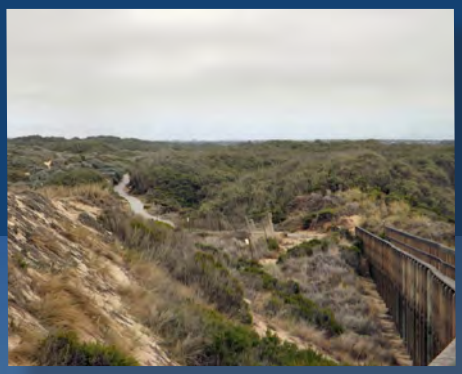

Draft
Environmental Impact Report

Habitat Conservation Plan for the Oceano Dunes District

February 2020

California Department of Parks and Recreation
Oceano Dunes District
Habitat Conservation Plan

Draft
Environmental Impact Report

SCH No. 2018011012

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February 2020

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OCEANO DUNES DISTRICT

HABITAT CONSERVATION PLAN

DRAFT ENVIRONMENTAL IMPACT REPORT

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ACRONYMS, ABBREVIATIONS, AND SYMBOLS

Acronym/Symbol	Full Phrase or Description
µg/m^3	Micrograms per cubic meter
AB	Assembly Bill
ALUP	Airport Land Use Plan
ALUC	Airport Land Use Commission
AMM	Avoidance and Minimization Measure
APCD	Air Pollution Control District
APCO	Air Pollution Control Officer
ATV	All-terrain vehicle
BCC	Birds of Conservation Concern
BMP	Best Management Practices
CAAQS	California Ambient Air Quality Standards
CalEEMOD	California Emissions Estimator Model
CARB	California Air Resources Board
CCC	California Coastal Commission
CCR	California Code of Regulations
CDF	California Department of Forestry and Fire Prevention
CDFW	California Department of Fish and Wildlife
CDP	Coastal Development Permit
CDPR	California Department of Parks and Recreation
CDVAA	Coastal Dune Vehicle Activity Areas
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFP	California Fully Protected Species
CFR	Code of Federal Regulations
CH_4	Methane
CHRIS	California Historical Resources Information System
CLTE	California Least Tern
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon Monoxide
CRHR	California Register of Historical Resources
CRI	Cultural Resource Inventory

Acronym/Symbol	Full Phrase or Description
CRLF	California Red-legged Frog
CRPR	California Rare Plant Ranked
CSSC	California Species of Special Concern
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DRI	Desert Research Institute
EA	Environmental Assessment
E-BAM	Environmental Beta Attenuation Monitor
ESU	Ecologically Significant Unit
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESHA	Environmentally Sensitive Habitat Area
FC	Candidate for Federal Listing
FE	Federal Endangered
FESA	Federal Endangered Species Act
FT	Federal Threatened
GHG	Greenhouse Gas
GWP	Global Warming Potential
H_2S	Hydrogen Sulfide
HCP	Habitat Conservation Plan
HFC	Hydrofluorocarbons
HMS	Habitat Monitoring System
ITP	Incidental Take Permit
LCP	Local Coastal Program
MBTA	Migratory Bird Treaty Act
MCV2	Manual of California Vegetation, Second Edition
MRZ	Mineral Resource Zone
MTCO2e	Million Metric Tons of CO_2 Equivalents
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plant

Acronym/Symbol	Full Phrase or Description
NEPA	National Environmental Policy Act
NO_2	Nitrogen Dioxide
NOAA Fisheries	National Oceanic and Atmospheric Administration, National Marine Fisheries Service
NOI	Notice of Intent
NOP	Notice of Preparation
NO_x	Oxides of Nitrogen
NPPA	Native Plant Protection Act
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
NWR	National Wildlife Refuge
O_3	Ozone
ODD	Oceano Dunes District
Oceano Dunes SVRA	Oceano Dunes State Vehicular Recreation Area
OHMVR	Off-Highway Motor Vehicle Recreation
OHP	Office of Historic Preservation
OHV	Off-Highway Vehicle
PI-SWERL	Portable In-Situ Wind Erosion Lab
PM	Particulate Matter
PMRP	Particulate Matter Reduction Program
PRC	Public Resources Code
PWP	Public Works Plan
ROG	Reactive Organic Gases
RUV	Recreational Utility Vehicle
RWQCB	Regional Water Quality Control Board
SAG	Scientific Advisory Group
SAO	Stipulated Order of Abatement
SB	Senate Bill
SCCAB	South Central Coast Air Basin
SHPO	State Historic Preservation Officer
SHRC	State Historic Resources Commission
SIP	State Implementation Plan
SLO	San Luis Obispo
SLOAPCD	San Luis Obispo Air Pollution Control District

Acronym/Symbol	Full Phrase or Description
SNPL	Western snowy plover
SO_2	Sulfur Dioxide
SO_x	Oxides of Sulfur
SR	State Rare
ST	State Threatened
SVRA	State Vehicular Recreation Area
SWL	State Watch List
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
UAS	Unmanned Aircraft System
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
VOC	Volatile Organic Compounds
WHPP	Wildlife Habitat Protection Plan

SUMMARY

S.1 PROJECT DESCRIPTION

California Department of Parks and Recreation (CDPR or State Parks) manages and operates Pismo State Beach and Oceano Dunes State Vehicular Recreation Area (SVRA). Federally- and state-listed endangered or threatened species occur on the property, including western snowy plover (*Charadrius nivosus nivosus;* SNPL), California least tern (*Sternula antillarum browni;* CLTE), California red-legged frog (*Rana draytonii;* CRLF), and tidewater goby (*Eucyclogobius newberryi*), as well as six listed plant species. Therefore, CDPR has prepared a Habitat Conservation Plan (HCP) as part of its application for an incidental take permit (ITP), authorized under Sections 10(a)(1)(A) and 10(a)(1)(B) of the federal Endangered Species Act (FESA). The HCP provides the basis for United States (U.S.) Fish and Wildlife Service (USFWS) issuance of a 25-year permit authorizing incidental take[1] of listed species under FESA.

The 5,005-acre HCP area includes two state park units—Pismo State Beach and Oceano Dunes SVRA—which are located in San Luis Obispo County, California. The HCP area is bounded by the City of Pismo Beach to the north, the Guadalupe-Nipomo Dunes National Wildlife Refuge to the south, urban and agricultural land to the east, and the Pacific Ocean to the west. Primary access to the area is via U.S. Highway 101 and State Route 1.

Covered activities under the HCP include all activities for which CDPR has responsibility within the HCP area that could result in take of covered species. These activities include, but are not limited to, public use/recreation management, natural resources management, and park/beach management. The species selected for inclusion in the HCP are based on their potential to be affected by covered activities, their occurrence in the HCP area, and the species' listing status. The HCP is based upon the current program being implemented by CDPR at Pismo State Beach and Oceano Dunes SVRA. The HCP includes actions to achieve the biological goals and objectives and relies on several types of conservation measures, including avoidance and minimization measures (AMMs), habitat enhancement, habitat restoration, habitat creation, and population enhancement. Protection of the covered species includes minimizing human alteration or disturbance of native habitats and reducing conflicts between covered species and park users. Monitoring would be utilized to inform decision-making and management strategies to ensure program effectiveness.

The HCP includes 52 covered activities divided into five categories: park visitor activities, natural resources management, park maintenance, visitor services, and other activities. The majority of these covered activities are existing visitor uses or park operations that have been occurring in the state park for decades. These existing activities are considered part of the baseline environmental conditions of the HCP site. The HCP also includes new covered

[1] *Take*, as defined by FESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct." Harm is defined as "an act which actually kills or injures wildlife," including significant habitat modification or degradation "where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering." *Take*, as defined under CESA, is any action or attempt to "hunt, pursue, catch, capture, or kill."

activities, which are either proposed now as a modification to the current park operation or may be contemplated in the future.

The HCP proposes four new covered activities evaluated in this Environmental Impact Report (EIR):

- CA-12b:[2] SNPL chicks and eggs would be captured and sent to captive rearing if they cannot be reunited with an attending adult and are at risk of death or injury from covered activities not related to covered species management activities (e.g., motorized recreation, pedestrian recreation, new covered activities).
- CA-21: Mechanical trash removal would occur through beach raking or grooming in heavily used areas from Grande Avenue south to orientation marker (Post) 6.
- CA-50: Seasonal fencing erected along East Boneyard Exclosure (approximately 49 acres) would be removed and seasonal fencing along the 6 Exclosure would be incrementally reduced to allow year-round recreation in these two exclosures. The 6 Exclosure (60 acres) may be reduced in 328-foot (100-meter) increments from north to south (approximately 7.5 acres), or CDPR may implement alternative incremental reductions of similar acreage to meet management needs. The gradual progression of the 6 Exclosure reduction would be conditioned upon biological criteria being met for SNPL and CLTE, operational considerations, and other factors.
- CA-52: CDPR may use unmanned aircraft systems (UAS; e.g., drones) in the HCP area (CA-52) reduce the time and cost associated with data collection, especially in more remote areas.

The HCP also covers new activity currently being planned or which may be considered in the future that will be subject to separate environmental review for California Environmental Quality Act (CEQA) compliance (EIR section 2.5). New covered activities being planned by CDPR include dust control measures prescribed under a new Particulate Matter Reduction Plan (PMRP; Dust Control Activities – CA-44). Potential activities not proposed at this time but that may be contemplated in the future include banding adult SNPL (CA-12b), propagation and outplanting of listed plants (CA-15), replacement of the cable fence (CA-28), Pismo Creek estuary seasonal (floating) bridge (CA-41), riding in 40 Acres (CA-42), replacement of the safety and education center (CA-43), Oso Flaco Lake boardwalk replacement (CA-48), and special projects (CA-49). All these activities are reasonably foreseeable projects considered in the cumulative impact analysis (also see EIR section 3.3).

S.2 PROJECT IMPACTS AND MITIGATION

Consistent with CEQA and the CEQA Guidelines, this EIR focuses on the potentially significant direct and indirect impacts that could result from implementation of the proposed HCP. Impacts that were determined to be less than significant due to absence of the evaluated resource or the nature of the proposed activity include aesthetics, agricultural and forest resources, geology and soils, greenhouse gas emissions and energy, hazards and hazardous materials, hydrology and

[2] This capture is a new covered activity proposed under the HCP, which is different than ongoing capture associated with natural resources management activities. This activity addresses capture when eggs and chicks are threatened by non-covered species management activities, such as motorized recreation.

water quality, mineral resources, noise, population and housing, public services, transportation and traffic, utilities and service systems, and wildfire (see EIR section 3.2). These impacts are discussed in EIR section 10.3.

The EIR impact analysis evaluates in detail potential impacts to land use, air quality, biological resources, cultural resources, and recreation. A summary of project impacts and mitigation is presented in Table S-1. All impacts associated with the HCP can be reduced to less-than-significant levels. There are no significant unavoidable impacts.

Table S-1. Summary of Project Impacts and Mitigation Measures

Impact	Mitigation Measure
Land Use	
Impact: SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b), mechanical trash removal (CA-21), reduction of the Boneyard Exclosure and 6 Exclosure (CA-50), and CDPR's use of UAS (CA-52) do not change the land uses within Pismo State Beach or Oceano Dunes SVRA. These activities do not constitute new development within the coastal zone or require permitting through the Local Coastal Program or other land use agencies. CA-50 would remove seasonal restrictions on up to 109 acres of open riding and camping area during the summer season. The action increases coastal recreation access to motorized and non-motorized recreation in a recognized environmentally sensitive habitat area (ESHA). Daily vehicle use numbers are limited by the current Coastal Development Permit (CDP 4-82-300) and would remain in effect. With HCP AMMs, CDP vehicle use limits, and EIR mitigations in place, the HCP does not conflict with state or local land use plans or resource plans governing the HCP area. **Less-than-Significant Impact**	**No mitigation is required.**
Air Quality	
Impact: SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b) and CDPR's use of UAS (CA-52) do	**No mitigation is required.**

Table S-1. Summary of Project Impacts and Mitigation Measures	
not generate PM emissions and have no impact on air quality standards. **No Impact**	
Impact AIR-1: The proposed new covered activities of mechanical trash removal (CA-21) and reduction of the East Boneyard Exclosure and 6 Exclosure (CA-50) could potentially change dune surface emissivity, increase dust generation, expose persons to substantial pollutant concentrations, and cause or contribute to exceedances of $PM_{2.5}$ and/or PM_{10} ambient air quality standards. **Potentially Significant Impact**	**Mitigation Measure AIR-1A:** To ensure that implementation of the HCP does not cause or contribute to violations of air quality standards, the OHMVR Division shall undertake the following monitoring actions. 1) Annually, the OHMVR Division shall identify boundary changes to the 6 Exclosure implemented under CA-50 and disclose this information to the SAG convened under the Stipulated Order of Abatement Case No. 17-01. 2) Prior to initiating mechanical trash removal activities, the OHMVR Division shall divide the trash removal treatment area into appropriate subareas that take into account, but are limited to, geographic continuity and anticipated level of treatment. 3) In collaboration with the SAG, the OHMVR Division shall evaluate and establish baseline dust/ PM_{10} generation in the East Boneyard Exclosure and 6 Exclosure and in the areas proposed for mechanical trash removal. This baseline may be based on: a) Historical data; b) New data; and/or c) A combination of historical and new data. 4) Every 3 months, the OHMVR Division shall conduct emission monitoring at one or more locations within/around the reduced East Boneyard Exclosure and 6 Exclosure areas and within the designated areas that have undergone mechanical trash removal. The specific number and location(s) of the monitoring, as well as instrumentation used for the monitoring, shall be determined in consultation with the SAG, and the data produced shall be made readily available to the SAG. 5) Based on the emissions monitoring conducted pursuant to item 4) above: a) If the average values at a monitoring location associated with the 6 Exclosure show the area is experiencing an increased emission factor of three or more (compared to baseline conditions) for three or more consecutive monitoring efforts, additional annual reductions of the 6 Exclosure area shall be halted, and the OHMVR Division shall implement Mitigation Measure AIR-1B. b) If the average values at a monitoring location associated with East Boneyard show the area is experiencing an increased emission factor of three

Table S-1. Summary of Project Impacts and Mitigation Measures

	or more (compared to baseline conditions) for three or more consecutive monitoring efforts, the OHMVR Division shall implement Mitigation Measure AIR-1C. c) If the average value in an area south of Post 4 that has undergone mechanical trash removal shows any measurable increase in emission potential (compared to baseline conditions) after the area has been raked, additional mechanical trash removal of that area shall not occur until the requirements identified in Mitigation Measure AIR-1D have been met. This requirement does not supersede the requirements set for the 6 Exclosure or East Boneyard area by subsections 5a and 5b, respectively. **Mitigation Measure AIR-1B:** To ensure reduction of the 6 Exclosure does not cause or contribute to violations of air quality standards, the OHMVR Division shall undertake the following actions. 1) If, through modeling or other statistical analysis, it is determined that the increased emissions from the 6 Exclosure have caused or substantially contributed to a violation of state and/or federal air quality standards, the OHMVR Division shall, in consultation with the SAG, determine measures that offset increased emission concentrations. These measures may include, but are not limited to: a) Returning the exclosure to existing conditions, b) Administering a surface treatment on the area of the exclosure that has been reduced, or c) Controlling dust from another portion of the HCP area that is equivalent to the measured increase from the exclosure area that caused the violation. In no case shall the control measure acreage cause a loss of camping and motorized recreation that exceeds the acreage gained by reducing the 6 Exclosure. 2) Additional exclosure reduction activities may be resumed when, in consultation with the SAG, it has been determined that the change in emissions from the 6 Exclosure has not caused or substantially contributed to a violation of state and/or federal air quality standards. 3) The OHMVR Division may reduce/cease monitoring of the reduced exclosure areas being carried out pursuant to Mitigation Measure AIR-1A under the following criteria. a) Monitoring may be reduced to an interval of once every 6 months if the OHMVR Division no longer proposes to reduce the size of the 6 Exclosure, the monitoring has demonstrated emissions in the

Table S-1. Summary of Project Impacts and Mitigation Measures

	reduced exclosure area have stabilized over a period no less than 1 year, and modeling/statistical analysis is not being conducted for the initial emissions rate being analyzed pursuant to item 1) above. b) Monitoring may cease if the OHMVR Division no longer proposes to reduce the size of the 6 Exclosure, the monitoring has demonstrated emissions in the reduced exclosure area have stabilized over no less than 2 years, and modeling/statistical analysis is not being conducted for that emissions rate pursuant to item 1) above. c) If at any time an exclosure is reduced, monitoring shall resume pursuant to Mitigation Measure AIR-1A at a rate of once every 3 months. Conditions 3a) and 3b) must be met again to decrease the frequency of the monitoring after reducing an area of an exclosure. **Mitigation Measure AIR-1C:** To ensure reduction of East Boneyard does not cause or contribute to violations of air quality standards, the OHMVR Division shall undertake the following actions. 1) If, through modeling or other statistical analysis, it is determined that the increased emissions from the East Boneyard have caused or substantially contributed to a violation of state and/or federal air quality standards (i.e., independent of larger meteorological phenomena), the OHMVR Division shall, in consultation with the SAG, determine another portion of the HCP area outside of the open riding area to control dust. The area controlled shall be equivalent to the measured amount of PM increased from the exclosure area that caused the violation; however, in no case shall the control measure acreage cause a loss of camping and motorized recreation that exceeds the acreage gained by reducing the Boneyard Exclosure. 2) The OHMVR Division may reduce/cease monitoring of the reduced exclosure areas being carried out pursuant to Mitigation Measure AIR-1A under the following criteria. a) Monitoring may be reduced to an interval of once every 6 months if the monitoring has demonstrated emissions in the reduced exclosure area have stabilized over a period no less than 1 year, and modeling/statistical analysis is not being conducted for the initial emissions rate being analyzed pursuant to item 1) above. b) Monitoring may cease if it has been demonstrated that emissions in the reduced exclosure area have stabilized over no less than 2 years, and

Table S-1. Summary of Project Impacts and Mitigation Measures

	modeling/statistical analysis is not being conducted for that emissions rate pursuant to item 1) above. **Mitigation Measure AIR-1D:** To ensure that implementation of mechanical trash removal does not cause or contribute to violations of air quality standards, the OHMVR Division shall undertake the following actions. 1) If mechanical trash removal has increased emissivity in an area south of Post 4 (or other area determined by the SAG), the OHMVR Division shall, in consultation with the SAG, identify and implement measures that offset the increased emission concentrations. These measures may include, but are not limited to: a) Permanently discontinuing mechanical trash removal activities in the area that has experienced an increase in emissivity so it can return to baseline conditions, or b) Controlling dust from another portion of the HCP area that is equivalent to the measured increase in emissivity from the raked area; however, in no case shall the control measure cause a loss of camping and motorized recreation acreage. 2) Mechanical trash removal activities may be resumed when, in consultation with the SAG, it has been determined the change in emissions from the area that underwent mechanical trash removal has been fully offset. 3) The OHMVR Division may reduce/cease monitoring being carried out pursuant to Mitigation Measure AIR-1A for areas that have undergone mechanical trash removal under the following criteria. a) Monitoring may be reduced to an interval of once every 6 months if the monitoring has demonstrated that emissions in the mechanically raked area have stabilized over a period no less than 1 year (i.e., new maximum emissivity values are not being recorded), control measures have been implemented that fully offset the maximum increase in emissions after the mechanical trash removal has occurred (i.e., immediately after the area has been raked), and modeling/statistical analysis is not being conducted for the initial emissions rate being analyzed pursuant to item 1) above. b) Monitoring may cease if the OHMVR Division no longer proposes to mechanically rake an area, or the monitoring has demonstrated that emissions in the mechanically raked area have stabilized over no less than 2 years (i.e., no new maximum emissivity values have been recorded), and modeling/statistical

