
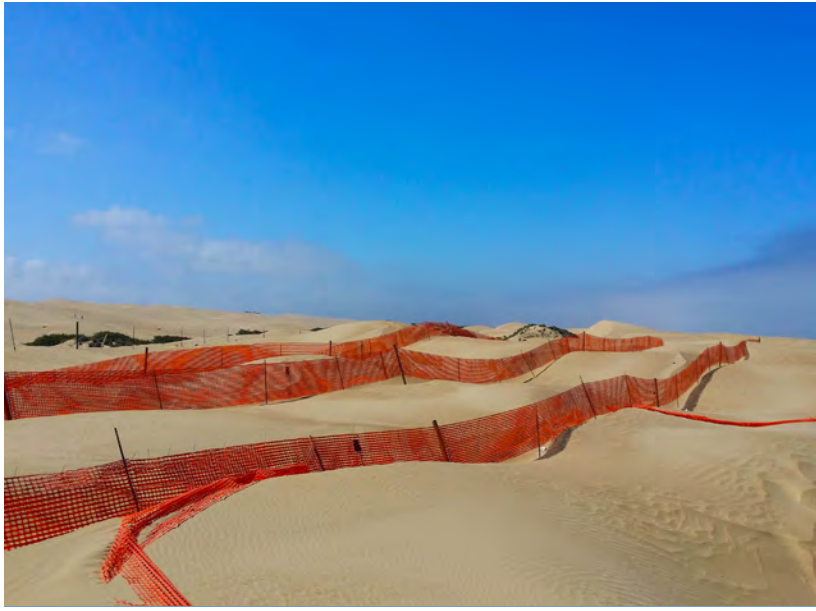

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Oceano Dunes SVRA Dust Control Program

Draft Program Environmental Impact Report

Volume 1

State Clearinghouse # 2012121008

July 2016

MIG | TRA ENVIRONMENTAL SCIENCES

CALIFORNIA STATE PARKS SINCE 1864

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OCEANO DUNES SVRA DUST CONTROL PROGRAM
DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT VOL. 1

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LIST OF ACRONYMS, ABBREVIATIONS, AND SYMBOLS

Acronym / Symbol	Full Phrase or Description
AB	Assembly Bill
ALUC	Airport Land Use Commission
ALUP	Airport Land Use Plan
APCO	Air Pollution Control Officer
ATV	All-Terrain Vehicle
BAM	Beta Attenuation Mass
BMPs	Best Management Practices
CARB	California Air Resources Board
CBOC	California Burrowing Owl Consortium
CCC	California Coastal Commission
CCIC	Central Coast Information Center (of CHRIS)
CCR	California Code of Regulations
CDFG	California Department of Fish and Game (now CDFW)
CDFW[1]	California Department of Fish and Wildlife (formerly CDFG)
CDP	Coastal Development Permit
CDPR	California Department of Parks and Recreation
CDVAA	Coastal Dune Vehicle Activity Area
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CHRIS	California Historical Resources Information System
CH4	Methane
CNEL	Community Noise Equivalent Level
CO2	Carbon Dioxide
CFR	Code of Federal Regulations
CGS	California Geological Survey
CNDDB	California Natural Diversity Database
CNPPA	California Native Plant Protection Act
CNPS	California Native Plant Society
CRHR	California Register of Historic Places
CRPR	California Rare Plant Ranking
CVC	California Vehicle Code
CWA	Clean Water Act
dB	Decibel
dBA	Decibels, A-Weighted
dBV	Decibels, Velocity
DNL / Ldn	Day-Night Noise Level

[1] Both CDFW and CDFG refer to the same agency.

LIST OF ACRONYMS, ABBREVIATIONS, AND SYMBOLS

Acronym / Symbol	Full Phrase or Description
DTSC	California Department of Toxic Substances Control
DWQ	Division of Water Quality
EIR	Environmental Impact Report
ESHA	Environmentally Sensitive Habitat Area
E-BAM	Environmental Beta Attenuation Mass
FEM	Federal Equivalent Method
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Works Administration
GHG	Greenhouse Gases
GIS	Geographic Information System
GWP	Global Warming Potential
HCP	Habitat Conservation Plan
HMS	Habitat Monitoring System
Hz	Hertz
IS	Initial Study
LCP	Local Coastal Program/Plan
Leq	Average / Equivalent Noise Level
Lmax	Maximum Noise Level
MBTA	Migratory Bird Treaty Act
MCV2	Manual of California Vegetation, Second Edition
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
MTCO2e	Metric Tons of Carbon Dioxide Equivalents
m^3	Cubic Meters
NAHC	Native American Heritage Commission
NCTC	Northern Chumash Tribal Council
NRHP	National Register of Historic Places
NMFS	National Marine Fisheries Service
NOP	Notice of Preparation
NOx	Oxides of Nitrogen
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRP	Nipomo Regional Park
OHMVR	Off-Highway Motor Vehicle Recreation Division
OHV	Off-Highway Vehicle
PI-SWERL®	Portable In-Situ Wind Erosion Laboratory
PM	Particulate Matter

LIST OF ACRONYMS, ABBREVIATIONS, AND SYMBOLS

Acronym / Symbol	Full Phrase or Description
PMRP	Particulate Matter Reduction Plan
PM2.5	Fine Particulate Matter
PM10	Coarse Particulate Matter
PPV	Peak Particle Velocity
PRC	Public Resources Code
PRE	Porous Roughness Element
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
SCCAB	South Coast Central Air Basin
SCH	State Clearinghouse
SHPO	State Historic Preservation Officer
SHRC	State Historical Resources Commission
SLO	San Luis Obispo
SLOAPCD	San Luis Obispo County Air Pollution Control District
SPCC	Spill Prevention Control and Countermeasure
SPR	Standard and/or Specific Project Requirement
SPRP	Spill Prevention and Response Plan
SR	State Route
SVRA	State Vehicular Recreation Area
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
US	United States
USACE	United States Army Corps of Engineers
USC	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
WHPP	Wildlife Habitat Protection Plan
µg	Micrograms
µm	Microns / Micrometers

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S. SUMMARY

S.1 PROJECT DESCRIPTION

The California Department of Parks and Recreation (CDPR), Off-Highway Motor Vehicle Recreation (OHMVR) Division proposes to implement a five-year program (Program) to control and minimize emissions of dust and particulate matter (PM) that are generated at Oceano Dunes SVRA during periods of strong, persistent winds and subsequently blown downwind of the SVRA and onto the Nipomo Mesa. Oceano Dunes SVRA is located in southwestern San Luis Obispo (SLO) County, approximately twelve miles south of the City of SLO, within the Coastal Zone established by the California Coastal Act. The SVRA borders and is contiguous with parts of Pismo State Beach. The two parks provide public access to beaches and public, coastal recreation opportunities, including off-highway motor vehicle (OHV) recreation in certain designated areas. The OHMVR Division has applied for a Master Coastal Development Permit (CDP) from the California Coastal Commission (CCC), Central Coast District, for the Program because it involves development in the Coastal Zone.

S.1.1 Program Area

The proposed Dust Control Program area primarily consists of approximately 690-acres of state-owned and operated lands at Oceano Dunes SVRA. The proposed Program area is located between approximately 280 degrees to 315 degrees upwind of the SLOAPCD's CDF ambient air quality monitoring station, and includes most of the open sand areas in the central to northern portion of the Oceano Dunes SVRA open riding and camping area, commonly referred to as the "La Grande Tract." SLOAPCD and OHMVR Division studies have identified this area as the area most likely influencing air quality measurements at the CDF station and air quality conditions on the Nipomo Mesa. All vegetation plantings, seasonal dust control measure deployment, and monitoring would occur within the 690-acre Program area, which avoids U.S. Fish and Wildlife Service (USFWS)-designated critical habitat for the western snowy plover (*Charadrius nivosus nivosus*; federal-listed as threatened) that is located west of the Program area.

S.1.1.1 Proposed Activities in the Program Area

The OHMVR Division proposes to undertake the following activities in the Program area:

- **Planting approximately 20 acres of native vegetation per year at Oceano Dunes SVRA.** Vegetation would be planted during the fall, when rains support the establishment of native dune vegetation. In total, approximately 100 acres of native vegetation could be planted over the five-year period covered by this EIR.
- **Deploying approximately 40 acres of seasonal dust control measures from approximately March to September at Oceano Dunes SVRA.** Dust control measures such as wind fencing, straw bales, porous roughness elements and, potentially, non-toxic, environmentally friendly soil stabilizers would be deployed to control and minimize dust on a seasonal basis. These seasonal measures could be installed as early as March 1 and removed as late as September 30. Seasonal dust control measures could also include pilot and/or demonstration projects as new control measures are identified by the OHMVR Division for implementation at Oceano Dunes SVRA.
- **Potentially planting trees downwind of Oceano Dunes SVRA.** Native, fast-growing trees may be planted downwind of Oceano Dunes SVRA if agreements can be successfully reached with private landowners. Tree plantings would be unlikely to control

or minimize dust emissions during the five-year period covered by this EIR, but could provide for the long term control of dust emissions.

- **Deploying dust and meteorological monitoring equipment at Oceano Dunes SVRA.** Scientific monitoring equipment would be installed, maintained, and operated to investigate and evaluate dust levels and control measure effectiveness.
- **Preventing track-out of sand onto Grand Avenue in the City of Grover Beach and Pier Avenue in Oceano.** Grooved or notched concrete would be be installed, operated, and maintained at Pismo State Beach exits on Grand Avenue in the City of Grover Beach and Pier Avenue in the community of Oceano.

The Oceano Dunes SVRA Dust Control Program also includes continuing existing dust control, monitoring, and track-out prevention activities currently taking place at Oceano Dunes SVRA and Pismo State Beach.

S.1.1.2 Project Duration and Schedule

The OHMVR Division proposes to implement the Dust Control Program for an approximately 5-year period, beginning in fall 2017 and continuing through summer 2022. In general, vegetation projects would be planned and planted in the fall of each calendar year. Seasonal dust control measures would be deployed from as early as March 1 and remain in place as late as September 30 of each calendar year. Grooved concrete track-out prevention devices would be a capital outlay project that requires the appropriation of funds by the State Legislature. Thus, track-out prevention devices would not be installed until December 2018 at the earliest and would be a permanent feature.

S.1.1.3 Dust Control Program Implementation Scenarios

Under the proposed Dust Control Program, the OHMVR Division would plant vegetation, deploy seasonal dust control measures, and install dust and meteorological monitoring equipment throughout the Program area. Planting vegetation and deploying seasonal dust control measures would occur annually. The OHMVR Division would plant up to 20 acres of native dune vegetation per year for a period of five years, and deploy up to 40 acres of seasonal dust control measures. Dust and meteorological monitoring equipment (approximately three acres) would temporarily occupy individual monitoring sites for up to two years, but could be moved throughout the SVRA throughout the duration of the Program.

Planting vegetation, deploying seasonal dust control measures, and installing temporary monitoring equipment would occupy open sand areas in the SVRA where OHV recreation currently occurs. This impact would increase in magnitude each year of the Dust Control Program. In Year 1, approximately 20 acres of open sand areas could be permanently occupied by vegetation and approximately 43 acres of open sand areas could be temporarily occupied by seasonal dust control measures and associated monitoring equipment. Thus, in Year 1, the Dust Control Program could occupy a maximum of approximately 63 acres of open sand areas. This would occur for a period of approximately seven months, from as early as March 1 to as late as September 30. In Year 5 of the Dust Control Program, approximately 100 acres of open sand areas could be permanently occupied by vegetation and approximately 43 acres could be temporarily occupied by seasonal dust control measures and associated monitoring equipment. Thus, in Year 5, the proposed Dust Control Program could occupy a maximum of approximately 143 acres of open sand areas. Following Year 5, approximately 100 acres of open sand areas could remain permanently occupied by vegetation.

The proposed Dust Control Program activities would take place within an approximately 690-acre area of Oceano Dunes SVRA. Approximately 425 acres of the Program area are open to vehicular recreation, and approximately 265 acres are closed to vehicular recreation, including 179 acres that are completely closed to all public access and recreation (motorized and non-motorized). To the extent supported by scientific data, the OHMVR Division would emphasize the planting of vegetation in the part of the Program area that is closed to all public access and recreation, which would reduce potential impacts on all recreation. Under this preferred scenario, the OHMVR Division could plant approximately 50 acres of vegetation in areas closed to all public access and recreation; an additional 15 acres could be planted in areas closed to vehicular recreation and camping, but open to non-vehicular recreation. The remaining 35 acres of vegetation could be planted inside the SVRA's open riding and camping area, along with 43 acres of seasonal dust control measures and associated monitoring. Thus, under the preferred scenario, the proposed Dust Control Program could occupy up to 78 acres of land currently open to vehicular recreation and camping at Oceano Dunes SVRA (plus 15 acres of land open to non-vehicular recreation only).

The OHMVR Division has also identified an alternate scenario that may be implemented to achieve Dust Control Program goals and objectives. Under this alternate scenario, approximately 15 acres of total vegetation could be planted in areas closed to all public access and recreation; an additional 15 acres could be planted in areas closed to vehicular recreation, but open to non-vehicular recreation. The remaining 70 acres of vegetation could be planted inside the SVRA's open riding and camping area, along with 43 acres of seasonal dust control measures and associated monitoring. Thus, under the alternate scenario, the proposed Dust Control Program could occupy up to 113 acres of land currently open to vehicular recreation at Oceano Dunes SVRA (plus 15 acres of land open to non-vehicular recreation only.

S.1.1.4 Proposed Annual Review Process

This EIR is a Program EIR, which requires the OHMVR Division to consider subsequent dust control activities against the scope and content of this EIR to determine if additional environmental review is required. In addition, the OHMVR Division has applied for a Master CDP from the CCC, which requires the CCC and other agencies to review specific dust control activities to ensure they are in compliance with the CDP issued for the Program. In light of these review requirements, the OHMVR Division is proposing an annual review process that consists of planning, resource evaluation, agency coordination and review, implementation, and reporting phases. This annual review process would ensure the OHMVR Division's specific Dust Control Program related activities comply with CEQA and any CDP conditions imposed on the project, as well as any other laws or regulations that may apply to the planned activities, once they are known in sufficient detail to permit a project-specific review.

S.1.2 Significant Impacts and Mitigation Measures

This EIR focuses on the significant and potentially significant direct and indirect effects that would occur with implementation of the proposed Oceano Dunes SVRA Dust Control Program.

One impact was found to be potentially significant, but the inclusion of mitigation measures reduces this impact to a less than significant level:

- **Impact NOI-2: The Dust Control Program would generate track-out prevention-related noise on Grand Avenue and Pier Avenue.**

  Mitigation Measure NOI-2: Reduce Track-out Prevention Noise

The OHMVR Division shall, given the specific engineering and vehicle conditions present at the Pismo State Beach Pier Avenue exit, reduce noise from track-out prevention devices by:

- Minimizing the width between concrete grooves as much possible (while still ensuring sufficient spacing to provide effective track-out control)
- Considering installing sinusoidal shaped concrete grooves if research indicates such devices are cost effective and would produce lower vehicle noise levels than rectangular or cylindrical shaped.

Three impacts were found to be unavoidable, significant impacts of the proposed Program, even with the application of feasible mitigation measures:

- **Impact REC-1: The Dust Control Program would limit and interfere with coastal vehicular recreation opportunities at Oceano Dunes SVRA.**

  Mitigation Measure REC-1: Minimize Loss of OHV Recreation Opportunities. The OHMVR Division shall minimize the loss of OHV recreational opportunities at Oceano Dunes SVRA by:

  - Planting vegetation outside the Oceano Dunes SVRA open riding and camping area
  - Planting vegetation and deploying seasonal dust control measures in a manner that does not interfere with the Oceano Dunes SVRA "Sand Highway" and other established paths of travel in the SVRA
  - Deploying seasonal dust control measures from March 1st thru September 30th only
  - Considering potential hazards to public recreation from the seasonal deployment of dust control measures (e.g., ensuring that areas are safe for resumption of OHV recreation following removal of the project)
  - Integrating recreation opportunities, including OHV recreation opportunities, into dust control measures. This could be achieved by:
    - Educational kiosks that highlight the progression of dune vegetation / ecosystems
    - Establishing and maintaining motorized and non-motorized trails through large, continuous blocks of planted vegetation
    - Embedding OHV training or vendor areas in dust control measures large enough to support such areas
  - Identifying areas to provide additional camping or OHV recreation opportunity and diligently pursue opening those areas to OHV recreation with existing staff levels and funding considerations. Any such expansion shall occur in a manner that is consistent with the Public Resources Code and other applicable laws and regulations and shall not impede achievement of the performance standard set by Rule 1001.

Impact REC-1 identifies that the Dust Control Program could result in the temporary (up to 43 acres annually) and permanent (between 35 and 70 acres) closure of land inside the Oceano Dunes SVRA open riding and camping area (in Year 5), which would constitute an approximately 5.3 to 7.7 percent loss in OHV recreation lands at Oceano Dunes SVRA (out of 1,453 acres). Mitigation Measure REC-1 requires the OHMVR Division to minimize the loss of OHV recreation opportunities at Oceano Dunes SVRA by planting vegetation outside the SVRA's open riding and camping area as much as feasible, planting vegetation and deploying seasonal dust control measures in a manner that does not interfere with Sand Highway and other established paths of travel, integrating recreation opportunities (including OHV recreation) into dust control measures, and identifying areas to add camping and OHV recreation opportunities. Any expansion of OHV recreation opportunities shall occur in a manner that is consistent with the Public Resources Code and other applicable laws and regulations and shall not impede achievement of the performance standard set by Rule 1001. Mitigation Measure REC-1 could minimize some of the loss in coastal vehicular recreational opportunities at Oceano Dunes SVRA that would occur under the Dust Control Program; however, the potential would remain for the Dust Control Program (in Year 5) to temporarily (43 acres) and permanently (70 acres) limit and interfere with OHV recreation at Oceano Dunes SVRA. Factors such as the SVRA's history of use, historical reduction in vehicle recreation lands in the area, current seasonal reduction in vehicle recreation lands, high visitor attendance levels, and the unique, low-cost nature of the coastal recreational opportunities provided by the SVRA make this loss of OHV lands a substantial and adverse change to OHV recreation at Oceano Dunes SVRA, and a significant and unavoidable impact of the Dust Control Program.

- **Impact LUP-1: The Dust Control Program would conflict with the Pismo Dunes SVRA (now Oceano Dunes SVRA) General Development Plan and Resource Management Plan**

Impact LUP-1 identifies that the loss of up to approximately 78 to 113 acres of land inside the Oceano Dunes SVRA is considered a significant conflict with the Oceano Dunes SVRA General Development Plan and Resource Management Plan because it would not perpetuate and enhance recreational use of OHVs in the SVRA. Mitigation Measure REC-1 requires the OHMVR Division to implement measures that could reduce the potential for Dust Control Program components to limit and interfere with OHV recreation. Mitigation Measure REC-1 also directs the OHMVR Division to compensate for the loss (i.e., closure) of OHV recreation lands that could occur with implementation of the Dust Control Program; however, the ability of the OHMVR to do this is subject to other applicable laws and regulations and is, therefore, speculative. Thus, even with the implementation of Mitigation Measure REC-1, the potential remains for the Dust Control Program (in Year 5) to temporarily (43 acres) and permanently (70 acres) limit and interfere with OHV recreation at Oceano Dunes SVRA. This loss is considered a significant conflict with the stated management policy of the General Development Plan and Resource Management Plan.

- **Impact LUP-2: The Dust Control Program could conflict with the California Coastal Act.**

Impact LUP-2 identifies the proposed Dust Control Program could conflict with the California Coastal Act because the preferred Dust Control Program scenario would impact 78 acres of coastal OHV recreation lands and the alternate program scenario does not maximize existing, historical, and traditional coastal OHV recreational opportunities at Oceano Dunes SVRA. This significant impact would occur even with design and mitigation measures (REC-1) incorporated into the Program.

The Program would also contribute to two significant and unavoidable cumulative impacts.

- **Impact CML-1: The Dust Control Program would contribute to cumulative, seasonal and permanent reductions in coastal vehicular recreational opportunities at Oceano Dunes SVRA.**

Impact CML-1 identifies that the Dust Control Program could result in the temporary (up to 43 acres) and permanent (between 35 and 70 acres) closure of land inside the Oceano Dunes SVRA open riding and camping area in Year 5 of the Program. This impact would combine with the seasonal closure of 284 acres of land inside the SVRA's open riding and camping area, which occurs from March 1st to September 30th due to the installation of fencing to protect nesting western snowy plovers (nest exclosure). This impact would also combine with the recent closure of 16 acres of land associated with an expanded cultural resources management and protection measure. In Year 5, the total seasonal loss in coastal vehicular recreation lands resulting from the nest exclosure (284 acres), expanded cultural resources protection (16 acres) and the Dust Control Program (78 to 113 acres) would range from approximately 378 to 413 acres. The seasonal closure of 378 to 413 acres of land constitutes an approximately 26 to 28.4 percent reduction in available OHV recreation lands at Oceano Dunes SVRA (out of 1,453 acres). This seasonal reduction would occur for approximately seven months of the year (more than 50 percent), and include popular holiday weekends such as Memorial Day, July 4th, and Labor Day, as well as the summer season when schools on traditional schedules are out of session. In Year 5, the total permanent loss in coastal vehicular recreation lands resulting from expanded cultural resources protection (16 acres) and the proposed Dust Control Program (35 to 70 acres) would range from 51 to 86 acres. The permanent closure of 51 to 86 acres of land constitutes an approximately 3.5 to 5.9 percent reduction in available OHV recreation lands at Oceano Dunes SVRA. The implementation of Mitigation Measure REC-1 could partially reduce the Dust Control Program's contribution to this cumulative impact; however, the ability of the OHMVR Division to implement Mitigation Measure REC-1 in its entirety is not certain. Specifically, the ability of the OHMVR Division to compensate for the loss (i.e., closure) of OHV recreation lands that could occur with implementation of the Dust Control Program would be subject to other applicable laws and regulations and cannot, therefore, be guaranteed. Impact CML-1, therefore, is considered a significant and unavoidable cumulative impact of the Dust Control Program.

- **Impact CML-2: The Dust Control Program would contribute to a cumulative loss in OHV recreation lands that conflicts with the Pismo Dunes SVRA (now Oceano Dunes SVRA) General Development Plan and Resource Management Plan and the California Coastal Act.**

Impact CML-2 identifies that the magnitude of the loss of coastal recreation lands identified in impact CML-1 does not perpetuate or enhance the recreational use of OHVs at Oceano Dunes SVRA, as required by the General Development Plan and Resource Management Plan, nor does it maximize coastal recreation opportunities, as generally required by the Coastal Act. The permanent or temporary loss of OHV recreation lands at Oceano Dunes SVRA is especially important given the site's history, popularity, and unique, low-cost coastal recreational opportunities, plus the lack of similar facilities in the state. Mitigation Measure REC-1 could partially reduce the Dust Control Program's contribution to this cumulative impact; however, the ability of the OHMVR Division to implement Mitigation Measure REC-1 in its entirety is not certain. Specifically, the ability of the OHMVR Division to compensate for the loss (i.e., closure)

of OHV recreation lands that could occur with implementation of the Dust Control Program would be subject to other applicable laws and regulations and cannot, therefore, be guaranteed. Impact CML-2, therefore, is considered a significant and unavoidable cumulative impact of the Dust Control Program.

S.1.3 Alternatives to the Proposed Project

S.1.3.1 Alternatives Considered and Rejected

The OHMVR Division considered and rejected six alternatives to the proposed Oceano Dunes SVRA Dust Control Program, as follows:

- The OHMVR Division considered different Dust Control Program locations, but rejected this alternative because it is not a feasible alternative that would obtain most of the basic objectives for the proposed Dust Control Program. The OHMVR Division is required to implement a dust control Program at Oceano Dunes SVRA per the requirements of SLOAPCD Rule 1001, and does not own or operate other coastal lands in SLO County where a Dust Control Program could be implemented.
- The OHMVR Division considered an accelerated Dust Control Program schedule of less than five years, but rejected this alternative because it is not logistically and technically feasible given staffing and resource needs and state budget limitations and scheduling.
- The OHMVR Division considered a reduction in the area open to OHV recreation, both in-lieu of, and in addition to, the proposed Dust Control Program's vegetation and seasonal dust control measures. The option to reduce the OHV recreation area in-lieu of the proposed Program's dust control measures was rejected because it would not achieve most of the proposed Oceano Dunes SVRA Dust Control Program's basic objectives, would increase the magnitude of the Program's significant and unavoidable recreation impacts, and result in a new significant land use impact that would not occur under the proposed Program. The option to reduce the OHV recreation area in addition to the proposed Program's dust control measures would obtain most of the objectives of the proposed Dust Control Program; however, this alternative was rejected because it would not avoid or substantially lessen any of the proposed Dust Control Program's impacts. Rather, it would increase the magnitude of the Program's significant recreation and land use impacts.
- The OHMVR Division considered off-site mitigation in the form of enhanced filtration systems for residential heating and cooling systems, both in-lieu of, and in addition to, the proposed Dust Control Program's vegetation and seasonal dust control measures. These options were rejected because they involve activities on properties not owned or operated by the OHMVR Divisionand would either not obtain most of the objectives for the proposed Program or not avoid or substantially lessen the significant impacts of the proposed Oceano Dunes SVRA Dust Control Program.

S.1.3.2 No Project Alternative

The OHMVR Division considered two versions of the No Project Alternative: the No Action Alternative and the No Comprehensive Dust Program Alternative.

Under the No Action Alternative, the OHMVR Division would continue to perform existing dust control, monitoring, and track-out prevention activities at Oceano Dunes SVRA and Pismo State Beach (1,700 feet of sand fencing and five acres of vegetation planted per year, all of which would be within existing, protected vegetation islands or outside the open riding and camping

area), but would not undertake the additional vegetation planting (approximately 100 acres), seasonal dust control measures (approximately 40 acres), or track-out prevention activities proposed under the Dust Control Program. The No Action Alternative would only result in minimal changes to the environment and would thus avoid the significant and unavoidable recreation and land use impacts, as well as the potentially significant noise impact (from track-out prevention device noise), of the proposed Dust Control Program. The No Action Alternative, however, would not make progress towards compliance with the Rule 1001 compliance standard. It also would not contribute toward the development of a comprehensive dust control Program, including the deployment of temporary monitoring equipment and the installation and operation of a track-out prevention device at the Grand Avenue and Pier Avenue sand ramps. Thus, the No Action Alternative would not obtain most of the basic objectives of the Dust Control Program.

Under the No Comprehensive Dust Control Program, the OHMVR Division would continue to perform existing dust control, monitoring, and track-out prevention activities at Oceano Dunes SVRA and Pismo State Beach, but would not undertake a comprehensive, five-year dust control program. Rather, the OHMVR Division would proceed with an interim series of dust control projects consisting of approximately 40 acres of seasonal dust control measures such as wind fencing, straw bales, or PREs. These measures would be installed within the Oceano Dunes SVRA open riding and camping area, east of sand highway. The No Comprehensive Dust Program Alternative would substantially reduce and/ or avoid most of the proposed Dust Control Program's significant impacts because the OHMVR Division would not plant up to 100 acres of vegetation, nor install grooved concrete for track-out prevention purposes. The No Comprehensive Dust Program Alternative would obtain some of the basic objectives of the Dust Control Program to a certain degree. Deploying approximately 40 acres of seasonal dust control measures would control and minimize dust emissions during strong winds; however, it is uncertain whether this level of activity would reduce concentrations of PM10 as measured at the SLOAPCD's CDF air quality monitoring station and thus make progress towards compliance with the Rule 1001 performance standard. The No Comprehensive Dust Program Alternative would maintain existing public access routes and coastal recreation opportunities; however, it would not result in the development of a comprehensive dust control program, including the deployment of temporary monitoring equipment and the installation and operation of a track-out prevention device at the Grand Avenue and Pier Avenue sand ramps

S.1.3.3 Alternate Dust Control Program

The OHMVR Division, at the request and recommendation of the SLOAPCD, identified an alternate dust control Program for discussion because some studies indicate the areas with the highest potential to generate dust and emit PM10 are near-shore areas and because limiting the size and scope of the proposed Dust Control Program could limit the OHMVR Division's ability to achieve the performance standard set by Rule 1001. Under this alternative, the OHMVR Division would implement an alternate dust control Program at Oceano Dunes SVRA, which would be different from the proposed Dust Control Program in three key ways: 1) The project area would include all OHV recreation lands, excluding the 284-acre seasonal nesting exclosure and OHV recreation lands south of marker post 8; 2) Vegetation plantings would be emphasized in areas closer to the shore and where fore dunes would be expected in the absence of vehicular recreation; and 3) the amount of seasonal wind fencing installed at Oceano Dunes SVRA would be increased by 20 percent each year until the Rule 1001 performance standard is met.

The economic and logistical feasibility of this alternative is uncertain; however, presuming it is feasible, the alternate dust control Program would not avoid or substantially lessen any of the

proposed Oceano Dunes SVRA Dust Control Program significant impacts. This alternative would result in similar noise impacts as the proposed Program, because it would still involve the installation of track-out prevention devices on Pier Avenue in Oceano. In addition, this alternative would substantially increase the magnitude of the proposed Program's significant and unavoidable recreation and land use impacts because all proposed vegetation planting and wind fencing would occur inside the SVRA's open riding and camping area. Furthermore, this alternative could result in a new, potentially significant or significant and unavoidable impacts on aesthetics and/or biological resources. The alternate dust control Program could more than double the amount of wind fencing installed in Year 5 of the Dust Control Program (83 acres versus 40 acres), which would increase the visibility of the fencing array from all receptor vantage points. The alternate dust control Program could also result in direct and/or indirect impacts on biological resources because the emphasis on planting vegetation in near-shore areas would likely modify, to some degree, USFWS-designated critical habitat for the western snowy plover (federal-listed as threatened).

The alternate dust control Program would meet most of the objectives for the proposed Dust Control Program. The alternate Program would still be a comprehensive dust control Program that involves planting vegetation, deploying seasonal dust control measures and monitoring equipment, and installation of track-out prevention devices. Thus, it would likely reduce concentrations of PM10 at the SLOAPCD's CDF monitoring station and make progress toward the Rule 1001 performance standards. The alternate Program would maintain existing public access routes into and out Oceano Dunes SVRA, but could affect existing paths of travel within Oceano Dunes SVRA (such as Sand Highway) because of the substantially greater level of seasonal dust control measures involved (a large access way may be required through an 80-acre array, which would reduce the array's effectiveness). The alternate dust control Program would not, however, maintain existing coastal recreational opportunities at Oceano Dunes SVRA as well as the proposed Program, and the vegetation planting may change the dune ecosystem in a manner that adversely affects the environment for two breeding listed species, which is inconsistent with the OHMVR Division's need to manage and protect these natural resources.

S.1.3.4 Environmentally Superior Alternative

The No Action and No Comprehensive Dust Program Alternatives are the least environmentally damaging alternative because they avoid or lessen all of the impacts that would occur with implementation of the Oceano Dunes SVRA Dust Control Program; however, these alternative would only achieve some of the objectives of the proposed Program. The alternate dust control Program would obtain many of the proposed Program's objectives, but would also result in substantially more severe recreation impacts and substantially more severe impacts on aesthetic and biological resources. As a result, the proposed Program is considered the environmentally superior alternative.

S.1.4 Known Areas of Controversy

CEQA Guidelines Section 15123(b) requires the EIR Summary to identify areas of controversy known to the Lead Agency, including issues raised by agencies and the public and issues to be resolved including choice among alternatives and whether and how to mitigate the significant effects of the Program.

The following issues were most prominent in the agency and public comments (see Section 3.3):

- Location and amount of dust control measures and monitoring equipment
- Process for reviewing subsequent Dust Control Program-related activities

- Protection of natural resources Project implementation in accordance with existing permits (e.g., existing Coastal Development Permit 4-82-300, as amended)
- Motor vehicle restrictions as an alternative (i.e., moratorium on vehicle activity at Pismo State Beach and Oceano Dunes SVRA
- Adequate public noticing and involvement
- Transparency of the CEQA process (review and approval)

This EIR resolves most of the areas of controversy listed above; however, until final approvals for the Program are obtained, issues related to the Dust Control Program's specific location and amount of vegetation and seasonal dust control measures remain unresolved. The proposed annual review process would ensure the OHMVR Division's specific Dust Control Program-related activities comply with CEQA and any CDP conditions imposed on the Program, as well as any other laws or regulations that may apply to the proposed activities.

CHAPTER 1 INTRODUCTION

The California Department of Parks and Recreation (CDPR), Off-Highway Motor Vehicle Recreation (OHMVR) Division has prepared this Draft Program Environmental Impact Report (EIR) to evaluate the potentially significant environmental impacts that may result from implementation of the Oceano Dunes State Vehicular Recreation Area (SVRA) Dust Control Program (proposed Program). Oceano Dunes SVRA is located in southwestern San Luis Obispo (SLO) County, approximately twelve miles south of the City of SLO, within the Coastal Zone established by the California Coastal Act. The SVRA borders and is contiguous with parts of Pismo State Beach. The Oceano Dunes District manages and oversees operation of both parks, which provide public access to beaches and coastal recreation opportunities, including off-highway vehicle (OHV) recreation in certain designated areas. Figure 1-1 shows the regional setting for Oceano Dunes SVRA.

1.1 DUST CONTROL PROGRAM OVERVIEW AND BACKGROUND INFORMATION

The proposed Oceano Dunes SVRA Dust Control Program is intended to control and minimize dust and particulate matter (PM) emissions[2] that are generated under strong wind conditions and subsequently transported downwind of Oceano Dunes SVRA (generally towards the east-southeast). An ambient air quality monitoring station (the "CDF" station) operated by the SLO County Air Pollution Control District (SLOAPCD) is located downwind of the SVRA, on the Nipomo Mesa, as are residential areas. The proposed Program would control PM emissions by:

- Planting approximately 20 acres of native vegetation per year at Oceano Dunes SVRA, or approximately 100 acres of vegetation over a five-year period.
- Deploying approximately 40 acres of seasonal dust control measures at Oceano Dunes SVRA from as early as March 1 through as late as September 30, such as wind fencing, straw bales and, potentially, other artificial control measures.

As part of the proposed Dust Control Program, the OHMVR Division would also conduct dust and meteorological monitoring to support and measure the effectiveness of dust control measures and install devices designed to prevent the track-out of sand onto paved, public roadways including Grand Avenue in the City of Grover Beach and Pier Avenue in the unincorporated community of Oceano. In addition, the OHMVR Division may also plant trees downwind of Oceano Dunes SVRA, although this activity would be unlikely to control or reduce dust and PM10 during the five-year period covered by this EIR.

Nearly all of the proposed Dust Control Program activities would occur within an approximately 690-acre area of Oceano Dunes SVRA that is located approximately 280 to 315 degrees upwind of the CDF monitoring station. This area includes a large open sand area in the central to northern portion of the Oceano Dunes SVRA open riding and camping area commonly referred to as the "La Grande Tract." The OHMVR Division has worked with the SLOAPCD and the California Air Resources Board (CARB) to identify and define this area as the area most likely influencing elevated PM concentrations at the SLOAPCD's CDF monitoring station and on the Nipomo Mesa in general.

[2] This EIR uses both the terms "dust" and "particulate matter." While these terms are similar, CARB and SLOAPCD generally define dust as "solid" particles that can become airborne (CARB 2014, SLOAPCD 2002). In contrast, particulate matter is a regulated air pollutant under the federal and California Clean Air Act that includes both solid and liquid particles. For example, Title 17 of the California Code of Regulations, Section 70100, refers to PM10 as "atmospheric particles, solid or liquid, except uncombined water . . ."

Proposed Dust Control Program area
Potential tree planting area
Oceano Dunes SVRA
Pismo State Beach
Guadalupe-Nipomo Dunes Complex (partial)
Existing air quality monitor
Coastal Zone boundary
Highway
Major road
Public park land
Urban areas
County boundary

Figure 1-1 Dust Control Program Regional Setting

Oceano Dunes SVRA Dust Control Program – Draft Program EIR

The Oceano Dunes SVRA Dust Control Program also includes continuing existing dust control, monitoring, and track-out prevention activities currently taking place at Oceano Dunes SVRA and Pismo State Beach. These existing, independent activities, which are described in Chapter 2, would not change as a result of the proposed Dust Control Program and would thus not result in any new, physical environmental effects at either Oceano Dunes SVRA or Pismo State Beach.

1.1.1 Saltation and Dust Generation at Oceano Dunes SVRA

Oceano Dunes SVRA is situated in the Guadalupe-Nipomo Dunes Complex, an approximately 18,000-acre, 18-mile-long coastal dune landscape that contains large, vegetated and unvegetated sand dunes subject to strong prevailing winds (see Figure 1-1). According to the California Geological Survey (CGS), Oceano Dunes SVRA is located within the youngest, most active formations of the dune complex, where winds transport sand and dunes are actively migrating inland several feet per year (CGS 2007). The dunes, including the area in which Oceano Dunes SVRA is located, are exposed to strong and frequent prevailing winds from the northwest (i.e., blowing towards the southeast), especially during the springtime (approximately March through June) (SLOAPCD 2007). These strong prevailing winds exert a force on the surface of 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 (generally a few inches to a few feet), 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.

The saltation process is depicted in Figure 1-2.

Figure 1-2 Saltation and Dust Generation Process

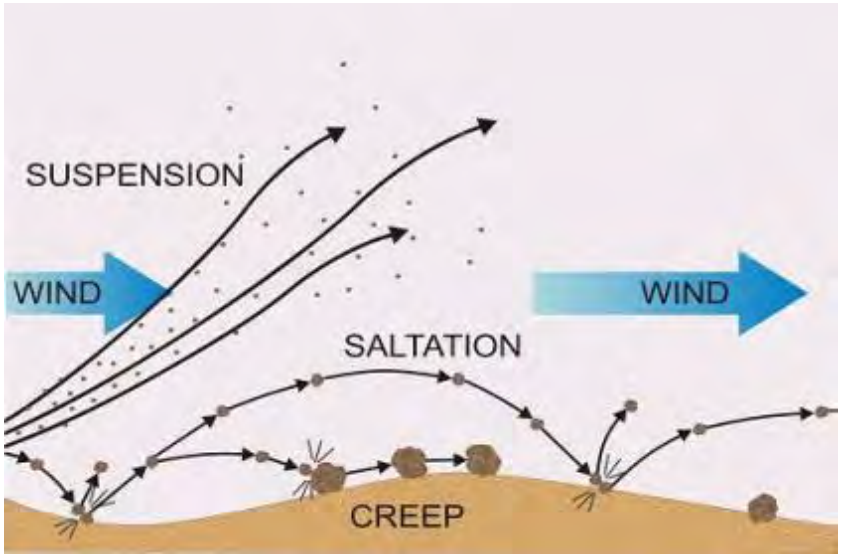


Figure 1-2. Wind results in sand creep or saltation and the suspension of fine particles. Image source: Jaison 2012.

Generally, when winds exceed approximately 10 miles per hour, the sand grains in the unvegetated dunes that naturally form in the Guadalupe-Nipomo Dunes Complex begin to creep or saltate and generate dust and PM that can affect air quality conditions.

1.1.2 Particulate Matter Monitoring Downwind of Oceano Dunes SVRA

The SLOAPCD, the local agency charged with preserving air quality, divides SLO County into different air quality regions that have similar geologic and meteorological conditions. Oceano Dunes SVRA is located in the South County air quality region of SLO County. The SLOAPCD maintains and operates three ambient air quality monitoring stations in the South County Region (see Figure 1-1): CDF, Mesa2, and Nipomo Regional Park (NRP) (SLOAPCD 2014a). These stations measure ambient concentrations of particulate matter, which is a regulated air pollutant under both the federal and state Clean Air Act.

Particulate matter is known to cause adverse lung, heart, and other health effects, and is considered a "criteria" air pollutant because the U.S. Environmental Protection Agency (USEPA) and CARB regulate PM on the basis of human health and/or environmentally-based criteria (USEPA 2016a). The national and state Clean Air Acts regulate two kinds of particulate matter: PM10, also called "inhalable coarse" PM, which consists of particles with an aerodynamic diameter of 10 micrometer or less, and PM2.5, also called "fine" particulate matter, which consists of particles with an aerodynamic diameter of 2.5 microns or less. Both types of PM are very small, invisible to the naked eye, and are capable of penetrating deep into the lungs (and potentially bloodstream), resulting in adverse health effects such as asthma, decreased lung function, heart attack, and premature death (U.S. EPA 2016b). Figure 1-3 provides a graphical depiction of the size of PM10 and PM2.5 particles.

Figure 1-3 Particulate Matter

Figure 1-3. PM10 particles are approximately five to seven times smaller than the diameter of a human hair. PM2.5 particles are approximately 20 to 25 times smaller than the diameter of a human hair. Image source: U.S. EPA 2013b.

Of the three South County monitoring stations, CDF is the closest to Oceano Dunes SVRA, approximately 0.5 miles southeast of Oceano Dunes SVRA (as measured in the prevailing wind direction, see Figure 1-1). The NRP station is the farthest away from Oceano Dunes SVRA, more than five miles southeast of the SVRA. Mesa2 is of middle proximity, approximately two miles southeast of the SVRA.

Table 1-1 shows the number of days from 2010 to 2015 that the SLOAPCD's CDF, Mesa2, and NRP monitoring stations measured levels of PM that are above the state's 24-hour standard for PM10, which is set at 50 micrograms per cubic meter (µg/m^3).

Table 1-1 South County Monitoring Days Above 24-Hour State PM10 Standard(A)

Monitoring Year	SLOAPCD South County Monitoring Station		
	CDF	Mesa2	NRP
2010	74	41	2
2011	65	33	3
2012	70	36	9
2013	93	55	20
2014	79	39	9
2015(B)	67	30	8

Sources: SLOAPCD 2014a, 2016; CARB 2016.

(A) The state 24-hour PM10 standard is set at 50 µg / m^3. The state also maintains an average annual PM10 standard of 20 µg/m^3.

(B) Data reflect daily average PM10 (Beta Attenuation Mass [BAM]) data measurements at the SLOAPCD CDF, Mesa2, and NRP monitoring stations (U.S. EPA Air Quality System IDs# 060792007**,** 060792004, and 060794002). This air quality information was retrieved from CARB's Air Quality and Meteorological Information System (http://www.arb.ca.gov/aqmis2/aqmis2.php). Data may be preliminary and subject to change.

In addition, the CDF station measured levels of PM10 that exceeded the national 24-hour standard for PM10 (150 µg/m^3) three times in 2012, two times in 2013, and two times in 2014 (SLOAPCD 2013a, 2014b, 2016); the station did not exceed the national 24-hour standard in 2015. The CDF station also measured levels of PM2.5 that exceeded the national 24-hour standard for PM2.5 (35 µg/m^3) three times in 2013, four times in 2014, and one time in 2015 (CARB 2016, SLOAPCD 2014b, 2016).

1.1.3 Dust and PM Studies at Oceano Dunes SVRA

The SLOAPCD and the OHMVR Division have completed several studies that have examined dust and PM generation at Oceano Dunes SVRA and helped to form the basis for the proposed Dust Control Program. In chronological order, these studies are briefly summarized below:

- *Nipomo Mesa Particulate Study* (SLOAPCD 2007). This SLOACPD study was designed to delineate the nature and extent of the high levels of PM concentrations observed by the SLOAPCD during air quality monitoring. The 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.

- *South County Phase 2 Particulate Matter Study* (SLOAPCD 2010). This second SLOAPCD study was designed to determine if OHV activity at Oceano Dunes SVRA played a role in the high PM concentrations measured on the Nipomo Mesa. The study reported several major findings, including findings that the primary source of high PM10 levels measured on the Nipomo Mesa is the open sand sheets in the dune areas of the coast, and that the open sand sheets subject to OHV activity at the SVRA emit significantly greater amounts of particulates than the undisturbed sand sheets at the study's control sites under the same wind conditions.
- *Oceano Dunes SVRA Pilot Project Study* (DRI 2011). This collaborative pilot project study evaluated the viability and effectiveness of three potential dust control strategies under consideration by the OHMVR Division and the SLOAPCD in 2011: established vegetation, artificial surface roughness (straw bales), and a comparison of undisturbed surfaces against surfaces disturbed by vehicle activity. The evaluation indicated that vegetation (90 to 99 percent control) and artificial surface roughness (40 to 70 percent control) were effective at reducing sand transport within the pilot project areas.
- *South County Community Monitoring Project* (SLOAPCD 2013b). This APCD study was designed and implemented to map differences in the spatial extent and concentrations of dust transported downwind of Oceano Dunes SVRA. In general, the study found that the spatial extent downwind dispersion of PM10 during high wind events varied, with the main variable being the severity of the PM10 concentrations. The study also concluded that wind direction near the shore is stronger and less variable than winds five miles inland, which shift to the south. The SLOAPCD uses the data collected by the study to prepare more detailed air quality forecasts for the Nipomo Mesa region. Based on the data, the SLOACPD identified four different forecast zones for the Nipomo Mesa that are related to the PM10 concentrations measured by the SLOAPCD's CDF, Mesa2, and NRP monitoring stations during the community monitoring project.
- *Wind and PM10 Characteristics at the ODSVRA from the 2013 Assessment Monitoring Network* (DRI 2014). This OHMVR Division study involved 12 dust and meteorological monitoring sites intended to provide information on differences in dust and meteorological conditions at and near Oceano Dunes SVRA. In general, the study found that the strongest and most frequent winds were associated with winds from the northwest (280 – 326 degrees), that winds show a tendency to speed up as they move from west to east, most likely due to compression of the streamlines over the dunes that force the wind to accelerate, and that mean wind speeds and maximum wind gusts increase from north to south. The study also found that the highest levels of PM10 concentrations during the study were measured in the central to northern portion of the SVRA's open riding and camping area, in the La Grande tract.
- *2013 Intensive Wind Erodibility Measurements at and Near the Oceano Dunes State Vehicular Recreation Area: Report of Findings* (DRI 2015a). This OHMVR Division study evaluated differences in emissivity throughout Oceano Dunes SVRA and Pismo State Beach by utilizing a small, portable device that simulates wind shear on the dune surface (the Portable In-Situ Wind Erosion Lab, or PI-SWERL®). In general, the study found that potential PM10 emissions were highest within the La Grande tract. Although the study could not explain why PM10 emissivity within the La Grande

tract was the highest, it did note that factors such as sand grain size, meteorology, and topography all influence PM10 emissions (both potential and actual).

- *Particle Size Distribution Characteristics and PI-SWERL PM10 Emission Measurements: Oceano Dunes State Vehicular Recreation Area* (DRI 2015b). This OHMVR Division study developed a detailed characterization of the particle size distribution at Oceano Dunes SVRA to evaluate if there were particle size characteristics that could be linked with the strength of the dust and PM10 emissions measured in previous studies. The study did not find a link between the amount of fine particle material (i.e., PM10-sized) present in sediment and PM10 emissions; however, it did find that the observed increase in wind speeds from north to south at Oceano Dunes SVRA is associated with an increase in the mean particle diameter of the sand sized fraction of the sediment at Oceano Dunes SVRA. Page 20 of the report states "considering all data, i.e., temporary monitoring, PI-SWERL, and particle size data, [a] picture has emerged that generally describes the spatial variability of the PM10 emissions. The PM10 emissions measured with the PI-SWERL show a pattern that is corroborated by the temporary monitoring networks, with higher PM10 measurements [in the central to northern part of the open riding and camping area], being associated with areas that the PI-SWERL measurements have identified as having higher emission potential."
- *Dust Control Project ODSVRA 2016* (DRI 2015c). This OHMVR Division study evaluated the effectiveness of seasonal dust control measures installed at Oceano Dunes SVRA. The study concluded that seasonal dust control measures installed in 2015 were more effective than measures installed in 2014 and showed quantifiable reductions in PM10 concentrations due to the controls. Overall, the OHMVR Division's 2015 wind fence array reduced sand transport within the array by 73 percent on average and up to 87% for areas in the interior of the array. In addition, over the three-month period the fencing was in place, the downwind concentration of PM10 at the trailing edge of the fence array was approximately 20% to 37% lower than the upwind PM10 concentration during moderate windy periods (approximately 10 to 12 miles per hour); during high wind conditions downwind concentrations were approximately 5% to 30% lower than concentrations upwind of the fence array. Despite reductions immediately downwind of the fencing array, a preliminary SLOAPCD analysis has indicated that the 2015 seasonal dust control measures may not have been effective at reducing PM10 levels at the SLOAPCD's CDF station; however, this preliminary finding may due to anomalous meteorological conditions in 2015, particularly in May 2015 (Zeldin and Tupper 2015).

The OHMVR Division and the SLOAPCD collaborated on the development and analysis of most of the studies listed above. Although all of the specific findings and conclusions of each report have not been fully accepted by both agencies, the OHMVR Division and the SLOAPCD, together with CARB, have reached a general consensus on an approach to dust control at Oceano Dunes SVRA that is reflected in, and forms the basis for, the proposed Oceano Dunes Dust Control Program.

1.1.4 SLOAPCD Rule 1001 (Coastal Dunes Dust Control Requirements)

In November 2011, based on the findings of its Nipomo Mesa and South County particulate matter studies described above, SLOAPCD adopted Rule 1001, Coastal Dune Dust Control Requirements. Rule 1001 requires the operator of a coastal dune vehicle activity area (CDVAA)

greater than 100 acres in size to prepare and implement a Particulate Matter Reduction Plan (PMRP) to minimize emissions of PM with an aerodynamic diameter equal to or less than 10 microns, or PM10 (also referred to as suspended or coarse inhalable PM), from the area under its control. Rule 1001, Section B.4., 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." The part of Oceano Dunes SVRA where vehicle activity is permitted is a CDVAA as defined by SLOAPCD Rule 1001 (the only one in the jurisdiction of the SLOAPCD)[3]. The OHMVR Division, as operator of Oceano Dunes SVRA, is therefore subject to the applicable requirements of Rule 1001.

Section C of SLOAPCD Rule 1001 outlines the rule's general requirements, which include, but are not limited to:

1) Development and implementation of an Air Pollution Control Officer (APCO)-approved PMRP that contains:
    a. An APCO-approved PM10 Compliance Monitoring network consisting of at least one CDVAA Monitor and at least one Control Site Monitor;
    b. A description of all PM10 control measures that would be implemented to comply with the Rule 1001 performance standard (see requirement 3 below);
    c. An APCO-approved track-out prevention Program that does not allow track-out of sand to extend 25 feet or more onto, and requires track-out to be removed from, paved public roadways;
2) Compliance with a performance standard that requires PM10 concentrations at the APCO-approved CDVAA Monitor to be no more than 20% higher than the PM10 concentrations at the APCO-approved Control Site Monitor. The performance standard applies only when the 24-hour average PM10 concentrations at the approved CDVAA Monitor exceeds 55 micrograms per cubic meter.

In July 2013, the APCD conditionally approved the OHMVR Division's PMRP and in June 2015 the OHMVR Division installed a Control Site Monitor at a location south of Oso Flaco Lake. The OHMVR Division and the SLOAPCD would use this control monitor, together with the SLOAPCD's CDF monitoring station, to determine whether the proposed Oceano Dunes Dust Control Program is attaining the performance standard established by Rule 1001. Table 1-2 lists the relationship between some important Rule 1001 terms and the proposed Dust Control Program.

[3] Oceano Dunes SVRA borders parts of Pismo State Beach where vehicle activity is also permitted. Thus, the part of Pismo State Beach where vehicle activity is permitted is also part of the CDVAA.

Table 1-2 Relationship Between Rule 1001 Terms and EIR Analysis

Rule 1001 Term	Rule 1001 Definition	Relationship to Proposed Dust Control Program
Coastal Dune Vehicle Activity Area (CDVAA)	Any area within 1.5 miles of the mean high tide line where public access to coastal dunes is allowed for vehicle activity.	The CDVAA is the part of Oceano Dunes SVRA (and Pismo State Beach) where vehicle activity is permitted.
CDVAA Monitor	An APCO-approved monitoring site or sites designed to measure the maximum 24-hour average PM10 concentrations directly downwind from the vehicle riding areas at the CDVAA. At a minimum, the monitoring site shall be equipped with an APCO-approved Federal Equivalent Method (FEM) PM10 monitor capable of measuring hourly PM10 concentrations continuously on a daily basis, and an APCO-approved wind speed and wind direction monitoring system.	The CDVAA Monitor is the SLOAPCD's "CDF" ambient air monitoring station located at the Cal Fire station at 2391 Willow Road, Arroyo Grande, CA.
Control Site Monitor	An APCO-approved monitoring site or sites designed to measure the maximum 24-hour average PM10 concentrations directly downwind from a coastal dune area comparable to the CDVAA but where vehicle activity has been prohibited. At a minimum, the monitoring site shall be equipped with an APCO-approved FEM PM10 monitor capable of measuring hourly PM10 concentrations continuously on a daily basis, and an APCO-approved wind speed and wind direction monitoring system.	The Control Site Monitor is the OHMVR Division's FEM PM10 monitor installed south of Oso Flaco Lake (35°0'36.5" North latitude, 120°36'14.5" West longitude).
Particulate Matter Reduction Plan	A plan to minimize PM10 emissions for the area under the control of the CDVAA Operator.	The OHMVR Division's PMRP forms the basis for the proposed Dust Control Program described and analyzed in this EIR.
Track-out Prevention Device	A gravel pad, grizzly, rumble strip, wheel wash system, or a paved area, located at the point of intersection of an unpaved area and a paved road that is designed to prevent or control track-out.	The OHMVR Division would install grooved concrete at exit points on Grand Avenue in Grover Beach and Pier Avenue in Oceano (unincorporated SLO County).

1.1.4.1 Rule 1001 Settlement Agreement

In January 2012, Friends of Oceano Dunes (a California non-profit organization and OHV advocacy group) filed a petition for writ of mandate in San Luis Obispo Superior Court, challenging SLOAPCD's adoption of Rule 1001, including, among other things, the Rule's requirement that California State Parks' OHMVR Division obtain a permit to operate Oceano Dunes SVRA from the SLOAPCD. California State Parks was named in the lawsuit as a Real Party-in-Interest. The trial court denied the petition and Friends of Oceano Dunes and State Parks appealed. During the pendency of the appeal, SLOAPCD and California State Parks entered into a settlement agreement (titled a "consent decree") whereby the parties agreed on a method for implementation of Rule 1001. Friends of Oceano Dunes was not a party to the settlement agreement. Ultimately, the appellate court reversed the trial court, finding that SLOAPCD did not have the authority to require a permit to operate Oceano Dunes SVRA, and remanded the case to the trial court. The trial court excised the permit to operate requirement from Rule 1001, but kept the remainder of Rule 1001 intact. In a separate lawsuit, Friends is challenging the settlement agreement as an illegal amendment of Rule 1001. That case is pending.

1.2 LEAD AGENCY INFORMATION

The California Environmental Quality Act (CEQA; PRC §21000 et seq.) and the CEQA Guidelines (14 CCR §15000 et seq.) establish the OHMVR Division of CDPR 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 an EIR or Initial Study (IS) / Negative Declaration is required for the project and is responsible for preparing the appropriate environmental review documentation. As described below, the OHMVR Division has determined a Program EIR is the appropriate CEQA document for the Dust Control Program and has prepared this Draft Program EIR in accordance with CEQA and the CEQA Guidelines.

The contact person for the OHMVR Division regarding this Draft Program EIR is:

Mr. Ronnie Glick, Senior Environmental Scientist
Oceano Dunes District
CDPR, OHMVR Division
340 James Way, Suite 270
Pismo Beach, CA 93449
OHVInfo@parks.ca.gov
(Note: Please enter "Dust Control Program EIR" in the email "Subject" line)

1.3 TYPE OF EIR

This EIR is a Program EIR. As described in CEQA Guidelines Section 15168(a), a Program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

- Geographically;
- As logical parts in the chain of a contemplated action;
- In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing Program; or

- 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.

As described above and in greater detail in Chapter 2, Project Description, the proposed Dust Control Program constitutes a series of related activities that would occur regularly, in approximately the same geographic area, and result in generally similar environmental effects that can be mitigated in similar ways. Thus, the OHMVR Division has determined a Program EIR is the appropriate type of EIR for the project.

The contents of a Program EIR are the same as an EIR that analyzes the construction and operation of a single project or activity (a Project EIR); however, a Project EIR typically examines the effects of a specific activity in detail, whereas a Program EIR is intended to provide information in a more general (or Programmatic) level of detail because the subsequent, specific activities of the Program are yet to be defined in detail.

In accordance with CEQA Guidelines Section 15168(c), if dust control activities implemented later under this Program EIR are within the scope of this Program EIR, no further CEQA review is necessary. If the OHMVR Division determines the later activity would have effects that were not examined in this Program EIR, it would evaluate potential impacts under Public Resources Code Section 21166, which only requires subsequent CEQA review in certain circumstances. Any feasible mitigation measures or alternatives developed in this Program EIR must also be included in the subsequent activity.

When the subsequent activities involve site specific operations, CEQA Guidelines Section 15168(c)(4) recommends a Lead Agency use a checklist or other similar device to document the evaluation of the site and the activity to determine if the effects of the activity were covered in the Program EIR. For the proposed Dust Control Program, the OHMVR Division is proposing an annual review process with the California Coastal Commission (CCC). This pre-construction review is described in more detail in Section 2.4 of the Project Description.

1.4 INTENDED USES OF THIS PROGRAM EIR

An EIR is an objective, informational document that informs governmental agency decision makers and the public of the potential for significant project effects, including possible ways to minimize those effects, and describes reasonable alternatives to the project (CEQA Guidelines §15121(a)). An EIR must be prepared with a sufficient degree of analysis to provide decision makers with information enabling them to make a decision that intelligently considers the project's potential direct and indirect environmental consequences. The evaluation of the environmental effects of the proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible (CEQA Guidelines §15151).

This Program EIR is intended to cover the direct and indirect physical, environmental effects associated with the OHMVR Division's Dust Control Program, as summarized in Section 1.1.3 and described in detail in Chapter 2, Project Description.

1.4.1 Responsible, Trustee, and Interested Agency Approvals

The information contained in this EIR will be used for all Dust Control Program-related discretionary approvals subject to environmental review, including approvals by responsible, trustee, and other agency approvals.

CEQA Guidelines Section 15381 defines a responsible agency as "a public agency which proposes to carry out or approve a project for which a Lead Agency has prepared an EIR."

Responsible Agencies for the proposed Dust Control Program may include the CCC, the SLOAPCD, and the California Department of Fish and Wildlife (CDFW).

CEQA Guidelines Section 15386 defines a trustee agency as "a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California." Trustee agencies with jurisdiction over the resources potentially affected by the proposed Dust Control Program include CDFW and CDPR.

CEQA Guidelines Section 15379 excludes federal government agencies from the definition of a "public agency." Thus, the U.S. Fish and Wildlife Service (USFWS) is not a responsible agency or a trustee agency for the purposes of CEQA, but rather an interested agency concerned with the project and its potential effects on species listed as threatened or endangered under the federal Endangered Species Act (FESA).

A summary of the key permits and approvals that may be required for the project is presented in the sections below. A complete list of the permits and approvals the project may require is provided in Section 2.6.

1.4.2 Master Coastal Development Permit

The OHMVR Division has applied for a Master CDP from the CCC, Central Coast District, because the project involves development in the Coastal Zone, as defined by the California Coastal Act of 1976 (CDP Application #3-12-050). If approved, this Master CDP would cover the full range of potential Dust Control Program activities as described in this EIR, including the continuation of certain existing dust control-related activities described in Chapter 2. As part of its Master CDP application, the OHMVR Division is proposing to submit annual work plans and monitoring reports demonstrating subsequent, site-specific activities have complied with the CDP and all other required agency approvals. This annual review process is described in Section 2.4.1 of this EIR.

1.5 EIR SCOPING INFORMATION

1.5.1 Notice of Preparation of an EIR

The OHMVR Division had previously circulated a Notice of Preparation (NOP) and IS for the Dust Control Program EIR for public review in December 2012. Subsequently, the OHMVR Division revised the Dust Control Program area and activities and reduced the duration of the Program covered by the EIR. Accordingly, the OHMVR Division prepared and filed a revised NOP of an EIR with the State Clearinghouse (SCH) on February 6, 2015 (SCH# 2012121008) describing the proposed Dust Control Program, its location, and probable environmental effects. A copy of the revised NOP was published in the SLO Tribune and Santa Maria Times and also made available electronically via a weblink on the OHMVR Division's website. The OHMVR Division provided a public review period for the revised NOP from February 6, 2015 to March 9, 2015. Written comments in response to the revised NOP were received from 3 agencies, 1 organization, and 17 interested individuals. These written comments are summarized in Section 3.2.1 and are included as Appendix A to this EIR.

1.5.2 Public Scoping Meeting

The OHMVR Division held a public scoping meeting on February 17, 2015 in the City of Grover Beach, CA. The OHMVR Division provided notice of this meeting in the revised NOP. One agency representative (SLOAPCD) and six interested individuals attended the meeting. Oral comments heard at this scoping meeting are summarized in Section 3.2.2 No written comments were received at the meeting.

1.5.3 Native American Consultation

In compliance with CDPR's *Departmental Notice 2007 Native American Consultation Policy and Implementation Procedures*, Native American consultation has occurred as part of the environmental review of this project. Native American consultation included a record search request of the Native American Heritage Commission's (NAHC) Sacred Lands Files on January 9, 2013 and a consultation meeting at the Oceano Dunes District on March 28, 2013. Sections 3.3.1 and 8.2.4 summarize the results of the record search and the consultation meeting.

1.5.4 U.S. Fish and Wildlife Service / California Department of Fish and Wildlife Coordination

The OHMVR Division met with representatives of the USFWS and CDFW in June and July 2013 to discuss long-term implementation of the Dust Control Program in consideration of federal and state endangered species act permitting requirements. Section 3.3.2 provides additional information on this coordination.

1.5.5 EIR Scope and Content

In accordance with CEQA Guidelines Section 15126, this EIR identifies and focuses on the potentially significant environmental effects of the proposed project, as determined based on the project description contained in this EIR, oral comments received at the public scoping meeting for the EIR on February 17, 2015, and written comments received during the public review period for the NOP (February 6, 2015 to March 9, 2015). Accordingly, this EIR focuses on one or more significant impacts to the following resource areas identified in Appendix G to the State CEQA Guidelines: Recreation, Land Use and Planning, Aesthetics, Biological Resources, Cultural Resources, Hydrology and Water Quality, and Noise. Section 3.4 provides more information on the project's impacts found not to be significant.

1.6 REFERENCES

California Air Resources Board (CARB) 2014. Glossary of Air Pollution Terms.

_____2016. Air Quality and Meteorological Information System. n.d. Web. April 6, 2016. <http://www.arb.ca.gov/aqmis2/aqdselect.php >

California Geological Survey (CGS) 2007. "Review of Vegetation Islands, Executive Summary, Oceano Dunes SVRA." Prepared for the Off-Highway Motor Vehicle Recreation Division. Sacramento, CA. August 30, 2007.

Desert Research Institute (DRI) 2011. *Oceano Dunes Pilot Projects Final Report*. DRI. Reno, Nevada. September 15, 2011.

_____2014. Wind and PM10 Characteristics at the ODSVRA from the 2013 Assessment Monitoring Network. DRI. Reno, Nevada. September 22, 2014.

_____2015a. 2013 Intensive Wind Erodibiliy Measurements at and Near the Oceano Dunes SVRA: Report of Findings. DRI. Reno, Nevada. July 20, 2105.

_____2015b Addendum to the PI-SWERL Report of Etymezian et. Al. (2014) – Particle Size Distribution Characteristics and PI-SWERL PM10 Emission Measurements: Oceano Dunes SVRA. DRI. Reno, Nevada. July 2015.

_____2015c. Dust Control Project ODSVRA 2016. DRI. Reno, Nevada. December 2015.

Jaison 2012. Greg Jaison, University of Southampton. 2012.

San Luis Obispo County Air Pollution Control District (SLOAPCD) 2002. Rule 105 – Definitions. Adopted August 2, 1976, amended March 26, 2002.

_____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.

_____2013a. *2012 Annual Air Quality Report.* San Luis Obispo, CA. November 2013.

_____2013b. *South County Community Monitoring Project.* San Luis Obispo, CA. January 2013.

_____2014a. *2013 Annual Air Quality Report.* San Luis Obispo, CA. September 2014.

_____2014b. "2013 Annual Air Quality Report" [PowerPoint Presentation]. 2014.

_____2016. *2014 Annual Air Quality Report.* San Luis Obispo, CA. January 2016..

United States Environmental Protection Agency (USEPA) 2016a. "Particulate Matter (PM)." *Particulate Matter.* U.S. EPA, Science and Technology [Air], National Ambient Air Quality Standards, Six Principal Pollutants. February 23, 2016. Web. April 6, 2016. <http://www.epa.gov/airquality/particlepollution/>

_____2016b. "Health." *Health.* U.S. EPA, Science and Technology [Air], National Ambient Air Quality Standards, Six Principal Pollutants, Particulate Matter. February 23, 2016. Web. April 6, 2016. <http://www.epa.gov/airquality/particlepollution/health.html>

_____ 2016c. "Basic Information." *Particulate Matter.* U.S. EPA, Science and Technology [Air], National Ambient Air Quality Standards, Six Principal Pollutants. February 23, 2016. Web. April 6, 2016. <https://www3.epa.gov/airquality/particlepollution/basic.html>

Zeldin and Tupper 2015. Zeldin, Mel and Karl Tupper. *2015 Update #1 To A Methodology to Determine Annual Effectiveness of Mitigation Techniques in the ODSVRA.* n.p. 2015.

CHAPTER 2 PROJECT DESCRIPTION

The OHMVR Division's proposed Oceano Dunes SVRA Dust Control Program is intended to control and minimize saltation-generated dust and PM emissions that are produced at Oceano Dunes SVRA during periods of strong, persistent winds, and subsequently blown downwind of the SVRA and onto the Nipomo Mesa. In general, the proposed Dust Control Program, as called for in Rule 1001, would involve an iterative series of dust control activities that would be evaluated and revised as necessary to meet goals set by the OHMVR Division, SLOAPCD, and CARB, which as outlined in the Rule 1001 settlement agreement, are to "achieve an immediate goal of meeting the Federal PM10 standard at the monitor located on the Nipomo Mesa known as CDF and to provide ongoing progress toward achieving the State PM10 standards and meet the standards set forth in Rule 1001."

The OHMVR Division would accomplish this by planting vegetation and deploying seasonal dust control measures such as wind fencing (or equivalent control measures) at Oceano Dunes SVRA. Planting vegetation and deploying seasonal dust control measures would occur annually. The OHMVR Division would plant approximately 20 acres of native dune vegetation, and deploy approximately 40 acres of seasonal dust control measures per year for a period of five years (seasonal measures could be installed as early as March 1 and removed as late as September 30). These activities would take place on approximately 690 acres of land within Oceano Dunes SVRA that are located upwind of the Nipomo Mesa. SLOAPCD and OHMVR Division studies have identified this area as the area most likely area influencing air quality downwind of Oceano Dunes SVRA. Dust and meteorological monitoring to support these activities would also occur under the Dust Control Program. The OHMVR Division may also plant trees in an approximately 295-acre area located immediately downwind of Oceano Dunes SVRA.

The proposed Dust Control Program also includes track-out prevention activities on Grand Avenue in the City of Grover Beach and Pier Avenue in the unincorporated community of Oceano; however, these activities would not occur annually. Rather, the OHMVR Division would install track-out prevention infrastructure, operate, and maintain this equipment for the useful life of the infrastructure, which is assumed to be five years or more.

2.1 DUST CONTROL PROGRAM OBJECTIVES

The OHMVR Division's objectives for the proposed Dust Control Program are:

1) Control and minimize saltation-generated dust and PM produced at Oceano Dunes SVRA during periods of strong, persistent winds.
2) Reduce concentrations of PM10 measured at the SLOAPCD's CDF ambient air quality monitoring station.
3) Make ongoing and best possible progress towards compliance with SLOAPCD Rule 1001 performance standard.
4) Maintain existing public access routes into, out of, and within Pismo State Beach and Oceano Dunes SVRA to the maximum extent feasible and consistent with public safety and environmental protection needs.
5) Maintain existing coastal recreation opportunities (especially coastal OHV recreational opportunities), visitor levels, and visitor-serving facilities (including campsites) at Pismo State Beach and Oceano Dunes SVRA to the maximum extent feasible and consistent with public safety needs and OHMVR Division legislative mandates.

6) Plant vegetation and deploy seasonal dust control measures in scientifically-defensible locations that balance the need to implement a comprehensive dust control Program and manage, protect, and conserve cultural, natural, and recreational resources at Pismo State Beach and Oceano Dunes SVRA.

7) Deploy temporary monitoring equipment that scientifically supports the selection of areas to plant vegetation and deploy seasonal dust control measures and evaluates the effectiveness of these activities.

8) Install, operate, and maintain equipment that prevents the track-out of sand by vehicles exiting onto paved, public roads and minimizes, to the maximum extent possible, vehicle queuing and delays when visitors exit Oceano Dunes SVRA and Pismo State Beach.

9) Continue to implement existing dust-control related activities at Oceano Dunes SVRA and Pismo State Beach.

2.2 OCEANO DUNES SVRA OVERVIEW

This section provides a general overview of the location, setting, recreational opportunities, resource management considerations, and existing dust control activities taking place at Oceano Dunes SVRA.

2.2.1 Location and Access

Located on California's central coast, in southwestern SLO County, Oceano Dunes SVRA (as measured from the center of the park) is approximately 12 miles south of the City of SLO, west of State Route (SR) 1 and U.S. Highway 101 (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 Halcyon (1.5 miles east), Nipomo and the Nipomo Mesa (1 mile east), and Guadalupe (3 miles south). Both parks are located within the Coastal Zone established by the California Coastal Act. Figure 2-1 shows the location of Oceano Dunes SVRA and the proposed Oceano Dunes SVRA Dust Control Program.

As shown in Figure 2-1, Oceano Dunes SVRA is adjacent to and contiguous with Pismo State Beach, and Pismo Dunes Natural Preserve, which is a sub-unit of Pismo State Beach. From an overview perspective, it is important to note that Oceano Dunes SVRA and Pismo State Beach are separate units of the State Parks system; however, the two parks provide similar beach and coastal recreation opportunities, including street-legal and OHV recreation opportunities in designated areas, which attract visitors from throughout the state (see Section 2.2.5 below). The two parks also share certain property boundaries; Pismo State Beach is adjacent to and contiguous with the SVRA's northern property boundary and most of the SVRA's western property boundary.

Pismo State Beach can be accessed from SR 1 primarily via Grand Avenue in the City of Grover Beach or Pier Avenue in Oceano. These entrances provide sand ramps that lead vehicles down onto the beach and serve as the primary access to Oceano Dunes SVRA.

Proposed Dust Control Program area
Potential tree planting area
Proposed trackout prevention site
Existing air quality monitor
Oceano Dunes SVRA
Pismo State Beach
Coastal Zone boundary
County line
Urban areas
Highway
Major road

Figure 2-1 Dust Control Program Location

Oceano Dunes SVRA Dust Control Program – Draft Program EIR

2.2.2 Dune Setting

Oceano Dunes SVRA and Pismo State Beach stretch along approximately nine miles of California's central coast.

Regionally, the parks are located within the Nipomo Dunes-Point Sal Coastal Area, which has been designated as a National Natural Landmark. According to the National Registry of Natural Landmarks, the Nipomo Dunes-Point Sal Coastal Area contains the largest, relatively undisturbed coastal dune tract in California, and is one of the last remaining tracts of pristine rocky coastline in the South Coast Ranges (NPS 2012). The area is a popular scenic destination and is known for dramatic coastal views, long stretches of shoreline, and unique dune systems.

Geologically, Oceano Dunes SVRA and Pismo State Beach lie within the northern portion of the Guadalupe-Nipomo Dune Complex, which extends approximately 18 miles along the shore and 31 miles inland (see Figure 1-1). This dune complex formed because the two main needs for coastal dune development, sand supply and effective onshore winds, are present in the area (Orme and Tchakerian 1986). The amount of sand and finer material carried onshore to the dunes that lie between Arroyo Grande Creek (just south of Grand Avenue in Pismo State Beach) and the Santa Maria River has been estimated at between 125,000 and 400,000 cubic yards per year (Bowen and Inman 1966, Mulligan 1985). Oceano Dunes SVRA and Pismo State Beach are located within the more recent dune deposits, estimated to be approximately 3,000 years old. The Nipomo Mesa, which is located downwind of Oceano Dunes SVRA, consists of older dune deposits (6,000 to 25,000 years old) and is much higher in elevation (approximately 250 feet above mean sea level) than the shoreline, although some dunes within Oceano Dunes SVRA can reach approximately 200 feet in height (Orme and Tchakerian 1986). The difference in elevation between the older and newer dune systems is the result of changes in sea level over time.

CGS estimates, based on a review of sequential aerial photography, that the rate of dune advancement within Oceano Dunes SVRA ranges from 6 to 18 feet per year along dune slip faces (the side of the dune in away from the wind) in open sand areas and 1 to 7 feet per year along slip faces west of vegetated dune areas (CGS 2007). The slow movement of sand dunes over time is a naturally occurring process, but can disturb resources and infrastructure in and near the beach and dunes. For example, wind-blown sand is a nuisance to businesses and residences on Grand Avenue (in Grover Beach) and Pier Avenue and Strand Way (in Oceano). Wind-blown sand also encroaches upon park infrastructure and vegetation, and the OHMVR Division actively protects these and other resources from encroaching sand dunes (see Sections 2.2.6.1 and 2.2.7.1).

Despite the sometimes harsh nature of a coastal dune environment, vegetation is able to colonize, persist, and slowly expand on the dunes. Older dune formations have more developed soils and a greater capacity to support a greater number of plants and plant communities, including live oak woodlands, chaparral, and coastal sage scrub habitats. Younger dunes are typically limited to dune scrub vegetation, with the youngest dunes dominated by pioneering dune plants such as sand verbena (*Abronia* spp.). Within the portion of Oceano Dunes SVRA where vehicle activity is permitted, vegetation is generally limited to protected (i.e., fenced) areas. In 2007, CGS, at the request of CDPR, examined 20 vegetation islands located within or adjacent to Oceano Dunes SVRA. A relevant summary of historical changes in land use and vegetation is included in this report:

> Changes that affected development of the various dune complexes and their vegetation included: natural and Native American-induced fires in the 1700's; Spanish exploration and settlement in the 1800's; continued subdivision of large ranchos, the completion of

> railroad lines, and the conversion of land for grazing, agriculture and urban purposes; and the appearance of industrial (i.e., petroleum development and sand mining), military, and recreational land uses in the 1900's. Vegetation in the dunes was also affected by the introduction of cars along the beaches in the early 1900's; the use of some dunes in large movie productions; and the use of vegetated dunes and vegetation islands as homes by the Dunites until the early 1970's . . .
>
> Non-native, invasive beach grasses were introduced on the northern Callender dune area near Pismo Beach, and the west side of Pavilion Hill around 1905 . . . Following World War II, the use of jeeps on the beaches and open dune areas became popular. However, until dune buggy use began in the late 1950's, [OHV] use on the back dunes was limited; i.e., until about 1965, vehicle use on the property owned by [CDPR] was a combination of street and camping vehicles along the beach and in the vicinity of Oso Flaco Lake, and dune buggies in the back country . . . In 1983, when [Oceano Dunes SVRA] was established, Oso Flaco Lake was closed to OHVs, and by 1984, OHVs within the Callender dunes and other dune sheets were prohibited except within the fenced areas of the SVRA.
>
> At the time [Oceano Dunes SVRA] was established for OHV recreational use, [CDPR] adopted the policy that there would be no net loss of vegetation throughout the park. Numerous maintenance and revegetation efforts were initiated, including straw mulching and hydroseeding in the vicinity of 40-Acre Woods and Oso Flaco Lake in 1986/87 and the establishment of foredunes northwest and west of Oso Flaco Lake between 1989 and 1992 . . .
>
> Since 1985, efforts by [CDPR] to maintain vegetation within [Oceano Dunes SVRA] while providing OHV ride areas have, in general, proven to be effective. Even though unfenced vegetation in portions of the ride area has disappeared, the total acreage of vegetation within [Oceano Dunes SVRA] has increased. According to a recent GIS analysis of aerial photos by [CDPR] (Shanaberger 2007), vegetation within the ride area of [Oceano Dunes SVRA] increased from 142.4 total acres in 1985 to 222.9 total acres in 2003; i.e., an increase of 80.5 total acres. Of these, [Oceano Dunes SVRA] has gained 123.2 acres of new vegetation, lost 42.8 acres of vegetation, and 99.7 acres remained unchanged . . . (CGS 2007, pp: 6-8).

A subsequent mapping analysis performed by CGS in 2010, in which the amount of vegetation shown on aerial photos taken in 1930 and 1939 was compared with the amount of vegetation shown on 2010 aerial imagery, also indicate a similar trend at Oceano Dunes SVRA (both riding and non-riding areas): Since the 1930's, the area has lost 254 acres of vegetation and gained 450 acres of vegetation, for a net gain of 196 acres. Most of the vegetation loss since 1930 occurred in a north-south trending line of vegetation islands approximately 0.4 miles from the shore.

2.2.3 Surrounding Land Use

Oceano Dunes SVRA, which is the more southern of the two parks, is surrounded by less commercial and residential development than Pismo State Beach, which is generally bordered by beach front and other development associated with Pismo Beach, Grover Beach, and Oceano. In contrast, the SVRA is generally bordered and surrounded by mostly undeveloped lands up to SR 1, including the Pismo Dunes Natural Preserve to the north, the Guadalupe-Nipomo Dunes National Wildlife Refuge to the south, and agricultural and private recreational / open space lands to the east. The largest development between the SVRA and SR 1 is the Phillips 66 refinery, which has been in operation since 1955.

Approximately five miles east of the SVRA, land use historically consisted of rural residences, agricultural and greenhouse operations, and gentle, rolling hills covered with eucalyptus trees (SLO County 1998). This area was part of the higher, older sand dunes and has always been subject to wind-generated dust emissions, buffered to some extent by the eucalyptus groves. In December 1998, SLO County approved the Woodlands Specific Plan, which permits up to 1,320 total residential units on approximately 300 acres of land southeast of the SVRA, plus other recreational (e.g., golf course) and commercial land uses. Construction of homes and other facilities envisioned in the Woodlands Specific Plan began in the early 2000's, and resulted in the loss of large tracts of mostly non-native, eucalyptus groves.

2.2.4 Recreational Opportunities

Together, Oceano Dunes SVRA and Pismo State Beach provide public recreation on nearly 4,100 acres of state-owned and -operated lands. The amount and type of managed recreation lands at Oceano Dunes SVRA and Pismo State Beach are summarized in Table 2-1 and shown in Figure 2-2. For discussion purposes, although Oceano Dunes SVRA and Pismo State Beach are separate units of the State Parks system, it is easier to discuss the parts of these two parks where vehicular recreation is allowed as a whole, rather than separately.

Table 2-1 Managed Recreation Lands at Pismo State Beach and Oceano Dunes SVRA

Park Unit	Motorized Recreation Allowed(A)	Motorized Recreation Not Allowed(B)	Closed to all Public Recreation	Total Park Size
Pismo State Beach(C)	307 Acres	1,126 Acres	76 Acres	1,509 Acres
Oceano Dunes SVRA	1,224 Acres	1,428 Acres	845 Acres	3,497 Acres
Total Managed Lands	1,531 Acres(D)	2,554 Acres	921 Acres	5,005 Acres(E)

(A) Motorized recreation includes street-legal and OHV recreation lands.
(B) Area refers to the portions of Oceano Dunes SVRA and Pismo State Beach that are closed to motorized recreation; however, non-motorized recreation is also permitted in areas where motorized recreation is allowed.
(C) Pismo State Beach totals include the Pismo Dunes Natural Preserve, which consists of approximately 696 acres of non-vehicular recreation lands, and Pismo Lake (approximately 70 acres), which is closed to public recreation. Pismo Lake is not officially a part of Pismo State Beach; however, it is managed by the Oceano Dunes District and thus included in this table for consistency purposes.
(D) OHV recreation is allowed on only approximately 1,450 acres.
(E) Rounding of the above numbers results in 5,006 acres, but the Oceano Dunes District manages 5,005 acres.

Source: California State Parks; MIG|TRA

- Proposed Dust Control Program area
- Potential tree planting area
- Oceano Dunes SVRA
- Pismo State Beach
- Marker post
- Existing air quality monitor
- Sand highway (approximately)
- Closed to all public use
- Closed to motorized vehicles
- Open riding and camping
- Street legal vehicles only

Figure 2-2 Managed Recreation Lands

Oceano Dunes SVRA Dust Control Program – Draft Program EIR

2.2.4.1 Recreational History

Vehicular and non-vehicular recreation has been occurring at the Guadalupe-Nipomo Dunes for at least 80 years. In 1934, CDPR (then known as the California Department of Natural Resources) began acquiring the lands that would eventually become Pismo State Beach and Oceano Dunes SVRA. Additional acquisition occurred in 1949, 1951, 1958 to 1964, and 1974 (CDPR 1975). In 1975, CDPR approved a General Development Plan and Resource Management Plan to guide the future growth and management of resources at the present-day Pismo State Beach and Oceano Dunes SVRA (formerly Pismo Dunes SVRA). Use of the area comprising Oceano Dunes SVRA for OHV recreation grew in popularity over time. Prior to the 1980s, vehicles could be operated throughout the open sand areas that stretch from Pismo State Beach in SLO County to Mussel Point in Santa Barbara County (CCC 2001). In 1982, the OHMVR Division began administering Oceano Dunes SVRA and implementing many of the management practices that are in place today (see Section 2.2.6), such as the installation of fencing along the SVRA perimeter where vehicle recreation is allowed.

2.2.4.2 Coastal Development Permit 4-82-300

In June 1982, the CCC approved CDP 4-82-300 to construct 35,000 feet (about 7 miles) of fencing to protect vegetated dunes and wetland areas at Oceano Dunes SVRA and to place access kiosks at Grand Avenue and Pier Avenue. This permit was subject to certain conditions, including six special conditions related to (1) interim and permanent staging areas, (2) control of access to the park, (3) control of uses within the park, (4) restoration activities, (5) protection of archeological resources, and (6) annual review. As part of these conditions, beach camping was restricted to a maximum of 500 units (Condition 3B).

The CDP has evolved since its original adoption in 1982, as follows:

- In August 1982, Amendment 1 approved moving the location of the interim staging area (Condition 3A), and provided for more specific fencing requirements (Condition 3E).
- In June 1983, Amendment 2 approved an increase in camping spaces from 500 to 1000 (Condition 3B).
- In August 1984, Amendment 3 modified condition 3(E)(a) to alter fence alignments.
- In October 1991, Amendment 4 eliminated equestrian access over the Oso Flaco causeway, and in the vicinity of Oso Flaco Lake, and allowed gate construction at the east entrance of the parking lot across Oso Flaco Lake Road.
- In May 2001, the CCC approved Amendment A5 as a means of fulfilling Conditions 3B, 3D and 6 of CDP 4-82-300. Conditions 3B, 3D, and 6 addressed use and use limits, including how limits were to be established. Amendment 5 instituted interim vehicle use limits at Oceano Dunes SVRA and required establishment of an interagency Technical Review Team to act as an advisory body to the Oceano Dunes District Superintendent in order to manage vehicle impacts on the SVRA ecosystems.

The OHMVR Division continues to manage Oceano Dunes SVRA in compliance with CDP 4-82-300, as amended, as follows:

1) *Interim and Permanent Staging Areas:* The OHMVR Division continues to operate an OHV staging south of marker post 2. The OHMVR Division has twice evaluated potential sites for alternative access and associated staging areas – in 1991 (CDPR 1991) as part of its General Plan Amendment (CDPR 1994) and in 2006 (CDPR 1994, Condor

Environmental 2006). In both instances, the evaluations concluded that the continued use of Grand Avenue and Pier Avenue for access and the current location of the staging area is the environmentally preferred alternative. A General Plan Amendment formalizing the staging area as permanent was approved by the OHMVR Division and the California State Park and Recreation Commission in 1994 (California State Park and Recreation Commission 1994).

2) *Control of Access to the Park:* All vehicular access and egress continues to be via Grand Avenue and Pier Avenue kiosks, and vehicle barriers remain in place at the southern end of the Oso Flaco causeway.

3) *Control of Uses within the Park:* Street-legal and OHV activity is restricted to authorized areas only via fencing, signage, and enforcement activities. Camping and vehicle limits remain in effect consistent with CDP 4-82-300.

4) *Restoration:* The OHMVR Division continues to enhance and protect dune habitat, as described in Section 2.2.6.1.

5) *Protection of Archaeological Resources:* The OHMVR Division continues to install and maintain fencing to protect archaeological resources, as described in Section 2.2.6.3.

6) *Annual Review:* On March 3, 2016, the OHMVR Division submitted its 15th annual Technical Review Team report to the CCC. This report summarizes California least tern and western snowy plover nesting results for the 2015 breeding season, research and management priorities identified by the Technical Review Team, and reviews Technical Review Team recommendations made in 2014.

The OHMVR Division is not proposing to perform any activities that would change compliance with existing CDP 4-82-300 conditions, as amended. The OHMVR Division would fence any vegetation planted under the Dust Control Program and would continue to preserve in place all sensitive cultural resources at Oceano Dunes SVRA.

2.2.4.3 Existing Vehicular Recreation

Vehicular recreation is permitted in only certain areas at Oceano Dunes SVRA and Pismo State Beach. The area in which visitors are allowed to drive their vehicles on the beach starts at the Grand Avenue sand ramp, in Pismo State Beach, and extends approximately six miles south to the southern boundary of the SVRA's open riding and camping area (see Figure 2-2). For orientation purposes, marker posts are placed in half mile intervals along the beach beginning approximately 2.0 miles south of Grand Avenue and 0.8 miles south of Pier Avenue. The area between Grand Avenue and marker post 2 is designated as a day use area and is restricted to street-legal vehicle use only by CDP 4-82-300. This area is 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. This area is also used by visitors towing their vehicles into Oceano Dunes SVRA.

Beginning south of marker post 2, camping and OHV uses are allowed. There are approximately 1,450 acres of lands managed for OHV recreation at Oceano Dunes SVRA and Pismo State Beach. The width of the area open to OHV recreation varies from as little as approximately 400 feet in the vicinity of marker posts 2 and 3 to as much as approximately 1.3 miles in the center of Oceano Dunes SVRA. In general, the area open to OHV recreational opportunities is bound by a perimeter fence that prevents OHV access from occurring in unauthorized areas. CDP 4-82-300 sets an interim limit on vehicle day-use of 4,300 vehicles per day, including 1,720 OHVs (at any given time).

2.2.4.4 Existing Non-Vehicular Recreation

Non-vehicular recreation opportunities such as fishing, hiking, wildlife viewing, etc. are generally allowed throughout most of Oceano Dunes SVRA and Pismo State Beach, although some areas of the park are closed to all public access and use (see Figure 2-2).

Camping is permitted within Oceano Dunes SVRA. CDP 4-82-300 has generally limited the amount of overnight camping units permitted within Oceano Dunes SVRA (see CDP 4-82-300 discussion above). Amendment 5 to this CDP, approved in 2001, sets an interim limit of 1,000 overnight camping units at Oceano Dunes SVRA (defined as one street-legal vehicle that enters the park under its own power), although the permit limit does not apply on Memorial Day, July 4th, Labor Day, and Thanksgiving. There are no designated campsites; however, on a typical day most camping activity occurs near the beach, between marker posts 2 and 5. During busy periods (holidays and weekends) camping activity can extend farther south and inland.

The 1,000 individual camp sites at Oceano Dunes SVRA and Pismo State Beach represent approximately seven percent of the 14,472 total individual and group camp sites in the State Parks system (California State Parks 2015). Of all campsites within the State Parks' system, approximately 6,200 (43%) are in coastal parks. The 1,000 individual campsites at Oceano Dunes SVRA represent a large proportion (approximately 16%) of the available coastal camping sites in the state.

2.2.5 Visitation Levels

The ability to camp and drive your vehicle on the beach and sand dunes is a unique recreational opportunity that attracts visitors from throughout the state and country to Oceano Dunes SVRA and Pismo State Beach. From 2012 to 2014, visitation to both parks averaged approximately 2.3 million, with 1.7 million visitors to Oceano Dunes SVRA and 600,000 visitors to Pismo State Beach (CDPR 2013, 2014, 2015). Based on a survey of more than 800 visitors to Oceano Dunes SVRA, park visitors come from the Bay Area, Sacramento, Central Valley, and southern California, as well as SLO County (SMG 2011). Seventy percent of survey respondents indicated they were overnight visitors, and approximately 50 percent indicated they camped overnight at Oceano Dunes SVRA and Pismo State Beach (SMG 2011).

In general, daily visitation to Oceano Dunes SVRA is lowest during Monday thru Thursday and highest on the weekend. Seasonally, visitation increases during the summer months (late May to early September) and is lower during the fall, winter, and spring, other than holiday weekends such as Thanksgiving and Christmas.

2.2.6 Natural and Cultural Resources Management Activities

Pismo State Beach and Oceano Dunes SVRA contain special resources and infrastructure that the OHMVR Division actively manages as part of its responsibility to maintain, administer, and operate these parks for ecologically balanced and sustained vehicular recreational use. Brief descriptions of pertinent management operations are provided below. Unless otherwise noted, this EIR considers the resource management activities described below as part of the baseline environmental conditions against which the the proposed Dust Control Program's potential environmental impacts are evaluated.

2.2.6.1 Vegetation / Dune Restoration

The OHMVR Division has planted and maintained vegetation in dune habitats within Oceano Dunes SVRA since it began managing the park in 1982. This vegetation is planted to enhance the habitat characteristics of existing vegetated areas present within Oceano Dunes SVRA and/or

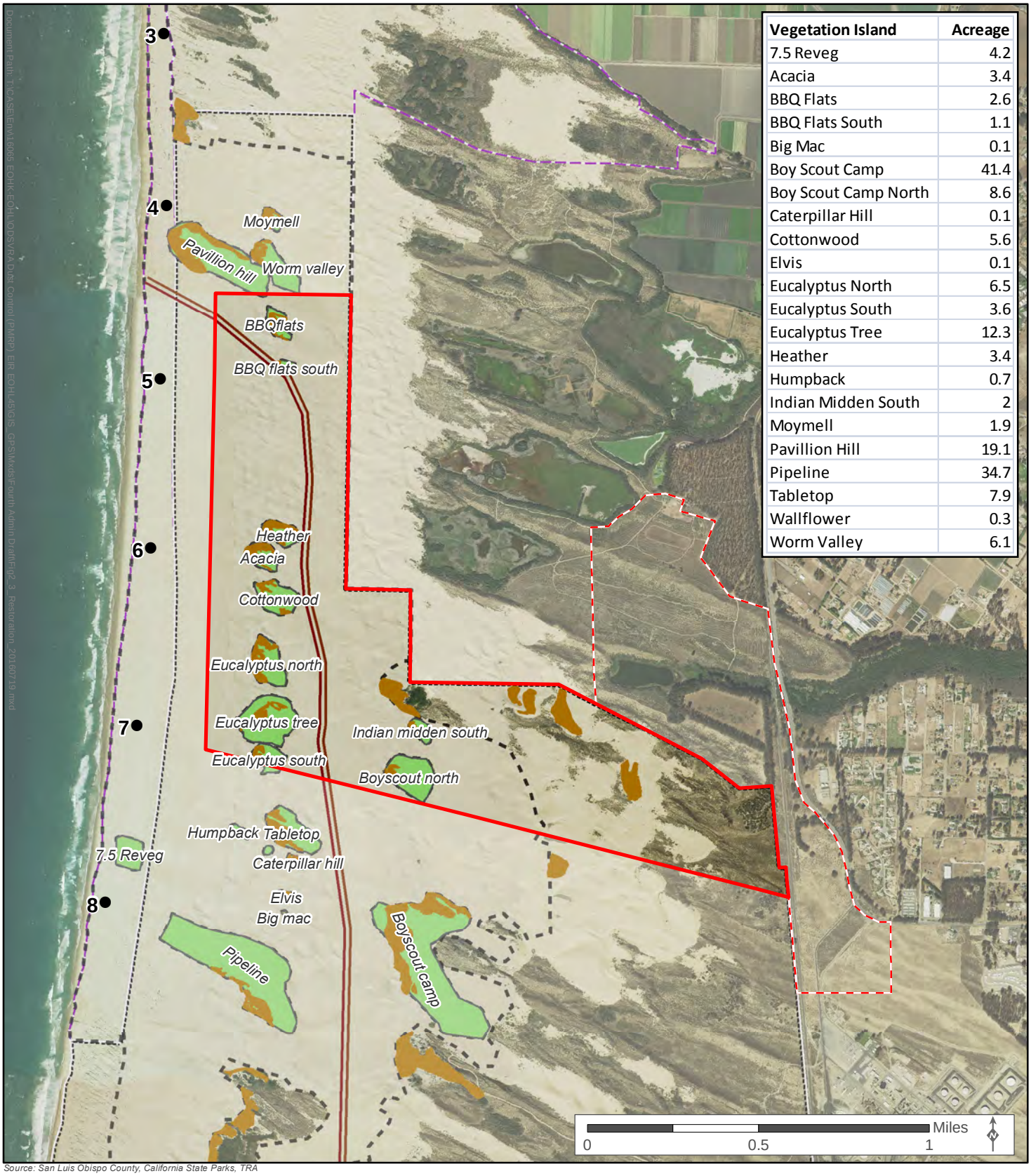
protect sensitive habitat areas (such as Oso Flaco Lake) and critical park infrastructure (such as access roads) from encroaching sand dunes. By way of example, the OHMVR Division planted approximately 140 total acres of vegetation at Oceano Dunes SVRA during the ten-year period between the 2006 / 2007 and 2015 / 2016 planting seasons (see Figure 2-3). Most of this vegetation was planted on sandy areas adjacent to existing vegetation islands or other vegetated areas in the southern half of Oceano Dunes SVRA, and thus merely replenished and restored vegetation recently buried by encroaching sand dunes. In contrast, approximately five acres of vegetation per year, on average, was planted in an area where vegetation did not previously exist (i.e., the planting established a new vegetated area as opposed to restoring a previously vegetated area); these new vegetated areas were all established outside the Oceano Dunes SVRA open riding and camping area.

The OHMVR Division's ongoing vegetation activities are performed in a manner consistent with existing Oceano Dunes SVRA CDP 4-82-300-A5 and therefore do not require a new or amended CDP from the CCC. The OHMVR Division will continue to plant vegetation to restore and enhance vegetation islands and protect sensitive habitat areas and park infrastructure within Oceano Dunes SVRA. As such, this ongoing activity is also not part of the proposed Dust Control Program evaluated in this EIR; however, the combined impacts from future planting activity activity and the proposed Dust Control Program are analyzed in Chapter 11 of this EIR (Cumulative Impacts).

2.2.6.2 Wildlife Habitat Protection

Pismo State Beach and Oceano Dunes SVRA contain a variety of habitats that support different plant and wildlife species, some of which are special-status species protected by various federal and state laws. OHMVR Division environmental scientists have mapped and designated sensitive habitats throughout Pismo State Beach and Oceano Dunes SVRA, including riparian corridors, ponds, known locations of special-status plants, and other habitat features. Park environmental scientists monitor and manage these areas to reduce potential recreational impacts, control invasive exotic species, and address other resource needs. In general, the OHMVR Division protects sensitive habitat areas, including existing vegetation islands, with perimeter fences that require regular maintenance due to the shifting nature of the sand dunes; the shifting sands also necessitate planting to maintain the existing vegetated islands and prevent burial / loss of the vegetation island over time. In addition, park management includes a substantial, ongoing effort to enhance habitat for the western snowy plover (*Charadrius nivosus nivosus*; federal-listed as threatened) and California least tern and to protect these species' nesting sites. As part of this effort, the OHMVR Division temporarily installs fencing to protect nesting western snowy plover and California least tern from March 1 to September 30 each year. This seasonal nesting exclosure is approximately 300-acres in size, most of which (about 284 acres) is located within the area where OHV recreational activities are permitted[4]. The Dust Control Program does not encompass any of this seasonal nesting exclosure. Chapter 7, Biological Resources, provides more information on sensitive habitats and special-status species in the project area and the management activities the OHMVR Division undertakes to protect these resources.

[4] The OHMVR Division is required to install fencing a minimum of 100 meters (roughly 300 feet) from least tern nests. This means that if a nest is present near the exclosure fencing, "bump-outs" must be installed to provide the 100-meter buffer. These bump outs can increase the size of the nesting exclosure, sometimes by as much as approximately 15 acres. Thus, the size of the nesting exclosure varies slightly from year to year. For the purposes of this EIR, the exclosure is presumed to be 300 total acres in size, most of which (about 284 acres) is located in the area where OHV recreational activities are permitted.



Vegetation Island	Acreage
7.5 Reveg	4.2
Acacia	3.4
BBQ Flats	2.6
BBQ Flats South	1.1
Big Mac	0.1
Boy Scout Camp	41.4
Boy Scout Camp North	8.6
Caterpillar Hill	0.1
Cottonwood	5.6
Elvis	0.1
Eucalyptus North	6.5
Eucalyptus South	3.6
Eucalyptus Tree	12.3
Heather	3.4
Humpback	0.7
Indian Midden South	2
Moymell	1.9
Pavillion Hill	19.1
Pipeline	34.7
Tabletop	7.9
Wallflower	0.3
Worm Valley	6.1

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

Proposed Dust Control Program area
Potential tree planting area
Oceano Dunes SVRA
Pismo State Beach
Marker post
Open riding and camping area
Sand Highway, approximately
Existing vegetation island
Recent vegetation / dune restoration project

Figure 2-3 Vegetation Islands and Recent Restoration Activities

The OHMVR Division's ongoing wildlife habitat protection measures are performed in a manner consistent with existing Oceano Dunes SVRA CDP 4-82-300-A5 and therefore do not require a new or amended CDP from the CCC. The OHMVR Division will continue to protect sensitive habitat areas within Oceano Dunes SVRA, including California least tern and western snowy plover nest site. As such, this ongoing activity is also not part of the proposed Dust Control Program evaluated in this EIR; however, the combined impacts from the continued implementation of a seasonal nesting exclosure and the proposed Dust Control Program are analyzed in Chapter 11 of this EIR (Cumulative Impacts).

2.2.6.3 Cultural Resources Protection

The OHMVR Division protects cultural resources at Pismo State Beach and Oceano Dunes SVRA by installing and maintaining perimeter fencing that prevents unauthorized recreational access (both vehicular and non-vehicular). Chapter 8, Cultural Resources, provides more information on cultural and archaeological resources present at and in the vicinity of Oceano Dunes SVRA. The OHMVR Division's ongoing cultural protection measures are performed in a manner consistent with existing Oceano Dunes SVRA CDP 4-82-300-A5 and therefore do not require a new or amended CDP from the CCC. The OHMVR Division will continue to maintain cultural resources within Oceano Dunes SVRA. As such, this ongoing activity is also not part of the proposed Dust Control Program evaluated in this EIR; however, the combined impacts from the continued protection of cultural resources and the proposed Dust Control Program are analyzed in Chapter 11 of this EIR (Cumulative Impacts).

2.2.7 Ongoing and Completed Dust Control Activities

The OHMVR Division currently undertakes or has recently undertaken a number of dust control and monitoring activities at Oceano Dunes SVRA and Pismo State Beach. These ongoing and completed activities are depicted on Figure 2-4. As noted below, some of these ongoing and completed activities are part of the baseline environmental conditions and some are not.

2.2.7.1 Ongoing Grand Avenue, Pier Avenue, and Strand Way Sand Management

From approximately March to July of each year, the OHMVR Division installs approximately 1,700 linear of four-foot-high, orange-colored wind fencing directly upwind of Grand Avenue in Grover Beach and Pier Avenue and Strand Way in Oceano (see Figure 2-4). The OHMVR Division installs this fencing to control natural sand drift from the beach onto public roads, parking areas, and other structures such as residences that front the southern portion of Pismo Beach. Although the OHMVR Division does not install this fencing explicitly for the purposes of preventing track-out of sand onto paved, public roadways, it nonetheless does capture a large amount of sand that would otherwise be blown up the sand ramps that provide access to Pismo State Beach and Oceano Dunes SVRA. Without this fencing, this sand would deposit on public roadways and be prone to movement from vehicles and wind. The OHMVR Division's installation of seasonal wind fencing upwind of Grand Avenue is exempt from CDP requirements, and the fencing upwind of Pier Avenue and Strand Way is performed in a manner consistent with an existing CDP Waiver (3-08-041W). This season wind fencing is part of the baseline environmental conditions at Pismo State Beach and Oceano Dunes SVRA. Nonetheless, the OHMVR Division has included the seasonal installation of approximately 1,700 linear feet of wind fencing upwind of Grand Avenue, Pier Avenue, and Strand Way in its Dust Control Program CDP application and the proposed Dust Control Program would merely continue this ongoing activity. As such, the continued installation of seasonal fencing upwind of Grand Avenue, Pier Avenue, and Strand Way does not represent a new change to the physical environment that requires detailed analysis.

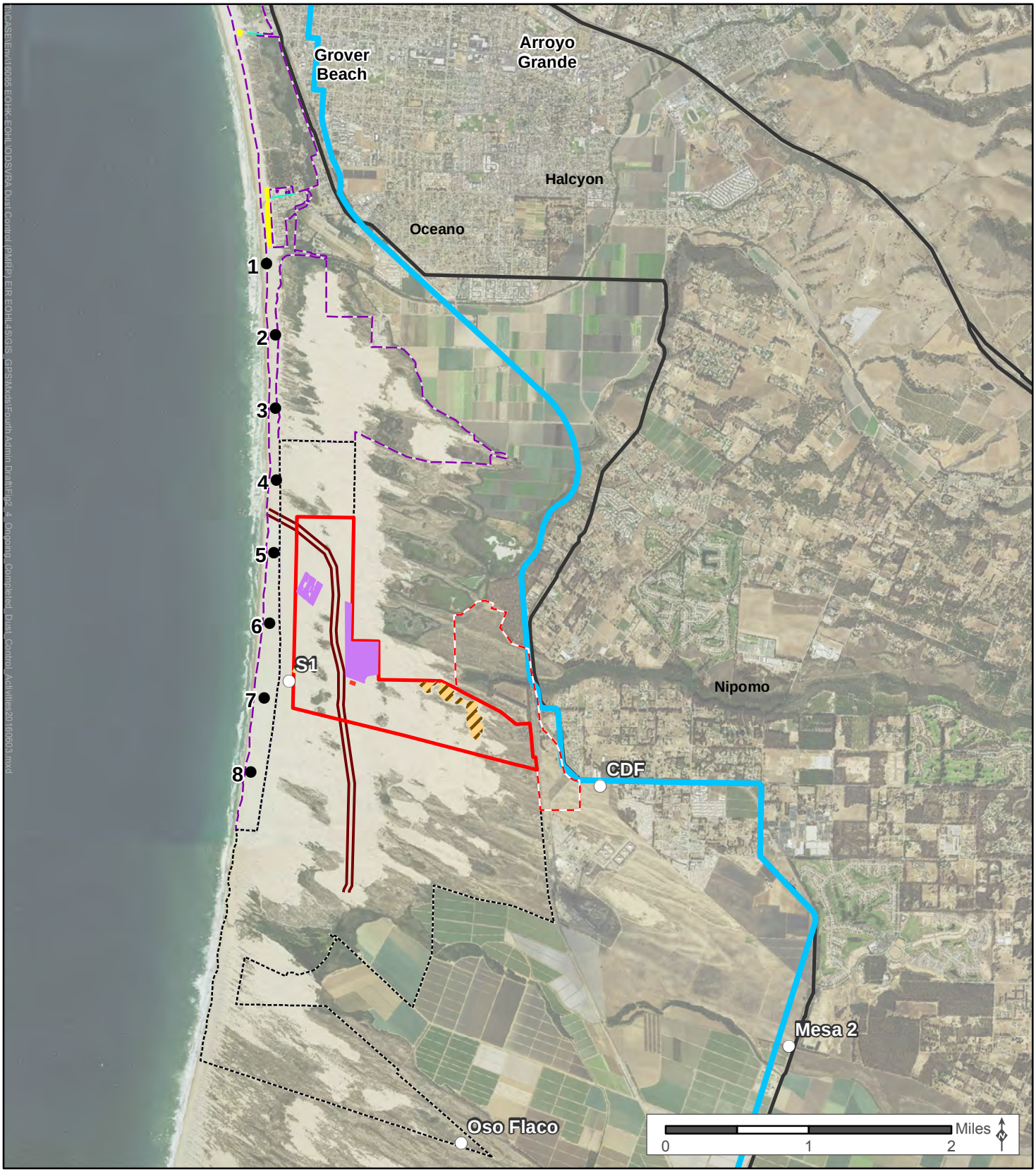


Figure 2-4 Ongoing and Completed Dust Control Activities

Oceano Dunes SVRA Dust Control Program – Draft Program EIR

2.2.7.2 Ongoing Street Sweeping Program

The OHMVR Division currently operates a street sweeping Program to remove sand that accumulates on Grand Avenue in Grover Beach and Pier Avenue in Oceano. Two to three times per week, Oceano Dunes SVRA staff operate a small, CDPR-owned sweeper from the Pier Avenue Entrance Station to the ramp leading to the beach, a distance of approximately 100 feet. The OHMVR Division also contracts 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. The street sweeping complements actions by SLO County to sweep the entire length of Pier Avenue from SR 1 to the entrance station. SLO County operates this street sweeping Program using in-lieu funds generated from registration fees for OHVs. Similarly, two to three times per week, the OHMVR Division sweeps a 550-foot length of Grand Avenue using an existing CDPR-owned sweeper. The OHMVR Division's existing street sweeping operations are part of the baseline environmental conditions at Pismo State Beach and Oceano Dunes SVRA. The street sweeping operations do not constitute development under the Coastal Act, do not require a CDP, and are not a part of the Dust Control Program evaluated in this EIR.

2.2.7.3 Ongoing Dust and Meteorological Monitoring

Since June 2010, the OHMVR Division has operated and maintained a meteorological tower near the center of Oceano Dunes SVRA, referred to as the "S1" meteorological tower. The S1 tower contains an approximately 33-foot-tall (10-meter) lattice tower with air temperature and relative humidity instruments, a wind vane, a propeller anemometer, and sand transport measurement devices. A perimeter fence surrounds the site, which occupies approximately 0.1 acres (4,000 square feet) within the Oceano Dunes SVRA open riding and camping area. The S1 tower is installed with concurrence from the SLO County Planning Division (DRC2010-0003) and was included in a permit application to the CCC for five total wind towers in and near Oceano Dunes SVRA. The permit application is currently under appeal to the CCC (A3-SLO-11-021), and there is no timeline for a public hearing. The OHMVR Division's S1 meteorological tower is part of the baseline environmental conditions at Oceano Dunes SVRA. Nonetheless, the OHMVR Division has included the continued operation and maintenance of the S1 meteorological tower in its Dust Control Program CDP application and the proposed Dust Control Program would merely continue this ongoing activity. As such, the continued operation and maintenance of the S1 meteorological tower does not represent a new change to the physical environment that requires detailed analysis.

In May 2015, the OHMVR Division installed an air quality monitoring station, the Oso Flaco station, in the southeast corner of Oceano Dunes SVRA (see Figure 2-4). The approximately 0.4-acre site includes a PM10 BAM monitor enclosed in a small, weatherproof container, meteorological monitoring equipment (mounted on a 10-meter tower), and five solar panels with associated solar charging and battery-backup systems. The monitor is intended to serve as the control site monitor required by Rule 1001. The monitor was installed after the NOP for this EIR was issued and as such is not part of the baseline environmental conditions at Oceano Dunes SVRA. Accordingly, the combined impacts from the operation of the Oso Flaco station and the proposed Dust Control Program are evaluated in Chapter 11 (Cumulative Impacts).

2.2.7.4 Completed Dust Control Projects

Since 2011, the OHMVR Division has undertaken an iterative series of dust control projects at Oceano Dunes SVRA. The purpose of these projects was three-fold: 1) To test how effective different dust control measures are at controlling and minimizing dust emissions; 2) To test the

ability of different dust control measures and monitoring equipment to withstand harsh dune conditions (e.g., salt, sand blasting); and 3) To test the ability of different dust control measures to be feasibly installed at Oceano Dunes SVRA, given dune topography, equipment and staffing resources, and other factors.

Straw Bale Projects

The OHMVR Division has deployed two straw bale arrays at Oceano Dunes SVRA. In 2011 (April to May), the OHMVR Division installed a 1.25-acre array (210 straw bales) approximately 1,500 feet northeast of marker post 7, as measured to the center of the straw bale array (see Figure 2-4). These straw bales were broken apart and covered with sand, some of which has re-surfaced over time as sand shifts and migrates at Oceano Dunes SVRA. The remaining straw has deteriorated. Thisdoes not have the potential to result in impacts that could combine with the proposed Dust Control Program activities.

In March 2014, the OHMVR Division installed approximately 5,000 straw bales on a 30-acre area along the eastern boundary of Oceano Dunes SVRA, outside of the SVRA's open riding and camping area (see Figure 2-4). These straw bales were left in place and have become partially buried. The plans are to allow any straw bales that remain to provide ground cover for potential vegetation projects. For example, in 2014, approximately six acres of straw bales were incorporated into a restoration project and an additional five acres were vegetated in 2015. Some of the straw bales in these two restoration areas were broken up and incorporated as part of the vegetation planting. In addition, at the request of the CCC, the OHMVR Division intends to remove as many straw bales as feasible; however, since the 30-acre straw bale project was completed prior to the release of the NOP for this EIR, and remains in place, these straw bales are part of the baseline environmental conditions against which the EIR evaluates potential Dust Control Program impacts.

Seasonal Wind Fencing Arrays

The OHMVR Division has deployed three wind fencing arrays at Oceano Dunes SVRA. In 2014 (March to July), the OHMVR Division installed a 15-acre array approximately 1,850 feet southeast of marker post 5. In 2015 (March to July), the OHMVR Division installed a 40-acre array on the east side of Sand Highway (see Figure 2-4). In 2016 (March to July), the OHMVR Division installed an approximately 40-acre array in the same location as the 2015 array. These arrays consisted of four-foot-high, orange-colored wind fencing rows oriented perpendicular to the prevailing wind direction and spaced every 20 to 40 feet apart (or more, depending on topography). Several rows of fencing became buried over the course of the project. This wind fencing has been or will be removed the year it was installed and has no potential to result in impacts that could combine with the proposed Dust Control Program activities. Since the 2015 and 2016 arrays were not in place at the time the Notice of Preparation was issued for this EIR, these seasonal wind fencing projects are not part of the baseline environmental conditions at Oceano Dunes SVRA.

Other Pilot and Demonstration Projects

In Spring 2015, the SLOAPCD and the OHMVR Division proposed the use of soil stabilizers on an approximately two-acre area east of the northern end of Sand Highway (see Figure 2-4); however, this proposal was rejected by the CCC. Please refer to Section 2.3.2.3 for additional information on soil stabilizers.

In April 2016, the OHMVR Division installed an approximately 0.6-acre array of "porous roughness elements" (PREs, reminiscent of a dog crate) consisting of rectangular, approximately

3-feet-long by 2-feet-wide by 2 feet-high crates wrapped in mesh fencing material, each with a smaller crate, also wrapped in fencing material, nested inside of the larger crate. These nested, three dimensional PREs have increased aerodynamic drag and promote greater sand capture and deposition as compared to two-dimensional wind fencing and non-porous (i.e., solid) three-dimensional roughness elements such as straw bales. The PREs (approximately 150) were installed under an emergency permit from the CCC, which requires the PRE's to be removed no later than August 31, 2016. Since the 2015 and 2016 arrays were not in place at the time the Notice of Preparation was issued for this Draft EIR (February 2015, see Section 1.5.1), these seasonal wind fencing projects are not part of the baseline environmental conditions against which the EIR evaluates potential Program impacts.

Dust and Meteorological Monitoring Projects

In addition to the ongoing operation of the S1 meteorological tower and the Oso Flaco air quality monitoring station (see Section 2.2.7.3), the OHMVR Division has conducted temporary monitoring at Oceano Dunes SVRA in 2011 (as part of the 2011 straw bale array described above), at Pismo State Beach and Oceano Dunes SVRA in 2013 (for investigative and assessment purposes), and at Oceano Dunes SVRA in 2014, 2015, and 2016 (as part of the 15- and 40-acre wind fencing and 30-acre straw bale arrays described above). These past monitoring activities have ceased or will have ceased by September 2016 and have no potential to result in impacts that could combine with the proposed Dust Control Program activities. As described in Section 2.2.7.3, limited meteorological monitoring (the S1 tower) is part of the baseline environmental conditions at Oceano Dunes SVRA.

2.3 PROPOSED DUST CONTROL PROGRAM DESCRIPTION

The proposed Dust Control Program activities would include:

- **Planting approximately 20 acres of native vegetation per year at Oceano Dunes SVRA.** The OHMVR Division would plant this vegetation during the fall, when rains support the establishment of native dune vegetation. In total, the OHMVR Division could plant approximately 100 acres of native vegetation over the five-year period covered by this EIR.
- **Deploying approximately 40 acres of seasonal dust control measures from approximately March to September at Oceano Dunes SVRA.** The OHMVR Division would deploy dust control measures such as wind fencing, straw bales, PREs, and, potentially, non-toxic, environmentally friendly soil stabilizer to control and minimize dust on a seasonal basis. These seasonal measures could be installed as early as March 1 and removed as late as September 30. Seasonal dust control measures could also include pilot and/or demonstration projects as new control measures are identified by the OHMVR Division for implementation at Oceano Dunes SVRA.
- **Potentially planting trees downwind of Oceano Dunes SVRA.** The OHMVR Division may plant native, fast growing trees on private lands located downwind of the SVRA. Tree plantings would be unlikely to control or minimize dust emissions during the five-year period covered by this EIR, but could provide for the long term control of dust emissions.
- **Dust and meteorological monitoring at Oceano Dunes SVRA.** The OHMVR Division would install, maintain, and operate scientific monitoring equipment to investigate and evaluate dust levels and control measure effectiveness.

- **Preventing track-out of sand onto Grand Avenue in the City of Grover Beach and Pier Avenue in Oceano.** The OHMVR Division would install, operate, and maintain grooved concrete at Pismo State Beach exits on Grand Avenue in the City of Grover Beach and Pier Avenue in the community of Oceano.

In addition to these activities, the Dust Control Program would continue certain ongoing sand management, street sweeping, and track-out prevention activities currently taking place at Pismo State Beach and Oceano Dunes SVRA, as discussed in Section 2.2.7; however, these activities would not change as a result of Program implementation and would thus not result in any new, physical environmental effects at either Pismo State Beach or Oceano Dunes SVRA.

The proposed Dust Control Program is discussed in more detail below.

2.3.1 Proposed Dust Control Program Area

The proposed Dust Control Program area primarily consists of approximately 690-acres of state-owned and state-operated lands at Oceano Dunes SVRA[5]. This portion of Oceano Dunes SVRA lies within the area covered by the SLO County LCP, and consists mostly of undulating, actively migrating sand dunes and vegetated sand dunes. Figure 2-5 shows the proposed Dust Control Program area in detail. All vegetation plantings, seasonal dust control measure deployment, and monitoring would occur within this 690-acre area.

The proposed Dust Control Program area also includes an approximately 295-acre area of privately-owned lands located immediately downwind and adjacent to Oceano Dunes SVRA (see Figure 2-5). All potential tree plantings would occur within this area.

Track-out prevention devices would be installed at Grand Avenue and Pier Avenue, which are outside the Program area, but still part of the proposed Dust Control Program.

2.3.1.1 Basis for Dust Control Program Area

The proposed Program area includes the portion of Oceano Dunes SVRA located between approximately 280 degrees to 315 degrees upwind of the SLOAPCD's CDF ambient air quality monitoring station (see Figure 2-5). The Program area includes most of the open sand areas in the central to northern portion of the Oceano Dunes SVRA open riding and camping area, commonly referred to as the "La Grande Tract." SLOAPCD and OHMVR Division studies have identified this area as the area most likely influencing air quality measurements at the CDF station and air quality conditions on the Nipomo Mesa (see Section 1.1.2). The proposed Program area also includes the areas where seasonal wind fencing and straw bale arrays were implemented in 2014, 2015, and 2016 by the OHMVR Division and SLOACPD, in consultation with CARB (see Sections 2.2.7.4). Finally, the proposed Program area is situated in the middle of the SLOAPCD's CDF air quality forecast zone, which is the zone that experiences the worst air quality conditions during high wind and dust events.

[5] The exact acreage of the Dust Control Program area is 688 acres.

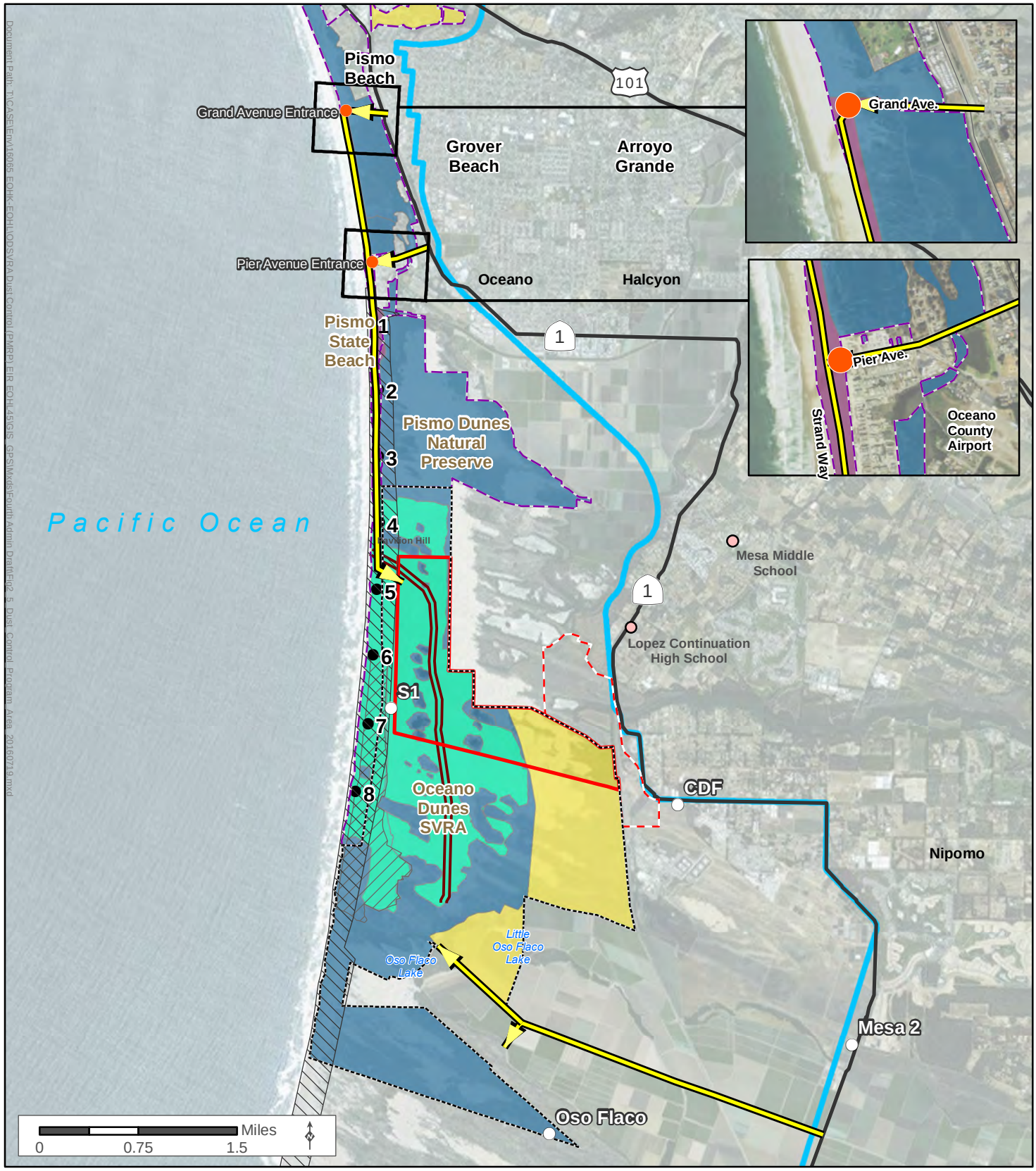


Figure 2-5 Dust Control Program Area

The proposed Program area avoids USFWS-designated critical habitat for the western snowy plover, which borders the Program area to the west. Portions of the SVRA generally north of Pavilion Hill (between marker posts 4 and 5) were excluded from the Program area because they were considered substantially more north of the optimum trajectory for the wind path to CDF. Air quality measurements conducted by the SLOAPCD at locations to the north of CDF, including Mesa Middle School and Lopez High School, either did not show elevated PM10 readings or were more comparable to the SLOAPCD's Mesa2 or NRP monitoring stations (SLOAPCD 2011, 2013a). Portions of the SVRA generally south of marker post 7 were generally excluded from the Program area because they are outside of the range of wind directions that can reasonably be expected to influence measurements at the CDF station, and there is generally less residential development downwind of these areas.

2.3.1.2 City of Grover Beach (Grand Avenue) and Oceano (Pier Avenue)

The Dust Control Program would also include a small portion of Grand Avenue in the City of Grover Beach and Pier Avenue in the community of Oceano for track-out prevention device installation, operation, and maintenance (less than 0.1 acres each).

Grand Avenue is a major arterial road that provides access to Pismo State Beach and Oceano Dunes SVRA. Between the public entrance kiosk and SR 1, Grand Avenue is primarily bordered by vegetated dunes (on the south) and existing commercial development (on the north).

Pier Avenue is a collector road that provides access to Pismo State Beach and Oceano Dunes SVRA. Between the public entrance kiosk and SR 1, Pier Avenue is bordered by numerous commercial and residential properties.

2.3.1.3 Private Lands Downwind of Oceano Dunes SVRA

The proposed Program's potential tree planting area includes privately-owned lands downwind of Oceano Dunes SVRA. This area is south of the community of Oceano and west of the Nipomo Mesa and is approximately 295 acres in size. The area consists of private agricultural, open space, and recreational lands and includes older sand dune and dune lake ecosystems. The area is accessible via SR 1 and private access roads. The OHMVR Division would not plant trees on 295 acres of land; rather the identified area reflects the location where trees could be planted. The exact amount of trees that could be planted is unknown at this time.

2.3.2 Proposed Dust Control Measure Descriptions

The proposed dust control measures are described in detail below. The OHMVR Division notes that any dust control measure installed within the Oceano Dunes SVRA open riding and camping area would be surrounded by a perimeter fence for safety reasons.

2.3.2.1 Vegetation Planting

Vegetation is generally accepted to be effective at reducing sand movement. It physically covers the ground surface, stabilizes or holds sand in place with roots and plant litter, and breaks the flow of wind across the landscape. A 2011 pilot project study conducted at Oceano Dunes SVRA concluded vegetation reduced sand transport by as much as 90% to 95% within the first 165 feet (50 meters) from the upwind boundary of the vegetated area, and 90% to 99% farther downwind (DRI 2011). The effectiveness of seedling vegetation projects is uncertain, but presumably lower than mature, established vegetation.

The OHMVR Division is proposing to plant approximately 20 acres of vegetation per year for dust control purposes. This newly planted vegetation would primarily enhance areas where vegetation already exists (e.g., adjacent to an existing vegetation island). The establishment of

vegetation in areas where no vegetation presently exists is less likely. This is due to the fact that establishing vegetation in areas of bare sand would be a greater challenge than planting vegetation in or near areas where vegetation already exists because the newly planted vegetation would be exposed to more wind and sand movement that could inundate seedlings.

The use of vegetation to control sand movement and dust emissions would require an initial planting effort followed by a period of time during which the vegetation would grow large enough to become effective. During the initial planting, the OHMVR Division would apply certified, weed-free straw to the control area either by hand or with use of a straw blower or sheep foot, which is a large rolling device that mechanically punches straw into the ground. The OHMVR Division would then broadcast the control area with fertilizer, non-native sterile annual grasses, and locally collected native seeds and container plants. The straw and annual grasses are intended to reduce wind and sand movement that can lead to sand blasting and burial of container plants and seedlings. The OHMVR Division would design vegetation projects to match the plant community composition that exists in the area being planted and would obtain seeds and plant materials from local genetic stock within the vicinity of the project area. Table 2-2 presents the native species the OHMVR Division would likely use for dust control purposes; installation of non-native plants would be avoided for dust control purposes.

Table 2-2 Potential Dominant Plant Species Mix for Use in Vegetation Projects

Common Name	Scientific Name
Sand Verbena (foredunes)	*Abronia maritima* and *A. latifolia*
Beach Bur (foredunes and dune scrub)	*Ambrosia chamissonis*
Dune Evening Primrose (foredunes)	*Camissonia cherianthifolia*
Mock Heather	*Ericameria ericoides*
Silver Dune Lupine	*Lupinus chamissonis*
Crisp Monardella	*Monardella crispa*
Senecio	*Senecio blochmanii*

Source: OHMVR Division

Initial planting efforts typically take approximately four months to install straw, spread seed, and plant container stock. Once planted, vegetation typically takes two to four years to become fully established and provide sufficient vegetative cover to stabilize sand surfaces. During this time period, the OHMVR Division would apply additional ground cover (e.g., straw or grasses) as necessary to promote healthy plant growth and establishment. The OHMVR Division would monitor vegetation growth by surveying and photo-monitoring control areas to ensure vegetation projects become established and meet their design control efficiency.

Once established, the OHMVR Division would not need to perform regular and routine maintenance of vegetation projects; however, the OHMVR Division would remove any exotic plants that become established in control areas by hand, machine, or herbicide. The OHMVR Division anticipates that vegetation projects, once established, could cover from 25 to 100 percent of any particular area under control and reach a height of 3 to 5 feet at full growth. Although vegetation would take time to become established and could be hampered by environmental factors such as a short growing season, drought, hardiness of individual plants, etc., it has the inherent ability to respond and potentially stabilize dynamic dune conditions and reduce the need for regular and routine maintenance once the vegetation is established.

2.3.2.2 Deployment of Seasonal Dust Control Measures

Similar to vegetation, seasonal dust control measures such as wind fencing and straw bales physically cover the ground surface and break the flow of wind across the landscape. Studies conducted at Oceano Dunes SVRA have concluded these measures may reduce sand transport by 40 to 70 percent on average and as much as 87% within the interior of the array (DRI 2011, 2014, 2015c).

Wind fencing and straw bales would be a seasonal form (March 1 – September 30) of dust control at Oceano Dunes SVRA. Wind fencing and straw bale arrays can be designed to provide a specific control efficiency, can be deployed over a large area rapidly and, once installed, begin to provide immediate sand transport and dust control; however, the effectiveness of these measures decreases with time, and they do not have the ability to respond to dynamic dune conditions and thus can become buried over time (and subsequently later exposed). Both wind fencing and straw bales require regular maintenance and/or replenishment of materials and are therefore not considered a permanent dust control strategy (i.e., wind fencing and straw bale arrays may ultimately be replaced with vegetation projects, as necessary). The total amount of wind fencing and straw bales that would be seasonally deployed on an annual basis would be approximately 40 acres. Straw bales could be left in place to provide protection for and promote establishment of subsequent vegetation projects.

To install wind fencing and straw bales, the OHMVR Division would transport the materials to the control area using a flatbed truck or heavy equipment capable of pulling trailers. The OHMVR Division would set the artificial materials by hand or use a loader or backhoe. For wind fencing, the OHMVR Division would drive fence poles into the ground and stretch plastic or metal mesh fencing material across the fence poles in approximately 80-foot sections. The OHMVR Division may use heavy equipment to move and distribute sand that has accumulated in wind fencing projects throughout the park. For straw bales, the OHMVR Division may also move sand that has accumulated in the array to other areas of the park or "roll" the bale forward onto sand that has accumulated on the upwind side of the bale. The frequency of maintenance activities would be approximately every two weeks for wind fencing and possibly every month for straw bales. In addition, the OHMVR Division could need to replenish materials that wear down or become buried. The OHMVR Division would not deposit any sand removed as part of wind fencing and straw bale project maintenance below the ordinary high water mark of any waters of the U.S, waters of the state, or other water resources. Removal of wind fencing may include heavy equipment like excavators and tractors in addition to utility trucks and hand labor.

2.3.2.3 Tree Plantings

It is noted that the area under the control of the OHMVR Division does not contain, and is not conducive to the growth of, large groves of trees; however, the area east of SR 1 contains non-native eucalyptus stands on private lands. The OHMVR Division may plant native, fast-growing seedlings or container saplings during the five-year term covered by this EIR in this general area (see Figure 2-5). The planting of trees would only occur if the OHMVR Division could successfully negotiate with private landowners to plant trees. Planted trees would would take time to grow and thus improved air quality conditions may not be fully or even partially achieved within the five-year period covered by this EIR; however, the planting of trees may provide longer-term dust benefits and become part of a longer-term dust control strategy implemented by the OHMVR Division in the future.

2.3.2.4 Pilot and Demonstration Projects

The proposed Dust Control Program incorporates feasible, scientifically-documented dust control methods available to the OHMVR Division as of the time of the writing of this EIR (June 2016). In the future, additional dust control methods may be tested and/or implemented at Oceano Dunes SVRA. In general, the OHMVR Division would initially test new dust control methods on a small scale. These one- to two-acre pilot and demonstration projects would be located adjacent to the seasonal dust control measures established by the OHMVR Division. Although the exact information and details of such projects are uncertain, the OHMVR Division anticipates that pilot projects may include taller or more narrowly-spaced wind fencing, different-sized PREs, soil stabilizers, or other artificial materials that would block the flow of wind and reduce sand transport and dust generation at Oceano Dunes SVRA. PREs and wind fencing are described in Sections 2.2.7.4 and 2.3.2.2, respectively. Soil stabilizers are described in more detail below.

Soil Stabilizers

Chemical soil stabilizers are a type of dust suppressant. There are many types of stabilizers, including water, water-absorbing materials, clay additives, organic petroleum products, organic non-petroleum products, and synthetic polymer products. Organic petroleum and non-petroleum products and synthetic polymer products suppress dust by binding or adhering surface particles together. Usually a proprietary chemical formula, the stabilizing compound(s) is mixed with water to provide the desired level of stabilization and then sprayed onto the receiving surface. The mixture is typically a milky white, but dries clear or leaves the ground surface appearing wet. Although surface particles are adhered, the stabilized surface remains permeable to water. A USEPA Environmental Technology Verification Report for one particular dust suppression product, EnviroKleen, found the product to have dust control effectiveness between 70 to 90 percent. In addition, the U.S. EPA determined, after testing for acute and chronic toxicity, that this particular product has very low aquatic toxicity and is not considered an aquatic pollutant (USEPA 2005). The OHMVR Division's review of existing, commercially available soil stabilizer products indicates most stabilizer products are non-toxic, but that synthetic polymer products may be the least toxic type of stabilizer. If a suitable non-toxic, environmentally friendly soil stabilization product can be obtained and demonstrated to be viable for use at Oceano Dunes SVRA, the OHMVR Division would apply the product via a tanker truck and spray hose. The stabilizer product could be used in lieu of wind fencing and straw bales, or within the interior of fencing and straw bale arrays (to provide additional dust control).

2.3.2.5 Dust and Meteorological Monitoring

Dust and meteorological monitoring would involve the installation, operation, and maintenance of meteorological, sand transport, and PM10 monitoring equipment at locations within Oceano Dunes SVRA. This equipment would consist of low profile, self-operating equipment including:

- Meteorological monitoring equipment (e.g., instruments that measure air temperature, relative humidity, wind direction, wind speed, etc.)
- Sand transport monitoring equipment (instruments that measure and collect the amount of sand and particles moving at or near the ground surface during a wind event, such as a Cox Sand Catcher, Big Spring Number Eight dust sampler, or a Sensit)
- PM10 monitoring equipment (instruments that monitor the amount of PM10 particles in the air stream, such as a Met One Instruments Ambient Particulate Profiler or Environmental Beta Attenuation Mass Monitor (E-BAM)).

The exact equipment that would be used 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, or the area that this equipment would occupy, would be substantially different than that required for the instruments listed above.

The OHMVR Division would perform monitoring on an as-needed basis during the five-year period covered by this EIR to support siting vegetation, wind fencing, and straw bale projects and evaluating the effectiveness of such projects. The OHMVR Division would co-locate equipment at monitoring sites, meaning that a combination of meteorological, sand transport, and PM10 monitoring instruments would be located at each monitoring site. The OHMVR Division would use four-wheel-drive trucks or other utility vehicles to access and deliver equipment to the monitoring sites, and does not anticipate that these activities would result in soil import or export operations or vegetation removal. The OHMVR Division would install dust monitoring equipment directly into the ground (approximately one to two feet below ground surface), mount the equipment directly onto 6- or 12-foot-tall (2- or 4-meter) tripods or poles or 33-foot-tall (10-meter) tall lattice towers, or affix the equipment to mobile, elevated platforms (trailers) that are leveled and not subject to movement. Guy wires attached to anchor rods may be used to further secure the tripods and poles to the ground. Dust monitoring equipment would require solar panels and back-up power batteries, which would similarly be anchored to the trailer. Trailers and platforms are installed using a small tractor to drive 10-foot-tall poles into the ground. The platforms are then leveled and bolted to the poles. Small equipment is also used to remove these poles and platforms.

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, but could range between approximately 0.1 acres (4,000 square feet) to 0.3 acres (15,000 square feet) per site. In general, sites that have equipment mounted on two- or four-meter-tall tripods or poles would require less area than sites that have a 33-foot-tall (10-meter) tall lattice tower and/or that require a solar panel array. The OHMVR Division anticipates installing up to 12 monitoring sites at a time. These sites would be installed on a temporary basis ranging between six months to two years in duration, depending on the purpose and need for the monitoring site, the dust and PM levels measured at the site, etc. The total amount of area that could be temporarily occupied by temporary monitoring sites at any given time could be approximately three acres. Once installed, monitoring equipment would require regular (daily or weekly) maintenance.

2.3.2.6 Track-Out Prevention

Track-out prevention is intended to prevent track-out of sand onto paved, public roadways. In the case of Oceano Dunes SVRA, there are two paved, public roadways that provide ingress and egress to the park: Grand Avenue in Grover Beach and Pier Avenue in Oceano. During a typical summer weekend (Friday to Sunday), up to 11,500 vehicles can pass through the Grand and Pier Avenue entrances to Oceano Dunes SVRA (OHMVR Division 2013). A busy weekend like July 4th or Memorial Day could see over 5,100 vehicles entering and exiting the park in a single day (OHMVR Division 2013). A wide range of vehicle types and sizes pass through these entrances, including cars, trucks, trailers, recreational vehicles, and commercial vehicles.

The proposed track-out prevention structures would remove sand from vehicles before it reaches Grand Avenue or Pier Avenue; however, the OHMVR Division must overcome technical and logistical challenges to install any structural track-out prevention device at Oceano Dunes SVRA. The greatest technical challenge is to develop a system that can deal with the quantities

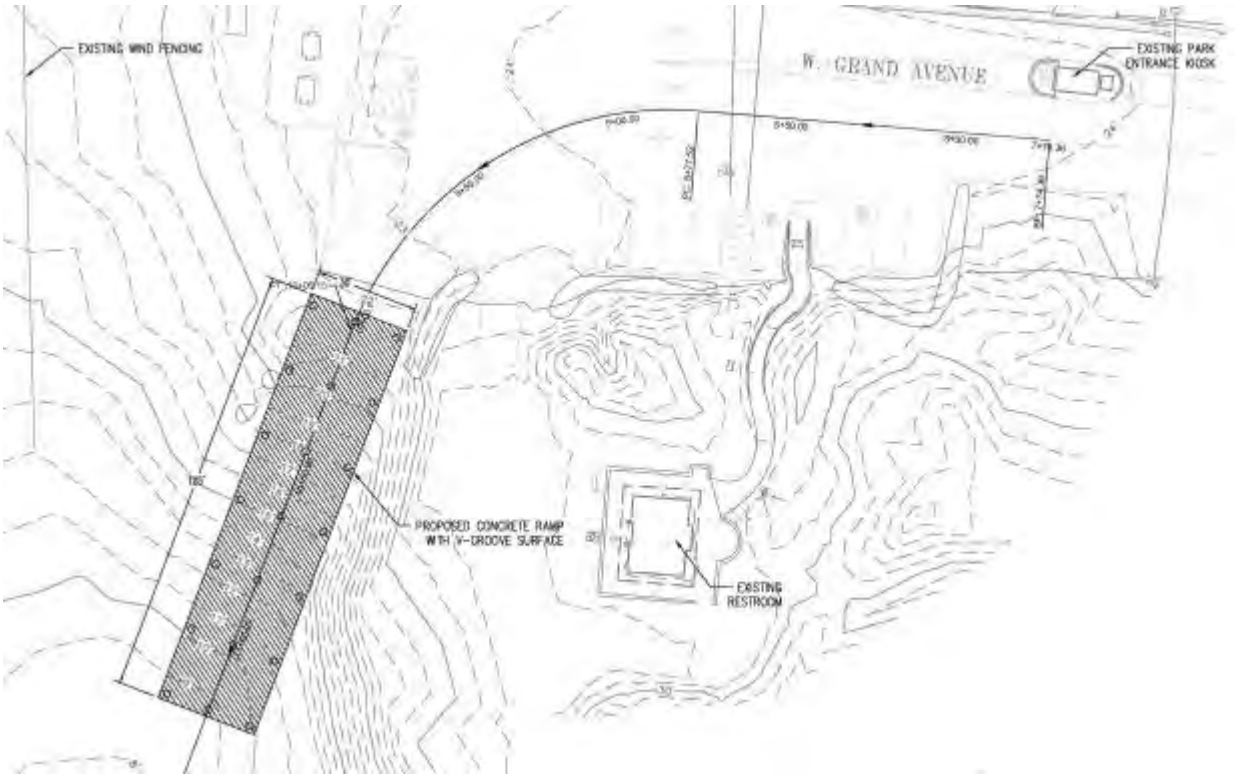
of sand expected to occur in the area. In addition to accommodating the sand that adheres to vehicles, the structural devices would need to function with the large quantity of naturally blowing sand from the beach area. The greatest logistical challenge is maintenance. Structural devices would need to be easy to use and would need to quickly remove sand attached to vehicles. In addition, the structures would need to accommodate a wide-array of vehicle types. Preliminarily, the OHMVR Division is proposing to install V-shaped, grooved concrete panels west of the entrance kiosks at Grand Avenue and Pier Avenue. The concrete panels would be eight inches thick and supported by footings or a pier and beam foundation. The panels would be 30 to 45 feet wide in total, with 1- to 1 ½ inch-thick V-shaped groves that would run perpendicular to vehicle travel lanes (both ingress and egress). The concrete panels would be between 50 to 125 feet in length, and would be located in the Grand Avenue and Pier Avenue roadways, potentially extending down the entrances' sand ramps. Figure 2-6 and Figure 2-7 depict the preliminary site plan for the proposed Grand Avenue and Pier Avenue track-out prevention structures.

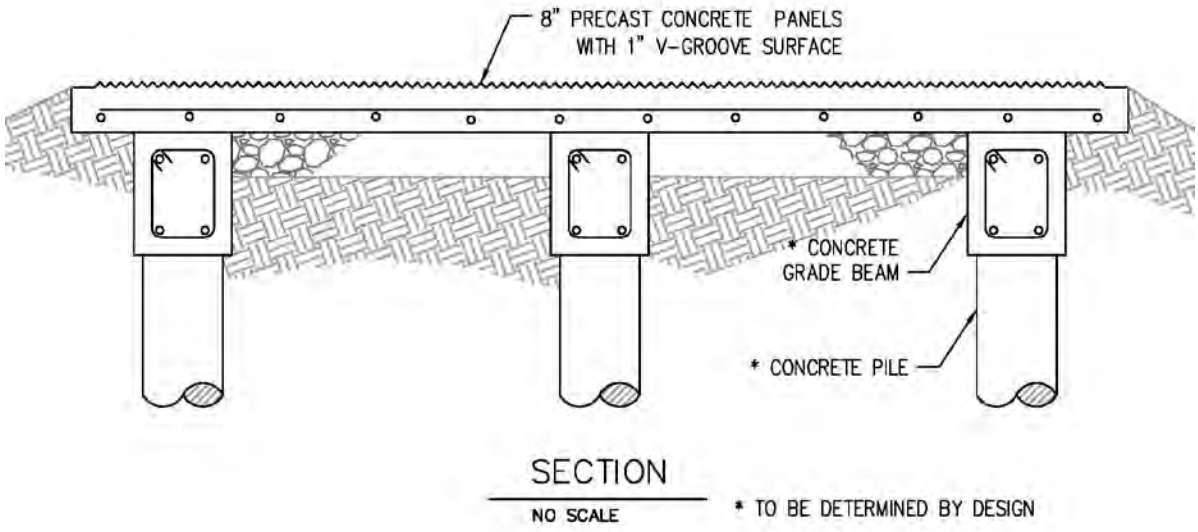
2.3.3 Dust Control Measure Siting Considerations

Although the precise location of vegetation plantings and seasonal dust control deployment is not known at this time, there are several environmental, technical, and logistical factors that would generally guide where the OHMVR Division could potentially plant vegetation and deploy seasonal dust control measures. These include Rule 1001 compliance, resource and recreation management considerations, and material availability and cost factors.

- *Rule 1001:* The OHMVR Division would consider if the dust control measure location would meet the performance objectives of Rule 1001 (i.e., have a measurable effect at CDF and on the Nipomo Mesa). In general, if all other factors are equal, the OHMVR Division would give preference to the locations that most support compliance with Rule 1001, as determined in coordination with the SLOAPCD.
- *Resource Management:* The OHMVR Division would not plant vegetation within Pismo State Beach or within approximately 1,100 feet (in the vicinity of marker posts 4 and 5) to 1,500 feet (in the vicinity of marker post 7) of the mean high tide line, which is where most beach-front recreation occurs (including camping), as well as most western snowy plover and California least tern nesting activity, which are species are protected under the federal endangered species act. In addition, the OHMVR Division would emphasize projects that avoid adverse effects on other biological and/or cultural resources.
- *Recreation Management:* Vegetation projects would be a permanent form of dust control at Oceano Dunes SVRA. The OHMVR Division would therefore avoid planting vegetation as much as possible within the Oceano Dunes SVRA open riding and camping area in order to minimize loss of beach camping and motorized recreation lands. In addition, straw bales are more likely to become buried or laden with sand, resulting in considerably greater effort to remove (if they can be removed). Buried straw bales that subsequently become exposed in later years could pose a risk to vehicle recreation. Thus, the OHMVR Division would not place straw bales within the SVRA's open riding and camping area unless they were part of a multi-year effort for restoration purposes (e.g., straw bales would be installed in one year, broken up, and vegetation planted in the same area the subsequent year. Finally, the OHMVR Division would also emphasize projects that avoid and/or minimize interference with existing park infrastructure, such as Sand Highway.

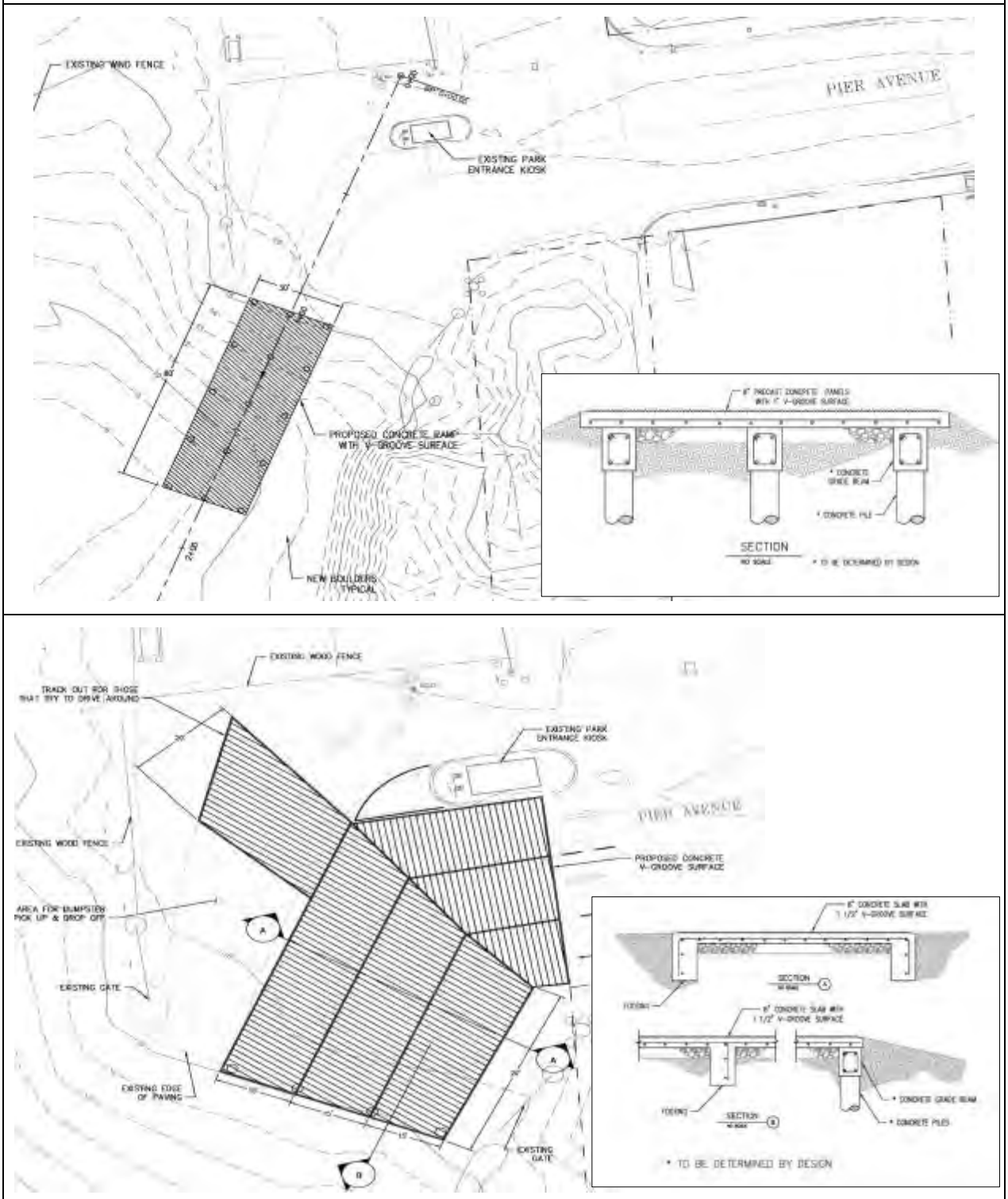
Figure 2-6 Preliminary Site Layout - Track-Out Prevention (Grand Avenue)





Preliminary site design depicting 125-foot-long grooved concrete ramp and supporting foundation at Grand Avenue entrance. Ramp length is preliminary and may range between approximately 50 and 125 feet in length. Final design is subject to revision and/or change. Source: California State Parks 2015b, 2016a. 2016b.

Figure 2-7 Preliminary Site Layout - Track-Out Prevention (Pier Avenue)



Preliminary site design depicting 80-foot-long (above) and approximately 30-foot-long (below) grooved concrete ramp and supporting foundations at Pier Avenue entrance. Ramp length is preliminary and may range between approximately 20 and 80 feet in length.
Source: California State Parks 2015b, 2016a. 2016b.

- *Material Availability:* Dust control project materials must comply with CDPR policies for invasive exotic plants, including Department Operations Manual Policy 0310.7.1, Exotic Plant Landscaping Policy. This policy generally prohibits the use of invasive, exotic plants (an exception is provided for temporary erosion control).
- *Project Costs:* The OHMVR Division would consider the capital and recurring costs associated with Dust Control Program activities, with preference to projects that are most cost-effective.

2.3.4 Dust Control Program Implementation Scenarios

Table 2-3 summarizes the amount of land that the proposed vegetation, seasonal dust control measures, and monitoring equipment could occupy at Oceano Dunes SVRA.

Table 2-3 Dust Control Program Approximate Land Occupancy

Program Year	Total Vegetation Plantings[(A)]	Seasonal Dust Control Measures[(B)]	Temporary Monitoring[(C)]	Total Land Occupancy
Year 1	20 Acres	40 Acres	3 Acres	63 Acres
Year 2	40 Acres	40 Acres	3 Acres	83 Acres
Year 3	60 Acres	40 Acres	3 Acres	103 Acres
Year 4	80 Acres	40 Acres	3 Acres	123 Acres
Year 5	100 Acres	40 Acres	3 Acres	143 Acres

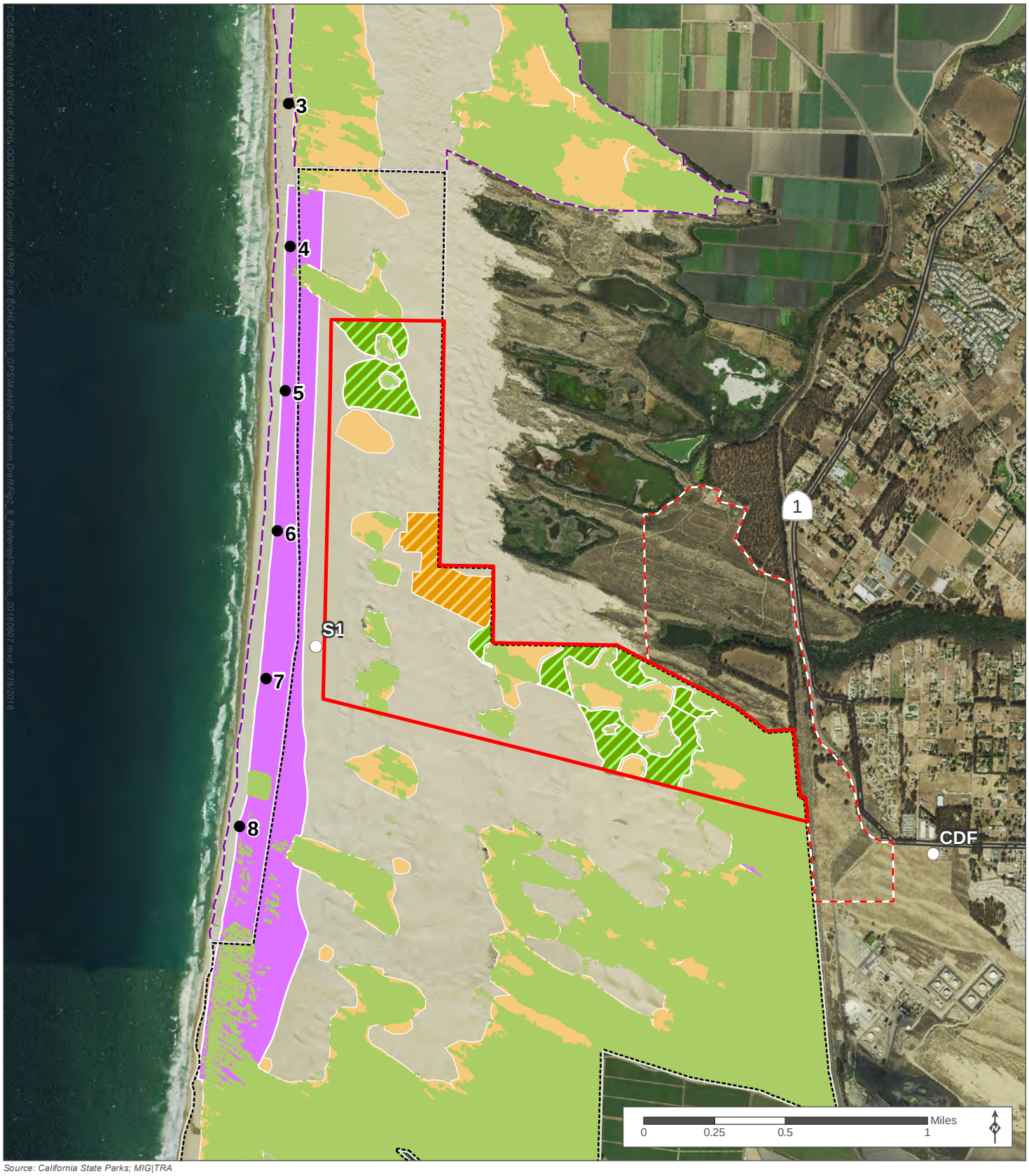
Table Notes:

(A) The OHMVR Division could plant approximately 20 acres of native dune vegetation per year. The values reflected in this column show the cumulative planting that could occur under the proposed Program. For example, in Year 3, the OHMVR Division would not plant 60 acres of vegetation. Rather, by the end of Year 3, the OHMVR Division could have planted approximately 20 acres of vegetation per year in years 1, 2, and 3, for a total of 60 acres (20 + 20 + 20 = 60 total acres).

(B) Seasonal dust control measures could include measures such as wind fencing, straw bales, and soil stabilizers.

(C) Temporary monitoring value is based on 12 monitoring sites operating at the same time. The actual land occupied by monitoring equipment may be less than three acres.

The OHMVR Division would configure the proposed activities to maximize dust reduction upwind of CDF and minimize permanent loss of recreation opportunities at Oceano Dunes SVRA. The actual implementation of dust control measures and vegetation schemes would depend on several factors, including the future PM10 concentrations at the CDF monitoring station, the results of dust control monitoring from within Ocean Dunes SVRA, existing environmental resource constraints (e.g., biological and cultural resources), and logistical issues such as seed availability and growing space; however, the OHMVR Division has identified conceptually preferred and alternate scenarios for possible implementation. These scenarios are shown in Figure 2-8 and Figure 2-9 and described below.



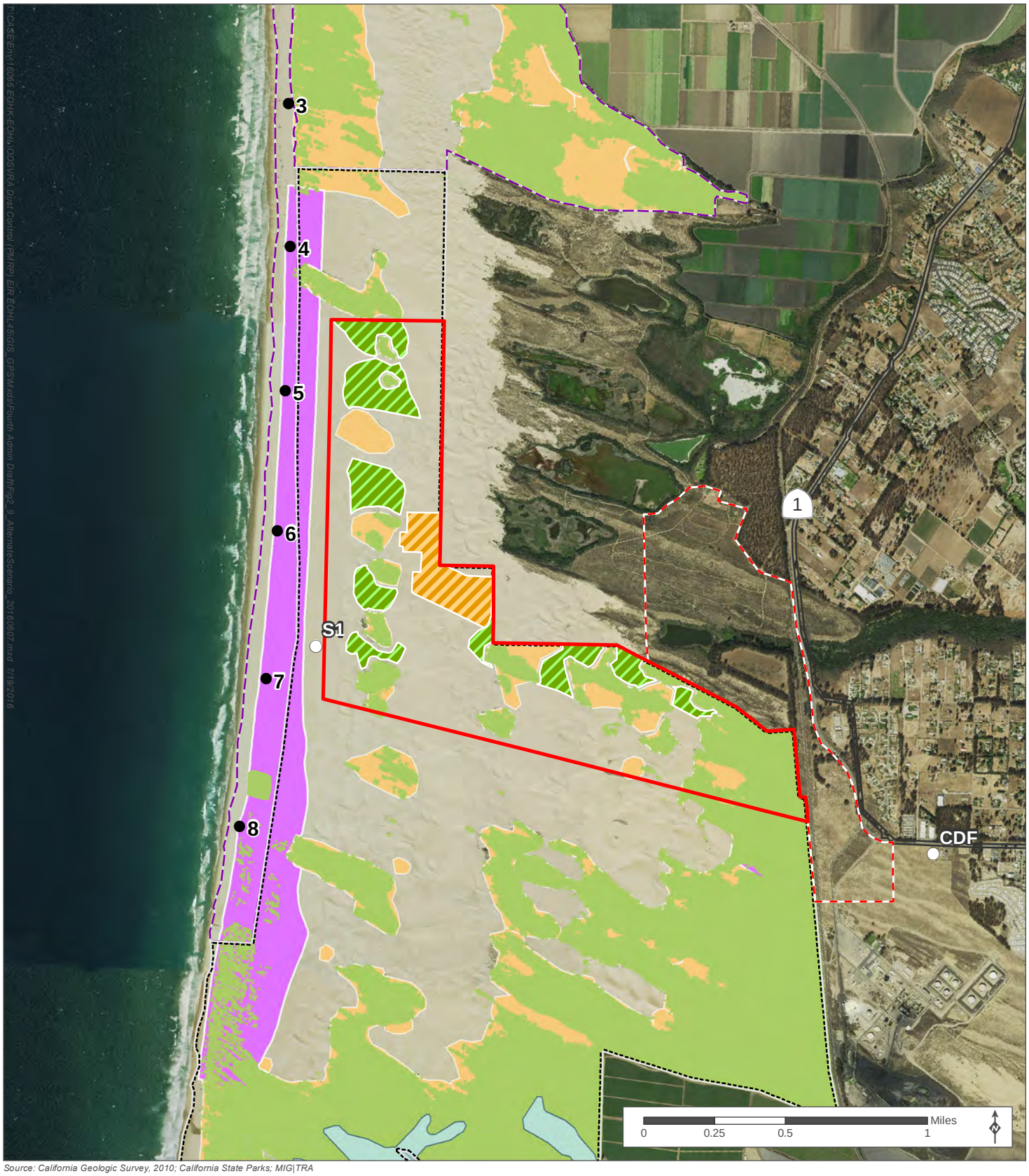
Source: California State Parks; MIG|TRA

- Proposed Dust Control Program area (687 acres)
- Potential tree planting area (295 acres)
- Oceano Dunes SVRA
- Pismo State Beach
- Marker post
- Existing air quality monitor
- Existing vegetation
- Medium and high cultural sensitivity area
- High biological sensitivity area

Proposed Dust Control Measures - Conceptual Locations (Preferred)

- Conceptual vegetation plantings (approx. 100 acres)
- Conceptual seasonal dust control measure (approx. 40 acres)

Figure 2-8 Dust Control Program - Preferred Scenario



Source: California Geologic Survey, 2010; California State Parks; MIG|TRA

- Proposed Dust Control Program area (688 acres)
- Potential tree planting area (295 acres)
- Oceano Dunes SVRA
- Pismo State Beach
- Marker post
- Existing air quality monitor
- Exisitng vegetation
- Medium and High Cultural Resource Sensitivity Area
- High Biological Resource Sensitivity Area

Proposed Dust Control Measures - Conceptual Locations (Alternate)

- Conceptual vegetation plantings (approx. 100 acres)
- Conceptual seasonal dust control measure (approx. 40 acres)

Figure 2-9 Dust Control Program - Alternate Scenario

2.3.4.1 Preferred Dust Control Program Scenario

The OHMVR Division would plant vegetation outside the Oceano Dunes SVRA open riding and camping area to the maximum extent feasible (see Figure 2-8). This is because planting vegetation inside the open riding and camping area would result in the permanent loss of OHV recreational lands. The maximum amount of vegetation that could be planted upwind of CDF and the Nipomo Mesa, but outside the Oceano Dunes SVRA open riding and camping area, is approximately 65 acres, meaning that approximately 35 acres of vegetation could be planted inside the open riding and camping area. Under this preferred scenario, the OHMVR Division would also deploy approximately 40 acres of seasonal dust control measures inside the open riding and camping area from March through September of each year.

2.3.4.2 Alternate Dust Control Program Scenario

The OHMVR Division would plant approximately 30 acres of vegetation upwind of CDF and the Nipomo Mesa, but outside the Oceano Dunes SVRA open riding and camping area, and approximately 70 acres of vegetation inside the Oceano Dunes SVRA open riding and camping area (see Figure 2-9). Under this alternate scenario, the OHMVR Division would also deploy approximately 40 acres of seasonal dust control measures from March through September of each year. Soil stabilizers or other equivalent pilot / demonstration measures could be applied and/or installed inside or outside the SVRA's open riding and camping area. The alternate scenario represents the worst-case impact to public recreation lands at Oceano Dunes SVRA, especially if all 40 acres of seasonal dust control were to take place inside the SVRA's open riding and camping area

2.4 SCHEDULE OF ACTIVITIES

The OHMVR Division proposes to implement the Dust Control Program for an approximately five-year period, estimated to begin in spring 2017 and continue through late 2022. In general, vegetation projects would be planted in the fall of each calendar year. Seasonal dust control measures would be deployed from as early as March 1 and remain in place as late as September 30 of each calendar year. The OHMVR Division would remove all seasonal dust control measures as feasible; however, straw bales or other seasonal measures that become partially or fully buried and which cannot be reasonably removed could remain in place during and after the five-year period considered by this EIR. Any structural, track-out solution would be a capital outlay project that requires the appropriation of funds by the State Legislature. The OHMVR Division would concurrently work to obtain proposals for professional services as well as agency approvals; however, an 18- to 24-month timeline from the appropriation of funds is anticipated before track-out prevention devices would be fully operational. Since funds have not yet been appropriated, the OHMVR Division would not be able to install track-out infrastructure until December 2018 at the earliest.

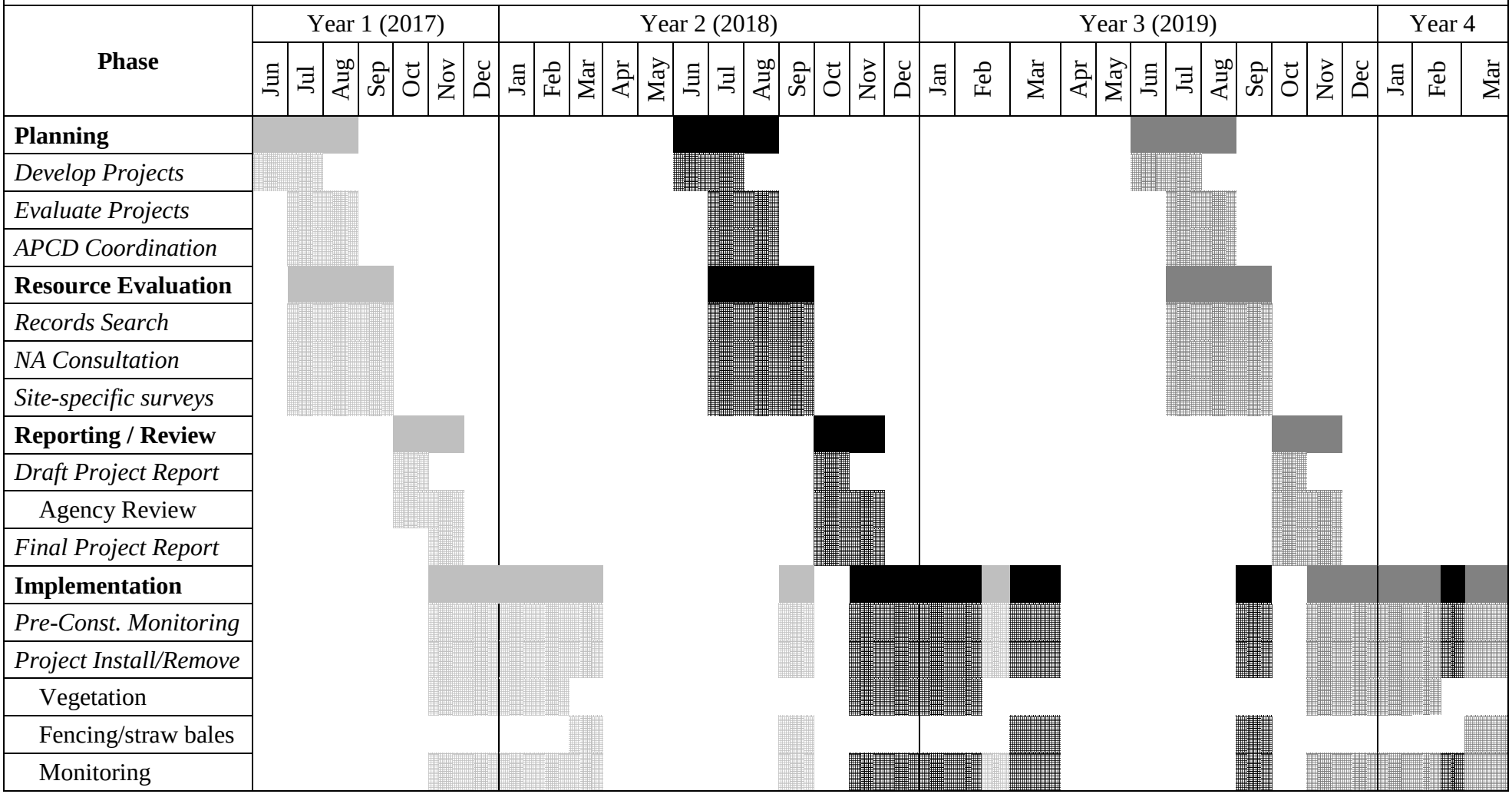
2.4.1 Dust Control Program Annual Review

As described in Section 1.3, this EIR is a Program EIR, which requires the OHMVR Division to consider subsequent dust control activities against the scope and content of this EIR to determine if additional environmental review is required. In addition, as described in Section 1.4.2, the OHMVR Division has applied for a Master CDP from the CCC, which requires the CCC and other agencies to review specific dust control activities to ensure they are in compliance with the CDP issued for the project. In light of these review requirements, the OHMVR Division is proposing the following process for the annual review of dust control measures and activities:

- **Planning:** Starting June 1 of each year (beginning in 2017), the OHMVR Division shall develop a list of potential dust control and monitoring projects for implementation in the coming 12-month period, evaluate potential projects for consistency with the Dust Control Program EIR and any CDP conditions, and coordinate with the APCD on final planned activities. This planning phase would conclude by August 31 of the same year. As part of this planning process, the OHMVR Division shall identify whether activities would take place on state-leased lands and, if necessary, secure authorization to proceed with projects on leased lands.
- **Resource Evaluation:** By July 1 of each year, the OHMVR Division shall initiate biological and cultural resource evaluations for planned activities, including all necessary records searches, Native American consultations, and site-specific surveys. This resource evaluation phase would conclude by September 30 of the same year.
- **Agency Reporting and Review:** By October 1 of each year, the OHMVR Division shall submit to the CCC (Central Coast Office), a draft "Oceano Dunes SVRA Year-End Summary and Annual Work Plan" report that:
    - Summarizes the status of all Dust Control Program-related activities (if data is available) performed the previous year (i.e., the 365 days before October 1), including:
        - A description of the installation, maintenance, and decommissioning activities performed as part of the Dust Control Program; an analysis of whether measures incorporated into the planned activities to avoid or minimize the adverse impacts of the activities were effective and successful (i.e., avoided impacts); and a report on compliance with Master CDP and other applicable conditions / requirements (i.e., EIR mitigation measures)
    - Describes the type, amount, and location of Dust Control Program-related activities the OHMVR Division would perform in the coming year (i.e., the 365 days after October 1), including:
        - Site specific-resources within work areas and potential impacts from installation, maintenance, and decommissioning
        - The measures incorporated into the planned activities to avoid or minimize the adverse impacts of the activities
        - An analysis of whether planned activities and their potential impacts are consistent with and within the scope of the Dust Control Program EIR, Master CDP, and other applicable regulatory conditions
    - By November 15 of each year, the OHMVR shall, in coordination with the CCC, finalize the "Oceano Dunes SVRA Year-End Summary and Annual Work Plan," obtain approval from all necessary agencies, and proceed with the planned dust control activities
- **Implementation:** Starting November 16 of each year, the OHMVR Division shall proceed with the planned dust control activities.