Table S-1. Summary of Project Impacts and Mitigation Measures	
	analysis is not being conducted for that emissions rate pursuant to item 1) above. c) If at any time a new area of the HCP area is proposed for mechanical trash removal, its baseline emissivity shall be documented, and monitoring shall occur pursuant to Mitigation Measure AIR-1A at a rate of once every 3 months. Conditions 3a) and 3b) must be met again to decrease the frequency of the monitoring after a mechanically raked area has recorded an increased emissivity factor compared to baseline conditions. **Less than Significant with Mitigation Incorporated**
Biological Resources	
Impact: The proposed SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b) would remove SNPL in areas where covered activities not related to covered species management, including new proposed activities, would likely result in death or injury of SNPL eggs or chicks. Capture for captive rearing would be incorporated as new AMM 22 and would be limited to 12 chicks and 12 eggs per year. Capture associated with AMM 22 is a new covered activity proposed under the HCP that is different than ongoing capture associated with natural resources management activities (incorporated as AMM 90). CDPR would contact the USFWS prior to meeting relocation thresholds to discuss modified or additional AMMs (e.g., expanding the exclosure along the shoreline to provide additional protected foraging habitat, increasing monitoring along the shoreline, increasing signage in the breeding area) to ensure additional take does not occur. Capture and relocation would be subject to available capacity at a rearing facility. Handling of chicks and eggs causes disturbance and risk of injury/mortality, and although these eggs and chicks are already at risk of take, this covered activity could potentially increase annual SNPL take by up to four eggs and four chicks above existing baseline take levels occurring in the HCP	All AMMs apply as appropriate. **No mitigation is required.**

Table S-1. Summary of Project Impacts and Mitigation Measures	
area. The potential for increased take of four chicks and four eggs is significant to a federally-listed threatened species. Given the breeding success of the established conservation program, however, the potential increased take of SNPL would not impair the continuation of successful nesting seasons or the SNPL population stability. In addition, capture for captive rearing could prevent an injury or mortality. Removal of SNPL chicks or eggs could remove these individuals from the Oceano Dunes SNPL population but would protect the SNPL from harm, thus resulting in a benefit to the individuals. AMM 22 SNPL chick and egg removal for captive rearing if observed to be threatened by recreational activities or other non-covered species management activities would have minimal to no impact on other special-status species. **Less-than-Significant Impact**	
Impact: Mechanical trash removal (CA-21) would occur on the open sand areas above the wrack line (high water mark) and would not occur in vegetated areas, within 500 feet of known nesting areas, or near natural creek or dune areas. Equipment would observe all speed limits and not exceed 10 mph. CDPR staff would inspect the area prior to equipment use. These restrictions are incorporated as AMMs. As a result, no direct impacts on special-status species would occur. Mechanical trash removal could remove organic debris deposited on the beach potentially affecting the quality of habitat available for foraging and sheltering special-status birds. Continual grooming could reduce organic material supporting food source populations for foraging shorebirds. CDPR provides supplemental wrack inoculated with talitridae (beach hoppers) in the seasonal exclosure during breeding season. However, this is not provided in the winter season. Mechanical trash removal during the winter could alter the beach ecosystem such that invertebrate populations, which are an important prey source for	All AMMs apply as appropriate. AMMs specific to CA-21 include: SNPL AMMs 104 through 109; CLTE AMMS 91 through 95 **No mitigation is required.**

Table S-1. Summary of Project Impacts and Mitigation Measures	
shorebirds including SNPL, are reduced. CDPR will implement AMM 109, which includes conducting a study to establish baseline conditions of invertebrate populations and to determine the impact of mechanical trash removal on these populations. In addition, if CDPR finds a significant decline in invertebrate numbers in mechanical trash removal areas, additional measures would be implemented (e.g., conducting habitat enhancement, reducing the frequency of mechanical trash removal, and/or reducing the locations). **Less-than-Significant Impact**	
Impact: Reduction of the Boneyard Exclosure (CA-50) would eliminate approximately 49 acres of seasonally protected nesting habitat in East Boneyard. CLTE has not nested in East Boneyard since 2005. This action would have no impact on nesting CLTE. SNPL use of East Boneyard is low and infrequent with one nest occurring in six seasons since 2005. Any nests discovered in East Boneyard would be protected with single-nest exclosures. Removal of the East Boneyard Exclosure would allow year-round pedestrian access through the Boneyard gate leading to the South Oso Flaco area; the gate is otherwise inaccessible from the riding area during the breeding season. This could increase OHV use in the southern portion of the riding area and potentially increase disturbance of SNPL nesting in South Oso Flaco. The fencing along South Oso Flaco would be adjusted to maintain blocked access to the Boneyard gate during the breeding season. Removal of the East Boneyard Exclosure would allow recreation activity to occur adjacent to SNPL and CLTE nests along the east side of the West Boneyard Exclosure. Additional fencing would be installed as described in the SNPL and CLTE AMMs to ensure that disturbance in this area is minimized. With implementation of AMMs, removing the East Boneyard Exclosure fencing would not result in new take of SNPL	All AMMs apply as appropriate. **No mitigation is required.**

Table S-1. Summary of Project Impacts and Mitigation Measures	
and CLTE above baseline levels. The East Boneyard Exclosure would have no impact on other special-status species. **Less-than-Significant Impact**	
Impact: Reduction of the 6 Exclosure (CA-50) could eliminate up to 60 acres of seasonally protected high-value nesting habitat for SNPL and CLTE in annual 328-foot increments (approximately 7.5 acres) if biological and operational criteria are met. Reduction of the 6 Exclosure could result in increased nesting in the open riding area outside of the protective exclosure fencing, increasing risk of mortality or injury from covered activities of chicks and eggs. The reduced exclosure area size could increase nesting density and brood density on the shoreline resulting in increased brood aggression or decreased breeding productivity. The 6 Exclosure would be restored if monitoring shows adverse impacts to SNPL and CLTE breeding success and species population. AMMs have been incorporated into the HCP to minimize potential impacts to individual SNPL and CLTE, including routine monitoring and use of single nest exclosures and bumpouts. As a result, the impact of the 6 Exclosure reduction on CLTE and SNPL breeding success would be less than significant. No additional take of SNPL adults/juveniles above baseline levels is expected. Reducing the 6 Exclosure could potentially increase annual SNPL take by up to four eggs or four chicks above existing baseline take levels occurring in the HCP area. The potential for increased take of four chicks and four eggs is significant to a federally-listed threatened species. Given the breeding success of the established conservation program, the potential increased take of SNPL would not impair the continuation of successful nesting seasons or the SNPL population stability. As a result, the impact of reducing the 6 Exclosure on the SNPL population within the HCP area would be less than significant.	All AMMs apply as appropriate. **No mitigation is required.**

Table S-1. Summary of Project Impacts and Mitigation Measures	
No increase in CLTE take is expected from the 6 Exclosure reduction due to low occurrence of CLTE nesting attempts outside of exclosure fencing and because CLTE do not travel to the shoreline from the nest location once hatched. Reduction of the 6 Exclosure would have no impact on other special-status species. **Less-than-Significant Impact**	
Impact: CDPR's use of UAS (CA-52) could potentially affect SNPL and CLTE and other birds nearby. Monitoring would occur before every flight, and flight altitudes would be maintained at least 100 feet above ground and 328 feet away from known nest locations. During testing, UAS did not cause flushing or crouching. With AMMs incorporated, UAS use is not expected to adversely impact SNPL, CLTE and other special-status birds. **Less-than-Significant Impact**	SNPL AMMs 123 through 140 and CLTE AMMs 112 through 125 apply. **No mitigation is required.**
Impact: SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b), mechanical trash removal (CA-21), reducing the Boneyard Exclosure and 6 Exclosure (CA-50), and CDPR's use of UAS (CA-52) would have no or negligible impact on wildlife movement corridors, sensitive natural communities, and jurisdictional waters and wetlands. **No Impact**	**No mitigation is required.**
Cultural Resources	
Impact: SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b) and CDPR's use of UAS (CA-52) do not involve ground-disturbance activity and would have no impact on cultural resources. **No Impact**	**No mitigation is required.**
Impact: Mechanical trash removal (CA-21) would only occur in areas that are already disturbed by vehicular recreation and would not be allowed in any areas with known	**No mitigation is required.**

Table S-1. Summary of Project Impacts and Mitigation Measures	
covered or uncovered cultural sites. A cultural monitor would review all proposed trash removal areas to confirm all known cultural sites, including sites that are currently buried, are avoided. Should an unknown cultural resource site be discovered, it would be recorded, assessed, and protected from further disturbance. **Less-than-Significant Impact**	
Impact: Reduction of the 6 Exclosure (CA-50) would not occur within an area of medium or high cultural sensitivity. Two sites partially within the East Boneyard boundary are covered by the mobile dune environment and were not relocated during a 2011 survey. The sites are not fenced off. Recreational access already occurs in the East Boneyard Exclosure and 6 Exclosure areas 5 months out of the year during the non-breeding season for CLTE and SNPL. No significant impacts to cultural resources would occur from the proposed fencing changes allowing year-round access to the East Boneyard Exclosure and 6 Exclosure areas. **Less-than-Significant Impact**	**No mitigation is required.**
Recreation	
Impact: SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b) and CDPR's use of UAS (CA-52) would not affect recreation activities or access. Mechanical trash removal (CA-21) is a temporary and transient maintenance activity to remove trash from the beach surface and would not block or otherwise impede access to the ocean. **No Impact**	**No mitigation is required.**
Impact: Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50) would allow year-round recreation on up to 109 coastal acres that are otherwise seasonally closed for 7 months (March 1 through September 30). No change would occur to the	**No mitigation is required.**

Table S-1. Summary of Project Impacts and Mitigation Measures	
camping or visitor limits established by CDP 4-82-300. This lifted restriction expands recreation opportunity and access and would be a beneficial effect to public coastal access to Pismo State Beach and Oceano Dunes SVRA. **Beneficial Impact**	

S.3 CUMULATIVE PROJECT 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. The approach taken in this EIR to address the cumulative impact analysis is presented in EIR section 3.3. The EIR determined that the proposed new covered activities would not result in incremental effects that are cumulatively significant when combined with other past, present, or future projects that are reasonably foreseeable.

S.4 PROJECT ALTERNATIVES

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. As described in Chapter 3 through Chapter 8 of this EIR, the project has the potential to result in significant effects during implementation of the HCP. All impacts would be reduced to a less-than-significant impact level through identified mitigation measures.

S.4.1 Alternatives Considered but Rejected

CDPR considered various strategies to avoid and minimize impacts to protected special-status species prior to selection of the proposed project. The proposed HCP is based on a multi-year process of data collection and consultation with resource agencies. Alternatives that were considered but rejected in favor of the proposed HCP include: 1) No Take Park Operations; 2) Off-site Mitigation in-lieu of Nesting Exclosures; 3) Changes in Oceano Dunes SVRA Access; 4) Restricted Riding Times; and 5) Increased Vehicle Use Limits. These alternatives would not clearly reduce the potential for adverse impacts on air quality or SNPL and CLTE associated with HCP covered activities. Therefore, they are rejected from further consideration. These alternatives are discussed in Alternatives (EIR section 9.1).

S.4.2 Alternatives Further Considered

Four alternatives are considered in this EIR: 1) No Project Alternative; 2) Reduced Disturbance in High PM_{10} Emissivity Areas; 3) Permanent Year-Round Exclosures; and 4) Reduced Vehicle Use Limits. These alternatives are discussed in detail in Alternatives (EIR section 9.2). Maintain 6 Exclosure Boundary is considered the environmentally superior alternative as described in EIR section 9.3.

No Project Alternative. Under this alternative, the USFWS would not issue an ITP for the Oceano Dunes District parklands. Incidental take of SNPL, CLTE, CRLF, and tidewater goby

that may occur from visitor uses and park operations, whether occurring presently or in the future, would be unauthorized, leaving the violation of FESA unresolved. CDPR would maintain its current park operations and continue implementation of its current conservation program, including its annual strategy to avoid take. No changes would be made to current park operations.

The No Project Alternative conflicts with CDPR's responsibility of managing state parkland in a manner consistent with governing laws. Given the failure of the alternative to meet basic project objectives of FESA compliance and recreation management (EIR section 2.3.2), the No Project Alternative is not a viable option and is rejected by CDPR in favor of the proposed HCP project.

Reduced Disturbance in High PM_{10} Emissivity Areas. Under this alternative, the proposed change to the northern boundary of the seasonal exclosure identified in CA-50 would be eliminated from the HCP and proposed mechanical trash removal described in CA-21 would be prohibited south of Post 4. The purpose of this alternative would be to avoid activities with the potential to increase particulate emissions from the HCP area. The East Boneyard Exclosure would still be eliminated as proposed in the HCP.

This alternative conflicts with the Consent Decree (see CA-50 discussion in EIR section 2.4.2.2) by maintaining the northern boundary of the seasonal exclosure at Post 6. CDPR rejected this exclosure boundary location when preparing the HCP (HCP section 8.3). CDPR determined the conservation program proposed under the HCP provides adequate AMMs, and the biological criteria and other factors that are required to reduce the 6 Exclosure (HCP section 5.2.3) ensure that any take of SNPL and CLTE occurring as a result of reducing the exclosure would be minimized. Further, this alternative eliminates the incremental restoration of recreation opportunity on 60 acres at this location from 5 months per year to year-round and eliminates the benefits of debris removal in recreation areas. This alternative conflicts with project objectives to preserve, manage, and expand recreation opportunities and to manage, maintain, and maximize access to unique coastal camping and recreation amenities. The alternative preserves existing but not historic recreation opportunity. Given these considerations, the Reduced Potential Air Quality Impact Alternative is rejected in favor of the proposed HCP.

Permanent Year-Round Exclosures. Under this alternative, the riding area boundary would be permanently modified to provide year-round exclosures for wintering bird protection (including SNPL) and to improve SNPL and CLTE nesting habitat quality by limiting recreation disturbance. The permanent exclosure would not be actively managed by CDPR and would thus likely become less productive habitat over time. Given the success of the current conservation program using the existing seasonal exclosure size, establishing permanent year-round exclosures is unnecessary to achieve project biological objectives. This alternative would shift the riding area away from the shoreline and reduce beach access for OHV recreation and camping. This alternative conflicts with project objectives to balance conservation and recreation demands, particularly to preserve, manage, and expand recreational opportunities and to manage, maintain, and maximize unique coastal camping and recreational amenities. The Permanent Year-Round Exclosures Alternative is rejected in favor of the proposed HCP.

Reduced Vehicle Use Limits. Under this alternative, day use vehicle and OHV use limits would be decreased to reduce environmental impacts associated with motorized recreation. The alternative would reduce vehicle access to Oceano Dunes SVRA. The acreage of the riding area open to vehicle use would not be changed. It is unknown whether a decrease in vehicle activity could reduce PM_{10} emissivity levels and offset potential project impacts. Reducing vehicle

activity could lower the risk of take of SNPL and CLTE caused by new covered activities; however, the reduction in risk is difficult to assess and may not result in actual reduced take. The reduced number of vehicles combined with the potential opening of up to 60 access of shoreline access (6 Exclosure) suitable for camping would reduce congestion during peak visitation months beyond the density reduction achieved by the proposed exclosure reduction alone. This alternative conflicts with project objectives to balance conservation and recreation demands, particularly to preserve, manage, and expand recreational opportunities and to manage, maintain, and maximize unique coastal camping and recreational amenities. The Reduced Vehicle Use Limits Alternative is rejected in favor of the proposed HCP.

S.5. AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

CEQA Guidelines § 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. These issues are discussed below.

Existing Park Operations. The effects of the existing park operation are controversial, including use of motor vehicles on the beach and in sensitive dune habitat, dust and sand blown off site and downwind, and impacts to protected species. These concerns are associated with the ongoing park operation and its recreational use; these are not concerns generated by new HCP actions and a possible take permit. The park activities causing impact and controversy have been previously authorized and established as allowable uses under the adopted State Park General Plan. The HCP approval and take permit issuance is not responsible for authorizing the underlying park activities, which are otherwise approved. It could be perceived as controversial by some to allow these existing uses to continue without greater restrictions; however, it is not the goal of this EIR to evaluate existing authorized uses, the parameters of park operations, or regulatory permit conditions.

Balance of Resource Protection and Recreation Opportunity. The main controversy concerning the HCP is striking an acceptable balance between motorized recreation opportunity and protection of natural resources. State Parks' mission is to provide both high-quality recreation opportunity (Public Resources Code [PRC] § 5090.01 *et seq.*) including motor vehicle recreation and resource protection that conserves and improves habitat over time (SB249). The HCP represents State Parks' efforts to balance these competing needs. Some conservation interests and those opposed to motorized recreation at Oceano Dunes would like to see State Parks reduce park access to OHVs through a complete ban or through increased riding restrictions in either hours, open area, or vehicle numbers. Conversely, motorized recreation interests have seen multiple sizable reductions in park acreage open to OHV recreation and camping and would like to see both the existing area preserved and previously closed areas reopened.

Size of the 6 Exclosure. The HCP proposes a gradual elimination of the 6 Exclosure, which is a highly productive nesting area for SNPL and CLTE. The proposal would reduce the amount of seasonally protected breeding habitat in 328-foot or similar increments (approximate 7.5-acre phases; 60 acres total) correspondent with demonstrating maintained breeding success and a sustained population. The reduction would be reversed and the eliminated exclosure reinstated if subsequent breeding and population targets are not met. The potential response of SNPL and CLTE to the reduced exclosure is unknown. The phased reduction based on adaptive

management is a prudent approach to testing the SNPL and CLTE response to the exclosure change and the degree of impact. The elimination of 6 Exclosure may be controversial in that groups opposed to OHV use would argue that this action is reducing highly productive habitat and contrary to conservation progress toward recovery. Reducing the size of protected nesting habitat could be viewed as increasing the potential for take of individual SNPL and CLTE, reducing the breeding success, and impeding species recovery. Conversely, breeding in the HCP area has been very successful and should allow for some modification to current management protocols.

The phased elimination of 6 Exclosure is included in the HCP, consistent with the Consent Decree issued by the U.S. District Court (2005). In November 2001 Sierra Club filed a petition with the U.S. District Court alleging operation of Oceano Dunes SVRA in violation of FESA by facilitating vehicle recreation activities that cause unauthorized take of SNPL, CLTE, and steelhead trout. As a term of the Consent Decree, CDPR agreed to immediately expand the boundaries of the seasonal exclosure north to Post 6 and south by 1 mile to their current locations. The Consent Decree further stipulated that the CDPR HCP application to the USFWS would support a northern boundary of the seasonal exclosure at Post 7 (7 Exclosure). The elimination of 6 Exclosure proposed by the HCP satisfies this Consent Decree requirement.

Uncertainty of Air Quality Impacts. As described in the EIR, it is unknown whether the HCP proposals to implement mechanical trash removal or to increase recreational access to East Boneyard Exclosure and 6 Exclosure from seasonal (5 months per year) to year-round will affect dust (particulate matter [PM_{10}]) emissivity levels. The EIR includes mitigation to assess the potential impact through monitoring and address any observed impact through prescribed actions such as discontinuing the activity or providing dust control treatments at alternate park locations. Until the activities can be monitored, the amount of impact, if any, and the scale of mitigation needed to offset impacts (i.e., location and size of offset areas) is unknown and speculative.

Future Public Works Plan (PWP) Projects. State Parks is in the midst of a planning process to upgrade park infrastructure and operations. Potential projects were identified during a public scoping process (see Cumulative impacts in EIR section 3.3.3 for further discussion). State Parks has not yet made a final selection of project components to be included in the PWP. One potential project that could impact the HCP covered habitat and species is the development of a new campground and/or day use area in the Oso Flaco area. Until design of such uses is further along, the project effects cannot be adequately addressed by the HCP.

State Parks is still conducting PWP planning and design as of Winter 2019/2020. The PWP projects will be subject to a separate environmental review process and could require coverage under the HCP for impacts to federally protected species. The HCP anticipates that some future PWP projects may require amendments to the HCP, whereas others could be incorporated without amendment. Amendments would be considered at the time they are proposed for implementation (see HCP section 2.2.7).

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Chapter 1 INTRODUCTION

1.1 PROJECT OVERVIEW

California Department of Parks and Recreation (CDPR) Oceano Dunes District (ODD) manages Pismo State Beach and Oceano Dunes State Vehicular Recreation Area (SVRA). Park operations, including visitor uses, visitor services, facility maintenance, and resource management, may affect federally- and state-listed endangered or threatened species, including western snowy plover (*Charadrius nivosus nivosus*; SNPL), California least tern (*Sternula antillarum browni*; CLTE), California red-legged frog (*Rana draytonii*; CRLF), and tidewater goby (*Eucyclogobius newberryi*) as well as four federally- and two state-listed plant species.