The conceptual schedule for the Dust Control Program annual review process is shown in Table 2-4. The OHMVR Division would submit two annual work plans during the first year of project implementation to account for initial project start-up.

Table 2-4 Dust Control Program Annual Review Process



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2.5 STANDARD AND SPECIFIC REQUIREMENTS INCORPORATED INTO THE DUST CONTROL PROGRAM

CDPR has the distinction of being a Trustee Agency under CEQA (see Section 1.4.1), and with this distinction comes the responsibility to ensure that actions that protect both the cultural and natural resources of the State Parks' system are always taken on all projects. CDPR, therefore, incorporates Standard Project Requirements intended to avoid or minimize impacts to resources into individual projects as necessary. CDPR also applies Specific Project Requirements to projects that have unique issues. These specific requirements are written for, and applied to, individual projects based on their unique components or activities. In some cases, these specific requirements are based on CDPR's standard requirements, but modified to reflect the unique situation or setting in which the specific project is being carried out.

Table 2-5 summarizes the Standard and Specific Project Requirements (SPRs) the OHMVR Division is including as part of the project.

Table 2-5 Summary of Standard and Specific Project Requirements

Standard Requirements That Would Reduce Effects in Multiple Resource Areas

- **Minimize Ground Disturbance and Land Occupancy.** The OHMVR Division shall:
  - Design and implement the Dust Control Program to disturb and occupy as little land as possible
  - Prior to the start of Dust Control Program-related work activities (e.g., installation of dust control measures, monitoring equipment maintenance), the OHMVR Division shall determine the minimum area required to complete the work and define the boundaries of the work area on project drawings and with flagging or fencing on the ground, as appropriate
  - Use existing paths of travel to access project-related work areas
  - Restore all disturbed areas to the maximum extent feasible

Hazards and Hazardous Materials (Chapter 3)

- **Designate Vehicle and Equipment Storage, Staging, and Clean-up Locations.** The OHMVR Division shall store, stage, and clean-up all vehicles and equipment used for Dust Control Project-related work activities at its maintenance yard on SR 1 in Oceano when not in use.
- **Designate Vehicle and Equipment Fueling Locations.** The OHMVR Division shall also store and conduct all re-fueling activities at its maintenance yard on SR 1 in Oceano.
- **Inspect for Equipment Leaks.** The OHMVR Division shall inspect all off-road and other construction equipment for leaks prior to and at the conclusion of any installation, operation, or maintenance activity. If leaks are observed, the leaking equipment shall be removed from the project site and repaired. All contaminated water, sludge, spill residue, or other hazardous compounds discovered during inspections shall be contained and disposed of, as necessary, at lawfully permitted or authorized disposal sites.
- **Prepare and Implement Spill Prevention and Response Plan.** The OHMVR Division shall prepare a Spill Prevention and Response Plan (SPRP) to provide protection to on-site workers, the public, and the environment from accidental leaks or

Table 2-5 Summary of Standard and Specific Project Requirements

spills of vehicle fluids or other potential contaminants. At a minimum, this plan will include (but not be limited to):

- A map that delineates equipment staging, refueling, and maintenance areas and the BMPs that would be implemented to prevent spills or leaks from leaving these areas
- A list of project materials which, if released, could pose a hazard to the public or the environment
- Procedures for the proper storage, use, and disposal of any solvents or other chemicals used in project activities;
- Procedures for the immediate containment and clean-up of any spills or leaks of hazardous materials, including a list of items to be maintained in an on-site spill response kit at all times
- Identification of lawfully permitted or authorized disposal destinations outside of the project site

Aesthetics (Chapter 6)

Standard and Specific Project Requirements:

- **Vegetation Design Considerations.** The OHMVR Division shall:
  - Use local, native vegetation that matches the existing plant community composition of the planting area.
  - Plant vegetation in patterns and shapes that reflect the natural plant colonization and dune-building processes of the dunes (e.g., planting along the prevailing wind direction, avoid planting in regular shapes like squares or rectangles).
- **Seasonal Dust Control Measure Design Considerations.** The OHMVR Division shall, to the maximum extent feasible and supported by scientific data:
  - Deploy seasonal dust control measures in locations that minimize conflict with scenic views of the ocean from sensitive park visitor viewpoints, including camping areas, hiking trails, established paths of travel, and other areas of high visitation.
  - Deploy muted green- or neutral-colored (e.g., sand-colored or brown) wind fencing when existing orange-colored fencing supplies deteriorate or run out.

Biological Resources (Chapter 7)

Standard and Specific Project Requirements:

- **Minimize Ground Disturbance and Land Occupancy.** The OHMVR Division shall:
  - Design and implement the Dust Control Program to disturb and occupy as little land as possible
  - Prior to the start of Dust Control Program-related work activities (e.g., installation of dust control measures, monitoring equipment maintenance), the OHMVR Division shall determine the minimum area required to complete the work and define the boundaries of the work area on project drawings and with flagging or fencing on the ground, as appropriate
  - Use existing paths of travel to access project-related work areas
  - Restore all disturbed areas to the maximum extent feasible

Table 2-5 Summary of Standard and Specific Project Requirements

- **Minimize and/or Avoid Impacts to Special-Status Plants.** The OHMVR Division would implement the following measures to minimize and/or avoid impacts to special-status plants:
  - Prior to starting all work under the Dust Control Program, a qualified biologist shall survey for the presence of special-status plants in and within 100 feet of work areas (including new access routes). These surveys should be conducted during the appropriate blooming period for species that are known to or have the potential to occur in work areas, and shall follow protocols established by the USFWS, CDFW, and CNPS.
  - A qualified biologist shall map, flag, and protect special-status plants identified during surveys.
    - The qualified biologist shall establish clear avoidance areas around special-status plant locations. This avoidance area shall provide a minimum 25-foot buffer from all work activities (the biologist may establish a larger buffer if appropriate). Sturdy, visible fencing or other protective features shall be installed around all avoidance areas. Fencing shall be securely staked and installed in a manner that would be reasonably expected to withstand winds and sand transport levels typical of Oceano Dunes SVRA. Fencing and other protective features shall be removed upon completion of work activities.
    - If California or federal endangered or threatened plant species are observed, the OHMVR Division shall prepare and submit a report detailing the find to the appropriate resource agency (i.e., USFWS, CDFW) prior to starting work.
  - If it is not feasible to avoid the loss of non-listed special-status plants, the OHVMR Division shall, if feasible, compensate for this loss by reseeding, replanting, and/or restoring the disturbed areas with locally collected seed stock from nearby plant locations.
- **Minimize and/or Avoid Impacts to Special-Status Amphibians and Reptiles.** The OHMVR Division would implement the following measures to minimize and/or avoid impacts to special-status amphibians and reptiles:
  - Immediately prior to starting all work under the Dust Control Program, a qualified biologist shall survey for the presence of special-status amphibians and reptiles (other than California red-legged frog) in and within 100 feet of work areas (including new access routes). These surveys may include a combination of visual and trapping surveys (if authorized by CDFW).
  - If special-status amphibians and/or reptiles are identified during surveys (other than California red-legged frog), a qualified biologist shall coordinate with and receive approval from CDFW to capture and relocate the animal to nearby, suitable habitat that is at least 300 feet from the work area.
  - No trash shall be deposited on the site during work activities. All trash shall be placed in trash receptacles with secure lids or stored in vehicles.
- **Minimize and/or Avoid Impacts to California Red-Legged Frog.** The OHMVR Division would implement the following measures to minimize and/or avoid impacts to the California red-legged frog:
  - Immediately prior to starting all work under the Dust Control Program, a qualified

Table 2-5 Summary of Standard and Specific Project Requirements

biologist shall survey the work site for California red-legged frogs. If found, the biologist shall delineate and maintain an appropriate sized buffer and contact the USFWS to determine if moving the animal(s) is appropriate. In making this determination, the USFWS will consider if an appropriate relocation site exists. If the USFWS approves moving animals, an approved biologist will be allowed sufficient time to move them from the work site before work activities begin. Only USFWS-approved biologists shall participate in activities associated with the capture and handling of California red-legged frogs.

- If a project is proposed near an area that could potentially support California red-legged frog, a biological monitor shall remain onsite to monitor for the presence of California red-legged frog throughout the installation of all dust control measures. The on-site biological monitor shall have the authority to halt any action that might result in impacts that exceed the levels anticipated by the USFWS during review of the proposed action. If work is stopped, the USFWS shall be notified immediately by the biological monitor.
- **Minimize and/or Avoid Impacts to Nesting and Special-Status Birds.** The OHMVR Division would implement the following measures to minimize and/or avoid impacts to special-status birds:
  - Prior to starting all work under the Dust Control Program from February 1st to August 15th, a qualified biologist shall survey for nesting birds in the vicinity of work areas. These surveys shall be performed no more than seven days prior to the start of work.
    - If nesting birds are found during surveys, the OHMVR Division shall establish a buffer zone around the nest until the young have fledged. The size of the buffer shall be determined by the qualified biologist, and shall depend on the species and topography, but would generally be 300 feet for raptors and 50 feet for other bird species.
  - Prior to starting all work under the Dust Control Program in suitable burrowing owl habitat areas in the backdunes from September 1st through February 28th, a qualified biologist shall survey for potential burrows in the vicinity of the work area.
    - If small mammal burrows are detected, the biologist shall scan the area for burrowing owls and will search for signs of burrowing owls including feathers, whitewash, or pellets.
    - If any occupied burrows are detected, the OHMVR Division shall establish a minimum 100-foot buffer zone around the occupied burrow.
    - If no burrowing owls or signs of burrowing owls are detected, no further action is required.
  - The OHMVR Division has designed the project to avoid western snowy plover and California least tern habitat (generally flat, unvegetated, or sparsely vegetated sand near the shoreline); however, some activities may occur in the vicinity of these species. To the extent feasible, the OHMVR Division shall perform Dust Control Program work activities in the vicinity of western snowy plover and California least tern habitat from October 1 through February 28, which is outside of the nesting season for these species. If work activities must be conducted March 1

Table 2-5 Summary of Standard and Specific Project Requirements

through September 30, the OHMVR Division would implement the following measures:

- No more than three days prior to starting work in the vicinity of western snowy plover and California least tern habitat from March 1st to September 30th, a qualified biologist shall survey for western snowy plover and California least tern nests. If nests are found during this survey, the OHMVR Division shall establish a minimum 300-foot buffer zone around the nest.
- If nesting activity is initiated within 300 feet of in-progress or installed project activities, the OHMVR Division shall stop all active work and install a large (200-foot diameter) fence bump-out (if it is near an existing exclosure) or circular single nest exclosure (if it is not near any existing exclosure) consisting of 2-inch by 4-inch mesh wire fencing with a height of 5 feet (8 inches buried) to protect the nest from people and predators. No additional dust control activities shall be performed within 300 feet of such exclosure until after the nest fate is determined.
- A biological monitor shall be available to monitor for the presence of nesting activity throughout the installation of all dust control measures. The on-site biological monitor shall have the authority to halt any action that might result in impacts to individual birds or nests. If work is stopped, the USFWS shall be notified immediately by the on-site biological monitor.

o The OHMVR Division shall plan and design Dust Control Program activities to avoid changing breeding habitat in the vicinity of known or potential snowy plover and least tern nesting areas. Program activities that could facilitate predator movement into known or potential nesting areas for plover and tern shall be minimized. If avoidance is not feasible, additional predator control resources (e.g., enhanced monitoring and/or trapping) shall be secured to reduce predator presence and impacts to plover and tern adults, juveniles, chicks, and nests.

- **Minimize and/or Avoid Impacts to American Badger and Badger Dens.** No more than seven days prior to installation of project features, a qualified biologist shall perform a pre-construction survey for badger dens in the vicinity of work areas. If any dens are found, the OHMVR Division shall establish a minimum 100-foot buffer zone around the den.
- **Minimize and/or Avoid Impacts to Wetland Habitats.** The OHMVR Division would implement the following measures to minimize and/or avoid impacts wetland habitats:
  - o The OHMVR Division will avoid or minimize impacts to federally protected wetlands to the maximum extent feasible by conducting work in upland areas.
  - o If necessary, the OHMVR Division shall verify the Pacific Ocean's high tide line in the vicinity of Pier Avenue and Grand Avenue and ensure the installation and placement of all piles, beams, or other track-out prevention structures occur above the high tide line.
  - o The OHMVR Division shall not install any project features within wetlands or other jurisdictional waters, and shall setback all project features a minimum of 150 feet from all such areas.
  - o The OHMVR Division shall not perform any equipment maintenance within 150 feet of any wetland or jurisdictional water where equipment fuel, oil, etc. could

Table 2-5 Summary of Standard and Specific Project Requirements

enter the such areas.

- The OHMVR Division shall not allow water containing mud, silt, or other pollutants to be placed in locations that may be subjected to high storm flows.
- Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil.
- When operations are completed, any excess materials or debris shall be removed from the work area.
- To minimize disturbance to the work area, the OHMVR Division shall limit crew size, number of vehicles and equipment, and access points.

- **Employee education.** If, in the opinion of the project biologist, a work area is in or near an area that is known or has the potential to support listed species, all construction personnel shall receive training on listed species and their habitats by a USFWS-approved biologist. The importance of these species and their habitat as well as the minimization and avoidance measures that are to be implemented as part of the project will be described to all employees.
- **Avoid Open Trenches.** If track-out prevention installation results in open trenches, the OHMVR Division shall cover such trenches at the close of each working day with plywood or similar materials, or shall include escape ramps constructed of earth fill or wooden planks so that animals may exit the trench. A staff biologist, or other staff trained by a staff biologist will inspect trenches and pipes for wildlife at the beginning of each workday. If a trapped animal is discovered, it will be released in suitable habitat at least 300 feet from the work area.

Cultural Resources (Chapter 8)

Standard and Specific Project Requirements:

- **Inventory Cultural Resources.** Conduct a records search and field survey for historical and archaeological resources prior to the start of specific work activities; map and record all resources.
- **Monitor Cultural Resources.** Evaluate whether the project will adversely change the significance of a historical resource; first consult with and involve a Native American representative; have a qualified monitor present during all installation activities within the vicinity of the resource.
- **Avoid Cultural Resources.** Avoid substantial adverse changes to cultural resources; review ground disturbing activities, flag or fence buffers around all cultural resources in the vicinity of work activities, train construction personnel on cultural resources identification and avoidance.
- **Avoid Impacts from Accidental Discoveries.** In the event cultural resources are accidentally discovered during work activities, stop all work and immediately have the resource evaluated by a qualified state archaeologist. If human remains are accidently discovered, stop all work and contact the county coroner.
- **Native American Consultation and Monitoring.** Consult with and involve Native American representatives during near and long-term project implementation.

Table 2-5 Summary of Standard and Specific Project Requirements

- **Preserve Cultural Resources in Place.** The OHMVR Division shall, to the maximum extent feasible and supported by Dust Control Program data, preserve cultural resources in place and avoid substantial adverse changes to historical and archaeological resources. The OHMVR Division shall ensure adequate paths of travel are maintained around or between dust control measures and historical or archaeological resource and existing protections are sufficient to maintain resource protection.

Hydrology and Water Quality (Chapter 9)

- **Minimize Ground Disturbance and Land Occupancy.** The OHMVR Division shall:
  - Design and implement the Dust Control Program to disturb and occupy as little land as possible
  - Prior to the start of Dust Control Program-related work activities (e.g., installation of dust control measures, monitoring equipment maintenance), the OHMVR Division shall determine the minimum area required to complete the work and define the boundaries of the work area on project drawings and with flagging or fencing on the ground, as appropriate
  - Use existing paths of travel to access project-related work areas
  - Restore all disturbed areas to the maximum extent feasible
- **Manage Seasonal Dust Control Measure Stockpiles.** The OHMVR Division shall locate stockpiles of seasonal dust control measures such as straw bales at least 50 feet away from concentrated storm water flows.
- **Designate Vehicle and Equipment Storage, Staging, and Clean-up Locations.** The OHMVR Division shall store, stage, and clean-up all vehicles and equipment used for Dust Control Program-related work activities at its maintenance yard on SR 1 in Oceano when not in use.
- **Designate Vehicle and Equipment Fueling Locations.** The OHMVR Division shall store all fuel and conduct all re-fueling activities at its maintenance yard on SR 1 in Oceano.
- **Inspect for Equipment Leaks.** The OHMVR Division shall inspect all off-road and other construction equipment for leaks prior to and at the conclusion of any installation, operation, or maintenance activity. If leaks are observed, the leaking equipment shall be removed from the field and repaired immediately. All contaminated water, sludge, spill residue, or other hazardous compounds discovered during inspections shall be contained and disposed of, as necessary, at lawfully permitted or authorized disposal sites.
- **Soil Stabilizer Selection:** If soil stabilizers are used, the OHMVR Division shall, in consultation with CCC staff, select a non-toxic, environmentally friendly soil stabilizer to control sand transport. The selection should take into consideration a variety of factors including but not limited to: surface runoff carrying suppressants and/or breakdown of products, uptake of dust suppressants by plants, ingestion of dust suppressant constituents by animals, volatilization, transport of suppressant particulates by wind erosion to unintended areas, consumption of contaminated groundwater, downwind drift of spray off-site during application, and ingestion of dust suppressant constituents by humans.

Table 2-5 Summary of Standard and Specific Project Requirements

- **Track-Out Device Installation:** The OHMVR Division shall, to the maximum extent feasible, minimize disturbance to or disruption of any existing storm water flows, drainage facilities, and systems on Grand Avenue in Grover Beach and Pier Avenue in Oceano. This may be accomplished by, but not limited to, installing track-out prevention devices that have the potential to interfere with or disrupt storm water facilities during the dry season (April 15 to October 15) or provide temporary storm water drainage facilities during track-out installation. If necessary, the OHMVR Division shall prepare a Storm Water Pollution Prevention Plan for track-out prevention device installation and obtain all necessary permits for installation, operation, and maintenance of the track-out prevention devices.
- **Regularly Remove, Test, and Dispose of Sediment from Track-out Prevention Devices.** The OHMVR Division shall:
  - Regularly remove the sediment that accumulates in any sediment trapping devices, oil/water separators, or other track-out prevention devices to ensure storm water flows do no back-up or spill out into local storm water collection systems or the beach.
  - Inspect and, if necessary, test the sediment collected by track-out prevention devices for the presence of pollutants such as fuel, oils, or other waste and appropriately disposed of in accordance with solid and/or hazardous waste regulations.

Noise (Chapter 10)

Standard and Specific Project Requirements:

- **Reduce Equipment Noise.** To reduce equipment-related noise, the OHMVR Division shall:
  - Store and/or stage all construction equipment away from sensitive receptor locations as possible
  - Maintain all construction equipment in good working order
  - Ensure construction vehicles, equipment, and machines incorporate design features in good operating order that meet current industry standards for noise muffling and reduction, e.g., internal combustion engines shall be equipped with a muffler, engines should be enclosed or shielded, etc.
  - Shield stationary equipment such as compressors, generators, and welder machines or locate/operate this equipment as far away from sensitive receptors as possible. If stationary noise sources must be located near sensitive noise receptors (within 100 feet), stationary noise sources shall be muffled, shielded, or enclosed within a temporary shed
- **Limit Construction Hours.** The OHMVR Division shall limit construction equipment use to daylight hours, Monday – Friday, to maximum extent feasible. If work during weekends or holidays is required, the OHMVR Division shall limit construction activities to the hours of 8 AM to 5 PM.

2.6 PERMITS AND APPROVALS REQUIRED BY THE PROJECT

The OHMVR Division is both the proponent and lead agency for the project. The project involves planting vegetation, deploying seasonal dust control measures, installing track-out prevention devices, and temporary dust and PM10 monitoring in the Coastal Zone as defined by the California Coastal Act of 1976 and would require a CDP to be implemented. The proposed project is within the jurisdiction of the City of Grover Beach and SLO County certified LCPs. These jurisdictions would ordinarily be responsible agencies under CEQA. The CCC, however, will retain CDP jurisdiction for the proposed project because the OHMVR Division, the City of Grover Beach, SLO County, and the CCC have all consented to consolidate the coastal permit action. Thus, the CCC is a responsible agency under CEQA. This consolidation would not substantially impair public participation because the OHMVR Division has prepared a public participation plan for review and approval by the CCC.

The proposed project may result in construction or maintenance work in public rights of way under the jurisdiction of the City of Grover Beach and SLO County and therefore may require an encroachment or grading permit from these jurisdictions.

The OHMVR Division would incorporate standard and specific project requirements to reduce or avoid potential impacts to protected plant and wildlife species and their habitats and does not anticipate the need to obtain permits or approvals from CDFW or USFWS for Dust Control Program activities.

Table 2-6 lists the potential approvals that the project could require.

Table 2-6 Potential Project Permits and Approvals

Agency	Potential Permit / Approval
CCC	Master CDP Annual CDP Review
City of Grover Beach Public Works Dept.	Encroachment permits for track-out devices Grading permits for track-out devices
SLO County Public Works Dept.	Encroachment permits for track-out devices Grading permits for track-out devices
U.S. Army Corps of Engineers	404 permit if final track-out prevention measure design results in placement of fill or structures within waters of the U.S.

2.7 REFERENCES

Bowen, A.J. and D.L. Inman. 1966. *Budget of Littoral Sands in the Vicinity of Point Arguello, California.* U.S. Army Coastal Engineering Research Center. Technical Memorandum No. 19. December 1966.

California Coastal Commission (CCC) 2001. Staff Report Permit Amendment 4-82-300-A5. Santa Cruz, CA. April 24, 2001.

California Department of Parks and Recreation (CDPR) 1975. *Pismo State Beach and Pismo Dunes State Vehicular Recreation Area General Development Plan and Resource Management Plan*. Sacramento, CA. April 1975.

_____1991. Pismo Dunes State Vehicular Recreation Area Access Corridor Project Draft Environmental Impact Report. State Clearinghouse No. 90011118. Sacramento, CA. August 1991.

_____1994. Notice of Determination, California Department of Parks and Recreation, Pismo Dunes SVRA Access Corridor Project.

_____2013. *California State Parks System Statistical Report Fiscal Year 2012/2013.* Sacramento, CA. 2013.

_____2014. *California State Parks System Statistical Report Fiscal Year 2013/2014.* Sacramento, CA. 2014.

_____2015a. *California State Parks System Statistical Report Fiscal Year 2014/2015.* Sacramento, CA. 2014.

_____2015b. Option A Preliminary Site Plan for Oceano Dunes SVRA Track Out Prevention – Grand Avenue and Pier Avenue. Sacramento, Ca. October 2015.

_____2016a. Option B Preliminary Site Plan for Oceano Dunes SVRA Track Out Prevention – Grand Avenue and Pier Avenue. Sacramento, Ca. April 2016.

_____2016b. Option C Preliminary Site Plan for Oceano Dunes SVRA Track Out Prevention – Grand Avenue and Pier Avenue. Sacramento, Ca April 2016.

California Geological Survey (CGS) 2007. "Review of Vegetation Islands, Executive Summary, Oceano Dunes SVRA." Prepared for the Off-Highway Motor Vehicle Recreation Division. Sacramento, CA. August 30, 2007.

California State Park and Recreation Commission 1994. Oceano Dunes State Vehicular Recreation Area General Plan Amendment.

Condor Environmental Planning Services, Inc., 2006. Alternative Access Study: Oceano Dunes State Vehicular Recreation Area. Prepared for State of California: Department of Parks and Recreation, Oceano Dunes District. November 15.

Desert Research Institute (DRI) 2011. Oceano Dunes Pilot Projects Final Report. DRI. Reno, Nevada. September 15, 2011.

_____2014. *Wind and PM10 Characteristics at the ODSVRA from the 2013 Assessment Monitoring Network*. DRI. Reno, Nevada. September 22, 2014.

_____2015c. Dust Control Project ODSVRA 2016. DRI. Reno, Nevada. December 2015.

Mulligan 1985. *The Movement of Transverse Coastal Dunes, Pismo Beach, California 1982-1983.* UCLA Department of Geography (Unpublished Masters Thesis). Los Angeles, CA. 1985.

National Park Service (NPS) 2012. "Nipomo Dunes-Point Sal Coastal Area" *Nipomo Dunes-Point Sal Coastal Area*. NPS, Explore Nature, National Natural Landmarks, NNL Directory, Select a State (California), San Luis Obispo. June 28, 2012. Web. November 11, 2014. < http://www.nature.nps.gov/nnl/site.cfm?Site=NIDU-CA>

Off-Highway Motor Vehicle Recreation (OHMVR) Division 2013. Oceano Dunes State Vehicular Recreation Area Rule 1001 Particulate Matter Reduction Plan. Sacramento, CA. March 29, 2013.

Orme, Antony R., and Tchakerian, Vatche P., 1986, "Quaternary Dunes of the Pacific Coast of the Californias." In *Aeolian Geomorphology: Proceedings of the 17th Annual Binghamton Geomorphology Symposium*, September 1986, Nickling, William, ed. Boston: Allen & Unwin. 1986.

San Luis Obispo County (County) 1998. *Woodlands Specific Plan.*

San Luis Obispo County Air Pollution Control District (SLOACPD) 2011. *South County Neighborhood Monitoring and Air Quality Forecasts* [PowerPoint slides]. September 7, 2011.

_____2013a. *South County Community Monitoring Project*. San Luis Obispo, CA. January 2013.

Strategic Marketing Group (SMG) 2011. *Oceano Dunes SVRA Economic Impact Analysis Report 2010-2011.* Prepared for CDPR, OHMVR Division. Sacramento, CA. 2011.

United States Environmental Protection Agency (U.S. EPA) 2005. *Environmental Technology Verification Report Dust Suppression Products Midwest Industrial Supply, Inc.'s EnviroKleen.* EPA cooperative agreement no. CR829434-01-1. Research Triangle Park, NC. September 2005.

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CHAPTER 3 IMPACT ANALYSIS METHODOLOGY

This chapter describes the analytical methodology used, and EIR scoping information considered, in the preparation of the environmental analyses contained in Chapters 4 – 12 of this EIR. This chapter also partially addresses Dust Control Program effects found not to be significant.

3.1 ANALYTICAL METHODOLOGY

In evaluating the proposed Dust Control Program's potential impacts, the OHMVR Division employed the following analytical methodology:

Step 1: Incorporation of Standard and Specific Project Requirements (SPRs). The EIR incorporates SPRs into the proposed Program activities and components that are designed to minimize impacts to the existing environmental setting. The application of SPRs is presumed and therefore they are not considered mitigation measures but rather resource protection measures that are part of the proposed project. Thus, the application of these requirements is considered prior to making a finding of significance for project impacts.

Step 2: Compliance with Applicable Laws, Ordinances, Statutes, and Regulations. The EIR presumes, unless specifically noted, that the project would be designed, constructed, operated, and maintained in accordance with the applicable requirements described in the regulatory setting discussion. The regulatory setting is not intended to be exhaustive; rather, it is intended to provide a summary of key regulatory requirements that materially affect the relationship between the project's design, construction, operation, and maintenance and potential environmental impacts. In addition, the regulatory setting does not summarize regulations that do not apply to the proposed project's components and activities.

Step 3: Identification of Existing Physical Conditions. The EIR identifies the existing physical environmental conditions that exist in the proposed Program area and which could change as a result of the Program activities and components. The environmental setting generally reflects the physical environmental conditions of the Dust Control Program area as they existed at the time the OHMVR Division published its Notice of Preparation for this EIR (February 2015). This setting constitutes the baseline physical conditions by which the OHMVR Division is determining whether the physical change that occurs to the environment as a result of the proposed Dust Control Program is significant. In accordance with CEQA Guidelines Section 15125(a), the environmental setting describes only those physical environmental conditions necessary to understand the significant effects of the proposed Dust Control Program and its alternatives.

Step 4: Analysis of Project Impacts. The EIR evaluates the significance of the Dust Control Program's potential impacts, i.e., the change to the physical environmental conditions that could result from implementation of the Program, on the full range of resources identified in Appendix G to the CEQA guidelines. Pursuant to CEQA Guidelines Section 15126, this EIR analyzes the potential environmental impacts stemming from all phases of the proposed Program. This examination is based on the incremental change to the existing physical conditions that would result from the implementation of the proposed Program and considers the public comments submitted by agencies and interested individuals during the 30-day public review period for the 2015 NOP, as well as the 2012 IS and NOP. The EIR's impact analyses consider the direct and indirect impacts of the proposed Program, as well as the short-term and long-term impacts of the Program, and enable the OHMVR Division to determine if the proposed Dust Control Program

would have a beneficial impact, no impact, a less than significant impact, a potentially significant impact, or a significant and unavoidable impact to the environment.

Step 5: Inclusion of Mitigation Measures. The EIR describes the feasible mitigation measures proposed to avoid or minimize the Dust Control Program's significant impacts. Program mitigation measures are in addition to the standard and specific resource protection measures incorporated into the Program, and generally require the OHMVR Division to avoid, prevent, or minimize impacts to resources, or, if impacts do occur, to rehabilitate, restore, or compensate for the impact in a manner that is proportional to the Program impact.

3.2 SUMMARY OF EIR SCOPING COMMENTS

As described in Section 1.5, the OHMVR Division filed a revised NOP for this Program EIR with the State Clearinghouse on February 6, 2015, and provided a public review for the NOP from February 6, 2015 to March 9, 2015. In addition, one scoping meeting was held in the City of Grover Beach on February 17, 2015.

3.2.1 Written Comments Received by the OHMVR Division

The OHMVR Division received written comments during the revised NOP public review period from three public agencies, one organization, and 17 interested individuals. Full written comments are presented in Appendix A. Many written comments expressed support or opposition to the project and OHV recreation in general, which are not germane to the CEQA process or the scope or content of the EIR's regulatory setting, environmental setting, or impact analyses and mitigation measures. In addition, many comments were generic remarks that could not be correlated to a specific point in the revised NOP. Written comments germane to the scope and content of the EIR are briefly summarized below, followed by where each comment type is addressed in the Draft EIR, if applicable.

- CEQA review timing and process for the project: Chapter 1, Introduction. Many residents were unable to attend the planned scoping meeting, but were interested in this process. They asked that concerned parties be kept abreast of developments as they occur, be afforded an opportunity to respond, and be added to any mailed lists regarding scheduled meetings.
- Consistency with Rule 1001: Chapter 1, Introduction and Chapter 2, Project Description. Commenters stated that the proposed dust control measures appear to be inadequate to meet the emission reduction requirements and performance standard of Rule 1001.
- Project objectives Chapter 2, Project Description. Commenters expressed both strong opposition and support for OHV riding and OHV impact concerns. Additionally, comments stated that project objectives are not clearly articulated in the NOP, and this "project" describes a Program, not a project.
- Air quality monitoring, pollution levels and standards: Chapter 1, Introduction, Chapter 2, Project Description, Chapter 3, Impact Analysis Methodology, and Chapter 12, Alternatives. Several commenters raised concerns about the dust pollution, claiming health problems and the need for air filters and gas masks.
- Impacts on property values due to increased noise levels: Chapter 10, Noise. Comments expressed concern regarding noise levels due to rumble strips and loud equipment at used at night with devalue neighboring properties.

- Policies regarding recreation and public access limits and hours: Chapter 4, Recreation and Public Access, and Chapter 5, Land Use and Planning. Comments expressed concern regarding consistency with the Oceano Dunes SVRA General Development and General Plan and the OHMVR Division's legislative mandate, lost recreation opportunities, and vehicle restrictions.
- Project consistency with local land use plans and policies, agency jurisdiction over the project area and potential impacts to public access: Chapter 4, Recreation and Public Access, and Chapter 5, Land Use and Planning.
- Recreation and aesthetic impacts: Chapter 4, Recreation and Public Access, and Chapter 6, Aesthetics. Commenters encouraged a less intrusive approach with particular concerns for diminished aesthetics for OHV riders, lost recreation opportunities, and fewer SVRA visitors.
- Special-status species and biological resources impacts: Chapter 7, Biological Resources. CDFW recommended several measures to avoid impacts to wildlife and plants associated with Program implementation.
- Cumulative impacts evaluation: Chapter 11, Cumulative Impacts. Comments requested a discussion of cumulative impacts in the EIR, including dirt roads, paved roads, and new housing projects in the area.
- Inclusion of a robust and full range of alternatives, including alternative dust control measures: Chapter 12, Alternatives.

3.2.2 Oral Comments Received by the OHMVR Division

The OHMVR Division received oral comments from the six interested individuals at the EIR scoping meeting held on February 17, 2015. These comments were generally related to the proposed Program area, the scope of the Program activities, and the Program schedule. No written comments were received at the meeting.

3.3 PUBLIC AGENCY AND OTHER PROJECT COORDINATION

3.3.1 Native American Consultation

In compliance with CDPR's *Departmental Notice 2007 Native American Consultation Policy and Implementation Procedures,* Native American consultation has occurred as part of the environmental review of this project. Native American consultation included a record search request of the NAHC Sacred Lands Files on January 9, 2013. A search of the NAHC Sacred Lands Files indicated the presence of Native American cultural sites within portions of the project area. CDPR also requested a Native American contact list of the project area. Native American individuals/organizations listed on the NAHC contact list were contacted by CDPR through certified letter, email and phone call.

The NCTC, the Santa Ynez Tribal Elders Council, the yak tityu tityu - Northern Chumash Tribe, and the Odom family requested to be included in the Native American consultation for this project. On behalf of the NCTC, Mr. Fred Collins sent a comment letter to CDPR on February 7, 2013. CDPR sent a response to comment letter to the NCTC on February 19, 2013. CDPR also provided representatives of the NCTC, Santa Ynez Tribal Elders Council, yak tityu tityu – Northern Chumash Tribe, and the Odom Family copies of the *Oceano Dunes SVRA Dust Control Project Initial Study* and the report *A Cultural Resource Inventory of Oceano Dunes SVRA, San Luis Obispo County, California*.

CDPR hosted a Native American consultation meeting at the Oceano Dunes District on March 28, 2013. The Native American participants all agreed that they wanted to be informed and consulted during all phases of the project. CDPR will continue to keep the community informed as the project continues.

3.3.2 Wildlife Agency Coordination

The OHMVR Division met with USFWS and CDFW representatives in June and July 2013 to discuss long-term implementation of the Dust Control Program in consideration of federal and state endangered species act permitting requirements.

3.4 PROJECT IMPACTS FOUND NOT TO BE SIGNIFICANT

The OHMVR Division has determined, using the Environmental Checklist Form contained in Appendix G to the CEQA Guidelines as a guide, that implementation of the proposed Oceano Dunes SVRA Dust Control Program would clearly result in no impact or a less than significant impact to the resources described below.

In addition, Chapters 4 – 10 of this EIR include a summary of the Program impacts found to be less than significant for specific resource areas (e.g., biological resources) in which one or more impacts were also determined to be potentially significant. This summary, which is found under the "Program Impacts and Mitigation Measures" heading of each chapter (typically sub-Section 4 of the chapter), indicates which impacts are not evaluated further in this EIR.

3.4.1 Agriculture and Forestry Resources

Implementation of the proposed Dust Control Program would have no impact on agricultural or forestry resources. None of the lands within the Dust Control Program area are actively grazed, cultivated, or otherwise in agricultural production. The project area contains no prime agricultural lands as defined by the Coastal Act, and no Prime Farmland, Farmland of Statewide Importance, or other Unique Farmland as defined by the California Department of Conservation's Farmland Mapping and Monitoring Program (CDC 2013); however, there are approximately 120 acres of Farmland of Local Potential, as defined by SLO County within the potential tree planting area. This area is currently undeveloped and unirrigated but does have the potential for high yield crops because of high soil quality. The OHMVR Division would avoid planting trees on lands designated as farmland of local potential, and this planting activity would not otherwise interfere with potential future agricultural operations. Thus, the Dust Control Program would have no impact on agricultural or forestry resources.

3.4.2 Air Quality

Air quality is a function of pollutant emissions and topographic and meteorological influences. The physical features and atmospheric conditions of a landscape interact to affect the movement and dispersion of pollutants and determine its air quality. The USEPA and CARB are the federal and state agencies charged with maintaining air quality in the nation and state, respectively. The USEPA delegates much of its authority over air quality to CARB. CARB has geographically divided the state into 15 air basins for the purposes of managing air quality on a regional basis. An air basin is a CARB-designated management unit with similar meteorological and geographic conditions. There are 15 air basins in the state. The project area is located along the central coast of California, within the South Central Coast Air Basin (SCCAB). The SLOAPCD is the primary agency responsible for monitoring and maintaining air quality in the portion of the SCCAB where the Dust Control Program is located. In 2001, the SLOAPCD adopted its *2001 Clean Air Plan*. This plan updates the SLOAPCD's 1998 Clean Air Plan, addresses ozone and particulate

matter emissions, and identifies the control measures necessary to attain ozone air quality standards. Oceano Dunes SVRA is subject to the requirements of SLOAPCD Rule 1001, Coastal Dunes Dust Control Requirements.

The proposed Dust Control Program consists of vegetation plantings, seasonal dust control measure deployment, and the installation, operation, and maintenance of monitoring equipment and track-out prevention devices at Oceano Dunes SVRA and Pismo State Beach. These activities would require the use of vehicles and equipment that would combust gasoline and diesel fuel and produce emissions. The OHMVR Division has obtained a new street sweeper to support compliance with Rule 1001, and may lease heavy equipment to expedite the installation of dust control measures; however, in general, the OHMVR Division would use existing vehicles and equipment to deliver materials and install, maintain and, if necessary, remove dust control measures, monitoring equipment, and track-out prevention devices. These vehicles and equipment already operate at and in the vicinity of Oceano Dunes SVRA; in 2012, the Oceano Dunes District vehicle consumed total of approximately 7,000 gallons of diesel and 37,200 gallons of gasoline. Under the proposed Dust Control Program, the OHMVR Division anticipates use of this equipment could increase slightly as a result of new dust control measures and equipment, requiring approximately 10 percent more gasoline and diesel fuel combustion.

Table 3-1 summarizes the Dust Control Program's net increase in pollutant emissions from mobile vehicles and equipment.

Table 3-1 Net Increase in Annual Vehicle and Equipment Emissions (Tons per Year)

Emissions Source	**Existing Conditions**		
	ROG	**NOX**	**PM10(A)**
On-Road Vehicles	0.33	0.47	0.03
Construction Equipment	0.10	1.04	0.06
Total	0.43	1.51	0.09
Emissions Source	**Program Conditions**		
	ROG	**NOX**	**PM10(A)**
On-Road Vehicles	0.36	0.51	0.04
Construction Equipment	0.11	1.15	0.06
Total	0.47	1.66	0.10
Net Project Increase	**0.04**	**0.15**	**0.01**
SLOAPCD CEQA Threshold	**2.5**	**2.5**	**0.13**

Sources: EMFAC/OFFROAD 2011

(A) Estimate reflects PM10 emissions; PM2.5 emissions would be a subset of these values. All PM10 is considered to be exhaust emissions.

(B) SLOAPCD 2.5 tons per year thresholds is a combined threshold for ROG and NOx emissions.

As shown in Table 3-1, the Dust Control Program would increase vehicle and equipment emissions of ROG, NOX, and PM by less than 0.2 tons per year for all pollutants. This impact would be less than significant.

Under the Dust Control Program, the OHMVR Division would plant vegetation (approximately 100 acres total) and deploy approximately 40 acres of seasonal dust control measures at Oceano Dunes SVRA. Although the magnitude and the location of specific dust control measures is not certain, these activities would nonetheless block the flow of wind across the dune landscape,

slow or stop sand movement and corresponding dust generation at Oceano Dunes SVRA, and improve downwind air quality.

For these reasons, impacts to air quality are not discussed further in this EIR.

3.4.3 Geology and Soils

The proposed Oceano Dunes SVRA Dust Control Program is situated in the Santa Maria Dune Complex (also known synonymously as the Guadalupe-Nipomo Dune Complex), an 18-mile long coastal dune landscape that occupies approximately 18,000 acres in southwestern SLO County and northwestern Santa Barbara County (USFWS 2012). Several sources identify the Guadalupe-Nipomo Dune Complex as "one of the largest coastal dune landscapes along the west coast of North America" (USFWS 2012) and "the largest intact coastal dune ecosystem on Earth" (The Nature Conservancy 2013). A portion of the dune complex is designated the Nipomo Dunes-Point Sal Coastal Area Natural National Landmark, an area that contains "the largest, relatively undisturbed coastal dune tract in California, and is one of the last remaining tracts of pristine rocky coastline in the South Coast Ranges" (NPS 2013). Though these descriptions vary slightly, they generally identify the Guadalupe-Nipomo Dune Complex as a unique coastal dune landscape with few, if any, parallels in size. According to the NRCS, the Beaches soil map unit (Unit 107) includes sands in the intertidal zone characterized by rapid permeability, low to very low available water capacity, slow surface runoff, and high to very high erosion hazard due to wind and wave action (SCS 1984). The Dune Land unit (Unit 134) consists primarily of hilly areas along the coast that are composed of sand-sized particles that shift with the wind. These areas are characterized by very rapid permeability, very low available water capacity, slow surface runoff, and very high sand blowing hazard.

The 2008 Soil Conservation Standards and Guidelines state that OHV recreation facilities should be managed for sustainable long-term prescribed use including the minimization of negative effects such as soil loss, erosion, and sedimentation. OHV facilities are further mandated by PRC Sections 5090.2, 5090.35, and 5090.53, which emphasize that OHV use should be managed for sustained long term use and that the protection of public safety, the appropriate utilization of lands, and the conservation of land resources are of the highest propriety in the management of SVRAs. The California Coastal Act also requires development to reduce potential impacts from geologic and soil conditions.

Implementation of the proposed Dust Control Program would have a less than significant impact on geology and soils. Program activities would involve the use of heavy equipment and vehicles to plant vegetation, deploy seasonal dust control measures, and install monitoring equipment and track-out prevention devices. No significant grading, excavation, or soil hauling is anticipated under the Program. Program activities would occur in active dunes which are part of a dynamic, wind-blown environment where the predominant earth material is sand. Strong winds continually blow sand from the ocean to create the dunes. There will be no net erosion to the area. The deployment of dust control measures would interfere with sand transport and change land cover, but would not destroy local dunes or the Guadalupe-Nipomo Dune Complex. Dune features are deeply embedded into the landscape and the migrating sand that could be stabilized by vegetation and seasonal dust control measures would not significantly change the overall dynamics of the dune sheet or dune complex. The nature of these dune systems is that they tend to re-create themselves in some form or another due to the basin and the wind. The project wouldn't interfere with the coastal sediment transport process; deposition and sand transport would continue to occur in the project area, and large open sand areas would continue to persist. For these reasons, impacts to geology and soils are not discussed further.

3.4.4 Greenhouse Gases and Energy

Gases that trap heat in the atmosphere and affect regulation of the earth's temperature are known as "greenhouse" gases (GHG). GHG that contribute to climate regulation are a different type of pollutant than criteria or hazardous air pollutants because climate regulation is global in scale, both in terms of causes and effects. Some GHG are emitted to the atmosphere naturally by biological and geological processes such as evaporation (water vapor), aerobic respiration (carbon dioxide), and off-gassing from low oxygen environments such as swamps or exposed permafrost (methane); however, GHG emissions from human activities such as fuel combustion (e.g., carbon dioxide) and refrigerants use (e.g., hydrofluorocarbons) significantly contribute to overall GHG concentrations in the atmosphere, climate regulation, and global climate change. Human production of GHG has increased steadily since pre-industrial times (approximately pre-1880) and atmospheric carbon dioxide concentrations have increased from a pre-industrial value of 280 parts per million in the early 1800's to 407 parts per million in April 2016 (NOAA 2016). The effects of increased GHG concentrations in the atmosphere include climate change (increasing temperature and shifts in precipitation patterns and amounts), reduced ice and snow cover, sea level rise, and acidification of oceans. These effects in turn will impact food and water supplies, infrastructure, ecosystems, and overall public health and welfare. GHG can remain in the atmosphere long after they are emitted. The potential for a particular greenhouse gas to absorb and trap heat in the atmosphere is considered its global warming potential (GWP). The reference gas for measuring GWP is CO_2, which has a GWP of one. By comparison, CH_4 has a GWP of 21, which means that one molecule of CH_4 has 21 times the effect on global warming as one molecule of CO_2.

In 2006, the California State Legislature adopted the California Global Warming Solutions Act of 2006, Assembly Bill (AB) 32, which implemented a goal of 1990 GHG emissions levels for 2020 GHG emissions limits using various measures. Since AB 32, California has set forth plan updates and other bills working to achieve this emissions goal.

As discussed in Section 3.4.2, the proposed Dust Control Program is anticipated to result in a slight increase in vehicle and equipment use and associated gasoline and diesel fuel combustion, which is estimated to result in the net increase of approximately 35 metric tons of carbon dioxide equivalents (MTCO2e), which is below SLOAPCD CEQA thresholds of significance for land use projects (1,150 MTCO2e per year). Implementation of the proposed project would not result in a substantial increase in energy demand or the wasteful use of fuel or energy. The project would not change or result in new land use, and no new buildings for human habitation are proposed. The project is anticipated to use approximately ten percent more diesel and gasoline, but this usage would not be considered wasteful or inefficient because the proposed project would maximize coastal access and recreation consistent with public safety and environmental protection needs. For these reasons, potential GHG energy impacts from implementation of the proposed Program are not discussed further.

3.4.5 Hazards and Hazardous Materials

The Dust Control Project area is comprised of public park and adjacent open space lands that are generally free of hazardous materials contamination (DTSC 2016, SWRCB, 2016). Potential hazardous materials used in park operations such as gasoline, oil, diesel, cleaning chemicals, and pesticides, are stored off-site at the OHMVR Division's park maintenance facility on SR 1 in Arroyo Grande. All materials are used and stored in compliance with labeling requirements, and disposed of in accordance with applicable local and state hazardous materials regulations. The

OHMVR Division also has containment measures and protocols in place in the event of a spill or leak at the maintenance yard.

Within Pismo State Beach (excluding Pismo Dunes Natural Preserve) and Oceano Dunes SVRA, vehicle recreation creates the potential for fuel or oil leaks, as well as sewage leaks and illegal sewage dumping from RVs that camp in the park. These types of leaks are rare, but if witnessed and documented, the OHMVR Division does report the release to appropriate state and county environmental health agencies.

Although the project area is free of hazardous materials contamination, there are approximately 50 documented sites within two miles of Oceano Dunes SVRA subject to hazardous materials-related oversight. Of these, only eight sites are active, meaning they are in the process of clean-up. Most of these (4 sites) involve fueling stations that are within developed areas, Grover Beach (1), Oceano (1), and Guadalupe (2), and none of these fueling stations would affect or be affected by the proposed Dust Control Program. One active site, the Phillips 66 Refinery at 2555 Willow Road in Arroyo Grande is immediately adjacent to (east of) Oceano Dunes SVRA. This site is listed on both California Department of Toxic Substances Control (DTSC) and State Water Resources Control Board (SWRCB) databases as containing hazardous waste. The waste site consists of soil that has been contaminated by vanadium and nickel from past processes used at the refinery. The cleanup consists of removal of the soil and debris mounds via transport by rail cars and disposal at an authorized hazardous waste receiving facility.

According to fire hazard safety zone maps for SLO County, Pismo State Beach and Oceano Dunes SVRA have moderate fire susceptibility. Lands downwind of these parks have high fire susceptibility due to the vegetation and fuel loading (CAL FIRE 2007a).

To minimize the proposed Dust Control Program's potential adverse effects from hazards and hazardous materials, the OHMVR Division would include the following SPRs into the planning, design, and implementation of the Dust Control Program:

- **Designate Vehicle and Equipment Storage, Staging, and Clean-up Locations.** The OHMVR Division shall store, stage, and clean-up all vehicles and equipment used for Dust Control Project-related work activities at its maintenance yard on SR 1 in Oceano when not in use.
- **Designate Vehicle and Equipment Fueling Locations.** The OHMVR Division shall also store and conduct all re-fueling activities at its maintenance yard on SR 1 in Oceano.
- **Inspect for Equipment Leaks.** The OHMVR Division shall inspect all off-road and other construction equipment for leaks prior to and at the conclusion of any installation, operation, or maintenance activity. If leaks are observed, the leaking equipment shall be removed from the project site and repaired. All contaminated water, sludge, spill residue, or other hazardous compounds discovered during inspections shall be contained and disposed of, as necessary, at lawfully permitted or authorized disposal sites.
- **Prepare and Implement Spill Prevention and Response Plan.** The OHMVR Division shall prepare a Spill Prevention and Response Plan (SPRP) to provide protection to on-site workers, the public, and the environment from accidental leaks or spills of vehicle fluids or other potential contaminants. At a minimum, this plan will include (but not be limited to):

- A map that delineates equipment staging, refueling, and maintenance areas and the BMPs that would be implemented to prevent spills or leaks from leaving these areas
- A list of project materials which, if released, could pose a hazard to the public or the environment
- Procedures for the proper storage, use, and disposal of any solvents or other chemicals used in project activities;
- Procedures for the immediate containment and clean-up of any spills or leaks of hazardous materials, including a list of items to be maintained in an on-site spill response kit at all times
- Identification of lawfully permitted or authorized disposal destinations outside of the project site

The proposed Oceano Dunes SVRA Dust Control Program would involve the use of vehicles and equipment that would contain petroleum products (gasoline, diesel and oil) in fuel tanks and oil pans that could release hazardous materials during routine operations and/or accidents; however, SPRs for equipment storage, staging, and clean-up, leaks, fueling, and spill response would minimize the potential for spills or leaks to cause a substantial hazard to the public or the environment and render this a less than significant impact.

Vegetation and seasonal wind fencing and straw bales are flammable and would constitute a ready source of fuel for a wildland fire; however, the OHMVR Division would install perimeter fencing around dust control measures as necessary to ensure visitors and vehicles would remain a safe distance from project components, minimizing the potential for vehicle sparks or other accidental ignition sources to come in contact with flammable materials. The project does not involve residences or other permanent dwellings suitable for occupancy. These factors would render the potential for the proposed Dust Control Program to expose people and property to impacts from wildland fires less than significant.

3.4.6 Mineral Resources

The California Department of Conservation has classified most lands in and around the SLO County project area as Mineral Resource Zone (MRZ)-3, or areas containing mineral deposits of undetermined significance (i.e., the significance cannot be evaluated from available data; CDC 1989b). The exception to this is a small area of land (approximately 30 acres) south of the community of Oceano, near the northeast corner of Pismo Dunes Natural Preserve, that is classified MRZ-2 (CDC 1989a and 1989b). Operated by the Oceano Sand Company, this active mine produces specialty sand (CDC 2016). The implementation of the proposed Dust Control Program would not interfere with this mining operation, would not result in the loss of availability of a known mineral resource or that would be of value to the region and residents of the state, and would not result in the loss of a locally-important mineral resource recovery site as delineated on a local general plan, specific plan or other land use plan. For these reasons, impacts to mineral resources are not discussed further.

3.4.7 Population and Housing

The proposed Dust Control Program consists of vegetation plantings, seasonal dust control measure deployment, and the installation, operation, and maintenance of monitoring equipment and track-out prevention devices at Oceano Dunes SVRA and Pismo State Beach. These activities would not induce substantial population growth in the area, either directly (for

example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure), would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere, and would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. For these reasons, impacts to population and housing are not discussed further.

3.4.8 Public Services

The proposed Dust Control Program consists of vegetation plantings, seasonal dust control measure deployment, and the installation, operation, and maintenance of monitoring equipment and track-out prevention devices at Oceano Dunes SVRA and Pismo State Beach. These plants, materials, and structures could pose collision risks to OHV recreationists. These facilities would also reduce the amount of land open to recreational opportunities, creating the potential for concentrating visitor activity, particularly riding activity, and thereby increasing the incidence of vehicle to vehicle collisions and vehicle to pedestrian collisions. These effects are noteworthy, but do not involve physical changes to the existing environmental conditions in the project area, and would not alter existing fire, police, or emergency service patterns. Implementation of the proposed Dust Control Program also would not result in a new or altered land use that would require new fire or police protection services or facilities, public recreational facilities, or schools. For these reasons, impacts to public services are not discussed further.

3.4.9 Traffic and Transportation

Regional access to the Dust Control Program area is primarily provided via SR 1 and US 101. Just north of Arroyo Grande, SR 1 splits from US 101, running more westerly through Grover Beach and Oceano. Annual average daily traffic volumes on this portion of SR 1 range from approximately 4,400 to 10,300 vehicles (Caltrans 2016). Pismo State Beach can be accessed from SR 1 primarily via Grand Avenue in the City of Grover Beach or Pier Avenue in Oceano. These entrances provide sand ramps that lead vehicles down onto the beach and serve as the primary access to Oceano Dunes SVRA. Average daily traffic volumes on Grand Avenue and Pier Avenue in the vicinity of park entrances are approximately 1,600 and 5,000, respectively.

The proposed Dust Control Program would not increase employee related trips to and from Oceano Dunes SVRA or Pismo State Beach; however, the proposed Program would result in new vehicle trips associated with delivery of fencing, straw bales, etc. for use in control measures. The number of truck trips generated under the proposed project is expected to be less than 100 total truck trips per year (less than one trip 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 proposed Dust Control Program area. For this reason, traffic and transportation impacts are not discussed further.

3.4.10 Utilities and Service Systems

The proposed Dust Control Program area has limited utilities and service systems due to the vast acreage of open sand dunes and other open space lands that are not permanently developed for residential, commercial, industrial, or other inhabitable use. There are typical urban utilities (gas, electricity, sewer, water, and telecommunications) along the streets that serve the Program area, including Grand Avenue and Pier Avenue.

The proposed Dust Control Program consists of vegetation plantings, seasonal dust control measure deployment, and the installation, operation, and maintenance of monitoring equipment and track-out prevention devices at Oceano Dunes SVRA and Pismo State Beach. These activities would 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. A small increase in potable water use is expected for the germination of seedlings and to support the vegetation projects, however this increase would not require new or expanded water entitlements. The OHMVR Division would comply with all regulations related to solid waste generation and disposal. For these reasons, impacts to utilities and service systems are not discussed further in this EIR. Please see Chapter 9 for a discussion of potential storm water-related impacts from track-out prevention devices.

3.5 REFERENCES

California Department of Conservation (CDC) 1989a. *Mineral Land Classification: Portland Cement Concrete Aggregate and Active Mines of All other Mineral Commodities in the San Luis Obispo-Santa Barbara Production-Consumption Region*. Sacramento, Ca. 1989.

_____1989b. *Generalized Mineral Resource Zone Classification Map of the Southwestern Third of San Luis Obispo County, Southern Part* [map]. 1989.

_____2013. *San Luis Obispo County Important Farmland 2010* [map]. July 2013.

_____2016. *Oceano Sand Pit* [map]. n.d. Scale undetermined; generated by MIG using <http://maps.conservation.ca.gov/mol/mol-app.html> May 20, 2016.

California Department of Forestry and Fire Protection (CAL FIRE) 2007a. *Fire Hazard Severity Zones in SRA – San Luis Obispo County.* 1:150,000. Sacramento, CA. November 21, 2007. < http://www.calfireslo.org/FHSZ.html>

California Department of Toxic Substances Control (DTSC) 2016. *Pismo Dunes State Park* [map]. n.d. Scale undetermined; generated by MIG using <http://www.envirostor.dtsc.ca.gov/public/> May 20, 2016.

Caltrans 2016. "Route 1". *Traffic and Vehicle Data Systems Unit 2012 All Traffic Volumes on CSHS*. Caltrans, Business, Traffic Counts, Traffic Volumes 2014. Web. May 20, 2016. < http://www.dot.ca.gov/trafficops/census/2014all/Route1.html>

National Oceanic and Atmospheric Administration (NOAA) 2016. "Recent Monthly Average Mauna Loa CO_2." *Trends in Atmospheric Carbon Dioxide*. NOAA, Earth System Research Laboratory, Global Monitoring Division. May 5, 2016. Web. May 20, 2016. <http://www.esrl.noaa.gov/gmd/ccgg/trends/>

National Park Service (NPS) 2013. "Nipomo Dunes-Point Sal Coastal Area" *Nipomo Dunes-Point Sal Coastal Area*. NPS, Explore Nature, National Natural Landmarks, NNL Directory, Select a State (California), San Luis Obispo. June 28, 2012. Web. November 11, 2013. < http://www.nature.nps.gov/nnl/site.cfm?Site=NIDU-CA>

Nature Conservancy 2013. "California Guadalupe Nipomo Dunes." *Guadalupe Nipomo Dunes Project.* Nature Conservancy, Where We Work, North America, United States, California, Places We Protect. 2013. Web. November 11, 2013. <http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/california/placesweprotect/guadalupe-nipomo-dunes.xml>

Soil Conservation Service (SCS). *Soil Survey of San Luis Obispo County, California, Coastal Part*. September 1984.

State Water Resources Control Board (SWRCB) 2016. *Oceano Dunes State Recreation Area* [map]. n.d. Scale undetermined; generated by MIG using <http://geotracker.waterboards.ca.gov/> May 20, 2016.

U.S. Fish and Wildlife Service. 2012. *Draft Environmental Assessment for the Wildlife Ponds Project Guadalupe-Nipomo Dunes National Wildlife Refuge San Luis Obispo County, California*. Ventura, CA. November 2011.

CHAPTER 4 RECREATION AND PUBLIC ACCESS

The analysis of the proposed Dust Control Program's impacts to recreation and public access has determined that the proposed Program would have a less than significant impact on public access and non-vehicular recreation at Pismo State Beach and Oceano Dunes SVRA; however, the proposed Program's potential impacts to existing coastal vehicular recreation opportunities, even with the implementation of mitigation measures, would be significant and unavoidable effects of the Program.

4.1 REGULATORY SETTING

4.1.1 California's Recreation Policy

In the belief that all Californians should be provided with an array of opportunities allowing them to pursue their personal recreational interests, the Legislature delegated responsibility for preparing the state's Recreation Policy to the State Park and Recreation Commission. PRC Section 540 directs the Commission to formulate, in cooperation with other state agencies, interested organizations and citizens, and recommend to the Director of CDPR for adoption, a comprehensive recreational policy for the State of California. The 2005 California Recreation Policy is intended to be broad in scope and considers the full range of recreation activities – active, passive, indoors and out-of-doors. It is a comprehensive policy directed at recreation providers at all levels: federal, state, and local agencies, as well as private and nonprofit suppliers. The policy mandates opportunities and access to recreation activities for all activities and populations, while preserving natural and cultural resources.

4.1.2 Off-Highway Motor Vehicle Recreation (OHMVR) Division

The OHMVR Division of CDPR promotes managed, environmentally responsible, and sustainable OHV use. OHMVR Division Programs are carried out with the advisory oversight of the OHMVR Commission and are funded directly by the recreation community through gasoline taxes, green and red sticker fees, and entrance fees at SVRAs like Oceano Dunes SVRA.

The OHMVR Division provides education, training, and information to promote safe and environmentally responsible OHV recreation. Marketing and outreach conducted by the OHMVR Division promotes widespread understanding of environmental protection and safe and appropriate OHV recreation.

The OHMVR Division's mission statement is as follows:

> The mission of the [OHMVR Division] is to provide leadership statewide in the area of [OHV] recreation; to acquire, develop, and operate state-owned vehicular recreation areas; and to otherwise provide for a statewide system of managed OHV recreational opportunities through funding to other public agencies. The OHMVR Division works to ensure quality recreational opportunities remain available for future generations by providing for education, conservation, and enforcement efforts that balance OHV recreation impacts with Programs that conserve and protect cultural and natural resources.

Public Resources Code Section 5090.02 enumerates certain findings of the state Legislature with regards to OHV recreation, including its ever-increasing popularity and potential to have a deleterious impact on the environment if OHV recreation and access to non-motorized recreational activities is indiscriminate and uncontrolled. Public Resources Code Section 5090.02(b) also sets forth the state Legislature's declaration that effectively managed areas and adequate facilities for the use of OHVs and conservation and enforcement are essential for

ecologically balanced recreation. Accordingly, with passage of the OHMVR Act of 2003, the state legislature intended, in part, that: 1) Existing OHV recreational areas, facilities, and opportunities be expanded and managed to sustain long-term use (PRC §5090.02(c)(1)); 2) New OHV recreational areas, facilities, and opportunities be provided and managed in a manner that sustains long-term use (PRC §5090.02(c)(2)); 3) the OHMVR Division support both motorized recreation and motorized OHV access to non-motorized recreation (PRC§5090.02(c)(3)); and 4) When areas cannot be maintained to appropriate standards for sustained long-term use, they should be repaired to prevent accelerated erosion or closed and restored. In addition, Public Resources Code Section 5090.35(a) provides that protection of public safety, the appropriate utilization of lands, and the conservation of land resources are of the highest priority in the management of SVRAs, and that the OHMVR Division shall promptly repair and continuously maintain areas and trails, anticipate and prevent accelerated and unnatural erosion, and restore lands damaged by erosion to the extent possible.

SVRAs are established on lands where there are quality recreational opportunities for OHVs. Areas must be developed, managed, and operated for the purpose of making the fullest public use of the outdoor recreational opportunities present. The natural and cultural elements of the environment may be managed or modified to enhance the recreational experience consistent with protection of soils and habitat values. To protect natural and cultural values, CDPR may designate sensitive areas within SVRAs. If OHV use results in damage to any natural or cultural values, appropriate measures must be taken to protect these lands from any further damage. These measures may include the erection of physical barriers and must include rehabilitation of the damage to natural resources and the repair of damage to cultural resources (PRC § 5090.43).

4.1.3 State Beaches and Seashores

Public Resources Code Section 5001.6 sets forth that state park system units may be located within, and be a part of, a state seashore.

Section 5001.6(b)(7) of the Public Resources Code establishes the San Luis Obispo State Seashore, which consists of “lands extending from Cayucos to Lion's Head and including Cayucos State Beach, Morro Strand State Beach, Atascadero State Beach, Morro Bay State Park, Montana de Oro State Park, Avila State Beach, Pismo State Beach, [Oceano] Dunes State Vehicular Recreation Area and Point Sal State Beach, all within San Luis Obispo and Santa Barbara Counties.”

The Public Resources Code defines state seashores as areas that “consist of relatively spacious coastline areas with frontage on the ocean, or on bays open to the ocean, including water areas landward of the mean high tide line and seasonally connected to the ocean, possessing outstanding scenic or natural character and significant recreational, historical, archaeological, or geological values” (PRC §5019.62). The purpose of state seashores is to preserve the outstanding values of the California coastline and to make possible the enjoyment of coastline and related recreational activities (PRC §5019.62).

The Public Resources Code defines state beaches to consist of areas “with frontage on the ocean, or bays designed to provide swimming, boating, fishing, and other beach-oriented recreational activities” (PRC §5019.56(c)).

4.1.4 California Coastal Act

As described in greater detail in Chapter 5, Land Use and Planning, the California Coastal Act (PRC §30000 et seq.) governs development within the Coastal Zone. One of the legislative findings and goals of the Coastal Act is to “maximize public access to and along the coast and

maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners."

Chapter 2, Section 30116 of the Coastal Act defines "sensitive coastal resource areas" to mean those identifiable and geographically bounded land and water areas within the coastal zone of vital interest and sensitivity, including "areas possessing significant recreational value."

Chapter 3 of the Coastal Act, Coastal Resources Planning and Management Policies, sets forth the policies that constitute the standards for the adequacy of local coastal Programs and development subject to the Coastal Act (PRC §30200 et seq.). The applicable standards (or parts of standards) of this chapter related to recreation and public access include:

- Maximum access and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse. (PRC §30210)
- Development shall not interfere with the public's right of access to the sea where acquired through use of legislative authorization. (PRC §30211)
- Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where 1) it is inconsistent with public safety, 2) adequate access exists nearby, or, 3) agriculture would be adversely affected. (PRC §30212)
- Lower cost visitor and recreation facilities shall be protected, encouraged, and, where feasible, provided, with preference for developments that provide public recreation facilities. (PRC §30213)
- Public access policies of Chapter 3, Article 2 of the Coastal Act shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case, including, but not limited to topographic and geologic site characteristics, the capacity of the site to sustain use and at what level of intensity. (PRC §30214)
- Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses. (PRC §30220)
- Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible. (PRC §30223)
- Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes. (PRC §30230)
- The economic, commercial, and recreational importance of fishing activities shall be recognized and protected. (PRC §30234.5)
- Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continued recreation use of those areas. (PRC §30240)

4.2 ENVIRONMENTAL SETTING

Pismo State Beach and Oceano Dunes SVRA are units of the California State Parks system. According to the CDPR *California State Parks System Statistical Report 2014/15 Fiscal Year*, the State Parks system consists of 279 classified park units and major unclassified properties. A summary of the number of different parks in the state system, as well as the number of individual campsites and total attendance to these different parks, is provided in Table 4-1.

Table 4-1 Summary of State Parks System Units (Fiscal Year 2014/15)[A]

Classification[B]	No. Units	Total Acreage	Camp Sites[C]	Day Use Visitors[D]	Camping Visitors[E]	Total Attendance
State Park	88	1,181,790	5,633	21,717,343	2,745,352	24,462,695
State Beach	62	22,950	2,702	24,390,080	2,831,172	27,221,252
State Historic Park	52	26,305	92	9,363,654	16,613	9,380,267
State Recreation Area	33	185,469	4,164	6,271,715	445,875	6,717,590
State Natural Reserve	16	67,673	0	2,685,029	4	2,685,033
Unclassified[F]	16	12,340	0	635,604	0	635,604
SVRA	8	114,102	1,565	1,950,650	1,004,708	2,955,358
State Monument[G]	1	209	0	769,874	0	769,874
State Marine Park[H]	1	--	--	--	--	--
State Seashore[I]	1	1,860	0	0	0	0
Wayside Campground	1	66	0	18,609	0	18,609
TOTAL[J]	279	1,612,762	14,156	67,802,558	7,043,724	74,846,282

Source: CDPR 2015

(A) The fiscal year runs from July 1, 2014 to June 30, 2015.

(B) These classifications do not include certain "internal" park units situated within the boundaries of other park units, including 61 Natural Preserves, 22 Cultural Preserves, and 12 State Wilderness areas.

(C) Campsite refers to individual / family campsites and does not include group campsites. According to the CDPR Statistical Report for 2014/15, individual and family campsites include primitive and developed campsites, including RV hookups, accessible by foot or vehicle. Most campsites are capable of accommodating up to eight people.

(D) Day use visitor data reflect free and paid day use (non-overnight) visits.

(E) Camping visitors represents overnight visitors that used individual or group campsites.

(F) This line item reflects major unclassified units of the state parks system (15) plus one state marine reserve.

(G) This unit classification has been shortened from State Historic Monument.

(H) Data is included in State Seashore line item.

(I) Data includes information for state marine reserves/marine parks.

(J) Totals may not add due to rounding.

As shown in Table 4-1, during the 2014-2015 fiscal year, SVRAs accounted for only eight of the 279 major state park areas (approximately three percent of the total park system units)[6]. These eight SVRAs occupied approximately 7 percent of the land area in the state parks system (114,102 out of 1,612,762 acres), while accounting for 15 percent of the total overnight campers (1,004,708 out of 7,043,724 camping visitors) and 4 percent of the total visitors (day use and camping) to the state parks system (2,955,358 out of 74,846,282 total visitors).

Within the SVRA system, Oceano Dunes SVRA is particularly popular. A summary of the SVRA system's total acreage, campsites, and visitors during the 2005 to 2014 time period is provided in Table 4-2. Between 2005 and 2014, Oceano Dunes SVRA occupied only about 3.6 percent of the total lands in the SVRA system (3,497 out of 96,300 acres). Yet at the same time, Oceano Dunes SVRA provided 68 percent of the total individual campsites in the SVRA system (1,000 out of 1,469 campsites) and accounted for approximately 52% of the total day use and overnight visitors to the SVRA system (1,747,123 out of 3,394,836 total visitors). Despite being the third smallest SVRA in the state (in terms of total SVRA acreage), Oceano Dunes SVRA was the most visited SVRA in every year from 2005 to 2014, except 2006. Additional information on visitor trips to Oceano Dunes SVRA is presented in Section 4.2.3.4.

The 2014 OHMVR Commission Program Report recognizes that the demand for OHV recreation in California is forecast to increase with improved economic conditions (OHMVR Division 2014). Despite this increase demand, the OHMVR Program is faced with many challenges, including: air quality issues at Oceano Dunes SVRA, Ocotillo Wells SVRA, and Heber Dunes SVRA; the potential reduction in OHV recreation on federal Bureau of Land Management (BLM) lands in Johnson Valley and Clear Creek Management Area; changes in existing connections to OHV recreation areas on U.S. Forest Service (USFS) Lands near Hungry Valley SVRA; and ongoing legal challenges at several SVRAs. These challenges make it difficult for the OHMVR Division to achieve the objectives and goals set forth in the strategic planning process the OHMVR Division has completed pursuant to PRC Section 5090.32, including goals related to sustaining and increasing existing OHV recreation opportunities (OHMVR Division 2009).

[6] CDPR's statistical report for the 2014-2015 fiscal year does not include information on the Eastern Kern County Onyx Ranch SVRA, which was added to the state parks system in 2015. The Eastern Kern County Onyx Ranch SVRA offers 26,000 acres of scenic and challenging off-road recreation. The OHMVR Division notes that the Onyx Ranch SVRA does not provide new OHV recreational opportunity but rather the continuation of OHV recreation on what was formerly private land. Camping at the SVRA is informal and there is no set number of ampsites. Although camping is not limited to designated sites, motorized access to camping areas must occur via routes or lands open to motorized travel.

Table 4-2 SVRA System Acreage, Campsites, and Visitor Levels (2005 – 2014)[A]

Fiscal Year[A]	Acreage[B]		Campsites[C]		Visitor Levels[D]	
	Oceano Dunes[E]	All SVRAs[F]	Oceano Dunes	All SVRAs	Oceano Dunes	All SVRAs
2005	3,497	86,873	1,000	1,307	1,976,119	4,585,656
2006	3,497	87,358	1,000	1,388	2,012,613	5,109,675
2007	3,497	87,506	1,000	1,307	1,956,448	4,041,812
2008	3,497	87,491	1,000	1,544	1,671,629	3,206,383
2009	3,497	87,587	1,000	1,319	1,614,189	3,294,430
2010	3,497	87,623	1,000	1,564	1,468,674	2,525,630
2011	3,497	108,187	1,000	1,565	1,682,622	2,778,536
2012	3,497	108,187	1,000	1,565	1,588,345	2,697,333
2013	3,497	108,314	1,000	1,565	1,693,611	2,753,543
2014	3,497	113,878	1,000	1,565	1,806,977	2,955,358
AVERAGE	3,497	96,300	1,000	1,469	1,747,123	3,394,836

Source: CDPR 2006 – 2015.

(A) Data are reported for the fiscal year, i.e., data for 2005 are for the time period July 1, 2005 to June 30, 2006.
(B) All reported acreage values are approximate.
(C) Campsites refers to primitive and developed individual and family campsites (tent and RV).
(D) Visitor levels include day use and camping visitors.
(E) Data is for Oceano Dunes SVRA only and does not include acreage associated with Pismo State Beach (see Table 2-3 and Table 4-6). Data also does not include campsites or attendance attributed to Pismo State Beach.
(F) Data is for all SVRAs, inclusive of Oceano Dunes. The other SVRAs are: Carnegie, Clay Pit, Heber Dunes, Hollister Hills, Hungry Valley, Ocotillo Wells and Prairie City. Data does not include information on the Eastern Kern County Onyx Ranch SVRA.

4.2.1 Regional Recreation Overview

Oceano Dunes SVRA and Pismo State Beach are located on California's central coast. As described in more detail in Section 4.2.3, the parks provide both vehicular and non-vehicular recreation opportunities. The general availability of vehicular and non-vehicular recreational lands in the central coast region is discussed below and summarized in Table 4-3. The central coast region of California is generally acknowledged to include, from north to south, Santa Cruz, San Benito, Monterey, SLO, Santa Barbara, and Ventura County.

Table 4-3 Overview of Public Recreation Lands - Central Coast Counties

Land Manager	Managed Recreation Lands[A]		Campsites[B]	
	OHV	Total	OHV	Total
BLM / NPS/ USFS / USFWS				
BLM Central Coast Field Office	26 trail miles	284,000 Acres	12	30
BLM Bakersfield Office (Coast Area)	-	NA	NA	NA
USFS Monterey Ranger District	-	330,000 Acres	-	14
USFS Mount Pinos Ranger District	160 Trail Miles	250,000 Acres	5	200
USFS Ojai Ranger District	17 Trail Miles	875,000 Acres	4	43
USFS Santa Barbara Ranger District	NA	NA	NA	NA
USFS Santa Lucia District	192 Trail Miles	476,000 Acres	14	160
USFWS Guadalupe-Nipomo Dunes National Wildlife Refuge	-	2,550 Acres	-	-
Federal Agency Subtotal	*395 Trail Miles*	*1,920,550 Acres*	*35*	*447*
CDPR (Non-OHMVR Division)				
State Beaches (23)[C]	-	6,622 Acres	-	1,060
Other State Park Units (31)[D]	-	71,672 Acres	-	841
CDPR Subtotal	-	*78,294 Acres*	-	*1,901*
CDPR (OHMVR Division)				
Hollister Hills SVRA	6,624 Acres	6,624 Acres	231	231
Oceano Dunes SVRA	1,224 Acres	3,497 Acres	1000	1000
Pismo State Beach	230 Acres	1,509 Acres	-	225
OHMVR Subtotal	*8,078 Acres*	*11,630 Acres*	*1,231*	*1,456*
Central Coast Counties				
Santa Cruz	-	1,400 Acres	-	-
San Benito	-	747 Acres	-	43
Monterey	-	16,751 Acres	-	830
San Luis Obispo	-	14,000 Acres	-	700
Santa Barbara	-	8,600 Acres	-	657
Ventura	-	3,543 Acres	-	362
County Subtotal	-	*45,041 Acres*	-	*2,549*
TOTALS[E]	395 Trail Miles 8,078 Acres	2,055,515 Acres	1,266	6,353

Source: OHMVR Division / MIG 2016

(A) All acreages are approximate. Managed recreation lands include parks, open space areas, national forest lands, etc. BLM and USFS managed lands are rounded to the nearest 1,000 acres. "NA" denotes information was not available at the time this Draft EIR was prepared (June 2016).

(B) Campsites refers to primitive and developed individual tent and RV campsites that can be access by car, hiking, biking, or horseback riding. OHV campsites refers to campsites that provide direct access to OHV recreational opportunities (e.g., campsites located adjacent to OHV trails or within OHV recreation areas).

(C) This line item does not include Pismo State Beach.

(D) This line item does not include SVRAs.

(E) Totals may not equal due to rounding.

As shown in Table 4-3, numerous public parks, open space lands, and other recreation areas provide hundreds of thousands of acres of non-vehicular recreational opportunities such as hiking, wildlife viewing, hunting, swimming, and camping. But, in general, vehicular recreational areas in these counties are rare[7]. At the federal level, most OHV recreational opportunities consist of non-coastal road / trail riding or OHV camping in Los Padres National Forest, which is administered by the USFS, as well as lands administered by the BLM (Condon Peak and Williams Hill Recreation Area, totaling 13,900 acres). OHV recreation was permitted on 30,000 acres in the BLM's Clear Creek Management Area until 2008, but the BLM has closed this area to OHV recreation due to health concerns over naturally occurring asbestos.

Within the State Park System, the central coast contains 24 state beaches (including Pismo State Beach), 18 state parks, 7 state historic parks, 3 state nature reserves, 3 other state properties, 2 SVRAs (including Oceano Dunes SVRA), and 1 state historic monument. Hollister Hills SVRA in San Benito County is the other SVRA considered to be located in the state's central coast region[8]; however, Hollister Hill SVRA is located on the eastern side of the coast mountain ranges, more than 18 miles east of the Pacific Ocean. Besides Oceano Dunes and Hollister Hills SVRA, none of the state beaches or other park units allow OHV recreation. In addition, USFS staff report that only a handful of OHV trails have views of the ocean, and those that do have distant views of the ocean from higher inland elevations. There are no BLM OHV trails that have coastal views.

At the county level, there are no county parks, open space areas, or other recreation lands in Santa Cruz, San Benito, Monterey, SLO, Santa Barbara, or Ventura County where OHV recreation is permitted. Camping is not permitted in Santa Cruz County parks; however, campsites are maintained by the Monterey County (830 campsites), San Benito (43 campsites), SLO County (700 campsites), Santa Barbara County (657 campsites), and Ventura County (362 campsites) parks departments.

Oceano Dunes SVRA is located within one of the largest and most unique remaining sand dune complexes in the State of California, the Guadalupe Nipomo Dunes Complex. This dune complex extends approximately 18 miles along the coast, from Pismo State Beach in southern SLO County to Point Sal State Beach in northern Santa Barbara County. A large part of the dunes that make up this unique geographic feature are managed as recreation land or open space by the USFWS, the OHMVR Division, SLO County, and Santa Barbara County, as summarized in Table 4-4. These existing parks accommodate a wide range of recreation activities including hiking, camping, wildlife viewing, horseback riding, and OHV recreation.

[7] In preparing this section of the EIR, OHMVR Division staff and consultants contacted staff at the BLM, USFS, and central coast counties for information regarding public OHV recreational opportunities and conducted a general internet search for potential private recreational opportunities using keywords such as OHV, all-terrain vehicle (ATV), motocross, off-road, and off-road motorcycle. The information presented in this chapter is meant to provide an overview of regional recreation opportunities, and is not mean to represent an exhaustive and total summary of all recreational facilities in all central coast counties (e.g., recreational lands run by water and other districts are not included in this summary).

[8] Hungry Valley SVRA occupies approximately 19,378 acres in Kern County (845 acres), Los Angeles County (11,912 acres), and Ventura County (6,621 acres). The portion of the SVRA within Ventura County is located in the extreme northeast part of the County, more than 38 miles from the Pacific Ocean. For the purposes of this EIR, Hungry Valley is not considered located in the central coast region.

Table 4-4 Public Recreation Lands At and Near Oceano Dunes SVRA

Park	Managing Agency	Recreation Activities Available	Size
Guadalupe Nipomo Dunes Wildlife Refuge	USFWS	Hiking, fishing, wildlife viewing	2,550 Acres
Pismo State Beach	CDPR	Camping, clam digging, fishing, hiking, horseback riding, shoreline vehicular access and recreation, swimming, wildlife viewing	1,509 Acres 225 campsites
Oceano Dunes SVRA	CDPR	Camping, horseback riding, fishing, hiking, OHV recreation, surfing, swimming, wildlife viewing	3,497 Acres 1,000 campsites
Coastal Dunes RV Park and Campground	SLO County	Camping, swimming, access to Pismo State Beach and Oceano Dunes SVRA	230 campsites
Oceano County Campground	SLO County	Camping, fishing, picnicking	22 campsites
Rancho Guadalupe Dunes County Park	Santa Barbara County	Hiking, wildlife viewing	615 Acres

Sources: California Protected Areas Database, CDPR, OHMVR Division, USFWS, SLO County Parks

4.2.1.1 Private Recreational Facilities

An internet search for potential private vehicular recreation areas on the central coast identified two potential facilities:

- Piru Motocross Park, 4375 Center Street, Piru, CA (Ventura County): This private park is a full service motocross facility with main and mini motocross tracks.
- Zaca Station Motocross Park, Buellton, CA (Santa Barbara County): This private park has three tracks offering a variety of terrain and difficulty levels.

These facilities provide tracks for recreational motocross / off-road motorcycle enthusiasts. They do not provide general OHV recreation nor an open OHV riding area similar to that provided by Oceano Dunes SVRA.

An internet search for potential private campgrounds on the central coast identified many facilities offering tent and RV campsites (e.g., KOA campgrounds), including the Pacific Dunes Ranch RV Resort at 1205 Silver Spur Place, Oceano, CA. This private RV campground offers 229 sites that abut the Pismo Dunes Natural Preserve, a sub-unit of Pismo State Beach.

4.2.2 Oceano Dunes SVRA and Pismo State Beach Public Access

Public access to Oceano Dunes SVRA and Pismo State Beach occurs via established roads, trails, and other existing paths of travel. Regionally, access to coastal southwestern SLO County is primarily provided via SR 1 and US 101. From San Luis Obispo to just north of Arroyo Grande, SR 1 and US 101 are a combined, four-lane highway (two lanes in each direction). Just north of Arroyo Grande, SR 1 splits from US 101, running more westerly through Grover Beach and Oceano (see Figure 2-1). This segment of SR 1 is a two-lane highway (one lane in each direction).

4.2.2.1 Grand Avenue, Pier Avenue, and Oso Flaco Lake Road Access

Traffic coming to Grover Beach and Oceano from the north via the City of San Luis Obispo would exit US 101 at Exit #190, Hinds Avenue, and travel along SR 1 (the Cabrillo Highway) to Grand or Pier Avenues. SR 1 runs perpendicular to Grand and Pier Avenues. Traffic coming from the south through Santa Barbara County would likely exit US 101 at Exit 187A (Grand Avenue), or use SR 1 through Guadalupe, Oceano, and Grover Beach.

Pismo State Beach can be accessed from SR 1 primarily via Grand Avenue in the City of Grover Beach or Pier Avenue in Oceano. These entrances provide sand ramps that lead vehicles down onto the beach and serve as the primary access to Oceano Dunes SVRA. Visitor data indicates that the Grand Avenue ramp provides access for approximately 51 percent of the visitors entering Pismo State Beach and Oceano Dunes SVRA. This portion of Grand Avenue west of SR 1 is mostly undeveloped, although a restaurant is located at its western terminus, and the planned and approved Grover Beach Lodge and Conference Center will be located near the intersection with SR 1. The Grand Avenue ramp is situated close to densely developed portions of the City of Grover Beach and is therefore the most convenient access point for "walk-in" visitors (sidewalks are located on the north side of this portion of Grand Avenue). The ramp located at the foot of Pier Avenue in Oceano lies approximately one mile south of Grand Avenue. Commercial establishments line Pier Avenue leading to the entrance kiosk, and sidewalks are located on both the north and south side of the avenue.

The southern end of Oceano Dunes SVRA can be accessed from Oso Flaco Lake Road off of SR 1. The road is narrow and terminates at the Oso Flaco Lake entrance station and parking lot. This access way is primarily used by hikers, nature walkers, and fishermen. This entrance point does not provide access to the Oceano Dunes SVRA open riding and camping area.

4.2.2.2 Non-Motorized Vehicular Access

Visitors may walk in to Pismo State Beach and Oceano Dunes SVRA via Grande Avenue, Pier Avenue, and South Oso Flaco Lake Road. Other non-motorized access is also available via River Road and Creek Road just south of the Oceano County Airport (where the private Pismo Dunes Ranch RV Resort is located). These non-motorized access points lead into Pismo Dunes Natural Preserve, a subunit of Pismo State Beach that connects with Oceano Dunes SVRA. These access points, which are not close to the beach or open riding and camping area, are less popular than Grand and Pier Avenue access.

4.2.3 Oceano Dunes SVRA and Pismo State Beach Recreational Opportunities

As shown in Table 4-5, Oceano Dunes SVRA and Pismo State Beach consist of approximately 5,000 acres of managed lands, the majority of which (4,084 acres) is managed for public recreation purposes. Approximately 845 acres of the SVRA is closed to all public access and recreation. This is area is located in the eastern portion of Oceano Dunes SVRA (see Figure 2-2). This part of Oceano Dunes SVRA includes lands operated by the OHMVR Division but owned by Phillips 66 and lands leased from the OHMVR Division for agricultural purposes. Pismo State Beach consists of 1,509 acres of managed recreation lands, nearly all of which is open to the public.

Table 4-5 Oceano Dunes SVRA – Public Recreation Lands

Park	Area Open to Public Recreation	Area Closed to Public Access and Recreation	Total Size
Oceano Dunes SVRA	2,652 Acres	845 Acres	3,497 Acres
Pismo State Beach(A)	1,433 Acres	76 Acres	1,509 Acres
TOTAL	4,085 Acres	921 Acres	5,005 Acres(B)

Source: OHMVR Division / MIG 2016

(A) Pismo State Beach totals include the Pismo Dunes Natural Preserve, which consists of approximately 696 acres of non-vehicular recreation lands, and Pismo Lake (approximately 70 acres), which is closed to public recreation. Pismo Lake is not officially a part of Pismo State Beach; however, it is managed by the Oceano Dunes District and thus included in this table for consistency purposes.

(B) Rounding of the above numbers results in 5,006 acres, but the Oceano Dunes District manages 5,005 acres.

The California Coastal Act defines "coastal-dependent development or use" to mean any development or use which requires a site on, or adjacent to, the sea to be able to function at all (PRC §30101). Thus, the OHMVR Division considers beach- and dune-oriented recreational opportunities to be coastal-dependent recreation activities. For the purposes of this EIR, coastal-dependent recreation activities at Pismo State Beach and Oceano Dunes SVRA could include:

- Non-vehicular recreational activities such as sand play, sun bathing, surf fishing, swimming (in the ocean), kite boarding and kayaking (in the ocean), marine wildlife viewing, and beach and coastal dune horseback riding
- Beach and coastal dune camping
- Beach and coastal dune vehicular recreation

Categorizing these activities as coastal-dependent would be appropriate because by the nature of their unit classification, Pismo State Beach and Oceano Dunes SVRA provide a unique place to enjoy OHV riding that is not available elsewhere.

As described in Section 2.2.1 and 2.2.4, Oceano Dunes SVRA and Pismo State Beach are separate units of the State Parks system that provide similar recreation opportunities. Thus, although they are separate units, it is easier to discuss the areas of these two parks where vehicle recreation is and is not allowed as a whole, rather than as separate and distinct park units.

4.2.3.1 Vehicular Recreation

The Guadalupe Nipomo Dunes Complex in general, and Oceano Dunes SVRA specifically, have been a popular recreation destination for more than 100 years. Early photographs depict families enjoying the beach and dunes in horse-drawn carriages and bicycles, and motorized vehicles are known to have been driven on the beach as early as 1906 (OHMVR Commission 2014). In 1929, when SLO County began managing parks, the County's budget included a line item for miscellaneous expenses associated with "beach parks" (SLO County 2006). Prior to approximately 1975, most of the land at and in the immediate vicinity of present-day Oceano Dunes SVRA was open to all forms of recreation, including vehicular recreation (see Figure 4-1). Present day, the area open to vehicular recreation is about 1,530 acres at most (see Table 4-6).

Table 4-6 Vehicular Recreation Lands at Oceano Dunes SVRA

Season	Street-Legal Vehicles Only[A]	Street-Legal and OHV Use	Total Vehicular Recreation Area
October to February	78 Acres	1,453 Acres[B]	1,531 Acres
March to September	78 Acres	1,169 Acres[C]	1,247 Acres

(A) Area represents vehicle recreation lands between Grand Avenue and marker post 2.

(B) Area represents vehicle recreation lands south of marker post 2. This area generally is reported as the size of the Oceano Dunes SVRA open riding and camping area (i.e., approximately 1,450 acres).

(C) The seasonal reduction in vehicle recreation lands is due to the installation of fencing to protect western snowy plover and California least tern. This nesting exclosure reduces the amount of land open to vehicular recreation by approximately 284 acres from March 1 to September 30 each year.

At Oceano Dunes SVRA, the ability to drive a vehicle onto the beach begins at Grand Avenue and extends approximately six miles down the coast to the southern boundary of Oceano Dunes SVRA open riding and camping area. From Grand Avenue to marker post 2, vehicle recreation is limited to street-legal vehicles only (see Figure 2-2). This area is designated as a day use only area and predominately used by people who want to drive their street-legal vehicles on the beach to enjoy beach activities and by visitors towing their vehicles into the interior of the park.

OHV use and camping, as well as OHV concessions, is permitted beginning south of marker post 2. CDP 4-82-300, as amended, sets an interim limit on vehicle day-use of 4,300 vehicles per day, including 1,720 OHVs. In general, the part of Oceano Dunes SVRA area open to street-legal and OHV recreation is bound by a perimeter fence on the north (adjacent to the Pismo Dunes Natural Preserve), south, and east. This fence prevents OHV recreation from occurring in unauthorized areas (see Figure 2-2).

A well-traveled route known as the Sand Highway runs from south of marker post 3 into the backdunes all the way to the southern boundary of the riding area (see Figure 2-2). The Sand Highway is marked with numbered signs for navigation. A small OHV training area is also located in the northern portion of the open riding and camping area.

As described in Section 2.2.6.2, existing resource management activities seasonally reduce the size of the open riding and camping area. From March 1 to September 30 of each year, the OHMVR Division installs temporary fencing to protect nesting western snowy plovers and California least terns. This fencing extends from marker post 6, south to the Oso Flaco Lake Trail, and encloses an area that is approximately 300 acres in total size. The amount of vehicular recreation land that is seasonally closed because of the enclosure is approximately 284 acres.

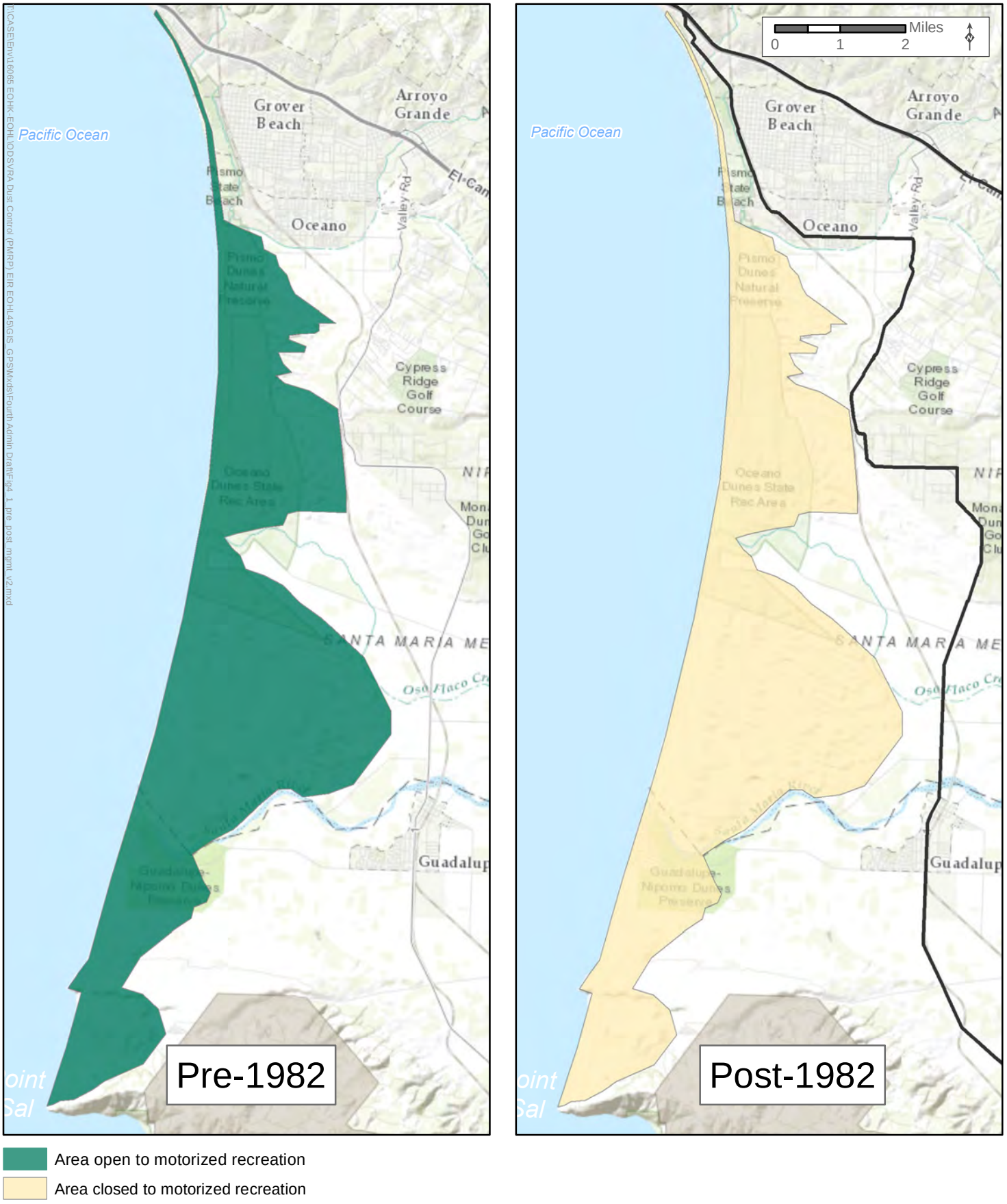


Figure 4-1 Changes in Vehicular Recreation Lands Near Oceano Dunes SVRA

4.2.3.2 Non-Vehicular Recreation

Non-vehicular recreation is allowed throughout all areas of Pismo State Beach and Oceano Dunes SVRA that are open to public recreation (4,085 acres) and include (but are not limited to) hiking, horseback riding, swimming, surfing, birding and other wildlife viewing, photography, and fishing, kayaking and other water-related activities (e.g., kite boarding). Non-vehicular recreation is particularly popular along the shoreline north of Grand Avenue and between Grand Avenue and marker post 2. Non-vehicular recreation is also popular in the Oso Flaco Lake Area in the southern portion of Oceano Dunes SVRA.

Although on its face not a form of vehicular recreation, camping at Pismo State Beach and Oceano Dunes SVRA is largely a vehicle-dependent activity as campers are generally based out of vehicles driven onto the beach, and camping is only allowed within the open riding and camping area. Camping within Oceano Dunes SVRA is limited to 1,000 registered campers based on each registered vehicle. There are no designated campsites; however, on a typical day most camping activity occurs near the beach, between marker posts 2 and 6. During busy periods (holidays, weekends, and special events) camping activity can extend farther south and inland. Outside of the Dust Control Program area, Pismo State Beach has two campgrounds (North Beach and Oceano) with a total of 225 designated campsites.

Importantly, many visitors engaging in non-OHV recreation, such as camping and beach combing, also participate in OHV recreation (see Section 4.2.3.4).

Pismo Dunes Natural Preserve

Pismo Dunes Natural Preserve (see Figure 2-2) is a sub-unit of Pismo State Beach that provides opportunities for non-vehicular recreational uses except swimming and other water-related activities because the Dunes Preserve does not adjoin the beach. Walking trails traverse the preserve, but otherwise there are no visitor serving facilities in the preserve. The Dunes Preserve is approximately 700 acres in size.

4.2.3.3 Visitor-Serving Facilities / Camping Opportunities

Pismo State Beach contains a variety of visitor-serving facilities and infrastructure including a visitor center, golf course, campgrounds, RV facilities, and parking areas; however, these facilities are located north of Pier Avenue, outside the Dust Control Program area, and do not require detailed discussion in this EIR. Nearly all visitor-serving facilities at Oceano Dunes SVRA are located within the SVRA's open riding and camping area. These facilities include vault and chemical toilets, trash disposal areas, and mobile services provided by private concessionaires (e.g., drinking water delivery, holding tank pump out, towing). The Oso Flaco Lake Area also includes a parking lot, boardwalk, and other small visitor serving facilities.

Besides vehicle recreation, the ability to camp on the beach and dunes at Oceano Dunes SVRA is the significant recreational attraction. As shown in Table 4-1, the State Parks system has 279 major park areas and 14,156 individual campsites; however, only approximately 50 park units provide coastal camping opportunities totaling 6,136 individual campsites (Glick 2014). The SVRA's open riding and camping area provides 1,000 individual campsites on the beach and dunes next to the Pacific Ocean. These 1,000 campsites account for nearly seven percent of the total individual campsites, and 16 percent of the total individual coastal campsites, in the entire State Parks system. Within the central coast region, Oceano Dunes SVRA provides substantially more camping opportunities than any other state or local public park (see Table 4-7).

Table 4-7 Central Coast State and County Park Camping Opportunities

Public Park[A]	**Campsites**[B]	**Fee Range**[C]
Oceano Dunes SVRA	1,000	$10
Lopez Lake (SLO County Park)	330	$32 - $49
Lake Nacimiento (Monterey County Park)	306	$32 - $45
Lake San Antonio (Monterey County Park)	253	$32 - $45
Hollister Hills SVRA	231	$10
Coastal Dunes RV Park (SLO County Park)	230	$55 - 58
Pismo State Beach	225	$25 - 50
Hearst San Simeon State Park	201	$5 - 25
Carpinteria State Beach	201	$10 - $80
Pfeiffer Big Sur State Park	194	$5 - $50
Laguna Seca Recreation Area (Monterey County Park)	172	$32 - $37
Cachuma Lake Park (Santa Barbara County Park)	150	$20 - $50
McGrath State Beach	145	$10 - $45
Morro Bay State Park	139	$35 - $50
El Capitan State Beach	137	$10 - $35
Point Mugu State Beach	136	$10 - $45
Rincon Parkway (Ventura County Park)	127	$28
Jalama Beach (Santa Barbara County Park)	117	$25 - $45
New Brighton State Beach	115	$35 - $50
San Lorenzo Park (Monterey County Park)	99	$9
Emma Wood State Beach	91	$30 - $40
Sunset State Beach	91	$35
Morro Strand State Beach	85	$35 - $50
Refugio State Beach	68	$10 - $55
Manresa State Beach	64	$35
Seacliff State Beach	63	$55
El Chorro Regional Park (SLO County Park)	61	$32 - $49
Santa Margarita Lake (SLO County Park)	60	$32 - $49
Montana De Oro State Park	49	$5 - $25
Faria Beach Park (Ventura County Park)	42	$36 - $48
Gaviota State Park	40	$10 - $45
Hobson Beach Park (Ventura County Park)	31	$36 - $48
Limekiln State Park	26	$35
Fremont Peak State Park	25	$25
Molera State Park	24	$25
Oceano County Campground (SLO County Park)	22	$55 - $58

Source: MIG 2016

(A) Public parks having camping with direct shoreline access are shown in *italics*. In general, only parks with more than 20 campsites are listed in this table.

(B) Campsites refers to primitive and developed tent and RV campsites. Values are approximate.

(C) Fee range includes peak and off-peak fees for all campsites (e.g., walk-in, bike-in, and drive-in), but does not include other fees or charges that may apply. The fees reported represent the lowest fees that would apply to a potential overnight visitor. The actual cost to camp at listed facility may be higher.

The primitive beach and dune campsites at Oceano Dunes SVRA and Pismo State Beach, at a fee of $10 per night year round, also represents a low-cost camping and recreation opportunity. This $10 fee is the lowest camping fee available within the Oceano Dunes District (North Beach and Oceano Campground fees range from $25 - $50), and one of the lowest public camping fees available in the central coast region (see Table 4-7). In comparison, the SLO County Department of Parks and Recreation Department charges between $55 and $58 per night for a tent / RV campsite at its Coastal Dunes RV Park and Campground and Oceano Campground facilities, which are located near Pier Avenue but set back from the shoreline at least 1,500 feet. These county facilities do, however, offer full hook-ups for RVs, whereas concessionaires provide these services to RVs in the Oceano Dunes SVRA open riding and camping area. The $10 camping fee at Oceano Dunes SVRA is also substantially less than an overnight hotel accommodation, which can be $70 or more in the Pismo Beach area[9].

4.2.3.4 Additional Visitor Information

Oceano Dunes SVRA and Pismo State Beach are popular parks capable of drawing over three million visitors per year (SLO County 2007). In general, daily visitation to Oceano Dunes SVRA is lowest Monday thru Thursday and highest on the weekend. Seasonally, visitation increases during the summer months (late May to early September) and is lower during the fall, winter, and spring, other than holiday weekends such as Thanksgiving and Christmas. From 2005 to 2014, total attendance averaged approximately 1.75 million visitors for Oceano Dunes SVRA and 600,000 visitors for Pismo State Beach, equal to 2.35 million visitors per year. Importantly, during the recent economic recession of 2008 to 2012, visitation to Pismo State Beach and Oceano Dunes SVRA dropped approximately 14 percent (compared to non-recession years in 2005-2007 and 2013-2014) whereas visitation to the other 7 SVRAs dropped approximately 40 percent (CDPR 2006 to 2015). Several recent studies provide additional information and context on the nature and characteristics of visitor trips to Oceano Dunes SVRA. These studies are summarized below.

2010-2011 Oceano Dunes SVRA Economic Impact Analysis Report

In 2010, the Oceano Dunes District retained Strategic Marketing Group (SMG) to determine the economic impact of the visitors to Oceano Dunes SVRA on SLO County and its local communities (SMG 2011). As part of this study, SMG conducted an after trip telephone survey of Oceano Dunes SVRA visitors from April 1, 2010 to March 31, 2011 (i.e., survey respondents were contacted after they had visited Oceano Dunes SVRA). This survey found:

- 96% of survey respondents lived in California, with most of these in-state visitors coming from the Central Valley (25%), San Luis Obispo County (14%), the San Francisco Bay Area (11%), the Los Angeles basin (10%), Ventura County / Santa Barbara (5%), and Riverside / San Bernardino, Orange County / San Diego, and Sacramento regions (each less than 5%).
- 64% of survey respondents lived within 400 miles of Oceano Dunes SVRA at the time of their visit.

[9] This value is an estimate only. Actual costs for an overnight hotel vary by brand, night, and season. The $70 estimate is meant to provide a reasonable low-end range for the cost of overnight accommodation in Pismo Beach, CA. For reference, in the 2016 fiscal year, the maximum reimbursable per diem rate for lodging expenses incurred while on official travel in San Luis Obispo County is $90 for state employees and $112 off-peak peak / $133 peak for federal employees.

- 72% of survey respondents indicated they were overnight visitors from outside SLO County. Of these out-of-county visitors, 76% camped overnight at Oceano Dunes SVRA and 24% stayed outside the park (e.g., at a hotel or at another private or public campground).
- Camping at Oceano Dunes SVRA occurs in four main forms, including trailers / 5th wheels (52%), RVs (22%), tents (21%), and truck campers (5%).
- Campers stayed an average of three nights per visit.
- The average number of people in a group visiting Oceano Dunes SVRA is 13, and 66% of survey respondents indicated they had one or more children with them during their visit.

As shown in Figure 4-2, OHV recreation in the open riding and camping area was by far the most common recreational activity survey respondents had participated in during their visit to Oceano Dunes SVRA (this is not surprising since the report specifically surveyed visitors to the SVRA; SMG 2012). Importantly, more than half (56%) of local visitors (those from SLO County) indicated they participated in vehicular recreation at Oceano Dunes SVRA. When survey respondents were asked if they would still visit SLO County if Oceano Dunes SVRA was not in existence, 67% indicated they would not visit SLO County. This data suggests that Oceano Dunes SVRA provides a unique location and set of recreational experiences that is important on a local and regional level.

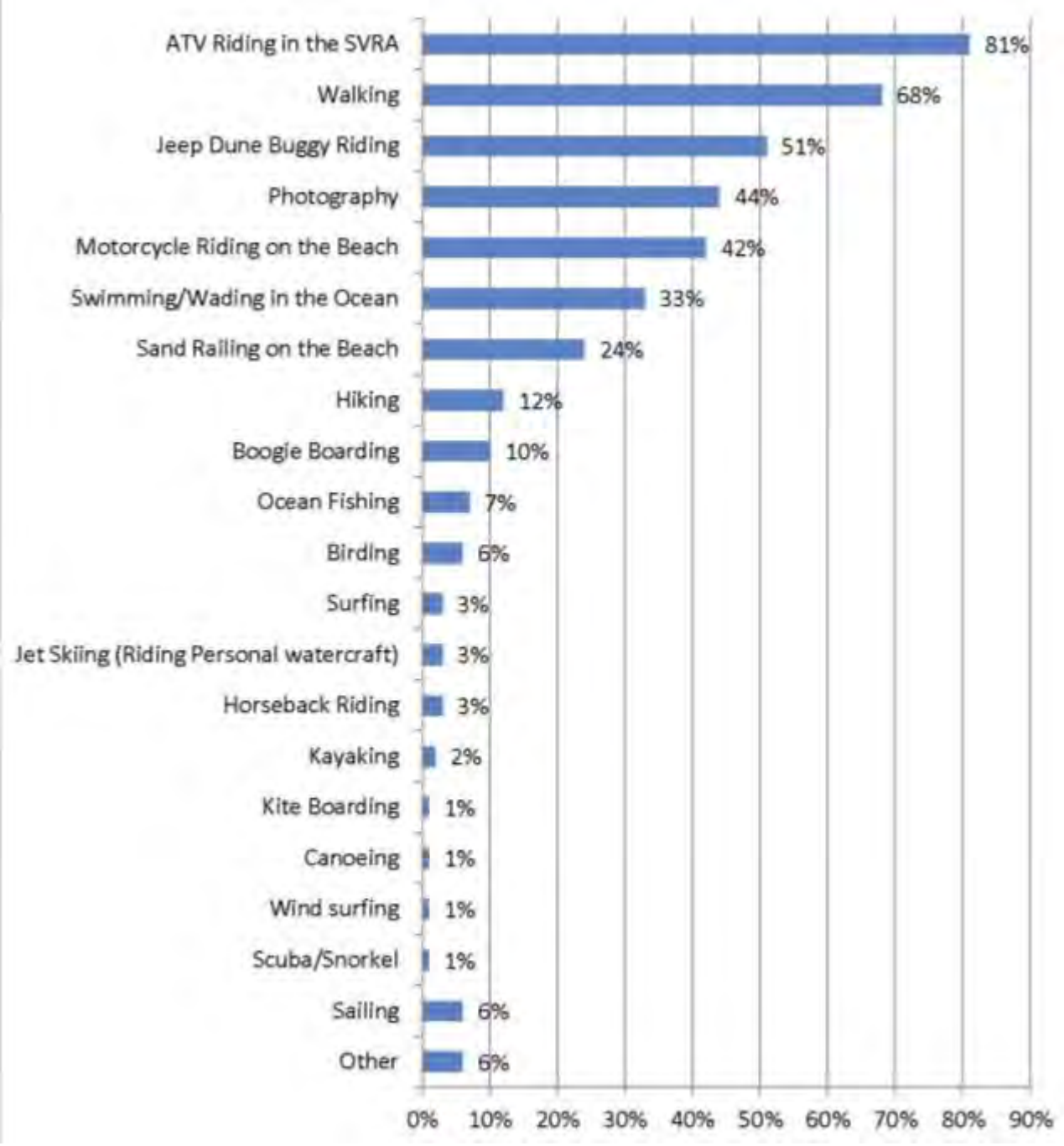
2012-2013 OHMVR Division Attendance Study

In 2012, the OHMVR Division undertook a research effort in collaboration with Department of Recreation, Parks, and Tourism Administration at California State University to measure visitor attendance at SVRAs and collect social data related to SVRA visitors. As part of the research effort, approximately 1,000 visitors to Oceano Dunes SVRA were surveyed regarding the characteristics of their visit. This survey found:

- 96.5% of survey respondents lived in California, with most of these in-state visitors coming from Fresno County (13.4%), Kern County (11.8%), Tulare County (9.6%), Los Angeles County (8.2%), SLO County (7.3%), Kings County (5.6%), and Stanislaus County (5.1%).
- 87% of survey respondents traveled more than 50 miles to Oceano Dunes SVRA, with the overall average trip distance of 217 miles.
- 86% of survey respondents indicated they had camped at Oceano Dunes SVRA on their last visit, with an average stay of four nights.
- Camping at Oceano Dunes SVRA occurred in four main forms, including trailers / 5th wheels (48%), tents (24.4%), RVs (21.9%), and truck campers (4.9%).
- 18.6% of survey respondents indicated they had come to Oceano Dunes SVRA less frequently because of the economic recession, whereas most respondents indicated they had visited the same (48%) or more frequently (29.1%).

The results of the CSU Sacramento study are generally consistent with the findings of the economic analysis conducted by SMG during the 2010 / 2011 time period.

Figure 4-2 Visitor Survey Reponses – Recreational Activity Participation (2010/2011)



Source: SMG 2011.

2015 Statewide Outdoor Comprehensive Recreation Plan (SCORP)

The National Park Service requires California, and all other states, to develop a SCORP once every five years to qualify for federal Land and Water Conservation Fund grants. The SCORP serves as a statewide master plan for state and local parks and outdoor recreational open space areas. CDPR's Office of Grants and Local Services (a branch within CDPR that administers grant Program funding) prepared the 2015 SCORP, which involved extensive public input, including a 2012 survey of more than 5,000 adult Californians to ascertain current public opinions and attitudes on outdoor recreation in California. The findings of the SCORP's Survey on Public Opinions and Attitudes on Outdoor Recreation in California (SPOA) indicate:

- Survey respondents place a moderate importance on areas for the use of driving for pleasure on dirt roads or trails and areas for OHV use (such facilities averaged a 3.15 and 3.06, respectively, on a scale of 1 to 5 with 1 "not at all important" and 5 "very important; in contrast, wilderness type areas where no vehicles or development are allowed was rated the most important with an average ranking of 4.12)
- A majority of survey respondents (56.8%) indicated they had used an unpaved trail for hiking, biking, or horseback riding at least once in the 12-month period prior to the survey.
- A minority of survey respondents (18.2 percent) reported using an OHV in the 12-month period prior to the survey. A majority of survey respondents (79.9%) indicated they had never used an OHV.
- Survey respondents indicated the frequency of OHV use was highest in the greater San Francisco Bay area (22.5% of survey respondents) and lowest in the Central Valley (16.4% of survey respondents), but generally in the range of 18 to 20 percent for all regions.
- Survey respondents were relatively evenly divided on whether state and federal government outdoor recreation agencies in California should place less (33.7% of survey respondents), the same (33.3 % of survey respondents), or more (22.6% of survey respondents) emphasis on providing additional opportunities for motorized vehicle operation on dirt trails and roads (10.3% of survey respondents were unsure).

Though it is difficult to draw any definitive conclusions from the SCORP survey, the data do indicate there is relatively consistent regional and statewide interest in OHV recreation and recreation facilities, which provides some context for why millions of visitors come to Oceano Dunes SVRA annually.

4.3 PROGRAM IMPACTS AND MITIGATION MEASURES

Consistent with CEQA and the CEQA Guidelines Appendix G, this EIR focuses on the potentially significant direct and indirect impacts that could result from implementation of the proposed Oceano Dunes SVRA Dust Control Program, as described in Chapter 2. The OHMVR Division has determined, based on the characteristics of the proposed Dust Control Program and the environmental conditions described in Section 4.2, that:

- The proposed Dust Control Program does not have the potential to result in an adverse effect on the environment from new or expanded recreational facilities because the proposed Program does not involve the construction of any new recreational facilities, nor would it directly require the expansion of any existing recreational facility. In addition, the OHVMR Division is not proposing changes to any camping or visitor limits

established by CDP 4-82-300, as amended, and the Dust Control Program would not induce or generate population growth. The proposed Program, therefore, would not accelerate the deterioration of existing recreational facilities.

- The proposed Dust Control Program would not alter public access to Oceano Dunes SVRA and Pismo State Beach. Under the Dust Control Program, the OHMVR Division would install, maintain, and operate track-out prevention devices at Pismo State Beach public exit points on Grand Avenue in the City of Grover Beach and Pier Avenue in Oceano. The installation of these devices could require minor excavation or trenching and placement of grooved concrete. These construction activities could occur for 2 – 4 weeks, and may temporarily restrict park egress; however, the OHMVR Division would control park ingress and egress during construction and maintenance periods by using flaggers, managing lanes, etc. Thus, the Dust Control Program would not result in a significant impact to existing public access to Pismo State Beach and Oceano Dunes SVRA.

For these reasons, these issues are not discussed further in this Program EIR. The potentially significant impacts that could result from implementation of the proposed Oceano Dunes SVRA Dust Control Program are described in Sections 4.3.1and 4.3.2 below.

4.3.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, the Dust Control Program would have a significant environmental impact related to recreation and public access if it would:

- 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.

In addition, the OHMVR Division has determined the project would have a significant environmental impact related to recreation and public access in the project area if it would:

- Substantially limit, reduce, or interfere with established coastal recreational opportunities at Oceano Dunes SVRA

The OHMVR Division notes that while the potential for the Dust Control Program to limit, disrupt, and/or interfere with established recreational opportunities may be quantified in terms of potential acreage lost, visitors affected, etc., evaluating the effect of this potential change is largely a qualitative judgement. Specific individuals and agencies may react to changes in recreation conditions differently. Recreation impacts, therefore, depend, in part, on the specific stakeholder sensitivity to the type of recreational opportunity being affected.

In determining whether the Dust Control Program would substantially limit, disrupt, or interfere with established recreational activities, the OHMVR Division has considered the following factors:

- The recreational history of Oceano Dunes SVRA
- The number of visitors that could be affected by a change in established recreational opportunities
- The extent to which changes to established recreational opportunities would be perceptible to visitors
- The ability of visitors to use similar facilities instead of Oceano Dunes SVRA

- The legislative mandate and mission of the OHMVR Division

The OHMVR Division considered the use of a specific value (e.g., 25 acres) to provide a numeric context for whether or not the potential change to established recreational opportunities is substantial; however, a single numeric value fails to account for the variety of factors that determine why, how, and where an individual chooses to recreate. Therefore, a numeric threshold of significance was not considered appropriate for the Dust Control Program.

4.3.2 Potential Impacts to Existing Recreational Opportunities

Under the proposed Dust Control Program, the OHMVR Division would plant vegetation, deploy seasonal dust control measures, and install dust and meteorological monitoring equipment throughout the Program area. Planting vegetation and deploying seasonal dust control measures would occur annually. The OHMVR Division would plant up to 20 acres of native dune vegetation per year for a period of five years, and deploy up to 40 acres of seasonal dust control measures. Dust and meteorological monitoring equipment (approximately three acres) would temporarily occupy individual monitoring sites for up to two years, but could be moved throughout the SVRA throughout the duration of the Program.

Planting vegetation, deploying seasonal dust control measures, and installing temporary monitoring equipment would occupy open sand areas in the SVRA where OHV recreation currently occurs. This impact would increase in magnitude each year of the Dust Control Program (see Table 2-3). In Year 1, approximately 20 acres of open sand areas could be permanently occupied by vegetation and approximately 43 acres of open sand areas could be temporarily occupied by seasonal dust control measures and associated monitoring equipment. Thus, in Year 1, a maximum of approximately 63 acres of open sand areas could be occupied by the Dust Control Program. This would occur for a period of approximately seven months, from as early as March 1 to as late as September 30. In Year 5 of the Dust Control Program, approximately 100 acres of open sand areas could be permanently occupied by vegetation and approximately 43 acres could be temporarily occupied by seasonal dust control measures and associated monitoring equipment. Thus, in Year 5, the proposed Dust Control Program could occupy a maximum of approximately 143 acres of open sand areas. Following Year 5, approximately 100 acres of open sand areas could remain permanently occupied by vegetation.

The proposed Dust Control Program activities would take place within an approximately 690-acre area of Oceano Dunes SVRA. Approximately 425 acres of the Program area are open to vehicular recreation, and approximately 265 acres are closed to vehicular recreation, including 179 acres that are completely closed to all public access and recreation (motorized and non-motorized). To the extent supported by scientific data, the OHMVR Division would emphasize the planting of vegetation in the part of the Program area that is closed to all public access and recreation, which would reduce potential impacts on all recreation (see Figure 2-6). Under this preferred scenario, the OHMVR Division could plant approximately 50 acres of vegetation in areas closed to all public access and recreation; an additional 15 acres could be planted in areas closed to vehicular recreation and camping, but open to non-vehicular recreation. The remaining 35 acres of vegetation could be planted inside the SVRA's open riding and camping area, along with 43 acres of seasonal dust control measures and associated monitoring. Thus, under the preferred scenario, the proposed Dust Control Program could occupy up to 78 acres of land currently open to vehicular recreation and camping at Oceano Dunes SVRA (plus 15 acres of land open to non-vehicular recreation only). Table 4-8 shows the change in vehicular recreation lands at Oceano Dunes SVRA that would occur under the preferred Program scenario.

The OHMVR Division has also identified an alternate scenario that may be implemented to achieve Dust Control Program goals and objectives (see Figure 2-7). Under this alternate scenario, approximately 15 acres of total vegetation could be planted in areas closed to all public access and recreation; an additional 15 acres could be planted in areas closed to vehicular recreation, but open to non-vehicular recreation. The remaining 70 acres of vegetation could be planted inside the SVRA's open riding and camping area, along with 43 acres of seasonal dust control measures and associated monitoring. Thus, under the alternate scenario, the proposed Dust Control Program could occupy up to 113 acres of land currently open to vehicular recreation at Oceano Dunes SVRA (plus 15 acres of land open to non-vehicular recreation only). Table 4-9 shows the change in vehicular recreation lands at Oceano Dunes SVRA that would occur with implementation of the alternate Program scenario.

Table 4-8 Dust Control Program Vehicular Recreation Lands (Preferred Scenario)

Scenario	Street-Legal Vehicles Only(A)	Street-Legal and OHV Use(B)	Total Vehicular Recreation Area
Existing Conditions(C)	78 Acres	1,453 Acres	1,531 Acres
Dust Program - Year 5	78 Acres	1,375 Acres	1,453 Acres
Net Change	0 Acres	-78 Acres	-78 Acres

(A) Area represents vehicle recreation lands between Grand Avenue and marker post 2.
(B) Area represents vehicle recreation lands south of marker post 2. This area generally is reported as the size of the Oceano Dunes SVRA open riding and camping area (i.e., approximately 1,450 acres).
(C) Existing conditions are from Table 4-6 (October to February).

Table 4-9 Dust Control Program Vehicular Recreation Lands (Alternate Scenario)

Scenario	Street-Legal Vehicles Only(A)	Street-Legal and OHV Use(B)	Total Vehicle Recreation Area
Existing Conditions(C)	78 Acres	1,453 Acres	1,531 Acres
Dust Program – Year 5	78 Acres	1,340 Acres	1,418 Acres
Net Change	0 Acres	-113 Acres	-113 Acres

(A) Area represents vehicle recreation lands between Grand Avenue and marker post 2.
(B) Area represents vehicle recreation lands south of marker post 2. This area generally is reported as the size of the Oceano Dunes SVRA open riding and camping area (i.e., approximately 1,450 acres).
(C) Existing conditions are from Table 4-6 (October to February).

The impact of the Dust Control Program on vehicular and non-vehicular recreational opportunities is evaluated below. It is noted that potential tree planting activities would not impact recreational resources and is thus not discussed further in the impact evaluation.

Impact REC-1: The Dust Control Program would limit and interfere with coastal vehicular recreation opportunities at Oceano Dunes SVRA.

As shown in Table 4-8 and Table 4-9, the proposed Dust Control Program could occupy between 78 and 113 acres of land at Oceano Dunes SVRA where vehicle activity is permitted (i.e., the SVRA's open riding and camping area). Under the OHMVR Division's preferred scenario, approximately 35 acres of land inside the Oceano Dunes SVRA open riding and camping area would be vegetated, protected, and permanently closed to OHV recreation. Under the alternate scenario, approximately 70 acres of land in the Oceano Dunes SVRA open riding and camping area would be vegetated, protected, and permanently closed to OHV recreation. In addition, under both scenarios, the OHMVR Division would protect and close, on a seasonal basis (March

1 to September 30), approximately 43 acres of land inside the open riding and camping area due to the installation of wind fencing or other seasonal dust control measures and associated monitoring equipment that pose a safety risk to OHV riders. The OHMVR Division anticipates that most of the permanent and temporary closures would occur in the mid- to back-dune regions of the SVRA (see Figure 2-6 and Figure 2-7).

The loss of 78 to 113 acres of land inside the Oceano Dunes SVRA would constitute an approximately 5.3 to 7.7 percent loss in OHV recreation lands at Oceano Dunes SVRA (out of 1,453 acres). While these values may not seem large in and of themselves, any permanent or temporary loss of OHV recreation lands at Oceano Dunes SVRA is important given the site's history, popularity, and unique coastal recreational opportunities, plus the lack of similar facilities in the state.

The "thrill of driving for miles on natural sand beach with the surf breaking just a few yards away . . . has always been among the most popular activities" at Pismo State Beach and Oceano Dunes SVRA (CDPR 1975). As described in Section 4.2.3, motorized recreation at Oceano Dunes SVRA and Pismo State Beach has occurred since 1906 and has long been recognized as a "rare and memorable outdoor experience that attracts visitors from all parts of the country" (CDPR 1975)[10]. This is because the flat, hard sand pack near the shoreline was and remains capable of supporting wheeled vehicles, starting with horse-drawn wagons and early automobiles at the turn of the last century. By 1915, photos show long lines of automobiles parked on the beach (Austin and Hammond 2010). After World War II, vehicular recreation in the dunes grew in popularity, and a 1971 Life magazine photo shows a large number of campers and vehicles at Pismo State Beach and Oceano Dunes SVRA during July 4 of that year. By that time, motorized vehicles traversed the publicly and privately owned beach and dunes from the north end of Pismo Beach all the way to Point Sal, in Santa Barbara County.

As shown in Figure 4-1, the availability of the unique recreational opportunity and experience provided at and near Oceano Dunes SVRA has been substantially limited and reduced over time as CDPR has implemented measures to protect resources. Whereas thousands of acres had historically been open to vehicle recreation historically, only approximately 1,450 acres are open today. Furthermore, from March to September of each year, the open riding and camping area continues to be seasonally reduced in size by 19.5 percent (284 out of 1,453 acres) because of the installation of fencing to project nesting western snowy plovers and California least terns (see Section 4.2.3.1).

Given its long history of vehicular recreation, it is not surprising that Oceano Dunes SVRA is a popular destination. Although the SCORP survey of public opinions and attitudes indicates a majority of Californians have never used an OHV in a recreational context, millions of Californians are OHV enthusiasts. Oceano Dunes SVRA and Pismo State Beach draw millions of visitors each year, equal to slightly more than 50% of the total statewide SVRA system attendance totals. Furthermore, according to CDPR statistical reports, Oceano Dunes SVRA alone (i.e., not including Pismo State Beach visitors) had the 7th highest visitor attendance level in the entire State Parks system (279 units) in Fiscal Year 2012-2013, the 8th highest visitor attendance level in Fiscal Year 2013-2014, and the 6th highest visitor attendance level in Fiscal Year 2014-2015.

[10] In addition to the 1975 General Plan, survey data from 2012/2013 (OHMVR Division 2013) identified visitors to Oceano Dunes SVRA from Canada and Germany.

As described in Section 4.2.3.4, survey data indicates that visitors to Oceano Dunes SVRA are both local (from SLO County) and regional (from outside SLO County). In particular, visitors come from regions such as the Central Valley, Los Angeles County, and San Francisco Bay Area. Thus, despite the presence of other OHV recreation opportunities as close, or closer to, the visitors' home Counties, OHV recreationists continue to choose to travel to Oceano Dunes SVRA[11]. In addition, 67 percent of the visitors surveyed indicated they would not visit SLO County if Oceano Dunes SVRA did not exist. As concluded by SMG (2011), the data suggest that, for certain visitors, Oceano Dunes SVRA "provides a unique location and set of recreational experiences."

The unique setting and location of the SVRA are likely the predominant factors in the SVRA's popularity. Survey data indicate Oceano Dunes SVRA is a popular family destination, with the average camping party having up to 13 people (see 4.2.3.4). There is also anecdotal evidence of successive generations of visitors returning to the dunes for years and decades for recreation, rest, and relaxation. The active, shifting dunes provide recreational opportunities for riders of all experience levels. Facilities such as Sand Highway promote safe, established routes of travel for less experienced riders, and the undulating dunes provide opportunities for more experienced riders. Furthermore, the variety of unique, low-cost coastal recreation opportunities such as camping, surf fishing, hiking and, in particular OHV recreation, available in one location is a fundamental reason for visiting the park. A family camping along the shore can enjoy beach play, low-speed shoreline touring, and challenging back-dune driving, all from the same campsite, and all on the same day.

Among the OHV riding community, Oceano Dunes SVRA is a highly desirable location to ride and is one of only two OHV use areas in the state where OHV recreation is allowed on the beach. The BLM manages the Samoa Dunes Recreation Area in Arcata in northern California where 140 acres of "open" terrain, containing numerous trails and the beach strand, is available for OHV riding. An additional new 75-acre riding area known as Eureka Dunes is now open to OHV use and extends about 1 mile north of the park (BLM 2012). Given the distance to the Samoa Dunes Recreation Area and its small size, it is not an equivalent opportunity for OHV recreation at Oceano Dunes SVRA[12]. Camping is also not permitted at Samoa Dunes Recreation Area, further limiting its comparability to Oceano Dunes SVRA (camping on a paved lot is available at the nearby boat ramp). Thus, Oceano Dunes SVRA provides a one-of-a-kind mix of recreational opportunities that cannot be found elsewhere in the central coast or any other part of the state (see Table 4-3).

Given the SVRA's history, popularity, and unique, low-cost recreational opportunities, the OHMVR Division considers the temporary (43 acres annually) and permanent (70 acres) closure of land inside the Oceano Dunes SVRA open riding and camping area to be a potentially significant impact on OHV recreation. To reduce the impact of the Dust Control Program on OHV recreation at Pismo State Beach and Oceano Dunes SVRA, the OHMVR Division would implement Mitigation Measure REC-1, Minimize Loss of OHV Recreation Opportunities

[11] For example, the 2012-2013 OHMVR Attendance Study (see 4.2.3.4) identifies that 13% of visitor survey respondents were from Fresno County. Presuming a point of origin of Fresno, Hollister Hills SVRA is the closest SVRA (128 miles road distance), followed by Carnegie SVRA (129 miles road distance), Oceano Dunes SVRA (153 miles road distance), and Hungry Valley SVRA (155 miles road distance).

[12] Samoa Dunes Recreation Area is located near the mouth of Humboldt Bay. It is approximately 280 miles from San Francisco, 320 road miles from Sacramento, 470 miles from Fresno, and 650 miles from Los Angeles.

Mitigation Measure REC-1: Minimize Loss of OHV Recreation Opportunities
The OHMVR Division shall minimize the loss of OHV recreational opportunities at Oceano Dunes SVRA by:

- Planting vegetation outside the Oceano Dunes SVRA open riding and camping area
- Planting vegetation and deploying seasonal dust control measures in a manner that does not interfere with the Oceano Dunes SVRA "Sand Highway" and other established paths of travel in the SVRA
- Deploying seasonal dust control measures from March 1st through September 30th only
- Considering potential hazards to public recreation from the seasonal deployment of dust control measures (e.g., ensuring that areas are safe for resumption of OHV recreation following removal of the project)
- Integrating recreation opportunities, including OHV recreation opportunities, into dust control measures. This could be achieved by:
    - Educational kiosks that highlight the progression of dune vegetation / ecosystems
    - Establishing and maintaining motorized and non-motorized trails through large, continuous blocks of planted vegetation
    - Embedding OHV training or vendor areas in dust control measures large enough to support such areas
- Identifying areas to provide additional camping or OHV recreation opportunity and diligently pursue opening those areas to OHV recreation with existing staff levels and funding considerations. Any such expansion shall occur in a manner that is consistent with the Public Resources Code and other applicable laws and regulations and shall not impede achievement of the performance standard set by Rule 1001.

Mitigation Measure REC-1 requires the OHMVR Division to implement measures that could reduce the potential for Dust Control Program components to limit and interfere with OHV recreation. Mitigation Measure REC-1 also directs the OHMVR Division to compensate for the loss (i.e., closure) of OHV recreation lands that could occur with implementation of the Dust Control Program; however, the ability of the OHMVR to do this is subject to other applicable laws and regulations and is, therefore, speculative. Thus, even with the implementation of Mitigation Measure REC-1, the potential remains for the Dust Control Program (in Year 5) to temporarily (43 acres) and permanently (70 acres) limit and interfere with OHV recreation at Oceano Dunes SVRA. Factors such as the SVRA's history of use, historical reduction in vehicle recreation lands in the area, current seasonal reduction in vehicle recreation lands, high visitor attendance levels, and the unique, low-cost nature of the coastal recreational opportunities provided by the SVRA make this loss of OHV lands a substantial and adverse change to OHV recreation at Oceano Dunes SVRA. Thus, Impact REC-1 would be a significant and unavoidable impact of the Dust Control Program. In addition, the proposed Dust Control Program would contribute to a significant and unavoidable cumulative impact on coastal vehicular recreation lands, as described in Chapter 11, Cumulative Impacts.

See Chapter 5, Land Use and Planning, for the evaluation of the proposed Dust Control Program's consistency with applicable land use plans and regulations.

Impact REC-2: The Dust Control Program could limit or interfere with coastal, non-vehicular recreational activities at Oceano Dunes SVRA.

The Dust Control Program would not substantially limit or interfere with non-vehicular recreational activities at Oceano Dunes SVRA. The temporary and permanent closure of up to 113 acres of land inside the Oceano Dunes SVRA would not adversely change non-vehicular recreation opportunities such as photography, hiking, camping, or wildlife viewing because these activities typically take place away from the mid- and back-dune regions where dust control measures would be implemented. While 15 acres of land open to non-vehicular recreation only could be changed from open sand to vegetation, this change would occur in the very back of the dunes where there are no trails and non-vehicular access is difficult. In addition, as described in Section 4.2.1, there are ample opportunities, both in the central coast region and on a statewide basis, for coastal, non-vehicular recreation such as photography, hiking, and wildlife viewing.

The OHMVR Division is not proposing to plant vegetation or deploy seasonal dust control measures within the boundaries of Pismo State Beach. In addition, the OHMVR Division would set back all Dust Control Program activities between 1,100 feet (near marker posts 4 and 5) and 1,500 feet (near marker post 6 and 7) from the mean high tide line of the Pacific Ocean. Thus, the proposed Dust Control Program would not change recreational activities or opportunities in this area. In particular, sea-side camping, which tends to be concentrated just inland of the shore zone – high enough to avoid inundation from high tides and keep clear of the north-south vehicle movement, but close enough to the shoreline to avoid vehicles getting stuck in the softer, interior dune sand and allow families easy access to the beach – is not anticipated to be impacted by the proposed Dust Control Program.

For the reasons provided above, the proposed Dust Control Program is not anticipated to substantially limit or interfere with non-vehicular recreation at Oceano Dunes SVRA.

4.4 REFERENCES

Akeman 2016. Phone communication between John Akeman, Park Planning Manager, Monterey County Parks Department and Chris Dugan, Project Manager, MIG. May 20, 2016.

Austin and Hammond 2010. Linda Austin and Norm Hammond, Images of America Oceano, 2010, Arcadia Publishing.

California Department of Parks and Recreation (CDPR) 1975. *Pismo State Beach and Pismo Dunes State Vehicular Recreation Area General Development Plan and Resource Management Plan*. Sacramento, CA. April 1975.

_____2006. *California State Park System Statistical Report 2005/2006 Fiscal Year*. Sacramento, CA. November 2006.

_____2007. *California State Park System Statistical Report 2006/2007 Fiscal Year*. Sacramento, CA. December 2007.

_____2009. *California State Park System Statistical Report 2007/2008 Fiscal Year*. Sacramento, CA. March 2009.

_____2010a. *California State Park System Statistical Report 2008/2009 Fiscal Year*. Sacramento, CA. August 2010.

_____2010b. *California State Park System Statistical Report 2009/2010 Fiscal Year*. Sacramento, CA. 2010.

_____2011. *California State Park System Statistical Report 2010/2011 Fiscal Year*. Sacramento, CA. 2011.

_____2012. *California State Park System Statistical Report 2011/2012 Fiscal Year*. Sacramento, CA. 2012.

_____2013. *California State Park System Statistical Report 2012/2013 Fiscal Year*. Sacramento, CA. 2013.

_____2014a. *California State Park System Statistical Report 2013/2014 Fiscal Year*. Sacramento, CA. 2014.

_____2014b. *Survey on Public Opinions and Attitudes on Outdoor Recreation in California (SPOA) 2012*. Sacramento, CA. January 2014.

_____2015a. *California State Park System Statistical Report 2014/2015 Fiscal Year*. Sacramento, CA. 2015.

_____2015b. *2015 Statewide Comprehensive Outdoor Recreation Plan.* Sacramento, CA. 2015.

_____2016 *California State Parks Camping Fees.* n.p. Web. n.d. <http://www.reserveamerica.com/showPage.do?name=common&commonPath=/usa/ca/cafeesmain.html>

Chavez 2016. Phone communication between Mary Chavez, Program Coordinator, Santa Cruz County Parks, Open Space, and Cultural Services Department and Chris Dugan, Project Manager, MIG. May 4, 2016.

Cooper 2015. Phone communication between Shaun Cooper, Senior Planner, San Luis Obispo County Parks and Recreation Department and Chris Dugan, Project Manager, MIG. May 5, 2016.

Glick 2014. Phone communication between Ronnie Glick, Senior Environmental Scientist, Oceano Dunes District and Chris Dugan, Project Manager, MIG. August 1, 2014.

Howell 2016. Phone communication between Rick Howell, Information Assistant, U.S. Forest Service Mt. Pinos Ranger District and Phil Gleason, Analyst, MIG. May 4, 2016.

Langlands 2016. Phone communication between Paddy LAnglands, Deputy Director, Santa Barbara County Community Services Department Parks Division and Chris Dugan, Project Manager, MIG. May 5, 2016.

Murphy 2016. Phone communication between Rachel Murphy, Visitor Information Assistant, U.S. Forest Service Ojai Ranger District and Phil Gleason, Analyst, MIG. May 4, 2016.

Off-Highway Motor Vehicle Recreation (OHMVR) Division 2010. *Strategic Plan.* Sacramento, CA. 2009.

_____2013. Oceano Dunes State Vehicular Recreation Area Rule 1001 Particulate Matter Reduction Plan. Sacramento, CA. March 29, 2013.

_____2014a. *OHMVR Commission Program Report.* Sacramento, CA. January 2014.

_____2013. *Attendance Study 2012-2013*. Sacramento, CA. August 2014.

Sanchez 2016. Phone communication between Alicia Sanchez, Assistant Recreation Officer, U.S. Forest Service Santa Lucia Ranger District and Phil Gleason, Analyst, MIG. May 4, 2016.

San Luis Obispo County 2006. *San Luis Obispo County General Plan Parks and Recreation Element*. San Luis Obispo, CA. December 2006.

Strategic Marketing Group (SMG) 2011. *Oceano Dunes SVRA Economic Impact Analysis Report 2010-2011*. Prepared for CDPR, OHMVR Division. Sacramento, CA. 2011.

Wilde 2016. Phone communication between Adam Wilde, Outdoor Recreation Planner, U.S. Bureau of Land Management Central Coast Field Office and Chris Dugan, Project Manager, MIG. May 20, 2016.

CHAPTER 5 LAND USE AND PLANNING

As described in Section 1.4.2 and Section 2.4.1, the proposed Oceano Dunes SVRA Dust Control Program involves development activities within the Coastal Zone, as defined by the California Coastal Act of 1976.

The proposed Dust Control Program would be located on state-owned and state-operated land that, with the exception of coastal development permitting usually conducted through local agencies, is not subject to local land use restrictions and zoning regulations. For the proposed Dust Control Program, the OHMVR Division, SLO County, the City of Grover Beach, and the CCC have consented to a consolidated CDP process (pursuant to California Public Resource Code Section 30601.3) by which the CCC will process and act upon the OHMVR Division's CDP application. Under this process, the standard of review will follow Chapter 3, Coastal Resources Planning and Management Policies, of the California Coastal Act, and the CCC will use the appropriate LCPs as a reference and guidance document when acting upon the consolidated CDP. Accordingly, this chapter focuses on the Program's conformance with Chapter 3 of the Coastal Act.

It is important to note that while the proposed Dust Control Program includes development according to the Coastal Commission staff, its components and activities are not the typical development uses or activities considered and planned for by the Coastal Act and appropriate LCPs. In reviewing Chapter 3 of the Coastal Act for standards that could apply to the proposed Dust Control Program the OHMVR Division focused only on those standards and guidelines that were related to the proposed Dust Control Program activities and how those activities are performed and conducted, not ongoing park operations that would not be affected by the Program (e.g., activities in Pismo State Beach north of Grand Avenue, park visitation levels, etc.).

5.1.1 Pismo State Beach and Pismo Dunes SVRA General Development and Resource Management Plan

The Pismo State Beach and Pismo Dune SVRA General Development and Resource Management Plan was completed in 1975 and amended in 1982 and 1994.

As set forth in this plan, the purpose of Pismo State Beach is to make available to the people an outstanding coastal area of beach and sand dunes. According to the plan's management policy, the OHMVR Division is manage Pismo State Beach is to perpetuate and enhance the recreational opportunities afforded by Pismo State Beach's outstanding coastline, together with the scenic and natural features upon which such recreational opportunities depend; to regulate the various uses in the interest of the safety and enjoyment of visitors; and to coordinate various activities and uses in such a way that resources are protected and perpetuated to ensure their continuous availability to the people.

As set forth in the management plan, the purpose of Pismo Dunes SVRA (now Oceano Dunes SVRA) is to make available to the people opportunities for recreational off-road vehicles in an uncommonly large area of unstabilized sand dunes; to regulate such uses in the interest of visitor safety and environmental protection; and to provide appropriate related facilities to serve the user of the area. The SVRA was also established to afford protection to surrounding stabilized sand dunes that embrace some areas of great ecological interest and significance which are not important not only in their own right, but also as key elements in the environment within which vehicular activities take place and in the quality of the visitor experience arising from those activities. The management plan states that this protection is to be afforded by the exclusion of

vehicular activities, by establishment of natural preserves in appropriate locations, and by other measures as required. According to the plan's management policy, the OHMVR Division is to manage Oceano Dunes SVRA in ways that perpetuate and enhance the uses and values enumerated above, that reduce or eliminate conflicts between patterns of use arising from the kinds of resources present in the SVRA, and that forward mutual understanding between diverse groups of visitors and interested persons who use the area for recreational and scientific pursuits.

5.1.2 California Coastal Act

The California Coastal Act (PRC §30000 et seq.) identifies the Coastal Zone as a valuable natural resource which should be protected from deterioration and destruction to promote public safety, health, welfare, and to protect public and private property, wildlife, marine fisheries and other ocean resources and natural environment. The Coastal Zone runs the length of California's coastline, from the Oregon border to the Republic of Mexico and extends inland generally 1,000 yards from the mean high tide line. In significant coastal estuarine habitat and recreational areas it extends inland to the first major ridgeline paralleling the sea or five miles from the mean high tide line of the sea, whichever is less. In developed urban areas the zone generally extends inland less than 1,000 yards. The Coastal Act ensures that existing developed uses and future developments are carefully planned and developed consistent with the policies of the Coastal Act. The Coastal Act also constitutes California's Coastal Zone Management Program within the Coastal Zone for purposes of the Federal Coastal Zone Management Act of 1972 (16 U.S.C. 1451, et seq.).

Relevant goals of the Coastal Act include protecting the overall quality of the Coastal Zone environment, assuring orderly balanced utilization and conservation of Coastal Zone resources, maximizing public access and recreational opportunities consistent with resource conservation, and giving priority to coastal-dependent and coastal-related developments over other development on the coast. To achieve these goals, the Coastal Act sets forth specific policies that address issues including, but not limited to, shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works.

The CCC, in partnership with coastal cities and counties, plans and regulates the use of land and water in the Coastal Zone. Development activities, which include (among others) construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to coastal waters, generally require a CDP from either the CCC or the local government. After the CCC certifies a LCP, the Commission's permitting authority is largely delegated to the local government (including appeals). The CCC retains appeal authority over certain local government permit decisions, including, but not limited to, developments between the sea and the first public road paralleling the sea or within 300 feet of the inland extent of beach or mean high tide line where there is no beach, and developments within sensitive resource areas. It also retains original permit jurisdiction (and therefore appeal authority) over development on tidelands, submerged lands, and public trust lands in the Coastal Zone.

5.1.2.1 Definitions

Chapter 2 of the Coastal Act (PRC §30100 et seq.) defines the terms used in the Coastal Act. Relevant terms include:

- **"Coastal-dependent development or use"** means any development or use which requires a site on, or adjacent to, the sea to be able to function at all (PRC §30101).

- **"Coastal-related development"** is defined as any use that is dependent on a coastal-dependent development or use (PRC §30101.3).
- **"Development"** means, on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'Berg-Nejedly Forest Practice Act of 1973 (commencing with Section 4511). As used in this section, "structure" includes, but is not limited to, any building, road, pipe, flume, conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line (PRC §30101.3).
- **"Environmentally sensitive area"** means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments (PRC §30107.5).
- **"Public works"** is defined to mean, in part, all production, storage, transmission, and recovery facilities for water, sewerage, telephone, and other similar utilities owned or operated by any public agency or by any utility subject to the jurisdiction of the Public Utilities Commission, except for energy facilities; and, all publicly financed recreational facilities, all projects of the State Coastal Conservancy, and any development by a special district (PRC §30114).
- **"Sensitive coastal resource areas"** means those identifiable and geographically bounded land and water areas within the coastal zone of vital interest and sensitivity, including: special marine and land habitat areas, wetlands, lagoons, and estuaries as mapped and designated in Part 4 of the coastal plan; areas possessing significant recreational value; highly scenic areas; archaeological sites referenced in the California Coastline and Recreation Plan or as designated by the State Historic Preservation Officer; special communities or neighborhoods which are significant visitor destination areas; areas that provide existing coastal housing or recreational opportunities for low- and moderate-income persons; areas where divisions of land could substantially impair or restrict coastal access (PRC §30114).
- **"Wetland"** means lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens (PRC §30114).

5.1.2.2 Coastal Resources Planning and Management Policies

Chapter 3 of the Coastal Act (PRC §30200 et seq.) sets forth the policies that constitute the standards for the adequacy of local coastal Programs and development subject to the Coastal Act.

summarizes the standards that apply to the proposed Program, their requirements, and the Program's consistency with these requirements; it does not include Coastal Act standards that clearly do not apply to the Program, such as standards related to oil and gas development. Where appropriate, the table refers the reader to specific chapters where additional information regarding Program consistency with the Coastal Act is provided.

Table 5-1 Project Consistency with Coastal Act Planning and Management Policies

PRC Section	Title and Summary of Requirement	Project Consistency Analysis
30210	Access; recreational opportunities; posting: Maximum access and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.	The Dust Control Program would not interfere with existing coastal access (see Chapter 2 Project Description, and Chapter 4 Recreation and Public Access) but would significantly limit and interfere with existing, historical, and traditional coastal vehicular recreational opportunities (Impact REC-1), even with the inclusion of mitigation measures (see Mitigation Measure REC-1). This significant impact would reduce dust and PM produced at Oceano Dunes SVRA during periods of strong persistent winds and make best possible progress towards complying with SLOAPCD Rule 1001. Nonetheless, the preferred Dust Control Program scenario would impact 78 acres of coastal OHV recreation lands, and the alternate program scenario does not maximize recreational opportunities. Thus, the proposed Program may not be consistent with PRC section 30210.
30211	Development not to interfere with access: Development shall not interfere with the public's access to the sea.	The Dust Control Program would not prevent, reduce, or otherwise interfere with public access to the sea (see Chapter 2, Project Description, and Chapter 4, Recreation and Public Access).
30212	New development projects: Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects unless adequate access exists nearby.	The Dust Control Program would not interfere with existing public access to the shoreline that is provided via Highway 1, Grand Avenue, Pier Avenue, and Oso Flaco Road (See Chapter 4, Recreation and Public Access).

Table 5-1 Project Consistency with Coastal Act Planning and Management Policies		
PRC Section	**Title and Summary of Requirement**	**Project Consistency Analysis**
30213	Lower cost visitor and recreation facilities: Lower cost visitor and recreation facilities shall be protected, encouraged, and provided; developments providing public recreation are preferred.	The Dust Control Program is not anticipated to substantially impact existing visitor-serving facilities or low-cost camping opportunities at Oceano Dunes SVRA, but would significantly limit and interfere with coastal vehicular recreational opportunities (Impact REC-1), even with the inclusion of mitigation measures (see Mitigation Measure REC-1). This significant impact would reduce dust and PM produced at Oceano Dunes SVRA during periods of strong persistent winds and make best possible progress towards complying with SLOAPCD Rule 1001. Nonetheless, the preferred Dust Control Program scenario would impact 78 acres of coastal OHV recreation lands, and the alternate program scenario does not maximize recreational opportunities. Thus, the proposed Program may not be consistent with PRC section 30213.
30214	Implementation of public access policies: Public access policies shall take into account topographic and geologic site characteristics.	The Dust Control Program would not interfere with public access to the beach or coastal zone (see Chapter 2, Project Description, and Chapter 4, Recreation and Public Access) and would not result in substantial adverse effects to geology and soils (see Chapter 3).
30220	Protection of certain water oriented activities. Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.	The Dust Control Program is not anticipated to substantially impact water-oriented recreational activities such as swimming, kite boarding, or surfing, etc., but would significantly limit and interfere with coastal vehicular recreational opportunities (Impact REC-1), even with the inclusion of mitigation measures (see Mitigation Measure REC-1).

Table 5-1 Project Consistency with Coastal Act Planning and Management Policies		
PRC Section	**Title and Summary of Requirement**	**Project Consistency Analysis**
30223	Upland areas: Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.	The Dust Control Program would not substantially alter upland habitats (see Chapter 7, Biological Resources), but would significantly limit and interfere with coastal vehicular recreational opportunities (Impact REC-1), even with the inclusion of mitigation measures (see Mitigation Measure REC-1). This significant impact would reduce dust and PM produced at Oceano Dunes SVRA during periods of strong persistent winds and make best possible progress towards complying with SLOAPCD Rule 1001. Nonetheless, the preferred Dust Control Program scenario would impact 78 acres of coastal OHV recreation lands, and the alternate program scenario does not maximize recreational opportunities. Thus, the proposed Program may not be consistent with PRC section 30223.
30230	Marine resources; maintenance Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance.	The Dust Control Program would not result in substantial adverse effects to marine resources. The OHMVR Division is incorporating requirements to avoid coastal waters, streams, wetlands, etc. (see Chapter 7, Biological Resources) and to avoid or minimize spills, leaks, and storm water contamination that could potentially interfere with the marine environment (see Chapter 9, Hydrology and Water Quality).

Table 5-1 Project Consistency with Coastal Act Planning and Management Policies		
PRC Section	**Title and Summary of Requirement**	**Project Consistency Analysis**
30231	Biological Productivity; water quality: The biological productivity and the quality of coastal waters appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing substantial interference with surface waterflow, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.	The Dust Control Program would not result in substantial adverse effects to biological resources (see Chapter 7) or hydrology and water quality (see Chapter 9). The OHMVR Division is incorporating survey, monitoring, and setback requirements to avoid sensitive resources, including wetlands, into the Program. The OHMVR Division is also incorporating requirements to designate vehicle and equipment storage, staging, and clean-up locations, designated vehicle and equipment fueling locations, inspect for equipment leaks, manage material stockpiles, prepare and implement a storm water pollution prevention and spill prevention and response plan, route track-out runoff through a sediment trap, and regularly remove, test, and dispose of sediment from track-out prevention devices.
30232	Oil and hazardous substance spills: Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials.	The Dust Control Program includes protection against spills of oil and other potentially hazardous substances. The OHMVR Division is incorporating requirements into the Program to designate vehicle and equipment storage, staging, and clean-up locations, designated vehicle and equipment fueling locations, inspect for equipment leaks, manage material stockpiles, prepare and implement a storm water pollution prevention and spill prevention and response plans, route track-out runoff through a sediment trap, and regularly remove, test, and dispose of sediment from track-out prevention devices (see Chapter 9, Hydrology and Water Quality).
30234.5	Economic, commercial, and recreational importance of fishing: The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.	The Dust Control Program would not affect fishing access where fishing is legally allowed at Pismo State Beach or Oceano Dunes SVRA.

Table 5-1 Project Consistency with Coastal Act Planning and Management Policies		
PRC Section	**Title and Summary of Requirement**	**Project Consistency Analysis**
30240	Environmentally sensitive habitat areas, adjacent developments: Environmentally sensitive habitat areas shall be protected against significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.	The Dust Control Program involves development within environmentally sensitive habitat area (see Chapter 7, Biological Resources); however, the OHMVR Division is incorporating requirements to conduct pre-construction surveys, avoid special-status species and their habitat, protect riparian and other wetland habitats, delineate work areas and, if necessary, obtain permits from appropriate wildlife agencies for species listed pursuant to the federal Endangered Species Act or California Endangered Species Act. These measures would be performed by qualified personnel, and would be in addition to existing resource protection and management measures that are part of the Oceano Dunes District's ongoing administration and management of the existing resources at Pismo State Beach and Oceano Dunes SVRA. These requirements would protect against significant disruption of habitat values in environmentally sensitive habitat areas. Furthermore, the planting of vegetation could have a beneficial impact on the environment. The Dust Control Program involves activities and components to measure and control dust from a coastal recreation area (see Chapter 2, Project Description, and Chapter 4, Recreation and Public Access). Thus, Program activities and components are dependent on these coastal resources.
30241	Prime agricultural land; maintenance in agricultural production: The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas' agricultural economy, and conflicts shall be minimized between agricultural and urban land uses.	The Dust Control Program does not include any agricultural land that has been designated as "prime" agricultural land pursuant to the Coastal Act (see Chapter 3).

Table 5-1 Project Consistency with Coastal Act Planning and Management Policies		
PRC Section	**Title and Summary of Requirement**	**Project Consistency Analysis**
30242	Lands suitable for agricultural use; conversion: All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless continued or renewed agricultural use is not feasible. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.	The Dust Control Program could result in tree plantings on parcels of land considered Farmland of Local Importance (see Chapter 3); however, these parcels are not in agricultural production and the Dust Control Program would not result in direct or indirect adverse effects to potential agricultural resources.
30243	Productivity of soils and timberlands; conversion. The long-term productivity of soils shall be protected.	The Dust Control Program would not result in direct or indirect adverse effects to potential agricultural resources, would not result in net soil erosion, and would not alter the productivity of any underlying soil potentially suitable for agricultural use (see Chapter 3).
30244	Archaeological or paleontological resources: Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.	The Dust Control Program would not adversely impact archaeological or paleontological resources because it would be implemented in a manner consistent with existing requirements of CDP 4-82-300 (as amended). The OHMVR Division is incorporating requirements to inventory, monitor, and avoid cultural resources, avoid impacts from accidental discoveries, consult with Native Americans, and preserve cultural resources in place. These requirements would ensure the Program would not adversely impact archaeological or paleontological resources (see Chapter 8, Cultural Resources).

Table 5-1 Project Consistency with Coastal Act Planning and Management Policies		
PRC Section	**Title and Summary of Requirement**	**Project Consistency Analysis**
30251	Scenic and visual qualities: The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.	The Dust Control Program involves planting native dune vegetation, deploying wind fencing, straw bales, and temporary monitoring equipment, and potentially planting trees, which may or may not be perceived as an improvement to the existing visual resource setting of the Program area and Guadalupe-Nipomo Dune Complex depending on the viewer. This EIR finds the proposed Dust Control Program activities would not result in a substantial adverse change to the scenic nature and existing visual character of Oceano Dunes SVRA. The OHMVR Division has also included design measures for vegetation projects and seasonal dust control measures into the project to further reduce the less than significant magnitude of the Program's aesthetic impacts (see Chapter 6, Aesthetics).
30253	Minimization of adverse impacts: New development shall minimize risks to life and property in areas of high geologic, flood, and fire hazard; neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area, and be consistent with requirements imposed by an air pollution control district or the State Air Resources Board.	The Dust Control Program would not expose people to risks from geologic, flood, or fire hazards (see Chapter 3). The Dust Control Program also would not create or contribute to erosion, nor destroy a unique geologic resource (see Chapter 3). Finally, the Program is consistent with all applicable air quality plans (see Chapter 3), and implementation of the Program is intended to control and reduce dust and PM produced at Oceano Dunes SVRA during periods of strong persistent winds and make best possible progress towards complying with SLOAPCD Rule 1001.
30254	Public works facilities: New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted.	The Dust Control Program does not require the construction or expansion of major public works facilities such as buildings, roads, water supply or sewage treatment, schools, or parks.

Table 5-1 Project Consistency with Coastal Act Planning and Management Policies		
PRC Section	**Title and Summary of Requirement**	**Project Consistency Analysis**
30255	Priority of coastal-dependent developments: Coastal-dependent developments shall have priority over other developments on or near the shoreline. Except as provided elsewhere in this division, coastal-dependent developments shall not be sited in a wetland. When appropriate, coastal-related developments should be accommodated within reasonable proximity to the coastal-dependent uses they support.	The Dust Control Program must be implemented at Oceano Dunes SVRA. The parts of Oceano Dunes SVRA (and Pismo State Beach) where vehicle activity is allowed represent a "coastal dune vehicle activity area" under SLOAPCD Rule 1001. The proposed Dust Control Program is intended to control and minimize dust at Oceano Dunes SVRA to improve air quality conditions at the SLOAPCD CDF monitoring site and on the Nipomo Mesa in general. The proposed Program is also intended to comply with SLOAPCD Rule 1001. The OHMVR Division considered different locations for implementation of the proposed Oceano Dunes SVRA Dust Control Program, but no viable alternative locations were identified for several reasons (see Chapter 12, Alternatives).

5.1.2.3 Coastal Development Permit 4-82-300 (as amended)

Oceano Dunes SVRA is operated under a Coastal Development Permit (CDP) issued by the CCC in 1982, as amended (refer to Section 2.2.2 of the Project Description). The CDP was needed in order for the OHMVR Division to install fencing to protect wetlands and vegetated dunes and to install entrance kiosks at Grand and Pier Avenues. The permit was subject to certain conditions related to (1) interim and permanent staging areas, (2) control of access to the park, (3) control of uses within the park, (4) restoration activities, (5) protection of archeological resources, and (6) annual review. As part of these conditions, beach camping was restricted to a maximum of 1,000 registered campers (Condition 3B). The OHMVR Division is not proposing to perform any activities that may affect compliance with existing CDP 4-82-300 conditions, as amended.

5.1.3 Oceano County Airport Land Use Plan

Oceano County Airport is located adjacent to Pier Avenue in Oceano, approximately 1.9 miles north of the proposed Dust Control Program area. The SLO County Airport Land Use Commission (ALUC) provides for the orderly development areas surrounding public use airports. In carrying out this duty, the ALUC prepares Airport Land Use Plans (ALUP) and reviews county and city actions which can affect the land use in the vicinity of the airport. The ALUC is an autonomous entity independent of the SLO County government.

The Oceano County Airport Land Use Plan (ALUP) is intended to protect the long-term viability of the airport by ensuring only compatible land uses are built in the vicinity of the airport, ensuring adoption of land use regulations which minimize exposure of people to hazards associated with airport operations, and providing a set of policies and criteria to assist the ALUC in evaluating the compatibility of proposed actions of local agencies with present and future operations at the Airport. Section 4 of the ALUP, Airport Land Use Planning Areas, identifies and delineates Planning Areas based on their proximity to the airport and their potential to be

exposed to airport-related hazards. Section 5 of the ALUP, Airport Land Use Compatibility Policies, establishes policies to minimize the exposure of new development to airport-related hazards. The Dust Control Program would involve activities within ALUP planning areas and FAA airport surfaces associated with Oceano County Airport. Table 4 of the ALUP identifies the which land use categories are consistent with ALUP and compatible with ALUP Planning Areas; in general, the greater the risk posed by or from airport hazards such as noise the more restrictive the Planning Area is. The ALUP also includes the following airport land use compatibility policies:

Policy G-1: **ALUP Right of Review.** No project or land use may be established within the Airport Planning Area nor may any building or use permit be issued for a proposed development unless the proposed project or land use has been reviewed by the ALUC and determined to be consistent with the ALUP.

Policy A-1: **Obstructions to Aerial Navigation.** No structure, tower, landform, or other improvement may be constructed nor vegetation be grown or permitted to grow to a height which exceeds the height of any imaginary surface established under Section 77.25 or 77.29 of the Federal Aviation Regulations.

Policy A-2: **Hazards to Aerial Navigation.** No project or land use may be established within the Airport Planning Area if such use would potentially interfere with the takeoff, landing, or maneuvering of aircraft at the Airport:

- creation of electrical interference with navigation signals or radio communication between the aircraft and airport;
- lighting which is difficult to distinguish from airport lighting;
- glare in the eyes of pilots using the airport;
- uses which attract birds and create bird strike hazards;
- uses which produce visually significant quantities of smoke; and uses which entail a risk of physical injury to operators or passengers of aircraft (e.g., exterior laser light demonstrations or shows).

In regards to Policy G-1, the Oceano County ALUP identifies that no entity other than an ALUC is empowered by state law to make a determination of consistency with respect to an adopted ALUP, but that the review of individual development projects such as the proposed Dust Control Program is not a responsibility mandated to the ALUC when such projects do not require adoption or amendment of a general plan, zoning ordinance, etc.

5.2 ENVIRONMENTAL SETTING

Dust Control Program activities would occur within the Coastal Zone of southwestern SLO County. Project area lands lie under multiple jurisdictional boundaries, including the state, SLO County, and the City of Grover Beach. Most of the Program area consists of state-owned or state-operated lands in Oceano Dunes SVRA. Track-out prevention devices would be located in Pismo State Beach, on Grand Avenue (City of Grover Beach) and Pier Avenue (Oceano).

5.2.1 Land Use and Zoning

Existing land use designations in the Program area include Recreation, Open Space, and Agriculture. Adjacent to or in close proximity are retail and commercial uses along Grand Avenue in the City of Grover Beach and Pier Avenue in the community of Oceano (in unincorporated SLO County), commercial and residential development in the City of Pismo

Beach, the City Grover Beach, and Oceano, the Oceano County Airport, industrial use associated with the Phillips 66 Santa Maria Refinery (east of Oceano Dunes SVRA), and intensive agriculture on the east side of the dunes (see Figure 2-3 and Figure 2-5). The private lands in the tree planting area are located in the unincorporated area of SLO County and are all within the County's Coastal Zone. Under the SLO County LCP the private lands are designated as, and zoned for, Agriculture, Open Space, or Industrial land use (the Phillips 66 Refinery).

5.2.1.1 Pismo State Beach

Pismo State Beach is located adjacent to the cities of Pismo Beach and Grover Beach and the community of Oceano. It is bordered on the north by the City of Pismo Beach, on the south by 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.

The part of Pismo State Beach where Dust Control Program activities could occur is within the planning area of the City of Grover Beach and the SLO County LCPs. The portion of Pismo State Beach within the City of Grover Beach LCP area is designated as State Park and zoned for Coastal Pedestrian Beach north of Grand Avenue and Coastal Vehicular Beach on the south side of Grand Avenue. The portion of Pismo State Beach within the SLO County LCP planning area is designated and zoned for Recreation.

The Pismo Dunes Natural Preserve is a sub-unit of Pismo State Beach, located in the unincorporated area of SLO County. Under the SLO County LCP the western portion of the Natural Preserve is designated and zoned for Recreation, and the east side of the Preserve is designated and zoned for Agriculture. The proposed Dust Control Program area does not include Pismo Dunes Natural Preserve.

Oceano County Airport is located just north of the Pismo Dunes Natural Preserve. This civil, general aviation airport averages approximately 27 aircraft per day; its single runway surface is approximately 2,300 feet long and 50 feet wide and situated at an elevation of 14 feet above mean sea level (AirNav 2016).

5.2.1.2 Oceano Dunes SVRA

Oceano Dunes SVRA is generally located south of the City of Grover Beach and the community of Oceano. The SVRA is bordered on the north by Pismo State Beach, 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.

The 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 allowed throughout the majority of the park and is especially popular in those areas of the park that are not open to OHV recreation, such as the Oso Flaco Lake Natural Area in the southern portion of Oceano Dunes SVRA.

Oceano Dunes SVRA, including the proposed Dust Control Program area, is located in the unincorporated area of SLO County. The SLO County LCP and Coastal Zoning Ordinance guide development within this part of the Coastal Zone. Under the SLO County LCP most of the SVRA is designated and zoned for Recreation; however, the area adjacent to the Phillips 66 Refinery (the Phillips 66 leasehold) is designated and zoned as Open Space.

5.2.2 City of Grover Beach (Grand Avenue) and Oceano (Pier Avenue)

Grand Avenue is a major arterial road that provides access to Pismo State Beach and Oceano Dunes SVRA. Between the public entrance kiosk and SR 1, West Grand Avenue is primarily bordered by vegetated dunes (on the south) and existing commercial development (on the north). This section of West Grand Avenue is located within the jurisdiction of the City of Grover Beach and land uses are subject to the Grover Beach LCP and zoning ordinances. Adjacent to and just east of State Park property along Grand Avenue land is designated for Open Space and zoned for Coastal Open Space. The area just north of Grand Avenue and east of the Park entrance is designated as Planned Commercial and zoned for Coastal Planned Commercial.

Pier Avenue in Oceano is a collector road that provides access to Pismo State Beach and Oceano Dunes SVRA. Numerous commercial and residential properties front Pier Avenue. The SLO County LCP and Coastal Zoning Ordinance, as well as the Oceano Specific Plan, guide development within this part of the Coastal Zone. Under the Oceano Specific Plan, the south side of Pier Avenue east of the Park entrance the land is designated as Residential Multi Family, while on the north side it is designated as Commercial Retail.

5.3 PROGRAM IMPACTS AND MITIGATION MEASURES

Consistent with CEQA and the CEQA Guidelines, this EIR focuses on the potentially significant direct and indirect impacts to the environment that could result from implementation of the proposed Oceano Dunes SVRA Dust Control Program, as described in Chapter 2. The OHMVR Division has determined, based on the characteristics of the proposed Program and the environmental conditions described in 5.2, that:

- Implementation of the Dust Control Program would not physically divide an established community or conflict with any Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP). The Program would not result in the construction of any physical barriers in surrounding neighborhoods, and there is no HCP or NCCP that applies to OHMVR Division activities.

For this reason, this potential land use and planning impact is not discussed further in this EIR. The potentially significant impacts that could result from implementation of the Dust Control Program are described in 5.3.2.

5.3.1 Thresholds of Significance

According to the CEQA Guidelines (Appendix G), the Oceano Dunes SVRA Dust Control Program will have a significant effect on land use if it:

- 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

5.3.2 Potential Impacts from Conflict with Applicable Land Use Plans, Policies, or Regulations

Under the proposed Dust Control Program, the OHMVR Division would plant vegetation, deploy seasonal dust control measures, and install dust and meteorological monitoring equipment throughout the Program area. Planting vegetation and deploying seasonal dust control measures would occur annually. The OHMVR Division would plant up to 20 acres of native dune vegetation per year for a period of five years, and deploy up to 40 acres of seasonal dust control

measures. Dust and meteorological monitoring equipment (approximately three acres) would temporarily occupy individual monitoring sites for up to two years, but could be moved throughout the SVRA throughout the duration of the Program. The OHMVR Division would also install and operate track-out prevention devices at exit points on Grand Avenue and Pier Avenue.

The impacts of the Dust Control Program on the applicable General Development Plan and Resource Management Plan, Coastal Act, and other applicable plans are evaluated below. The proposed Dust Control Program would not conflict with the declared purpose or management policy for Pismo State Beach (see section 5.1.1). The proposed track-out prevention devices at Grand Avenue and Pier Avenue would not interfere with the perpetuation or enhancement of recreational opportunities at Pismo State Beach.

Impact LUP-1: The Dust Control Program would conflict with the Pismo Dunes SVRA (now Oceano Dunes SVRA) General Development Plan and Resource Management Plan.

As described in section 4.3.2, the OHMVR Division's proposed Dust Control Program would (in Year 5 of the Program) result in the permanent and temporary closure of approximately 78 to 113 acres of land at Oceano Dunes SVRA where vehicle activity is permitted (i.e., the SVRA's open riding and camping area; see Table 4-8 and Table 4-9). The loss of this land is considered a significant recreational impact due to the SVRA's history, popularity, unique coastal recreational opportunities, and lack of similar facilities in the state. This significant impact would reduce dust and PM produced at Oceano Dunes SVRA during periods of strong persistent winds and make best possible progress towards complying with SLOAPCD Rule 1001; however, it would not be consistent with the General Development Plan's stated policy to manage the SVRA in ways that "perpetuate and enhance" recreational use of OHVs in the SVRA. Accordingly, the loss of up to approximately 78 to 113 acres of land inside the Oceano Dunes SVRA is considered a significant conflict with the Oceano Dunes SVRA General Development Plan and Resource Management Plan. Mitigation Measure REC-1 requires the OHMVR Division to implement measures that could reduce the potential for Dust Control Program components to limit and interfere with OHV recreation. Mitigation Measure REC-1 also directs the OHMVR Division to compensate for the loss (i.e., closure) of OHV recreation lands that could occur with implementation of the Dust Control Program; however, the ability of the OHMVR Division to do this is subject to other applicable laws and regulations and is, therefore, speculative. Thus, even with the implementation of Mitigation Measure REC-1, the potential remains for the Dust Control Program (in Year 5) to temporarily (43 acres) and permanently (70 acres) limit and interfere with OHV recreation at Oceano Dunes SVRA. This loss is considered a significant conflict with the stated management policy of the General Development Plan and Resource Management Plan. Thus, Impact LUP-1 would be a significant and unavoidable impact of the Dust Control Program.

Impact LUP-2: The Dust Control Program could conflict with the California Coastal Act.

As described in Chapter 4 – Chapter 10 of this EIR, the OHMVR Division is incorporating SPRs and, where necessary, feasible mitigation measures into the design, construction, and implementation of the proposed Dust Control Program which avoid or minimize the potential adverse effects of the Program. The following discussion summarizes the Dust Control Program's general conformance with the Articles of Chapter 3 of the Coastal Act, based on the inclusion of the SPRs and mitigation measures identified in this EIR:

- **Public Access:** The Dust Control Program would not interfere with the public's right to access the sea. Track-out prevention devices would be installed at two park exits, but would not prevent or interfere with public access points on Grand Avenue, Pier Avenue, Oso Flaco Road, or any other trail to the beach or shore.
- **Recreation:** The Dust Control Program would significantly limit and interfere with existing, historical, and traditional coastal vehicular recreational opportunities (Impact REC-1), even with the inclusion of design measures and Mitigation Measure REC-1. The loss of this recreational land also represents a significant conflict with the applicable General Development Plan and Resource Management Plan. The OHMVR Division would minimize interference with and disruption to existing recreational uses at Oceano Dunes SVRA by, in part:
    - Implementing a preferred scenario in which most vegetation planting occurs outside the Oceano Dunes SVRA's open riding and camping area, as well as in areas where no public access or recreation is permitted (Program design feature)
    - Implementing a Dust Control Program that does not plant vegetation or deploy wind fencing and straw bales within 1,100 to 1,500 feet of the mean high tide line, where most beach camping usually occurs (Program design feature)
    - Planting vegetation and deploying seasonal dust control measures in a manner that does not interfere with the Oceano Dunes SVRA "Sand Highway" and other established paths of travel in the SVRA (Mitigation Measure REC-1)
    - Considering potential hazards to public recreation from the seasonal deployment of dust control measures (e.g., ensuring that areas are safe for resumption of OHV recreation following removal of the project (Mitigation Measure REC-1)
    - Integrating recreation opportunities, including OHV recreation opportunities, into dust control measures through the use of educational kiosks, trail development, and/or embedding training or vendor areas into large dust control areas (Mitigation Measure REC-1)
    - Identifying areas to provide additional camping or OHV recreation opportunity and diligently pursue opening those areas to OHV recreation with existing staff levels and funding considerations. Any such expansion shall occur in a manner that is consistent with the Public Resources Code and other applicable laws and regulations and shall not impede achievement of the performance standard set by Rule 1001 (Mitigation Measure REC-1)

  Although the OHMVR Division would implement measures to minimize impacts to existing recreational opportunities at Oceano Dunes SVRA, the proposed Dust Control Program could still result in the significant permanent and/or temporary closure of vehicular recreational lands at Oceano Dunes SVRA (between 78 and 113 acres), which does not maximize recreational opportunities. Thus, the proposed project may not be consistent with the Coastal Act (PRC sections 30210, 30213, and 30223).
- **Marine Environment:** The Dust Control Program would generally not affect the marine environment. The OHMVR Division would protect against oil or hazardous substance spills in accordance with existing regulations and requirements incorporated into the Program. The Dust Control Program would not result in the placement of fill into coastal

or other water resources, and would not impact commercial fishing or recreational boating facilities.