CDPR has prepared a draft Habitat Conservation Plan (HCP) for the Oceano Dunes District in support of its application to the U.S. Fish and Wildlife Service (USFWS) for issuance of an incidental take permit (ITP) for federally-listed animal species authorized under Sections 10(a)(1)(A) and 10(a)(1)(B) of the federal Endangered Species Act (FESA; 16 USC § 1531 et seq). Additionally, the HCP addresses federally- and state-listed plant species.

In a separate action, CDPR intends to prepare a Natural Community Conservation Plan (NCCP) in support of an application to California Department of Fish and Wildlife (CDFW) for issuance of a permit authorizing incidental take of state-listed animal and plant species under California Fish and Game Code sections 2800 *et seq.*, including section 2835.

1.2 LEAD AGENCY CONTACT INFORMATION

The California Environmental Quality Act (CEQA; PRC § 21000 *et seq.*) and the CEQA Guidelines (14 California Code of Regulations [CCR] § 15000 *et seq.*) establish 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 is responsible for preparing the appropriate environmental review documentation. As described below, CDPR has determined that an Environmental Impact Report (EIR) is the appropriate CEQA document for the project and has prepared this Draft EIR in accordance with CEQA and the CEQA Guidelines.

The contact person for CDPR Oceano Dunes District is:

Mr. Ronnie Glick, Senior Environmental Scientist
California Department of Parks and Recreation, Oceano Dunes District
340 James Way, Suite 270
Pismo Beach, CA 93449

1.3 INTENDED USES AND TYPE OF EIR

An EIR is an objective, informational document that informs government 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 EIR will be used by CDPR to evaluate the environmental effects associated with the HCP when considering its approval. No other state or local agencies are Responsible Agencies (see HCP section 2.6). Trustee Agencies, defined by CEQA Guidelines section 15386 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," may review this EIR for potential impacts related to natural resources under their governance. Trustee Agencies with jurisdiction over the resources potentially affected by the proposed HCP include CDFW.

CEQA Guidelines section 15379 excludes federal government agencies from the definition of a "public agency." Thus, USFWS is not a Responsible Agency or a Trustee Agency for the purposes of CEQA. USFWS is the permitting agency conducting separate environmental analysis under the National Environmental Policy Act (NEPA), which is not limited to threatened and endangered species.

This EIR is a Project EIR intended to cover the direct and indirect environmental effects associated with implementing the Oceano Dunes District HCP as described in the HCP and summarized in EIR Chapter 2, Project Description. It is not the role of this EIR to evaluate existing authorized uses, the parameters of park operations, or regulatory permit conditions. The EIR impact analysis is limited to the environmental assessment of activities proposed by the HCP that would result in a physical change to the environment.

The HCP identifies potential park improvement projects that may be considered by CDPR in the future during the 25-year term of the ITP. The inclusion of future projects in the HCP as covered activities allows CDPR to address both existing and reasonably anticipated future park operations in one federal permit review process. Issuance of a federal ITP covering future projects does not entitle these future projects to the subsequent approvals necessary from CDPR or other agencies or obviate future environmental review of these projects pursuant to CEQA. Other authorizations that may be required for future park actions are described in EIR section 2.5. This EIR does not provide a program-level or project-level CEQA review for these future activities.

1.4 SCOPING OF ENVIRONMENTAL ISSUES

CDPR published a Notice of Preparation (NOP) for the EIR on January 11, 2018 to invite comment on the scope and content of the environmental review of the Oceano Dunes District HCP; the comment period closed on March 12, 2018. Simultaneously, the USFWS published a Notice of Intent (NOI) to prepare an environmental review of the HCP pursuant to NEPA (42 USC § 4321 *et seq.*) and to invite public comment. Both notices announced a joint public scoping meeting on February 7, 2018 for the purpose of inviting public comments on the project. Public notice of the scoping period and public meeting was distributed to local community agencies and interested groups and individuals. Notice was also published in a newspaper of local circulation.

Twelve distinct comment letters, emails, or comment cards were received in response to the NOP and NOI. Also, one form letter was submitted by 2,053 individuals with some containing additional unique comments. Oral comment was received from the meeting attendees at large.

The NOP and NOI, scoping meeting presentation, summary of comments, and comment letters are presented in Appendix A.

Some of the comments related to the HCP rather than the environmental document, and some comments expressed support or opposition to certain aspects of the proposed HCP. Some comments pertained only to the federal agency environmental review under NEPA (specifically requesting preparing an Environmental Impact Statement [EIS] instead of an Environmental Assessment [EA], assessing environmental justice, and co-equal evaluation of alternatives). Only those comments relating to the scope of the environmental analysis under CEQA are addressed. As summarized below in Table 1-1. Scoping Comment Received, the comments focused on air quality, biological resources, cultural resources, water quality/hydrology, recreation opportunity, the alternatives analysis, and cumulative impacts. The EIR section that addresses the comments is also listed in Table 1-1. Scoping Comment Received.

Table 1-1. Scoping Comment Received

Comment	Where Addressed in EIR
Document Type and Review Process	
• Specify whether the EIR will be used as a programmatic "tiering" document or provide project-level review. • An NCCP is needed for CLTE since it is a Fully Protected Species.	Chapter 1, Introduction
General Comments Applying to Entire Document	
• Base environmental review on the best available science and survey data following established protocols.	Chapter 3, Impact Analysis Methodology
Project Description	
• Identify the purpose and need and rationale for the proposed action. • HCP and CEQA/NEPA documents must clearly identify enforcement provisions.	Chapter 2, Project Description
Air Quality	
• Address general impacts of motorized recreation on air quality, dust, and particulates. • For air quality analysis, quantify emissions, identify emissions sources, and include construction emissions mitigation, including fugitive dust source controls, stationary equipment source controls, and administrative controls. • Demonstrate project emissions of air basin pollutants in nonattainment or maintenance status are accounted for in the State Implementation Plan.	Chapter 5, Air Quality
Greenhouse Gas (GHG)	
• Address general impacts of motorized recreation on GHG emissions.	Chapter 10, Other CEQA Considerations, EIR section 10.3.4

Biological Resources	
• Address general impacts of motorized recreation on the loss of surface soils and vegetation and trash. (also see Chapter 5, Air Quality and Chapter 10, Other CEQA Considerations; Section 10.3.3 Geology and Soils) • Include direct, indirect, and cumulative impacts to all wildlife and habitat, and measures to avoid impacts. • Discuss the HCP's consistency with other HCPs or recovery plans in the area. • Address invasive species impacts and impacts to steelhead and leatherback sea turtle. • Address other protected species not covered in the HCP. • Take into account the impacts of climate change and dogs off leash on covered species. • Incorporate findings of USFWS 2017 report to improve protections for SNPL and CLTE. • Address impacts from dust control mitigation on increased vegetation that attracts predators, threatening endangered species. • Address sand density in the preferred nesting habitat assessment. Take into account injured birds in take totals. • Apply a correction factor for detection of juvenile and adult SNPL mortality caused by vehicle strikes. • Express losses to take of SNPL eggs, chicks, and juveniles as adult equivalents to better identify cumulative impacts. • Address nighttime vehicle threat to juvenile and adult SNPL. • Consider rates of sea level rise in impact analysis for SNPL habitat. • Address impacts of fertilizer used for revegetation projects.	Chapter 6, Biological Resources; Appendix C; Appendix D
Cultural Resources	
• Describe tribal consultation process. • Address Indian sacred sites that exist in the project area. • Consult with California Native American tribes affiliated with the geographic area per Senate Bill (SB) 18 and Assembly Bill (AB) 52, particularly in regard to dust mitigation projects and planning.	Chapter 7, Cultural Resources
Hazardous Materials	
• Address general impacts of motorized recreation from oil and gas spills.	Chapter 10, EIR Other CEQA Considerations, EIR section 10.3.5
Hydrology and Water Quality	
• Describe the drainage patterns in the area, including the 50- and 100-year flood plains. • Address water quality and flow rates of Oso Flaco Lake and Arroyo Grande Creek.	Chapter 10, Other CEQA Considerations, EIR section 10.3.6

Land Use Planning	
• Discuss project consistency with objectives of federal, state, tribal, or local land use plans, policies, and controls in the plan area.	Chapter 4, Land Use Planning
Recreation	
• Consider a range of recreation opportunity, including no loss in recreation opportunity and more restrictions to vehicle use. Evaluate night riding impacts.	Chapter 2, Project Description; Chapter 8, Recreation; and Chapter 9, Alternatives
Alternatives	
• Evaluate all reasonable alternatives that fulfill the project's purpose and need in detail and protect imperiled wildlife and health of nearby communities. • Include a clear discussion of reasons for elimination of any alternatives not discussed in detail. • Include alternatives with expanded SNPL and CLTE exclosures and permanent exclosures. • Consider an alternative area for permanent fences, alternative access during the wet season, alternative areas for off-highway vehicle (OHV) use in non-sensitive areas, riding closure during breeding season, staggering use of OHV days and hours, and off-site mitigation for CLTE/SNPL as alternatives. • Establish visitor capacity limits and consider as an alternative. • Address return of the seasonal exclosure boundary to Post 7 in compliance with the 2003 Settlement Agreement.	Chapter 9, Alternatives
Cumulative Impacts	
• Evaluate the effects of other past, present, and reasonably foreseeable actions, and consider those impacts on a cumulative level. • Discuss future changes that may affect covered species and their habitats. • Evaluate all potential Oceano Dunes SVRA operations and configurations and consider future uncertainties due to temporary Coastal Development Permit (CDP) and PWP being developed.	Chapter 3, Impact Analysis Methodology, EIR section 3.3; and Cumulative Impacts discussion in Chapters 4–8

1.5 SEPARATION OF CEQA AND NEPA DOCUMENTS

This document is a Draft EIR, prepared pursuant to CEQA, for the Oceano Dunes District HCP. USFWS is preparing an environmental review of the Draft HCP pursuant to NEPA in a separate EA document. Both the Draft EIR and the USFWS EA will have distinct public review periods and opportunities to provide comment on the respective environmental review document.

CEQA and NEPA documents differ from each other in structure and content. One primary difference is seen in the analysis of alternatives. CEQA requires only that the proposed project be analyzed in detail; a reasonable range of project alternatives is to be discussed in lesser detail. Only feasible alternatives that can at least partially obtain the project objectives need to be

considered. NEPA requires co-equal treatment and environmental analysis of alternatives; the proposed action is one of several alternatives equally evaluated for consideration. NEPA considers environmental justice or socioeconomic issues, whereas CEQA focuses on project impacts causing a physical change in the environment. CEQA and NEPA documents also use different terminology when describing the significance of impacts. CEQA describes impacts in terms of significant or less than significant. NEPA describes an impact as likely or not likely to adversely affect a resource.

Given these differences, public review comments made on the CEQA document may or may not be relevant to the NEPA document. Both this Draft EIR and the USFWS NEPA document should be separately reviewed for relevant comment under CEQA and NEPA. Comments on the Draft EIR should be submitted to CDPR. Comments on the NEPA document should be submitted to the USFWS.

1.6 INCORPORATED BY REFERENCE

The HCP is incorporated into this document by reference and is summarized in the EIR Project Description (Chapter 2).

Chapter 2 **PROJECT DESCRIPTION**

2.1 LOCATION AND SITE DESCRIPTION

The proposed HCP covers two coastal Oceano Dunes District park units managed by CDPR, located in San Luis Obispo County, California (Figure 2-1 Regional Location). The 5,005-acre HCP area comprises Pismo State Beach and Oceano Dunes SVRA. The covered park units, and portions thereof, fall under three different classifications: State Beach (PRC § 5019.56(c)), Natural Preserve (PRC § 5019.17), and SVRA (PRC § 5090.43). The HCP area is bounded by the City of Pismo Beach to the north, the City of Grover Beach and Oceano community to the east, agricultural land also to the east, the Guadalupe-Nipomo Dunes National Wildlife Refuge to the south, and the Pacific Ocean to the west. Primary access to the area is via U.S. Highway 101 and State Route 1 (Figure 2-2 HCP Area Overview).

Pismo State Beach and Oceano Dunes SVRA comprise approximately 25 percent of the 18-mile linear shoreline of the overall Guadalupe-Nipomo Dunes complex. The Guadalupe-Nipomo Dunes complex extends from Pismo Beach south to Point Sal, and roughly from State Route 1 to the Pacific Ocean in San Luis Obispo and Santa Barbara counties. The Guadalupe-Nipomo Dunes complex is a relatively intact coastal dune and dune scrub ecosystem varying in width from 2 to 5 miles.

The HCP area lands are owned by CDPR, except for 584 acres known as the La Grande property, which is owned by San Luis Obispo County and interspersed with small, privately-owned parcels; 34 acres owned by Union Oil; and approximately 642 acres owned by Phillips 66 and closed to all public access (Figure 2-2). All of these lands are managed by the Oceano Dunes District. Uses of lands owned or managed by CDPR are shown in Table 2-1. HCP Area Land Use Acreages.

Pismo State Beach. Pismo State Beach includes five somewhat distinct areas: the beach area; Pismo Dunes Natural Preserve (Dunes Preserve); Pismo Lake; the monarch butterfly grove; and a developed portion, including two campgrounds, a golf course with restaurant, ranger station/maintenance yard, and park residence area (Figure 2-3 HCP Area Land Use and Facilities and Figure 2-4 HCP Area Land Use and Facilities Detail). The entire Pismo State Beach unit is 1,515 acres and is adjacent to the cities of Pismo Beach and Grover Beach and the community of Oceano.

The City of Pismo Beach has operated the northern portion of the state beach (from approximately Addie Street to the northern CDPR boundary) in accordance with an operating agreement in place since 1951. Although the City of Pismo Beach operates this portion of the state beach, when needed, CDPR staff assist with lifeguard operations on the City-operated beach and CDPR environmental scientists conduct resource work in this area.

Some areas of Pismo State Beach are closed to vehicles, some areas are open to street-legal vehicles only, while other areas are open to OHVs and street-legal vehicles. The portion of Pismo State Beach north of Grand Avenue is closed to vehicle traffic. The public is allowed to drive motorized vehicles through Pismo State Beach south of Grand Avenue to access Oceano Dunes SVRA. Visitors and CDPR staff can also drive onto the beach via sand ramps at the western terminus of Grand Avenue and Pier Avenue (Figure 2-4; Figure 2-5, Site Photographs 1 and 2). CDPR staff also have access to the beach via an entrance from Oceano Campground,

which is north of Pier Avenue (i.e., Midramps). Motorized vehicles, including OHVs, and open camping (no designated spaces) are allowed on the portion of Pismo State Beach south of orientation marker Post 2 (Figure 2-4). Pismo State Beach offers a variety of motorized and non-motorized recreational opportunities (Figure 2-5, Photograph 5).

The Pismo Dunes Natural Preserve is a 695-acre subunit of Pismo State Beach with undisturbed sand dunes, dune slack, and freshwater wetlands. The preserve extends from the south bank of Arroyo Grande Creek south to the northern boundary of Oceano Dunes SVRA. It is bounded on the west by the seaward toe of the foredune at Pismo State Beach (Figure 2-2). The preserve is open to pedestrian and equestrian access and closed to vehicle use.

The 70-acre Pismo Lake area (Figure 2-2) is inland of and disconnected from the rest of Pismo State Beach. While it is currently open to the public, the public is not encouraged to visit the area because designated access points have not been established, and the area is treated as closed to the public in this EIR for mapping purposes. No management plan or future development design is currently in effect for the area.

Oceano Dunes SVRA. Oceano Dunes SVRA is 3,490 acres and is contiguous with Pismo State Beach. As a result, the vehicle operations at Pismo State Beach and Oceano Dunes SVRA are managed as an SVRA. As noted above, motorized vehicles access Oceano Dunes SVRA via sand ramps in Pismo State Beach at Grand and Pier avenues (Figure 2-2). Between the two park units (i.e., Pismo State Beach and Oceano Dunes SVRA), approximately 1,305 acres are set aside for OHV use in what is called the "open riding area." Over 2,000 acres of the SVRA are outside of the open riding area and maintained in a largely natural state of bare and vegetated sand dunes (e.g., Oso Flaco Lake, Phillips 66 Leasehold, vegetated islands, etc.) (Figure 2-5, Photographs 3 and 4).

The open riding area allows open area (non-trail) riding and camping in non-designated spaces. Riding and camping are prohibited in vegetated areas (Figure 2-6 Recreational Restrictions). The open riding area is heavily used for vehicle related recreation and camping (Figure 2-5, Photograph 5). The safety and education center kiosk is a landmark within the SVRA (Figure 2-5, Photograph 6). Roughly 300 acres of the riding area are seasonally restricted (March through September) from vehicle recreation by exclosure fencing and signage (Figure 2-7 Western Snowy Plover and California Least Tern Management) to provide protected nesting habitat (Figure 2-5, Photographs 7, 8, 9, and 10). Wind fencing also occurs within the open riding area (Figure 2-5, Photographs 11 and 12). A complete description of riding area acreage is presented in Recreation (Chapter 8).

The Oso Flaco pedestrian area is located at the southern portion of Oceano Dunes SVRA open riding area and offers hiking trails and boardwalk (Figure 2-5, Photographs 13 and 14). Access to this area is from Oso Flaco Lake Road off State Route 1, as well as from an entrance in the open riding area at Boneyard gate during the non-breeding season (Figure 2-8 Proposed New Covered Activity). This area can also be accessed from the shoreline during the non-breeding season for SNPL and CLTE when shoreline access is not restricted by fencing (i.e., seasonal exclosure) erected by CDPR to protect breeding SNPL and CLTE.

The Phillips 66 Leasehold east of the Oceano Dunes SVRA open riding area is closed to all visitors. Oceano Dunes District staff manages the leasehold area (e.g., maintains fences and manages resources) as needed. This area can be used for emergency access. Phillips 66 maintains the road through the leasehold property to ensure access for pipeline maintenance. CDPR leases

some Oceano Dunes SVRA land to local agricultural operators (Figure 2-3) near Oso Flaco Lake. This 202-acre leased portion of Oceano Dunes SVRA is also included in the project HCP. No public access is allowed on those lands leased for agricultural operation.

Table 2-1. HCP Area Land Use Acreages

Land Use	Acres
Total HCP area[1]	5,005
Open riding area[2]	1,305
Beach open to street-legal vehicles only	65
Closed to beach driving, OHVs, and open camping[3]	3,634
Open to pedestrians[4]	4,065
Open to equestrians[5]	2,802
Closed to all public visitors[6]	940
Campgrounds (Oceano and North Beach)	58
Ranger station and yard	6
Pismo State Beach Golf Course	25
Grand Avenue parking lots and facilities	11
Pismo Lake	70
Phillips 66 Leasehold	658
Agricultural lease area	211

Notes:
[1]Comprises Pismo State Beach (1,515 acres), including the Pismo Dunes Natural Preserve and Pismo Lake, and Oceano Dunes SVRA (3,490 acres)
[2]Includes 300 acres of riding area seasonally closed March 1 through September 30 for SNPL and CLTE nesting; excludes 48 acres fenced off for future foredune development
[3]Area closed to camping is 3,607 acres due to closure of foredune alleys to camping
[4]Entire HCP area except Pismo Lake, Phillips 66 Leasehold, and agricultural lease area
[5]Includes Pismo State Beach (except Pismo Lake, Golf Course, and Ranger Station), open riding area within Oceano Dunes SVRA, and vegetation islands
[6]Phillips 66 Leasehold, agricultural lease area, and Pismo Lake (Pismo Lake is not formally closed but public access is not encouraged)

2.2 BACKGROUND OF PARK OPERATIONS

2.2.1 Mission of California State Parks

CDPR has several parks within San Luis Obispo County, encompassing large sections of the central California coastline, extensive watersheds, and upland terrestrial environments.

The mission of CDPR is to provide for the health, inspiration, and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor

recreation. Balancing the need to protect California's natural resources while providing recreational access to the parks requires the development of sound management strategies that are based on the best available scientific, demographic, and economic information. This is particularly important considering the number of endangered plant and animal species that use these parks as a last safe refuge at the same time that a growing population puts increasing demand on parks.

The Off-Highway Motor Vehicle Recreation (OHMVR) Act of 2003, as amended (PRC § 5090.01 *et seq.*), provides CDPR's mandate for OHV recreation. The OHMVR Division is charged with administering the state's OHMVR Program to provide high-quality OHV recreation opportunities in a manner that is safe, environmentally responsible, and sustainable.