- **Land Resources:** The Dust Control Program would not interfere with existing management measures undertaken at Oceano Dunes SVRA to protect sensitive biological resources, including habitat, and cultural resources, nor would it impede the viability of any active agricultural lands in the vicinity of the Program because the OHMVR Division is incorporating requirements to:
    - Inventory, monitor, and avoid biological resources and obtain all necessary permits from wildlife agencies (Biological Resources SPR)
    - Inventory, monitor, and avoid cultural resources and impacts from accidental discoveries, consult with and involve Native American representatives during Program implementation, and preserve cultural resources in place (Cultural Resources SPR)
- **Development:** The Dust Control Program would, to the maximum extent feasible, preserve the scenic and visual qualities of the coastal area in which the Program is set by incorporating requirements to:
    - Use local, native vegetation that matches the existing plant community composition of the planting area (Aesthetics SPR).
    - Plant vegetation in patterns and shapes that reflect the natural plant colonization and dune-building processes of the dunes (e.g., planting along the prevailing wind direction, avoid planting in regular shapes like squares or rectangles) (Aesthetics SPR)
    - Deploy seasonal dust control measures in locations that minimize conflict with scenic views of the ocean from sensitive park visitor viewpoints, including camping areas, hiking trails, established paths of travel, and other areas of high visitation (Aesthetics SPR).
    - Deploy muted green- or neutral-colored (e.g., sand-colored or brown) wind fencing when existing orange-colored fencing supplies deteriorate or run out (Aesthetics SPR)

  Given the visual context of Dust Control Program, it would not result in a significant adverse change in the scenic nature and existing visual character of Oceano Dunes SVRA from the planting of vegetation and deployment of wind fencing (see Impact AES-1).
- **Industrial Development:** The Dust Control Program does not involve any industrial development.

As summarized above and in , the proposed Dust Control Program could conflict with the California Coastal Act because the preferred Dust Control Program scenario would impact 78 acres of coastal OHV recreation lands, and the alternate program scenario does not maximize existing, historical, and traditional coastal OHV recreational opportunities at Oceano Dunes SVRA. This significant impact would occur even with design and mitigation measures (REC-1) incorporated into the project. Thus, Impact LUP-2 is considered a significant and unavoidable impact of the proposed Dust Control Program. The OHMVR Division notes that this significant impact would reduce dust and PM produced at Oceano Dunes SVRA during periods of strong persistent winds and make best possible progress towards complying with SLOAPCD Rule 1001. Coastal Act provides that maximum access and recreational opportunities shall be

provided consistent with public safety needs. The CCC may determine the Dust Control Program, as described in this EIR, is consistent with the Coastal Act and/or impose additional conditions on the Program as necessary to support its issuance of a CDP and the Program's conformance with the Coastal Act.

Impact LUP-3: The Dust Control Program would not conflict with the Oceano County Airport Land Use Plan.

The potential for the proposed Dust Control Program to impact aviation patterns, result in a hazard to air navigation, or expose people visiting, living, or working in the Program areas is primarily dependent on the height of the proposed structures and the proximity of the proposed structures to airport planning areas or other protected surfaces. According to the Oceano County ALUP (Figures 3 and 4), the Program area lies within Oceano County ALUP Planning Areas "C", "Oa", and "TP-1" (ALUC 2007). Planning Area C encompasses commercial use areas exposed to severe airport impacts, including Pier Avenue. These areas lie within runway protection and airport approach and departure zones. The Oceano County ALUP identifies that Pier Avenue Entrance to Pismo State Beach and Oceano Dunes SVRA is directly on the airport's extended runway centerline, approximately 750 feet from the runway end, and considers the high concentration of vehicles that can form at the entrance station while waiting to enter the park a potential safety hazard. The OHMVR Division is proposing to install track-out prevention devices that could lead to vehicle queues at the Pier Avenue exit, thereby increasing this potential safety hazard. The Oceano County ALUP identifies that non-residential uses in approach and departure zones should be limited to activities which attract few people and have a maximum intensity of use of no greater than 25 to 40 people per acre. Planning Area "Oa" encompasses open space areas exposed to severe/significant airport impacts. These areas, which include the part of Pismo State Beach immediately north and south of the Pier Avenue entrance, also lie within the runway protection, approach and departure, and other important airport zones. The Oceano County ALUP identifies that open space uses are generally compatible with airport operations. The OHMVR Division is not proposing to change the use or intensity of this area as a result of the Dust Control Program. Planning Area "TP-1" encompasses areas exposed to slight airport impacts, including the part of the Program area south of Pismo State Beach marker post 1. The Oceano County ALUP identifies that aircraft in this area are at relatively high altitudes and are not performing complex maneuvers. The proposed Dust Control Program would not significantly increase airport-related risks for park visitors or interfere with takeoff, landing, or maneuvering of pilots, nor would it exceed the height of any FAA civil airport surface. Thus, the Program would not conflict with the Oceano County ALUP.

5.4 REFERENCES

AirNav 2016. "Oceano County Airport." *Oceano County Airport*. Airnav, Airports [Oceano County Airport]. March 31, 2016. Web. May 23, 2016. <http://www.airnav.com/airport/L52>

Airport Land Use Commission (ALUC) 2007. *Airport Land Use Plan for the Oceano County Airport*. [San Luis Obispo, CA]. February 1976, Amended May 16, 2007 <http://sloairport.com/index.php?p=custom_page&page_name=Airport%20Land%20Use%20Plan%20Oceano>

California Department of Parks and Recreation (CDPR) 1975. *Pismo State Beach and Pismo Dunes State Vehicular Recreation Area General Development Plan and Resource Management Plan*. Sacramento, CA. April 1975.

CHAPTER 6 AESTHETICS

6.1 REGULATORY SETTING

6.1.1 California Coastal Act

As described in greater detail in Chapter 5, Land Use and Planning, the California Coastal Act (PRC §30000 et seq.) governs development within the Coastal Zone.

Chapter 2, Section 30116 of the Coastal Act defines "sensitive coastal resource areas" to mean those identifiable and geographically bounded land and water areas within the coastal zone of vital interest and sensitivity, including "areas possessing significant recreational value" and "highly scenic areas."

Chapter 3 of the Coastal Act, Coastal Resources Planning and Management Policies, sets forth the policies that constitute the standards for the adequacy of LCPs and development subject to the Coastal Act (PRC §30200 et seq.). The applicable standards of Chapter 3 related to aesthetics include:

- The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance (PRC §30251)
- Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas and, where feasible, to restore and enhance visual quality in visually degraded areas (PRC §30251)
- New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting (PRC §30251)
- New development shall, where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses (PRC §30253)

In 2007, the CCC adopted the following statement regarding Section 30251:

> The primary concern under this section of the Coastal Act is the protection of ocean and coastal views from public areas such as highways, roads, beaches, parks, coastal trails and accessways, vista points, coastal streams and waters used for recreational purposes and other public preserves rather than coastal views from private residences where no public vistas are involved (SLO County 2007).

6.2 ENVIRONMENTAL SETTING

Regionally, Oceano Dunes SVRA lies within the Nipomo Dunes-Point Sal Coastal Area which has been designated as a National Natural Landmark. According to the National Registry of Natural Landmarks, the Nipomo Dunes-Point Sal Coastal Area contains the largest, relatively undisturbed coastal dune tract in California, and is one of the last remaining tracts of pristine rocky coastline in the South Coast Ranges (NPS 2012). The area is a popular scenic destination and is known for dramatic coastal views, long stretches of shoreline, and unique dune systems.

6.2.1 Visual Descriptions of Pismo State Beach and Oceano Dunes SVRA

Pismo State Beach and Oceano Dunes SVRA are located in the southwest portion of SLO County. The parks are 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 Phillips 66 refinery located east of Oceano Dunes SVRA.

As described in Section 2.2.4.1, the dune complexes at and in the vicinity of Oceano Dunes SVRA have been used for recreation purposes for more than 80 years (see also Figure 4-1). The Pismo State Beach and Pismo Dunes SVRA General Plan was completed in 1975, and amended in 1994. The 1994 amended General Plan includes a setting that still accurately describes the visual setting of Oceano Dunes SVRA and Pismo State Beach (including the Pismo Dunes Natural Preserve). The visual descriptions from the 1994 General Plan are summarized below:

Oceano Dunes SVRA: This large park has an extensive length of ocean beach, many areas wide enough to accommodate vehicle beach camping. Long, gently sloping mostly un-stabilized dunes begin at the eastern edge of the beach and rise to undulating dunes up to 200 feet high. The un-stabilized dunes are mostly within the OHV riding area. Views from the top of the dunes include the beach and ocean looking west, un-stabilized and stabilized dunes to the north and south, and to the east, dunes, lakes, agricultural lands, and the oil refinery to the east. The properties along the entire eastern boundary are mostly maintained in a natural state and include freshwater lakes and stabilized dune complexes. The [Phillips 66] oil refinery is located on the eastern edge of the SVRA and is visible from locations on the back side of the dunes. OHV activity is visible from various portions of the park, particularly in areas adjacent to the riding area.

In addition, the southernmost portion of Oceano Dunes SVRA consists of the Oso Flaco Lake area. This area consists of two freshwater lakes (Oso Flaco and Little Oso Flaco) and both stabilized and un-stabilized sand dunes. The southern boundary of Oceano Dunes SVRA borders the Guadalupe-Nipomo Dunes National Wildlife Refuge, which also consists of beach and undulating stabilized and un-stabilized dunes moving eastward from the edge of the beach.

Pismo State Beach: This beach is dominated by relatively level beach sand area at the ocean interface, adjacent low rising dune strand (little or no vegetation), and commercial and residential development on the eastern edge of the park. It is a typical beach park with paved parking areas and several trails leading down to the beach from the parking areas.

Pismo Dunes Natural Preserve: This area consists of natural landscapes with undulating stabilized dune structures and active dunes up to 200 feet high. Although most areas of the dunes do not have ocean views, the area provides a unique visual landscape for park visitors. Arroyo Grande Creek runs along the preserve and can be viewed from certain locations in the preserve. Dune complexes are rare visual landscapes and are considered an important natural resource of the area in which they exist.

6.2.1.1 Scenic Quality and Sensitivity

The United States Bureau of Land Management (BLM) defines scenic quality as the measure of visual appeal of a tract of land and identifies seven key factors that influence scenic quality: landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications (BLM 1986). These factors are described in Table 6-1.

Table 6-1 Factors that Affect Scenic Quality	
Factor	**Description**
Landform	Topography becomes more interesting as it gets steeper or more massive, or more severely universally sculpted. Outstanding landforms may be monumental (e.g., the Grand Canyon) or subtle (e.g., an individual arch).
Vegetation	A variety of plant life patterns, forms, textures, and striking or intriguing plant life (e.g., gnarled or wind-beaten trees) is more appealing than some or little variety or contrast in vegetation.
Water	Clear and clean appearing water which dominates a landscape is more appealing than water features that do not dominate a landscape.
Color	Rich color combinations and a variety of vivid or pleasing colors are more appealing than some or little to no variety in colors and muted landscape tones.
Adjacent Scenery	Adjacent scenery that enhances visual quality is more appealing than scenery that does not enhance visual quality.
Scarcity	Rare, unique, or exceptional land areas are more appealing than areas that are similar or common within the region.
Cultural Modifications	Modifications that add visual harmony are more appealing than modifications add discordant elements.
Source: BLM 1986	

The scenic quality of an area, combined with the public's concern for the scenic quality and the relative visibility of the area, help to determine the overall aesthetic value, set visual management objectives, and characterize the importance of changes in the scenic quality of a particular landscape. The scenic quality and sensitivity of the Oceano Dunes SVRA landscape are discussed below; the relative visibility of the landscape from sensitive visual receptors is discussed in Section 6.2.1.2.

Scenic Quality

Pismo State Beach and Oceano Dunes SVRA are considered to generally have a moderate to high scenic quality based on the factors listed in Table 6-1. The parks are broadly situated within the Nipomo Dunes-Point Sal National Natural Landmark, which is known for dramatic coastal views, long stretches of shoreline, and unique dune systems. The smell of the salty air, sound of the waves crashing, and sight of the Pacific Ocean are major factors in the visual appeal of the entire California coast, including the Oceano Dunes SVRA area, from vantage points both near and far. Within Oceano Dunes SVRA, dune topography is not strikingly steep; however, the undulating dunes go from sea level to 125 feet above sea level and higher, forming a series of individual and ever-changing dune ridges, valleys, troughs, and other formations that provide visual interest.

Vegetated areas and vegetation "islands" (i.e., isolated areas of vegetation surrounded by open sand areas) generally lack a variety of forms, textures, and color, but do stand out against the monotonous color of the sand dunes that generally dominates the landscape. Large, contiguously-vegetated areas are typically located in the older dune regions (i.e., not actively migrating) to the east and south of the Dust Control Program area, outside the Oceano Dunes SVRA open riding and camping area. The western portion of the Pismo Dunes Natural Preserve

also includes the toe of a foredune system that is stabilized with invasive, exotic European beach grass (*Ammophila arenaria*) and ice plant (*Carpobrotus* spp.), creating a large vegetated area to the north of the Dust Control Program area. Vegetation within Oceano Dunes SVRA's open riding and camping area consists mostly of vegetation islands situated in a north-south line approximately 0.4 miles (approximately 2,110 feet) from the mean high tide line (see Figure 2-4). These vegetation islands occupy a total of approximately 220 acres within Oceano Dunes SVRA open riding and camping area; the proposed Program area contains 49 acres of vegetation islands. Individual islands range in size from approximately 0.5 to 45 acres, are amorphous in shape (though generally aligned in the prevailing wind direction), and are dominated by native dune vegetation, including, but not limited to silver dune lupine (*Lupinus chamissonis*), mock heather (*Ericameria ericoides*), and arroyo willow (*Salix lasiolepis*).

In addition to views of the ocean, beach, open sand areas, and vegetated dunes (i.e., landscapes and landforms), Pismo State Beach and Oceano Dunes SVRA are active recreation areas in which fishing, camping, street-legal and OHVs, equestrian and other recreational activities regularly occur (i.e., cultural modifications). Visitor vehicles and campers may be brightly colored and have flags elevated above the vehicle (particularly parked campers); some campers also install wood or fencing around the camper to reduce sand blasting and erosion during high winds. Pismo State Beach and Oceano Dunes SVRA also include visitor-serving facilities such as marker posts, restrooms, garbage receptacles, and vendors; fencing that protects vegetation, biological and cultural resources, and generally defines where OHV activity is permitted, is a common sight throughout the park. Furthermore, as described in Section 2.2.7, there are several ongoing and completed dust control activities at Oceano Dunes SVRA that contribute to the baseline scenic quality of the park, including brightly-colored, seasonal wind fencing at Grand Avenue, Pier Avenue, and Strand Way, dust and meteorological monitoring equipment (e.g. the S1 meteorological tower), and remnant straw bales from a 2014 seasonal dust control project).

Sensitivity Level

The public's sensitivity or concern for the particular scenic qualities of an area depend on several factors, including the types of users, amount of use, public interest, interrelationship with adjacent land uses, and other variables such as special land use designations that require or promote preservation of the natural landscape (e.g. areas of critical environmental concern).

The scenic qualities of Pismo State Beach and Oceano Dunes SVRA are considered to be moderate to highly sensitive, depending on the individual. In general, as described in Section 4.2.1, Pismo State Beach and Oceano Dunes SVRA are highly popular state parks that attract visitors from local and regional points of origin. In particular, the average visitor travels hundreds of miles to Oceano Dunes SVRA to recreate despite the presence of other SVRAs that are likely closer to their home. While the unique combination of vehicular recreation, non-vehicular recreation, and camping opportunities at Oceano Dunes SVRA are a major appeal, the coastal location and ability to recreate and camp next to the Pacific Ocean enhance this appeal.

6.2.1.2 Relative Visibility from Sensitive Visual Receptor Locations

For the purposes of this EIR, sensitive visual receptors are considered to be groups of individuals in public areas and vantage points that could be potentially affected by changes to scenic quality and character of Pismo State Beach and Oceano Dunes SVRA as a result of the proposed Dust Control Program. These include:

- Visitors to Pismo State Beach and Oceano Dunes SVRA

- Visitors and users of publically accessible points of attraction along the shoreline from Avila Beach to Point Sal (e.g., Pismo Pier, public park areas in Shell Beach)
- Travelers along public roads that may have views of Oceano Dunes SVRA (e.g., U.S. 101, local roadways at elevations higher than the dunes).

The relative visibility of Oceano Dunes SVRA from these sensitive visual receptors is discussed below.

Visitors to Pismo State Beach and Oceano Dunes SVRA

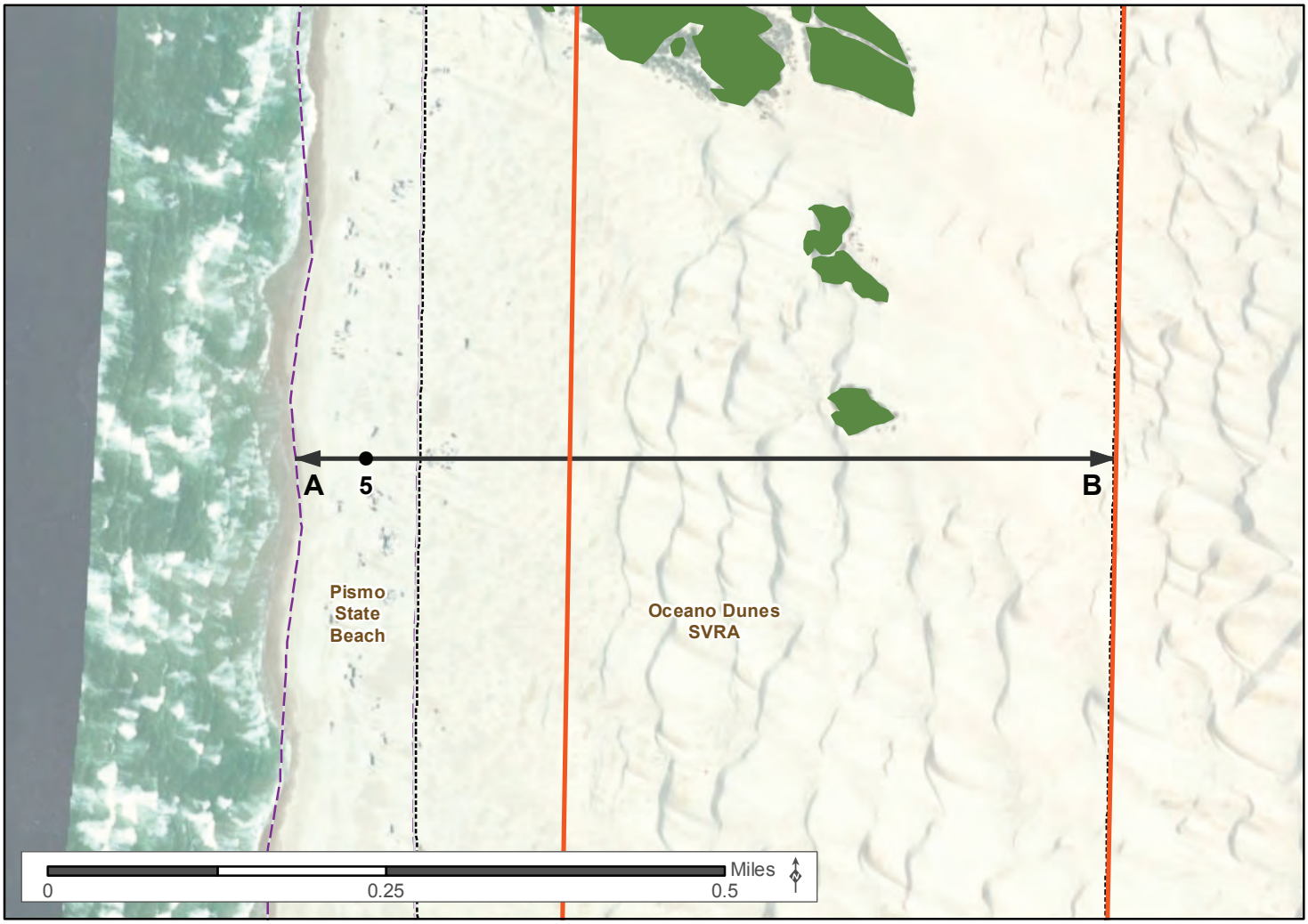
Visitors to Pismo State Beach and Oceano Dunes SVRA take in the scenic qualities and characteristics of Pismo State Beach and Oceano Dunes SVRA in close proximity and as such have a focused view of the parks' individual landforms, vegetation, and recreation and visitor-serving facilities (fences, restrooms, vendors, etc.). Views from within Pismo State Beach and Oceano Dunes SVRA vary depending upon topography and the orientation of the visitor. Topographic changes in the Program area are characterized in Figure 6-1 to Figure 6-3 (looking east-to-west from marker posts 5, 6, and 7). Generally, within approximately 0.5 – 0.7 miles of the marker post, the topography gently slopes up towards a dune ridge; beginning approximately 0.5 – 0.7 miles east of the marker posts, the topography begins to undulate, consisting of a series dune crests and troughs of varying height and depth.

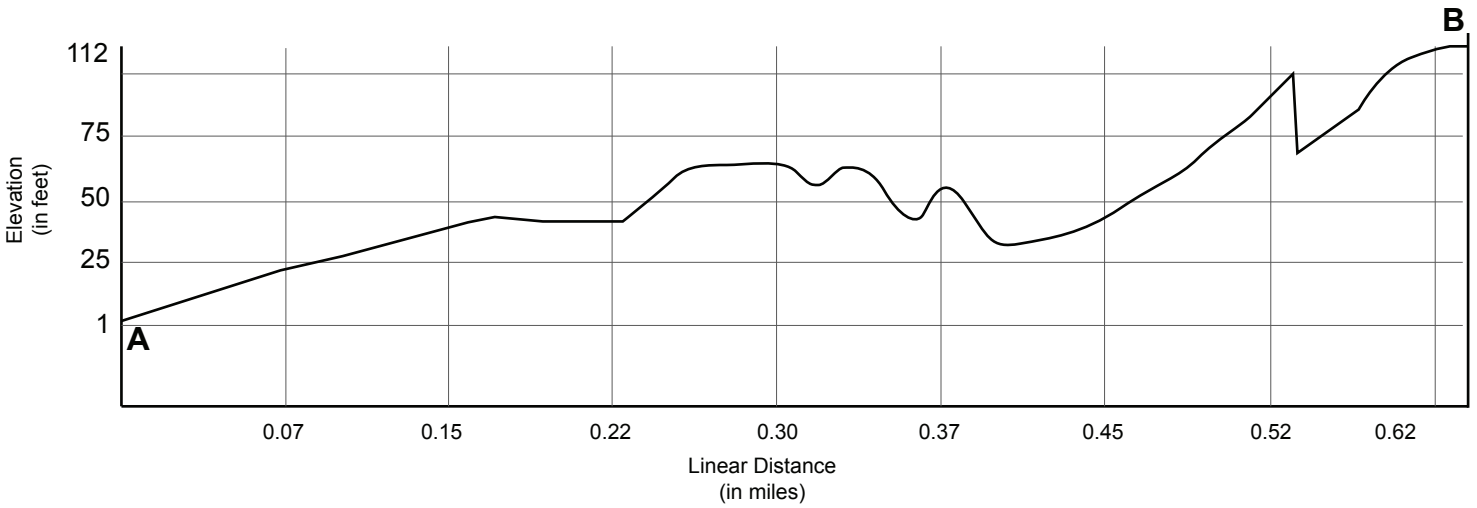
In addition to the focused view of individual park features (see Figure 6-4), visitors to Pismo State Beach and Oceano Dunes SVRA also can take in regional views of the Guadalupe-Nipomo Dune Complex and crenulate (spiral)-shaped coastline in which it sits. Looking north, south, and east, visitors to Oceano Dunes SVRA and Pismo State Beach generally have views of a large expanse of open sand areas either interspersed with vegetation islands or adjacent to contiguously vegetated areas (see Figure 6-5 and Figure 6-6). Looking west, visitors generally have views of the Pacific Ocean in the background with open sand and vegetated areas in the foreground (see Figure 6-6). Developed areas of Pismo Beach, Shell Beach, and Avila Beach are visible in the distance from higher dune elevations, as well as large sand dunes associated with Guadalupe Dunes County Park in Santa Barbara County (approximately six miles south of Oceano Dunes SVRA).

Publically Accessible Points along the Shoreline

As shown in Figure 2-1, Oceano Dunes SVRA is situated near the center of a spiral-shaped stretch of coastline. This location allows the SVRA to be seen from parks and public areas located north and south of Oceano Dunes SVRA, such as the Pismo Pier, Dinosaur Caves Park and other public areas along Ocean Boulevard in Shell Beach, and Rancho Guadalupe Dunes County Park in Santa Barbara County. These public parks and other areas are approximately three to five miles up and down the coast from Oceano Dunes SVRA. The SVRA, therefore, lies in the fore to middleground of the viewer's perspective from these areas, with the Nipomo Mesa, elevated parts of Pismo Beach and Grover Beach, and parts of the Coast and Transverse Ranges in the view background (see Figure 6-7) looking east.

At distances of three to five miles Pismo State Beach and Oceano Dunes SVRA are just one part of the landscape level view and it is difficult, but not impossible, to discern individual management activities at Oceano Dunes SVRA with the naked eye. Public areas up and down the the coast that are at or near sea level have a limited view of the SVRA (due to near-shore topography that blocks some of the interior of the SVRA), while public areas that are elevated have a more direct and total view of the SVRA. During periods of high winds, it is common for sea spray and dust to obstruct views of the SVRA from points up and down the coast.

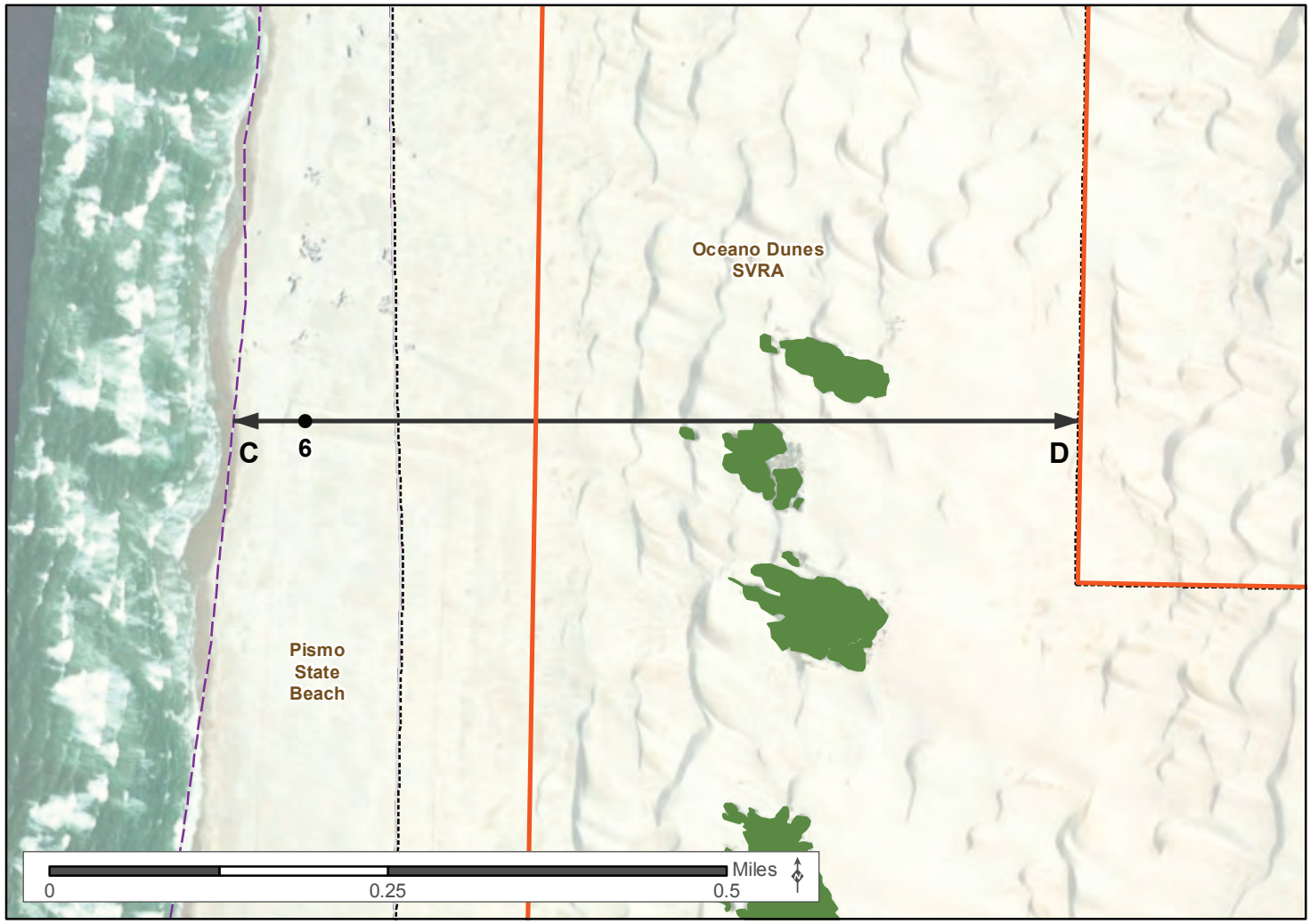


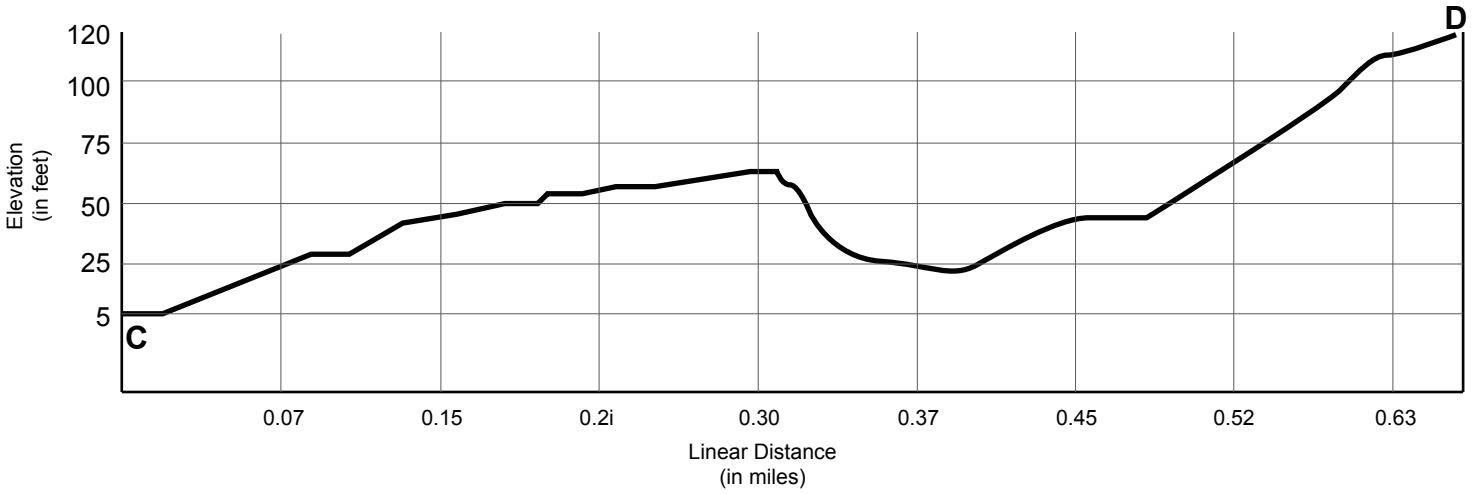


Proposed Dust Control Program area
Marker post
Marker post transect
Oceano Dunes SVRA
Pismo State Beach
Existing vegetation island

Figure 6-1 Dust Control Program Area Topography (Marker Post 5)

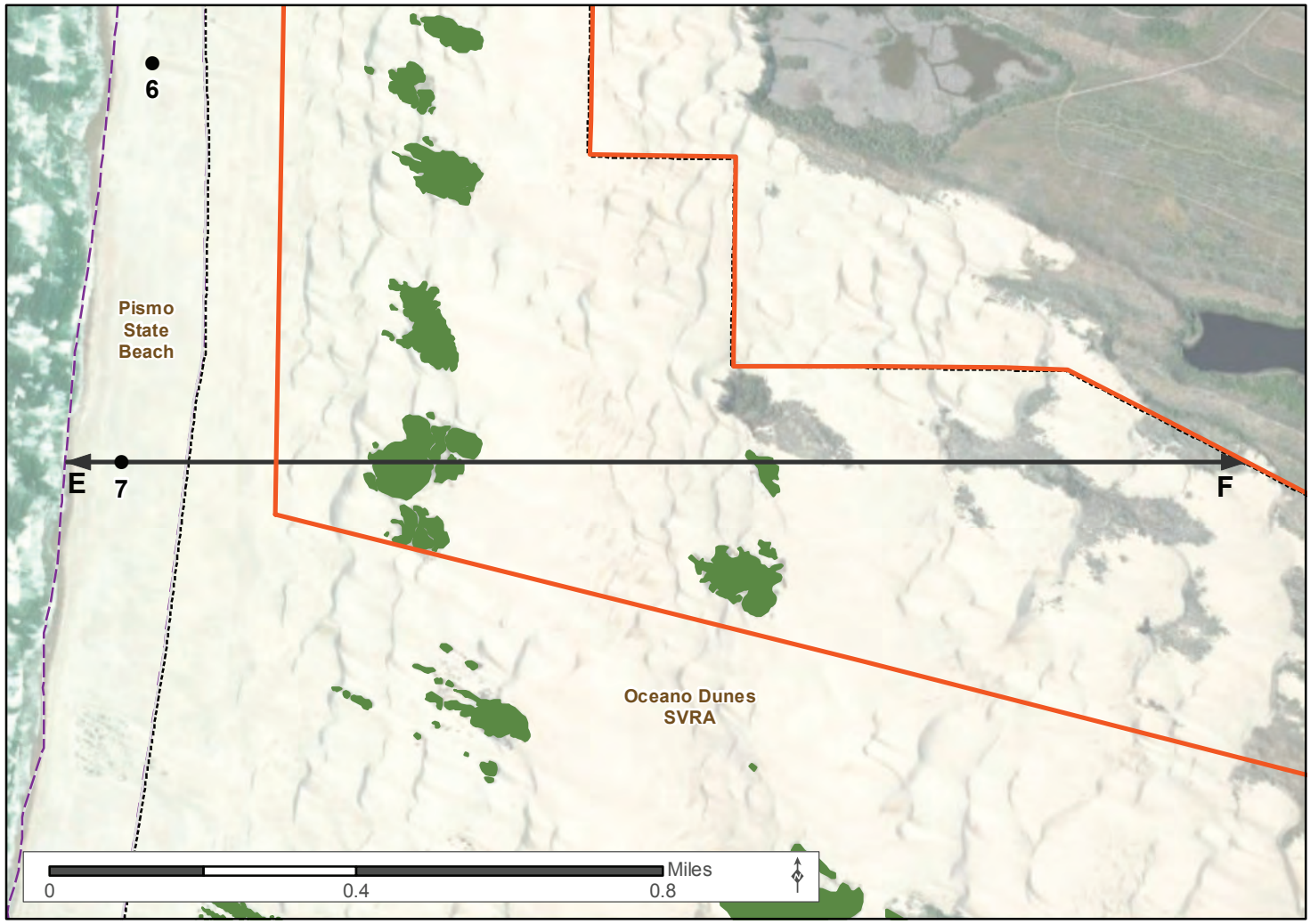
Oceano Dunes SVRA Dust Control Program – Draft Program EIR

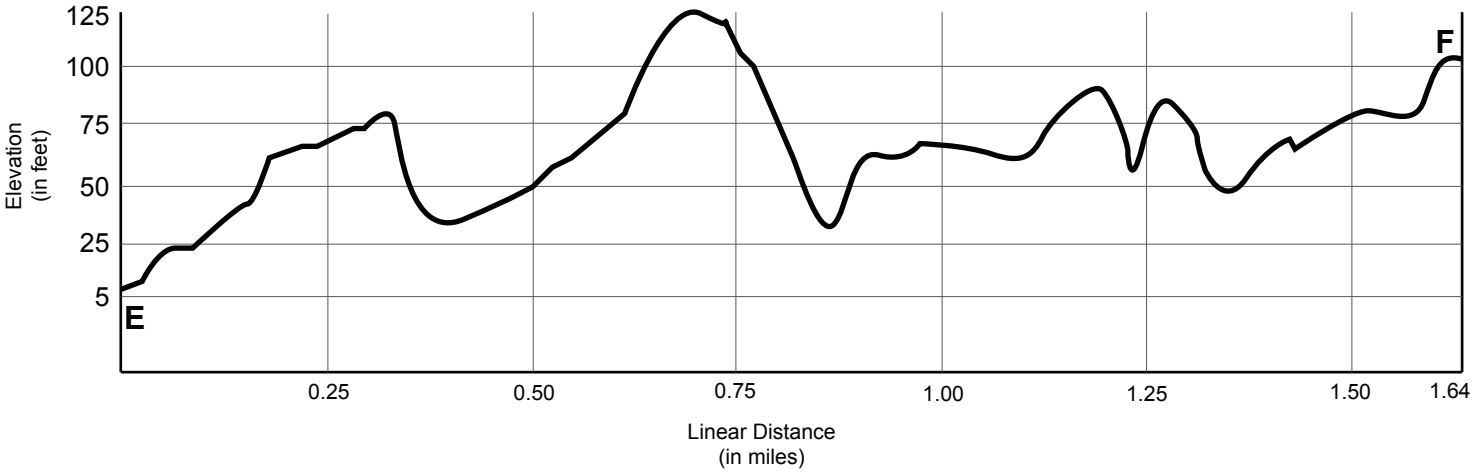




Proposed Dust Control Program area
Marker post
Marker post transect
Oceano Dunes SVRA
Pismo State Beach
Existing vegetation island

Figure 6-2 Dust Control Program Area Topography (Marker Post 6)





Proposed Dust Control Program area
Marker post
Marker post transect
Oceano Dunes SVRA
Pismo State Beach
Existing vegetation island

Figure 6-3 Dust Control Program Area Topography (Marker Post 7)

Oceano Dunes SVRA Dust Control Program – Draft Program EIR

Figure 6-4 Pismo State Beach and Oceano Dunes SVRA Visitor Views – North and South

Figure 6-4. Top: View looking north / north west from Sand Highway marker 15. Shell Beach and Irish Headlands are visible in the photo background. Bottom: View looking south from the vicinity of the S1 meteorological tower (between marker posts 6 and 7). The Coast and Transverse Ranges are visible in the photo background, as it Rancho Guadalupe Dunes County Park (the large open sand area at the right of the mountain range).

Figure 6-5 Pismo State Beach and Oceano Dunes SVRA Visitor Views – East and West

Figure 6-5. Top: View looking east from the vicinity of marker post 5. Note how the topography increases in elevation towards the background. Bottom: Panoramic view looking west / south west from Sand Highway marker 15. To the north (right) is the South BBQ Fats Vegetation Island; to the south (left) is Heather Vegetation Island.

Figure 6-6 Pismo State Beach and Oceano Dunes SVRA Visitor Views – Topography and Recreation / Visitor Serving Facilities

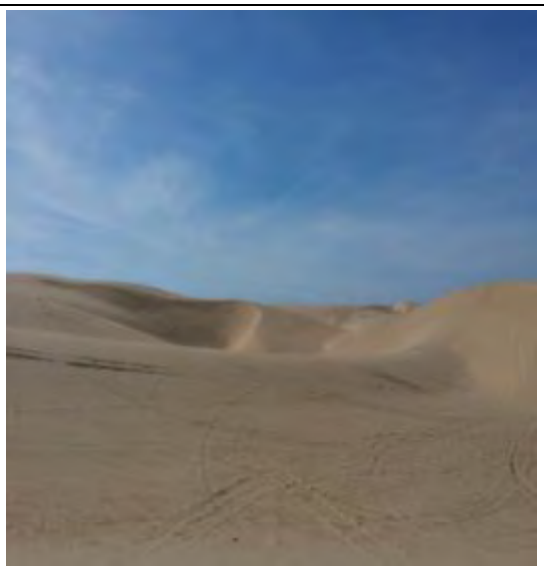


Figure 6-6. Top Left: View looking west from below a dune crest; ocean views are blocked by dune topography. Top Right: View looking south east towards Marker Post 5. Bottom Typical sea-side camping sites at Oceano Dunes SVRA, with street-legal vehicles, OHVs, and other camping amenities.

Figure 6-7 Views of Oceano Dunes SVRA from Pismo Pier and Shell Beach

Figure 6-7. Top: View looking south / south east from Pismo Pier. Bottom: View looking south / south east from Shell Beach area (east of U.S. 101). The higher elevation in the bottom photo shows much more of the interior dunes at Oceano Dunes SVRA. Image Source: Oasis Associates.

Public Roads

Public roads in the Program vicinity include Grand Avenue in the City of Grover Beach, Pier Avenue in the community of Oceano, Halcyon Road and SR 1 to the east of Pismo State Beach and Oceano Dunes SVRA, and Oso Flaco Lake Road to the south of Oceano Dunes SVRA. Of these roads, only SR 1 is eligible for designation, but it is not officially designated as a state scenic highway (Caltrans 2011).

Most of the public roads listed above are at or near the same elevation as Oceano Dunes SVRA; however, Halycon Road climbs in elevation to reach the Nipomo Mesa. Once on the mesa, Halcyon Road connects with SR 1 which is situated at a higher elevation than Oceano Dunes SVRA. There are several public roadways off of SR 1 that have a view looking back (i.e., to the west) toward Oceano Dunes SVRA and the Pacific Ocean, including Hermosa Vista Way and Northview Avenue.

Existing views from representative public roads in the vicinity of the Dust Control Program area are shown in Figure 6-8. Generally, roads at or near the same elevation as the SVRA do not have views of the Pacific Ocean or the interior of Pismo State Beach and Oceano Dunes SVRA due to intervening topography and vegetation. The exceptions to this include the portion of Grand Avenue and Pier Avenue near the entrance to Pismo State Beach and Oceano Dunes SVRA. In these locations, the view of the Pacific Ocean is prevalent, and vegetated foredunes are visible to the north and south; views of vehicles on the beach are also common. On the Nipomo Mesa, there are isolated points on some roads that do have a view of the Pacific Ocean and sand dunes that are part of the SVRA and/or under private ownership.

Figure 6-8 Existing Views from Public Roads in the Vicinity of the Project

Figure 6-8. Top Left: View as visitors approach the Grand Avenue entrance to Pismo State Beach. Top Right: View as visitors approach the Pier Avenue entrance to Pismo State Beach. Bottom: View from Hermosa Vista Way, a public road on the Nipomo Mesa.

6.3 VISUAL CHARACTERISTICS OF THE PROJECT

Chapter 2, Project Description, describes the proposed Dust Control Program activities, which include planting vegetation and deploying seasonal dust control measures such as wind fencing, straw bales, and PREs or other equivalent dust control measures. The OHMVR Division would also install, operate, and maintain temporary dust and meteorological monitoring equipment and track-out prevention devices. The visual characteristics of these activities are presented below.

6.3.1 Vegetation

As described in Section 6.2.1.1, vegetation (in the form of vegetation islands and large, contiguously vegetated areas) is a natural feature of both the Program area and Oceano Dunes SVRA and Pismo State Beach in general. The OHMVR Division actively manages and restores some of this natural vegetation as part of ongoing park operations (see Section 2.2.6.1).

Dust Control Program vegetation would consist of native seeds plants from local genetic stock that match species composition present in the area being planted (see Table 2-2 for a list of species likely to be planted). But in contrast to natural vegetation, which spreads slowly as environmental conditions permit, Dust Control Program vegetation would likely be planted in five- to ten-acre plots that would likely be adjacent to or continuous with existing vegetated areas, including vegetation islands. The initial planting would require application of straw ground cover and possibly straw bales to break up wind flow and support vegetation establishment. Once planted, vegetation typically takes two to four years to become fully established and provide sufficient vegetative cover to stabilize sand surfaces. During this time period, the OHMVR Division would apply additional ground cover (i.e., straw or grasses) as necessary to promote healthy plant growth and establishment. The typical progression of vegetation projects from initial planting to full establishment at Oceano Dunes SVRA is shown in Figure 6-9.

Any trees planted as part of the Dust Control Program would take several years to grow to the point where they could be visible from a distance and/or distinguishable from groves of trees located along SR 1.

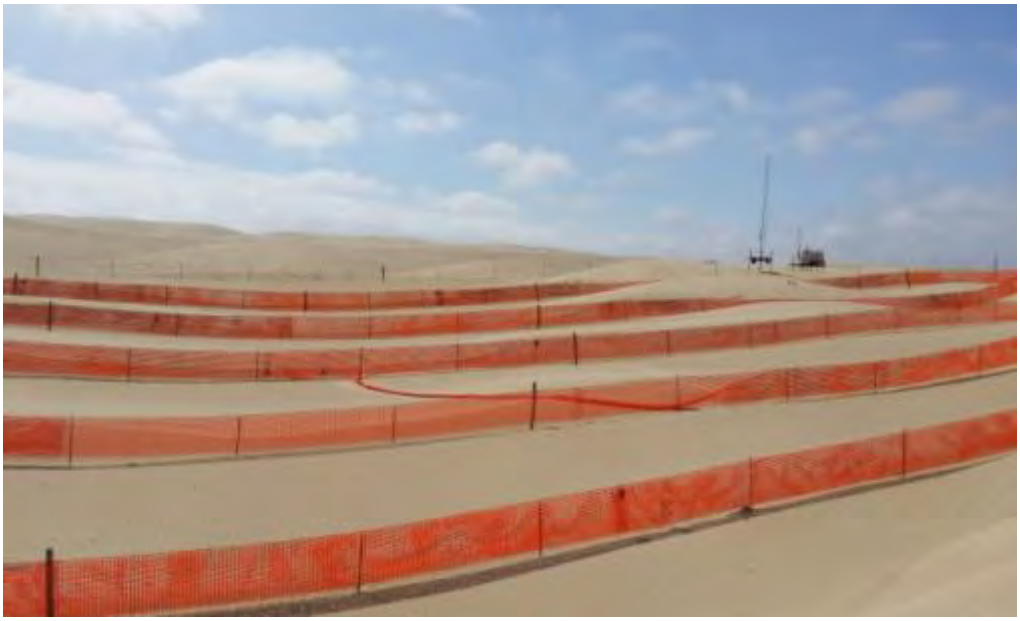
6.3.2 Seasonal Dust Control Measures

Seasonal dust control measures would consist of artificial materials such as wind fencing and straw bales that are uncharacteristic of and contrast with an unaltered dune environment. The OHMVR Division would deploy seasonal dust control measures in one or more pre-designed arrays aligned perpendicular to the prevailing wind direction. These arrays would cover approximately 40 acres, though the exact length and width dimensions are unknown. Straw bales would be approximately 4 feet long by 1.5 feet high by 2 feet wide and placed in parallel rows approximately five feet apart, depending on the control efficiency set for the project. Wind fencing would consist of approximately 4-foot high plastic or metal mesh fencing installed in a series of parallel rows set approximately 20 feet (for a higher control efficiency) to 50 feet (for approximately 50 percent control efficiency) apart. Over time, wind fencing and straw bales could become buried in the sand, especially within the leading edge of the array or at the top of dune crests. Example wind fencing and straw bale arrays are shown in Figure 6-10.

Figure 6-9 Typical Vegetation Project at Oceano Dunes SVRA

Figure 6-9. Top: Supplemental planting and ground cover in bare sand area. This vegetation project is two years old. Drought conditions resulted in a low rate of vegetation establishment. Note straw ground cover. Bottom: Fully established vegetation at approximately 15 years after planting.

Figure 6-10 Example Photographs of Wind Fencing and Straw Bale Array



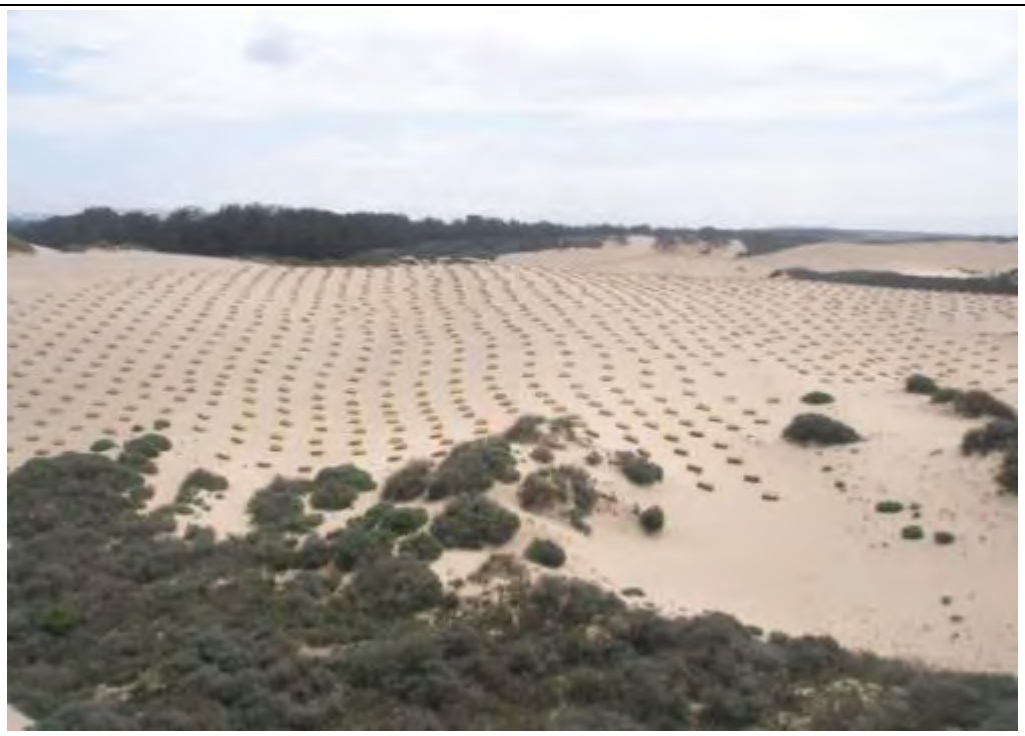


Figure 6-10. Top: A part of the 15-acre wind fencing array installed at Oceano Dunes SVRA in 2014. Note monitoring equipment at trailing edge of array. Bottom: The 30-acre straw bale array installed outside the Oceano Dunes SVRA open riding and camping area in 2014.

6.3.3 Porous Roughness Elements / Soil Stabilizers

Porous roughness elements (PREs) would consist of rectangular, approximately 3-feet-long by 2-feet-wide by 2 feet-high crates wrapped in mesh fencing material, each with a smaller crate, also wrapped in fencing material, nested inside of the larger crate. Similar to fencing and straw bales, these nested elements would be deployed in an array perpendicular to the prevailing wind direction. An example PRE array is shown in Figure 6-11.

Figure 6-11 Example Photograph of PRE Array

Figure 6-12. Example PRE array.

Soil stabilizers are a liquid product applied directly to the ground surface. When first mixed and applied, the stabilizer can appear milky white; however, this color rapidly dissipates, leaving the ground surface clear or slightly darker (i.e., having a wet appearance). The OHMVR Division may use soil stabilizers in-lieu of, or in addition to, seasonal dust control measures. Soil stabilizers may also be used to support and stabilize newly planted vegetation because it is permeable and has the potential help keep seeds in place.

6.3.4 Dust and Meteorological Monitoring

Dust Control Program monitoring equipment and sites would consist of mostly low-profile scientific instruments and supporting platforms and towers that would be taller than surrounding vegetation, vehicles, and park fences. Sites may contain meteorological towers up to 33-feet-tall (10-meters-high) and a small array of solar panels, plus back-up battery (similar to car-batteries). The typical dust and meteorological monitoring equipment that has been used at Oceano Dunes SVRA in the past is shown in Figure 6-12.

6.3.5 Track-out Prevention Device

Dust Control Program track-out prevention devices would be installed in the ground and would consist of grooved concrete (see Figure 2-6 and Figure 2-7). These devices would be installed at the public exits onto West Grand Avenue in the City of Grover Beach and Pier Avenue in Oceano. The OHMVR Division would post signs just before the exit warning the drivers of the presence of the track out device. In general, track-out devices would be installed in or on the ground and would not be visible except from the area immediately in the vicinity of the device.

Figure 6-12 Typical Dust and Meteorological Monitoring Equipment

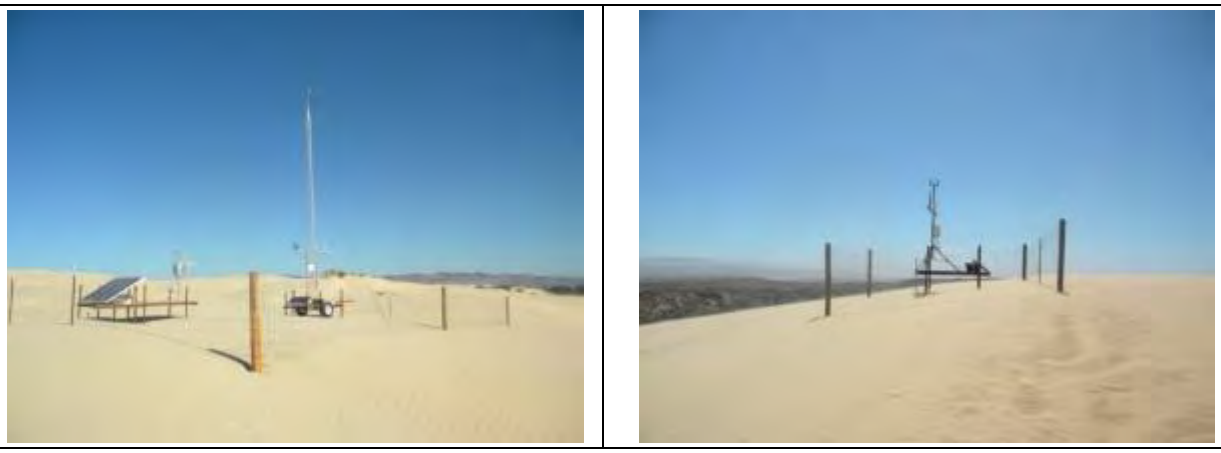


Figure 6-12. Left: Temporary monitoring site with E-BAM, solar panels, and 10-meter lattice tower (approximately 0.1 acre). Right: Temporary monitoring site without E-BAM and 10-meter tower (approximately 0.05 acres).

6.4 PROGRAM IMPACTS AND MITIGATION MEASURES

Consistent with CEQA and the CEQA Guidelines Appendix G, this EIR focuses on the potentially significant direct and indirect impacts that could result from implementation of the proposed Oceano Dunes SVRA Dust Control Program, as described in Chapter 2. The OHMVR Division has determined, based on the characteristics of the proposed Dust Control Program and the environmental conditions described in Section 6.2, that:

- The proposed Dust Control Program does not have the potential to substantially damage scenic resources within a state scenic highway because Oceano Dunes SVRA, Pismo State Beach, and the proposed Dust Control Program area are not located near or within view of an officially designated state scenic highway. The nearest such highway is North Coast Scenic Byway portion of SR 1, which terminates at the City of SLO limit, approximately 12 miles north of Oceano Dunes SVRA.
- The proposed Dust Control Program does not have the potential to create a new source of substantial light or glare which would adversely affect day or nighttime views in the area because the project does not include buildings or other permanent structures that require lighting or that would generate a substantial amount of glare.

For these reason, these issues are not discussed further in this Program EIR. The potentially significant impacts that could result from implementation of the proposed Oceano Dunes SVRA Dust Control Program are described in Section 6.4.3 below.

6.4.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, the Oceano Dunes SVRA Dust Control Program would have a significant environmental impact related to aesthetics, if it would:

- Have a substantial adverse effect on a scenic vista
- Substantially degrade the existing visual character or quality of the site and its surroundings

6.4.2 Standard and Specific Requirements Incorporated into the Project

As discussed in Section 3.1 the OHMVR Division is incorporating Standard and Specific Project Requirements (SPR) into the planning, design, and implementation of the Dust Control Program. SPRs that would avoid or minimize the potential adverse aesthetic effects of the Program include:

- **Vegetation Design Considerations.** The OHMVR Division shall:
  - Use local, native vegetation that matches the existing plant community composition of the planting area.
  - Plant vegetation in patterns and shapes that reflect the natural plant colonization and dune-building processes of the dunes (e.g., planting along the prevailing wind direction, avoid planting in regular shapes like squares or rectangles).
- **Seasonal Dust Control Measure Design Considerations.** The OHMVR Division shall, to the maximum extent feasible and supported by scientific data:
  - Deploy seasonal dust control measures in locations that minimize conflict with scenic views of the ocean from sensitive park visitor viewpoints, including camping areas, hiking trails, established paths of travel, and other areas of high visitation.
  - Deploy muted green- or neutral-colored (e.g., sand-colored or brown) wind fencing when existing orange-colored fencing supplies deteriorate or run out.

6.4.3 Potential Impacts on Scenic Vistas and Existing Visual Character and Quality

Although the Dust Control Program area lacks specific scenic vista points, it is situated in an area recognized for its unique dune systems and scenic qualities (NPS 2012, OHMVR Division 2014). Under the Dust Control Program, the OHMVR Division would plant vegetation, deploy seasonal dust control measures, and install dust and meteorological monitoring equipment throughout the Program area. Planting vegetation and deploying seasonal dust control measures would occur annually. The OHMVR Division would plant up to 20 acres of native dune vegetation per year for a period of five years, and deploy up to 40 acres of seasonal dust control measures. Dust and meteorological monitoring equipment (approximately three acres) would temporarily occupy individual monitoring sites for up to two years, but could be moved throughout the SVRA throughout the duration of the Program. The OHMVR Division would also install and operate track-out prevention devices at exit points on Grand Avenue and Pier Avenue.

As explained in Section 2.3.4 and 4.3.2, the potential impacts of the Dust Control Program would increase in magnitude each year, resulting in a maximum of approximately 143 acres of temporary and permanent land occupancy in Year 5 of the Program (see Table 2-3). Under the OHMVR Division's preferred scenario, approximately 35 acres of land inside the Oceano Dunes SVRA open riding and camping area would be vegetated, protected, and permanently closed to OHV recreation. Under the alternate scenario, approximately 70 acres of land in the Oceano Dunes SVRA open riding and camping area would be vegetated, protected, and permanently closed to OHV recreation. In addition, under both scenarios, the OHMVR Division would protect and close, on a seasonal basis (March 1 to September 30), approximately 43 acres of land inside the open riding and camping area due to the installation of wind fencing or other dust control measures and associated monitoring equipment that pose a safety risk to OHV riders. The

OHMVR Division anticipates that most of the permanent and temporary closures would occur in the mid- to back-dune regions of the SVRA (see Figure 2-8 and Figure 2-9).

The impact of the Dust Control Program on the visual character and quality of Oceano Dunes SVRA and its surroundings is evaluated below.

Impact AES-1: The Dust Control Program could adversely change the existing visual character and scenic qualities of Oceano Dunes SVRA and its surroundings.

In general, the proposed Dust Control Program activities have the potential to impact the scenic qualities of Oceano Dunes SVRA and its surroundings and thus change the visual character of the Program area and its surroundings. The potential change that could be observed would depend on factors such as topography, meteorological conditions, the distance between the Dust Control Program components and sensitive visual receptor, and the specific Program component (i.e., fencing, vegetation, etc.) added to the view shed. To help characterize this potential change, the OHMVR Division has compiled and prepared a series of photographs and photographic simulations that generally depict potential views of Oceano Dunes SVRA with and without the proposed Dust Control Program's vegetation (approximately 100 acres) and seasonal dust control measures (approximately 40 acres)[13]. Since the proposed vegetation planting and seasonal dust control measure locations could move or change throughout the five-year Dust Control Program, the OHMVR Division selected photo points intended to represent a worst case change from the sensitive receptors described in 6.2.1.2. Five sensitive receptor photo points are presented in Figure 6-13 to Figure 6-21:

- Figure 6-13 to Figure 6-15 depicts Oceano Dunes SVRA with and without the proposed Dust Control Program from the vantage point of a park visitor near the Pismo Dunes Natural Preserve and near Sand Highway, east of marker post 6.
- Figure 6-16 to Figure 6-20 depict Oceano Dunes SVRA with and without the proposed Dust Control Program from the vantage point of a visitor standing on Pismo Pier and a visitor to Shell Beach (north of Oceano Dunes SVRA).
- Figure 6-21 depicts Oceano Dunes SVRA with and without the proposed Dust Control Program from a public road (Hermosa Vista Way) on the Nipomo Mesa (east of Oceano Dunes SVRA).

The significance of the potential change in the visual character and quality of Oceano Dunes SVRA and its surroundings is discussed below. In general, the OHVMR Division has determined that the proposed Dust Control Program's vegetation, seasonal dust control measures and associated monitoring equipment, and track-out prevention devices would not result in a substantial adverse change to the visual character and quality of Oceano Dunes SVRA due to the inclusion of SPRs and other factors such as topography, the temporary nature of seasonal dust control measures, and the ability to take in other views.

[13] At the time the photographs used in the Draft EIR evaluation were captured (May 2016), the OHMVR Division had installed an approximately 40-acre seasonal wind fence array, in coordination with CARB and the SLOAPCD, and in accordance with the terms of an emergency permit issued by the CCC. Thus, the photos included a feature that is not part of the baseline environmental conditions against which the proposed Dust Control Program's potential impacts are evaluated (see section 2.2.7.4). The OHMVR Division removed the 2016 seasonal fencing array from the photos shown in Figure 6-13 to Figure 6-21 to represent the conditions at Oceano Dunes SVRA without the proposed Program. The OHMVR Division used the photos with the 40-acre fencing array as the basis for showing the conditions at Oceano Dunes SVRA with the proposed Program.

Pismo State Beach and Oceano Dunes SVRA Visitors

The proposed Dust Control Program vegetation and seasonal dust control measures would be noticeable to Pismo State Beach and Oceano Dunes SVRA visitors. Vegetation and seasonal dust control measures would both occupy open sand areas; however, as shown in Figure 6-13 to Figure 6-15 (pages 6-24 to 6-26), the visual change resulting from vegetation would be less pronounced than that resulting from a seasonal array of fencing, straw bales, or other artificial materials. Tree plantings would not likely be noticeable to SVRA visitors.

The visual change resulting from Dust Control Program vegetation projects would be less pronounced because the OHMVR Division would plant native vegetation in locations and patterns that reflect the natural plant colonization and dune-building processes at Oceano Dunes SVRA. While vegetation projects may initially contrast with established, adjacent vegetation islands due to the extensive straw ground cover and sparse vegetation coverage associated within initial planting efforts (see Figure 6-9), Dust Control Program vegetation projects would, over time, integrate and blend in with existing patterns and forms of vegetation at Oceano Dunes SVRA. Once blended, vegetation projects would not contrast with the dune environment nor detract from the adjacent scenery and are likely to be indistinguishable from other vegetated areas (see Figure 6-14). Individual visitors, therefore, may or may not notice a change to the visual character and quality of the Oceano Dunes SVRA from additional vegetation plantings, but even the additional vegetation is noticed, it would not be a substantial adverse change to the visual character and quality of Oceano Dunes SVRA.

In contrast, seasonal dust control measures such as wind fencing and straw bales are not native or common to the natural dune landscape. In order to provide maximum effectiveness, seasonal dust control projects would be large (approximately 40 acres), deployed in linear rows with repetitive, set spacing, and oriented perpendicular to the prevailing wind direction (see Figure 6-13). In addition, based on the latest coordination with CARB and the SLOAPCD (see Sections 1.1 and 2.3.1.1), at least a portion of future seasonal dust control projects would likely be installed in the large open sand area between marker posts 5 and 6, at elevations higher up the dune slope than existing vegetation islands (and proposed Dust Control Program vegetation). Furthermore, the color of the seasonal dust control measures, even straw bales (which darken over time), would starkly contrast with the coastal dune landscape, which is predominantly muted earth tones (browns and greens). This is especially true for wind fencing, which is typically available in orange or other bright colors to promote visibility for safety purposes (see Figure 6-13). Thus, a brightly-colored, large seasonal dust control array (such as orange wind fencing) against the dune landscape is presumed to be at least partially visible to most visitors from most areas of the SVRA for approximately seven months out of the year (March 1 to September 30). Even green- or neutral-colored fencing would be visible from close proximity (see Figure 6-15), although green-colored fencing would better integrate with landscape level views of Oceano Dunes SVRA (see Figure 6-20).

The size, rectilinear design, and potential to contrast with natural dune landscape colors, would make seasonal dust control measures a noticeable and distinct change to the visual character and quality of Oceano Dunes SVRA and its surroundings, much more so than Dust Control Program vegetation. But noticeable and distinct objects or landscape features do not necessarily imply significant and adverse impacts to the visual character and quality of an area or landscape. Factors such as the individual visitor's visual context and sensitivity to materials such as fencing, straw bales, etc., the ability of the visitor to still enjoy unmodified views, and whether the potential change would be temporary or permanent influence whether a noticeable and distinct visual change is substantial and adverse.

Park visitors may or may not be highly sensitive to the visual change resulting from the deployment of seasonal dust control measures such as wind fencing and straw bales. While it is not possible to know each individual visitor's sensitivity to such objects and features, the general visual context in which the typical visitor would view these objects and features may be considered:

- Importantly, Pismo State Beach and Oceano Dunes SVRA are popular parks (see Section 4.2). While this means a large number of visitors could be potentially affected by changes in the visual character and quality of the SVRA, it also means humans and human use of the park is a key component of the visual landscape at the SVRA and surrounding lands. In contrast to the ocean, mountains or other minimal or undeveloped landscapes viewed from scenic vistas or vista points, and which are not directly accessed by many human beings, millions of human beings annually recreate on top of the scenic beach and dunes at Oceano Dunes SVRA, both passively and actively.
- Visitor survey data indicates most visitors to Oceano Dunes SVRA are overnight visitors, and that nearly 70 percent of all camping activity takes place in a trailer / 5^{th} wheel or RV (see Section 4.2.3.4). Such vehicles can be a maximum of 40 feet in length, and reach 10 to 12 feet above ground level. As shown in Figure 6-6, campsites typically include one or more families that have brought campers, street-legal vehicles, OHVs, and other campsite amenities to the park. Larger vehicles are normally oriented against the prevailing wind (to provide shelter and protection for outdoor activities). Although most 5^{th} wheels and RVs (which are the largest vehicles in the SVRA) are primarily white, some have brightly colored patterns. In addition, street-legal vehicles and OHVs in many different colors can be seen on the dunes. Campsites sometimes also include plywood boards to stop blowing sand, and tall flags to help visitors identify and find their campsite. Thus, large campsites with one or more vehicles are a common visual component of the visual character and quality of Oceano Dunes SVRA (but not coastal landscapes in general). Most campsites tend to be concentrated just inland of the shore zone – high enough to avoid inundation from high tides and keep clear of the north-south vehicle movement, but close enough to the shoreline to avoid vehicles getting stuck in the softer, interior dune sand and allow families easy access to the beach. But during busy periods (holidays, weekends, and special events), camping activity can extend further south and inland, and the total area that is generally occupied by vehicular-based campsites can be 100 acres or more.
- OHV recreation occurs throughout the open riding and camping area. A variety of different vehicles are used to recreate, including motorcycles, OHVs, ATVs, sand rails or dune buggies, and 4 x 4 trucks. It is common to see groups of vehicles recreating together.

In summary, camping and vehicular recreation activity is a major component of the visual context and setting for the typical park visitor. Camping and vehicular recreation is visible from the park entrances on Grand and Pier Avenue into and throughout the open riding and camping area, reinforcing the passive and active recreational use of the SVRA. While, in general, the size, design, and color of a large, 40-acre seasonal dust control array would not be compatible with any coastal dune landscape, such an array is considered more compatible at Oceano Dunes SVRA given its popularity and both passive and active recreational use. Although there are periods of time when visitation to the SVRA is low, and there is little to no camping or OHV activity occurring at the dunes, every park visitor sees street-legal vehicles, OHVs, campers, and other recreational activities and amenities when visiting Oceano Dunes SVRA. In addition, there

are periods of time, such as holidays, when foreground views from within the park, including views of the Pacific Ocean, are dominated by campsites and vehicles. Furthermore, repeat visitors would be accustomed to the sight of vehicles and other man-made objects at Oceano Dunes SVRA, including several ongoing or recently completed dust control and monitoring projects, such as the S1 meteorological tower near the center of the SVRA, which has been in operation since 2010 (see Section 2.2.7). For these reasons, although it is not possible to know the individual sensitivity of each individual receptor, the visual context in which the proposed seasonal dust control measures would be located is considered to lower the typical viewer's sensitivity somewhat, although it is possible the opposite may be true for some individual viewers. In addition to existing topography (see Section 4.2.3 and Figure 6-1 to Figure 6-3), the OHMVR Division notes that street-legal vehicles, OHVs, and camper vehicles could partially or totally obscure views of the seasonal dust control measures from points near the beach, especially when camping activity is high. This is because individuals may not be able to see the interior dunes over an adjacent, 10-foot high camper vehicle.

Regardless of whether the individual visitor is sensitive or indifferent to seasonal dust control measures being deployed on the dunes, the seasonal dust control measures would occupy a small part of the overall landscape and would not obstruct or detract from the landscape as a whole. For example, seasonal dust control measures would likely not be visible from the beach north of marker post 4, where the Dunes Preserve and Pavillion Hill block views into the southern and interior portions of Oceano Dunes SVRA. Importantly, visitors would also still be able to take in unobstructed views of the Pismo Dunes Natural Preserve, Pacific Ocean, Coast Range, Transverse Range, and Guadalupe-Nipomo Dunes Complex by changing their frame of view slightly (e.g., looking west instead of south, or moving to a point away from the seasonal dust control measure).

Finally, the OHMVR Division would deploy the seasonal dust control measures from March 1 to September 30 only, meaning there would be unobstructed views of the entire SVRA and surrounding landscape for approximately five months out of the year. The OHMVR Division notes it would take approximately two to four weeks to install and take down seasonal dust control measures meaning the full array would only be in place for approximately five or six months of the year. The OHMVR Division also notes that as the proposed Dust Control Program moves forward, the planting of Dust Control Program vegetation could reduce the need for seasonal dust control arrays.

Given the factors above, the proposed seasonal dust control measures, though noticeable and distinct, would not constitute a substantial and adverse change to the visual character and quality of Oceano Dunes SVRA and its surroundings for park visitors. The OHMVR Division has incorporated SPRs into the design of the project that could further reduce the less than significant magnitude of this impact. The SPRs require the OHMVR Division to deploy seasonal dust control measures in locations that minimize conflict with scenic views of the ocean. The OHMVR Division could accomplish this by locating seasonal dust control measures in the SVRA's back dunes, or by integrating dust control measures into the existing topography (e.g., locating part of an array behind a dune crest but in an area where it still accomplishes dust control goals). The SPRs also require the OHMVR Division to deploy green- or-neutral colored wind fencing when existing orange-colored fencing supplies deteriorate or run out. This SPR would promote the integration and balance of seasonal dust control measures with overall dune landscape from more distant vantage points inside and outside of Oceano Dunes SVRA.

Figure 6-13 Potential Change in View - SVRA Visitor (Near Dunes Preserve)

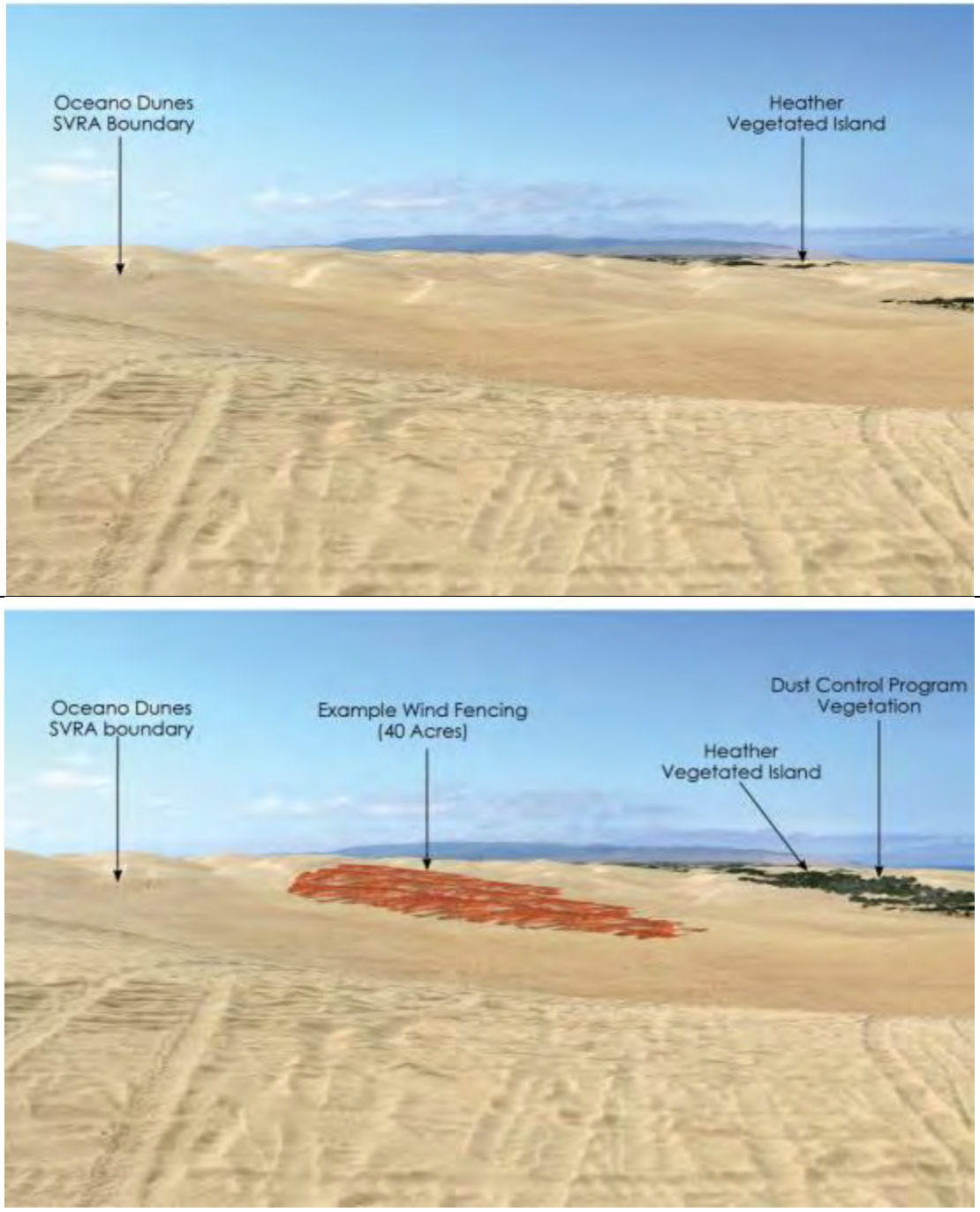
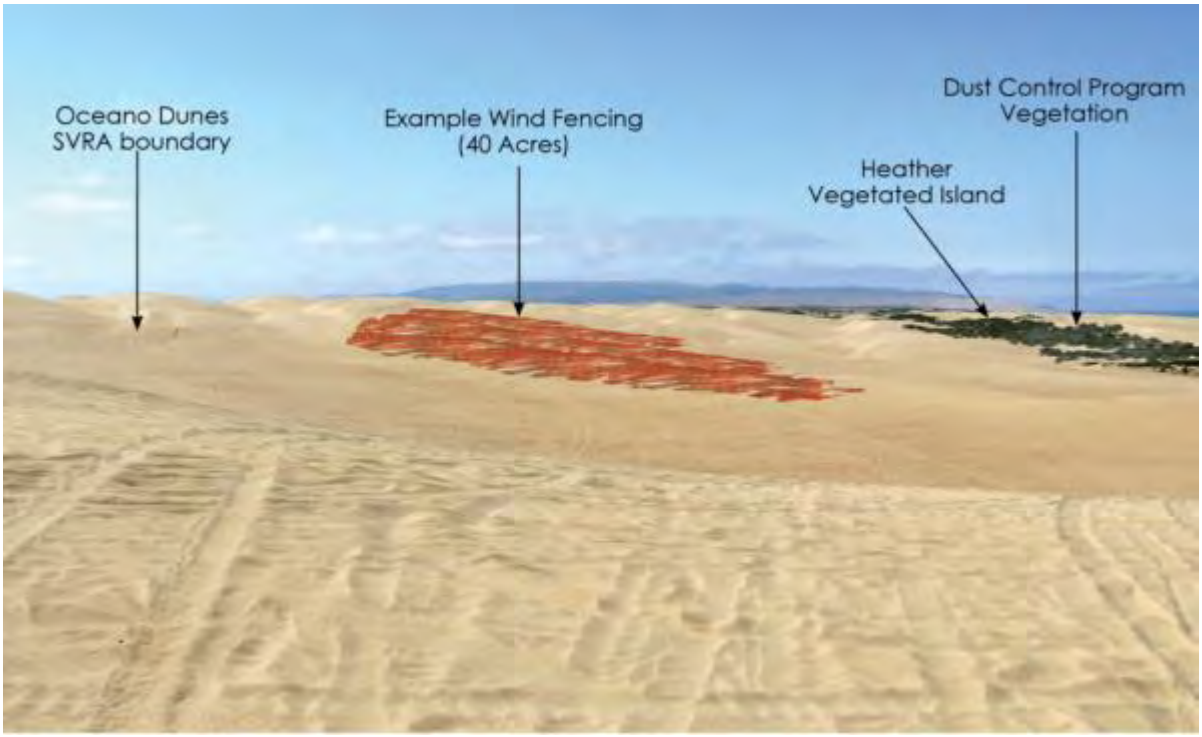


Figure 6-13. These photos depict the potential visual change a visitor to Pismo State Beach or Oceano Dunes SVRA could observe from a point near the Pismo Dunes Natural Preserve (i.e., looking south towards the SVRA open riding and camping area). The visitor could be enjoying non-vehicular hiking within the Dunes Preserve, or be an OHV enthusiast that has stopped to take in the view from a dune crest. The top photo shows the Dust Control Program Area without any newly planted vegetation or wind fencing. The bottom photo depicts approximately 40 acres of wind fencing and approximately 35 acres of vegetation planted between the Worm Valley and Heather vegetation islands (see Figure 2-4).

Figure 6-14 Potential Change in View - SVRA Visitor (Near Sand Highway)

Figure 6-14. These photos depict the potential change a visitor to Pismo State Beach or Oceano Dunes SVRA could observe from a point on Sand Highway, east of marker post 6. The visitor is likely to be an OHV enthusiast that is using Sand Highway or has stopped to take in the view from an elevated dune position. The top photo shows the Dust Control Program Area without any newly planted vegetation or wind fencing. The bottom photo depicts approximately 10 – 12 acres of vegetation planted between the Heather and Cottonwood vegetation islands (see Figure 2-4).

Figure 6-15 Seasonal Wind Fencing Array Colors



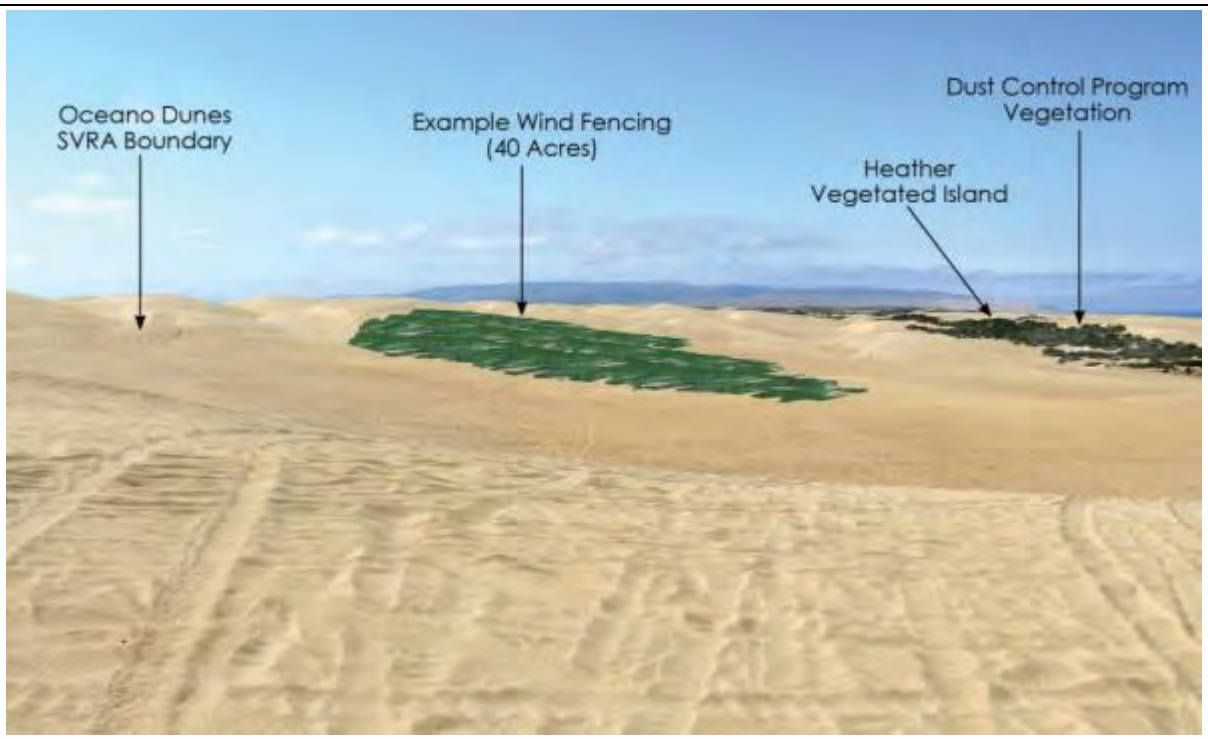


Figure 6-15. These photos depict a 40-acre wind fencing array in orange and green. Although the green-colored fencing would not reduce the visibility of such an array when viewed in close proximity, the use of green fencing would promote balance and consistency with existing dune landscape colors, particularly from more distant vantage points in the SVRA and beyond (see Figure 6-16 to Figure 6-20).

Publically Accessible Points along the Shoreline

The proposed Dust Control Program vegetation and seasonal dust control measures would likely be visible from areas north and south of Oceano Dunes SVRA that are accessible to the general public. Such areas could include, but are not limited to the Pismo Pier, park areas in Shell Beach that front the coastline, and other publically accessible areas in Shell Beach and/or Pismo Beach that are elevated and which have a view of the dunes (i.e. views are not screened by vegetation or buildings). The potential change in the visual character and quality of Oceano Dunes SVRA as seen from these more distant receptors is shown in Figure 6-16 to Figure 6-19. Due their distance, the potential visual change is shown with no magnification and with 3x magnification. Similar to the analysis for park visitors (see above), receptors from these more distant vantage points are not likely to distinguish Dust Control Program vegetation from other existing dune vegetation because the newly planted vegetation would be located in generally the same area and blend in with existing vegetation patterns. This vegetation would occupy open sand areas, but would not otherwise block views of the beach /surf zone or ocean (foreground), dune crests (middle ground), or mountain ranges (background). In contrast, as shown in Figure 6-16 to Figure 6-19, seasonal dust control arrays would be noticeable, even at distances of three to five miles or more, especially for elevated areas. This is because seasonal dust control arrays would likely be located behind (east of) existing vegetation islands (and proposed Dust Control Program vegetation), higher up the slope of the existing dunes, where the brightly-colored, artificial materials contrast with views of the ocean, beach, open sand areas, vegetated dunes, and mountains.