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. (CDPR, 2009)

SVRAs are selected, developed, and operated to provide OHV recreation opportunities. SVRAs must be developed, managed, and operated for the purpose of providing the fullest appropriate public use of the vehicular recreational opportunities present in accordance with the OHMVR Act (PRC § 5090.01 *et seq.*), while providing for the conservation of cultural resources and the conservation and improvement of natural resource values over time (PRC § 5090.43 (a)). If OHV use results in damage to any natural or cultural resources or damage within sensitive areas, appropriate measures must be taken to protect these lands from any further damage. These measures may include erecting physical barriers and must include restoring natural resources and repairing damage to cultural resources (PRC § 5090.43 (c)).

Oceano Dunes SVRA is committed to present and future protection of the sensitive habitat and species that call the Oceano Dunes District home. Oceano Dunes SVRA's challenge is to balance the needs of the ecological resources and the 2 million people who visit Oceano Dunes SVRA annually for a variety of recreational opportunities, including driving vehicles on the beach and dunes.

2.2.2 History of Park Conservation Planning

Conservation efforts originated at Oceano Dunes SVRA in 1990 with the discovery of CLTE at Oso Flaco Lake (Burton & Kutilek 1991a). The following year, biologists found a relatively small colony of CLTE nesting within the off-highway vehicle riding area boundary, and CDPR immediately protected the colony with a large fenced exclosure (Burton & Kutilek 1991b). After consulting with USFWS and CDFW Biologists, CDPR agreed to annually monitor breeding CLTE at the park and provide active nest protection through a research grant to San Jose State University. The same level of monitoring and protection was extended to SNPL, although at the time the species was not listed under the California Endangered Species Act (CESA) or FESA.

Since the start of annual monitoring of CLTE and SNPL in 1991, conservation efforts at Oceano Dunes SVRA have evolved and expanded over the years to include increased protections, habitat enhancements, and avoidance measures. The proposed HCP reflects the conservation program currently implemented by CDPR, which is based on over 25 years of data and experience. Notable developments in park management and conservation planning at Oceano Dunes SVRA are presented in Table 2-2..

Table 2-2. Timeline of Key Events in Oceano Dunes SVRA Recreation Management and Conservation Planning

Year	Event
1975	CDPR adopts Pismo State Beach and Pismo Dunes SVRA General Development Plan and Resource Management (CDPR, 1975).
1982	CDPR amends General Development Plan to include Grover Beach Lodge at Grand Avenue (CDPR, 1982b).
1982	California Coastal Commission (CCC) issues Coastal Development Permit (CDP #4-82-300) to install fence in the SVRA and construct entrance station kiosks (CCC, 2001).
1988	California OHMVR Act of 1988 (SB 877) requires plant and animal inventories, wildlife habitat protection programs, and monitoring of SVRAs (Kutilek, Shellhammer, & Bros, 1991).
1989–1990	A comprehensive baseline survey of flora and fauna is conducted by Dr. Michael Kutilek and others from San Jose State University. Study provides basis for the wildlife habitat protection plan and the monitoring program for Oceano Dunes SVRA (Kutilek, Shellhammer, & Bros, 1991).
1990	Discovery of CLTE at Oso Flaco Lake
1991	Discovery of CLTE nesting in the SVRA riding area. CDPR consults with USFWS and CDFW and agrees to begin annual monitoring of CLTE. First nest exclosures were erected for CLTE.
1991	CDPR publishes Draft EIR for Pismo Dunes SVRA Access Corridor Project to satisfy Coastal Development Permit (CDP #4-82-300) condition to identify the least damaging entrance and staging area to the SVRA. Five alternative entrance corridors were evaluated. Grand Avenue is identified as the least environmentally damaging and therefore the preferred alternative (CDPR, 1994).
1991	CDPR completes first WHPP for Pismo Dunes SVRA (Kutilek, Shellhammer, & Bros, 1991).
1992	First nest exclosures were erected for SNPL not yet listed.
1993	USFWS lists SNPL as a threatened species under FESA (USFWS, 1993); USFWS lists marsh sandwort and Gambel's watercress as endangered (USFWS, 1993).
1994	State Park and Recreation Commission approves Final EIR and the General Plan Amendment for the Pismo Dunes SVRA Access Corridor Project (CDPR, 1994), which concluded that the Grand and Pier Avenue entrances were the Environmentally Preferred alternative, together with the staging area that remains in use today (CDPR, 2004).
1994	USFWS lists tidewater goby as threatened species under FESA (USFWS, 1994).

Table 2-2. Timeline of Key Events in Oceano Dunes SVRA Recreation Management and Conservation Planning

Year	Event
1995	CDPR attempts to organize and coordinate multi-stakeholder group to develop conservation strategies for CLTE and SNPL throughout the greater Guadalupe-Nipomo Dunes Complex. The effort proves unsuccessful.
1996	First Wildlife Habitat Monitoring System (HMS) is designed for Oceano Dunes SVRA based on biological survey work completed (Kutilek, Shellhammer, & Bros, 1991).
1996	USFWS lists CRLF as a threatened species under FESA (USFWS, 1996).
1996	USFWS authorizes incidental take of CLTE and SNPL at Oceano Dunes SVRA pursuant to a Section 7 consultation from the U.S. Army Corps of Engineers (USACE) regarding permitted maintenance of the sand ramps at the SVRA. Since sand ramps used as primary vehicle access to beach, the biological opinion extended take authorization throughout the portion of SVRA open to vehicles (USFWS, 2016a).
1997	Following an apparent take of a SNPL chick in a closed area of the SVRA, CDPR agrees to develop an HCP for portions of the SVRA closed to vehicle use and not under the USFWS and CDFW take authorizations.
1999	CDPR initiates a separate multi-species HCP for the San Luis Obispo (SLO) Coast units.
2001	USACE relinquishes jurisdiction over the maintenance of the sand ramps at the SVRA and the Section 7 take authorization for the SVRA expires (USFWS, 2016a).
2001	CDFW withdraws any take authorization afforded by the 1996 CDFW biological opinion.
2001	Santa Lucia Chapter of the Sierra Club files suit with U.S. District Court for injunctive relief, alleging unauthorized take of CLTE, SNPL, and steelhead trout in violation of FESA.
2001	CDPR combines the SLO Coast and Oceano Dunes SVRA HCP.
2001	CDPR begins daily monitoring of the riding area for CLTE and SNPL (HCP sections 3.3.1.7 and 3.3.2.7).
2001	CCC amends CDP #4-82-300 (Amendment 5) establishing daily limits on vehicles within Oceano Dunes SVRA: up to 2,580 street-legal vehicles; 1,000 street-legal vehicles for camping; and 1,720 OHVs and requiring formation of a Technical Review Team and Scientific Subcommittee (CCC, 2001).
2001	CDPR convenes an interagency Scientific Subcommittee per CCC requirement to identify, develop, and evaluate the scientific information needed by decision-makers (Gardner, 2001) (CCC, 2002).
2002	Scientific Subcommittee begins annual recommendations of management and research questions and priorities concerning Oceano Dunes SVRA. Eight-member team of biologists representing state, federal, and county agencies as well as independent biologists. Purpose of subcommittee is to analyze technical data and

Table 2-2. Timeline of Key Events in Oceano Dunes SVRA Recreation Management and Conservation Planning

Year	Event
	provide scientific recommendations to the CCC Technical Review Team (Scientific Subcommittee Oceano Dunes SVRA, 2002).
2002	CDPR implements CLTE and SNPL predator management program (HCP sections 3.3.1.7 and 3.3.2.7).
2003	CDPR extends seasonal exclosure boundary north [from Post 8] to Post 6 and south 1 mile [Boneyard extension] per Consent Decree and Agreement with Sierra Club (U.S. District Court, 2005).
2003	First banding of CLTE chicks (HCP section 3.3.2.4).
2003	CDPR commences first annual monitoring of the fishery in Arroyo Grande Creek (Rischbieter D. , 2004).
2004	USFWS proposes critical habitat listing for steelhead in the HCP area.
2005	CDPR issues NOP and USFWS issues NOI for SLO Coast and Oceano Dunes District HCP EIS/EIR. CDPR and USFWS jointly hold public scoping meeting (CDPR, 2005b) (USFWS, 2005).
2005	Consent Decree between CDPR and Santa Lucia Chapter of the Sierra Club finalized. CDPR agrees to allocate funding for SNPL recovery and habitat improvement, evaluate alternatives to vehicle crossing of Arroyo Grande Creek, and prepare an HCP supporting reduction of the seasonal exclosure to Post 7 (U.S. District Court, 2005).
2005	CDPR expanded HCP area to include Pismo Creek portion of Pismo State Beach and reopened discussion with the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) to evaluate need for incidental take coverage for steelhead.
2005	Discovery of tidewater goby in Arroyo Creek (Rischbieter D. , 2006). CDPR adds tidewater goby to the HCP covered species list.
2005	CDPR evaluates recreational disturbance to water birds at SVRA (Neuman, Page, & George, 2005). CDPR evaluates effects of nighttime riding on shorebirds at SVRA (Mad River Biologists, 2005).
2006	CDPR commissioned study completed, evaluating alternate vehicle access to park rather than current route crossing Arroyo Creek (Condor, Environmental Planning Services Inc., 2006).
2008	NOAA Fisheries determines covered HCP activities unlikely to cause take of steelhead. ITP is not recommended (NOAA Fisheries, 2008).
2012	CDPR removed SLO Coast District from Oceano Dunes HCP effort.
2016	USFWS Ventura Fish and Wildlife Office and Office of Law Enforcement Staff meets with State Parks at Oceano Dunes SVRA to discuss the recent violations of FESA and steps to move forward and requests CDPR documentation of avoidance and minimization measures (USFWS, 2016c).
2017	CDPR completes draft Wildlife Habitat Protection Plan (WHPP) for the Oceano Dunes SVRA, as required by PRC section 5090.35 (CDPR, 2017b).

Table 2-2. Timeline of Key Events in Oceano Dunes SVRA Recreation Management and Conservation Planning

Year	Event
2018	CDPR issues NOP and USFWS issues NOI for joint EIS/EIR and holds scoping meeting.
2018-2019	CDPR signs Stipulated Order of Abatement from SLO Air Pollution Control District (SLOAPCD) requiring CDPR to expand revegetation and seasonal wind fencing and reduce particulate matter (PM) emissions by 50 percent. Scientific Advisory Group (SAG) appointed to advise on preparation of a new Particulate Matter Reduction Plan (SLOAPCD, 2018). SOA amended in 2019 further specifying closure and vegetation requirements and prompting CDPR to administratively reduce the number of camping units in Oceano Dunes SVRA.

2.3 PROJECT OBJECTIVES

2.3.1 Purpose of HCP

The HCP details the conservation effort initiated by the OHMVR Division to protect, conserve, and restore the natural resources of Pismo State Beach, Pismo Lake, and Oceano Dunes SVRA. The purpose of the HCP is to describe the measures the Oceano Dunes District will undertake to avoid, minimize, and mitigate specified visitor- and park operations-related impacts to several listed species. Avoidance and minimization of take of listed species will continue to be the primary HCP objective. Consistent with CDPR's and the OHMVR Division's missions, the HCP is designed to accommodate recreational use within the covered parks while protecting and benefiting numerous populations of threatened and endangered species occurring within those parks.

The primary goals of the HCP are to provide habitat-level protection and management and to minimize human-related impacts to key threatened or endangered wildlife, including the SNPL, CLTE, CRLF, tidewater goby, and six state- and/or federally-listed plant species.

The HCP will provide the basis for issuance of an ITP by the USFWS pursuant to section 10(a)(1)(B) of FESA. The HCP, which is a priority objective of management, establishes allowable levels of incidental take of the covered species that may occur as the unintended result of the otherwise lawful activities of park visitors and/or park staff and describes measures to minimize and mitigate the incidental take to the maximum extent practicable. The conservation program in the HCP also supports issuance of a FESA section 10(a)(1)(A) Recovery and Interstate Commerce Permit, which permits take that arises during measures taken to enhance the propagation or survival of a listed species.

Another goal of the HCP is to have certain elements of the program assist the Oceano Dunes District with meeting resource management goals and objectives identified in the parks' general plan.

2.3.2 Project Objectives

CDPR Oceano Dunes District is responsible for managing the state's parkland in a manner that both protects natural resources consistent with governing laws and promotes accessible recreation. CDPR's objectives for the proposed Oceano Dunes District HCP are to:

- Avoid, minimize, and mitigate the effects of take of the covered species
- Implement biological goals and objectives for covered species (HCP section 5.5) to promote species and habitat conservation
- Obtain a permit from the USFWS to authorize incidental take of covered species and ensure FESA compliance
- Operate the covered park units in a manner that provides for public use and enjoyment while conserving park resources, consistent with the overall mandate of CDPR and the specific unit classifications, as prescribed by the Public Resources Code
- Preserve, manage, and expand, as appropriate, motorized and non-motorized recreational opportunities
- Manage, maintain, and maximize, as appropriate, access to the unique coastal camping and recreational amenities in the HCP area
- Facilitate implementation of permit, legal settlement, and judicial or quasi-judicial order conditions and obligations applicable to one or both covered units (Pismo State Beach and/or Oceano Dunes SVRA).

2.4 PROJECT CHARACTERISTICS

The project involves implementation of an HCP to manage plant and animal species for compliance with FESA. The HCP formalizes the conservation program for these species that has developed over time and is presently implemented. The HCP covers existing lawful activities occurring at the park as authorized under the park enabling legislation as well as proposed changes and contemplated future changes to park operations. The HCP is not a program for managing general operations at Pismo State Beach and Oceano Dunes SVRA. Decisions concerning park unit operations are governed by existing laws and regulations, superintendent orders, agency permits and agreements, and court orders. The purpose of the HCP is limited to establishing a conservation program for avoidance and minimization of impacts to species covered by an ITP. The HCP governs park operations impacting covered federal species.

2.4.1 HCP Covered Species

Covered species were chosen based on their listing or potential listing status as a federally-listed threatened or endangered species and the potential for take within the HCP area. Table 2-3. HCP Covered Species lists the species addressed by the HCP. Four of these species are listed animals and six are listed plants. Although FESA does not prohibit take of listed plant species, CDPR has included them in the HCP and requests assurances for them under USFWS's "No Surprises" assurances rule, discussed in HCP section 6.5.

CLTE is both a state-listed endangered species under CESA and a fully protected state species under the California Fish and Game Code in addition to being a federally-listed endangered

species. As a fully protected state species, incidental take of CLTE can only be authorized under California law via an NCCP. See EIR section 2.5 below for further discussion.

In addition to the covered species, other special-status species have either been documented within 5 miles of the HCP area and/or are included on the USFWS Resource Report for the HCP area. Appendix A of the HCP lists these species along with an explanation as to why each species is not included as a covered species. These or other species could be added to the ITP via an amendment to the HCP if they become listed and/or otherwise require incidental take authorization during the duration of the permit.

Table 2-3. HCP Covered Species

Species Common Name (*Scientific Name*)	Listing Status	
	State	Federal
Animals		
Western snowy plover (*Charadrius nivosus nivosus*)	CSSC	FT
California least tern (*Sternula antillarum browni*)	SE, SP	FE[1]
California red-legged frog (*Rana draytonii*)	CSSC	FT
Tidewater goby (*Eucyclogobius newberryi*)	CSSC	FE[2]
Plants[3]		
Marsh sandwort (*Arenaria paludicola*)	SE	FE
La Graciosa thistle (*Cirsium scariosum* var. *loncholepi*s)	ST	FE
Surf thistle (*Cirsium rhothophilum*)	ST	–
Beach spectaclepod (*Dithyrea maritima*)	ST	–
Nipomo Mesa lupine (*Lupinus nipomensis*)	SE	FE
Gambel's watercress (*Nasturtium* [*Rorippa*] *gambelii*)	ST	FE

Listing Status:
FE Federally listed as endangered
FT Federally listed as threatened
SE State listed as endangered
ST State listed as threatened
CSSC California species of special concern
SP California fully protected

[1]The USFWS has recommended, but not formally proposed, downlisting to "threatened."

[2]On March 13, 2014, the USFWS proposed to downlist from federal endangered to threatened (USFWS, 2001).

[3]Listed plants are addressed by this HCP, but no take authorization is requested from the USFWS or required under FESA.

Note: Steelhead (*Oncorhynchus mykiss irideus*; South-Central California Coast Ecologically Significant Unit) is not proposed for coverage per 12/23/2008 letter from NOAA Fisheries (NOAA Fisheries 2008) concluding that covered activities are not likely to take steelhead with the implementation of avoidance and minimization measures (AMMs); therefore, an ITP is not required.

2.4.2 HCP Covered Activities

Together, Pismo State Beach and Oceano Dunes SVRA are visited by almost 2 million people each year. Visitors come to enjoy wide-ranging pursuits, from OHV recreation and camping to bird watching and horseback riding. To support this high level and diversity of visitation, the

Oceano Dunes District has an extensive operational program, providing visitor services, public safety, facilities maintenance and repair, and resource management addressing protection and enhancement of native ecosystems and cultural resources. Operations and maintenance activities may be performed by CDPR personnel, contractors, concessionaires, lessees, and/or other non-CDPR entities. All of the components of this operational program are covered activities under the HCP. In addition, certain management activities that are HCP-required management actions may also result in take and are considered covered activities.

HCP covered activities are summarized below and described in detail in Chapter 2 of the HCP. Most of the HCP covered activities listed below have been ongoing in the HCP area for many years. SNPL chick and egg capture for captive rearing, mechanical trash removal, a change in the seasonal exclosure boundaries, and CDPR's use of UAS for data collection are new activities specifically proposed under the HCP. Potential future activities contemplated by CDPR are proposed for coverage under the HCP and federal ITP. A summary of all activities proposed for coverage under the HCP is presented in Table 2-4.

2.4.2.1 Continuance of Existing Park Operations

Park Visitor Activities. Close to 2 million people visit the Oceano Dunes District every year engaging in pedestrian, camping, and motorized vehicle activities. Park visitor activities covered by the HCP (CA-1 through CA-11) include motorized recreation; camping; pedestrian activities such as picnicking, sunbathing, swimming, and hiking; bicycling and golfing; fishing; dog walking (on leash only); equestrian recreation; boating/surfing; and aerial/wind-driven activities including kiteboarding. Any increased visitation during holidays and special events is included as covered activities (although visitation never exceeds CDP limits). Examples of past permitted special events include poker runs, hucking (vehicles driving up and jumping off the top of sand dunes), vintage car races, concerts, group campfires and receptions, sports, weddings, video production, and still photography. These visitor activities presently occur at the park; no changes to these types of activities are proposed by the HCP. The areas where various park visitor activities are allowed are shown on Figure 2-3. See HCP section 2.2.1 for a complete description of park visitor activities.

Natural Resources Management Program. Natural resources management activities covered by the HCP (CA-12 through CA-19) include covered species management (e.g., habitat protections/fencings, surveys, monitoring, banding, salvage and rescue, predator control), vegetation planting and habitat restoration, habitat monitoring, invasive plant and animal control, prescribed fire management, installation of fences and signs to prevent trespass in sensitive areas, and water quality monitoring projects. These natural resource management activities occur as existing park operations. With the exception of SNPL chick and egg capture for captive rearing, no changes to the natural resource management activities are proposed by the HCP.[3] See HCP section 2.2.2 for a complete description of the natural resources management program.

Park Maintenance. Park maintenance activities include maintaining campgrounds, ramps, roads, and trails; collecting garbage; erecting and maintaining fences; and riparian vegetation maintenance. Park maintenance activities covered under the HCP (CA-20 through CA-31)

[3] Although chick and egg capture is a natural resource management activity, it is proposed as a method of avoiding take caused by recreation and other park operations.

address the following facilities: campgrounds, general facilities, trash bins, wind fencing, sand ramp, beach entrances from street, spillway and drainages, perimeter and vegetation island fencing, cable fencing, and boardwalks. Covered activities include the use of heavy equipment in all areas of the SVRA and minor grading (less than 50 cubic yards). These maintenance activities occur as existing park operations. They vary in frequency dependent upon the maintenance needed. Previous CEQA review has been completed for routine riparian maintenance activities (CA-26) (TRA Environmental Sciences, Inc., 2012), and the continuation of this activity is permitted by CDFW via a Streambed Alteration Agreement (1600-2012-0001-R4). The HCP proposes one addition to general maintenance activities (mechanical trash removal; CA-21) as described below in EIR section 2.4.2.2. No other changes to park maintenance activities are proposed by the HCP. See HCP section 2.2.3 for a complete description of park maintenance activities.