Visual receptors north and south of Oceano Dunes SVRA, particularly in local parks that front the coastline or other areas that are publically accessible, would include both local residents and regional visitors. Local residents could be more sensitive to the visual change resulting from the deployment of seasonal dust control measures than regional visitors, because they may be more accustomed to overall landscape level views of the dunes (which do not afford views of individual vehicles and other man-made features on the dunes). Local residents would also be impacted only on a temporary basis (from March 1st to September 30th each year).

Although these receptors could be more sensitive to seasonal dust control measures, they would be located three to five miles away or more from Oceano Dunes SVRA (much farther away than park visitors). Thus, the SVRA and any management activities that would be visible would represent just one detail in the foreground or middleground of a much larger landscape and viewshed being taken in by the receptor. While seasonal dust control measures may be initially interesting or intriguing and draw the attention of the viewer (due to their novelty), they would not be a visually dominant feature in the frame of view. Similarly, while visible with the naked eye, seasonal dust control measures would not substantially obstruct or detract from long-range coastal views, or more focused foreground, middleground, and background views of the Pismo Dunes Natural Preserve, Pacific Ocean, Coast and Transverse Ranges, and Guadalupe-Nipomo Dunes Complex. In addition, factors such as fog and sea-spray would reduce the visibility of seasonal dust control measures during certain times of the year. Finally, the OHMVR Division has also incorporated SPRs into the design of the project that promote the integration and balance of seasonal dust control measures with the overall dune landscape from more distant vantage points. For these reasons, seasonal dust control measures installed at Oceano Dunes SVRA would not constitute a substantial and adverse change to the visual character and quality of Oceano Dunes SVRA as observed from publically accessible points north and south of the SVRA.

Figure 6-16 Potential Change in View - Pismo Pier (No Magnification)

Figure 6-16. These unmagnified photos depict the potential change a visitor standing on the Pismo Pier could observe. The top photo shows the Dust Control Program Area without any newly planted vegetation or wind fencing. The bottom photo depicts a part of the approximately 40 acres of wind fencing and approximately 35 acres of vegetation planted between the Worm Valley and Heather vegetation islands (see Figure 2-4). Some of the fencing array is blocked by existing and proposed Dust Control Program vegetation.

Figure 6-17 Potential Change in View – Pismo Pier (3x Magnification)

Figure 6-17. These magnified (3x) photos depict the potential change a visitor standing on the Pismo Pier could observe. The top photo shows the Dust Control Program Area without any newly planted vegetation or wind fencing. The bottom photo depicts a part of the approximately 40 acres of wind fencing and approximately 35 acres of vegetation planted between the Worm Valley and Heather vegetation islands (see Figure 2-4). Some of the fencing array is blocked by existing and proposed Dust Control Program vegetation.

Figure 6-18 Potential Change in View – Shell Beach (No Magnification)

Figure 6-18. These unmagnified photos depict the potential change a visitor to public areas in Shell Beach could observe. The top photo shows the Dust Control Program Area without any newly planted vegetation or wind fencing. The bottom photo depicts an approximately 40-acre wind fencing array and approximately 20 acres of vegetation planted south of Pavilion Hill (see Figure 2-4). The fencing array is not blocked by existing or proposed Dust Control Program vegetation because the photo point is at a higher elevation than most of the dunes.

Figure 6-19 Potential Change in View – Shell Beach (3x Magnification)

Figure 6-19. These magnified (3x) photos depict the potential change a visitor to public areas in Shell Beach could observe. The top photo shows the Dust Control Program Area without any newly planted vegetation or wind fencing. The bottom photo depicts an approximately 40-acre wind fencing array and approximately 20 acres of vegetation planted south of Pavilion Hill (see Figure 2-4). The fencing array is not blocked by existing or proposed Dust Control Program vegetation because the photo point is at a higher elevation than most of the dunes.

Figure 6-20 Pismo Pier and Shell Beach Views – Orange vs. Green Fencing

Figure 6-20. These magnified (3x) photos depict a 40-acre wind fencing array in orange and green. The green-colored fencing reduces the visibility of the array and promotes balance and consistency with existing dune landscape colors.

Public Roads

As shown in Figure 6-21, Dust Control Program vegetation, wind fencing, and straw bales would not be visible from most public roadways in the vicinity of Oceano Dunes SVRA.

The OHMVR Division would install track-out prevention devices on or in the ground adjacent to entry and exit kiosks on West Grand Avenue in the City of Grover Beach and Pier Avenue in Oceano. This equipment would not degrade the existing visual character of Pismo State Beach or these public roadways because these are already developed areas and the new devices would blend in with the existing visual road setting.

Seasonal dust control measures could be slightly visible from small stretches and isolated points along US 101 (in the vicinity of Shell Beach), SR 1 (in the vicinity of Shell Beach and Oceano), and a few public roadways on the Nipomo Mesa (e.g., Hermosa Vista Way). In general, due to topography (see Figure 6-1 to Figure 6-3 and Figure 6-21), other vehicles, and/or intervening vegetation and buildings, only the portion of the seasonal dust control array installed on the highest dune crests would be visible, although some roadways on the Nipomo Mesa could also have views of seasonal dust control measures deployed in the very back of the dunes.

Travelers on public roadways in the vicinity of Oceano Dunes SVRA are not considered to be particularly sensitive viewers because they are surrounded by other vehicles and roadside developments. In addition, travelers on roadways would not be impacted for long durations or periods of time. For these reasons, the Oceano Dunes Dust Control Program would not constitute a substantial and adverse change to the visual character and quality of Oceano Dunes SVRA as observed from public roadways in the vicinity of the SVRA.

Figure 6-21 Potential Change in View – Hermosa Vista Way

Figure 6-21. These magnified (3x) photos depict the potential change a visitor on a public road (Hermosa Vista Way) on the Nipomo Mesa could observe. The top photo shows the Dust Control Program Area without any newly planted vegetation or wind fencing. The bottom photo depicts a part of an approximately 40 acres wind fencing array. Most of the proposed Dust Control Program's vegetation and fencing would not be visible from this location due to topography and trees that screen views into the Dust Control Program area.

6.5 REFERENCES

California Department of Transportation (Caltrans) 2011. "San Louis Obispo County." *California Scenic Highway Mapping System.* Caltrans, Engineering, Caltrans Design Program, Landscape Architecture Program, Scenic Highways, Scenic Highway Routes. September 7, 2011. Web. November 14, 2014. <http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm>

National Park Service (NPS) 2012. "Nipomo Dunes-Point Sal Coastal Area" *Nipomo Dunes-Point Sal Coastal Area*. NPS, Explore Nature, National Natural Landmarks, NNL Directory, Select a State (California), San Luis Obispo. June 28, 2012. Web. November 11, 2014. < http://www.nature.nps.gov/nnl/site.cfm?Site=NIDU-CA>

U.S. Bureau of Land Management (USBLM) 2012. "VRM System" *Visual Resource Management*. BLM, Recreation, National Recreation Programs, Visual Resource Management. June 28, 2012. Web. May 30, 2016. <http://www.blm.gov/wo/st/en/prog/Recreation/recreation_national/RMS/2.html>

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CHAPTER 7 BIOLOGICAL RESOURCES

This chapter summarizes the applicable regulations and policies that govern biological resources and describes the biological resources that are or have the potential to be present in the Program area. This chapter also evaluates the Program's potential effects on these resources and identifies measures incorporated into the Program to avoid these potential effects.

The evaluation of the Program's potential effects on biological resources is based on recent species-specific and vegetation community surveys, California Department of Fish and Wildlife (CDFW)[14] resources such as the California Natural Diversity Database (CNDDB), personal communication with CDPR personnel, and review of the scientific literature on species' life histories, distribution, habitat requirements for breeding and forage, response to human disturbance, and current threats. This evaluation was prepared using the following resources:

- Recent photographs including aerial orthorectified topography/photography and current photographs taken during site visits and fieldwork
- Oceano Dunes SVRA 2011-2014 Habitat Monitoring Report
- Pismo State Beach and Oceano Dunes SVRA Vegetation Mapping Report, February 2015
- CNDDB database and USFWS Species List queries which included all U.S. Geological Survey (USGS) 7.5-minute quadrangles encompassing the Program area and the adjacent USGS quadrangles around the site
- California Native Plant Society (CNPS) rare plant database
- CDFW's Special Animals list
- CDFW's Special Vascular Plants, Bryophytes, and Lichens List
- Inventory of Rare and Endangered Vascular Plants of California
- California Invasive Plant Council's Invasive Plant Inventory Database
- Review of relevant literature on biological resources in and around the Program area
- Consultation with wildlife and botanical experts
- Ongoing informal contacts with resource agency staff

7.1 REGULATORY SETTING

7.1.1 Federal Endangered Species Act (FESA)

FESA establishes a broad public and federal interest in identifying, protecting, and providing for the recovery of threatened and endangered species. The Secretary of the Interior and the Secretary of Commerce are designated in FESA as responsible for identifying endangered and threatened species and their critical habitat, carrying out Programs for the conservation of these species, and rendering opinions regarding the impact of proposed federal actions on listed species. The USFWS and the National Marine Fisheries Service (NMFS) are charged with

[14] As of January 1, 2013, the California Department of Fish and Game (CDFG) was renamed the California Department of Fish and Wildlife. When this document cites reports prepared by CDFW to 2013, the reference includes the prior department name of CDFG. Both CDFW and CDFG refer to the same agency.

implementing and enforcing FESA. USFWS has authority over terrestrial and continental aquatic species, and NMFS has authority over species that spend all or part of their life cycle at sea, such as salmonids.

Section 9 of FESA prohibits the unlawful "take" of any listed fish or wildlife species. Take, as defined by FESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such action." The USFWS's regulations define harm to mean "an act which actually kills or injures wildlife." Such an act may include "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 CFR § 17.3). Take can be permitted under FESA under Sections 7 and 10. Section 7 provides a process for take permits for federal projects or projects subject to a federal permit, and Section 10 provides a process for incidental take permits for projects without a federal nexus. FESA does not extend the take prohibition to federally listed plants on non-federal land, other than prohibiting the removal, damage, or destruction of such species in violation of state law.

7.1.2 Migratory Bird Treaty Act

Under the Migratory Bird Treaty Act (MBTA), it is unlawful to "pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not." Under the MBTA it is thus illegal to disturb a nest of a migratory species that is in active use, since this could result in killing a bird or destroying an egg. The USFWS oversees implementation of the MBTA.

7.1.3 California Endangered Species Act

The California Endangered Species Act (CESA), administered by CDFW, protects wildlife and plants listed as threatened or endangered by the California Fish and Game Commission, as well as species identified as candidates for listing. CESA restricts all persons from taking listed species except under certain circumstances. The state definition of take is similar to the federal definition, except that CESA does not prohibit indirect harm to listed species by way of habitat modification or harassment. Under CESA, an action must have a direct, demonstrable detrimental effect on individuals of the species.

CDFW maintains lists of animal Species of Special Concern (CSSC) that serve as "watch lists." A CSSC is not subject to the take prohibitions of CESA. The CSSC are species that are declining at a rate that could result in listing under the FESA or CESA and/or have historically occurred in low numbers, and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals and is intended to focus attention on the species to help avert the need for costly listing under federal and state endangered species laws. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them.

State agencies should not approve projects as proposed that would jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of the species, if reasonable and prudent alternatives consistent with conserving the species or its habitat are available that would prevent jeopardy (Fish and Game Code § 2053). Under Sections 2080.1 or 2081(b) of the California Fish and Game Code, CDFW may permit incidental take of species listed under CESA.

7.1.4 California Fish and Game Code

The California Fish and Game Code protects a variety of species, separate from the protection afforded under CESA. The following specific statutes afford some limits on take of named species: Section 3503 (nests or eggs), 3503.5 (raptors and their nests and eggs), 3505 (egrets, osprey, and other specified birds), 3508 (game birds), 3511 (fully protected birds), 4700 (fully protected mammals), 4800 et seq. (mountain lions), 5050 (fully protected reptiles and amphibians), and 5515 (fully protected fish).

Section 3503 simply states, "it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto." The exceptions generally apply to species that are causing economic hardship to an industry. Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted." Section 3505 prohibits taking, selling, or purchasing egrets, osprey, and other named species or any part of such birds.

Fully protected Species may generally not be taken or possessed except for scientific research. Four sections of the Fish and Game Code list 37 fully protected species (Fish and Game Code § 3511, 4700, 5050, and 5515). Incidental take of species that are designated as fully protected may be authorized via development of a natural community conservation plan (NCCP; Fish and Game Code § 2800 et seq.).

7.1.5 Regulated Waters

Impacts to stream channels (bed and bank) are specifically addressed by California Fish and Game Code Sections 1600 et seq. and may fall under the jurisdiction of the federal Clean Water Act (CWA) Section 404 and Section 401 permit process and the state Porter-Cologne Water Quality Control Act.

7.1.5.1 Federal Clean Water Act

The CWA is the primary federal law that protects the quality of the nation's surface waters. Under the CWA, all discharges of pollutants into "waters of the United States" are unlawful unless specifically authorized by a permit. "Waters of the United States" include, but are not limited to, oceans, bays, rivers, streams, and certain wetlands.

Under Section 404 of the CWA, the USACE must issue a permit to legally place any dredged or fill material below the ordinary high water mark of any water of the United States. Many projects require an individual, project-specific, permit. Other projects can streamline the permitting process by obtaining coverage under an existing nationwide permit that covers a range of activities. All projects that require a permit under Section 404 must also comply with Section 401 of the CWA. In California, Section 401 requires the state, through one of the its nine Regional Water Quality Control Boards (RWQCB), to certify that the discharge complies with all state water quality standards.

7.1.5.2 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne) established the State Water Resources Control Board (SWRCB) and divided the state into nine regions that are overseen by a RWQCB. The SWRCB is the primary state agency responsible for protecting the quality of the state's surface and groundwater supplies, but much of its daily implementation authority is delegated to the RWQCBs. Waters regulated under Porter-Cologne include isolated

waters that are no longer regulated by USACE. Projects that impact jurisdictional waters must demonstrate compliance with the goals of Porter-Cologne by developing Storm Water Pollution Prevention Plans and other measures in order to obtain a CWA Section 401 certification. The Central Coast RWQCB oversees implementation in the project region.

7.1.5.3 California Fish and Game Code Sections 1600 et seq.

Under Sections 1600 et seq. of the California Fish and Game Code, CDFW regulates activities that affect the flow, bed, channel, or bank of rivers, streams, and lakes. Sections 1602 requires public and private entities to notify and enter into a streambed or lake alteration agreement with CDFW before beginning any project that would divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank, of any river, stream, or lake. The code also prohibits discharging or disposing of material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake, without first obtaining a streambed or lake alteration agreement.

7.1.6 California Coastal Act

As described in greater detail in Chapter 5, Land Use and Planning, the California Coastal Act (PRC §30000 et seq.) governs development within the Coastal Zone.

The Coastal Act defines the term “sensitive coastal resource areas” to mean those identifiable and geographically bounded land and water areas within the coastal zone of vital interest and sensitivity (PRC §30116). In addition, the Coastal Act defines “wetland” to mean land within the coastal zone which may be covered periodically or permanently with shallow water, and includes saltwater marshes, freshwater marshes, open or closed brackish marshes, swamps, mudflats, and fens (PRC §30121). Finally, the Coastal Act defines “environmentally sensitive habitat areas” (ESHA) to mean areas in which plant or animal life or their habitats are either rare or especially valuable because of their nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

Chapter 3 of the Coastal Act, Coastal Resources Planning and Management Policies, sets forth the policies that constitute the standards for the adequacy of local coastal Programs and development subject to the Coastal Act (PRC §30200 et seq.). This chapter of the Coastal Act establishes the following standards related to biological resources:

- Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance (PRC §30230)
- The biological productivity and quality of waters and wetlands appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored (PRC §30231)
- Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas (PRC §30240)
- Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas (PRC 30240)

7.1.7 Public Resources Code Section 5090.35

Public Resources Code Section 5090.35 (c) requires the OHMVR Division to inventory wildlife populations and their habitats in each SVRA and to prepare a Wildlife Habitat Protection Plan (WHPP) for the SVRA. The goals of the WHPP are to monitor and manage wildlife and plant populations and restore habitats where necessary to sustain a viable species composition within the SVRA. If the OHMVR Division determines the WHPP is not being met in any portion of an SVRA, the OHMVR Division must close the noncompliant portion until the Program is met. If the WHPP cannot be met, the OHMVR Division must close and restore the noncompliant portion. Implementation of the WHPP is supported by the Habitat Monitoring System (HMS). The HMS provides an inventory of study data, establishes monitoring protocols, and allows managers to make decisions on the basis of quantitative field data.

7.2 ENVIRONMENTAL SETTING

The Dust Control Program area is almost entirely located within Oceano Dunes SVRA (the exception being track-out prevention areas on Grand Avenue and Pier Avenue). Combined, the SVRA and parts of Pismo State Beach where vehicle activity is allowed stretch along approximately seven miles of the central California coast, from Grand Avenue in the City of Grover Beach to the northern edge of the Guadalupe-Nipomo Dunes Wildlife Refuge. This area is home to a unique dunes ecosystem that provides habitat for several endangered and threatened plant and wildlife species.

The Dust Control Program area covers approximately 690 acres in the central / northern part of Oceano Dunes SVRA. Ecosystems within or near the Program area include open ocean, dune lakes, wetlands, fore- and backdunes, chaparral scrub, and riparian habitat. North of the Program area is a portion of Pismo State Beach which is not used for vehicular recreation, as well as agricultural lands and the Pismo Dunes Natural Preserve. The southern border of the Program area is situated north of Oso Flaco and Little Oso Flaco lakes, and on the east are the Phillips 66 Leasehold. A small portion of the Program area overlaps with the Phillips 66 leasehold at the extreme southeast portion. The western boundary of the Program area is setback from the Pacific Ocean by approximately 1,100 feet (in the vicinity of marker posts 4 and 5) to 1,500 feet (in the vicinity of marker post 7) to avoid western snowy plover (*Charadrius nivosus nivosus*) critical habitat and the seasonal exclosure.

The proposed Program's tree planting area includes privately-owned lands downwind and east of Oceano Dunes SVRA. This area is south of the community of Oceano and west of the Nipomo Mesa and is approximately 295 acres in size. The area consists of private agricultural, open space, and recreational lands and includes older sand dune and dune lake ecosystems.

7.2.1 Project Area Habitat

Oceano Dunes SVRA in general, and the Dust Control Program area specifically, are comprised of uplands and wetlands habitats. Uplands include dunes which may be divided into two zones characterized by their location and dominant vegetation. The most seaward zone of the dunes is the fore dune. It is characterized as a low, wind deposited dune that is sparsely vegetated with the hardiest of dune stabilizing plants. Foredune plants must be able to tolerate periods of drought, saltwater spray, storm waves, and alternating periods of sand burial and erosion. The foredunes begin at the high tide line, where only low growing plants with deep root systems can live, such as sand verbena (*Abronia* spp.). The strong winds, salt spray, and nutrient-poor substrate (sand) make this area uninhabitable for other types of plants. The back dune, also called coastal strand, is a more stabilized coastal dune that is vegetated with a dense thicket of salt-tolerant shrubs. The

backdunes, behind the foredunes, are subjected to less salt spray and erosive force and thus are more stable and more diverse in terms of vegetation. Wetlands correspond to vegetation islands at Oceano Dunes SVRA and are comprised of areas that hold and maintain water for a more extended hydroperiod than surrounding open sand areas. Plants that live within these coastal wetland environments are adapted to dynamic environmental conditions including high salinity concentrations and extreme temperatures (McLeod 2001). Weeds threatening native plant life have been introduced into the dune environment both purposefully and accidentally. Various native plants are being choked out by invasive species like European beach grass (*Ammophila arenaria*) and iceplant (*Carpobrotus* spp.).

Vegetation communities in the Program area are defined by their dominant or co-dominant species, following the classification system in *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009), abbreviated as MCV2. These vegetation types are known as vegetation alliances. Vegetation alliances in the Program area were mapped in 2012 (CDPR 2015a) and are shown on Figure 7-1 and described in detail below.

7.2.1.1 Foredunes

Foredunes in the Dust Control Program area support mostly herbaceous vegetation adapted to blowing sand. Dune mat is the predominant native vegetation alliance in the foredunes. Dune mat is dominated by sand verbena (*Abronia* sp.) and/or beach bur (*Ambrosia chamissonis*) mixing with other perennial herbs, grasses, and low shrubs to form a low canopy. Dune mat occurs on sand dunes of coastal bars, river mouths and spits along the immediate coastline from 0-30 ft. (Sawyer et al. 2009). Within the Program area, common herbaceous plants in this alliance type include yellow sand verbena (*A. latifolia*), red sand verbena (*A. maritima,*), pink sand verbena (*A. umbellata*), European searocket (*Cakile maritima*), beach evening primrose (*Camissoniopsis cheiranthifolia* var. *cheiranthifolia*), and Pacific silverweed **(***Potentilla anserina* var. *pacifica*). The Dust Control Program boundary avoids the majority of the foredune habitat in the vicinity of the Program; however, this is a common habitat to the north, south and west of the Program area.

7.2.1.1 Backdunes

Backdunes scattered with vegetation islands are the dominant habitat type within the Dust Control Program area. Vegetation islands are dominated by shrub species like mock heather (*Ericameria ericoides*), silver dune lupine (*Lupinus chamissonis*), seacliff buckwheat (*Eriogonum parviflorum*), and dune ragwort (*Senecio blochmaniae*). Silver dune lupine-mock heather scrub is the predominant vegetation type in the back dunes. In this vegetation alliance, silver dune lupine and mock heather occur characteristically together or alone in the shrub canopy. It occurs on stabilized dunes of coastal bars, river mouths, spits along coastlines, coastal bluffs, and terraces from 0-100 ft. (Sawyer et al. 2009). This alliance varies from areas dominated exclusively by silver dune lupine to areas dominated almost exclusively by mock heather to areas where both species are predominant, apparently due to a combination of soil texture, aspect, hydrology, and stand age.

Within the Program area, other common native shrub and herbaceous species that occur in this alliance include lizard tail (*Eriophyllum staechadifolium*), California croton (*Croton californicus*), seacliff buckwheat, deerweed (*Acmipson glaber*), California sandaster (*Corethrogyne filaginifolia*), yarrow (*Achillea millefolium*), cudweed (*Psuedognaphalium* sp.), Monterey Coast paintbrush (*Castilleja latifolia,*), and Southern California dudleya (*Dudleya lanceolata*).

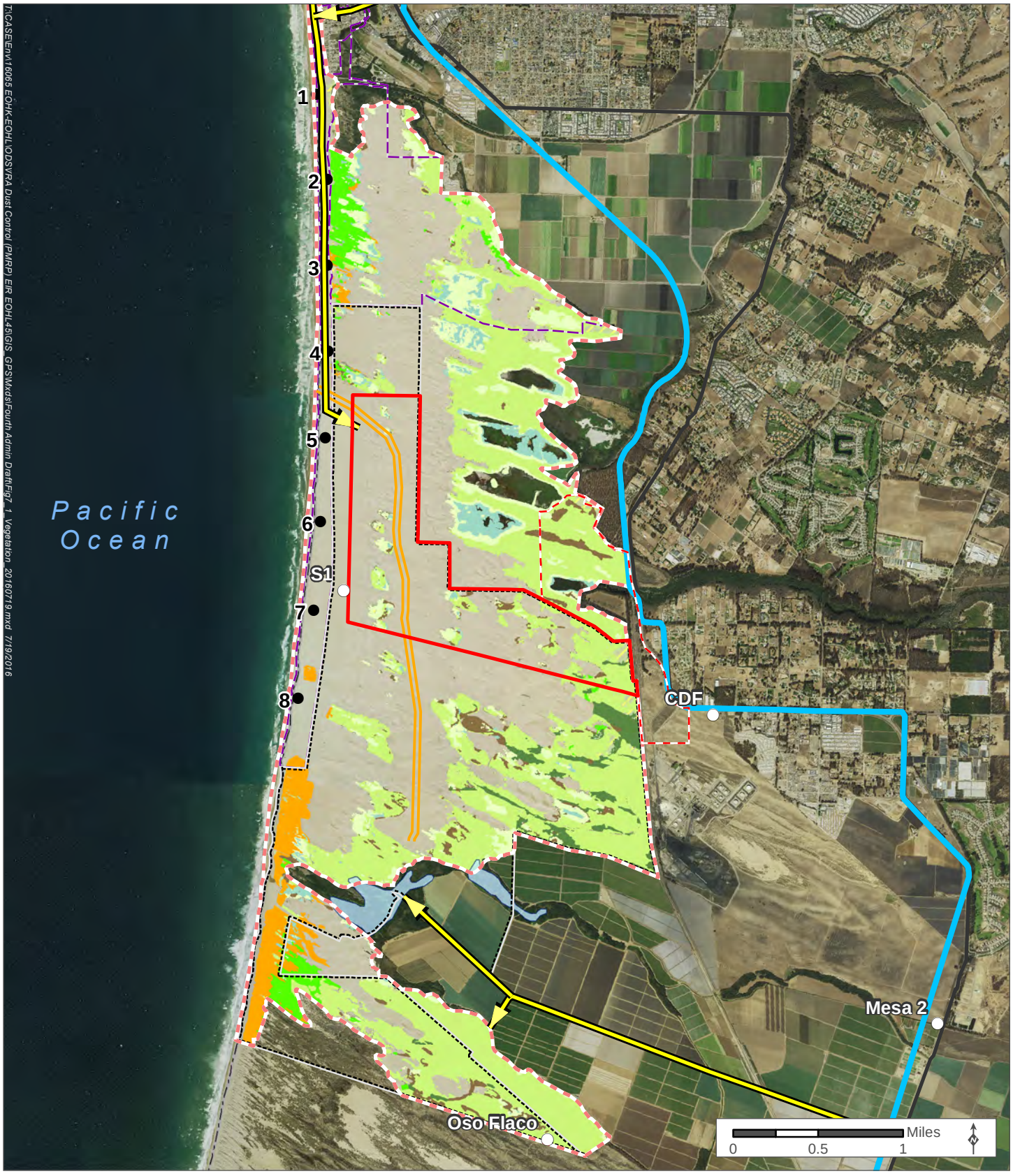

Figure 7-1 Dust Control Program Area Vegetation

Arroyo willow thickets are also prominent in the backdunes, patchily but widely distributed in the wetter areas of the larger silver dune lupine-mock heather scrub complex. In this vegetation alliance, arroyo willow (*Salix lasiolepis*) is dominant or co-dominant in the shrub or tree canopy, with >50% relative cover in the shrub or tree canopy or ≥ 25% absolute cover in the shrub or tree canopy. Within the Program areas, arroyo willow sometimes occurs with wax myrtle (*Morella californica*).

Portions of the shrubland understory in the backdunes are being invaded by perennial veldt grass stands, and in some areas lacking a shrubland overstory, this species becomes dominant. In this vegetation alliance, perennial veldt grass (*Ehrharta calycina*) dominates, with >50% relative cover in the herbaceous layer, and shrubs are sparse or absent. Perennial veldt grass is a non-native invasive perennial herb found in disturbed grasslands, roadsides, and coastal habitats in California's south and central west regions. Perennial veldt grass is spreading very rapidly in the central coast region, where it invades dunes and shrublands. It was originally imported to California for use as a pasture grass and for erosion control. Perennial veldt grass displaces native vegetation and converts coastal scrub and chaparral communities to grasslands (Cal-IPC 2016).

Small areas in the backdunes are dominated by other native shrub species, including coyote brush (*Baccharis pilularis*), deerweed, poison oak (*Toxicodendron diversilobum*), dune ragwort (*Senecio blochmaniae*) and California sandaster. Crisp monardella (*Monardella undulata* ssp. *crispa*) commonly colonizes bare sand areas at vegetation edges in both the fore- and backdunes.

7.2.1.2 Open Sand Areas

Open sand is a dominant land cover and habitat type within foredune and backdune habitats. Sandy beaches are a harsh environment where most plants are unable to survive. Inland open sand areas are characterized by actively moving sand in which material is continuously deposited and eroded by prevailing winds.

7.2.1.3 Wetlands

Several small wetlands occur in both the foredunes and backdunes in the Program area, mostly in low-lying moist areas underneath or adjacent to willow thickets. Dominant species include salt rush (*Juncus lescurii*), arroyo willow and black cottonwood (*Populus trichocarpa*). There are no streams, creeks, or lakes in or within 400 feet of the Dust Control Program area in Oceano Dunes SVRA; however, Black Lake lies within the extended tree planting area and the Pacific Ocean is generally adjacent to the Dust Control Program area, including areas where the OHMVR Division would install track-out devices. The Pacific Ocean has a mean high tide of between 4.1 and 4.7 feet, with a mean higher-high water mark of 5.4 feet and a highest predicted tide of approximately 6.9 feet (Mangionne 2001, Reese Water and Surveying Services 2001).

7.2.1.4 Non-Native Vegetation

Several vegetation types are not native to the Program areas. Besides the European beach grass and perennial veldt grass invading large areas of the fore- and backdunes, respectively, other dominant, non-native species include golden wattle (*Acacia longifolia*) and iceplant (*Carpobrotus* spp). These non-native species generally, exhibit invasive tendencies, forming large monocultures and crowding out native species. Jubata grass (*Cortaderia jubata*) is another invasive species that occurs in the Program area, but is in scattered locations that area small because the OHMVR Division has been controlling expansion of this species for more than 15 years. Non-native eucalyptus (*Eucalyptus* sp.) groves are present in the vicinity of the Program area.

7.2.2 Plants and Wildlife

Sand dunes and their vegetation provide habitat and protection for plants and wildlife, and the Dust Control Program area is known and/or has the potential to support numerous common and special-status plant and wildlife species.

The beach receives nutrients from the ocean that feed its burrowing invertebrate populations. Willets (*Catoptrophorus semipalmatus*), marbled godwits (*Limosa fedoa*), and least sandpipers (*Calidris minutilla*) search for food in the sand. Several species of gulls frequent the beach to scavenge, as do some terrestrial birds such as the Brewer's blackbird (*Euphagus cyanocephalus*) and white-crowned sparrow (*Zonotrichia leucophrys*). Inland of the beach, common red-winged blackbirds (*Agelaius phoeniceus*), song sparrows (*Melospiza melodia*), and western meadowlarks (*Sturnella neglecta*) take advantage of the seeds provided by the dune vegetation. Deer mice (*Peromyscus maniculatus*) and black-tailed jackrabbits (*Lepus californicus*) forage in the fore- and backdunes and may themselves become food for predators such as great horned owl (*Bubo virginianus*), coyote (*Canis latrans*), and bobcat (*Lynx rufus*). Common plant species are described by habitat type in Section 6.2.1.

A special-status species is defined as a species meeting one or more of the following criteria:

- Listed, proposed for listing, or candidate for possible future listing as threatened or endangered under FESA (50 CFR §17.12)
- Listed or candidates for listing by the State of California as threatened or endangered under CESA (Fish and Game Code §2050 et seq.).
- Listed as rare under the CNPPA (Fish and Game Code §1900 et seq.).
- Listed as a Fully Protected Species (Fish and Game Code §§3511, 4700, 5050, and 5515)
- Listed as a CSSC on CDFW's Special Animals list (CDFW 2016)
- Meets the definition of rare or endangered under CEQA (§15380 (b) and (d)). Species that may meet the definition of rare or endangered include the following:
    - Plant species considered by CNPS and CDFW to be "rare, threatened, or endangered in California" (Ranks 1A, 1B, and 2; CNPS 2016, CDFW 2016)
    - Species that may warrant consideration on the basis of local significance or recent biological information
    - Species considered locally significant; that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region. An example could include a species at the outer limits of its known range or a species occurring on an uncommon soil type. In general, California Rare Plant Rank (CRPR) 3 and 4 species were considered locally significant for the purposes of this report.[15]

Special-status species that are known to or that have a moderate to high potential to occur in the Program area are described below.

[15] In general, CRPR Rank 3 and 4 plants may not warrant consideration under CEQA; however, they are included here under the definition of special-status plants.

7.2.2.1 Special-Status Plants

Queries of CNDDB and USFWS Special Plant lists, CNPS Inventory of Rare and Endangered Plants, Oceano Dunes SVRA 2011-2014 Habitat Monitoring Report, Oceano Dunes SVRA fall 2012 vegetation monitoring, and the 2015 Pismo State Beach and Oceano Dunes SVRA Vegetation Mapping Report indicated 65 special-status plants occur in the region (see Appendix B). Of these 65 species, none are known to be present in the Dust Control Program area; however, eight of the 65 species are considered to have a moderate to high potential to occur in the Program area, as described below.

Coastal goosefoot (*Chenopodium littoreum*), a CRPR 1B.2 plant, is an annual herb in the Chenopodiaceae (goosefoot) family that blooms from April through August. It occurs on sand dunes from 33 to 100 feet elevation. It is endemic to California and is known from fewer than 20 occurrences. It is possibly threatened by recreational activities, vehicles, and non-native plants (CNPS 2016). This species has a moderate potential to occur in the Program area. It is not known to be present in the Program area, but suitable habitat is present and it was observed at Oso Flaco Lake during 2012 vegetation mapping (CDPR 2015a) and near Oso Flaco Lake based on CNDDB records (CNDDB 2016).

La Graciosa thistle (*Cirsium scariosum* var. *loncholepis*), federal and state threatened and a CRPR 1B.1 plant, is a bushy biennial or short-lived, perennial herb with large, smooth to slightly hairy leaves and clustered heads of white flowers. It is a spreading, mound-like or erect plant in the Asteraceae family that is well armored with spines on the leaves and flower heads. This species is known from coastal San Luis Obispo and Santa Barbara counties from Pismo Beach south to Los Alamos. In general, La Graciosa thistle is associated with mesic areas on the margins of dune swales, dune lakes, marshes, estuaries, coastal meadows, seeps, springs, intermittent streams, creeks, and rivers. This species thrives on sandy soils and is pollinated by hummingbirds and insects (USFWS 2000).

USFWS designated 41,089 acres for La Graciosa thistle as critical habitat in March 2004 (USFWS 2004). USFWS revised its designation of critical habitat for La Graciosa thistle in 2009 (USFWS 2012a). The revised critical habitat designates approximately 24,103 acres of habitat in San Luis Obispo and Santa Barbara counties as critical habitat. The critical habitat is divided into six units. The Callender-Guadalupe Dunes unit is the second largest (9,696 acres) and includes the Oceano Dunes District. This unit extends along 8.5 miles of coast from Arroyo Grande Creek south to the Santa Maria River. There is approximately 300 acres of La Graciosa thistle critical habitat within the Dust Control Program area. Since federal listing, populations of this species have severely declined. At the time of listing there were 11 extant occurrences distributed among 7 populations. Currently, La Graciosa thistle is considered to be extant at seven occurrences that are distributed among four populations (USFWS 2008).

There is suitable dune habitat within the Program area but this species is not known to occur within the Program area. It was recently observed nearby approximately two miles southeast of Oso Flaco Lake during CDPR surveys (CDPR 2015a), and has a moderate potential to occur in the Program area.

Dune larkspur (*Delphinium parryi* ssp.*blochmaniae*), a CRPR 1B.2 plant, is a perennial herb in the Ranunculaceae (buttercup) family that has purple and white or blue and white flowers and blooms from April through May. It occurs in maritime chaparral and on coastal dunes from 0 to 656 feet (0 to 200 meters) elevation. It is endemic to California and is threatened by development (CNPS 2016). This species has been recorded south of Oso Flaco Lake (CNDDB 2016) and has

a moderate potential to occur in the Program area based on the presence of suitable coast dune habitat.

Blochman's leafy daisy (*Erigeron blochmaniae*), a CRPR 1B.2 plant, is a perennial rhizomatous herb that blooms from June through August. It is in the Asteraceae family and has light purple flowers. It occurs on coastal dunes and in coastal scrub from 10 to 150 feet elevation. It is endemic to California and is threatened by development, non-native plants, and vehicles (CNPS 2016). This species has a high potential to be present in the project limits. It is locally common at Oceano Dunes SVRA and has a high potential to occur in the Program area (CDPR 2015a).

Nipomo Mesa lupine (*Lupinus nipomensis*), federal and state threatened and a CRPR 1B.1 plant, is a low-growing, blue-flowered, annual herb in the Fabaceae family. Nipomo Mesa lupine requires fine-grained, sandy soils of open sites or sparsely vegetated, stabilized dune communities close to the coast. Flowers are presumably capable of self-pollination, but may require insect visitation to maximize seed production. Seed germination and maximum plant size are apparently enhanced by activities of pocket gophers, which also present a threat of herbivory. Nipomo Mesa lupine is restricted to dry sandy flats of stabilized coastal dunes that lie west of Nipomo Mesa in San Luis Obispo County. There is no recovery plan or designated critical habitat for this species (CDPR 2015a).

At the time of the five-year review, Nipomo Mesa lupine was known to be extant at one location in San Luis Obispo County (USFWS 2009). USFWS considers all occurrences or colonies from this site (approximately six occurrences as recorded in CNDDB 2016) to comprise a single population. Individuals in this population are scattered across a two-mile stretch of backdune habitat west of State Route 1 and in between Black Lake Canyon and Oso Flaco Lake. The entire habitat for this species at this site is privately owned, most by the Philips 66 Oil Company, and smaller portions by Pacific Gas and Electric Company, and other private landowners. A portion of the habitat also occurs within a California Department of Transportation right-of way and within the eastern portion of Oceano Dunes SVRA on land leased from Phillips 66, outside the riding area. USFWS estimates the total amount of suitable habitat for Nipomo Mesa lupine in San Luis Obispo County to be approximately 1,000 acres. The extant populations cover approximately 100 acres. Long-term census data are not reliable enough to assess population trends. However, reliable data from 2006 through 2015 indicate the total numbers of Nipomo Mesa lupine is very low and fluctuates annually (CDPR 2015a; SLO County Land Conservancy 2015). Based on 2012 vegetation mapping (CDPR 2015a), annual SLO County Land Conservancy surveys, and CNDDB records (CNDDB 2016), this species is known to occur in the Phillips 66 Leasehold and in the area west of SR1 where the OHMVR Divison may potentially plant trees, and has a high potential to occur within the Program area based on the presence of suitable dune habitat and proximity to known locations.

Crisp monardella (*Monardella undulata* ssp. *crispa*), a CRPR 1B.2 plant, is a perennial rhizomatus herb that blooms from April through August. It has purple flowers and is in the Lamiaceae (mint) family. It occurs in coastal dunes and sandy scrub from 33 to 394 feet (10 to 120 meters) elevation. It is endemic to California and is threatened by vehicles (CNPS 2016). This species is present in the vegetation islands within the project limits based on 2012 vegetation mapping (CDPR 2015a) and other CDPR plant surveys (CDPR 2011).

San Luis Obispo monardella (*Monardella undulata* ssp. *undulata*), a CRPR 1B.2 plant, is a perennial rhizomatous herb that blooms from May through September. It has purple flowers and is in the Lamiaceae family. It occurs in coastal dunes and sandy coastal scrub from 30 to 650 feet elevation. It is endemic to California and is threatened by coastal development, vehicles, and

potentially non-native plants (CNPS 2016). This species was observed at several locations near the Program area during the 2012 vegetation mapping efforts (CDPR 2015a) and is known to occur nearby from CNDDB records (CNDDB 2016). It is not known to occur in the Program area but has a moderate potential to occur based on suitable dune habitat

7.2.2.2 Special-status Animal Species

Queries of CNDDB and USFWS Special Animal lists and the Oceano Dunes SVRA 2011 Habitat Monitoring Report indicated 47 special-status animals occur in the region (see, Appendix B). Of these, 13 are known to be present or to have a moderate to high potential to occur in the Dust Control Program area, as described below.

Amphibians and Reptiles

Four special-status amphibian and reptile species are known to occur in the Program area or surrounding environs.

California red-legged frog (*Rana draytonii*), federal threatened and a CSSC, is endemic to California and Baja California and has been found at elevations from sea level to about 5,000 feet, with most observations occurring below 3,500 feet. It uses a variety of habitat types including various aquatic, riparian, and upland habitats. California red-legged frog can use many types of aquatic systems, provided a permanent water source, ideally free of nonnative predators, is nearby; however, individual frogs may complete their entire life cycle in a pond or other aquatic site that is suitable for all life stages. California red-legged frog breeds in aquatic habitats such as marshes, ponds, deep pools, and backwaters in streams and creeks, lagoons, and estuaries. Breeding adults are often associated with dense, shrubby riparian or emergent vegetation and areas with deep (more than 27 inches), still, or slow-moving water. This species also successfully breeds in artificial ponds with little or no emergent vegetation and has been observed in stream reaches that are not covered in riparian vegetation. California red-legged frog also uses small mammal burrows and moist leaf litter for cover (USFWS 2002). This species is known to occur in Arroyo Grande Creek and Oso Flaco Lake and Creek (CDPR 2015b and CNDDB 2016) and in upland areas of dunes (Glick 2013).The extended tree planting area contains Black Lake and is adjacent to other suitable aquatic habitat for California red-legged frog; in addition, this species could make upland dispersal migrations between Arroyo Grande Creek, Black Lake, Oso Flaco Creek, and other occupied aquatic habitat to the south and is therefore considered to have a moderate potential to occur in the eastern part of the Program area (outside the SVRA open riding and camping area).

Western spadefoot (*Spea hammondii*), a CSSC, is found almost exclusively in California west of the Sierra Nevada Mountains from Shasta County to northwestern Baja California, Mexico. The western spadefoot has a black teardrop-shaped spade on each hind foot and vertical pupils. Western spadefoots prefer valley and foothill grassland, scrub and open chaparral habitats but can also be found within oak woodland habitat (Stebbins 1985). The western spadefoot is nocturnal and only active during the wet season and summer storms. It spends the rest of the year in burrows made in loose soils that are at least three feet deep. Breeding takes place in ephemeral pools and eggs take approximately three weeks to hatch and metamorphose successfully. Spadefoot diet consists of butterflies, beetles, crickets, flies, ants, and earthworms (Stebbins 1985). This species is known to occur in the Oso Flaco Lake area (CDPR 2015b) and in the upland areas of dunes (Glick 2013), but potential use of the Program area is likely restricted to overland movements during the rainy season.

Silvery legless lizard (*Anniella pulchra pulchra*), a CSSC, is a small, slim lizard approximately 4-7 inches long with no limbs. This species is often perceived as a snake; however, it is distinguished from snakes by its movable eyelids. Its smooth scales and shovel-shaped snout allow it to more easily move through loose or sandy soil. Typically, this species is silver to beige above with a yellow underside. Silvery legless lizards live mostly underground and inhabit beaches, pine-oak woodland, chaparral, sandy washes, stream terraces, and riparian habitat where there is suitable moist, loamy or sandy soil available for burrowing. Leaf litter under trees and bushes in sunny areas and dunes stabilized with lupine and mock heather often indicate suitable habitat. They forage for insects and spiders in leaf litter during the day. No eggs are produced by this species; instead live birth produces up to four young from September through November (Stebbins 1985 and California Herps 2016). This species is known to occur in Jack Lake, near Lettuce Lake, and in Oso Flaco Lake (CDPR 2015b and CNDDB 2016) but is not known to occur in the Program area. Suitable lupine and mock heather habitat are abundant in the southeastern portion of the site and scattered throughout the foredunes, so it is considered to have a moderate potential to be present.

Coast horned lizard (*Phrynosoma coronatum*), a CSSC, has a flattened oval body with five backwardly projecting head spines and pointed fringe scales running along the sides of the body. Its color is highly variable, but generally mimics the color of the surrounding soil (Stebbins 1985). The coast horned lizard is active from April to October, engaging in breeding activities during April and May. Its diet consists almost entirely of ants, but will feed on other insects when available. Coast horned lizard inhabits open areas of sandy soil and low vegetation in valleys, foothills, and semiarid mountains from sea level to 8,000 feet in elevation. It is found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. It is often found in lowlands along sandy washes with scattered shrubs and along dirt roads, and frequently found near ant hills. When threatened, it inflates with air, makes hissing noises, or sprays blood at a predator from the corner of its eyes as a last resort (California Herps 2016). This species is known to occur near Oso Flaco Lake (CDPR 2015b) and has been recorded within the Rancho Guadalupe Dunes County Park near the northwestern boundary of the Preserve (CNDDB 2016). It is not known to occur in the Program area, but moderately suitable sandy open areas are present so the coast horned lizard is thought to have a moderate potential to be present.

Birds

Special-status bird species that are known to or have the potential forage and/or breed in the Program areas with some regularity are described below.

Northern harrier (*Circus cyaneus*), a CSSC, inhabits fresh- and saltwater marshes, as well as upland grasslands. This medium-sized raptor often flies close to the ground while hunting for small mammals and birds. The male and female of this species are highly sexually dimorphic. The female is larger than the male and has dominantly brown colored plumage while the male is dominated with gray plumage; however, both have white rumps that are obvious during flight. (Sibley 2000). This species has been detected in CDPR surveys and is known to breed in the project vicinity (CDPR 2015b). Its continued present (foraging) is assumed in the Program area; however, no suitable nesting habitat exists within the Program area.

White-tailed kite (*Elanus leucurus*), a California Fully Protected species, is a year-round resident and breeder throughout much of California. They are typically found in low elevation agricultural, grassland, oak-woodland, wetland, or savannah habitats along with riparian habitats adjacent to open fields. Vegetation structure and prey abundance play an important role in

habitat suitability (Dunk 1995). White-tailed kites hunt rodents in open fields by hovering and then dropping straight to the ground (Sibley 2000). White-tailed kite has occasionally been observed in the Program area. Its continued present (foraging) is assumed in the Program area; however, no suitable nesting habitat exists within the Program area.

Peregrine falcon (*Falco peregrines*) is distributed worldwide, but the subspecies that occurs in California is called the American peregrine falcon (*F. peregrines anatum*) and is a California Fully Protected Species. Peregrine falcons feed on other birds up to and including ducks in size, and may take mammals, insects, and fish. Their primary feeding mode is to attack other birds in flight. They require protected cliffs and ledges for cover. Peregrine falcons nest near water, on cliffs, banks, dunes, or mounds. They will also occasionally nest on buildings or bridges, in cavities in trees or snags, or in the abandoned nests of other raptors. Peregrine falcons occur in California as residents or in the winter as migrants that breed further north (White et al. 2002). This species has been observed foraging in the Program area, but there is no suitable habitat for breeding present (CDPR 2015b). It has a moderate potential to be present in the Program area.

Western snowy plover (*Charadrius nivosus nivosus*), federal threatened and a CSSC, is a distinct subspecies of snowy plover that ranges from the southern tip of Baja California, Mexico, along the coast as far north as southern Washington to interior sites in Oregon, California, and as far east as Kansas, and south into coastal Texas (USFWS 2007). The western subspecies can be further separated into populations, depending on breeding locations. The Pacific coast population is defined as the individuals that occupy breeding sites along the Pacific Ocean on the North American mainland coast, peninsula offshore islands, interior bays, estuaries, and rivers (USFWS 2007). This population was listed as threatened under FESA. The western snowy plovers that occupy portions of the San Luis Obispo County coastline are part of the Pacific coast population. Regional snowy plover populations along the Pacific coast may be comprised of resident breeders that do not migrate, migratory breeders that leave during the winter months (November to January) and return at the onset of the breeding season, and wintering birds that migrate from interior or other coastal breeding sites, and arrive in November and remain until February (Warriner et al. 1986).

The USFWS originally designated critical habitat for the Pacific coast population in 1999, but that designation was withdrawn pending the results of an economic analysis. The economic analysis led to the redesignation of critical habitat for the Pacific coast population in September 2005 (USFWS 2005). In June 2012, the USFWS issued a revised critical habitat designation (USFWS 2012b). Overall, 39 new units, and 16,116 acres are being proposed that were not designated in 2005, for a total of 28,261 acres in 68 units in Washington, Oregon, and California. The proposed unit "CA 31 Pismo Beach/Nipomo Dunes" totals 1,652 acres, and includes the western portion of SLO County, including Pismo State Beach and Oceano Dunes SVRA. This critical habitat area extends approximately 1,300 feet inland from the mean high tide line, but does not overlap with the proposed Dust Control Program area.

Snowy plovers breed and forage on sandy beaches. Nests are typically found on flat open areas of the back beach or back dunes where vegetation is sparse or non-existent (Stenzel et al. 1981). Low or sparse vegetation allows the birds to detect approaching predators or other potential threats at a distance. Areas that have been overgrown by introduced European beach grass (*Ammophila arenaria*) are not suitable as nesting habitat. After the chicks hatch, they tend to move into areas where there is at least some vegetation or beach debris, which provides cover from the heat of the sun, inclement weather, and predators. In general, snowy plover nests are most often located within 100 meters of water, or at least within sight of it (Stenzel et al. 1981, USFWS 2007). While this may be true for most of the beaches along the SLO County coast,

which tends to be narrow, it is not the case in the Oceano Dunes District. In these locations, snowy plover nests may often be located several hundred meters from the nearest water source, and they are often tucked into areas sheltered from wind behind foredunes, where views of the ocean are blocked (CDPR 2013).

Throughout the non-breeding season, snowy plovers along the coast tend to aggregate in loose flocks along the beach, often around the mouths of freshwater creeks and rivers and along the swash line or upper beach. These flocks may consist of resident adults, juveniles born in the area, overwintering birds that breed elsewhere along the Pacific coast and interior sites (Warriner et al. 1986), and transitory adults and juvenile birds on migration. Western snowy plover are assumed to be present during the breeding season in the vicinity of foredune habitat, but the proposed Program area avoids active western snowy plover nesting areas.

California least tern (*Sternula antillarum browni)*, federal and state threatened and a California Fully Protected species, is a colonial nesting seabird that historically nested along the Pacific coast from Baja California to Monterey Bay, California (USFWS 2006, Grinnell 1928). Loss of California least tern habitat to development and recreation along with disturbance of nesting and feeding grounds has resulted in substantial declines in this subspecies following World War II (Atwood and Minsky 1983). From 1973 to 1975, the California breeding population was estimated at around 600 pairs (Bender 1974a, 1974b, Massey 1975). The subspecies *Sternula antillarum browni* has been designated as endangered under both CESA and FESA since 1976.

In mid to late April, California least terns return to nesting grounds along the coast of California, including San Francisco Bay, and Baja, Mexico. The breeding season lasts about five months, after which the birds migrate to wintering sites on the coasts of Central and South America (Sibley 2000). California least terns typically nest among the large open expanses of the beach and dunes that are completely or nearly completely devoid of vegetation. Nests are normally located where terrestrial predators can be detected over a large area. This allows adults time to leave their nest or young chicks and mob the intruder. California least terns feed on fish caught by diving into the surface waters of freshwater lakes and rivers, and oceans.

California least terns forage at Oso Flaco Lake and nearby Pismo and Dune Lakes. Foraging occurs mostly in mid-late July through mid-August, however they may forage there any time of the year when present at Oceano Dunes SVRA, Pismo Dunes Natural Preserve, and Pismo State Beach. California least terns begin to arrive in the area in mid-May and depart mid-August to beginning of September. Intensive efforts to protect nests from predators and park visitors have enhanced hatch rates (and fledge rates): from 2006 through 2013, annual hatch rates and fledge rates have exceeded 81% and 77% respectively (CDPR 2013). Least terns are known to nest to the west of the Program area, but the Program area avoids any active least tern nesting areas.

Burrowing owl (*Athene cunicularia*), a CSSC, inhabits open, annual and perennial grasslands, deserts and scrublands characterized by low-growing vegetation. It may also occupy woodland habitats where the canopy covers less than 30 percent of the ground surface. Within these habitats, burrowing owls nest in and occupy burrows made by fossorial mammals, particularly those of California ground squirrel. They will also occupy man-made structures including cement culverts, cement, asphalt, or wood debris piles (CBOC 1993). This species has been recorded wintering in the Oceano Dunes SVRA but is not known to occur within the project limits (CDPR 2015b and CNDDB 2016). Due of the presence of suitable habitats and recent nearby overwintering occurrences, burrowing owls have a moderate potential to overwinter but are unlikely to breed in the project limits.

Loggerhead shrike (*Lanius ludovicianus*), a CSSC, receives its name from its relatively large head in comparison to body size. Loggerhead shrikes have a black mask, gray head and back, and white chest. The loggerhead shrike is an unusual member of the order of Passerines because it is a top-level predator. Loggerhead shrikes possess a hooked bill, not unlike many raptor species, and capture and kill large prey by impaling them on a thorn or barbed wire fence. Prey items for loggerhead shrikes consist of large insects, small mammals and birds, amphibians, reptiles, carrion, and other invertebrates. In southern portions of their range, loggerhead shrikes are non-migratory and defend a territory as a pair year round (Shuford and Gardali 2008). This species has been detected in the Program area during point count surveys and is known to nest in the Program area (CDPR 2015b). Loggerhead shrike has a high potential to forage and breed in the Program limits and is assumed present.

Yellow warbler (*Setophaga petechia*), a CSSC, is most abundant in early succession riparian habitats that possess dense thickets of young willow trees. The male has distinctive reddish streaking on his chest with a bright yellow face. Insects, other arthropods, and occasionally wild fruits make up the diet of the yellow warbler. This species is a common brown-headed cowbird host and is one of the few species documented as rejecting the nest parasitism by building a new nest bottom over the existing clutch, thus creating a multi-tiered nest (Lowther 1999). This species has been documented at several locations in the vicinity of the Program area (CDPR 2015b and Condor 2006). Moderately suitable foraging and nesting habitat is present within the project limits. Yellow warbler has a moderate potential to forage and breed in the project limits.

Mammals

One special-status mammal has the potential to occur in the Program area:

American badger (*Taxidea taxus*), a CSSC, is found throughout California with the exception of the humid coastal forests of Del Norte and Humboldt counties. Habitat requirements include sufficient food supplies, loose sandy soils, and relatively open, uncultivated ground. Badgers preferred habitats include grasslands, savannas, and mountain meadows near timberline. Their primary prey consists of burrowing rodents such as gophers, ground squirrels, mice, and kangaroo rats. Badgers possess very long front claws, which allow them to capture prey by digging up burrows. Males are solitary and do not help in raising young. Female badgers give birth in the spring to as many as five young and are their sole providers (Ingles 1965). This species is known to occur in the vegetation islands and the Phillips 66 leasehold (CDPR 2015b and CNDDB 2016) and is assumed present in the project limits.

7.3 PROGRAM IMPACTS AND MITIGATION MEASURES

Consistent with CEQA and the CEQA Guidelines Appendix G, this EIR focuses on the potentially significant direct and indirect impacts that could result from implementation of the proposed Oceano Dunes SVRA Dust Control Program, as described in Chapter 2. The OHMVR Division has determined, based on the characteristics of the Dust Control Program and the environmental conditions described in Section 6.2, that:

- The Dust Control Program does not have the potential to result in a substantial adverse effect on any riparian habitat because the Dust Control Program area does not contain any riparian habitat.
- The Dust Control Program does not have the potential to substantially interfere with the movement of native fish or wildlife species or established wildlife corridors or impede the use of native wildlife nursery sites because Program components will be installed on

open sand areas and would not represent a substantial barrier to wildlife migration or movement.

- The Dust Control Program does not have the potential to conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan because no such plan is in effect that covers the Dust Control Program area. An HCP that would cover the Oceano Dunes SVRA and Pismo State Beach is currently being prepared, but has not yet been published. The proposed Dust Control Program would be a Covered Activity under the HCP and is not expected to conflict with the provisions of the HCP, once it is approved.

For these reasons, these issues are not discussed further in this EIR. The potentially significant impacts that could result from implementation of the Dust Control Program are described in Sections 6.3.3 and 6.3.4 below.

7.3.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, the proposed Oceano Dunes SVRA Dust Control Program would have a significant environmental impact on biological resources if it would:

- 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 CDFW or USFWS
- Have a substantial adverse effect on any federally protected wetland defined by Section 404 of the Clean Water Act
- Have a substantial adverse effect on a sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS

7.3.2 Standard and Specific Project Requirements

As discussed in Section 3.1.3.2 the OHMVR Division is incorporating Standard and Specific Project Requirements (SPR) into the planning, design, and implementation of the Dust Control Program. In compliance with Public Resources Code Section 5090.35 regarding monitoring and protecting wildlife resources, SPRs that would avoid or minimize the potential adverse biological resource effects of the Program include:

- **Minimize Ground Disturbance and Land Occupancy.** The OHMVR Division shall:
    - Design and implement the Dust Control Program to disturb and occupy as little land as possible
    - Prior to the start of Dust Control Program-related work activities (e.g., installation of dust control measures, monitoring equipment maintenance), the OHMVR Division shall determine the minimum area required to complete the work and define the boundaries of the work area on project drawings and with flagging or fencing on the ground, as appropriate
    - Use existing paths of travel to access project-related work areas
    - Restore all disturbed areas to the maximum extent feasible
- **Minimize and/or Avoid Impacts to Special-Status Plants.** The OHMVR Division would implement the following measures to minimize and/or avoid impacts to special-status plants:
    - Prior to starting all work under the Dust Control Program, a qualified biologist shall

survey for the presence of special-status plants in and within 100 feet of work areas (including new access routes). These surveys should be conducted during the appropriate blooming period for species that are known to or have the potential to occur in work areas, and shall follow protocols established by the USFWS, CDFW, and CNPS.

- A qualified biologist shall map, flag, and protect special-status plants identified during surveys.
  - The qualified biologist shall establish clear avoidance areas around special-status plant locations. This avoidance area shall provide a minimum 25-foot buffer from all work activities (the biologist may establish a larger buffer if appropriate). Sturdy, visible fencing or other protective features shall be installed around all avoidance areas. Fencing shall be securely staked and installed in a manner that would be reasonably expected to withstand winds and sand transport levels typical of Oceano Dunes SVRA. Fencing and other protective features shall be removed upon completion of work activities.
  - If California or federal endangered or threatened plant species are observed, the OHMVR Division shall prepare and submit a report detailing the find to the appropriate resource agency (i.e., USFWS, CDFW) prior to starting work.
- If it is not feasible to avoid the loss of non-listed special-status plants, the OHVMR Division shall, if feasible, compensate for this loss by reseeding, replanting, and/or restoring the disturbed areas with locally collected seed stock from nearby plant locations.

- **Minimize and/or Avoid Impacts to Special-Status Amphibians and Reptiles.** The OHMVR Division would implement the following measures to minimize and/or avoid impacts to special-status amphibians and reptiles:
  - Immediately prior to starting all work under the Dust Control Program, a qualified biologist shall survey for the presence of special-status amphibians and reptiles (other than California red-legged frog) in and within 100 feet of work areas (including new access routes). These surveys may include a combination of visual and trapping surveys (if authorized by CDFW).
  - If special-status amphibians and/or reptiles are identified during surveys (other than California red-legged frog), a qualified biologist shall coordinate with and receive approval from CDFW to capture and relocate the animal to nearby, suitable habitat that is at least 300 feet from the work area.
  - No trash shall be deposited on the site during work activities. All trash shall be placed in trash receptacles with secure lids or stored in vehicles.
- **Minimize and/or Avoid Impacts to California Red-Legged Frog.** The OHMVR Division would implement the following measures to minimize and/or avoid impacts to the California red-legged frog:
  - Immediately prior to starting all work under the Dust Control Program, a qualified biologist shall survey the work site for California red-legged frogs. If found, the biologist shall delineate and maintain an appropriate sized buffer and contact the USFWS to determine if moving the animal(s) is appropriate. In making this determination, the USFWS will consider if an appropriate relocation site exists. If the

USFWS approves moving animals, an approved biologist will be allowed sufficient time to move them from the work site before work activities begin. Only USFWS-approved biologists shall participate in activities associated with the capture and handling of California red-legged frogs.

- If a project is proposed near an area that could potentially support California red-legged frog, a biological monitor shall remain onsite to monitor for the presence of California red-legged frog throughout the installation of all dust control measures. The on-site biological monitor shall have the authority to halt any action that might result in impacts that exceed the levels anticipated by the USFWS during review of the proposed action. If work is stopped, the USFWS shall be notified immediately by the biological monitor.

- **Minimize and/or Avoid Impacts to Nesting and Special-Status Birds.** The OHMVR Division would implement the following measures to minimize and/or avoid impacts to special-status birds:
  - Prior to starting all work under the Dust Control Program from February 1st to August 15th, a qualified biologist shall survey for nesting birds in the vicinity of work areas. These surveys shall be performed no more than seven days prior to the start of work.
    - If nesting birds are found during surveys, the OHMVR Division shall establish a buffer zone around the nest until the young have fledged. The size of the buffer shall be determined by the qualified biologist, and shall depend on the species and topography, but would generally be 300 feet for raptors and 50 feet for other bird species.
  - Prior to starting all work under the Dust Control Program in suitable burrowing owl habitat areas in the backdunes from September 1st through February 28th, a qualified biologist shall survey for potential burrows in the vicinity of the work area.
    - If small mammal burrows are detected, the biologist shall scan the area for burrowing owls and will search for signs of burrowing owls including feathers, whitewash, or pellets.
    - If any occupied burrows are detected, the OHMVR Division shall establish a minimum 100-foot buffer zone around the occupied burrow.
    - If no burrowing owls or signs of burrowing owls are detected, no further action is required.
  - The OHMVR Division has designed the project to avoid western snowy plover and California least tern habitat (generally flat, unvegetated, or sparsely vegetated sand near the shoreline); however, some activities may occur in the vicinity of these species. To the extent feasible, the OHMVR Division shall perform Dust Control Program work activities in the vicinity of western snowy plover and California least tern habitat from October 1 through February 28, which is outside of the nesting season for these species. If work activities must be conducted March 1 through September 30, the OHMVR Division would implement the following measures:
    - No more than three days prior to starting work in the vicinity of western snowy plover and California least tern habitat from March 1st to September 30th, a qualified biologist shall survey for western snowy plover and California least tern

nests. If nests are found during this survey, the OHMVR Division shall establish a minimum 300-foot buffer zone around the nest.

- If nesting activity is initiated within 300 feet of in-progress or installed project activities, the OHMVR Division shall stop all active work and install a large (200-foot diameter) fence bump-out (if it is near an existing exclosure) or circular single nest exclosure (if it is not near any existing exclosure) consisting of 2-inch by 4-inch mesh wire fencing with a height of 5 feet (8 inches buried) to protect the nest from people and predators. No additional dust control activities shall be performed within 300 feet of such exclosure until after the nest fate is determined.
- A biologist shall be available to monitor for the presence of nesting activity throughout the installation of all dust control measures. The on-site biological monitor shall have the authority to halt any action that might result in impacts to individual birds or nests. If work is stopped, the USFWS shall be notified immediately by the on-site biological monitor.

- The OHMVR Division shall plan and design Dust Control Program activities to avoid changing breeding habitat in the vicinity of known or potential snowy plover and least tern nesting areas. Program activities that could facilitate predator movement into known or potential nesting areas for plover and tern shall be minimized. If avoidance is not feasible, additional predator control resources (e.g., enhanced monitoring and/or trapping) shall be secured to reduce predator presence and impacts to plover and tern adults, juveniles, chicks, and nests.

- **Minimize and/or Avoid Impacts to American Badger and Badger Dens.** No more than seven days prior to installation of project features, a qualified biologist shall perform a pre-construction survey for badger dens in the vicinity of work areas. If any dens are found, the OHMVR Division shall establish a minimum 100-foot buffer zone around the den.

- **Minimize and/or Avoid Impacts to Wetland Habitats.** The OHMVR Division would implement the following measures to minimize and/or avoid impacts wetland habitats:
  - The OHMVR Division will avoid or minimize impacts to federally protected wetlands to the maximum extent feasible by conducting work in upland areas.
  - If necessary, the OHMVR Division shall verify the Pacific Ocean's high tide line in the vicinity of Pier Avenue and Grand Avenue and ensure the installation and placement of all piles, beams, or other track-out prevention structures occur above the high tide line.
  - The OHMVR Division shall not install any project features within wetlands or other jurisdictional waters, and shall setback all project features a minimum of 150 feet from all such areas.
  - The OHMVR Division shall not perform any equipment maintenance within 150 feet of any wetland or jurisdictional water where equipment fuel, oil, etc. could enter the such areas.
  - The OHMVR Division shall not allow water containing mud, silt, or other pollutants to be placed in locations that may be subjected to high storm flows.
  - Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to

vegetation or wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil.

- When operations are completed, any excess materials or debris shall be removed from the work area.
- To minimize disturbance to the work area, the OHMVR Division shall limit crew size, number of vehicles and equipment, and access points.

- **Employee education.** If, in the opinion of the project biologist, a work area is in or near an area that is known or has the potential to support listed species, all construction personnel shall receive training on listed species and their habitats by a USFWS-approved biologist. The importance of these species and their habitat as well as the minimization and avoidance measures that are to be implemented as part of the project will be described to all employees.
- **Avoid Open Trenches.** If track-out prevention installation results in open trenches, the OHMVR Division shall cover such trenches at the close of each working day with plywood or similar materials, or shall include escape ramps constructed of earth fill or wooden planks so that animals may exit the trench. A staff biologist, or other staff trained by a staff biologist will inspect trenches and pipes for wildlife at the beginning of each workday. If a trapped animal is discovered, it will be released in suitable habitat at least 300 feet from the work area.

7.3.3 Potential Impacts on Special-Status Species

As described in Section 7.2.2.1 and Section 7.2.2.2, as well as Appendix B, many special-status plant and wildlife species are known to or have a moderate to high potential to occur in the Dust Control Program Area. In general, Dust Control Program activities would have the potential to impact these special-status species. The OHMVR Division would plant vegetation, deploy wind fencing, straw bales, and dust and meteorological monitoring equipment, and install track-out prevention devices. As described in Section 2.3, these activities would require the use of heavy equipment to transport materials to work sites, place materials on or in the ground, and maintain and remove temporary facilities.

Impact BIO-1: The Dust Control Program could result in direct and/or indirect impacts on special-status plants and their habitat.

Dust Control Program activities would have the potential to result in direct and indirect effects on special-status plant species and their habitat. Direct effects could include trampling or removal during work activities. Indirect effects could include habitat alteration (i.e., changing species composition as a result of altered wind, sand transport, moisture content, etc.).

The Program's potential to impact special-status plants or their habitat would vary depending on where Program activities take place; however, the exact location of the proposed Dust Control Program vegetation, straw bales, etc. is not known. In general, the potential magnitude of impacts on special-status plants will be lowest when dust control activities take place in open sand habitat because these areas support little to no dune vegetation or habitat for special-status plant species. As Program activities approach the edge of vegetation islands and other vegetated areas, such as parts of the Program area within the Phillips 66 leasehold area or within the extended tree planting area, the potential to impact special-status plants and their habitat would increase. Both vegetation islands and the contiguously vegetated areas in the Phillips 66 leasehold and the extended tree planting areas are known to or considered to have a moderate to

high potential to contain or provide habitat for special-status plants, including, but not limited to, crisp monardella, dune larkspur, and Nipomo Mesa lupine. Work activities, in particular the deployment of temporary monitoring sites upwind, downwind, and adjacent to Dust Control Program vegetation, wind fencing, and straw bales, could slightly overlap vegetation islands and vegetated areas and result in the removal of a minor amount (less than 0.5 acres in the Program area) of common, native dune vegetation (e.g., silver dune lupine). Tree plantings within the extended tree planting area could result in trampling or removal of Nipomo Mesa lupine. The OHMVR Division does not anticipate and is not proposing to impact listed special-status plant species.

SPRs incorporated into the Program include pre-work surveys for all special-status plants, flagging and protection for all special-status plants, establishment of 25-foot avoidance areas around all special-status plants, and restoration of disturbed, non-listed special-status plant areas. These SPRs would be performed by a qualified biologist, and would render Impact BIO-1 less than significant.

It is noted that planting approximately 100 acres of native dune vegetation may provide new habitat for locally-common CRPR plants. For example, planting efforts that could create or increase dune mat or silver dune lupine/mock heather scrub habitats could result in a net benefit to crisp monardella (CRPR 1B.2) and San Luis Obispo monardella (CRPR 1B.2). Planting efforts in open sand areas on the western portion of the Program area may also benefit beach spectacle-pod and may have some benefit to La Graciosa thistle.

Impact BIO-2: The Dust Control Program could result in direct and/or indirect effects on special-status wildlife species and their habitat.

Dust Control Program activities would have the potential to result in direct and indirect effects on special-status wildlife species and their habitat. Direct effects could include habitat loss and harassing, harming, and/or inadvertent trapping, wounding, or killing special-status wildlife species during work activities (including project access). Indirect effects could include habitat alteration or loss (i.e., changing existing habitat to a different type of habitat), increased predation of special-status species, and interference with or loss of reproductive interest and/or success. Given the unique and distributed nature of special-status wildlife species at and in the vicinity of the Dust Control Program area, the magnitude of this impact is considered relatively consistent throughout the Program area:

- Special-status mammals such as American badger can occur in the Program area. American badger is known to occur in vegetation islands and in the eastern part of the Dust Control Program area, in the Phillips 66 leasehold. The proposed Program would not result in the removal of trees or structures that could support roosting bats.
- Special-status amphibian and reptile species such as California red-legged frog, western spadefoot toad, silvery legless lizard, and coast horned lizard may occur throughout the Program area. The potential to encounter these species would be highest in vegetated and/or moist areas; however, these species could be found in open sand areas as they travel on the edge of existing habitat areas or disperse between potential habitat areas. In addition, planting vegetation and deploying straw bales and wind fencing could attract amphibians and reptiles. For example, straw bales in particular may hold and trap moisture both in and under the straw bale that may attract special-status amphibian and reptile species. Finally, though unlikely, temporary trenches associated with the installation of track-out prevention devices on Grand Avenue and Pier Avenue may trap amphibian and reptile species.

- Nesting and special-status birds may forage and/or breed throughout the Program area.

  In general, nesting birds (excepting western snowy plover, and California least tern) would most likely be encountered in or near vegetated areas. In addition to the special-status birds that could breed in or near the project areas, many other common species of native birds also have the potential to breed in and near the Program area; all native birds and their nests are protected by the MBTA and the California Fish and Game Code.

  Burrowing owls have been known to winter in Oceano Dunes SVRA, but have not been observed nesting in the Program area or other parts of Oceano Dunes SVRA (Iwanicha 2016). Burrowing owls occupy small mammal burrows, particularly ground squirrel burrows, year-round and not just during the breeding season. Such burrows are most likely to be present in the Program area in vegetation islands or in the eastern part of the Program area, in the Phillips 66 leasehold.

  Currently, western snowy plover and California least tern breed primarily breed directly west of the Program area. It is possible western snowy plover and California least tern, would be encountered in the western part of the Program area. Although unlikely, western snowy plovers could possibly be encountered throughout the Program area during foraging and wintering activities. California least terns forage over open water and do not winter in Oceano Dunes SVRA. Although the OHMVR Division has developed the Dust Control Program area to avoid critical habitat and seasonal nesting exclosure areas, vegetation – and to a lesser degree wind fencing – that is planted on the western part of the Dust Control Program area could impact active nests by providing habitat for predators to hide and stalk nesting western snowy plovers and California least terns. In addition, protective perimeter fence posts, wind fencing, and some temporary dust and meteorological monitoring equipment would be tall and sturdy enough to provide perching habitat for common ravens, gull species, raptors, or other avian species that could prey on western snowy plover and/or California least tern nests; however, the OHMVR Division has operated the S1 meteorological tower approximately 350 feet west of Oceano Dunes SVRA's seasonal plover exclosure since the 2010/11 breeding season without documented incident of increased predation. Chemical soil stabilizers would solidify sand surfaces and could potentially prevent nesting; however, as mentioned previously the OHMVR Division has developed the Program area to avoid critical habitat and the seasonal nesting exclosure. Soil stabilizers, therefore, are not anticipated to impact nesting birds.

Given their listed status, impacts to California red-legged frog, western snowy plover, and California least-tern would likely be of the greatest magnitude; however, all impacts to special-status wildlife species and their habitat could be potentially significant. SPRs incorporated into the Program include pre-work surveys for all special-status wildlife, removal of species from work areas, and avoidance of nesting birds, including a 300-foot buffer from nesting plovers and terns. In addition, the OHMVR Division is also incorporating SPRs to avoid changing habitat in the vicinity of known or potential snowy plover and least tern nesting areas and to provide additional predator controls for projects that could facilitate predator movement and impacts to plover and tern adults, juveniles, chicks, and nests. These SPRs would be performed by a qualified biologist, and would render Impact BIO-2 less than significant. It is also noted that planting approximately 100 acres of native dune vegetation may provide new habitat for some special-status wildlife species, such as American badger and California red-legged frog, especially if most Dust Control Program vegetation is planted outside the SVRA's open riding and camping area, in the Phillips 66 leasehold.

7.3.4 Potential Impacts on Federally-Protected or Isolated (Porter-Cologne) Wetlands

The majority of the proposed Dust Control Program components (e.g., planting vegetation, deploying seasonal dust control measures) do not have the potential to result in a substantial adverse effect on any federally protected wetland defined by Section 404 of the Clean Water Act or other wetland protected by Porter-Cologne. This is because the 690-acre Dust Control Program area is mostly situated in the mid- to backdune regions of Oceano Dunes SVRA which generally lacks such wetlands or jurisdictional features. In addition, most Program components would be set back from the Pacific Ocean and other wetland habitats; however, the OHMVR Division would install the proposed track-out prevention devices at Pier Avenue and Grand Avenue in close proximity to the Pacific Ocean. These installation activities would require the use of heavy equipment to move earth and install concrete piles, beams, and panels. Black Lake lies in the extended tree planting area; however, tree planting activities would be performed by hand with small seedlings and saplings. Heavy equipment would not be used near Black Lake.

Impact BIO-3: The Dust Control Program's track-out prevention devices could result in direct and/or indirect effects in the tidal zone.

As described in Section 2.3.2.6, the preliminary track-out prevention device design consists of V-shaped, grooved concrete panels that would be between 50 and 125 feet in length. The panels would primarily be located in the Grand Avenue and Pier Avenue roadway, but may extend down the Grand Avenue and Pier Avenue sand ramps. Maintenance of the existing sand ramps has not required a permit from the USACE because the ramps were determined to be located outside the USACE's jurisdiction (Mangionne 2001). At worst case (125 feet in length at Grand Avenue), the proposed concrete panels would extend down to a point between eight and nine feet above mean sea level, which is outside of the mean high tide line (4.1 to 4.7 feet), mean higher high water mark (5.7 feet), and highest predicted tide (6.9) feet associated with the Pacific Ocean (Mangionne 2001, Reese Water and Surveying Services 2001, CDPR 2015, 2016a, 2016b).

The installation and operation of the proposed track-out prevention devices is not anticipated to result in substantial, direct or indirect adverse impacts in the tidal zone for several reasons. First, the OHMVR Division has incorporated requirements to verify the Pacific Ocean high tide line and install all track-out related infrastructure above the high tide line. Second, the installation of the track-out prevention devices would not substantially change the existing conditions in the vicinity of Grand Avenue and Pier Avenue. Under present conditions, vehicles traverse the sand ramps, and sand and other material is blown up the ramp (most of the time); with the track-out prevention devices, some of this sand and other material would be trapped in the V-shaped grooves of the concrete panels until the OHMVR Division performs maintenance on the ramps. In addition, as described in Chapter 9, Hydrology and Water Quality, the OHMVR Division has incorporated SPRs to regularly remove, test, and dispose of sediments that accumulate in the track-out prevention devices, and the OHMVR Division would not spread any sediment below the high tide line. Thus, the proposed track-out prevention devices would be unlikely to indirectly cause sand or other materials to be deposited below the high tide line. This impact is considered less than significant.

7.3.5 Potential Impacts on Sensitive Natural Communities

California's coastal dunes and the vegetation communities they support are generally considered to be sensitive because they support a number of special-status plant and wildlife species, such as those described in Section 8.3, because there are only 27 dune fields remaining in California (CCC 1987), and because they continue to be threatened by a number of factors. In addition, Oceano Dunes SVRA is considered ESHA by the SLO County Local Coastal Program.

Impact BIO-4: The Dust Control Program could impact sensitive, natural dune vegetation.

The Guadalupe Nipomo Dune Complex is one of the largest remaining dune fields in California (CCC 1987). Dune vegetation in the Guadalupe Nipomo Dune Complex is threatened by non-native invasive plants such as European beach grass, veldt grass, and iceplant, OHV use, growth in urban development surrounding the dunes, and potential oil spills and pollution from the Phillips 66 refinery (Ardoin 2004). The proposed Dust Control Program could remove a small amount of sensitive dune vegetation for the installation of temporary dust and meteorological monitoring equipment (less than 0.5 acres); however, planting up to 100 acres of vegetation would offset the small amount of dune vegetation removed. Therefore, this impact is considered to be less than significant. The planting of up to 100 acres of native dune vegetation could result in a beneficial impact to the unique Guadalupe Nipomo Dune Complex.

7.4 REFERENCES

Ardoin, C., 2004. *A Natural History of the Nipomo Mesa Region.* Published by Corrine Ardoin, Santa Maria, California.

Atwood, J.L., and D.E. Minsky. 1983. Least Tern foraging ecology at three major California breeding colonies. Western Birds 14:57-72.

Bender, K. 1974a. California Least Tern census and nesting survey, 1973. Calif. Dept. of Fish and Game, Special Wildlife Investigations, Project W-54-R, Final Report, Job II.11, 7 pp. plus appendix.

Bender, K. 1974b. California Least Tern population and nesting survey, 1974. Calif. Dept. of Fish and Game, Nongame Wildlife Investigations, Project W-54-R, Job II.5.1, 5 pp. plus appendix.

California Burrowing Owl Consortium (CBOC). 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. April.

California Coastal Commission (CCC) 1987. *California Coastal Resource Guide.* University of California Press. November.

California Department of Fish and Wildlife (CDFW) 2016a. Special Animals List.

_____2016b. California Native Plants List.

California Department of Parks and Recreation 2013a. Habitat Conservation Plan for the California Department of Parks and Recreation San Luis Obispo Coast and Oceano Dunes District. Third Administrative Draft. Prepared by TRA Environmental Sciences, Inc. Working Draft, June 2013.

_____ 2015a. Draft Pismo State Beach and Oceano Dunes SVRA Vegetation Mapping Report. Prepared for CDPR, OHMVR Division, Oceano Dunes District by MIG|TRA Environmental Sciences, Inc. Sacramento, CA. 2015.

_____2015b. Habitat Monitoring Report. Oceano Dunes State Vehicular Recreation Area 2011-2014. Prepared by California Department of Parks and Recreation Off-highway Motor Vehicle Division, Oceano Dunes District. August.

_____2015c. Option A Preliminary Site Plan for Oceano Dunes SVRA Track Out Prevention – Grand Avenue and Pier Avenue. Sacramento, Ca. October 2015.

_____2016a. Option B Preliminary Site Plan for Oceano Dunes SVRA Track Out Prevention – Grand Avenue and Pier Avenue. Sacramento, Ca. April 2016.

_____2016b. Option C Preliminary Site Plan for Oceano Dunes SVRA Track Out Prevention – Grand Avenue and Pier Avenue. Sacramento, Ca April 2016.

California Herps, 2016. California Herps: A Guide to the Amphibians and Reptiles of California. Available at: http://www.californiaherps.com/ (accessed June 2016).

California Natural Diversity Database (CNDDB) 2016. California Department of Fish and Game, Biogeographic Data Branch. Last updated June 2016.

California Native Plant Society (CNPS) 2016. Online Inventory of Rare and Endangered Plants. Accessed June 2016 at http://www.rareplants.cnps.org/

Condor Environmental Planning Services, Inc., 2006. Alternative Access Study: Oceano Dunes State Vehicular Recreation Area. Prepared for State of California: Department of Parks and Recreation, Oceano Dunes District. November 15.

Dunk, J. R., 1995. White-tailed Kite (*Elanus leucurus*). In The Birds of North America, No. 178 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and The American Ornithologists' Union, Washington, D.C.

Glick 2013. Ronnie Glick, Senior Environmental Scientist, Oceano Dunes District. Personal communication with Sara Jones, TRA Environmental Sciences. 2013.

Grinnell, J. 1928. A distributional summation of the ornithology of lower California. Univ. of California Publ. Zool. 32:1-300. Ingles, Lloyd G. 1965. Mammals of the Pacific States: California, Oregon, Washington. Stanford, California: Stanford University Press.

Ingles, Lloyd G. 1965. Mammals of the Pacific States: California, Oregon, Washington. Stanford, California: Stanford University Press.

Iwanicha 2016. "Re: Burrowing Owl". Email communication from Joanna Iwanicha, Environmental Scientist, OHMVR Division, to Ronnie Glick, Senior Environmental Scientist, OHMVR Division. June 16, 2014.

Mangionne 2001. Phone communication between Lisa Mangionne, U.S. Army Corps of Engineers and Paula Hartman, TRA Environmental Sciences. October 30, 2001.

Massey, B.W. 1975. California Least Tern census and nesting survey, 1975. Calif. Dept. of Fish and Game (Nongame Wildlife Investigations) and the U.S. Fish and Wildlife Service (Kern Pixley N.W.R. - Endangered Species Program), 5 pp. + Appendix.

McLeod, 2001. Dune Mother's Wildflower Guide: Dunes of Coastal San Luis Obispo and Santa Barbara Counties, California. California Native Plant Society: Sacramento, California.

Reese Water and Surveying Services. *Survey Report Seasonal Tidal Line Location from Historic Data at the Pismo State Beach State Park in San Luis Obispo County, California.* Prepared for the California Department of Parks and Recreation. August 2001.

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evans. 2009. *A Manual of California Vegetation* (2nd edition). California Native Plant Society, Sacramento. 1300 pp.

Shuford, W.D. and Gardali, T., editors, 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field

Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Sibley, D.A., 2000. *The Sibley Guide to Birds*. New York: Chanticleer Press, Inc.

Stebbins, R.C. 1985. *Western Reptiles and Amphibians*. New York: Houghton Mifflin Company.

Stenzel, L.E., S.C. Peaslee, and G.W. Page. 1981. II. Mainland Coast. Pages 6-16 in Page, G.W. and L.E. Stenzel, (eds.). The breeding status of the snowy plover in California. Western Birds 12(1):1-40.

U.S. Fish and Wildlife Service (USFWS), 2000. Endangered and Threatened Wildlife and Plants; Final Rule for Endangered Status for Four Plants from South Central Coastal California. 65 Fed. Reg. 14888.

_____2002. Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*). U.S. Fish and Wildlife Service, Portland, Oregon. viii + 173 pp.

_____2004. Endangered and Threatened Wildlife and Plants; Final Designation of Critical abitat for *Cirsium loncholepis* (La Graciosa thistle); Final Rule. 69 Fed. Reg. 12553.

_____2005. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Pacific Coast Population of the Western Snowy Plover; Final Rule. 70 Fed. Reg. 56969.

_____ 2006. California least tern (*Sternula antillarum browni*) 5-Year Review Summary and Evaluation. U. S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, Carlsbad, California. September.

_____ 2007. Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (*Charadrius nivosus nivosus*). Portland, Oregon. In 2 volumes. Sacramento, California. xiv + 751 pages.

_____2008. *Arenaria paludicola* (Marsh Sandwort) 5-Year Review: Summary and Evaluation. Ventura Fish and Wildlife Office, Ventura, CA. June. http://ecos.fws.gov/docs/five_year_review/doc1932.pdf, accessed May 2013.

_____2009. *Lupinus nipomensis* (Nipomo Lupine) 5-Year Review: Summary and Evaluation. Ventura Fish and Wildlife Office, Ventura, CA. October. http://ecos.fws.gov/docs/five_year_review/doc3219.pdf, accessed May 2013.

_____ 2012a. Critical Habitat Portal. Available online at http://criticalhabitat.fws.gov/crithab/, (accessed October, 2012).

_____2012b. 50 CFR Part 17: Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Pacific Coast Population of the Western Snowy Plover; Final Rule. Federal Registrar, Vol. 77, No. 118. June 19, 2012.

Warriner, J.S., J.C. Warriner, G.W. Page, and L.E. Stenzel, 1986. Mating system and reproductive success of a small population of polygamous Snowy Plovers. Wilson Bull. 98:15-37.

White, Clayton M., Nancy J. Clum, Tom J. Cade and W. Grainger Hunt. 2002. Peregrine Falcon (*Falco peregrinus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/660doi:10.2173/bna.660.

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CHAPTER 8 CULTURAL RESOURCES

8.1 REGULATORY SETTING

8.1.1 The California Environmental Quality Act

CEQA establishes statutory requirements for the formal review and analysis of projects. CEQA recognizes archaeological resources as part of the environment. For the purpose of CEQA, "environment" is defined to include "the physical conditions which exist within the area which will be affected by the proposed project, including objects of historic or aesthetic significance" (PRC §21060.5). A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment (PRC §21084.1). Additionally, if the lead agency determines that a project may have a significant effect on unique archaeological resources, these effects will be addressed in an environmental impact report, or proper mitigations can be made to lessen or avoid impacts all together (PRC §21083.2). Public Resources Code Section 21084.1 and 21083.2 operate independently to ensure that potential effects on archaeological resources are considered as part of a project's environmental analysis. The former applies to archaeological sites which are listed on or eligible for listing on the California Register of Historical Resources (CRHR, see Section 8.1.3), the latter applies to other "unique" archaeological resources. Either of these benchmarks may indicate that a proposed project may have a potential adverse effect on archaeological resources.

An effective determination of whether or not a project will adversely affect archaeological resources is contingent upon supporting baseline data that includes, but is not limited to, archaeological archival research, field work, analyses, and resource evaluations. A record search to determine whether any previously identified resources exist within the project boundary is the first step in determining whether archaeological resources may be present. A record search is conducted at the applicable California Historical Resources Information System (CHRIS). There are 9 regional centers that maintain the State Archaeological Inventory as part of the Historical Resources File System. This system maintains current information on recorded archaeological sites, as well as resources listed in the CRHR. Additional sources of information include colleges and universities within archaeology departments, the local historical or archaeological society, local Native American groups, or appropriate archives and repositories. Most importantly, the Native American Heritage Commission (NAHC) maintains a file of sacred lands that contains information unavailable elsewhere. If the project area has never been surveyed for archaeological resources, the lead agency should require a field survey by a qualified state professional archaeologist to identify, record, and evaluate known archaeological resources within the project boundary.

8.1.1.1 Historical Resources

Pursuant to CEQA Guidelines Section 15064.5 (a) the term "historical resources" includes the following:

1) A resource listed, or determined to be eligible by the State Historical Resources Commission for listing, in the CRHR (PRC §5024.1, 14 CCR, §4850 et seq.).
2) A resource included in a local register of historical resources, as defined in Public Resources Code Section 5020.1 (k) or identified as significant in a historical resource survey meeting the requirements of Public Resources Code Section 5024.1 (g), shall be presumed historically or culturally significant. Public agencies must treat any such

resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (PRC §5024.1, Title 14 CCR, §4852) including the following:

    a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

    b. Is associated with the lives of persons important in our past;

    c. Embodies the distinctive characteristics of type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

    d. Has yielded, or may be likely to yield, information important in prehistory or history.

4) The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC §5020.1(k)), or identified in a historical resources survey (meeting the criteria in PRC §5024.1(g)) does not preclude a lead agency from determining that the resource may be a historical resource as defined by Public Resources Code Section 5020.1(j) or 5024.1.

8.1.1.2 Unique Archaeological Resources

Pursuant to CEQA Guidelines Section 21083.2(g), a unique archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information

2) Has a special and particular quality such as being the oldest of its type or the best available example of its type

3) Is directly associated with a scientifically recognized important prehistoric or historic event or person

The resource must also be at least 100 years old, possess "substantial stratigraphic integrity" (i.e., is predominantly undisturbed); and the resource involves "important research questions that historical research has shown can be answered only with archaeological methods."

To the extent that unique archaeological resources are not preserved in place or not left in an undisturbed state, mitigation measures shall be required (PRC §21083.2(c)). If it is proven that an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment, and no further CEQA review is required (14 CCR §15064.5(d)).

8.1.1.3 Assembly Bill 52 / Cultural Tribal Resources

Assembly Bill (AB) 52, approved in September 2014, creates a formal role for California Native American tribes by creating a formal consultation process and establishing that a substantial adverse change to a tribal cultural resource has a significant effect on the environment. Tribal cultural resources are defined as:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    A) Included or determined to be eligible for inclusion in the CRHR
    B) Included in a local register of historical resources as defined in PRC Section 5020.1(k)
2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1 (c). In applying the criteria set forth in PRC Section 5024.1 (c) the lead agency shall consider the significance of the resource to a California Native American tribe.

A cultural landscape that meets the criteria above may also be a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. In addition, a historical resource described in PRC Section 21084.1, a unique archaeological resource as defined in PRC Section 21083.2(g), or a "non-unique archaeological resource" as defined in PRC Section 21083.2(h) may also be a tribal cultural resource if it conforms to above criteria.

AB 52 requires a lead agency, prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. AB 52 states: "To expedite the requirements of this section, the Native American Heritage Commission shall assist the lead agency in identifying the California Native American tribes that are traditionally and culturally affiliated with the project area."

The requirements of AB 52 apply only to a project that has a notice of preparation or a notice of negative declaration or mitigated negative declaration filed on or after July 1, 2015.

8.1.2 National Register of Historic Places Criteria

The criteria for determining whether a property is eligible for listing in the National Register of Historic Places (NRHP) are found in Title 36 of the Code of Federal Regulations, Section 60.4 and are reproduced below:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and
>
> a. That are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> b. That are associated with the lives of persons significant in our past; or

c. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinctions; or

d. That have yielded, or may be likely to yield, information important in prehistory or history.

For a property to qualify for the NRHP, it must meet at least one of the above National Register Criteria for Evaluation by being associated with an important context and retaining historic integrity of those features necessary to convey its significance.

8.1.3 California Register of Historical Resources

The Office of Historic Preservation (OHP) administers CRHR, which was established in 1992 though amendments to the Public Resources Code, as an authoritative guide to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected from substantial adverse change. The CRHR includes all resources that have been formally determined eligible for, or listed in, the NRHP, State Historical Landmark Number 770 or higher, Points of Historical Interest recommended for listing by the State Historical Resources Commission (SHRC), resources nominated for listing and determined eligible in accordance with criteria and procedures adopted by the SHRC, and resources and districts designated as city or county landmarks when the designation criteria are consistent with CRHR criteria.

Typically, a resource also has to be at least 50 years old to be eligible for listing, although some properties of "exceptional importance" may be eligible even if the period of significance was achieved less than 50 years ago. Additionally, properties must possess several of the seven aspects of integrity to be eligible for listing in the NRHP and/or the CRHR. Integrity is defined as "…the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance" (CAOHP 2006). The seven levels of integrity are location, design, setting, materials, workmanship, feeling, and association. Resources that are listed in the NRHP are automatically eligible for the CRHR (PRC §5024.1(c)).

Both NRHP and CRHR evaluations must be made within an appropriate historic context. A historic context includes three components: a time period, place, and event. A historic context is developed through one or more research themes to help identify the resources' significance at the local, state, or national level. A resources' integrity is based on its ability to convey its significance through data requirements. Data requirements can best be described as evidence found within the archaeological record that conveys the resources' historical significance. If the appropriate data requirements are lacking, the resource arguably lacks significance and is therefore not eligible for listing on an historic register.

8.1.4 California Public Resources Code (PRC)

8.1.4.1 Public Resources Code Sections 5024 and 5024.5

Public Resources Code section 5024 requires each state agency to make a good faith effort to formulate policies to preserve and maintain all state-owned historical resources under its jurisdiction and to submit to the SHPO an inventory of all state-owned structures over 50 years of age under its jurisdiction. Additionally, section 5024 permits the SHPO to determine which historical resources identified in inventories meet NRHP and state historical landmark criteria for inclusion on the master list of historical resources. The SHPO will maintain this master list

comprised of all inventoried structures submitted and determined significant pursuant to Public Resources Code section 5024 (d), along with all state-owned historical resources currently listed in the NRHP or registered as a state historical landmark under state agency jurisdiction. CDPR has had an active and ongoing historic preservation Program with the SHPO since 1982 and is required to submit annual inventory updates as well as preservation and protection measures of historical resources to SHPO (CDPR 2011b; CAOHP 2005).

To comply with Public Resources Code section 5024, state agencies can establish a Cultural Resource Management Program. The OHMVR Division's Program includes Cultural Resource Management Guidelines that ensure that all cultural resources under Division jurisdiction are inventoried, evaluated, monitored, and protected. The Cultural Resource Management Guidelines include the following:

1) In accordance with Public Resources Code sections 5024 and 5024.5, a known cultural resource will be evaluated according to the NRHP and/or the CRHR criteria. A Determination of Eligibility from the SHPO for listing the resource on the NRHP/CRHR will also be obtained for known resources. If resources are determined to be eligible for NRHP/CRHR, protection measures consistent with the Secretary of Interior's Standards for the Treatment of Historic Properties and CEQA will be generated. In the event a complete inventory and/or resource evaluations are not feasible, all known cultural resources will be managed as potentially significant for listing in the NRHP/CRHR in accordance with CDPR policy;
2) Identify significant cultural resources that are in need of data recovery, or are in areas of high risk of impact/vandalism. Initiate a data recovery effort, including surveys, geographic information systems (GIS) mapping, analysis, and documentation to develop specific management guidelines for the monitoring, site treatment and protection of significant cultural resources;
3) Areas with eligible and/or potentially eligible resources should be set aside as educational and scientific areas with limited and/or controlled public access to prevent further destruction of these heritage treasures;
4) Determine the eligibility of cultural resources within proposed project areas prior to construction. If significant cultural resources are discovered within or adjacent to areas that will be affected by planned or proposed activities, the activities will be designed to avoid or minimize impacts to the identified resources. If cultural resources are discovered inadvertently during construction activities, cease construction activities within and in the vicinity of the find and consult an OHMVR Division archaeologist or other qualified cultural resource specialist to determine the potential significance of the find per NRHP/CRHR criteria. If the find is determined to be significant, develop and implement mitigation measures in consultation with the archaeologist consistent with the Secretary of Interior's Standards for the Treatment of Historic Properties, and CEQA. Mitigations could include avoidance, site capping, project redesign, or data recovery;
5) Maintain appropriate confidentiality of all cultural resources in conformance with Government Code 6254 "Restriction of Archaeological Record Disclosure" and 6254.10 "Information Maintained by Department of Parks and Recreation";
6) Consultation with local California Indian tribes and organizations who are culturally affiliated and connected to the area will occur on a regular basis to ensure productive, collaborative working relationships, especially when considering management practices

involving the project area's natural and cultural resources of interest and concern to Native American individuals and communities;

7) Conduct a focused ethnographic study of the project area through archival research and consultation with California Indian tribes and organizations that are culturally affiliated and connected to the area to identify possible traditional cultural properties and additional culturally sensitive and sacred areas; and

8) Conduct a focused archival research on the history of the project area to identify historic context(s) for the historic-era resources located in the project boundary. Identify and record historic buildings, structures, sites, objects, and landscape features for those that lack such documentation. Develop treatment recommendations for significant historic structures and identify compatible and non-compatible uses.

8.1.4.2 Public Resources Code Section 5090

Public Resources Code Section 5090.35(f) requires the OHMVR Division to monitor and protect cultural and archaeological resources within State Vehicular Recreation Areas.

8.1.4.3 Public Resources Code Section 5097.5

Public Resources Code Section 5097.5 states, "It is illegal for any person to knowingly and willfully excavate or remove, destroy, injure, or deface cultural resources." Furthermore, the crime is a misdemeanor punishable by a fine not to exceed $10,000 and/or county jail time for up to one year. In addition to a fine and/or jail time, the court can order restitution, and restitution will be granted of the commercial and archaeological value of the property. The OHMVR Division's law enforcement officers are the primary personnel responsible for the protection of OHMVR Division cultural resources on a daily basis.

8.1.5 California Health and Safety Code

Health and Safety Code Section 7050.5 regulates procedures in the event of human remains discovery. Pursuant to Public Resources Code Section 5097.98, in the event of human remains discovery, no further disturbance is allowed until the County Coroner has made the necessary findings regarding the origin and disposition of the remains. If the remains are determined to be Native American, the County Coroner is required to contact the NAHC. The NAHC is responsible for contacting the most likely Native American descendent, who would consult with the local agency regarding how to proceed with the remains.

8.1.6 CDPR Native American Consultation Policy and Implementation

It is CDPR policy to involve Native California Indian groups in all plans and practices that have impacts on the cultural resources under the CDPR's stewardship (CDPR 2007). Prior to implementing projects or policies that may have impacts to Native American sites within the State Park System, CDPR will actively consult with local Native California Indian groups regarding the protection, preservation, and/or mitigation of cultural sites and sacred places in the State Park System. Departmental Notice 2007 *Native American Consultation Policy and Implementation Procedures* (CDPR 2007) identifies the following nine areas of activity where consultation between local Native California Indian groups and California State Parks is required:

1. Acquisition of properties where cultural sites are present
2. During the General Plan process and/or development of Management Plans
3. Planning, design, and implementation of capital outlay projects

4. Issues of concern identified by the tribes
5. Plant and mineral gathering by Native people
6. Access to Native California Indian ceremonial sites
7. Archaeological permitting
8. Mitigation of vandalism and development of protective measures at Native American sites
9. When using the Native voice in presenting the story of California native Indian people in park units

8.1.7 Executive Order B-10-11

In September of 2011, California Governor Edmund G. Brown Jr. filed with the Office of the Secretary of the State Executive Order B-10-11. This Executive Order acknowledges the important relationship that many Native American California Tribes have with their native home of California. As described in the Executive Order, the term "Tribes" includes all Federally Recognized Tribes and additional California Native Americans. The Executive Order affirms that the State of California recognizes and reaffirms the inherent right of these Tribes to exercise sovereign authority over their members and territory. Most importantly, it is ordered that it is the policy of this Administration that every state agency and department subject to Governor Edmund G. Brown's control shall encourage communication and consultation with California Indian Tribes.

8.1.8 California Coastal Act

As described in greater detail in Chapter 5, Land Use and Planning, the California Coastal Act (PRC §30000 et seq.) governs development within the Coastal Zone.

Chapter 2, Section 30116 of the California Coastal Act defines "sensitive coastal resource areas" to mean those identifiable and geographically bounded land and water areas within the coastal zone of vital interest and sensitivity, including archaeological sites referenced in the California Coastline and Recreation Plan or as designated by the State Historic Preservation Officer (SHPO).

Chapter 3 of the Act, Coastal Resources Planning and Management Policies, sets forth the policies that constitute the standards for development subject to the Coastal Act. The applicable standards (or parts of standards) of this chapter related to cultural resources include:

- Reasonable mitigations are required where development would adversely impact archaeological or paleontological resources as identified by the SHPO (PRC §30244)

8.1.8.1 Coastal Development Permit (CDP) 4-82-300

Oceano Dunes SVRA operates pursuant to CDP 4-82-300, issued in 1982 by the CCC, and last amended in 2001. Since CDP 4-82-300 predates the County Local Coastal Program (LCP), the CCC retains permit jurisdiction for activities governed by the permit. CDP 4-82-300, as amended, requires the OHMVR Division to protect archaeological resources located within Oceano Dunes SVRA with fencing.

8.2 ENVIRONMENTAL SETTING

The Dust Control Program area lies within California's Central Coast. The Central Coast of California contains an abundant amount of archaeological evidence suggesting human coastal

and near-shore acclimation has existed within the past 10,000 years, including evidence of human occupation as early as 12,000 to 13,000 years ago (Jones et al. 2007: 125). As described below, the project area contains an extensive amount of previously recorded archaeological sites, all of which were identified during several cultural resource inventories of the area extending as far back as 1958 and up to 2010.

8.2.1 Prehistoric Setting

In general, there are three major prehistoric cultural divisions that are marked by highly distinctive tool assemblages: the Millingstone Culture, the Hunting Culture, and the Late Period (Jones et al. 2007: 135). The earliest documented survey and excavation conducted in areas within and adjacent to the project area were completed by William J. Wallace and Edith S. Taylor in 1958 (Wallace and Taylor 1958). Wallace and Taylor also conducted archaeological excavations of several sites and recovered artifacts such as: projectile points (triangular with a straight to concave base, tapering stem, and a parallel-sided stem), spear points (triangular with an expanding stem), knife blades, flake scrapers, bowl-shaped mortars, cylindrical shaped pestles, and uniface and biface handstones. Based on several temporally diagnostic projectile points, these sites are associated with the Hunting Culture (3000 cal B.C. to cal A.D. 1250) (Wallace and Taylor 1958: 34). A number of additional excavations were conducted on sites following Wallace and Taylor's 1958 study within and adjacent to the project area. Together, these excavation studies conclude the archaeology located within and adjacent to the project area dates between the Early/Middle Hunting Culture, cal. 3000 B.P. and the Late Period, cal A.D. 1250 to 1769.

8.2.2 Ethnographic Setting

The Program area is located within the Northern Chumash or Obispeño and Purisimeño language territory. The terms, "Obispeño" and "Purisimeño" represent a geographic and linguistic subdivision within the greater Chumash cultural family. These names were assigned to the two groups by Europeans in the 18th century to associate them to one of two missions, the San Luis Obispo de Tolosa Mission (est. 1772) or the La Purisima Concepcion (est. 1787) (Greenwood 1978: 520). The Obispeño and Purisimeño populations consisted of both coastal and inland groups.

The Obispeño practiced a regular seasonal round of population dispersal and aggregation in response to the location and seasonal availability of different food resources (Hoover 1990: 9). Prior to European contact, the Obispeño and Purisimeño had occupied and made use of a variety of resources associated with coastal, valley, foothill, and grassland ecological settings for over 9,000 years (Greenwood 1972, Greenwood 1978: 520). They exploited a variety of fish, and shellfish (Pismo clam, mussel, and abalone, etc.). Traps, poles, dipping nets, or fish hook and line were the common tools utilized for fishing in coastal zones, specifically in tidal pools and shallow waters (Fitzgerald et al. 2003: 9; Greenwood 1978: 522). They were also hunters of small and big game. Birds, reptiles, and additional terrestrial animals were also hunted by way of traps, snares, throwing sticks, slings, wooden lances with fire hardened tips or stone points, along with the bow and arrow (Fitzgerald et al. 2003: 10). They also gathered acorns, seeds (acorn, chia), and plants (roots, tubers, greens) (Hoover 1990: 9; Moratto 1984: 118-119).

The material culture of the Chumash illustrates exceptional artistry that can be found in a variety of objects including: shell beads, grave goods, a variety of handstones and millingstones, steatite vessels, baskets, canoes, wooden implements, rock art and fishhooks. All of these objects were manufactured using a variety of mediums including, shell, asphaltum, tule, bone, wood, and

stone, among others (Moratto 1984: 119). The Northern Chumash also used canoes known as a tule balsa for fishing.

In 1770, the total Chumash population totaled between 15,000 and 20,000. A Chumash village could include up to 1,000 residents, representative of the most populous settlement in the aboriginal Far West (Moratto 1984: 119). Villages were not occupied year round and likely disbanded into smaller social groups and dispersed to other areas for seasonal hunting or gathering (Fitzgerald et al. 2003: 10).

There were six major Chumash villages adjacent to the project area. Starting in the north and working southward, these villages include: *Pismu', Chiliquini, Lachito, Stemectatimi* (or *Nipomo*), *Ajuaps* (or *Tmaps*), and *Atajes*. Chumash villages were headed by a chief (*wot* or *wocha*) who embodied an inherited authority over the entire village (Kroeber 1925: 556). Ethnographic documentation explains, through familial ties, that villages could be interconnected with one principal village exercising authority over the additional village(s) (Fitzgerald et al. 2003: 11).

The first of several Spanish encounters with the Obispeño near the present-day proposed Program boundary occurred between 1769 and 1770 during Don Gaspar de Portolá sojourn in the area (Gibson 2002). The Program area encompasses areas that at one time were under the political and social control of Chief Buchon, whose principle village was Shepjato (Gibson 2002: 14). Interactions between the Spaniards and indigenous inhabitants included food provided by villagers in exchange for glass and shell beads (Gibson 2002).

By the early 1800s, the entire Chumash population, with the exception of those who had fled into the mountains and the inland valleys, were incorporated into the mission system (Grant 1978: 505).

The mission period ended in 1834 with the passage of the Secularization Act. Immediately following secularization, all property once under padre control was given over to private hands (Wallace and Taylor 1958: 6). The Chumash, once considered property of the padres, were included in this property exchange. The goal of secularization included transforming mission centers into pueblos, as well as transforming the Chumash into vaqueros (house servants or farm hands) and Mexican citizens (Grant 1978: 507). Despite the fact that small parcels of land were given to the Indians in the 1840s, most Indians lost their property rights through gambling or trade with whites in exchange for whiskey and blankets (Grant 1978: 507). During this period, disease was wide-spread, killing many Chumash; alcoholism also contributed to Indian fatality (Wallace 1971: 5 as cited in Grant 1978: 507).

With the arrival of Anglo-Americans to California in 1847, the Chumash population continued to decline through their exploitation as cheap laborers, by alcohol abuse, and through disease-related deaths. In 1855 120 acres near the Santa Ynez Mission became the permanent settlement for 109 Chumash. This reserve, known as Zanja de Cota, is 75 acres in size and is the smallest official Indian reserve in the state (Grant 1978: 507).

8.2.3 Historic Setting

A large portion of the Portolá exploration occurred in present-day SLO County, and represents the earliest recorded Spanish expedition for the County. Many of SLO County's place names as well as those in Oceano Dunes SVRA were given by Portolá and his crew. The group named present-day Oso Flaco (Spanish for "skinny bear") and Dune lakes after a lean bear they killed in the area (Dart 1978: 10).

The first Mission to be established near the Program area was Mission San Luis Obispo de Tolosa on September 1, 1772 (Robinson 1957: 6). As mentioned earlier, much of the Chumash, as with all of Alta and Baja California Indian groups' populace, tradition, and heritage, among additional cultural customs, were affected during the mission period by way of disease, abuse, and religious conversion. California Indians remained property of California's missions until 1834 when Mexican Congress decreed secularization to be the new law for land in California (Robinson 1957: 10-11). The establishment of SLO and Santa Barbara Counties shortly followed the 1848 Treaty of Guadalupe Hidalgo, at which point California became territory of the United States. The Treaty put an end to a three year long war between the United States and Mexico (Hoover 1990: 21; Robinson 1957: 15, 17).

Between 1886 and 1894 the Southern Pacific Railroad was extended southward starting at San Miguel and ending in San Luis Obispo. The railroad extension not only put San Luis Obispo on the map but it also made the area easier to access than by stagecoaches and large steamers (Robinson 1957: 30-31). The impetus for the town of Oceano was the coming of the long awaited Southern Pacific Railroad to SLO County in 1895 (Hammond 1992: 10-11). The establishment of the railroad triggered the construction of a railroad depot and shortly thereafter a hotel, a store, and a saloon. Following these developments, speculators purchased land around the railroad right-of-way and formed a collective group in charge of surveying the area and mapping the new townsite that is known today as Oceano (Hammond 1992: 11).

The expansive and isolated landscape of the dunes in present-day Oceano Dunes SVRA at one time made for an attractive place to live for a group of wayward individuals known as Dunites. The Dunites included an assortment of people who occupied areas throughout the Oceano dunes beginning in the early 20th century to the mid-1970s. The Dunites sought isolation, solitude, and solace amongst the Oceano dunes. The Dunites either lived alone or in small communities in make-shift homes erected from driftwood and additional locally found resources. The Pismo clam was a popular resource among the Dunites, as well as edible native plants found in areas around Oso Flaco Lake (Hammond 1992:16-17).

Veterans from the Spanish-American War also relocated to the area upon discovering the ideal climate, inexpensive living, solitude, and isolation afforded by the Oceano dunes (Hammond 1992: 17). As the Dunite population grew, the group began identifying much of the Oceano dunes area as coves; places usually named after the people who lived there (Hammond 1992: 21, 30). The events of World War II greatly impacted the Dunites. Following the attack on Pearl Harbor, the government felt California's Central Coast was vulnerable to attack and fortification was necessary. During this time the dunes were closed to visitors, and many Dunites left. (Hammond 1992 as cited in Gruver et al. 2005: 7). Following the war, life in the dunes began to change dramatically. The number of visitors to the dunes increased as people from the San Joaquin Valley came to escape the summer heat (Hammond 1992 as cited in Gruver et al. 2005: 7). Much of the increase in recreation was attributed to the introduction of the Volkswagen into America during the 1960s. The Volkswagen could be easily modified into an ideal vehicle to recreate in the sand, and in only a few short years they became the most frequent off-road vehicle to inundate the Oceano dunes. The Volkswagen was just one of the many new developments in off-road vehicle manufacturing that influenced the recreation in the Oceano dunes (Hammond 1992: 114). The last Dunite, Bert Schievink, left the dunes in 1974. The Dunite cabins have long since vanished under sand, and those that did not disappear below the surface were burned for fun by the public (Hammond 1992: 114, 117).

8.2.4 Cultural Resource Inventory

8.2.4.1 Record Search

Portions of the Dust Control Program area (approximately 79 acres of the 985-acre Program area[16]) were previously surveyed during the 2009 to 2010 Oceano Dunes District cultural resource inventory (Perez 2011). This cultural resource inventory occurred in compliance with Public Resources Code section 5024 and was completed by archaeologists with the OHMVR Division and the Archaeology, History & Museums Division. Members of the Northern Chumash community also participated during the field work.

Pre-field research for this current EIR consisted of consulting the OHMVR Division cultural resource library and the Oceano Dunes District cultural resource geo-database. Both the cultural resource library and the geo-database contain the pre-field research, archaeological field results, and post-field cultural resource inventory report for the 2009-2010 Oceano Dunes District cultural resource inventory.

Additional pre-field research included a record search of areas within the current Program area that were not included in the 2009-2010 Oceano Dunes District cultural resource inventory at the Central Coast Information Center (University of California, Santa Barbara) of CHRIS (CDPR Associate State Archaeologist Alicia Perez on December 7, 2012). The record search also included areas within a quarter-mile radius from the proposed Program boundary. The Central Coast Information Center, an affiliate of the OHP, is the official state repository of archaeological and historical records and reports for a two-county area that includes SLO and Santa Barbara Counties.

Other files and documents referenced in this record search include:

- State Historic Property Data Files;
- National Register of Historic Places;
- National Register of Determined Eligible Properties;
- California Historical Landmarks;
- California Points of Historic Interest;
- OHP Archaeological Determinations of Eligibility; and
- Caltrans State and Local Bridge Surveys.

A record search of NAHC sacred files was also requested on January 9, 2013. A search of the NAHC Sacred Lands Files indicated the presence of Native American cultural sites within portions of the Program area. A request for a Native American contact list of the Program area was also requested at this time. Native American individuals/organizations listed on the NAHC contact list were contacted by CDPR through certified letter, email and phone call. Representatives from Northern Chumash Tribal Council (NCTC), Santa Ynez Tribal Elders Council, yak tityu tityu - Northern Chumash Tribe, and the Odom family requested to be included in the Native American consultation for the Dust Control Program. On behalf of the NCTC, Mr. Fred Collins sent a comment letter to CDPR on February 7, 2013. CDPR sent a

[16] The 985 acre area includes the primary, 690-acre Program area where most activities would occur and the 295-acre potential tree planting area.

response to the NCTC on February 19, 2013. CDPR also provided representatives of the NCTC, Santa Ynez Tribal Elders Council, yak tityu tityu - Northern Chumash Tribe, and the Odom family copies of the *Oceano Dunes SVRA Dust Control Program Initial Study* and the *A Cultural Resource Inventory of Oceano Dunes SVRA, San Luis Obispo County, California* report.

CDPR hosted a Native American consultation meeting at the Oceano Dunes District on March 28, 2013. CDPR staff, including Brent Marshall, Oceano Dunes District Superintendent, Ronnie Glick, Project Manager and Oceano Dunes District Senior Environmental Scientist, and Alicia Perez, OHMVR Division Associate State Archaeologist, attended the meeting along with representatives from NCTC and Santa Ynez Tribal Elders Council, yak tityu tityu - Northern Chumash Tribe. To summarize, the meeting objectives were to provide the consulting Northern Chumash Native American community with a project description, a cultural resource overview of the project area, and a synopsis of the cultural resource management recommendations and mitigation measures that would be included in the cultural resources section of the EIR, specifically an accidental cultural resource discovery plan, a Native American human remains discovery plan, and the inclusion of Native American monitoring and participation. The last meeting objective was to provide the Native American community with a forum in which they could submit their concerns/comments about the project to CDPR. In conclusion, the Native American participants all agreed that they wanted to be informed and consulted with during all phases of the project; CDPR will continue to keep them informed as the project continues.

8.2.4.2 Field Surveys

Sand dune systems are mobile and susceptible to movement. Thus, the process of relocating previously recorded sites and locating new cultural resources within Pismo State Beach and Oceano Dunes SVRA is difficult. Given the mobile dune environment, it is common for a resource to be identified in an area where no resources were previously noted. Additionally, the sand dune terrain makes it difficult to adequately walk in methodically measured transects as is the standard for an archaeological pedestrian field survey of an entire Program boundary.

Field work was not conducted specifically for this Program EIR; however, the OHMVR Division has performed two recent surveys within the Program area. The first survey is the 2009 – 2010 Oceano Dunes District cultural resources inventory (Perez 2011). The areas that were archaeologically surveyed during the 2009-2010 inventory were chosen based on a predictive model adapted from previous archaeological surveys of areas within the project boundary. This model was based on two notable environmental characteristics; abundance of water and dune build-up (Hoover 1975; Hoover 1977). Through a number of archaeological field investigations, Hoover concluded that prehistoric habitation sites will likely be found in areas with plenty of water and behind large dune formations that provide protection against harsh wind. Harsh wind also affects archaeological sites by moving, deflating, and re-depositing artifacts and features. Areas with vegetation such as vegetation islands help bond the sand as well as archaeological sites in place and thereby making it easier for archaeologists to identify habitation areas on the landscape. Following this predictive model, a total of 1,180 acres were surveyed during the 2009 to 2010 Oceano Dunes District cultural resource inventory, approximately 79 acres of which are within the Dust Control Program area.

The archaeological field survey portion of the 2009-2010 inventory focused on the following two objectives: (1) to locate and update all previously identified resources on DPR 523 forms; and (2) to survey only vegetated areas in the park unit for new resources. The field crew used previously documented DPR 523 site location maps along with GPS units to drive directly to the location of previously recorded sites. Once located, the site boundary was surveyed by at least

two people using approximately 50-foot-wide (15-meter) transects to locate and record all previously recorded site features, artifacts and cultural constituents, and an updated site description was recorded on DPR 523 site record forms. The site location was recorded using GPS, and a site sketch map was also drawn using GPS equipment. Photographs were also taken of the site. Additionally, site elements not previously identified, including features, artifacts, and cultural constituents, were recorded. Site change and/or disturbances related to either natural (wind erosion, animal burrowing, etc.) or visitor use were also documented.

The second survey occurred in April 2013 (Perez 2013a). Archaeological and Native American monitoring during the installation of the dust control equipment was conducted by Elise Wheeler and Matthew Goldman on May 2, 8, and 16, 2013. As a result of the archaeological monitoring Program, all culturally sensitive areas were avoided during this 2013 monitoring project. The results of the project monitoring were recorded in an archaeological monitor report (Perez 2013b). CDPR provided copies of the archaeological survey and archaeological monitor reports to representatives of the NCTC, Santa Ynez Tribal Elders Council, yak tityu tityu - Northern Chumash Tribe, and the Odom family. The project concluded in October 2013.

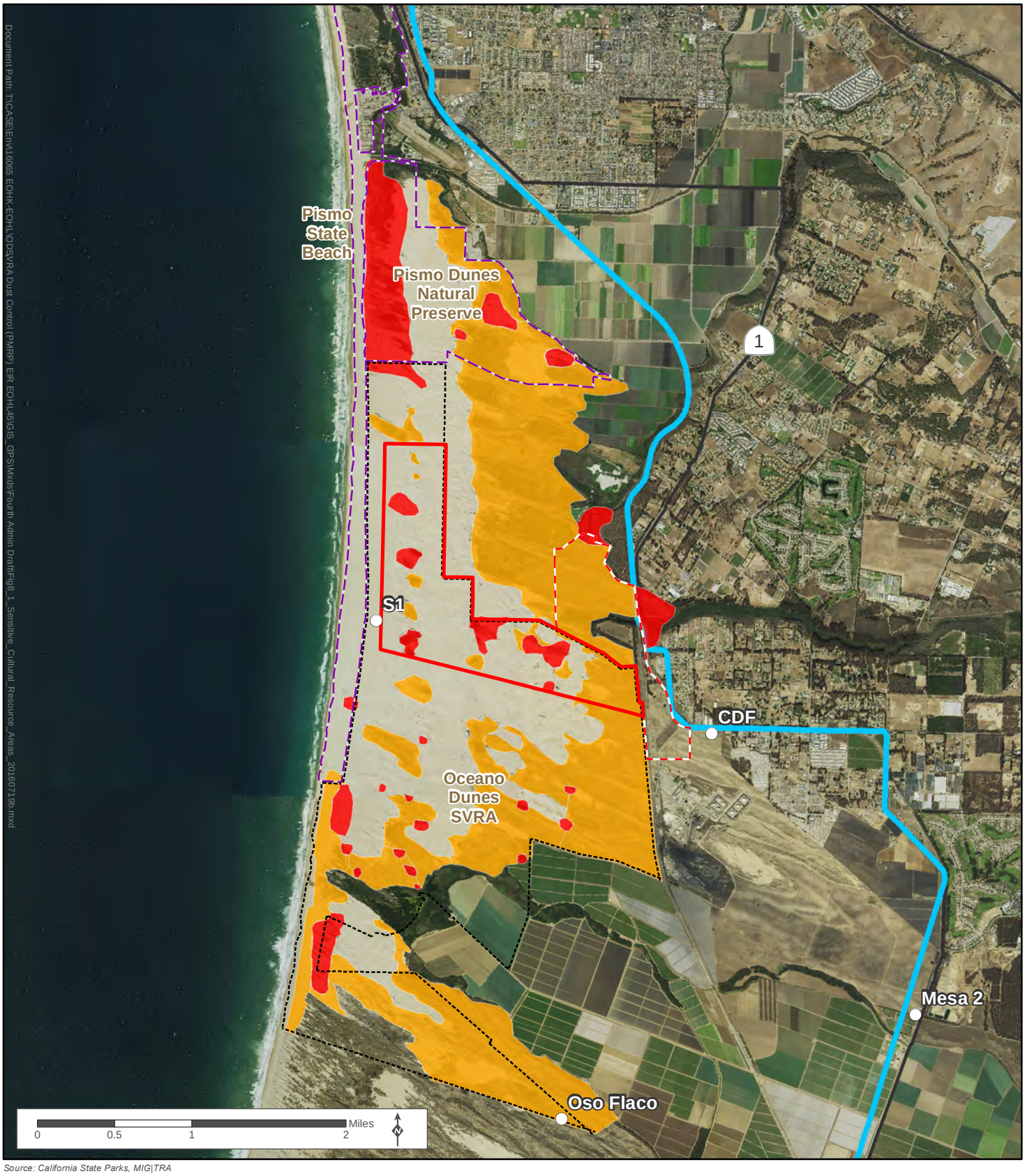
8.2.4.3 Inventory Results – Potential Historical Resources in the Program Area

Records search results are summarized in Appendix C (Table C-1). The record search indicated there are nine sites consisting of prehistoric shell midden and lithic scatter sites. Two of the nine previously recorded sites could not be located (that is, observed in the field) during the 2009-2010 cultural resource survey or subsequent field visit.

The potential historical resources in the Dust Control Program area are described and summarized in Appendix C (Table C-2). Based on the record search and field surveys, only three of the seven recorded sites within the Program area that could be located (that is, observed in the field) during subsequent field surveys are likely potential historical resources eligible for listing in either the NRHP and/or the CRHR as defined by Public Resources Code Section 15064.5(a). The remaining four recorded sites require further archaeological research (excavation) to determine site eligibility and integrity for listing in either Register. The method used to determine a resource's eligibility to either Register is based on its ability to yield significant data about the prehistory of the area.

CDPR cannot disclose maps that depict confidential archaeological site information, which includes all data that falls under an exemption to the California Public Records Act, or any other similar federal or state law, and are protected by the Information Practices Act, or by any other federal or state law regarding public disclosure of information. This includes archaeological data that are either specific enough or of a nature that their disclosure will put one or more archaeological sites or resources in danger of being located and/or damaged, should the information deliberately or inadvertently be made available to the public or to unauthorized individuals. Professional qualifications for access to confidential archaeological site information include individuals who meet the Secretary of Interior Standards or who hold a position as either a California State Associate State Archaeologist or California State Historian II.

Although CDPR cannot provide a map depicting the specific location of each cultural resource located within the Program area, Figure 8-1 depicts the areas of moderate and high cultural resource sensitivity within the Dust Control Program area.



Source: California State Parks, MIG|TRA

- Proposed Dust Control Program area (688 acres)
- Potential tree planting area (295 acres)
- Oceano Dunes SVRA
- Pismo State Beach
- Coastal Zone boundary
- Existing air quality monitor
- High cultural sensitivity
- Medium cultural sensitivity

Figure 8-1 Dust Control Program Area - Sensitive Cultural Resource Areas

8.3 PROGRAM IMPACTS

8.3.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, the proposed Oceano Dunes SVRA Dust Control Program would have a significant environmental impact related to cultural resources, if it would:

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

8.3.2 Standard and Specific Project Requirements

As discussed in Section 3.1, the OHMVR Division is incorporating Standard and Specific Project Requirements (SPRs) into the planning, design, and implementation of the Dust Control Program. In compliance with Public Resources Code Section 5024 and Section 5024.5 and CDPR's Departmental Notice 2007 *Native American Consultation Policy and Implementation Procedures,* SPRs that would avoid or minimize the potential adverse aesthetic effects of the Program include:

- **Minimize Project Ground Disturbance and Land Occupancy.** The OHMVR Division shall:
  - Design and implement the Dust Control Program to disturb and occupy as little land as possible
  - Prior to the start of Dust Control Program-related work activities (e.g., installation of dust control measures, monitoring equipment maintenance), the OHMVR Division shall determine the minimum area required to complete the work and define the boundaries of the work area on project drawings and with flagging or fencing on the ground, as appropriate
  - To the maximum extent feasible, use existing paths of travel to access project-related work areas
  - Restore all disturbed areas to the maximum extent feasible
- **Inventory Cultural Resources.** Prior to the start of specific Dust Control Program-related work activities (e.g., installation of dust control measures, monitoring equipment maintenance), a state-qualified archaeologist shall, to the extent necessary and not already completed:
  - Conduct a records search of the project boundary
  - Conduct a field survey to locate any historical and archaeological resources in the project boundary
  - Map and record all historical and archaeological resources within the project boundary to a level appropriate to the Secretary of Interior Standards
  - If historical or archaeological resources are identified, the project shall not proceed until a state-qualified archaeologist has determined whether the site is an historical or

unique archaeological resource as defined pursuant to CEQA Guidelines Section 15064.5 and Public Resources Code Section 21083.2 (g)

- **Monitor Cultural Resources.** If the OHMVR Division determines an archaeological resource is an historical resource, it shall then determine if the project will have a substantial adverse change to the significance of the resource. If the OHMVR Division determines that the project will not adversely change the significance of the historical resource, the project can proceed without mitigation, but the OHMVR Division will, as necessary, first consult with and involve a Native American representative, and a qualified archaeological and Native American monitor will be present during all installation activities within the vicinity of the resource.
- **Avoid Cultural Resources.** To avoid substantial adverse changes to cultural resources, a state-qualified archaeologist shall, prior to the start of specific Dust Control Program-related work activities (e.g., installation of dust control measures, monitoring equipment maintenance):
  - Review any ground disturbing activities that disturb soil to a depth of more than 24" below grade. If it is determined that buried resources could be present in or near work areas, the specialist shall conduct appropriate trenching and/or pre-construction excavations, as necessary, to delineate the resource
  - Coordinate with the Oceano Dunes District Project Manager and any necessary contractors to review and identify resources that must be protected
  - Flag and or fence a 50-foot buffer around all cultural resources in the vicinity of work activities (this measure is to be implemented at the discretion of the qualified cultural resource specialist, and shall be removed at the conclusion of work activities)
  - Train construction personnel in cultural resources identification and avoidance measures
- **Avoid Impacts from Accidental Discoveries.** In the event cultural resources are accidentally discovered during work activities, the OHMVR Division shall:
  - Stop all work and immediately have the resource evaluated by a qualified state archaeologist. In the event the find is determined to be a historical or unique archaeological resource, the qualified archaeologist shall develop avoidance measures to protect the resource. Work could continue in other parts of the project area while historical or unique archaeological mitigations take place (14 CCR §15064.5(f)).
  - If human remains are accidently discovered, activities at the find site must come to a complete stop and no further excavation or disturbance of the area or vicinity will occur. The San Luis Obispo County coroner is to be called immediately to determine if the remains are of Native American ancestry. If the coroner confirms that the remains are Native American, within 24 hours of the discovery the coroner is to contact the NAHC. The Commission will identify the person(s) believed to be the Most Likely Descendent (MLD), and the MLD will decide, along with the property owner, on appropriate treatment or disposal of the human remains and associated grave goods as provided in Public Resources Code 5097.98. If the NAHC cannot identify the MLD, the MLD fails to make a recommendation, or the property owner rejects the MLD's recommendations, the property owner can rebury the remains and

associated burial goods in an area not subject to ground disturbance (14 CCR §15064.5(e)).

- **Native American Consultation and Monitoring.** The OHMVR Division will continue to consult and involve Native American representatives during near and long-term project implementation. Regular consultation with California Indian Tribes and organizations that are culturally affiliated and connected to the region will ensure productive and collaborative working relationships, especially when considering substantial adverse changes to culturally sensitive resources. In compliance with CDPR's Native American consultation policy, the OHMVR Division will provide Tribes 90 days to review and consult on all projects that may result in a substantial adverse change to a culturally sensitive area.
- **Preserve Cultural Resources in Place.** The OHMVR Division shall, to the maximum extent feasible and supported by Dust Control Program data, preserve cultural resources in place and avoid substantial adverse changes to historical and archaeological resources by:
  - Planning for Dust Control Program activities to avoid areas with moderate or high cultural resource sensitivity.
  - Implementing Dust Control Program activities in a manner that avoids potential indirect adverse changes resulting from the siting of Dust Control Program activities. This could include, but is not limited to:
    - Ensuring adequate paths of travel are maintained around or between dust control measures and historical or archaeological resources.
    - Ensuring existing protection measures are appropriate in light of potential changes in recreation use near resource areas. If existing measures are not appropriate, the OHVMR Division shall upgrade the measures to provide the appropriate level of protection and avoidance.

8.3.3 Potential Impacts to Historical or Archaeological and Paleontological Resources

Pursuant to CEQA Guidelines Section 5064.5(b), a substantial adverse change in the significance of an historical resource because of a project is defined as "the demolition, destruction, relocation, or alteration of a resource or its immediate surroundings such that its significance is materially impaired." In general, a historical resource's significance is materially impaired when it can no longer convey its historical significance and therefore can no longer justify its inclusion in, or eligibility for, inclusion in the CRHR, the local register of historical resources pursuant to Public Resources Code Section 5020.1(k), or its identification in an historical resources survey meeting the requirements of Public Resources Code Section 5024.1(g). To determine the significance of impacts to archaeological resources because of a project CDPR will follow the specifications provided in CEQA Guidelines Section 15064.5(c).

As described in Section 8.2.4, a records search identified nine cultural resources within the Program area, seven of which were located during cultural resource field surveys in 2009-2010. In general, the proposed Dust Control Program could impact one or more of these seven cultural resources or encounter other cultural resources (i.e., one or more of the two recorded sites that were not located (that is, not observed in the field) during surveys or other unknown resources); however, the installation, operation, and maintenance of the proposed track-out prevention devices does not have the potential to impact recorded resources because there are no such resources present in these areas.

Impact CUL-1: The Dust Control Program could disturb cultural resources at Oceano Dunes SVRA.

Under the Dust Control Program, the OHMVR Division would plant vegetation and deploy wind fencing, straw bales, and monitoring equipment on and in the ground. These activities could require the use of heavy equipment to bring materials to project sites (e.g., dust control area, monitoring location) and/or to place materials on the ground (e.g., straw bale). The OHMVR Division would also install some equipment and materials into the ground. For example, anchor rods may be used to support equipment and prevent it from moving in the wind, and the OHMVR Division would install fencing around project components as necessary. These activities could result in a substantial adverse change in known and unknown historical and/or archaeological resources within the Program area if they were to occur at or near these resources. The potential for this to occur varies throughout the Program area as described below. In addition, because some of the proposed dust control measures and monitoring equipment may be conspicuous, they may indirectly increase the amount of vehicular and non-vehicular recreation occurring in the vicinity of these resources as a result of visitor interest in the proposed Dust Control Program activities.

Based on past field surveys and a records search conducted for the Program (see Section 8.2.4), the OHMVR Division has identified that approximately 190 acres of the approximately 690-acre Program area have a moderate or high cultural resource sensitivity (see Figure 8-1). Most of these moderate to highly sensitive cultural resource areas are located on the eastern half of the Program area, and primarily consists of inland, vegetated dunes. In general, within these areas, the OHMVR division could plant vegetation and deploy straw bales and monitoring equipment.

Within the Dust Control Program area, there are few open sand areas that have moderate or high cultural resource sensitivity. Open sand areas that are culturally sensitive and open to vehicle activity are present southeast of marker post 5 (see Figure 8-1). The OHMVR Division could plant vegetation or deploy wind fencing and monitoring equipment within this area.

As listed in Section 8.3.2, the OHMVR Division would incorporate SPRs to inventory, monitor, and avoid cultural resources, including a specific project requirement to preserve cultural resources in place and avoid indirect impacts by planning to avoid cultural resources and evaluating the suitability of existing protective measures. These SPRs require the OHMVR Division to examine the proposed project's specific dust control and monitoring sites prior to beginning any work at these sites and to consult with Native American representatives and the SHPO on projects that may have a potential adverse change to culturally sensitive resources. If necessary, these measures also require appropriate monitors to be on-site during installation activities, and provide for additional evaluations should resources be accidentally discovered during installation activities. The implementation of these SPRs would avoid potential adverse changes to cultural resources and render Impact CUL-1 less than significant.

The Dust Control Program area consists primarily of sand dune complexes that have formed and migrated over time into the present day. Given the dynamic nature of the active portions of these dune systems, the Dust Control Program has a low potential to destroy a unique paleontological resource such as fossils. Although unlikely, Dust Control Program activities could disturb a previously unknown unique paleontological resource. The potential for this disturbance is low, and the SPRs described in Section 8.3.2 above include provisions for monitoring and accidental discoveries that would also project paleontological resources. The implementation of these SPRs would render potential impacts to paleontological resources a less than significant impact.

8.3.4 Potential Impacts to Human Remains

Based on past field surveys and a records search conducted for the Program (See Section 8.2.4 above and Appendix E), Native American human remains have been identified within the general Oceano Dunes SVRA, but no human remains have been identified within the Dust Control Program area.

Impact CUL-2: The Dust Control Program could disturb human remains within Oceano Dunes SVRA.

Dust Control Program activities could disturb unknown human remains during the installation of measures and equipment into the ground; however, as described in Section 8.3.2, in the event that human remains are discovered, the OHMVR Division would protect the find and evaluate it for significance (see SPRs for Accidental Discoveries). If the human remains are determined to be of Native American ancestry by the county coroner, Native American consultation with the MLD would occur. If the MLD cannot be identified or fails to recommend treatment options, or the property owner rejects the MLD's recommendations, the property owner can rebury the remains and associated burial goods in an area not subject to ground disturbance (14 CCR §15064.5). The implementation of this SPR would render Impact CUL-2 less than significant.

8.4 REFERENCES

California Department of Parks and Recreation (CDPR) 2007. *Departmental Operations Manual*. Native American Consultation Policy & Implementation Procedure. California Department of Parks and Recreation, Archaeology, History, and Museums Division, Chapter 4.

Dart 1978. Louisiana Clayton Dart. *Vignettes of History in San Luis Obispo County*. San Luis Obispo, CA.

Fitzgerald et al 2003. Fitzgerald, Richard T., Jennifer M. Farquhar, and Nancy L. Farrell. *Archaeological Data Recovery at CA-SLO-809, Nipomo, San Luis Obispo County, California*. Cultural Resource Management Services. Submitted to The Vons Companies, Inc. Copies available from DPR, OHMVR Division, Sacramento, CA.

Gibson 2002. Robert O. Gibson. A *Preliminary Review of Chumash Ethnohistoric Data for the Oceano Dunes Recreation Area Cultural Resource Assessment San Luis Obispo County, CA.* Submitted to DPR, OHMVR Division. Copies available from DPR, OHMVR Division, Sacramento, CA.

Grant 1978. Campbell Grant. "Chumash: Introduction". In *Volume 8 California Handbook of North American Indians*, edited by Robert F. Heizer pp. 505-508. Smithsonian Institution, Washington, DC.

Greenwood 1972. Roberta S. Greenwood. "9000 Years of Prehistory at Diablo Canyon, San Luis Obispo County, California". *San Luis Obispo County Archaeological Society Occasional Papers* 2. San Luis Obispo, CA.

Greenwood 1978. Roberta S. Greenwood. "Obispeno and Purisimeno Chumash". In *Volume 8 California Handbook of North American Indians. E*dited by Robert F. Heizer pp. 520-523. Smithsonian Institution, Washington, DC.

Hammond 1992. Norm Hammond. *The Dunites*. South County Historical Society. Arroyo Grande, CA.

Hoover 1975. Robert L. Hoover, Ph.D. "Notes on Northern Chumash Ecology and Settlement Patterns". In *Archives of California Archaeology*, edited by Robert E. Schenk, pp. 75. Society for California Archaeology, Anthropology Museum, San Francisco State College, San Francisco, CA.

Hoover 1977. Robert L. Hoover, Ph.D. *The Archaeology of Pismo State Beach: Excavations of SLO-199*. Submitted to the Department of Parks and Recreation. Copies available from the Central Coast Information Center, University of California, Santa Barbara, Santa Barbara, CA.

Hoover 1990. Robert L. Hoover, Ph.D. *Archaeological Resources of the Nipomo Dunes Preserve*. Submitted to The Nature Conservancy, Contract No. CAFO-0005. Copies available from the Central Coast Information Center, University of California, Santa Barbara, Santa Barbara, CA.

Jones et al. 2007. Jones, Terry L., Nathan E. Stevens, Deborah A. Jones, Richard T. Fitzgerald, and Mark G. Hylkema. "The Central Coast: A Midlatitude Milieu." In *California Prehistory*, edited by Terry L. Jones and Kathryn A. Klar pp. 125-145. Altamira Press, Lanham, Maryland. 2007.

Kroeber 1925. A.L. Kroeber. Handbook of the Indians of California. *Bureau of American Ethnology* Bulletin 78.Washington D.C. Reprinted 1976, Dover Press.

Moratto 1984. M. J.Moratto. *California Archaeology*. Academic Press. Orlando, FL. 1984.

Perez 2011. Alicia C. Perez. *A Cultural Resource Inventory of Oceano Dunes SVRA, San Luis Obispo County, California*. CDPR, OHMVR Division. Submitted to CDPR, OHMVR Division. Copies available from CDPR, OHMVR Division, Sacramento, CA.

_____2013. *Dust Control Temporary Monitoring Program*. Archaeological Survey Report. CDPR, OHMVR Division. Submitted to CDPR, OHMVR Division. Copies available from CDPR, OHMVR Division, Sacramento, CA. 2013.

Robinson 1957. W.W. Robinson. *The Story of San Luis Obispo County*. Title Insurance and Trust Company. San Luis Obispo, CA.

Wallace 1971. Patricia Wallace. "A Short History of the Chumash from 1834-1900". (Unpublished Paper in Possession of Robert F. Heizer, University of California, Berkeley, CA).

Wallace and Taylor 1958. William J., and Edith S. Taylor. *Archaeological Investigations in the Arroyo Grande Creek Watershed, San Luis Obispo County, California*. Department of Anthropology of the University of Southern California, Los Angeles, California. 1958.

CHAPTER 9 HYDROLOGY AND WATER QUALITY

9.1 REGULATORY SETTING

9.1.1 Federal Clean Water Act of 1972

The primary federal law regulating water quality is the Clean Water Act (CWA), administered by the USEPA. The purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters through prevention and elimination of pollution.

The CWA applies to discharges of pollutants into Waters of the U.S.[17] The CWA establishes a framework for regulating storm water discharges from municipal, industrial, and construction activities under the National Pollutant Discharge Elimination System (NPDES). The CWA sections most relevant to this analysis are summarized below. In some instances, the U.S. EPA delegates its authority for implementing the CWA in California to the State Water Quality Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCB).

- Section 303(d) of the CWA requires states, territories, and authorized tribes to develop a list of water bodies that are considered to be "impaired" from a water quality standpoint. Water bodies that appear on this list do not meet water quality standards even after the minimum required levels of pollution control technologies have been implemented to reduce point sources of pollution. In turn, the law requires that respective jurisdictions (i.e., RWQCBs) establish priority rankings for surface water bodies on the list and develop action plans, referred to as total maximum daily loads (TMDLs), to improve water quality. The California SWRCB publishes the list of water-quality limited segments in California.
- Section 401 of the CWA requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. obtain a state certification that the discharge complies with other provisions of the CWA. The California Water Resources Control Board administers the certification Program within California through its nine RWQCBs.

[17] For purposes of the Clean Water Act, "Waters of the United States" means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(b) All interstate waters, including interstate "wetlands";

(c) All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters otherwise defined as waters of the United States under this definition;

(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;

(f) The territorial sea; and

(g) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition

- Section 402 of the CWA establishes the NPDES permit Program to regulate the discharge of pollutants from point sources. The CWA defines point sources of water pollutants as "any discernible, confined, and discrete conveyance" that discharges or may discharge pollutants. These are sources from which wastewater or storm water is transmitted in some type of conveyance (pipe and channel) to a water body; they are classified as municipal or industrial. Municipal point sources consist primarily of domestic treated sewage and processed water, including municipal sewage treatment plant outfalls and storm water conveyance system outfalls. These outfalls contain harmful substances that are emitted directly into Waters of the U.S. Without a permit, the discharge of pollutants from point sources into Waters of the U.S. is prohibited. NPDES permits require regular water quality monitoring. Assessments must be completed to ensure compliance with the permit standards.
- In 1990, the U.S. EPA promulgated regulations for permitting storm water discharges from industrial sites (including construction sites that disturb five acres or more) and from municipal separate storm sewer systems (MS4s) serving a population of 100,000 people or more. These regulations, known as the Phase I regulations, require operators of medium and large MS4s to obtain storm water permits. On December 8, 1999, U.S. EPA promulgated regulations, known as Phase II regulations, requiring permits for storm water discharges from Small MS4s and from construction sites disturbing between one and five acres of land.
- A Small MS4 is an MS4 that is not permitted under the municipal Phase I regulations (40 CFR §122.26(b)(16)). Small MS4s include systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares, but do not include separate storm sewers in very discrete areas, such as individual buildings. (40 CFR§122.26(b)(16(iii).) This permit refers to MS4s that operate throughout a community as "Traditional MS4s" and MS4s that are similar to traditional MS4s but operate at a separate campus or facility as "Non-traditional MS4s."
- Federal regulations allow two permitting options for storm water discharges: individual permits and general permits. The SWRCB elected to adopt a statewide general permit for Small MS4s in order to efficiently regulate numerous storm water discharges under a single permit. The existing General Permit (Water Quality Order 2003-0005-DWQ) was adopted by the SWRCB in April 2003 for a 5-year permit term. The existing General Permit expired in May 2008; however, it continues in force and in effect until rescinded by the SWRCB, or until a new Order is issued. The Order regulates storm water runoff from small municipalities and other facilities, including federal and State operated facilities that can include universities, prisons, hospitals, military bases (e.g. State Army National Guard barracks, parks and office building complexes.). All MS4s have to prepare a Storm Water Management Plan (SWMP) containing detailed BMPs and specific level-of-implementation information reviewed and approved by the permitting agency before the permittee obtains coverage under the General Permit. Pismo State Beach and Oceano Dunes are Non-traditional MS4s. Thus, the OHMVR Division will be required to prepare a SWMP for Pismo State Beach and Oceano Dunes SVRA
- Section 404 of the CWA establishes a permit Program, administered by the U.S. Army Corps of Engineers (USACE), regulating discharge of dredged or fill materials into waters of the U.S., including wetlands. Activities in waters of the U.S. that are regulated

under this Program include fills for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and conversion of wetlands to uplands for farming and forestry. CWA section 404 permits are issued by USACE.

9.1.2 Porter Cologne Water Quality Act and Basin Plan

Division 7 of the California Water Code is the basic water quality control law for California. This law is titled the Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The Porter-Cologne Act establishes a regulatory Program to protect water quality and to protect beneficial uses of state waters. The implementation of the Porter-Cologne Act is principally characterized in each RWQCB's Basin Plan. These Basin Plans set forth the water quality criteria by which all waters of the state within the Region are measured. "Waters of the state" means any surface water or groundwater, including saline waters, within the boundaries of the state. Oceano Dunes SVRA is under the jurisdiction of the Central Coast RWQCB.

The most recent Basin Plan for the Central Coastal Basin is from June, 2011. The objective of the Basin Plan is to show how the quality of the surface and ground waters in the Central Coast Region should be managed to provide the highest water quality reasonably possible. The Basin Plan lists the various water uses (Beneficial Uses), describes the water quality which must be maintained to allow those uses, describes the Programs, projects, and other actions which are necessary to achieve the standards established in the plan, summarizes SWQCB and RWQCB plans and policies to protect water quality, and describes statewide surveillance and monitoring Programs as well as regional surveillance and monitoring Programs.

9.1.3 Construction General Permit

A General Permit for Discharges of Storm Water Associated with Construction Activity according to Construction General Permit Order 2009-0009-DWQ is required for a project that disturbs one or more acres of soil. Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must list best management practices (BMPs) the discharger will use to protect storm water runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring Program; a chemical monitoring Program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. The proposed project would disturb more than one acre of soil and a SWPPP containing suitable BMPs will be prepared and implemented for the project.

9.1.4 Fish and Game Code Section 1600 (Streambed Alteration)

Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by the CDFW under Sections 1600-1616 of the California Fish and Game Code. Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term stream, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term stream can include

ephemeral streams, dry washes, water courses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance, if they support aquatic life, riparian vegetation, or stream dependent terrestrial wildlife (CDFG Environmental Services Division, 1994). Riparian is defined as "on, or pertaining to, the banks of a stream;" therefore, riparian vegetation is defined as, "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFG Environmental Services Division, 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFW.

9.1.5 OHMVR Division Best Management Practices Manual for Erosion and Sediment Control

The OHMVR Division's BMP Manual provides guidance for selecting and implementing BMPs at OHV recreational facilities, including methods to minimize the impacts of erosion, sedimentation, and other non-storm water pollutants on water quality resulting from park operations and maintenance activities.

9.1.6 Oceano Dunes SVRA Spill Prevention Control and Countermeasure Plan

The Oceano Dunes SVRA Spill Prevention Control and Countermeasure Plan (SPCC) covers Oceano Dunes District fueling stations, auto shops, and field operations. The plan is regularly updated to reflect conditions in the field and new health and safety requirements.

9.1.7 California Coastal Act

As described in greater detail in Chapter 5, Land Use and Planning, the California Coastal Act (PRC §30000 et seq.) governs development within the Coastal Zone.

The Coastal Act defines the term "sensitive coastal resource areas" to mean those identifiable and geographically bounded land and water areas within the coastal zone of vital interest and sensitivity (PRC §30116). In addition, the Coastal Act defines "wetland" to mean land within the coastal zone which may be covered periodically or permanently with shallow water, and includes saltwater marshes, freshwater marshes, open or closed brackish marshes, swamps, mudflats, and fens (PRC §30121).

Chapter 3 of the Coastal Act, Coastal Resources Planning and Management Policies, sets forth the policies that constitute the standards for the adequacy of local coastal Programs and development subject to the Coastal Act (PRC §30200 et seq.). This chapter of the Coastal Act establishes the following standards:

- Marine resources shall be maintained, enhanced, and where feasible, restored (PRC §30230)
- Special protection shall be given to areas and species of special biological or economic significance (PRC §30230)
- Use of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes (PRC §30230)
- The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and

entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams (PRC §30231)

- Protection against spills of oil, gas, petroleum products, or hazardous substances shall be provided for during development or transportation of such materials, and effective containment and clean-up facilities and procedures shall be provided for accidental spills that do occur (PRC §30232).

9.2 ENVIRONMENTAL SETTING

9.2.1 Regional Climate and Precipitation

The Dust Control Program area has a Mediterranean climate characterized by year-round mild temperatures of little diurnal fluctuation, moist winters, and warm dry summers. As a result of the influence of the Pacific Ocean, temperatures along the coast remain moderate during the summer and the winter. Along the immediate coast during the summer months, a band of low clouds often occurs. This cloudy zone moves inland during the night and early morning hours and recedes offshore during the day. Along the coast of California, wind predominately blows from the west and northwest. These prevailing wind patterns are most pronounced during the spring (March to June). During this period, it is common for hourly average wind speeds to exceed 20 miles per hour or more in the project area from approximately mid-morning to late afternoon, with little to no variation in the prevailing wind direction. The winds become light and variable at night and in the early morning hours. Average annual precipitation varied from 19.3 to 28.2 inches and average temperature varies from 57.7 and 58.6 degrees Fahrenheit from 2004 to 2010. More recent precipitation data from 2011-2015 reflects the recent drought suffered by all of California. Annual precipitation from 2011 to 2015 was approximately 15.7 inches, 8.5 inches, 6.0 inches, 14.1 inches, and 8.3 inches, respectively (CIMIS 2016).

9.2.2 Local Watershed

The eastern portion of the Dust Control Program area is contained within the Oso Flaco Creek watershed. The Oso Flaco Creek watershed contains about 7,400 acres, nearly all of which consist of prime agricultural land. Oso Flaco Creek flows into Oso Flaco Lake and ultimately to the Pacific Ocean. The portion of the Meadow Creek – Frontal Pacific Ocean watershed that contains the Program area consists of high sand dunes with a high infiltration rate draining to groundwater and ultimately to the Pacific Ocean.

The Dunes Lakes complex is outside, but adjacent to, the Dust Control Program area and the Meadow Creek – Frontal Pacific Ocean watershed. The Dune Lakes complex is primarily comprised of coastal and valley freshwater marshes, with the exception of Black Lake, which contains deepwater, lacustrine habitat. The Dune Lakes Complex includes Jack Lake, Lettuce Lake, Willow Lake, Pipeline Lake, Celery Lake, Hospital Lake, Big Twin Lake, White Lake, Mud Lake and Black Lake. Black Lake Canyon is a component of the Meadow Creek – Frontal Pacific Ocean watershed. Black Lake Canyon (approximately 1,555 acres) is approximately four miles in length and traverses the Nipomo Mesa along an east to west axis where it drains into Black Lake. Black Lake has no outlet. Water quality in these creeks and lakes is generally impacted by urban and agricultural activities in the surrounding region.

The Pacific Ocean shoreline and the areas around the Dune Lakes are in the FEMA 100-year floodplain (SLO County 2008). In addition, as described in Section 7.2.1.4, the Pacific Ocean is generally adjacent to the Dust Control Program area, including areas where the OHMVR

Division would install track-out devices. The Pacific Ocean has a mean high tide of between 4.1 and 4.7 feet, with a mean higher-high water mark of 5.4 feet and a highest predicted tide of approximately 6.9 feet (Mangionne 2001, Reese Water and Surveying Services 2001).

The Dust Control Program area is adjacent to the Lopez Dam failure inundation zone (SLO County 2009).

9.3 PROJECT IMPACTS AND MITIGATION MEASURES

Consistent with CEQA and the CEQA Guidelines Appendix G, this EIR focuses on the potentially significant direct and indirect impacts that could result from implementation of the proposed Oceano Dunes SVRA Dust Control Program, as described in Chapter 2. The OHMVR Division has determined, based on the characteristics of the Dust Control Program and the environmental conditions described in Section 9.2, that:

- The Dust Control Program does not have the potential to result in a substantial depletion of groundwater supplies or interfere substantially with groundwater recharge because the Dust Control Program would not alter or modify ground water irrigation wells or substantially increase impervious surfaces.
- The Dust Control Program does not have the potential to result in substantial erosion, siltation, or on- or off-site flooding because the Dust Control Program would not alter the existing water courses or drainage patterns in the area and would not substantially increase impervious surfaces.
- The Dust Control Program does not involve the construction of housing units and therefore would have no potential to place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or FIRM or other flood hazard delineation map (FEMA 2012).
- The Dust Control Program does not have the potential to place structures within a 100-year flood hazard area which could impede or redirect flood flows because the Dust Control Program area is not within any 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or FIRM or other flood hazard delineation map (FEMA 2012).
- The Dust Control Program does not have the potential to expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of dam or levee failure, because the Dust Control Program area is not located within a flood hazard area or dam inundation zone (FEMA 2012).
- The Dust Control Program area does not have the potential to expose people or structures to inundation by seiche, tsunami, or mudflow because the Dust Control Program area is not located within a seiche or tsunami hazard zone and does not contain slopes where mudflows could occur (FEMA 2012).

For these reasons, these issues are not discussed further in this EIR. The potentially significant impacts that could result from implementation of the Dust Control Program are described in Section 9.3.3 below.

9.3.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, the Dust Control Program would have a significant environmental impact related to hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements

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

9.3.2 Standard and Specific Requirements Incorporated Into the Project

As discussed in Section 3.1 the OHMVR Division is incorporating Standard and Specific Project Requirements (SPRs) into the planning, design, and implementation of the Dust Control Program. Consistent with the OHMVR Division's BMP Manual for Erosion and Sediment Control and the Oceano Dunes District SPCC, SPRs that would avoid or minimize the potential adverse hydrologic effects of the Program include:

- **Minimize Ground Disturbance and Land Occupancy.** The OHMVR Division shall:
  - Design and implement the Dust Control Program to disturb and occupy as little land as possible
  - Prior to the start of Dust Control Program-related work activities (e.g., installation of dust control measures, monitoring equipment maintenance), the OHMVR Division shall determine the minimum area required to complete the work and define the boundaries of the work area on project drawings and with flagging or fencing on the ground, as appropriate
  - Use existing paths of travel to access project-related work areas
  - Restore all disturbed areas to the maximum extent feasible
- **Manage Seasonal Dust Control Measure Stockpiles.** The OHMVR Division shall locate stockpiles of seasonal dust control measures such as straw bales at least 50 feet away from concentrated storm water flows.
- **Designate Vehicle and Equipment Storage, Staging, and Clean-up Locations.** The OHMVR Division shall store, stage, and clean-up all vehicles and equipment used for Dust Control Program-related work activities at its maintenance yard on SR 1 in Oceano when not in use.
- **Designate Vehicle and Equipment Fueling Locations.** The OHMVR Division shall store all fuel and conduct all re-fueling activities at its maintenance yard on SR 1 in Oceano.
- **Inspect for Equipment Leaks.** The OHMVR Division shall inspect all off-road and other construction equipment for leaks prior to and at the conclusion of any installation, operation, or maintenance activity. If leaks are observed, the leaking equipment shall be removed from the field and repaired immediately. All contaminated water, sludge, spill residue, or other hazardous compounds discovered during inspections shall be contained and disposed of, as necessary, at lawfully permitted or authorized disposal sites.
- **Soil Stabilizer Selection:** If soil stabilizers are used, the OHMVR Division shall, in consultation with CCC staff, select a non-toxic, environmentally friendly soil stabilizer to control sand transport. The selection should take into consideration a variety of factors including but not limited to: surface runoff carrying suppressants and/or breakdown of products, uptake of dust suppressants by plants, ingestion of dust suppressant constituents by animals, volatilization, transport of suppressant particulates by wind erosion to

unintended areas, consumption of contaminated groundwater, downwind drift of spray off-site during application, and ingestion of dust suppressant constituents by humans.

- **Track-Out Device Installation:** The OHMVR Division shall, to the maximum extent feasible, minimize disturbance to or disruption of any existing storm water flows, drainage facilities, and systems on Grand Avenue in Grover Beach and Pier Avenue in Oceano. This may be accomplished by, but not limited to, installing track-out prevention devices that have the potential to interfere with or disrupt storm water facilities during the dry season (April 15 to October 15) or provide temporary storm water drainage facilities during track-out installation. If necessary, the OHMVR Division shall prepare a Storm Water Pollution Prevention Plan for track-out prevention device installation and obtain all necessary permits for installation, operation, and maintenance of the track-out prevention devices.
- **Regularly Remove, Test, and Dispose of Sediment from Track-out Prevention Devices.** The OHMVR Division shall:
  - Regularly remove the sediment that accumulates in any sediment trapping devices, oil/water separators, or other track-out prevention devices to ensure storm water flows do no back-up or spill out into local storm water collection systems or the beach.
  - Inspect and, if necessary, test the sediment collected by track-out prevention devices for the presence of pollutants such as fuel, oils, or other waste and appropriately disposed of in accordance with solid and/or hazardous waste regulations.

9.3.3 Potential Impacts from Violating Water Quality Standards, Waste Discharge Requirements, and Storm Water Drainage and Runoff

The Dust Control Program involves the use of heavy equipment and transport vehicles that contain fuels and fluids which could leak during the normal course of operation as well as during accidents and breakdowns. In addition, track-out prevention devices could also capture sediment and other pollutants that require control prior to discharge.

Impact HYD-1: The Dust Control Program could result in spills or other releases of liquid (e.g., fuel, oil) and solid materials (e.g., sediment, straw bales) that could impact water quality.

The OHMVR Division would use existing vehicles and equipment to deliver materials and install, maintain and, if necessary, remove dust control measures, monitoring equipment, and track-out prevention devices. These vehicles and equipment already operate at and in the vicinity of the Dust Control Program area; under the proposed Program, the use of this equipment could increase slightly as a result of new dust control measures that would occur in the Program area. To access Oceano Dunes SVRA, these vehicles would need to cross the mouth of Arroyo Grande Creek. Vehicles and equipment contain petroleum products (gasoline, diesel and oil) in fuel tanks and oil pans that, if released, could directly enter or migrate into surface or ground water sources and impair water quality or the biological productivity of these waters. Once installed, seasonal dust control materials such as straw bales and wind fencing would be subject to strong winds that could blow materials into nearby water bodies. This risk is considered low, as the prevailing winds in the area generally blow materials inland where they would be captured in vegetated areas or dune troughs and deteriorate over time. In addition, track-out prevention devices may collect petroleum products and/or other materials and debris that fall from vehicles during the shaking process or are blown into the device by wind.

The use of soil stabilizers has been shown to result in similar water quality as compared to water-only control tests on untreated soils in the majority of parameters evaluated (EPA 2008). Some products resulted in higher total suspended solid (TSS) (quantity of sediments suspended in the water column) values which affects water clarity. Since the soil stabilizer application area consists of vast dune system, there is virtually no opportunity for surface runoff from the application sites and therefore very little chance for suspended solids from soil stabilizer applications to become suspended in storm water runoff. Total dissolved solids (TDS) (inorganic solids dissolved in water such as mineral salts) concentrations for several products were also found to be significantly higher than control tests; however the coastal environment is already subject to and adapted for increased salt exposure. No toxicity to fish was observed in any dust suppressant runoff. Some toxic effects to freshwater invertebrates were noted for some samples, however most samples showed no significant impacts. Physical entrapment of invertebrates was also noted, however these were observed in the water column (pools of water), which again would not be present in the Program area.

Oso Flaco Lake is on the Central Coasts Water Board's 303(d) Impaired Waters List, however it is located over 1 mile from the Program area would not be affected by proposed Program activities.

The OHMVR Division is not proposing to place fill or any other material in regulated waters, or perform any activities on tide lands or other lands subject to California State Lands Commission jurisdiction. In addition, Program activities would not take place in or immediately adjacent to creeks or wetlands. Black Lake lies in the extended tree planting area; however, tree planting activities would be performed by hand with small seedlings and saplings. Heavy equipment would not be used near Black Lake. The OHMVR Division is incorporating requirements to minimize project disturbance, designate equipment staging and fueling areas, inspect vehicles and equipment for leaks, manage stockpiles, and control discharges from track-out prevention devices (see Table 2-5). These SPRs avoid and minimize the risks associated with the release of fluids or other liquid and solid materials into the environment. The OHMVR Division also has existing protocols in place to address spill responses and storm water pollution prevention. Impact HYD-1 is considered a less than significant impact of the Program. Please see Chapter 7, Biological Resources, for a discussion of the Dust Control Program's potential impacts on federally-protected waters of the U.S from the installation of track-out prevention devices.

9.4 REFERENCES

California Department of Parks and Recreation (CDPR) 2007. *Departmental Operations Manual*. Native American Consultation Policy & Implementation Procedure. California Department of Parks and Recreation, Archaeology, History, and Museums Division, Chapter 4.

California Irrigation Management Information System (CIMIS) 2016. Daily data for Station 202. <http://www.cimis.water.ca.gov/>

Federal Emergency Management Agency (FEMA) 2012. Flood Insurance Rate Map Number 06079C159G and 06079C1584G. November 16, 2012.

Mangionne 2001. Phone communication between Lisa Mangionne, U.S. Army Corps of Engineers and Paula Hartman, TRA Environmental Sciences. October 30, 2001.

Reese Water and Surveying Services. *Survey Report Seasonal Tidal Line Location from Historic Data at the Pismo State Beach State Park in San Luis Obispo County, California.* Prepared for the California Department of Parks and Recreation. August 2001.

San Luis Obispo County 2008. FEMA-FIRM Flood Hazard Map. Department of Planning & Building, Geographic Technology Section. August 28th. Available online at: http://www.sloplanning.org/gis/mapimagepdf/flood.pdf, (accessed December, 2012).

_____2009. Natural Hazard Map: Dam Failure Inundation Zones. Department of Planning & Building, Geographic Technology Section. April 30th. Available online at: http://www.sloplanning.org/gis/mapimagepdf/damfail.pdf, (accessed December, 2012).

United States Environmental Protection Agency (U.S. EPA) 2005. *Environmental Technology Verification Report Dust Suppression Products Midwest Industrial Supply, Inc.'s EnviroKleen.* EPA cooperative agreement no. CR829434-01-1. Research Triangle Park, NC. September 2005.

CHAPTER 10 NOISE

10.1 BACKGROUND INFORMATION ON NOISE ACOUSTICS

Noise is defined as unwanted sound. Airborne sound is the rapid fluctuation of air pressure above and below atmospheric pressure. The frequency (pitch), amplitude (intensity or loudness), and duration of a sound all contribute to the effect on a listener, or receptor, and whether or not the receptor perceives the sound as "noisy" or annoying.

Sound levels are usually measured and expressed in decibels (dB). A dB is a unit of measurement that indicates the relative amplitude (i.e., intensity or loudness) of a sound, with 0 db corresponding roughly to the threshold of hearing for the healthy, unimpaired human ear. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 dBs represents a ten-fold increase in acoustic energy, while 20 dBs is 100 times more intense, 30 dBs is 1,000 times more intense, etc. In general, there is a relationship between the subjective noisiness or loudness of a sound and its intensity, with each 10 dB increase in sound level perceived as approximately a doubling of loudness. Due to their logarithmic basis, decibels cannot be directly added or subtracted together using common arithmetic operations:

$$50\ decibels + 50\ decibels\ \neq 100\ decibels$$

Instead, the combined sound level from two or more sources must be combined logarithmically. For example, if one noise source produces a sound power level of 50 dBA, two of the same sources would combine to produce 53 dB as shown below.

$$10 * \ 10\log\left(10^{\left(\frac{50}{10}\right)} + \ 10^{\left(\frac{50}{10}\right)}\right) = 53\ decibels$$

In general, when one source is 10 dB higher than another source, the quieter source does not add to the sound levels produced by the louder source because the louder source contains ten times more sound energy than the quieter source.

Humans generally can hear sounds with frequencies between 20 and 20,000 hertz (Hz); however, most of the sounds humans are normally exposed to do not consist of a single frequency, but rather a broad range of frequencies perceived differently by the human ear. Instruments used to measure sound, therefore, include an electrical filter that enables the instrument's detectors to replicate human hearing. This filter, known as the "A-weighting" or "A-weighted sound level" filters our low and very high frequencies, giving greater weight to the frequencies of sound to which the human ear is typically most sensitive. See Table 10-1 for a list of the typical human response associated with certain A-weighted noise levels, as well as common noise sources capable of generating such noise levels.

Table 10-1 Typical Outdoor and Indoor Noise Levels		
Common Outdoor Activities	**Noise Level (dBA)**	**Common Indoor Activities**
	-110-	Rock Band
Jet flyover at 1,000 feet		
	-100-	
Gas lawn mower at 3 feet		
	-90-	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	-80-	Garbage disposal at 3 feet
Noise urban area, daytime		
Gas lawnmower, 100 feet	-70-	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	-60-	
		Large business office
Quiet urban daytime	-50	Dishwasher next room
Quite urban nighttime	-40-	Theater, large conference room (background)
Quiet suburban nighttime		
	-30-	Library
Quite rural nighttime		Bedroom at night
	-20-	
		Broadcast/recording studio
	-10-	
Lowest threshold of human hearing	-0-	Lowest threshold of human hearing
Source: Caltrans, 2009		

Sound levels vary over time. To describe the time-varying nature of environmental noise, several sound descriptors are used. The L1, L10, L50, and L90 descriptors are used to describe the sound levels exceeded 1%, 10%, 50%, and 90% of the time the measurement was performed. The continuous equivalent noise level (Leq) descriptor is used to represent the average character of the sound over a period of time. The Leq represents the level of steady-state noise that would have the same acoustical energy as the sum of the time-varying noise measured over a given time period. Leq is useful for evaluating shorter time periods over the course of a day. The most common Leq averaging period is hourly, but Leq can describe any series of noise events over a given time period.

When considering environmental noise, it is important to account for the different responses people have to daytime and nighttime noise. In general, during the nighttime, background noise levels are generally quieter than during the daytime but also more noticeable due to the fact that household noise has decreased as people begin to retire and sleep. Noise exposure over the course of an entire day is described by the day/night average sound level, DNL (or Ldn), and the community noise equivalent level, or CNEL, descriptors. Both descriptors represent the 24-hour noise impact on a community. For Ldn, the 24-hour day is divided into a 15-hour daytime period (7 AM to 10 PM) and a 9-hour nighttime period (10 PM to 7 AM) and a 10 dB “penalty” is added to measure nighttime noise levels when calculating the 24-hour average noise level. For example, a 45 dBA nighttime sound level would contribute as much to the overall day-night

average as a 55 dBA daytime sound level. The CNEL descriptor is similar to Ldn, except that it includes an additional 5 dBA penalty for noise events that occur during the evening time period (7 PM to 10 PM). The artificial penalties imposed during Ldn and CNEL calculations are intended to account for a receptor's increased sensitivity to noise levels during quieter nighttime periods.

The energy contained in a sound pressure wave dissipates and is absorbed by the surrounding environment as the sound wave spreads out and travels away from the noise generating source. The strength of the source is often characterized by its "sound power level." Sound power level is independent of the distance a receiver is from the source and is a property of the source alone. Knowing the sound power level of an idealized source and its distance from a receiver, sound pressure level at the receiver point can be calculated based on geometrical spreading and attenuation (noise reduction) as a result of distance and environmental factors, such as ground cover (asphalt vs. grass or trees), atmospheric absorption, and shielding by terrain or barriers.

10.1.1 Noise Effects

Noise effects on human beings are generally categorized as:

- Subjective effects of annoyance, nuisance, and/or dissatisfaction
- Interference with activities such as speech, sleep, learning, or relaxing
- Physiological effects such as startling and hearing loss

Most environmental noise levels produce subjective or interference effects; physiological effects are usually limited to high noise environments such as industrial manufacturing facilities or airports.

Predicting the subjective and interference effects of noise is difficult due to the wide variation in individual thresholds of annoyance and past experiences with noise; however, an accepted method to determine a person's subjective reaction to a new noise source is to compare it the existing environment without the noise source, or the "ambient" noise environment. In general, the more a new noise source exceeds the ambient noise level, the more likely it is to be considered annoying and to disturb normal activities.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dB are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5 dB increase is generally perceived as a distinctly noticeable increase, and a 10 dB increase is generally perceived as a doubling of loudness that would almost certainly cause an adverse response from community noise receptors.

10.1.2 Vibration

Vibration is the movement of particles within a medium or object such as the ground or a building. Vibration may be caused by natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or humans (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, groundborne vibrations may be described by amplitude and frequency. Vibration amplitudes are usually expressed in peak particle velocity (PPV) in inches per second (in/sec). PPV represents the maximum instantaneous positive or negative peak of a vibration signal and is most appropriate for evaluating the potential for

building damage. As with airborne sound, the groundborne velocity can also be expressed in decibel notation as velocity decibels (FTA 2006).

10.2 REGULATORY SETTING

10.2.1 California Vehicle Code

The California Vehicle Code (CVC), Division 16.5, Chapter 6, Article 4, Section 38370 establishes noise limits for OHVs based on the vehicle's date of manufacture. Noise from vehicles manufactured on or after January 1, 1986 is limited to 96 dBA as measured at a distance of 20 inches; the standard is 101 dBA for vehicles manufactured prior to January 1, 1986.

10.2.2 California Coastal Act

As described in greater detail in Chapter 5, Land Use and Planning, the California Coastal Act (PRC §30000 et seq.) governs development within the Coastal Zone.

Chapter 3 of the Act, Coastal Resources Planning and Management Policies (PRC §30200 et seq.), sets forth the policies that constitute the standards for development subject to the Coastal Act. Chapter 3 of the Coastal Act does not contain any policies applicable to noise or vibration.

10.2.2.1 SLO County Noise Level Standards

Chapter 6, Operational Standards, and Chapter 7, Combining Designations, of the SLO County coastal zone land use ordinance establish several operational standards related to noise and noise control, including:

- Section 23.06.044, Exterior Noise Level Standards, and Section 23.06.046, Interior Noise Level Standards, sets the noise standards that shall not be exceeded by a project at affected, noise-sensitive land uses (in the unincorporated areas of the county); however, construction activities and activities conducted in public parks are exempt from these standards as described below.
- Section 23.06.042, Exceptions to Noise Standards, excludes certain sources from the County's noise standards, including activities conducted in public parks, safety signals and warning devices, waste and garbage collection from property devoted to non-residential land uses, and traffic on public roadways to the extent regulation is preempted by state or federal law. In addition, this section excludes construction noise, provided construction activities do not take place:
    - Before 7 AM or after 9 PM any day except Saturday and Sunday
    - Before 8 AM or after 5 PM on Saturday or Sunday

10.2.3 City of Grover Beach General Plan Noise Element

The City of Grover Beach General Plan Noise Element contains noise contour maps designed to help guide the City's land use decisions. The noise element identifies noise levels up to 60 dBA Ldn (or CNEL) are acceptable for residential, theatre, auditorium, and music hall land uses. Noise levels up to 70 dBA Ldn (or CNEL) are acceptable for playground and park land uses; levels up to 75 dBA Ldn are conditionally acceptable for playground and park uses.