Visitor Services. General park operations include patrolling beaches and trails; conducting public safety, law enforcement, medical aid, and emergency response activities; and providing other visitor services. These services may be conducted by CDPR personnel, contractors, other agencies, for-profit and not-for-profit entities, concessionaires, or lessees. Visitor services covered by the HCP (CA-32 through CA-39) include ranger, lifeguard, and park aide patrols; emergency response by CDPR staff; access by non-CDPR vehicles; American Safety Institute (ASI) courses, including all-terrain vehicle (ATV) and recreational utility vehicle (RUV) courses; concessions; Pismo Beach Golf Course operations; Grover Beach Lodge and Conference Center; and natural history and interpretation programs, including stationary programs, roving interpretation, interpretive walks, and driving tours. These activities are all ongoing park operations except for the Grover Beach Lodge and Conference Center (CA-38), which has been previously reviewed under CEQA (SWCA Environmental Consultants, 2012) and approved for development but not constructed. No changes to the existing park visitor services are proposed by the HCP. See HCP section 2.2.4 for a complete description of visitor services.

Other Activities. The HCP identifies additional covered activities that are not confined to a single category listed above or that may fall outside of the general categories. Motorized vehicle crossing of Pismo/Carpenter, Arroyo Grande, and Oso Flaco creeks (CA-40); dust control activities (CA-44); cultural resources management (CA-45); CDPR management of agricultural lands (CA-46); maintenance of a bioreactor on agricultural lands (CA-47); and pesticide use (CA-51) are ongoing activities in the HCP area. No changes to these covered activities are proposed in the HCP. New or modified covered activities are described below in EIR section 2.4.2.2. See HCP section 2.2.5 for a complete description of these other activities.

2.4.2.2 Proposed Changes to Park Operations

The following activities are changes to existing park operations proposed in the HCP. Activity locations are shown in Figure 2-8 Proposed New Covered Activity.

SNPL/CLTE Management (CA-12b) – SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreational Activities and Other Non-Covered Species Management Activities. As part of the ongoing SNPL and CLTE management program, CDPR currently collects for captive rearing some SNPL chicks or eggs identified as abandoned and considered vulnerable because of unusual circumstance (e.g., an attending adult being predated). However, to date, CDPR does not collect SNPL chicks or eggs if they are observed to be

threatened by covered activities, such as motorized or pedestrian recreation. Instead, CDPR staff attempt to protect nests in vulnerable locations (e.g., with single-nest exclosures) and direct chicks out of harm's way (e.g., back to the seasonal exclosure). To further minimize loss of eggs and chicks in the HCP area, CDPR proposes to expand captive rearing to include SNPL chicks or eggs that are deemed threatened by covered activities that are not related to covered species management (e.g., new proposed activities and motorized recreation). Therefore, in the future, if SNPL chicks are deemed to be threatened by a covered activity (e.g., motorized recreation), despite CDPR's efforts to direct chicks back to the protection of the seasonal exclosure and reunite them with attending adults, CDPR staff may collect SNPL chicks and transfer them to an approved wildlife facility. Similarly, if an SNPL nest is initiated in an area that is deemed vulnerable to covered activities, such as motorized recreation, CDPR may opt to transfer those eggs to an approved wildlife facility. In these instances, captive rearing would be the only option to prevent mortality or injury to those eggs or chicks deemed vulnerable by the covered activity. These activities would only be conducted by a USFWS-approved or 10 (a)(1)(A) permitted biologist. All chicks will be raised in a manner where they will not imprint on humans.

If sufficient bands are available and other logistics are satisfied, all fledglings will be color-banded to individual prior to releasing them back into the wild to assist in tracking bird movements, survival, and future reproductive success. In all cases, the need for captive care will be determined by a qualified Environmental Scientist, will be used selectively, and will be dependent on an approved facility having the capacity to accept the eggs and/or chicks. If time permits, CDPR staff will confer with USFWS prior to conducting salvage and rescue activities. See HCP section 2.2.2.1.2 for a discussion of captive rearing.

General Facilities Maintenance (CA-21) – Mechanical Trash Removal. CDPR proposes adding mechanical trash removal to its maintenance operations. CDPR would use a tractor-towed rake to collect nails, broken glass, and other debris that may pose a hazard to visitors or wildlife from open sand areas. Mechanical trash removal would occur year-round in the most heavily used beach areas from the Grand Avenue entrance south to Post 6. Mechanical trash removal would only occur above the active wrack line, would not occur in vegetated areas or within 500 feet of any known SNPL or CLTE nesting area, and would be set back from creeks. Equipment operating speed would be 5 to 10 miles per hour (mph). Collected debris would be deposited in the dumpsters. Work is expected to be conducted in the morning to avoid peak visitation. Up to approximately 24 acres could be treated on any 1 day. Given time constraints, speed limits, and other factors, fewer acres may be treated. Some areas could be treated several times per month during a busy season, whereas others may be treated only once or twice a year, if at all. Although trash removal would focus on a narrow (200- to 300-foot-wide), approximately 140-acre band running from Grand Avenue to Post 6, other areas may be treated pending resource staff review and within the above setback parameters. See HCP section 2.2.3.2 for a discussion of general facilities maintenance.

Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50). CDPR is proposing a management change associated with the seasonal exclosure for the SNPL and CLTE for the purpose of providing additional opportunity for year-round recreation if HCP conservation targets for SNPL and CLTE can be met.

The Boneyard Exclosure is located at the southern end of the riding area near Oso Flaco (Figure 2-3). CDPR proposes to refrain from fencing off the approximately 49-acre East Boneyard Exclosure during the first breeding season under the HCP. The eastern fence line of East

Boneyard is currently not being maintained as a predator fence due to the rapidly shifting open sand dunes in the area that make fencing difficult to maintain. Although the Boneyard Exclosure historically played a more significant role in CLTE and SNPL nesting, since 2005 it has only been used seven times by SNPL for nesting and has not been used by CLTE. As a result, the Boneyard Exclosure does not appear to contribute to CLTE and SNPL reproductive success in the HCP area. Currently, visitation by park users in South Oso Flaco is light during the breeding season because there is no public access via the open riding area. Pedestrian access from the riding area to South Oso Flaco is through Boneyard gate (Figure 2-3), which is seasonally inaccessible due to Boneyard exclosure fencing. When East Boneyard fencing is removed, the Oso Flaco fence at the south end of East Boneyard would be arranged to maintain blocked access to the East Boneyard gate during the breeding season.

The 6 Exclosure comprises the area between Post 6 and Post 7, which extends 0.5 mile of shoreline and covers approximately 60 acres. The Southern Exclosure was initially extended north to Post 6 in 2003 as a result of a Consent Decree that CDPR entered into with a local Sierra Club chapter in 2005.[4] Specific to the HCP process, the Consent Decree stipulated that CDPR "shall support a northern [seasonal exclosure] boundary of Distance Marker Number 7, notwithstanding the terms of this consent decree." Consistent with this stipulation, if CDPR determines that exclosure reductions are supported by appropriate considerations, CDPR may reduce the 6 Exclosure in 328-foot increments (approximately 7.5 acres) from Post 6 south toward Post 7 (or CDPR may implement alternative incremental reductions of similar acreage to meet management needs). At CDPR's discretion, and in consideration of specific criteria for SNPL and CLTE nesting success and population size and other factors (see HCP section 5.2.3 for a more detailed explanation of the criteria for reducing the exclosed area), CDPR may ultimately no longer fence the 60-acre exclosure. Based on this approach, a minimum of 8 years would be required to completely unfence the 6 Exclosure. If the criteria are not met for either species, the 6 Exclosure would be restored in the following breeding season in coordination with the USFWS. Decisions to restore the 6 Exclosure fence to ensure the criteria are met would be based on the best available science and could include additional management actions (e.g., predator management) along with restoring the exclosure size. Proposing a reduction in the 6 Exclosure is consistent with the 2005 Consent Decree and the OHMVR Division's mission to balance recreation and natural resource management.

See HCP section 2.2.5.11 for a discussion of the East Boneyard Exclosure and 6 Exclosure reductions.

CDPR Unmanned Aircraft System (UAS) Use for Park Activities (CA-52). CDPR may use UAS (drones) in the HCP area to reduce the time and cost associated with data collection, especially in more remote areas. All UAS operations will be consistent with CDPR policies regarding UAS use. The immediate need for UAS use is for assessing habitat for habitat enhancement activities. CDPR may use UAS for other activities as staff experience and accessibility increases. Specific practices are being developed to allow UAS work to occur with

[4] Although the Consent Decree was not finalized until 2005, it included implementation of exclosure boundary adjustments in 2003. The initial extension, in 2003, was narrower than the current configuration, which began in 2004.

a minimum amount of disturbance as described in the UAS AMMs. See HCP section 2.2.5.13 for a discussion of CDPR's use of UAS.

2.4.2.3 Contemplated Future Changes to Park Operations

The HCP covered activities include potential future activities being contemplated by CDPR and subject to separate CEQA review. Other than New Particulate Matter Reduction Plan (PMRP; CA-44), these activities are not currently planned. These activities include:

- SNPL Adult Banding (CA-12b; HCP Section 2.2.2.1.2)
- Propagation and Outplanting of Listed Plant Species (CA-15; HCP section 2.2.2.1.5)
- Cable Fence Replacement (CA-28; HCP section 2.2.3.9)
- Pismo Creek Estuary Seasonal (Floating) Bridge (CA-41; HCP section 2.2.5.2)
- Riding in 40 Acres (CA-42; HCP section 2.2.5.3)
- Safety and Education Center Replacement (CA-43; HCP section 2.2.5.4)
- Dust Control Activities – New PMRP (CA-44; HCP section 2.2.5.5)
- Oso Flaco Lake Boardwalk Replacement (CA-48; HCP section 2.2.5.9)
- Special Projects (CA-49: HCP section 2.2.5.10)

These activities may or may not be proposed by CDPR in the future. One of these projects (Pismo Creek Estuary seasonal [floating] bridge; CA-41) has been considered in the past by CDPR (TRA Environmental Sciences, Inc., 2013) and may be considered again. Riding in 40 Acres (CA-42) is being actively contemplated and may be included in CDPR's PWP, which is being prepared in a separate park improvement planning process. Additionally, CDPR is preparing a PMRP, which would modify the park's dust control activities (CA-44). Separate CEQA review of the PMRP is underway. The safety and education center (CA-43) and Oso Flaco Lake boardwalk (CA-48) are existing facilities with recognized future maintenance needs. Special projects (CA-49) is a broad category that covers replacement or expansion of existing facilities within the existing facility footprint and new facilities consistent with existing facilities, not to exceed a cumulative total of 35 acres over the HCP permit term.

By including these six potential projects as covered activities in the HCP now, it is CDPR's goal to be proactive administratively and to avoid a future ITP amendment process and NEPA review of the changed ITP should these activities become proposed projects that require ITP coverage. Including these contemplated projects in the HCP as covered activities does not constitute authorization by CDPR. These projects require a subsequent proposal by CDPR, environmental review pursuant to CEQA, and permit issuance by other agencies where warranted (EIR section 1.3 and section 2.5). Accordingly, these potential covered activities are evaluated in the cumulative impact analysis in each environmental chapter (see EIR section 3.3).

Table 2-4. Summary of Existing, Proposed, and Potential Future Covered Activities under HCP

Existing Activity[1]	Proposed New Activity[2]	Contemplated Future Activity[3]
Park Visitor Activities		
CA-1: Motorized Recreation; CA-2: Camping; CA-3: Pedestrian Activities (such as picnicking, sunbathing, swimming, and hiking); CA-4: Bicycling and Golfing; CA-5: Fishing; CA-6: Dog Walking (on leash only); CA-7: Equestrian Recreation; CA-8: Boating/Surfing; CA-9: Aerial/Wind-Driven Activities; CA-10: Holidays; and CA-11: Special Events.	**None.** The types of visitor uses or special events occurring in the HCP area would not be modified by the HCP. Areas open to visitor uses would be modified as described below in Other Covered Activities. Special events sporadically occur on an ongoing basis. Individual events are reviewed by CDPR when proposed, to determine suitability of the proposed use and the appropriate level of environmental review pursuant to CEQA.	**None.** CDPR does not anticipate new categories of park visitor uses beyond those that are presently occurring.
Natural Resources Management		
CA-12a: SNPL/CLTE Protection Fences; CA-12b: SNPL/CLTE Monitoring and Management; CA-13: Tidewater Goby and Salmonid Surveys; CA-14: CRLF Surveys and Associated Management (invasives control); CA-15: Listed Plant Monitoring, Propagation, and Habitat Enhancement; CA-16: Habitat Restoration Program (including seed collection, propagation, planting, monitoring, and minor grading to access work areas); CA-17: Invasive Plant and Animal Control (including prescribed fire, herbicide application, and hand clearing of paths to access work areas); CA-18: HMS (including small mammal trapping, point counts, shorebird counts, and coverboards); CA-19: Water Quality Monitoring Projects.	CA-12b: SNPL/CLTE Management: SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreational Activities and Other Non-Covered Species Management Activities	CA-12b: SNPL Adult Banding CA-15: Listed Plant Management – Propagation and Outplanting
Park Maintenance		
CA-20: Campground Maintenance (including mowing, hazardous tree program, restroom upkeep, and housekeeping); CA-21: General Facilities Maintenance; CA-22: Trash Control; CA-23: Wind Fencing Installation, Maintenance, and Removal; CA-24: Sand Ramp and Other Vehicular Access Maintenance (including roadway resurfacing); CA-25: Street Sweeping; CA-26: Routine Riparian Maintenance (including	CA-21: General Facilities Maintenance: Mechanical Trash Removal	CA-28: Cable Fence Maintenance – Replacement CA-48: Oso Flaco Lake Boardwalk Replacement could be a potential future park maintenance activity (discussed below in Other Covered Activities) depending

Table 2-4. Summary of Existing, Proposed, and Potential Future Covered Activities under HCP

Existing Activity[1]	Proposed New Activity[2]	Contemplated Future Activity[3]
spillway maintenance, culvert maintenance, vegetation management along trails and roads, emergent vegetation control, and minor flood control maintenance for ditch function and vegetation control); CA-27: Perimeter and Vegetation Island Fence Installation, Maintenance, and Removal; CA-28: Cable Fence Maintenance; CA-29: Heavy Equipment Response; CA-30: Minor Grading (less than 50 cubic yards); CA-31: Boardwalk and Other Pedestrian Access Maintenance.		upon the type of project selected.
Visitor Services		
CA-32: Ranger, Lifeguard, and Park Aide Patrols; CA-33: Emergency Response (including accidents, injuries, distressed vessels, search and rescue); CA-34: Access by Non-CDPR Vehicles; CA-35: ASI Courses, (including ATV and RUV courses); CA-36: Beach Concessions; CA-37: Pismo Beach Golf Course Operations; CA-39: Natural History and Interpretation Programs (including stationary programs, roving interpretation, interpretive walks, driving tours).	**None.** The types of visitor services activities occurring in the HCP area would not be modified by the HCP. Visitor services would continue at the same frequency and intensity and in the same area as presently occurring.	CA-38: Grover Beach Lodge and Conference Center (an approved use that is not yet built)
Other Activities		
CA-40: Motorized Vehicle Crossing of Pismo/Carpenter, Arroyo Grande, and Oso Flaco Creeks; CA-44: Dust Control Activities; CA-45: Cultural Resources Management; CA-46: CDPR Management of Agricultural Lands; CA-47: Maintenance of a Bioreactor on Agricultural Lands; CA-51: Use of Pesticides	CA-50: Reduction of the Boneyard Exclosure and 6 Exclosure; CA-52: CDPR UAS Use for Park Activities	CA-41: Pismo Creek Estuary Seasonal (Floating) Bridge; CA-42: Riding in 40 Acres; CA-43: Replacement of the Safety and Education Center; CA-44: Dust Control Activities – New PMRP; CA-48: Oso Flaco Lake Boardwalk Replacement; CA-49: Special Projects.

Notes:

[1] Existing Covered Activity includes those activities that are already occurring in the park. No changes are proposed to these activities by the HCP. These activities are considered environmental baseline in the EIR analysis.

[2] New Proposed Activity includes those activities that are proposed by CDPR in the HCP. These activities are considered new project actions subject to full environmental review in the EIR analysis.

[3] Potential Future Activity includes those activities that could be proposed by CDPR in the future. These future activities will be assessed to determine the need for further environmental review under CEQA. This also includes Grover Beach Lodge and Conference Center (CA-38), which has been approved and permitted but has not yet been constructed.

2.4.3 HCP Program Details

The HCP conservation program will be implemented to protect and promote recovery for listed and covered species in the HCP area by protecting and, where appropriate, enhancing their populations. The conservation program is a program of conservation measures (i.e., actions taken to avoid or minimize take, compensate for loss of habitat, or provide for the conservation of covered species) that, when implemented, will achieve the biological goals and objectives of the HCP while meeting the other primary project objectives described in EIR section 2.3.2. The conservation program relies on several types of conservation measures including avoidance and minimization, habitat enhancement, habitat restoration, habitat creation, and population enhancement. The HCP conservation program is described in detail in Chapter 5 of the HCP and is summarized below.

2.4.3.1 Biological Goals and Objectives for Covered Species

HCPs must establish biological goals and objectives (USFWS and NOAA Fisheries, 2016). The biological goals of an HCP are the broad, guiding principles for the operating conservation program and the rationale behind the minimization and mitigation strategies. The purpose of the biological goals is to ensure that the operating conservation program in the HCP is consistent with the conservation and recovery goals established for the species. The goals are also intended to provide to the applicant an understanding of why these actions are necessary. These goals are developed based upon the species' biology, threats to the species, the potential effects of the covered activities, and the scope of the HCP. The biological objectives of an HCP are the different component or measurable targets needed to achieve the biological goals.

The biological goals and objectives of the HCP for covered species are listed below in Table 2-5. HCP Goals and Objectives. Performance standards and success criteria are used to determine whether the goals and objectives are met and the success of the overall conservation program. These standards and criteria are described in HCP section 5.5.

Table 2-5. HCP Goals and Objectives

Western Snowy Plover	
Goal 1: Continue to contribute to SNPL recovery locally and range-wide.	
Objective 1.1:	Manage the SNPL population breeding in the HCP area to meet or exceed the CDPR target of 155 breeding SNPL averaged over a moving 3-year window.
Objective 1.2:	Maximize the reproductive success of SNPL in the HCP area to maintain a 3-year moving average of at least 1.0 fledgling per male.
Objective 1.3:	Increase the habitat quality through habitat enhancement and restoration.
Objective 1.4:	Reduce predation.
Objective 1.5:	Reduce disturbance by recreational users and predators.
Goal 2: Minimize conflicts between park users, park operations, and SNPL through a combination of avoidance and minimization measures and enforcement of park rules and regulations.	
Objective 2.1:	Provide effective outreach and education to CDPR staff, volunteers, concessionaires operating in the HCP area, and the public on the ecology of SNPL, the significance of the HCP area habitats for this species and its recovery, the importance of CDPR's

Table 2-5. HCP Goals and Objectives	
	protection and monitoring efforts, the impacts of predators on these species, and the importance of working together to conserve these species and their habitat.
Objective 2.2:	Provide adequate enforcement to ensure that park visitors do not violate restrictions that protect SNPL and their habitat.
Objective 2.3:	Implement recreation and other use restrictions to avoid and minimize take of SNPL.
Objective 2.4:	Conduct all maintenance and other park operations in a manner that avoids and minimizes take of SNPL.
California Least Tern	
Goal 1: Continue to contribute to CLTE recovery locally and range-wide.	
Objective 1.1:	Maintain a five-year running average of 35 breeding pairs of CLTE in the HCP area.
Objective 1.2:	Maximize the reproductive success of CLTE in the HCP area to maintain a 3-year moving average of at least 1.0 fledgling per nesting pair.
Objective 1.3:	Increase the habitat quality through habitat enhancement and restoration.
Objective 1.4:	Reduce predation.
Objective 1.5:	Reduce disturbance by recreational users and predators.
Goal 2: Minimize conflicts between park users, park operations, and CLTE through a combination of avoidance and minimization measures and enforcement of park rules and regulations.	
Objective 2.1:	Provide effective outreach and education to CDPR staff, volunteers, concessionaires operating in the HCP area, and the public on the ecology of CLTE, the significance of the HCP area habitats for this species and its recovery, the importance of CDPR's protection and monitoring efforts, the impacts of predators on these species, and the importance of working together to conserve these species and their habitat.
Objective 2.2:	Provide adequate enforcement to ensure that park visitors do not violate restrictions that protect CLTE and their habitat.
Objective 2.3:	Implement recreation and other use restrictions to avoid and minimize take of CLTE.
Objective 2.4:	Conduct all maintenance and other park operations in a manner that avoids and minimizes take of CLTE.
California Red-legged Frog	
Goal 1: Minimize the effects of park operations, park visitor activities, and management activities on suitable CRLF habitat.	
Objective 1.1:	When necessary to limit encroachment, close suitable habitat with symbolic fencing and signage, including Pismo Creek Lagoon, Pismo Lake, Meadow Creek, Carpenter Creek, Oceano (Meadow Creek) Lagoon, Arroyo Grande Creek, Arroyo Grande Creek Lagoon, Oso Flaco Lake, Oso Flaco Creek, and numerous unnamed water bodies within the dune system that provide existing and potential CRLF habitat.
Objective 1.2:	Protect habitat by closing informal trails adjacent to occupied aquatic habitat.
Goal 2: Manage invasive plants and animals to enhance suitable habitat and protect all CRLF life stages.	
Objective 2.1:	Control invasive aquatic predators of CRLF.
Objective 2.2:	Enhance CRLF habitat by managing aquatic vegetation.