10.3 ENVIRONMENTAL SETTING

The existing noise environment within the Dust Control Program area is characterized by natural and man-made sources. Natural sources include waves, wildlife such as bids, and wind. Anthropogenic sources include vehicular traffic (including OHVs), airports, railroads, and

industrial facilities. In general, non-vehicular recreation in Dust Control Program area (such as hiking, biking, camping, horseback riding, wildlife viewing, and beach activities does little to affect ambient noise levels.

10.3.1 Grand Avenue and Pier Avenue Entrances to Pismo State Beach

Anthropogenic noise sources in the vicinity of the Grand Avenue entrance to Pismo State Beach, in the City of Grover Beach, primarily consist of street-legal vehicles entering and exiting Pismo State Beach and the adjacent restaurant activities (Fin's) and are presumed to be in the range of 55 – 60 dBA Ldn. Vehicle and railroad related noise approximately 1,200 feet east of the entrance kiosk, at the intersection of Grand Avenue and SR 1, can be substantial (greater than 100 dBA when trains blow their horn); however these sources have less influence on noise levels at the entrance kiosk. Grand Avenue is not located within any noise contours shown on Figure 1 of the Oceano County ALUP (ALUC 2007).

Anthropogenic noise sources in the vicinity of the Pier Avenue entrance to Pismo State Beach, in the community of Oceano, consist of street-legal vehicles entering and exiting the park and activities associated with the commercial and residential land uses that front or are located near Pier Avenue. The type of street-legal vehicles entering and exiting the park varies significantly from small sedans to pick-up trucks with trailers to large self-propelled camping and recreation vehicles. The San Luis Obispo County General Plan Noise Element identifies that noise levels at the edge of Pier Avenue and 60 feet from the centerline are approximately 60 to 65 dBA Ldn, respectively. Pier Avenue is also located within the noise contours shown on Figure 1 of the Oceano County ALUP (ALUC 2007); airplane noise is predicted to be as high as 85 dB during aircraft overflight, which currently occurs approximately 30 times a day (AIRNAV 2016).

10.3.2 Oceano Dunes SVRA and Pismo State Beach

The noise setting of Oceano Dunes SVRA and Pismo State Beach is characterized by the persistent, natural sounds of waves, wildlife (e.g., bird calls), and wind passing over dunes and vegetation and the intermittent, punctuated by recreational activities, including beach camping activities and vehicle recreation (both street-legal and OHV). In addition, the OHMVR Division uses vehicles, equipment, and machines to maintain and administer these parks. This includes equipment use related to existing dust control-related activities in Oceano Dunes SVRA and Pismo State Beach, such as the installation and maintenance of wind fencing and street sweeping (see Section 2.2.7).

When winds are high (approximately 10 miles per hour or higher), which is not uncommon in the Program area, the sound of sand moving along the dune surface and wind rushing past the ear can drown out noise sources that are not in the immediate vicinity of the receiver, but can also reflect sound waves upward and cause them to travel farther than under low-wind conditions. Noise from vehicle recreation is highest in Oceano Dunes SVRA, where the OHV activity is permitted. In general, vehicle noise levels are highest on busy weekends (especially holiday weekends) and lowest on weekdays, although individual OHVs can generate noise levels in the range of 80 – 90 dBA in the immediate vicinity of the vehicle and 70 – 80 dBA approximately 50 – 100 feet away from the vehicle. Noise generated from the beach and open riding and camping area does not substantially influence the noise environment outside of the park due to the presence of intervening topography, vegetation, and the fact that recreational activities within the park are relatively dispersed; however, the OHMVR Division has received complaints from residents on the Nipomo Mesa that OHV noise can be heard at private residential locations. Certain meteorological conditions, such as fog and low-level clouds can reduce attenuation of sound in the atmosphere.

10.3.3 Sensitive Noise Receptor Locations

Sensitive receptors are individuals or groups of individuals who would be potentially affected by increases in noise levels (both ambient and short-duration noise). Noise can affect people on several levels. It can interfere with activities such as sleep and learning and result in physiological effects such as startle and hearing loss. Noise is also subjective in nature, and can be annoying or a nuisance depending on how the receptor perceives the noise source. For the purposes of this EIR, sensitive receptors are considered to be public park areas and residences in the vicinity of Pier Avenue, including Strand Way.

10.4 NOISE CHARACTERISTICS OF THE PROJECT

The proposed Dust Control Program involves the installation of dust control measures and monitoring equipment and track-out prevention devices. The installation of this equipment would generate noise from the operation of construction equipment. Table 10-2 list the noise levels generated by typical construction equipment at a distance approximately 50 feet from the source.

Table 10-2 Typical Construction Equipment Noise Levels

Equipment	Noise Level (Leq) @ 50 Feet from Source
Backhoe	80
Bulldozer	85
Concrete Mixer	85
Crane	85
Excavator	85
Generator	80
Pneumatic Tools	85
Scraper	85
Truck (supplies delivery)	84
Vibratory Compactor	85

Source: FHWA 2015, FTA 2006.

Once installed, the proposed Dust Control Program components (vegetation, seasonal dust control measures, and monitoring equipment) would not generate substantial amounts of noise. The OHMVR Division may maintain wind fencing projects with the use of heavy equipment; CDPR-owned OHVs or other all-terrain vehicles may be used to access some sites within Oceano Dunes SVRA. These vehicles would be subject to applicable CVC noise limits.

The proposed track-out prevention devices would consist of grooved concrete on the roadway surface of Grand Avenue and Pier Avenue, west of the park entrance kiosks. These devices would produce an intermittent but recurring noise, the level of which would depend on the device material and the speed, size, and weight of the vehicle passing over the device.

A preliminary investigation of traffic noise generated by rumble strips (primarily permanent rumble strips used in the center or on the side of highways) conducted by Caltrans' Division of Research and Innovation found few sources of research and information regarding noise levels for rumble strips or alternative rumble strip designs (Caltrans 2012); however this investigation did find that "The existing literature shows that milled rumble strips increase external noise levels by 5 to 19 decibels, and increase noise levels inside vehicles by 5 to 15 decibels. Wider

groove widths produce greater noise levels. External noise from sinusoidal rumble strips is 3 to 7 decibels quieter than rectangular strips, which increase noise levels by only 0.5 to 1 decibels" (Caltrans 2012).

10.5 PROJECT IMPACTS AND MITIGATION MEASURES

Consistent with CEQA and the CEQA Guidelines Appendix G, this EIR focuses on the potentially significant direct and indirect impacts that could result from implementation of the proposed Oceano Dunes SVRA Dust Control Program, as described in Chapter 2. The OHMVR Division has determined, based on the characteristics of the proposed Dust Control Program and the environmental conditions described in Section 10.3, that:

- The proposed Dust Control Program would be located within the airport land use plan area for Oceano County Airport, but would not increase or otherwise affect the amount of people exposed to noise from Oceano County Airport Operations.
- The proposed Dust Control Program does not have the potential to expose people residing or working at Oceano Dunes SVRA to excessive, airport-related noise levels because there are no private airstrips within two miles of the Program area.

For these reasons, these issues are not discussed further in this Program EIR. The potentially significant impacts that could result from implementation of the proposed Oceano Dunes SVRA Dust Control Program are described in Sections 10.5.3 and 10.5.4 below.

10.5.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, the Dust Control Program would have a significant environmental impact related to noise if it would:

- Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- Expose persons to or generate excessive ground borne vibration or ground borne noise levels
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity about levels existing without the project

10.5.2 Standard and Specific Requirements Incorporated into the Project

As discussed in section 2.5, the OHMVR Division is incorporating Standard and Specific Project Requirements (SPRs) into the planning, design, and implementation of the Dust Control Program. SPRs that would avoid or minimize the potential adverse noise effects of the Program include:

- **Reduce Equipment Noise.** To reduce equipment-related noise, the OHMVR Division shall:
    - Store and/or stage all construction equipment away from sensitive receptor locations as possible
    - Maintain all construction equipment in good working order
    - Ensure construction vehicles, equipment, and machines incorporate design features in good operating order that meet current industry standards for noise muffling and

reduction, e.g., internal combustion engines shall be equipped with a muffler, engines should be enclosed or shielded, etc.

- Shield stationary equipment such as compressors, generators, and welder machines or locate/operate this equipment as far away from sensitive receptors as possible. If stationary noise sources must be located near sensitive noise receptors (within 100 feet), stationary noise sources shall be muffled, shielded, or enclosed within a temporary shed

- **Limit Construction Hours.** The OHMVR Division shall limit construction equipment use to daylight hours, Monday – Friday, to maximum extent feasible. If work during weekends or holidays is required, the OHMVR Division shall limit construction activities to the hours of 8 AM to 5 PM.

10.5.3 Potential Impacts from the Exposure to or Generation of Temporary or Permanent Noise Levels

The Dust Control Program does not involve changes in land use that could expose new sensitive receptors to existing noise levels that are substantial. The Program does involve the use of heavy equipment and transport vehicles to install, maintain, and remove dust control measures, monitoring sites, and track-out prevention devices. This equipment would temporarily and intermittently generate noise at existing sensitive receptor locations. Once installed, track-out prevention devices would generate noise at sensitive receptor locations when vehicles pass over the device.

Impact NOI-1: The Dust Control Program would result in temporary and intermittent vehicle and heavy equipment operation that could increase ambient noise levels in the vicinity of the Program area.

Under the Dust Control Program, the OHMVR Division proposes to use vehicles and equipment to deliver materials, plant vegetation, install structures and equipment (e.g., fences, straw bales, monitoring equipment, track-out prevention devices), and access sites for maintenance and inspection/monitoring purposes. The types of vehicles used would include CDPR-owned and maintained OHVs, jeeps, and trucks. The type of equipment used would include bull dozers, backhoes, rollers, and other similar equipment. These vehicles and equipment already operate at and in the vicinity of Pismo State Beach and Oceano Dunes SVRA; under the proposed Program, the use of this equipment could temporarily increase slightly as a result of new dust control measures that would occur in the Program area, and as a result of maintenance of the proposed track-out prevention devices. This increase in equipment operation could result in intermittent increases in ambient noise levels both in and adjacent to the Program area.

The installation of any one dust control measure or monitoring site at Oceano Dunes SVRA would typically take no more than a few days of total equipment operation to install, maintain and, if necessary, remove (e.g., monitoring sites and wind fencing). Track-out devices installed on Grand Avenue and Pier Avenue would take longer to install (2 – 4 weeks); however, maintenance is anticipated to take no more than a few hours every one to three weeks. Most activities would occur away from sensitive receptors in the vicinity of Pier Avenue. Pismo State Beach and Oceano Dunes SVRA visitors, which are also considered sensitive receptors, are not anticipated to be impacted by equipment operation. Visitors are accustomed to vehicle noise and, due to intervening topography and natural noise sources such as wind, any increases in noise associated with CDPR equipment would not be substantial or even noticeable to visitors unless they are in the immediate vicinity of the work area. The OHMVR Division is incorporating

requirements to reduce equipment noise and limit construction hours associated with these activities; furthermore, construction activities are exempt from adopted SLO County and City of Grover Beach noise standards. The use of vehicles and equipment for Dust Control Program-related activities in Pismo State Beach and Oceano Dunes SVRA, therefore, would not substantially increase noise above the existing conditions in these areas and is therefore considered a less than significant impact.

Impact NOI-2: The Dust Control Program would generate noise from vehicles passing over track-out prevention devices on Grand Avenue and Pier Avenue.

The OHMVR Division anticipates that track-out prevention devices installed on Grand Avenue in the City of Grover Beach and Pier Avenue in Oceano would consist of grooved concrete approximately 1 to 1 ½ inches wide installed directly on the ground surface (see Figure 2-6 and Figure 2-7). This type of device would generate a rumbling noise when a vehicle passes over it; however, the grooved concrete design does not include mechanical or removable parts that can shift or vibrate, make contact with the ground, or otherwise generate a rattling noise. In addition, the vehicles themselves may brake and rattle or vibrate as they approach and/or pass over the device.

Existing vehicle noise in the immediate vicinity (i.e., near the roadside edge) of Grand Avenue and Pier Avenue is estimated to be approximately 55 to 60 dBA Ldn, respectively (City of Grover Beach 2012, SLO County 1992). These estimates reflect 24-hour average noise levels; hourly noise levels during daytime hours (7 AM to 7 PM), particularly during peak hour commute time periods could be 5 – 10 dBA higher due to increased vehicle traffic on the roadway system. Hourly noise levels would also be higher during peak visitor arrival (mid-morning) and exit periods (mid- to late afternoon).

Sensitive receptors in the vicinity of Grand and Pier Avenue include visitors using trails near Grand and Pier Avenue and the northern most townhomes on Strand Way, which could be located between 60 feet to 175 feet from the track-out prevention device (as measured to the property line). The amount of noise generated when a vehicle passes over the grooved concrete would be dependent on the actual grooved surface installed, and the speed, size, and weight of the vehicle passing over the device; however, the potential increase in noise above existing levels resulting from vehicles passing over track-out prevention devices on Grand and Pier Avenue is assumed to range from 5 to 19 dB (Caltrans 2012). This increase in noise would occur for just a second or two for each vehicle that passes over the device. By itself, the passage of a single vehicle over the track-out device would have minimal to no effect on hourly Leq or 24-hour average noise levels; however, this effect could be annoying to nearby residential receptors and/or interfere with sleep if vehicles pass over the device during sensitive nighttime periods (10 PM to 7 AM). Furthermore, several vehicles traveling over the device in succession for several minutes per hour and several hours per day would increase hourly and 24-hour average noise levels, although this increase is hard to quantify given the final design and specific vehicle mix passing over the device is not known at this time. This increase in noise levels would be worst during busy weekends and holiday periods when hundreds or thousands of large and small vehicles would pass over the device..

The potential for increased noise from track-out prevention devices to impact trail receptors near Grand Avenue is not considered a significant impact because these receptors would be subjected to isolated noise events lasting only a few seconds to a few minutes (i.e., the amount of time the user is on the trail in the vicinity of Grand Avenue); however, the potential for increased noise from track-out prevention devices on Pier Avenue to impact residential receptors on Strand Way

is considered a potentially significant impact. To reduce this impact, the OHVMR Division would implement Mitigation Measure NOI-2, Reduce Track-out Prevention Noise.

Mitigation Measure NOI-2: Reduce Track-out Prevention Noise

The OHMVR Division shall, given the specific engineering and vehicle conditions present at the Pismo State Beach Pier Avenue exit, shall reduce noise from track-out prevention devices by:

- Minimizing the width between concrete grooves as much possible (while still ensuring sufficient spacing to provide effective track-out control)
- Considering installing sinusoidal shaped concrete grooves if research indicates such devices are cost effective and would produce lower vehicle noise levels than rectangular or cylindrical shaped

Caltrans' preliminary investigation of highway rumble strips (i.e., grooved pavement) concluded individual design features such as those listed above can potentially limit increases in noise from vehicles passing over grooved pavement to as little as 1 dB above existing conditions, although the exact reduction varies from location to location. The implementation of Mitigation Measure NOI-2 would require the OHMVR Division to incorporate one or more of these design features as feasible to reduce track-out related noise on Pier Avenue and would thus render Impact NOI-2 less than significant.

10.5.4 Potential Impacts from Excessive Ground-borne Vibration or Ground-borne Noise

The majority of the Dust Control Program area consists of unconsolidated sandy soils that are not conducive to the transmission of ground-borne vibration or noise. The exception to this would be along Grand Avenue and Pier Avenue exits where vehicles travel along roadway surfaces and compacted subsurface materials. The installation of track-out prevention devices on these surfaces could increase ground-borne vibration in the vicinity of these exits as a result of increased forces resulting from vehicle tires striking grooved concrete.

Impact NOI-3: Implementation of the Dust Control Program could result in ground-borne vibration on Grand Avenue and Pier Avenue.

Vibration is the movement of particles within a medium or object such as the ground or a building. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency. Vibration amplitudes are usually expressed in peak particle velocity (PPV) or root mean squared, in inches per second (in/sec). PPV represents the maximum instantaneous positive or negative peak of a vibration signal and is most appropriate for evaluating the potential for building damage.

Human response to ground-borne vibration is subjective and varies from person to person. Table 10-3 presents Caltrans' guidelines for threshold criteria for human response to and potential damage from sources of vibration, such as compactors and pile drivers.

Table 10-3 Ground-borne Vibration Threshold Criteria	
Human Response	**Maximum PPV (inches/second)**
Barely Perceptible	0.01
Distinctly Perceptible	0.04
Strongly Perceptible	0.10
Severe	0.4
Vibration Damage Potential Criteria	**Maximum PPV (inches/second)**
Extremely Fragile Historic Buildings	0.08
Fragile Buildings	0.1
Historic and Some Old Buildings	0.25
Older Residential Structures	0.3
New Residential Structures	0.5
Modern Industrial/Commercial Buildings	0.5
Source: Caltrans 2004	

Construction activities on Grand Avenue and Pier Avenue would involve the use of construction equipment such as graders and pavers that would expose people and structures to ground-borne vibration. This equipment may also be used to maintain and repair grooved concrete as needed. Table 10-4 displays vibration levels for typical construction equipment.

Table 10-4 Construction Equipment Ground-Borne Vibration Estimates		
Equipment	**Reference PPV at 25 ft (in/sec)**	**Estimated PPV at 50 ft (in/sec)[(A)]**
Large bulldozer	0.089	0.042
Small bulldozer	0.003	0.001
Loaded truck	0.076	0.035
Jackhammer/Tamper	0.035	0.016
Source: Caltrans 2004; FTA 2006		
(A) Estimated PPV calculated as: PPV(D)=PPVref x (25/D)^1.1 where PPV(D)= estimated PPV @ Distance (D), PPV(ref) = reference PPV @ 25 feet, D = distance from equipment to receiver, and 1.1=ground attenuation rate.		

As Table 10-4 shows, construction equipment vibration levels from small bulldozers (0.001 in/sec PPV) and large bulldozers (0.042 in/sec PPV) operating within 50 feet of a residence or other structure would not exceed project significance criteria for new residential/commercial structural damage (0.5 in/sec PPV) but could exceed some Caltrans guidelines and standards for human perception and annoyance (e.g., Caltrans vibration annoyance guidelines of 0.01 in/sec PPV as "barely perceptible" and 0.04 in/sec PPV as "distinctly perceptible"). Furthermore, it is presumed that once installed, vehicles passing over grooved pavement could produce ground borne vibration levels equivalent to estimates for loaded construction trucks (a worst case assumption as most vehicles passing over the track-out prevention device would weight considerably less than a loaded haul truck). These levels also would not exceed Caltrans' standards for structural damage, but could be distinctly perceptible at commercial establishments

and residential structures near the track-out prevention device. Both Grand Avenue and Pier Avenue are already subject to existing vehicle traffic and groundborne vibration. The incremental increase in vibration levels attributable to track-out prevention devices would be intermittent, would not cause structural damage, and would therefore not be excessive. Impact NOI-3 is considered a less than significant impact.

10.6 REFERENCES

AirNav 2016. "Oceano County Airport." *Oceano County Airport*. Airnav, Airports [Oceano County Airport]. March 31, 2016. Web. May 23, 2016. <http://www.airnav.com/airport/L52>

Airport Land Use Commission (ALUC) 2007. *Airport Land Use Plan for the Oceano County Airport*. [San Luis Obispo, CA]. February 1976, Amended May 16, 2007 <http://sloairport.com/index.php?p=custom_page&page_name=Airport%20Land%20Use%20Plan%20Oceano>

California Department of Transportation (Caltrans) 2004. *Transportation- and Construction-Induced Vibration Guidance Manual*. Prepared by Jones and Stokes for Caltrans Division of Environmental Engineering, Noise, Vibration, and Hazardous Waste Management Office. Sacramento, CA. June 2004.

_____2009. *Technical Noise Supplement*. Prepared by ICF Jones and Stokes for Caltrans Division of Environmental Analysis. Sacramento, CA. November 2009.

_____2012b. *Traffic Noise Generated by Rumble Strips.* Caltrans Division of Research and Innovation. n.p. March 5, 2012.

U.S. Federal Highway Administration (FHWA) 2015. "Construction Noise Handbook, Chapter 9 Construction Equipment Noise Levels and Ranges." *U.S. Department of Transportation FHWA*. November 30, 2015. Web. May 23, 2016. <http://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm>

U.S. Federal Transit Administration (FTA) 2006. *Transit Noise and Vibration Assessment*. FTA-VA-90-1003-06. Washington, DC. May 2006.

CHAPTER 11 CUMULATIVE IMPACTS

CEQA requires that an EIR evaluate a project's cumulative impacts. Cumulative impacts are the project's impacts combined with the impacts of other related past, present, and reasonably foreseeable future projects. As set forth in the CEQA Guidelines, the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. As stated in CEQA, "a project may have a significant effect on the environment if the possible effects of a project are individually limited but cumulatively considerable" (PRC §21083(b)).

11.1 METHODOLOGY

CEQA Guidelines §15130 describe two different methodologies for cumulative impact analysis:

- The 'list' approach permits the use of a list of past, present, and probable future projects producing related or cumulative impacts, including projects both within and outside the Project area; and
- The 'projections' approach allows the use of a summary of projections contained in an adopted plan or related planning document, such as a regional transportation plan, or in an EIR prepared for such a plan. The projections may be supplemented with additional information such as regional modeling.

This EIR uses the list method to determine cumulative impacts. The geographic area considered in each cumulative impact analysis is generally the Dust Control Program area plus a 0.5-mile buffer around the Program area or the coastal zone boundary, whichever is closer to the Program area.

The cumulative analysis is based on a list of past, present, and probable future projects compiled using publicly available data. The analysis includes projects that would result in similar impacts as the Oceano Dunes SVRA Dust Control Program, due to their potential to contribute collectively to significant cumulative impacts. Projects which did not have publicly available information released regarding their environmental effects are not analyzed because their impacts are considered speculative. Sources of information on past, present, and probable future projects include OHMVR Division staff and the websites for the planning or community development departments of SLO County and the City of Grover Beach (San Luis Obispo County 2016, City of Grover Beach 2016).

Table 11-1 lists the past, present, and probable future project considered in the EIR's cumulative impact analysis. The table denotes with an "X" which impacts from these projects could combine with the proposed Dust Control Program.

Table 11-1 List of Past, Present, and Probable Future Projects and Their Potential to Result in Cumulative Impacts

Type	Location	Recreation	Land Use	Aesthetics	Agriculture	Air Quality	Biology	Cultural	Geology	GHG	Hazards	Hydrology	Minerals	Noise	Public Svcs	Traffic	Utilities
Pismo State Beach / Oceano Dunes SVRA																	
Proposed Dust Control Program		X	X	X		X	X	X	X	X	X	X		X		X	X
Seasonal Nesting Exclosure (300 total acres)		X															
Cultural Resources Management and Protection Measures		X															
Annual Vegetation / Dune Restoration (15 acres)		X		X		X	X	X		X							
Riparian Maintenance Project				X		X	X	X	X	X	X	X					
Meadow / Arroyo Grande Flood Control Activities				X		X	X	X	X	X		X					
New Visitor Center (Pier Ave) / Vehicle Storage Building (Hwy 1)		X	X	X		X	X	X	X	X	X	X		X	X	X	X
Special Events (e.g., motorized competitions)		X				X	X			X	X						
Invasive / Exotic Species Eradication				X		X	X			X		X					
Oso Flaco Control Site Monitor							X			X						X	
Oceano Lagoon Access Improvements		X	X			X				X	X			X		X	
Pismo State Beach Access Improvements		X	X			X	X			X	X			X		X	
Pismo Estuary Floating Bridge		X	X	X		X	X			X		X		X			
City of Grover Beach																	
Grover Beach Lodge / Conference Center (Grand Avenue)		X	X	X		X	X	X	X	X	X	X		X		X	X
Transit Station Expansion Project (Grand Avenue)			X			X		X	X	X	X	X		X		X	X
West Grand Avenue Master Plan			X	X		X	X	X	X	X	X	X		X		X	X
SLO County																	
Arroyo Grande Creek Channel Waterway Management Plan				X	X	X		X	X	X						X	
Guadalupe Cooling Wireless Facility (Guadalupe Road)				X						X							
Guadalupe Oil Field Remediation				X						X							
Nipomo Group Minor Use Permit					X		X			X				X	X	X	
Oceano Drainage Project (Paso Robles Street/Hwy 1)							X	X		X	X	X					
Phillips 66 Throughput / Refinery Rail / Remediation Projects		X	X	X	X	X	X			X	X	X		X		X	X

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11.2 ANALYSIS OF CUMULATIVE IMPACTS

The cumulative impact analysis considers the combined impacts of the proposed Dust Control Program and the past, present, and probable future projects listed in Table 11-1. In accordance with CEQA Guidelines Section 15130(b), the discussion of cumulative impacts describes the likelihood and severity of impacts associated with the projects identified in Table 11-1, and in accordance with CEQA Guidelines 15130(a), determines whether the Project's incremental effect is cumulatively considerable when assessed in conjunction with these other projects.

In addition, as stated in CEQA Guidelines, it should be noted that:

> "The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable" (14 CCR §15064(h)(4)).

As described in Chapters 4 – 10 of this EIR, the Oceano Dunes SVRA Dust Control Program would have the following significant and unavoidable impacts:

- ***Impact REC-1: The Dust Control Program could limit and interfere with coastal vehicular recreation opportunities at Oceano Dunes SVRA.***
- ***Impact LUP-1: The Dust Control Program would conflict with the Pismo Dunes SVRA (now Oceano Dunes SVRA) General Development Plan and Resource Management Plan.***
- ***Impact LUP-2: The Dust Control Program could conflict with the California Coastal Act.***

The Project would also result in less than significant impacts or potentially significant impacts that would be mitigated to less than significant levels on all other resource areas analyzed in this EIR. Impacts that are individually or incrementally minor may become significant when combined with impacts associated with past, present, and other anticipated future projects. The potential cumulative impacts in each resource area of concern are described below.

11.2.1 Recreation and Public Access

The Dust Control Program-related activities are in addition to ongoing cultural and biological resource management at Oceano Dunes SVRA (e.g., seasonal plover exclosure, planting 15 acres of vegetation per year, expansion of cultural resources protection areas), as well other projects in the vicinity of Pismo State Beach and Oceano Dunes SVRA. The combined effects of the Dust Control Program (Impact REC-1), ongoing dune restoration activities, and the Pismo State Beach New Visitor Center Project are considered less than significant. Existing vegetation activities are designed and implemented to minimize conflict with recreation opportunities, and the new visitor's center and floating bridge projects are designed to enhance the recreational experience at Pismo State Beach and Oceano Dunes SVRA and facilitate access to recreational lands. The Oceano Lagoon and Pismo State Beach access improvements may result in temporary closure of recreational trails, paths of travel, and camping areas (North Beach Campground), but would otherwise improve access and the recreational experience when complete. Oceano campground was recently closed for 16 months, but has since reopened.

Impact REC-1identifies that the Dust Control Program could result in the temporary (up to 43 acres annually) and permanent (between 35 and 70 acres) closure of land inside the Oceano Dunes SVRA open riding and camping area (see Section 4.3.2). Recreational activities in these areas primarily include photography, hiking, camping, wildlife viewing and, most prominently,

OHV recreation. This impact would combine with the seasonal closure of 284 acres of land inside the SVRA's open riding and camping area, which occurs from March 1 to September 30 due to the installation of fencing to protect nesting western snowy plovers and California least terns (nest exclosure). This impact would also combine with the recent loss in riding area lands as a result of the expansion for fencing to protect a cultural resources site in Oceano Dunes SVRA.

Impact CML-1: The Dust Control Program would contribute to cumulative, seasonal and permanent reductions in coastal vehicular recreational opportunities at Oceano Dunes SVRA.

The total seasonal loss in coastal vehicular recreation lands resulting from the nest exclosure and the Dust Control Program would increase in magnitude each year of the Dust Control Program. In Year 1, the total seasonal loss in coastal vehicular recreation lands resulting from the nest exclosure (284 acres), expanded cultural resource protection measures (16 acres) and Dust Control Program (approximately 63 acres, presuming all 20 acres of vegetation are planted inside the open riding and camping area; see Table 2-3) would be 363 acres. In Year 5, the total seasonal loss in coastal vehicular recreation lands resulting from the nest exclosure (284 acres), expanded cultural resources management and protection measures (16 acres) and the Dust Control Program (78 to 113 acres; see tables 4-8 and 4-9) would range from approximately 378 to 413 acres. The seasonal closure of 378 to 413 acres of land constitutes an approximately 26 to 28.4 percent reduction in available OHV recreation lands at Oceano Dunes SVRA (out of 1,453 acres). This seasonal reduction would occur for approximately seven months of the year (more than 50 percent of the year), including popular holiday weekends such as Memorial Day, July 4th, and Labor Day, as well as the summer season when schools on traditional schedules are out of session. In Year 5, the total permanent loss in coastal vehicular recreation lands resulting from expanded cultural resources protection (16 acres) and the proposed Dust Control Program (35 to 70 acres) would range from 51 to 86 acres. The permanent closure of 51 to 86 acres of land constitutes an approximately 3.5 to 5.9 percent reduction in available OHV recreation lands at Oceano Dunes SVRA. As described under Impact REC-1, the permanent or temporary loss of OHV recreation lands at Oceano Dunes SVRA is important given the site's history, popularity, and unique, low-cost coastal recreational opportunities, plus the lack of similar facilities in the state. Accordingly, the Dust Control Program would contribute to a cumulatively considerable adverse loss of OHV recreation lands at Oceano Dunes SVRA. The implementation of Mitigation Measure REC-1 could partially reduce the Dust Control Program's contribution to this cumulative impact; however, the ability of the OHMVR Division to implement Mitigation Measure REC-1 in its entirety is not certain. Specifically, the ability of the OHMVR Division to compensate for the loss (i.e., closure) of OHV recreation lands that could occur with implementation of the Dust Control Program would be subject to other applicable laws and regulations and cannot, therefore, be guaranteed. Impact CML-1, therefore, is considered a significant and unavoidable cumulative impact of the Dust Control Program.

11.2.2 Land Use and Planning

Impact LUP-1 identifies that the loss of approximately 78 to 113 acres of OHV recreation lands at Oceano Dunes SVRA is a significant conflict with the Pismo Dunes SVRA (now Oceano Dunes SVRA) General Development Plan and Resource Management Plan because the loss of these lands would not perpetuate and enhance recreation use of OHVs at the SVRA. Similarly, Impact LUP-2 identifies that the loss of OHV recreation lands that would occur under the Dust Control Program could conflict with the California Coastal Act because the Program would not maximize existing, historical, and traditional coastal OHV recreation opportunities. These

impacts would combine with the other potential recreation impacts from the projects listed at Pismo State Beach and Oceano Dunes SVRA. listed in Table 11-1.

Impact CML-2: The Dust Control Program would contribute to a cumulative loss in OHV recreation lands that conflicts with the Pismo Dunes SVRA (now Oceano Dunes SVRA) General Development Plan and Resource Management Plan and the California Coastal Act.

As explained under Impact CML-1:

- In Year 5 of the Dust Control Program the total seasonal loss in coastal vehicular recreation lands resulting from the nest exclosure (284 acres), expanded cultural resources management and protection measures (16 acres) and the Dust Control Program (78 to 113 acres; see tables 4-8 and 4-9) would range from approximately 378 to 413 acres. The seasonal closure of 378 to 413 acres of land constitutes an approximately 26 to 28.4 percent reduction in available OHV recreation lands at Oceano Dunes SVRA (out of 1,453 acres).
- In Year 5 of the Dust Control Program the total permanent loss in coastal vehicular recreation lands resulting from expanded cultural resources protection (16 acres) and the proposed Dust Control Program (35 to 70 acres) would range from 51 to 86 acres. The permanent closure of 51 to 86 acres of land constitutes an approximately 3.5 to 5.9 percent reduction in available OHV recreation lands at Oceano Dunes SVRA.

This magnitude impact does not perpetuate or enhance the recreational use of OHVs at Oceano Dunes SVRA, as required by the General Development Plan and Resource Management Plan, nor does it maximize coastal recreation opportunities, as generally required by the Coastal Act. As described under Impact REC-1, the permanent or temporary loss of OHV recreation lands at Oceano Dunes SVRA is especially important given the site's history, popularity, and unique, low-cost coastal recreational opportunities, plus the lack of similar facilities in the state. Accordingly, the Dust Control Program would contribute to a cumulatively considerable adverse loss of OHV recreation lands at Oceano Dunes SVRA, which is considered a significant conflict with the SVRA's General Development Plan and Resource Management Plan and the California Coastal Act. Mitigation Measure REC-1 could partially reduce the Dust Control Program's contribution to this cumulative impact; however, the ability of the OHMVR Division to implement Mitigation Measure REC-1 in its entirety is not certain. Specifically, the ability of the OHMVR Division to compensate for the loss (i.e., closure) of OHV recreation lands that could occur with implementation of the Dust Control Program would be subject to other applicable laws and regulations and cannot, therefore, be guaranteed. Impact CML-2, therefore, is considered a significant and unavoidable cumulative impact of the Dust Control Program.

11.2.3 Aesthetics

The potential exists for Dust Control Program-related activities and components to be located in the same general vicinity as the other projects listed in Table 11-1, resulting in combined aesthetic impacts to sensitive visual receptors; however, this combined impact would be less than significant. The addition of vegetation and buildings to Pismo State Beach, Oceano Dunes SVRA, and surrounding developed areas (which stretch several miles along the coast) that could occur with the other projects listed in Table 11-1 would likely not be discernible from sensitive receptor locations because these features blend in and are consistent with the existing landscape in which the Dust Control Program is located. In addition, because buildings and vegetation are consistent with the existing regional landscape, sensitive receptors are likely to focus their

attention on the seasonal dust control measures, which are likely to be most unique feature of the landscape. As a result, the other past, present, and reasonably foreseeable projects listed in Table 11-1 would not substantially contribute to cumulative changes in the visual character and quality of the SVRA. As discussed in Section 6.4.3 and shown in Figure 6-13 to Figure 6-21, the potential Dust Control Program impact of greatest aesthetic concern is the installation of brightly colored wind fencing and other seasonal dust control measures, which would be a noticeable and distinct change to the existing visual character and quality of the SVRA. Though noticeable and distinct, factors such as the visitor's visual context and distance from the SVRA, continued ability to enjoy unmodified views, and the temporary nature of the nature of the change due to seasonal dust control measures render this visual change less than significant. The inclusion of SPRs would further minimize conflict with scenic vistas and promote the integration of dust control measures into the existing topography and landscape. Thus, the combined visual change resulting from the proposed Dust Control Program and the other past, present, reasonably foreseeable projects in the surrounding area would be less than significant.

11.2.4 Agriculture and Forestry Resources

The Oceano Dunes SVRA Dust Control Program would have no impact to agriculture and forestry resources (see Section 3.4.1) and, therefore, would not contribute to any cumulative impacts on these resources.

11.2.5 Air Quality

The proposed Oceano Dunes SVRA Dust Control Program would result in less than significant ozone pre-cursor emissions and result in an air quality benefit from a reduction of dust and PM10 emissions in the vicinity of the Program (see Section 3.4.2). Therefore, the Program's contribution to cumulative air quality impacts would not be cumulatively considerable.

11.2.6 Biological Resources

The potential exists for Dust Control Program-related activities and components to be located in the same area as the other projects listed in Table 11-1, resulting in combined impacts to sensitive biological resources. These combined impacts could be potentially significant; however, the Dust Control Program includes SPRs to reduce or avoid the Program's specific impacts and, if necessary, alleviate combined impacts to resources. The OHMVR Division is incorporating requirements to conduct pre-construction surveys, avoid special-status species and their habitat, and protect wetland habitats. These measures would be performed by qualified personnel, and would be in addition to existing resource protection and management measures that are part of the ongoing administration and management of Pismo State Beach and Oceano Dunes SVRA. The OHMVR Division is also proposing an annual review process that consists of planning, resource evaluation, agency coordination and review, implementation, and reporting phases. This annual review process would ensure the OHMVR Division's specific Dust Control Program-related activities comply with CEQA and any CDP conditions imposed on the project, as well as any other laws or regulations that may apply to the planned activities, once they are known in sufficient detail to permit a project-specific review. For these reasons, the project's incremental effect on biological resources would not be cumulatively considerable.

11.2.7 Cultural Resources

The potential exists for Dust Control Program-related activities and components to be located in the same area as some of the other projects listed in Table 11-1, resulting in combined impacts to sensitive cultural resources. These combined impacts could be potentially significant; however, the Dust Control Program would not adversely impact archaeological or paleontological

resources. The OHMVR Division is incorporating requirements to inventory, monitor, and avoid cultural resources, avoid impacts from accidental discoveries, consult with Native Americans, and preserve cultural resources in place. For these reasons, the Program's incremental effect on cultural resources would not be cumulatively considerable.

11.2.8 Geology and Soils

The Program area and vicinity are subject to substantial, natural erosion forces (i.e., dune accretion and migration) that are independent of the proposed Program activities. As described in Section 3.4.3, the proposed Oceano Dunes SVRA Dust Control Program would not result in net soil erosion and would not contribute to cumulative erosion impacts; rather, dust control measures would generally slow overall sand transport and dune erosion/migration within the Program area. The proposed Program also would not destroy the unique Guadalupe-Nipomo Dunes Complex. For these reasons, the proposed Program's effect on geology and soils would not be cumulatively considerable.

11.2.9 Greenhouse Gases

Global climate change is the result of GHG emissions worldwide; individual projects do not generate enough GHG emissions to influence global climate change. Thus, the analysis of GHG emissions is by nature a cumulative analysis focused on whether an individual project's contribution to global climate change is cumulatively considerable. As described in Section 3.4.4, the proposed Oceano Dunes SVRA Dust Control Program's GHG emissions and contribution to global climate change would not be cumulatively considerable.

11.2.10 Hazards and Hazardous Materials

Combined hazards and hazardous materials impacts of the proposed Program and the other projects listed in Table 11-1 would not be significant. Each project would be subject to applicable hazardous materials regulations designed to minimize adverse effects from the transport, storage, use, and disposal of hazardous materials. With the implementation of these measures, the handling and use of hazardous materials would not pose a threat to human health or the environment.

11.2.11 Hydrology and Water Quality

The potential exists for Dust Control Program-related activities and components to be located in the same area as some of the other projects listed in Table 11-1, resulting in combined impacts to hydrology and water quality. These combined impacts would be less than significant. The Dust Control Program would avoid the placement of fill in regulated waters. The proposed Dust Control Program, as well as all other projects implemented by the OHMVR Division, includes requirements to designate vehicle and equipment storage, staging, and clean-up locations, designated vehicle and equipment fueling locations, inspect for equipment leaks, manage material stockpiles, route track-out runoff through a sediment trap, and regularly remove, test, and dispose of sediment from track-out prevention devices. Other projects would be subject to similar requirements in accordance with applicable storm water and wastewater discharge regulations. Flood control projects initiated by San Luis Obispo County in the Meadow Creek and Arroyo Grande Creek watersheds, the Oceano Drainage Project, and ODD Riparian Maintenance Projects address hydraulic deficiencies in waterways in and near the Program area, which is an issue not affected by the Dust Control Program. Therefore, combined hydrology and water quality impacts would be less than significant.

11.2.12 Noise

Grooved concrete installed at Grand and Pier Avenues could result in localized noise impacts that have the potential to combine with the Grover Beach Lodge/Conference Center Project. The proposed Program includes requirements to limit construction hours and noise from construction equipment. This two to four week activity would not significantly contribute to combined construction noise effects. None of the other projects considered in the cumulative analysis would combine with the Dust Control Program's potential temporary or permanent increases in noise (e.g., the new Visitor Center on Pier Avenue will be complete before the installation of track-out prevention devices). Repair and maintenance of the grooved concrete could require use of equipment or vacuums that could be audible at the Grover Beach Lodge; however, this noise would occur intermittently, be short in duration, and would not represent a cumulative considerable contribution to the noise environment.

11.2.13 Public Services

The Dust Control Program does not support new development or housing that would increase the local population, necessitating the construction or expansion of existing public service facilities. The Program would have no impact on Public Services and thus would not contribute to cumulative impacts on public services.

11.2.14 Traffic/Transportation

The proposed Oceano Dunes SVRA Dust Control Program would not generate a substantial amount of new traffic (less than 100 truck trips per year) or otherwise affect traffic circulation on local roads in a manner that has the potential to result in a cumulatively considerable contribution to potential traffic impacts resulting from development in the vicinity of Oceano Dunes SVRA.

11.2.15 Utilities and Service Systems

The potential exists for Dust Control Program-related storm water systems (for track-out prevention devices on Grand and Pier Avenue) to be located in the same area as other projects' utility infrastructure, resulting in combined impacts from the use or construction of these systems. These combined impacts would be less than significant. The Dust Control Program's track-out prevention devices would not interference with drainage facilities due to the fact that each individual project would be subject to applicable land use and planning regulations designed to minimize adverse effects from site design, project construction, and operation of the development, including any utilities, which would render this cumulative impact less than significant.

11.3 REFERENCES

City of Grover Beach 2016. "Project Updates." About Us. City of Grover Beach. n.p. Web. May 30, 2016. < http://www.grover.org/index.aspx?NID=154>

San Luis Obispo County 2016. "Environmental Notices." Planning and Building. San Luis Obispo County, Government, Department Directory, Planning and Building, Environmental Notices (Impact Reports). May 2016. Web. May 30, 2016. <http://www.slocounty.ca.gov/planning/environmental/EnvironmentalNotices.htm?>

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CHAPTER 12 ALTERNATIVES

12.1 ALTERNATIVES SELECTION

CEQA Guidelines Section 15126.6 states that an EIR shall describe a range of reasonable alternatives to a project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. An EIR does not need to consider every conceivable alternative, but must foster informed decision making and public participation. CEQA intends for the alternatives discussion to focus on alternatives that are capable of avoiding or substantially reducing any significant effects of the project, even if these alternatives would impede to some degree attaining the objectives of the project.

In selecting the range of reasonable alternatives analyzed by this EIR, the OHMVR Division identified potential alternatives that could feasibly attain the basic objectives of the proposed Dust Control Program and potentially avoid or substantially lessen the proposed Program's significant effects. The OHMVR Division considered alternative locations, alternative project designs and components, and an alternative project schedule. The OHMVR Division also considered two versions of the No Project Alternative required by CEQA. The selection of these alternatives was informed by written comments received during the EIR scoping process (see Section 3.2.1). In total, the OHMVR Division identified seven alternatives, four of which were rejected and not discussed in detail. The proposed Dust Control Program objectives, significant effects to be avoided or lessened, and alternatives are discussed below. Table 12-2 at the end of this chapter compares the proposed Program against the two alternatives analyzed in detail in this chapter.

12.1.1 Summary of Project Objectives and Significant Effects

The OHMVR Division's objectives for the proposed Dust Control Program are:

1) Control and minimize saltation-generated dust and PM produced at Oceano Dunes SVRA during periods of strong, persistent winds.
2) Reduce concentrations of PM10 measured at the SLOAPCD's CDF ambient air quality monitoring station.
3) Make ongoing and best possible progress towards compliance with SLOAPCD Rule 1001 performance standard.
4) Maintain existing public access routes into, out of, and within Pismo State Beach and Oceano Dunes SVRA to the maximum extent feasible and consistent with public safety and environmental protection needs.
5) Maintain existing coastal recreation opportunities (especially coastal OHV recreational opportunities), visitor levels, and visitor-serving facilities (including campsites) at Pismo State Beach and Oceano Dunes SVRA to the maximum extent feasible and consistent with public safety needs and OHMVR Division legislative mandates.
6) Plant vegetation and deploy seasonal dust control measures in scientifically-defensible locations that balance the need to implement a comprehensive dust control Program and manage, protect, and conserve cultural, natural, and recreational resources at Pismo State Beach and Oceano Dunes SVRA.

7) Deploy temporary monitoring equipment that scientifically supports the selection of areas to plant vegetation and deploy seasonal dust control measures and evaluates the effectiveness of these activities.

8) Install, operate, and maintain equipment that prevents the track-out of sand by vehicles exiting onto paved, public roads and minimizes, to the maximum extent possible, vehicle queuing and delays when visitors exit Oceano Dunes SVRA and Pismo State Beach.

9) Continue to implement existing dust-control related activities at Oceano Dunes SVRA and Pismo State Beach.

As described in Chapters 4 – 10 of this EIR, the proposed Dust Control Program would result in three significant and unavoidable impacts even with the implementation of SPRs and feasible mitigation measures:

- Impact REC-1 identifies that the Dust Control Program Dust Control Program could result in the temporary (up to 43 acres) and permanent (between 35 and 70 acres) closure of land inside the Oceano Dunes SVRA open riding and camping area (in Year 5), which would constitute an approximately 5.3 to 7.7 percent loss in OHV recreation lands at Oceano Dunes SVRA (out of 1,453 acres). Mitigation Measure REC-1 requires the OHMVR Division to minimize the loss of OHV recreation opportunities at Oceano Dunes SVRA by planting vegetation outside the SVRA's open riding and camping area as much as feasible, planting vegetation and deploying seasonal dust control measures in a manner that does not interfere with Sand Highway and other established paths of travel, integrating recreation opportunities (including OHV recreation) into dust control measures, and identifying areas to add camping and OHV recreation opportunities. Any expansion of OHV recreation opportunities shall occur in a manner that is consistent with the Public Resources Code and other applicable laws and regulations and shall not impede achievement of the performance standard set by Rule 1001. Mitigation Measure REC-1 could minimize some of the loss in coastal vehicular recreational opportunities at Oceano Dunes SVRA that would occur under the Dust Control Program; however, the potential would remain for the Dust Control Program (in Year 5) to temporarily (43 acres) and permanently (70 acres) limit and interfere with OHV recreation at Oceano Dunes SVRA. Factors such as the SVRA's history of use, historical reduction in vehicle recreation lands in the area, current seasonal reduction in vehicle recreation lands, high visitor attendance levels, and the unique, low-cost nature of the coastal recreational opportunities provided by the SVRA make this loss of OHV lands a substantial and adverse change to OHV recreation at Oceano Dunes SVRA, and a significant and unavoidable impact of the Dust Control Program.

- Impact LUP-1 identifies that the loss of up to approximately 78 to 113 acres of land inside the Oceano Dunes SVRA is considered a significant conflict with the Oceano Dunes SVRA General Development Plan and Resource Management Plan because it would not perpetuate and enhance recreational use of OHVs in the SVRA. Mitigation Measure REC-1 requires the OHMVR Division to implement measures that could reduce the potential for Dust Control Program components to limit and interfere with OHV recreation. Mitigation Measure REC-1 also directs the OHMVR Division to compensate for the loss (i.e., closure) of OHV recreation lands that could occur with implementation of the Dust Control Program; however, the ability of the OHMVR to do this is subject to other applicable laws and regulations and is, therefore, speculative. Thus, even with the

implementation of Mitigation Measure REC-1, the potential remains for the Dust Control Program (in Year 5) to temporarily (43 acres) and permanently (70 acres) limit and interfere with OHV recreation at Oceano Dunes SVRA. This loss is considered a significant conflict with the stated management policy of the General Development Plan and Resource Management Plan.

- Impact LUP-2 identifies the proposed Dust Control Program could conflict with the California Coastal Act because the preferred Dust Control Program scenario would impact 78 acres of coastal OHV recreation lands and the alternate program scenario does not maximize existing, historical, and traditional coastal OHV recreational opportunities at Oceano Dunes SVRA. This significant impact would occur even with design and mitigation measures (REC-1) incorporated into the project.

As described in Chapter 11 of this EIR, the proposed Dust Control Program would result in two significant and unavoidable cumulative impacts:

- Impact CML-1 identifies that the Dust Control Program could result in the temporary (up to 43 acres) and permanent (between 35 and 70 acres) closure of land inside the Oceano Dunes SVRA open riding and camping area in Year 5 of the Program. This impact would combine with the seasonal closure of 284 acres of land inside the SVRA's open riding and camping area, which occurs from March 1st to September 30th due to the installation of fencing to protect nesting western snowy plovers (nest exclosure). This impact would also combine with the recent closure of 16 acres of land associated with an expanded cultural resources management and protection measure. In Year 5, the total seasonal loss in coastal vehicular recreation lands resulting from the nest exclosure (284 acres), expanded cultural resources protection (16 acres) and the Dust Control Program (78 to 113 acres; see tables 4-8 and 4-9) would range from approximately 378 to 413 acres. The seasonal closure of 378 to 413 acres of land constitutes an approximately 26 to 28.4 percent reduction in available OHV recreation lands at Oceano Dunes SVRA (out of 1,453 acres). This seasonal reduction would occur for approximately seven months of the year (more than 50 percent), and include popular holiday weekends such as Memorial Day, July 4th, and Labor Day, as well as the summer season when schools on traditional schedules are out of session. In Year 5, the total permanent loss in coastal vehicular recreation lands resulting from expanded cultural resources protection (16 acres) and the proposed Dust Control Program (35 to 70 acres) would range from 51 to 86 acres. The permanent closure of 51 to 86 acres of land constitutes an approximately 3.5 to 5.9 percent reduction in available OHV recreation lands at Oceano Dunes SVRA. The implementation of Mitigation Measure REC-1 could partially reduce the Dust Control Program's contribution to this cumulative impact; however, the ability of the OHMVR Division to implement Mitigation Measure REC-1 in its entirety is not certain. Specifically, the ability of the OHMVR Division to compensate for the loss (i.e., closure) of OHV recreation lands that could occur with implementation of the Dust Control Program would be subject to other applicable laws and regulations and cannot, therefore, be guaranteed. Impact CML-1, therefore, is considered a significant and unavoidable cumulative impact of the Dust Control Program.

- Impact CML-2 identifies that the magnitude of the loss of coastal recreation lands identified in impact CML-1 does not perpetuate or enhance the recreational use of OHVs at Oceano Dunes SVRA, as required by the General Development Plan and Resource Management Plan, nor does it maximize coastal recreation opportunities, as generally required by the Coastal Act. The permanent or temporary loss of OHV recreation lands

at Oceano Dunes SVRA is especially important given the site's history, popularity, and unique, low-cost coastal recreational opportunities, plus the lack of similar facilities in the state. Mitigation Measure REC-1 could partially reduce the Dust Control Program's contribution to this cumulative impact; however, the ability of the OHMVR Division to implement Mitigation Measure REC-1 in its entirety is not certain. Specifically, the ability of the OHMVR Division to compensate for the loss (i.e., closure) of OHV recreation lands that could occur with implementation of the Dust Control Program would be subject to other applicable laws and regulations and cannot, therefore, be guaranteed. Impact CML-2, therefore, is considered a significant and unavoidable cumulative impact of the Dust Control Program.

12.2 ALTERNATIVES CONSIDERED BUT REJECTED

CEQA Guidelines establish that an EIR should identify alternatives considered but rejected by the Lead Agency and briefly explain the reasons the Lead Agency rejected the alternatives. Factors that may be taken into account when eliminating an alternative from detailed consideration include failure to meet most of the basic project objectives, infeasibility, or inability to avoid significant environmental impacts. Furthermore, factors affecting project feasibility include site suitability, economic viability, availability of infrastructure and other materials, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site. Six such alternatives are discussed in detail below.

The OHMVR Division notes that the proposed Dust Control Program would require a substantial amount of staff and contracted labor, as well as a substantial investment in equipment and other resources. For example, the OHMVR Division estimates it would require up to 2000 hours of staff time and 7,000 hours of contracted labor annually to grow, install, and maintain the vegetation necessary to adequately cover 20 acres of dunes, install and remove approximately 40 acres of seasonal dust control measures, and install and maintain associated monitoring equipment. The total annual costs associated with the proposed Program activities is estimated to be approximately $1,500,000, which must come out of the Oceano Dunes District operating fund. The required labor and expenditures are considered to be the upper bound of what is realistically feasible for the Oceano Dunes District. In considering the feasibility of Program alternatives, the OHMVR Division considered whether the alternative would be likely to require more or less staff and final resources than the proposed Dust Control Program.

12.2.1 Different Dust Control Program Location

The OHMVR Division considered different locations for implementation of the proposed Oceano Dunes SVRA Dust Control Program, but no viable alternative locations were identified for several reasons.

First, the OHMVR Division does not own or operate other coastal lands in SLO County where a Dust Control Program could be implemented and successfully achieve Program objectives and the performance standard of Rule 1001.

Second, the proposed Dust Control Program is intended to improve air quality at the SLOAPCD CDF ambient air monitoring station and on the Nipomo Mesa in general, which are located downwind of Oceano Dunes SVRA. Any alternative Dust Control Program location would need to be located upwind of the CDF station and Nipomo Mesa; however, the proposed Program area already includes most of the state-owned and –operated land that the OHMVR Division,

SLOAPCD, and CARB have identified as the area most likely influencing air quality conditions at the CDF site and the Nipomo Mesa.

Finally, the parts of Oceano Dunes SVRA and Pismo State Beach open to vehicular recreation are considered a CDVAA subject to the requirements of Rule 1001. Thus, the OHMVR Division would be required to implement a dust control Program at Oceano Dunes SVRA that would be the same or substantially similar to the Program described in this EIR even if a viable alternative location did exist.

Accordingly, the OHMVR Division has rejected this alternative because it is not a feasible alternative that would obtain most of the basic objectives of the proposed Dust Control Program.

12.2.2 Accelerated Dust Control Program Schedule

A proposed agreement with the APCD anticipated a recommendation that would will take action to reduce PM10 emissions "as soon as possible." The agreement acknowledges this will involve an iterative process of mitigation, evaluation, and revision to achieve an immediate goal of meeting federal PM10 standards at the CDF site and to provide ongoing progress toward achieving state PM10 standards and meet the standards set forth in Rule 1001.

The OHMVR Division considered an accelerated schedule for the proposed Dust Control Program in which the proposed activities would be undertaken on a two or three year schedule; however, an accelerated schedule that guarantees or ensures dust control measures achieve the goals set by the proposed agreement is not considered feasible for several reasons. First, the number of dust control measures necessary to achieve the goals of the proposed agreement is not known for certain. Second, even if the exact level of control were known, vegetation planted on an active dune system takes time to establish and is hampered by a short growing season, lack of available on-site water, and protocols requiring use of locally collected native vegetation. Thus, there are natural limitations to planting schedules. Newly planted vegetation could be augmented with seasonal dust control materials, but this would require the OHMVR Division to acquire, deploy, and maintain what is presumed to be substantial quantities of artificial materials, and the resources (staff and materials) necessary to plant sufficient vegetation or deploy sufficient artificial materials are not available due to state budget limitations and schedule. Accordingly, the OHMVR Division has rejected this alternative because it is not logistically and technically feasible.

12.2.3 Reduced OHV Use Area

Under this alternative, the OHMVR Division would voluntarily implement restrictions on the acreage within Oceano Dunes SVRA open to vehicular recreation. These restrictions could either be in lieu of, or in addition to, the vegetation and seasonal dust control measures proposed under the Dust Control Program. The OHMVR Division notes that this alternative has not been scientifically proven to be more effective at reducing saltation and associated dust production at Oceano Dunes SVRA than the proposed Dust Control Program activities.

12.2.3.1 OHV Use Restrictions in-Lieu of Dust Control Measures

Under this alternative, instead of occupying open sand areas with vegetation and seasonal dust control measures, the OHMVR Division would close an equivalent area (143 acres) to all OHV recreation. OHV use restrictions in-lieu of the proposed vegetation and seasonal dust control measures would not avoid or substantially lessen the proposed Dust Control Program's significant recreation impact because, at a minimum, it would result in more loss of coastal vehicular recreation lands (143 acres) than the proposed Dust Control Program. In addition, because OHV use restrictions would not directly cover the ground surface, break the flow of

wind across the landscape, or otherwise stabilize or hold sand in place, it is reasonable to presume that OHV use restrictions would not be as effective as vegetation (up 90 -99 percent effective once established) or wind fencing and straw bales (40 – 70 percent effective) at reducing sand transport and controlling and minimizing dust emissions. Therefore, in order to achieve the same level of effectiveness as the proposed Dust Control Program, OHV use restrictions could be required on a much larger area at Oceano Dunes SVRA, resulting in a greater loss of OHV recreation lands than the proposed Dust Control Program. Although the exact amount of acreage is uncertain, if it was found to be substantial enough (e.g., hundreds of acres), to increase vehicle density in the remaining open riding and camping area to an unsafe level, such a closure may lead to a reduction in the amount of OHV vehicles allowed at Oceano Dunes SVRA at any one time.

Thus, OHV use restrictions in-lieu of the proposed vegetation planting and seasonal dust control measures would not maximize the preservation of low-cost, coastal OHV recreation opportunities, and could result in a lower public safety benefit than the proposed Dust Control Program. Therefore, this alternative would be inconsistent with the Pismo State Beach and Pismo Dunes SVRA General Development and Resource Management Plan and the California Coastal Act, which both contain policies intended to provide maximum access and recreational opportunities consistent with visitor and public safety needs. This alternative would also be inconsistent with the OHMVR Division's legislative mandate. With passage of the OHV Recreation Act of 2003, it was the intent of the legislature that existing OHV recreation areas, facilities, and opportunities should be expanded and managed in a manner consistent with Chapter 1.25 of the Public Resources Code, in particular to maintain sustained, long-term use of recreational opportunities. Public Resources Code Chapter 1.25 sets forth that the protection of public safety, the appropriate utilization of lands, and the conservation of land resources are the highest priority for the OHMVR Division in its management of an SVRA. Public Resources Code Chapter 1.25 also sets forth that SVRAs shall be managed and operated for the purpose of making the fullest public use of the outdoor recreational opportunities present, and that the natural and cultural elements of the environment may be managed or modified to enhance the recreational experience (PRC §5090.43) consistent with the requirements of Public Resources Code Section 5090.35. Vehicle restrictions that do not maximize recreational activities consistent with public safety and environmental protection needs would change the context of the Program and its compatibility with the applicable plans and policies, resulting in a significant land use impact.

Finally, OHV use restrictions in-lieu of vegetation and seasonal dust control measures would not obtain most of the basic objectives of the Program. As described above, OHV use restrictions would not be as effective at controlling and minimizing dust emissions during strong, persistent winds, would not be as effective at improving downwind air quality, would slow progress towards compliance with the SLOAPCD Rule 1001 performance standard, and would not maintain existing coastal recreation opportunities at Oceano Dunes SVRA to the maximum extent feasible and consistent with legislative mandates. This alternative also may not maintain existing visitor levels if the in-lieu closure of lands led to public safety concerns due to increased vehicle density in the open riding and camping area.

Accordingly, the OHMVR Division has rejected this alternative because it would not obtain most of the basic objectives of the proposed Dust Control Program nor avoid or substantially lessen the Program's significant and unavoidable impacts (rather it would substantially increase the severity of these impacts).

12.2.3.2 OHV Use Restrictions in Addition to Dust Control Measures

Under this alternative, the OHMVR Division would implement the proposed Dust Control Program (approximately 100 acres of vegetation and 40 acres of seasonal dust control measures) and close additional acreage to motorized recreation. As described above (see Section 12.2.3.1), vehicular use restrictions are not scientifically proven to be effective at reducing saltation and dust production and, therefore, may not provide additional dust control above that provided by the proposed Dust Control Program.

This alternative would increase the magnitude of the proposed Dust Control Program's significant and unavoidable recreation and land use impacts because it would result in the additional closure of coastal vehicular recreation lands.

This alternative would achieve most of the basic objectives of the proposed Dust Control Program because it would still involve planting vegetation (approximately 100 acres) and deploying seasonal dust control measures (approximately 40 acres) that are effective at minimizing dust and PM10 emissions during wind events; however, this alternative would not maintain existing coastal recreation opportunities provided by Oceano Dunes SVRA. In addition, this alternative may not maintain existing visitor levels if the in-lieu closure of lands led to public safety concerns due to increased vehicle density in the open riding and camping area.

While this alternative would obtain most of the objectives of the proposed Dust Control Program, the OHMVR Division has rejected this alternative because it clearly would not reduce or substantially lessen the significant recreation and land use impacts of the Program; rather, it would increase the severity of these impacts by resulting in the additional closure of coastal vehicular recreation lands at Oceano Dunes SVRA.

12.2.4 Off-Site Mitigation Alternatives

Under this alternative, the OHVMR Division would implement off-site mitigation as part of the proposed Dust Control Program. This off-site mitigation could include providing enhanced filtration systems for residential heating and cooling systems. This off-site mitigation could either be in-lieu of, or in addition to, the vegetation and seasonal dust control measures proposed as part of the Oceano Dunes SVRA Dust Control Program.

12.2.4.1 Off-Site Mitigation In-Lieu of Dust Control Measures

Off-site mitigation in the form of residential filtration systems would require the OHMVR Division to work with individual landowners to evaluate whether existing systems can properly function with installation of higher efficiency filter. Thus, though technically feasible, this alternative would likely not be logistically feasible.

Although likely infeasible, off-site mitigation in-lieu of the proposed vegetation and seasonal dust control measures would avoid the proposed Dust Control Program's significant recreation and land use impacts because it would not involve planting up to 100 acres of vegetation or seasonally deploying up to 40 acres of wind fencing or straw bales in the proposed Dust Control Program area.

Off-site mitigation in-lieu of the proposed dust control measures would maintain existing types and levels of public access and recreation at Oceano Dunes SVRA, but it would not obtain most of the basic objectives of the proposed Dust Control Program. Off-site mitigation would not minimize dust generated at Oceano Dunes SVRA. This is because off-site mitigation would not involve vegetation or other measures that directly cover the ground surface, break the flow of wind across the landscape, or otherwise stabilize or hold sand in place at Oceano Dunes SVRA.

Accordingly, the OHMVR Division has rejected this alternative because it is not a feasible alternative that would obtain most of the basic objectives of the proposed Dust Control Program.

12.2.4.2 Off-Site Mitigation in Addition to Dust Control Measures

Off-site mitigation restrictions in addition to the proposed vegetation and seasonal dust control measures would not avoid or substantially lessen any of the proposed Dust Control Program's impacts. This alternative would obtain most of the objectives for the proposed Dust Control Program, because it would still involve planting vegetation and deploying seasonal dust control measures that are effective at minimizing dust and PM10 emissions during wind events. While this alternative would obtain most of the objectives of the proposed Dust Control Program, the OHMVR Division has rejected this alternative because it is not considered feasible and would clearly not reduce or substantially lessen the significant recreation and land use impacts of the proposed Dust Control Program.

12.3 NO PROJECT ALTERNATIVE

The OHMVR Division considered two versions of the No Project Alternative: the No Action Alternative and the No Comprehensive Dust Program Alternative. These two versions of the No Project Alternative are discussed below.

12.3.1 No Action Alternative

Under the No Action Alternative, the OHMVR Division would continue to perform existing dust control, monitoring, and track-out prevention activities at Oceano Dunes SVRA and Pismo State Beach (see 2.2.7); however, the OHMVR Division would not undertake any of the additional vegetation planting, seasonal dust control measures, monitoring, or track-out and prevention activities described in Section 2.3.1.3 of this EIR. Table 12-1 provides a comparison of the No Action Alternative and the proposed Dust Control Program.

Table 12-1 Comparison of No Action Alternative and Dust Control Program Activities

Activity	No Action Alternative	Proposed Dust Control Program	
		Program	Cumulative
Vegetation / Dune Restoration	Approximately 15 acres of restoration per year, but only 5 acres of newly planted vegetation per year	20 acres per year 100 acres total	25 acres per year 125 acres over 5 years
Seasonal Dust Control Measures	1,700 feet of fencing per year (March to June)	1,700 feet of fencing per year (March to June) and up to 40 acres of seasonal dust control measures from March 1 to September 30 (e.g., wind fencing, straw bales, PREs, and/or soil stabilizers)	1,700 feet of fencing per year (March to June) and up to 40 acres of wind fencing, straw bales, and/or soil stabilizers per year (March to September)

Table 12-1 Comparison of No Action Alternative and Dust Control Program Activities			
Activity	**No Action Alternative**	**Proposed Dust Control Program**	
		Program	**Cumulative**
Dust and Meteorological Monitors	S1 tower Oso Flaco	S1 tower Oso Flaco Up to 12 sites upwind, downwind, within, and adjacent to seasonal dust control measures	S1 tower Oso Flaco Up to 12 sites upwind, downwind, within, and adjacent to seasonal dust control measures
Track-out Prevention	Street Sweeping on Grand and Pier Avenue	Grooved concrete at or near Grand and Pier Avenue sand ramps	Street Sweeping on Grand and Pier Avenue and grooved concrete at or near sand ramps

As shown in Table 12-1, the No Action Alternative would only result in minimal changes to the environment (1,700 feet of fencing and five acres of newly planted vegetation per year, all of which would be within existing, protected vegetation islands or outside the open riding and camping area). Thus, this alternative avoids the significant and unavoidable recreation and land use impacts, as well as the potentially significant noise impact (from track-out prevention device noise), that would result with implementation of the proposed Dust Control Program.

The No Action Alternative would not obtain most of the basic objectives of the Dust Control Program. While vegetation planted (approximately five acres) and fencing deployed (1,700 linear feet of wind fencing upwind of Grand Avenue, Pier Avenue, and Strand Way) under the No Action Alternative would, to a small degree, control and minimize dust emissions during strong winds, they would not reduce concentrations of PM10 as measured at the SLOAPCD's CDF air quality monitoring station. This is because the vegetation and fencing would likely be outside the Dust Control Program area – which CARB, the SLOAPCD, and the OHMVR Division have identified as the area most likely influencing concentrations at CDF. In addition, since these current vegetation and fencing activities did not avoid the SLOACPD's development and adoption of Rule 1001, it is reasonable to presume these activities would not make progress towards compliance with the Rule 1001 performance standard. They also would not contribute toward the development of a comprehensive dust control Program, including the deployment of temporary monitoring equipment and the installation and operation of a track-out prevention device at the Grand Avenue and Pier Avenue sand ramps. The No Action Alternative would, however, maintain existing public access and coastal recreation opportunities at Pismo State Beach and Oceano Dunes SVRA.

12.3.2 No Comprehensive Dust Program Alternative

Under the No Comprehensive Dust Program Alternative, the OHMVR Division would continue to perform existing dust control, monitoring, and track-out prevention activities at Oceano Dunes SVRA and Pismo State Beach (see 2.2.7); however, the OHMVR Division would not undertake a comprehensive, five-year dust control program. Rather, the OHMVR Division would proceed with an interim series of dust control projects, which, for the purposes of this alternatives analysis, would consist of approximately 40 acres of seasonal dust control measures such as wind fencing, straw bales, or PREs. These seasonal dust control measures would most likely be

installed within the SVRA's open riding and camping area, east of sand highway (see Figure 2-2). The OHMVR Division would install some air quality and PM10 monitoring equipment to measure the effectiveness of the seasonal dust control measures, but would not proceed with installation of grooved concrete (for track-out prevention purposes) at Pier and Grand Avenue. The installation of seasonal dust control measures could occur for one year, five years, or more.

The No Comprehensive Dust Program Alternative would substantially reduce and/ or avoid most of the proposed Dust Control Program's significant impacts. The OHMVR Division would not plant up to 100 acres of vegetation, nor install grooved concrete for track-out prevention purposes. Thus, this alternative would substantially reduce the proposed Program's significant and unavoidable recreation and land use impacts, and avoid the proposed Program's potentially significant noise impacts. The OHMVR Division notes the No Comprehensive Dust Program Alternative would still result in the seasonal loss of approximately 40 acres of coastal recreation lands, which would combine with the seasonal loss of coastal recreation lands resulting from the plover exclosure (a minimum of 284 acres). Thus, this alternative would not entirely avoid the significant recreational impacts of the proposed Dust Control Program.

The No Comprehensive Dust Program Alternative would obtain most of the basic objectives of the Dust Control Program to a certain degree. Deploying approximately 40 acres of seasonal dust control measures would control and minimize dust emissions during strong winds; however, it is uncertain whether this level of activity would reduce concentrations of PM10 as measured at the SLOAPCD's CDF air quality monitoring station and thus make progress towards compliance with the Rule 1001 performance standard. The No Comprehensive Dust Program Alternative would maintain existing public access routes and coastal recreation opportunities; however, it would result in the development of a comprehensive dust control Program, including the deployment of temporary monitoring equipment and the installation and operation of a track-out prevention device at the Grand Avenue and Pier Avenue sand ramps.

12.4 ALTERNATE DUST CONTROL PROGRAM

At the request and recommendation of the SLOAPCD, the OHMVR Division identified an alternate Dust Control Program for discussion and consideration. This alternative has been considered because some studies indicate the areas with the highest potential to generate dust and emit PM10 are near-shore areas and because limiting the size and scope of the proposed Dust Control Program could limit the OHMVR Division's ability to achieve the performance standard of Rule 1001. Under this alternative, the OHMVR Division would implement an alternate Dust Control Program at Oceano Dunes SVRA, which would be different from the proposed Dust Control Program in the following ways:

- **Program Area:** The alternate Program area would essentially be the Oceano Dunes SVRA open riding and camping area. The Program area would include all OHV recreation lands, excluding the 284-acre seasonal nesting exclosure and OHV recreation lands south of marker post 8. This alternate Program area would encompass approximately 950 acres (as compared to approximately 690 acres for the proposed Dust Control Program), but would not include any areas outside the Oceano Dunes SVRA open riding and camping area, meaning that all dust control measures would be located on land where vehicular recreation is allowed.
- **Vegetation Planting:** The alternate dust control Program would still involve planting approximately 20 acres of native dune vegetation per year; however, the planting would

be emphasized in areas closer to the shore and where foredunes would be expected in the absence of vehicular recreation.

- **Wind Fencing:** The alternate dust control Program could still involve up to 40 acres of wind fencing in Year 1; however, the amount of fencing would be increased by 20 percent each year until the Rule 1001 performance standard is met. At worst-case, if the performance standard is not met, this alternative could result in approximately 48, 58, 69, and 83 acres of seasonal wind fencing at Oceano Dunes SVRA in Years 2 to 5, respectively.

The economic and logistical feasibility of this alternate Dust Control Program is uncertain because it would require substantially more labor and financial resources than the Oceano Dunes District currently has at its disposal (due to more seasonal wind fencing). Presuming the alternate dust control Program is feasible, it would not avoid or substantially lessen any of the significant impacts of the Oceano Dunes SVRA Dust Control Program. This alternative would result in similar noise impacts as the proposed Program, because it would still involve the installation of track-out prevention devices on Pier Avenue in Oceano. In addition, this alternative would substantially increase the magnitude of the proposed Program's significant and unavoidable recreation and land use impacts because all proposed vegetation planting and wind fencing would occur inside the SVRA's open riding and camping area. Thus, the total loss in OHV recreation lands that would occur under this alternative would be at least 143 acres in Year 5 (30 acres more than the proposed Program) and as much as 183 acres in Year 5 (70 acres more than the proposed Program) if the Rule 1001 performance standard is not met by Year 4. In addition, because the OHMVR Division would emphasize planting vegetation in near shore areas, this alternative would have a greater impact on beach and near-shore camping than the proposed Dust Control Program (because the most popular camp sites would be planted in vegetation).

Furthermore, this alternative could result in new, potentially significant or significant and unavoidable impacts on aesthetics and/or biological resources. The alternate dust control Program could also more than double the amount of wind fencing installed in Year 5 (83 acres versus 40 acres) if the Rule 1001 performance standard is not met, which would increase the visibility of the fencing array from all receptor vantage points. The alternate dust control Program could also result in direct and/or indirect impacts on biological resources because the emphasis on planting vegetation in near-shore areas would likely modify, to some degree, USFWS-designated critical habitat for the western snowy plover (federal-listed as threatened). Planting vegetation in this critical habitat area could impact active nests by providing habitat for predators to hide and stalk nesting western snowy plovers and California least terns (federal- and state-listed as threatened). The proposed Dust Control Program largely avoids this impact by setting back the Program area at least 1,100 feet from the mean high tide line and avoiding USFWS critical habitat areas.

The alternate dust control Program would obtain most of the objectives for the proposed Dust Control Program. The alternate Program would still be a comprehensive dust control Program that involves planting vegetation, deploying seasonal dust control measures and monitoring equipment, and installation of track-out prevention devices. Thus, it would likely reduce concentrations of PM10 at the SLOAPCD's CDF monitoring station and make progress toward the Rule 1001 performance standards. The alternate Program would maintain existing public access routes into and out Oceano Dunes SVRA, but could affect existing paths of travel within Oceano Dunes SVRA (such as Sand Highway) because of the substantially greater level of seasonal dust control measures involved (a large access way may be required through an 80-acre array, which would reduce the array's effectiveness). The alternate dust control Program would

not, however, maintain existing coastal recreational opportunities at Oceano Dunes SVRA as well as the proposed Program, and the vegetation planting may change the dune ecosystem in a manner that adversely affects the environment for two breeding listed species, which is inconsistent with the OHMVR Division's need to manage and protect these natural resources.

12.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

A comparison of the proposed Program against the two alternatives discussed in detail above is presented in Table 12-2.

Table 12-2 Comparison of Proposed Program Impacts against Program Alternatives

Resource	Proposed Program	No Project Alternatives		
		No Action	**No Comprehensive Dust Program**	**Alternate Dust Control Program**
Aesthetics	LTS	Lessened	Lessened	**PS/SU**
Agriculture	No Impact	Same	Same	Same
Air Quality	Benefit	Lessened	Lessened	Benefit
Biology	LTS	Lessened	Lessened	**PS/SU**
Cultural	LTS	Lessened	Lessened	Same
Geology	LTS	Lessened	Lessened	Same
GHG	LTS	Lessened	Lessened	Same
Hazards	LTS	Lessened	Lessened	Same
Hydrology	LTS	Lessened	Lessened	Same
Land Use	**SU**	**Avoided**	**Substantially Reduced**	**Substantially More Severe**
Minerals	No Impact	Same	Same	Same
Noise	LTSM	Lessened	Avoided	Same
Public Services	No Impact	Same	Same	Same
Recreation	**SU**	**Avoided**	**Substantially Reduced**	**Substantially More Severe**
Traffic	LTS	Lessened	Lessened	Same
Utilities	No Impact	Same	Same	Same
Meets Project Objectives?	**All**	**Few**	**Some**	**Most**

Table Legend: LTS = Less than significant impact; LTSM = Less than significant impact with mitigation; PS = Potentially significant impact: SU = Significant and unavoidable impact

As shown in Table 12-2, the No Action Alternative is the least environmentally damaging alternative because it avoids or lessens many of the impacts that would occur with implementation of the Oceano Dunes SVRA Dust Control Program; however, it only achieves a few of the objectives for the proposed Program. Similarly, the No Comprehensive Dust Control Program would avoid, substantially reduce, or lessen most of the impacts that would occur with the proposed Porgram. But it, too, only achieves some of the objectives for the proposed Program. The alternate dust control program would obtain most of the proposed Program's objectives, but would also result in substantially more severe aesthetics and recreation impacts and substantially more severe impacts on biological resources. As a result, the proposed Program is considered the environmentally superior alternative.

CHAPTER 13 OTHER CEQA CONSIDERATIONS

13.1 POTENTIALLY UNAVOIDABLE SIGNIFICANT IMPACTS

CEQA Guidelines Section 15126(a) and (b) require an EIR to discuss the significant environmental effects of the proposed project and the significant environmental effects which cannot be avoided if the proposed project is implemented.

All potentially significant impacts of the project are identified in Chapters 4 – 11 of this EIR, along with Standard and Specific Project Requirements (SPRs) and, where necessary, mitigation measures, to reduce or avoid these impacts. Even with the incorporation of SPRs and feasible mitigation measures, the proposed Dust Control Program, if implemented, would result in two unavoidable, significant impacts:

Impact REC-1: The Dust Control Program would limit and interfere with coastal vehicular recreation opportunities at Oceano Dunes SVRA.

Dust Control Program activities could result in the temporary (up to 43 acres) and permanent (between 35 and 70 acres) closure of land inside the Oceano Dunes SVRA open riding and camping area (in Year 5), which would constitute an approximately 5.3 to 7.7 percent loss in OHV recreation lands at Oceano Dunes SVRA (out of 1,453 acres). Mitigation Measure REC-1 requires the OHMVR Division to minimize the loss of OHV recreation opportunities at Oceano Dunes SVRA by planting vegetation outside the SVRA's open riding and camping area as much as feasible, planting vegetation and deploying seasonal dust control measures in a manner that does not interfere with Sand Highway and other established paths of travel, integrating recreation opportunities (including OHV recreation) into dust control measures, and identifying areas to add camping and OHV recreation opportunities. Any expansion of OHV recreation opportunities shall occur in a manner that is consistent with the Public Resources Code and other applicable laws and regulations and shall not impede achievement of the performance standard set by Rule 1001. Mitigation Measure REC-1 could minimize some of the loss in coastal vehicular recreational opportunities at Oceano Dunes SVRA that would occur under the Dust Control Program; however, the potential would remain for the Dust Control Program (in Year 5) to temporarily (43 acres) and permanently (70 acres) limit and interfere with OHV recreation at Oceano Dunes SVRA. Factors such as the SVRA's history of use, historical reduction in vehicle recreation lands in the area, current seasonal reduction in vehicle recreation lands, high visitor attendance levels, and the unique, low-cost nature of the coastal recreational opportunities provided by the SVRA make this loss of OHV lands a substantial and adverse change to OHV recreation at Oceano Dunes SVRA, and a significant and unavoidable impact of the Dust Control Program.

Impact LUP-1: The Dust Control Program would conflict with the Pismo Dunes SVRA (now Oceano Dunes SVRA) General Development Plan and Resource Management Plan.

Impact LUP-1 identifies that the loss of up to approximately 78 to 113 acres of land inside the Oceano Dunes SVRA is considered a significant conflict with the Oceano Dunes SVRA General Development Plan and Resource Management Plan because it would not perpetuate and enhance recreational use of OHVs in the SVRA. Mitigation Measure REC-1 requires the OHMVR Division to implement measures that could reduce the potential for Dust Control Program components to limit and interfere with OHV recreation. Mitigation Measure REC-1 also directs the OHMVR Division to compensate for the loss (i.e., closure) of OHV recreation lands that could occur with implementation of the Dust Control Program; however, the ability of the

OHMVR to do this is subject to other applicable laws and regulations and is, therefore, speculative. Thus, even with the implementation of Mitigation Measure REC-1, the potential remains for the Dust Control Program (in Year 5) to temporarily (43 acres) and permanently (70 acres) limit and interfere with OHV recreation at Oceano Dunes SVRA. This loss is considered a significant conflict with the stated management policy of the General Development Plan and Resource Management Plan.

Impact LUP-2: The Dust Control Program could conflict with the California Coastal Act.

Impact LUP-2 identifies the proposed Dust Control Program could conflict with the California Coastal Act because the preferred Dust Control Program scenario would impact 78 acres of coastal OHV recreation lands and the alternate program scenario does not maximize existing, historical, and traditional coastal OHV recreational opportunities at Oceano Dunes SVRA. This significant impact would occur even with design and mitigation measures (REC-1) incorporated into the project.

Impact CML-1: The Dust Control Program would contribute to cumulative, seasonal and permanent reductions in coastal vehicular recreational opportunities at Oceano Dunes SVRA.

Impact REC-1 identifies that the Dust Control Program could result in the temporary (up to 43 acres) and permanent (between 35 and 70 acres) closure of land inside the Oceano Dunes SVRA open riding and camping area in Year 5 of the Program. This impact would combine with the seasonal closure of 284 acres of land inside the SVRA's open riding and camping area, which occurs from March 1st to September 30th due to the installation of fencing to protect nesting western snowy plovers (nest exclosure). This impact would also combine with the recent closure of 16 acres of land associated with an expanded cultural resources management and protection measure. In Year 5, the total seasonal loss in coastal vehicular recreation lands resulting from the nest exclosure (284 acres), expanded cultural resources protection (16 acres) and the Dust Control Program (78 to 113 acres; see tables 4-8 and 4-9) would range from approximately 378 to 413 acres. The seasonal closure of 378 to 413 acres of land constitutes an approximately 26 to 28.4 percent reduction in available OHV recreation lands at Oceano Dunes SVRA (out of 1,453 acres). This seasonal reduction would occur for approximately seven months of the year (more than 50 percent), and include popular holiday weekends such as Memorial Day, July 4th, and Labor Day, as well as the summer season when schools on traditional schedules are out of session. In Year 5, the total permanent loss in coastal vehicular recreation lands resulting from expanded cultural resources protection (16 acres) and the proposed Dust Control Program (35 to 70 acres) would range from 51 to 86 acres. The permanent closure of 51 to 86 acres of land constitutes an approximately 3.5 to 5.9 percent reduction in available OHV recreation lands at Oceano Dunes SVRA. The implementation of Mitigation Measure REC-1 could partially reduce the Dust Control Program's contribution to this cumulative impact; however, the ability of the OHMVR Division to implement Mitigation Measure REC-1 in its entirety is not certain. Specifically, the ability of the OHMVR Division to compensate for the loss (i.e., closure) of OHV recreation lands that could occur with implementation of the Dust Control Program would be subject to other applicable laws and regulations and cannot, therefore, be guaranteed. Impact CML-1, therefore, is considered a significant and unavoidable cumulative impact of the Dust Control Program.

Impact CML-2: The Dust Control Program would contribute to a cumulative loss in OHV recreation lands that conflicts with the Pismo Dunes SVRA (now Oceano Dunes SVRA) General Development Plan and Resource Management Plan and the California Coastal Act.

Impact CML-2 identifies that the magnitude of the loss of coastal recreation lands identified in impact CML-1 does not perpetuate or enhance the recreational use of OHVs at Oceano Dunes SVRA, as required by the General Development Plan and Resource Management Plan, nor does it maximize coastal recreation opportunities, as generally required by the Coastal Act. The permanent or temporary loss of OHV recreation lands at Oceano Dunes SVRA is especially important given the site's history, popularity, and unique, low-cost coastal recreational opportunities, plus the lack of similar facilities in the state. Mitigation Measure REC-1 could partially reduce the Dust Control Program's contribution to this cumulative impact; however, the ability of the OHMVR Division to implement Mitigation Measure REC-1 in its entirety is not certain. Specifically, the ability of the OHMVR Division to compensate for the loss (i.e., closure) of OHV recreation lands that could occur with implementation of the Dust Control Program would be subject to other applicable laws and regulations and cannot, therefore, be guaranteed. Impact CML-2, therefore, is considered a significant and unavoidable cumulative impact of the Dust Control Program.

13.2 GROWTH INDUCING IMPACT OF THE PROPOSED PROJECT

CEQA Guidelines Section 15126(d) require an EIR to discuss the growth-inducing impact of the proposed Program. As described in Section 3.4.7, the Dust Control Program would not induce substantial population growth in an area, would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere, and would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. The proposed Dust Control Program does not contain any other potential activity or component that would induce growth.

13.3 POTENTIAL INCONSISTENCY WITH OTHER LOCAL PLANS

CEQA Guidelines Section 15125(d) requires an EIR to discuss inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans including, but not limited, to air quality plans, habitat conservation plans, and land use plans for the protection of the Coastal Zone. The Program's inconsistency with applicable plans is generally considered and discussed in the setting and impact discussions in Chapters 4 – 10 of this EIR; however, as discussed in Chapter 5, Land Use and Planning, the Dust Control Program area is primarily located on state-owned and state-leased and -operated land that, with the exception of coastal development permitting conducted through local agencies, is not subject to local land use restrictions and zoning regulations. The OHMVR Division, SLO County, the City of Grover Beach, and the CCC have consented to a consolidated CDP process in which the CCC will retain Coastal Act jurisdiction for the proposed Dust Control Program and process and act upon the OHMVR Division's CDP application. Chapter 7 of the Coastal Act, Development Controls, sets forth that the standard of review for the consolidated Dust Control Program CDP process is Chapter 3 of the Coastal Act. As described in 0, the proposed Dust Control Program would result in significant and unavoidable conflict with the SVRA's General Development Plan and Resource Management Plan and the California Coastal Act.

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CHAPTER 14 REPORT PREPARATION AND AGENCIES / ORGANIZATIONS CONSULTED

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