Table 2-5. HCP Goals and Objectives	
Goal 3: Minimize upstream water quality and quantity effects on CRLF and suitable habitat within the HCP area by facilitating cooperative management efforts with willing landowners.	
Objective 3.1:	Conduct outreach to, and work with, willing landowners upstream of the HCP area and the Regional Water Quality Control Board (RWQCB), whose activities affect water quality and quantity in the HCP area. Outreach and cooperative efforts with upstream land managers will seek to reduce impacts to water quality and quantity in target watersheds.
Tidewater Goby	
Goal 1: Minimize the effects of park operations, park visitor activities, and management activities on tidewater goby habitat.	
Objective 1.1:	Protect tidewater goby habitat by closing informal trails in and adjacent to occupied and potential habitat. Informal trails found within riparian habitat adjacent to Arroyo Grande and Pismo creeks will be blocked and restored to original conditions.
Objective 1.2:	Protect tidewater goby habitat in Arroyo Grande Creek by enforcing crossing guidelines.
Objective 1.3:	Protect tidewater goby habitat in Pismo Creek Lagoon by pursuing installation of proposed improvements to Pismo Creek.
Goal 2: Manage invasive animals to protect all life stages of tidewater goby.	
Objective 2.1:	Control invasive aquatic predators of tidewater goby.
Goal 3: Minimize the effects of upstream water quality and quantity to tidewater goby suitable habitat within the HCP area by facilitating cooperative management efforts with willing landowners and water agencies.	
Objective 3.1:	Conduct outreach to, and work with, willing landowners upstream of the Oceano Dunes District whose activities affect water quality and quantity in the HCP area, working in conjunction with the RWQCB.
Goal 4: Evaluate the suitability of potential tidewater goby habitat in the HCP area.	
Objective 4.1:	CDPR will cooperate with USFWS efforts to evaluate habitat conditions of other potential tidewater goby habitat within the HCP area.
Listed Plants	
Goal 1: Protect and enhance habitat for marsh sandwort, La Graciosa thistle, surf thistle, beach spectaclepod, Nipomo Mesa lupine, and Gambel's watercress within the HCP area to sustain or increase their populations.	
Objective 1.1:	Restore listed plant habitat.
Objective 1.2:	Protect listed plants from public encroachment.
Objective 1.3:	Close informal trails in and adjacent to listed plant species habitats and restore to original conditions.
Goal 2: Manage invasive plants to protect listed plant species habitat.	
Objective 2.1:	Control non-native invasive plant species. Invasions of non-native plants create a serious threat to ecosystem function, native biological diversity, and many listed plant species.

Table 2-5. HCP Goals and Objectives	
Goal 3: Minimize upstream water quality effects on marsh sandwort and Gambel's watercress and suitable habitat within the HCP area by facilitating cooperative management efforts with willing landowners.	
Objective 3.1:	Conduct outreach to, and work with, willing landowners upstream of the HCP area whose activities affect water quality and quantity at Oso Flaco Lake. The Oceano Dunes District will collaborate with willing upstream landowners and the RWQCB to improve water quality in the Oso Flaco drainage to improve habitat for marsh sandwort and Gambel's watercress. If a watershed assessment or other watershed-based program commences that could help the Oso Flaco watershed, then the Oceano Dunes District will evaluate the benefits of participation in such a program for the covered species.
Goal 4: Collaborate with external agencies and institutions to propagate and outplant listed plants to HCP area lands.	
Objective 4.1:	Coordinate with USFWS and other agencies and institutions, including botanical gardens, to explore opportunities for propagation and outplanting of listed plants in the HCP area to enhance existing populations and to support new populations of listed plant species in currently unoccupied but suitable habitat.

2.4.3.2 Avoidance, Minimization and Mitigation Measures

Section 10(a)(2)(A) of FESA requires that an HCP specify the measures that the permittee will undertake to minimize and mitigate to the maximum extent practicable the impacts of the take. The HCP adheres to a hierarchical requirement to first implement avoidance and minimization and then, if necessary, implement mitigation measures. AMMs for each covered species are listed in HCP section 5.3.1. A summary listing of the AMMs are presented in Appendix B. Most of the AMMs are currently in effect as part of the ongoing conservation program implemented by CDPR. The HCP includes new AMMs for covered activities as listed in Table 2-6..

The AMMs include educational efforts that foster public awareness of covered species and their protection by CDPR as well as provide training for park-related operations staff (concessions, emergency responders, etc.). Measures also enforce covered species protection regulations, such as the implementation and regulation of closed nesting areas and buffer zones, traffic rules, dog leash and waste rules, littering rules, and aerial/wind-driven activities. Furthermore, the AMMs specify ways to avoid disturbance during routine riparian maintenance, excavation for cultural resource management purposes, CDPR's use of UAS, prescribed fire activities, and potential future construction projects, such as Oso Flaco Lake boardwalk replacement.

AMMs include habitat protection, enhancement, and restoration measures. Protection measures include preventing/removing predators or invasive species, providing natural shelters, and restricting park visitor access in sensitive areas. Habitat management and restoration measures include managing both native and non-native vegetation, conducting botanical and wildlife surveys, monitoring habitat conditions, and use of pesticides.

Table 2-6. New AMMs for Existing and New Covered Activities

Covered Activity	Avoidance and Minimization Measure
Motorized Recreation (CA-1)	**SNPL AMM 22.** When, despite CDPR's efforts[5] to protect nests and/or move chicks back into the safety of the seasonal exclosure, chicks and eggs are still at risk of being injured or killed by covered activities not related to covered species management (e.g., motorized recreation or new proposed activities), CDPR may capture up to 12 eggs (i.e., 4 nests) and/or 12 chicks (i.e., 4 broods) for captive rearing each year. In all cases, the need for captive care is determined by a qualified Environmental Scientist and is used selectively. It is also dependent on an approved facility having the capacity to accept the eggs and/or chicks. If CDPR has captured 8 eggs or 8 chicks for captive rearing during one breeding season pursuant to this AMM, CDPR will contact the USFWS and discuss whether modified or additional AMMs (e.g., expanding the exclosure along the shoreline to provide additional protected foraging habitat, increasing monitoring, and/or increasing signage) are appropriate to minimize risk of additional injury or mortality and ensure no more than 12 eggs and 12 chicks are captured for captive rearing[6]. Because this measure involves capture, which is considered take under FESA, it is included within CA-12b. **SNPL AMM 46/CLTE AMM 37.** The Superintendent may consider implementing additional habitat enhancement measures if Environmental Scientists determine such measures may aid in meeting the criteria laid out in biological objectives for SNPL/CLTE (HCP section 5.2.1). If implemented, the value of any additional habitat enhancement measures to nesting SNPL/CLTE will be studied to evaluate the measure's effectiveness at improving reproductive success and to determine whether and how the measures should be implemented in future seasons.
Special Events (CA-11)	**SNPL AMM 65/CLTE AMM 54.** All UAS operators will follow the current CDPR policies regarding UAS use. **SNPL AMM 66/CLTE AMM 55.** Specific AMMs for UAS use will be included in the permit that all UAS operators must obtain from CDPR. For example, UAS will not be allowed south of Post 5 during the breeding season and will be limited year-round along the shoreline. In addition, a USFWS-approved monitor will accompany non-CDPR UAS operators at any time of year if it is determined there is potential to impact covered species. Stable flight paths are preferred to minimize the UAS being perceived as a predator.
General Facilities Maintenance (CA-21)	**SNPL AMM 104/CLTE AMM 91.** Mechanical trash removal will not occur in areas where any SNPL/CLTE are present. **SNPL AMM 105/CLTE AMM 92.** Mechanical trash removal will only occur above the highest high tide, avoid all wrack/surf cast kelp, avoid all live vegetation, and avoid lagoons and flowing creeks.

[5] At times, based on Senior Environmental Scientist professional discretion, CDPR may determine that SNPL eggs and/or chicks should be collected and transferred to an approved wildlife facility without an attempt to protect them on site because protecting eggs and/or directing chicks back to the exclosure will not eliminate the threat of covered activities.

[6] Capture associated with this AMM is different than capture associated with natural resources management activities. This AMM addresses capture when eggs or chicks are threatened by non-covered species management activities, such as motorized recreation.

Table 2-6. New AMMs for Existing and New Covered Activities

Covered Activity	Avoidance and Minimization Measure
	SNPL AMM 106/CLTE AMM 93. Equipment will observe all speed limits and will not exceed 10 mph. **SNPL AMM 107/CLTE AMM 94**. Mechanical trash removal will not be conducted within 500 feet of any known nesting area. **SNPL AMM 108/CLTE AMM 95.** Natural resources staff will inspect and approve the area subject to mechanical trash removal prior to each deployment. Natural resources staff will remain on site or be immediately available for monitoring purposes. **SNPL AMM 109.** In conjunction with mechanical trash removal, CDPR will implement a study to establish baseline conditions of invertebrate populations, including talitrids, and to determine the impact of mechanical trash removal on these populations. The study will, at a minimum, compare invertebrate abundance in mechanical trash removal areas to baseline conditions prior to start of mechanical trash removal to areas where mechanical trash removal is absent. If CDPR finds a significant decline in invertebrate numbers in mechanical trash removal areas, additional measures will be implemented (e.g., habitat enhancement measures, reduction in frequency of mechanical trash removal, and/or reduction in mechanical trash removal locations).
Routine Riparian Maintenance (CA-26)	**CRLF AMM 27.** CRLF life-stages found in the work area will be relocated upon determination by the USFWS-approved biologist that an appropriate relocation site exists and relocation is the preferred avoidance method. The biologist will be allowed sufficient time to move CRLF from the work site before activities begin. Only USFWS-approved biologists will participate in activities associated with capturing, handling, and monitoring CRLF. The biologists will follow safe-handling practices as outlined in the Declining Amphibians Population Task Force Code of Practice (HCP Appendix K). **Tidewater Goby AMM 38.** A USFWS-approved biologist will continue to conduct a pre-activity survey for tidewater goby in occupied tidewater goby habitat prior to commencing activities. If tidewater goby is observed in the work area or water is present in the work area and it cannot be determined if tidewater goby is present, the Environmental Scientist will continue to determine the appropriate measures taken to protect the tidewater goby population. These measures could include, but are not limited to, establishing fencing or otherwise demarcating a barrier between the work site and the tidewater goby population and/or relocation by a USFWS-approved biologist.
Pismo Creek Estuary Seasonal (Floating) Bridge (CA-41)	**SNPL AMM 114/CLTE AMM 101**. If, in the opinion of the Senior Environmental Scientist or monitors, visitor activities are significantly disrupting SNPL/CLTE foraging and/or roosting behavior, the bridge will be closed to public use until the birds have left the area. **Tidewater Goby AMM 45.** To allow movement of all fish species as well as an exchange of fresh and saltwater, the interlocking pieces of the bridge will be constructed to create wide openings under the bridge. Openings will be designed as wide as possible while maintaining structural integrity to ensure water flow even when the bridge sits on the bed of the estuary during low flows. **Tidewater Goby AMM 46.** If water levels are so low that the bridge is not allowing the free movement of fish in the estuary, the bridge will be removed until there is sufficient water to allow the bridge to float.

Table 2-6. New AMMs for Existing and New Covered Activities

Covered Activity	Avoidance and Minimization Measure
Oso Flaco Lake Boardwalk Replacement (CA-48)	**CLTE AMM 102.** As feasible, boardwalk construction activities will be scheduled when CLTE are unlikely to be present (generally mid-September to mid-April). **CLTE AMM 103**. If boardwalk replacement activities are scheduled when CLTE are known to be present, qualified biologists will monitor construction activities. If CLTE are not foraging nearby or biologists observing CLTE foraging activity determine that CLTE will not be disturbed by the activities, work may proceed as planned. However, if CLTE is present and has the potential to be disturbed, the biologist will continue to direct activities within 250 feet of the CLTE to stop until it leaves on its own accord. **CRLF AMM 14.** If CRLF are injured or killed during surveys, it will be reported to the USFWS as a part of the annual report (HCP section 5.7). **CRLF AMM 38.** Boardwalk replacement will be constructed during a period when egg masses are unlikely to occur in the project area. A USFWS-approved biologist will survey the work site 2 weeks before the onset of activities. If CRLF adults, tadpoles, or eggs are found, work will not commence until avoidance measures are in place. **CRLF AMM 39.** Any CRLF life-stages found in the project work area may be relocated upon determination by the USFWS-approved biologist that an appropriate relocation site exists and relocation is the preferred avoidance method. The approved biologist will continue to be allowed sufficient time to move CRLF from the work site before work activities begin. Only USFWS-approved biologists will participate in activities associated with the capture, handling, and monitoring of CRLF **CRLF AMM 40.** Before any project activities occur, a USFWS-approved biologist will conduct a training session for all construction personnel. At a minimum, the training will include a description of the CRLF and its habitat, the importance of the CRLF and its habitat, the general measures that are being implemented to conserve the CRLF as they relate to the project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided a qualified person is on hand to answer any questions. **CRLF AMM 41.** A USFWS-approved biologist will be present at the work site until the removal of all CRLF, instruction of workers, and habitat disturbance has been completed. After this time, the contractor or permittee will designate a person to monitor on-site compliance with all minimization measures. The USFWS-approved biologist will ensure that this individual receives training outlined in AMM 34 and in the identification of CRLF. The monitor and the USFWS-approved biologist have the authority to halt any action that might result in impacts that exceed the levels anticipated by the USFWS.
CDPR UAS Use for Park Activities (CA-52)	***Year-Round*** **SNPL AMM 123/CLTE AMM 112.** UAS will be flown with remote control and a built-in screen that shows battery life. The UAS will be equipped with software or other safeguard to ensure it will alert the operator when it reaches a minimum safe amount of battery life required for a return flight. **SNPL AMM 124/CLTE AMM 113.** UAS operators will attend a formal training and be certified as a Pilot in Command prior to conducting solo flights.

Table 2-6. New AMMs for Existing and New Covered Activities

Covered Activity	Avoidance and Minimization Measure
	SNPL AMM 125/CLTE AMM 114. UAS operators will have an established flight plan with a specific purpose determined following all Federal Aviation Administration (FAA) regulations. **SNPL AMM 126/CLTE AMM 115.** UAS will be kept in view of the operator at all times. **SNPL AMM 127/CLTE AMM 116.** UAS operators will not conduct flights in the HCP area without approval from the Senior Environmental Scientist. ***Breeding Season*** **SNPL AMM 128/CLTE AMM 117.** All flights within 328 feet of SNPL/CLTE nesting or brood-rearing habitat will require a USFWS-approved monitor to pilot or assist with flight logistics and monitoring, regardless if birds are confirmed in the area prior to flight. **SNPL AMM 129/CLTE AMM 118.** Prior to flying the UAS into or near (within 328 feet of) nesting or chick-rearing areas, the permittee will follow all existing monitoring guidelines that have been established with USFWS. **SNPL AMM 130/CLTE AMM 119.** UAS will not enter or fly within 328 feet of the SNPL/CLTE nesting areas if the wind speed is above 15 mph or strong enough to move sand (or will be before or after completion of set up and exit from the exclosure), the sand temperature is 83 ^{o}F, or if it is raining. **SNPL AMM 131/CLTE AMM 120.** UAS flights will be initiated at least 328 feet from the closest known SNPL/CLTE nest. The take-off and landing area will be clearly marked. If possible, take-off and landing areas will be out of direct sight from known nests. **SNPL AMM 132/CLTE AMM 121.** UAS will only be deployed when a qualified biologist is confident the activity will not jeopardize the safety of SNPL/CLTE individuals, nests, eggs, and young. **SNPL AMM 133/CLTE AMM 122.** Prior to every UAS flight, a qualified biologist will scan the area for SNPL/CLTE. If no birds are observed, the UAS flight can commence with monitoring, as appropriate. If a SNPL/CLTE is observed in the area, it must be monitored by a qualified biologist during the remainder of the flight. If significant disturbance to SNPL/CLTE is observed, the biologist may recommend increasing the altitude of the drone (but still remain below 400 feet to follow FAA guidelines) and/or guiding the drone to a safer area. **CLTE AMM 123**. When CLTE are present in the area of interest, the UAS will fly at the highest possible altitude to collect the necessary data. If any CLTE show an inclination to mob, the UAS will be directed upward (but still below the FAA ceiling of 400 feet) and quickly away from the incoming CLTE. Until a qualified biologist deems the UAS is not a threat to their colony the flight will be aborted. **SNPL AMM 134/CLTE AMM 124**. The UAS will be kept at least 100 feet above the ground at all times to reduce disturbance to nesting birds and below 400 feet to follow FAA guidelines. **SNPL AMM 135/CLTE AMM 125.** The flight plan will not include erratic flight patterns that could be interpreted as an avian predator by SNPL/CLTE.

Table 2-6. New AMMs for Existing and New Covered Activities	
Covered Activity	**Avoidance and Minimization Measure**
	Non-breeding Season **SNPL AMM 136.** UAS will only be deployed when a qualified biologist is confident that the activity will not jeopardize the safety of SNPL individuals. **SNPL AMM 137.** Prior to every UAS flight, a qualified biologist will scan the area for SNPL. If no birds are observed, the UAS flight can commence with monitoring, as appropriate. If an SNPL is observed in the area, it must be monitored by a qualified biologist during the remainder of the flight. If significant disturbance to SNPL is observed, the biologist may recommend increasing the altitude of the drone (but still remain below 400 feet to follow FAA guidelines) and/or guiding the drone to a safer area. **SNPL AMM 138.** Take-off and landing areas will be clearly marked in the field and should be out of sight from known individuals. **SNPL AMM 139.** If SNPL are present, the UAS will fly at least 100 feet above ground at all times to reduce disturbance to SNPL and will be kept at below 400 feet to follow FAA guidelines. **SNPL AMM 140.** The flight plan will not include erratic flight patterns that could be interpreted as an avian predator by SNPL.

2.4.3.3 Monitoring and Enforcement

There are three types of monitoring: (1) compliance monitoring, which tracks the permit holder's compliance with the requirements specified in the HCP and ITP; (2) effects monitoring, which tracks the impacts of the covered activities on the covered species; and (3) effectiveness monitoring, which tracks the progress of the conservation program in meeting the HCP's biological goals and objectives (includes species surveys, reproductive success, etc.). The monitoring program described in HCP section 5.4 provides data serving all three types of monitoring, as appropriate.

The provisions of the HCP are enforceable through the terms and conditions of the ITP issued by the USFWS (HCP section 6.7).

2.4.3.4 Adaptive Management

The HCP uses an adaptive management strategy to address the uncertainty in the conservation of a covered species. Adaptive management is an iterative decision-making process used to examine the effectiveness of the conservation program (e.g., AMMs and monitoring) for meeting the HCP's biological goals and objectives and, if necessary, adjusting management actions based on what is learned. CDPR would monitor the outcomes of management through the performance standards and success criteria and use the collected information and data to assess the effectiveness of the conservation program in meeting the HCP's biological goals and objectives. Management actions would be adjusted based on the relative success of the management actions in meeting the biological goals and objectives.

Based on ongoing adaptive management and monitoring of the covered species and scientific information currently available, CDPR expects that the management actions contained in the

HCP represent the best management practices at this time. The adaptive management strategy recognizes uncertainty in the responses of species to natural systems, and new different management techniques not identified in the HCP may become available that may be more effective in achieving the biological goals and objectives of the HCP. Use of adaptive management is proposed to provide management flexibility to best afford protection for the covered species. Adaptive Management is described in HCP section 5.6.

2.4.3.5 HCP Implementation

CDPR is the Permittee. The HCP would be implemented out of the Oceano Dunes District, with the District Superintendent having implementation responsibility supported by District and other CDPR staff. HCP implementation is described in detail in HCP chapter 6.

2.5 REQUIRED PERMITS AND APPROVALS

2.5.1 Oceano Dunes Habitat Conservation Plan

The following approvals are required for the proposed HCP:

- USFWS, Ventura Fish and Wildlife Office: Issuance of an ITP to California State Parks, Oceano Dunes District for four endangered or threatened wildlife species: CLTE, SNPL, CRLF, tidewater goby
- CDPR, Oceano Dunes District: Approval of the Oceano Dunes District HCP; certification of the EIR pursuant to CEQA

CDFW is not a permitting agency for the federal ITP supported by this HCP. It is anticipated, however, that CDFW will consult this HCP as part of its review of supporting documents in consideration of issuing an ITP pursuant to California Fish and Game Code section 2835 (NCCP) as described below in EIR section 2.5.2. CDPR may also seek coverage for take of state-listed plants via Fish and Game Code section 2081 (b).

2.5.2 Natural Community Conservation Plan

In a related but separate action, CDPR is preparing an application to CDFW for approval of a NCCP and issuance of an ITP for take of CLTE, which is a state-listed endangered species and a state fully protected species under California Fish and Game Code. The NCCP is in an early stage of development and will be subject to separate CEQA review.

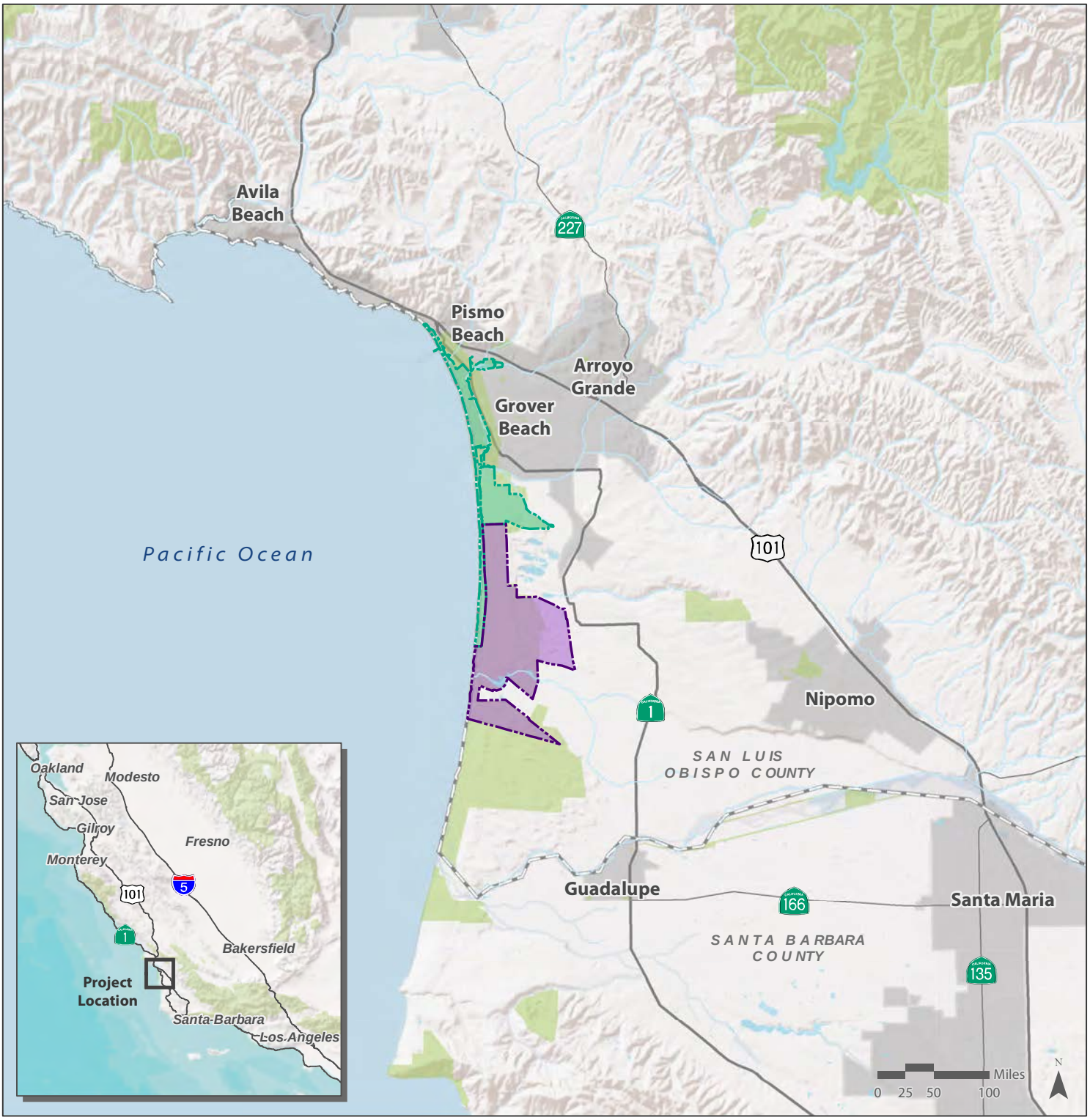
2.5.3 New Proposed and Future HCP Covered Activities

No subsequent approvals are required for the HCP proposed new covered activities of SNPL chick and egg capture for captive rearing (CA-12b), mechanical trash removal (CA-21), reduction of the Boneyard Exclosure and 6 Exclosure boundaries (CA-50), and CDPR's use of UAS (CA-52).

Potential future activities covered by the HCP may require subsequent review or approvals from the following agencies at the time the activities are proposed.

- CDPR: Environmental review and approval pursuant to CEQA
- USACE: Nationwide Permit or Individual Permit under the Clean Water Act, section 404

- RWQCB: Water Quality Certification under Clean Water Act section 401
- CDFW: Streambed Alteration Agreement under Fish and Game Code section 1600 *et seq.*
- CCC: CDP
- SLO County: CDP under the County Local Coastal Program (LCP)
- City of Pismo Beach: CDP under the Pismo Beach LCP
- City of Grover Beach: CDP under the Grover Beach LCP
- State Lands Commission: for projects that extend into state waters
- SLOAPCD: compliance review with Abatement Order and future PMRP



HCP Area

- Oceano Dunes SVRA
- Pismo State Beach

Base Map Features

- Public park land
- Urban area
- County boundary
- Waterbody
- Stream
- Highway
- Major road

February 2020
Source: CDPR, 2020; SLO Co Open GIS, 2017; MIG, 2020

Figure 2-1 Regional Location

CDPR, Oceano Dunes District Habitat Conservation Plan EIR

HCP Area Boundaries

- Oceano Dunes SVRA
- Pismo State Beach

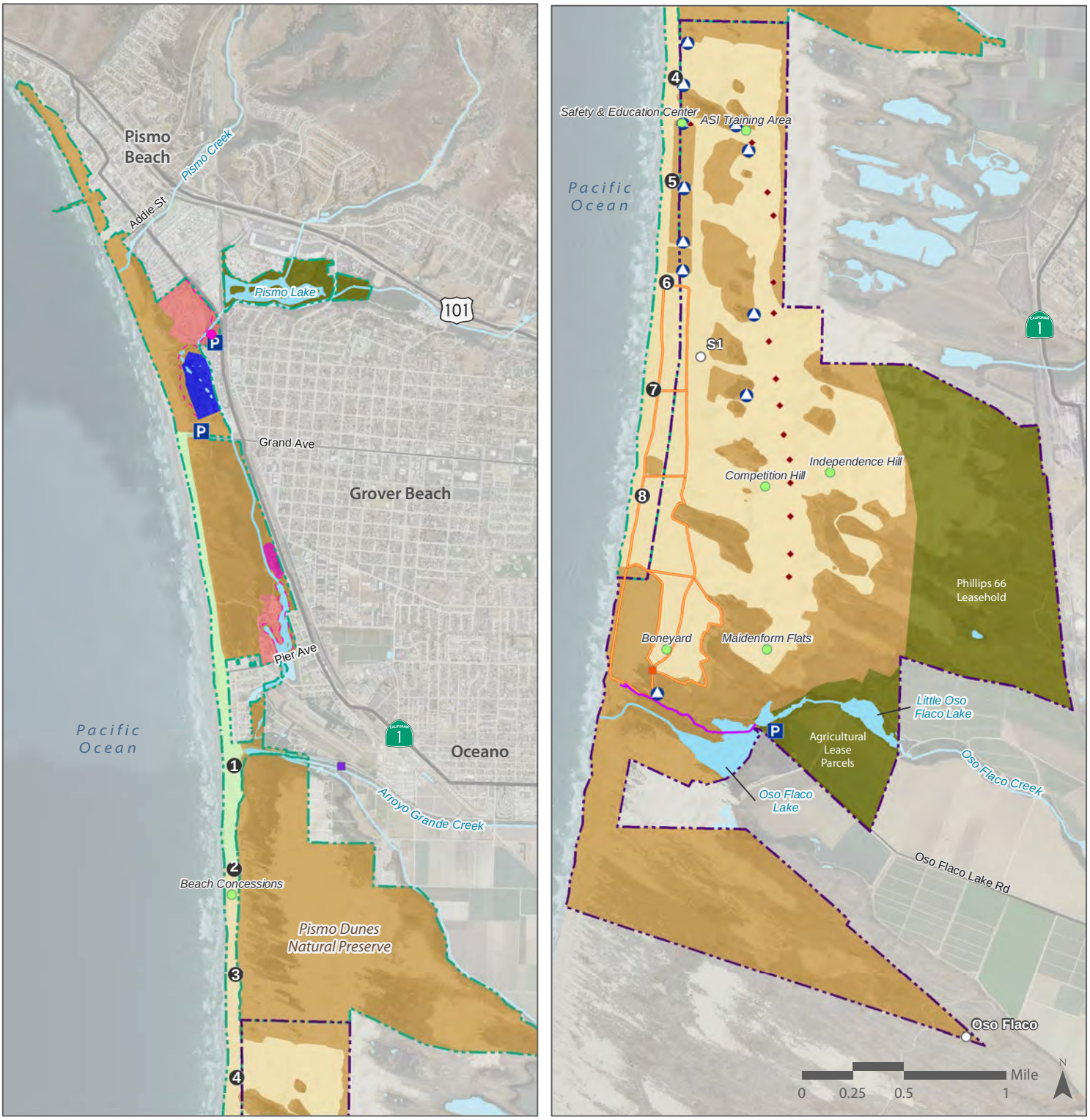
Base Map Features

- Marker post
- Waterbody
- Stream
- Highway
- Access road

February 2020
Source: CDPR, 2020; MIG, 2020

Figure 2-2 HCP Area Overview

CDPR, Oceano Dunes District Habitat Conservation Plan EIR



Land Use & Facilities

- Campground
- Golf course
- Ranger station
- Street legal vehicles only
- Open to riding and camping
- Closed to motorized vehicles
- Closed to all public use
- Trail
- Oso Flaco boardwalk

- Parking
- Restrooms
- Boneyard gate
- Guiton crossing
- Air quality monitor
- OHV landmark
- Monarch butterfly grove
- Sand Highway*

Base Map Features

- Oceano Dunes SVRA
- Pismo State Beach
- Seasonal exclosure
- Marker post
- Waterbody
- Stream
- Highway
- Access road

*Approximate location

February 2020
Source: CDPR, 2020; MIG, 2020

Figure 2-3 Land Use and Facilities

CDPR, Oceano Dunes District Habitat Conservation Plan EIR

Land Use & Facilities

- Campground
- Golf course
- Ranger station
- Street legal vehicles only
- Open to riding and camping
- Closed to motorized vehicles
- Closed to all public use
- Trail
- Unofficial trail*
- Wind fencing
- Parking
- Guiton crossing
- Monarch butterfly grove
- Pismo Lake spillway

Base Map Features

- Oceano Dunes SVRA
- Pismo State Beach
- Marker post
- Waterbody
- Stream
- Highway
- Access road

*Approximate location

February 2020
Source: CDPR, 2020; MIG, 2020

Figure 2-4 Land Use and Facilities Detail

CDPR, Oceano Dunes District Habitat Conservation Plan EIR

Photograph 1: Park entrance at Grand Avenue

Photograph 2: Park entrance at Pier Avenue

Photograph 3: Sand dune formation in open riding area

Photograph 4: Vegetated sand dunes in southern portion of open riding area








Photograph 5: Recreational uses at Pismo State Beach and Oceano Dunes SVRA

Figure 2-5 Photographs of Site

CDPR, Oceano Dunes District Habitat Conservation Plan EIR

Photograph 6: Safety and Education Center kiosk

Photograph 7: Shoreline west of 6 Exclosure looking south

Photograph 8: Seasonal exclosure fencing in southern portion of SVRA riding area near Oso Flaco Lake

Photograph 9: Seasonal exclosure signage

Photograph 10: Seasonal exclosure bumpout

Figure 2-5 Photographs of Site

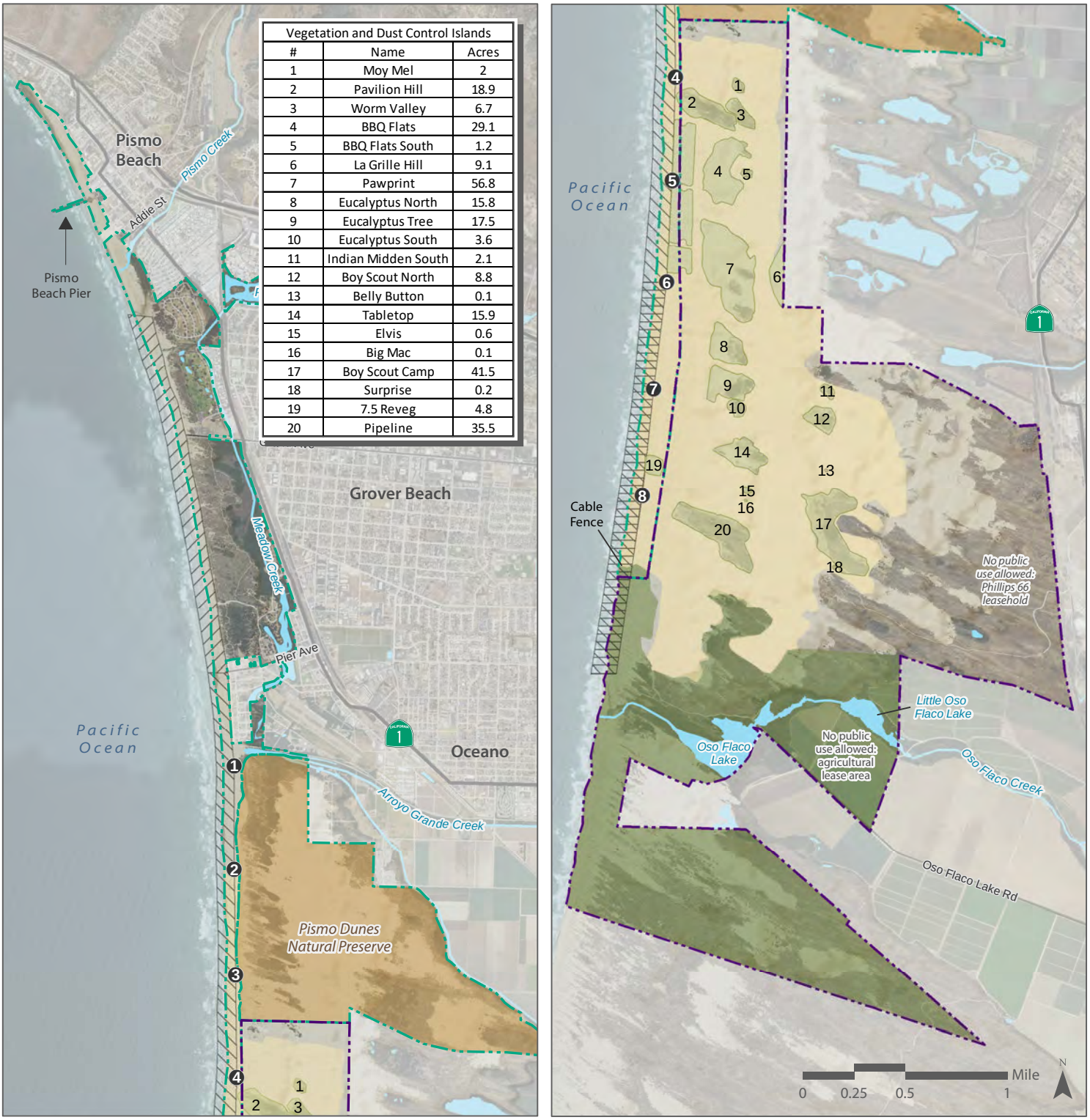
CDPR, Oceano Dunes District Habitat Conservation Plan EIR

Photograph 11: Dust control program wind fencing at Eucalyptus Tree

Photograph 12: Dust control program wind fencing at Tabletop

Photograph 13: Oso Flaco Lake Boardwalk

Photograph 14: Oso Flaco Boardwalk kiosk and dune access



Recreational Restrictions

- Dogs prohibited
- Dogs and horses prohibited
- Open to riding and camping
- Vegetation and dust control islands - closed to riding and camping

Kiteboarding landing/launching

- Wet/dry allowed
- Wet only
- Seasonal

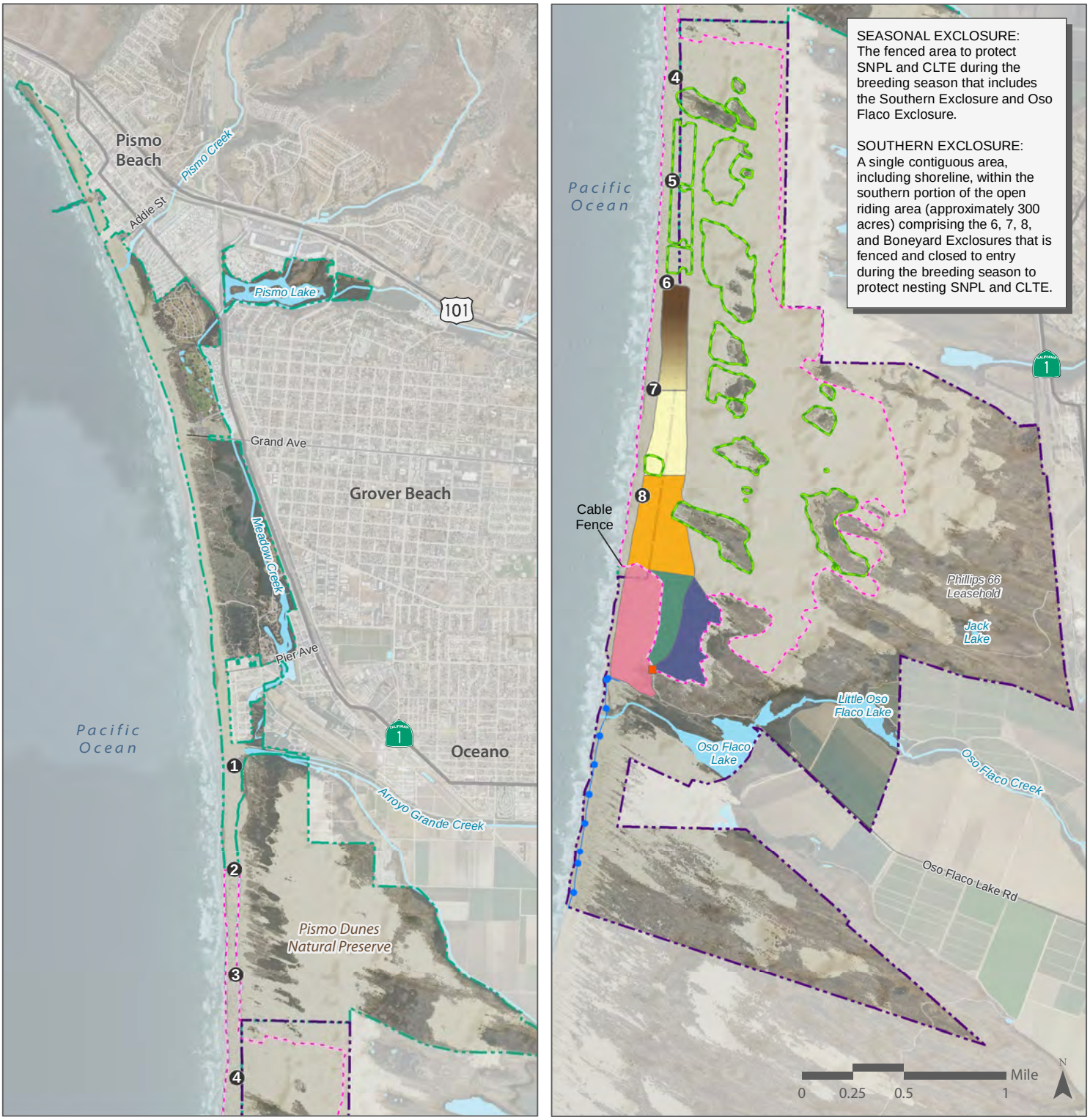
Base Map Features

- Oceano Dunes SVRA
- Pismo State Beach
- Marker post
- Waterbody
- Stream
- Highway
- Access road

February 2020
Source: CDPR, 2020; MIG, 2020

Figure 2-6 Recreational Restrictions

CDPR, Oceano Dunes District Habitat Conservation Plan EIR



Seasonal Exclosures

- 6 Exclosure
- 7 Exclosure
- 8 Exclosure
- East Boneyard
- West Boneyard
- North Oso Flaco

Fencing & Boundaries

- Vegetation island and dust control fencing
- Riding area boundary
- S. Oso Flaco symbolic fence
- Boneyard gate

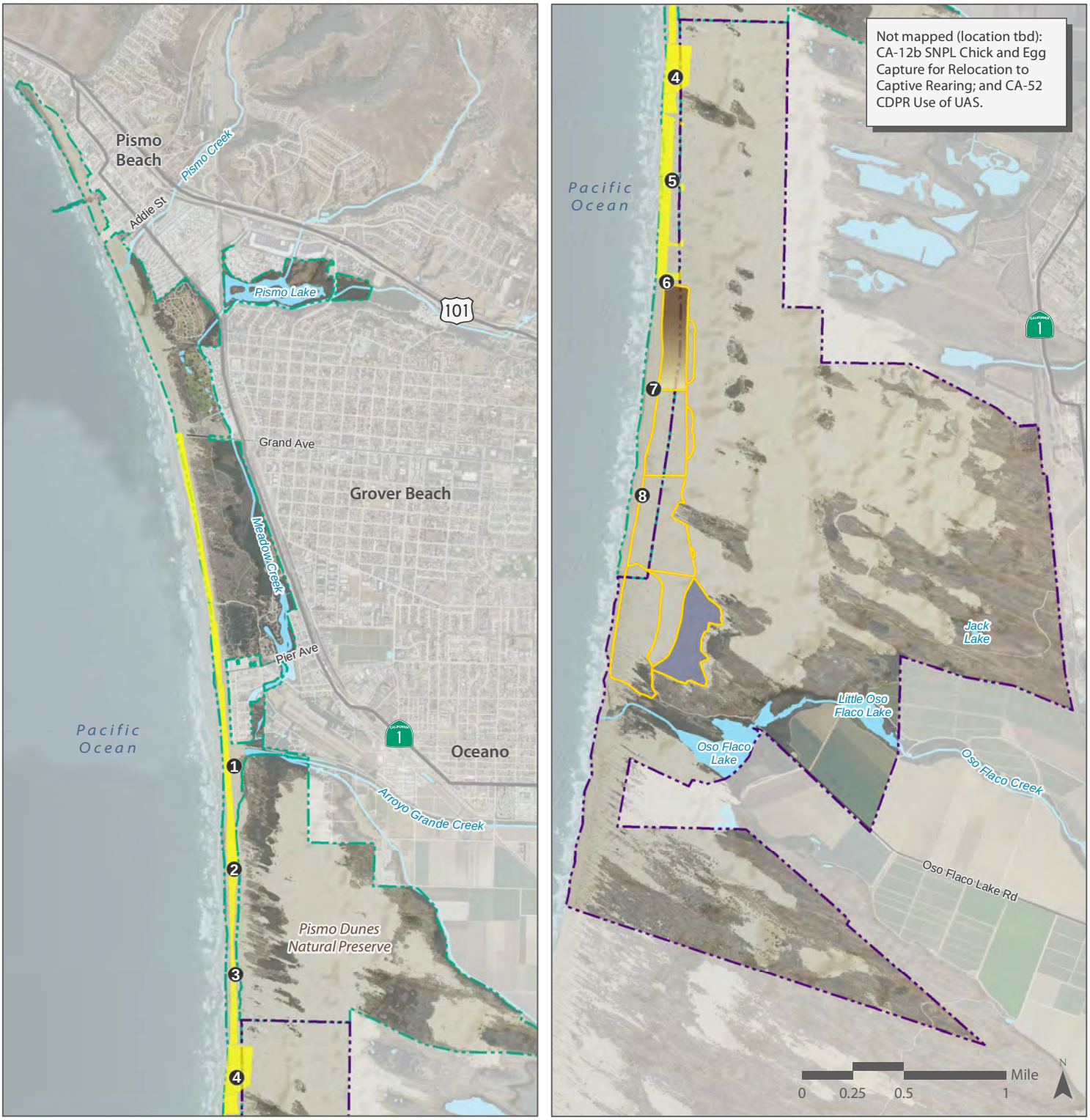
Base Map Features

- Oceano Dunes SVRA
- Pismo State Beach
- Marker post
- Waterbody
- Stream
- Highway
- Access road

February 2020
Source: CDPR, 2020; MIG, 2020

Figure 2-7 Western Snowy Plover and California Least Tern Management

CDPR, Oceano Dunes District Habitat Conservation Plan EIR



Proposed New Covered Activities

- CA-21 Mechanical trash removal*
- CA-50 6 Exclosure reduction*
- CA-50 Boneyard Exclosure reduction*

*Approximate location

Base Map Features

- Oceano Dunes SVRA
- Pismo State Beach
- Seasonal exclosure
- Marker post
- Waterbody
- Stream
- Highway
- Access road

February 2020
Source: CDPR, 2020; MIG, 2020

Figure 2-8 Proposed New Covered Activity

CDPR, Oceano Dunes District Habitat Conservation Plan EIR

Chapter 3 IMPACT ANALYSIS METHODOLOGY

3.1 ANALYTICAL METHODOLOGY

In evaluating the proposed HCP's potential impacts, CDPR employed the following analytical methodology:

Step 1: Incorporation of Avoidance and Minimization Measures (AMMs). The EIR incorporates AMMs identified in the proposed HCP as project components that are designed to minimize impacts to the existing environmental setting. The application of AMMs is presumed and therefore they are not considered mitigation measures but rather resource protection measures that are part of the proposed HCP. Thus, the application of these measures 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 actions covered by the HCP 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 HCP's components and activities.

Step 3: Identification of Existing Physical Conditions. The EIR identifies the existing physical environmental conditions that exist in the proposed HCP area that could change as a result of the HCP activities and components. The environmental setting generally reflects the physical environmental conditions of the HCP area as they currently exist. Existing park operations are part of the environmental setting, including visitor use, visitor services, park operations and maintenance, and natural resource management. Any environmental impacts that may be associated with current park operations are part of the environmental setting. This setting constitutes the baseline physical conditions by which CDPR is determining whether the physical change that occurs to the environment as a result of the proposed HCP 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 HCP and its alternatives.

Step 4: Identification of EIR Scope and Treatment of Future Activity. The EIR impact analysis is limited in scope to the environmental assessment of activities proposed by the HCP (Table 2-4.) that would result in a physical change to the environment. Existing park operations are part of the existing physical setting of the HCP project site and are baseline conditions for evaluating the proposed HCP project and do not need to be authorized. Therefore, existing park operations are not evaluated for impacts as new activities. The HCP identifies both immediate and potential future actions that would modify park operations and cause a physical change to the environment. The impacts associated with future activities are assessed in the cumulative impacts to the degree that detail is known. HCP approval and issuance of a federal permit for biological impacts does not constitute approval or commitment by subsequent permitting agencies to approve future activities. The purpose of the EIR is to address the environmental effects of approving the HCP, which supports a federal permit for incidental take of federal protected species. Therefore, the scope of the EIR is limited in its assessment of future activities

and does not include a project-level assessment of future activities proposed by the HCP. Because they are well defined and may be implemented upon ITP issuance, the EIR does fully address all potential impacts of the new HCP proposed activities identified in Table 2-4. These activities include mechanical trash removal (CA-21), reduction of 6 Exclosure and Boneyard Exclosure boundaries (CA-50), and CDPR's use of drones (UAS) for data collection (CA-52).

The EIR is limited in scope to activities proposed by the HCP. The purpose of the HCP is to protect, conserve, and restore the natural resources at Pismo State Beach and Oceano Dunes SVRA while allowing CDPR to continue to operate the park units for public use and enjoyment (HCP section 1.1.1). As described in EIR section 1.3, it is not the role or intent of the HCP to review or modify the parameters of existing park operations.

Step 5: Collection and Use of Scientific Data. The EIR analysis is based on the best available science and field survey data. CDPR has annually collected data on park resources and performed individual specialized studies, assisted by qualified professionals both in the public and private sector. CDPR has engaged with resource agencies (e.g., USFWS, CDFW, CCC, and SLOAPCD) and utilized a scientific advisory group comprised of agency representatives and environmental scientists during the course of the HCP preparation. The data has been used for the environmental review contained in this EIR.

Step 6: Analysis of Project Impacts. The EIR evaluates the significance of the HCP's potential impacts, (the change to the physical environmental conditions that could result from implementation of the HCP) 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 HCP. This examination is based on the incremental change to the existing physical conditions that would result from the implementation of the proposed HCP and considers the public comments submitted by agencies and interested individuals during the 30-day public review period for the 2018 NOP. The EIR's impact analyses consider the direct and indirect impacts of the proposed HCP, as well as the short-term and long-term impacts of the HCP, and enable CDPR to determine if the proposed HCP 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 7: Inclusion of Mitigation Measures. The EIR describes the feasible mitigation measures proposed to avoid or minimize the HCP's significant impacts. Project mitigation measures are in addition to the standard and specific resource protection measures incorporated into the HCP, and generally require CDPR 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 HCP impact.

3.2 PROJECT IMPACTS FOUND NOT TO BE SIGNIFICANT

CDPR has determined, using the Environmental Checklist Form contained in CEQA Guidelines Appendix G as a guide, that implementation of the proposed Oceano Dunes District HCP would clearly result in no impact or a less-than-significant impact to the following resources due to absence of the resource or the nature of the project as proposed; impacts to these resources were therefore dismissed from further detailed analysis. A discussion of these resource impacts is presented in Chapter 10.

- Aesthetics
- Agricultural and Forest Resources
- Geology and Soils
- Greenhouse Gas Emissions and Energy
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Transportation
- Utilities and Service Systems
- Wildfire

In addition, where applicable, Chapters 4–8 identify impacts that would not occur or would be clearly less than significant and dismissed from further evaluation. These impacts are identified under the "Thresholds of Significance" subheading of each impact analysis chapter.

3.3 CUMULATIVE IMPACTS

3.3.1 Introduction

CEQA Guidelines section 15130 requires that an EIR evaluate a project's cumulative impacts to determine if the project's incremental effect is cumulatively considerable. As defined in section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (14 CCR § 15355).

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 (14 CCR § 15130(b)). 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)). An EIR should not discuss impacts that do not result in part from the project evaluated in the EIR (14 CCR § 15130(a)(1)). 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)). The discussion should be guided by the standards of practicality and reasonableness and should focus on the cumulative impact to which the identified other projects

contribute rather than the attributes of other projects that do not contribute to the cumulative impact (14 CCR § 15130(b)).

3.3.2 Geographic Scope

The geographic area that could be affected by the Oceano Dunes HCP and its proposed new activities varies depending upon the environmental resource being evaluated. The geographic scope of each resource is identified in the environmental and regulatory setting of each EIR chapter. Some resources, such as air quality, land use planning, and recreation, have a regional geographic scope. Other resources, such as cultural resources, have a localized geographic scope. Biological resources have both site-specific and regional geographic scopes, dependent upon the individual resource being evaluated.

3.3.3 Cumulative Project List

CEQA Guidelines (§ 15130(b)(1)(A)) allow for the use of a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency for the cumulative impact analysis. The cumulative analysis includes projects that would result in similar impacts as the proposed HCP due to their potential to contribute collectively to significant cumulative impacts. 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 San Luis Obispo County, the City of Pismo Beach, the City of Grover Beach, and the Oceano Community Services District. The projects considered for the cumulative impact analysis are identified in Table 3-1. The future HCP projects with specific known locations are shown in Figure 3-1 Potential Future HCP Covered Activities. Potential CDPR projects being considered for inclusion in the PWP are shown Figure 3-2 CDPR Public Works Plan Projects.

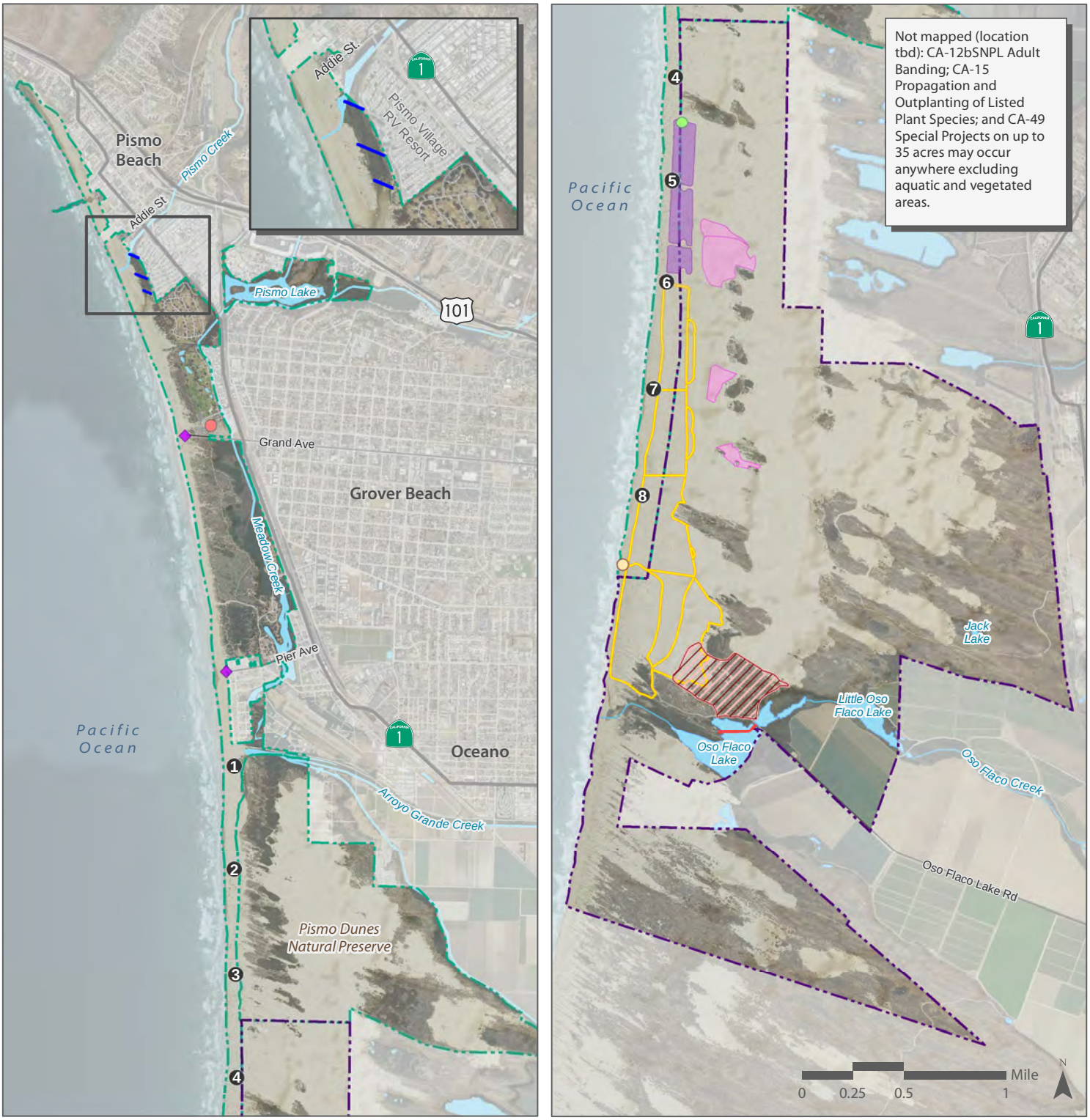
As described in HCP section 2.2.7, CDPR is currently preparing a PWP. The PWP is a long-range land use management plan for compliance with the California Coastal Act that is reviewed and certified by the CCC. The PWP will include site-specific proposed park improvement projects, including those listed in Table 3-1. CDPR has held multiple public input meetings and is further refining project concepts and preparing an EIR. The PWP projects are reasonably foreseeable future projects and included in the HCP EIR cumulative impact analysis. Because the PWP is in its planning phase, the PWP projects are not yet fully defined and are subject to revision. An “X” in Table 3-1. denotes which impacts from these projects could combine with the proposed HCP to create a cumulative impact. These cumulative impacts are addressed in the individual environmental resource chapters. Project impacts found to be absent as identified in EIR section 10.3 have no potential for cumulative impacts and are not considered in the cumulative analysis.

Table 3-1. List of Future Projects and their Potential for Cumulative Impacts with HCP Proposed New Activities

Project Type	Location	Project Impact					Status
		Land Use	Air Quality	Biology	Cultural / Tribal	Recreation	
Oceano Dunes District HCP Covered Activities – Potential Future Projects							
CA-12b SNPL Adult Banding	Oceano Dunes SVRA			X			Potential Future
CA-15 Listed Plant Management – Propagation and Outplanting	Pismo State Beach and Oceano Dunes SVRA			X			Potential Future
CA-28 Cable Fence Maintenance - Replacement	Oceano Dunes SVRA			X			Potential Future
CA-38 Grover Beach Lodge and Conference Center (150-unit lodge and conference center)	Pismo State Beach. West end of Grand Ave. in Grover Beach	X	X	X		X	Approved in 2012 but not built
CA-41 Pismo Creek Estuary Seasonal (Floating) Bridge	Pismo State Beach. Near Pismo Coast Village RV Park in Pismo Beach			X		X	Potential Future
CA-42 Riding in 40 Acres (OHV trail)	Oceano Dunes SVRA. East of Boneyard near Oso Flaco Lake		X	X	X	X	Tentative. CDPR exploring options
CA-43 Replacement of the Safety and Education Center	Oceano Dunes SVRA. Near Post 4			X	X	X	Potential Future
CA-44 Dust Control Activities – New PMRP	Oceano Dunes SVRA.	X	X	X	X	X	Active Planning. Draft Plan released June 2019. CEQA review in 2020.
CA-48 Oso Flaco Lake Boardwalk Replacement	Oceano Dunes SVRA. Oso Flaco Lake			X	X	X	Potential Future
CA-49 Special Projects	Pismo State Beach or Oceano Dunes SVRA		X	X	X	X	Potential Future
CDPR Public Works Plan Projects							
Project A: Oso Flaco Campground and Day Use Project	Oceano Dunes SVRA. Near Oso Flaco Lake	X	X	X	X	X	Potential Future

Table 3-1. List of Future Projects and their Potential for Cumulative Impacts with HCP Proposed New Activities

Project Type	Location	Project Impact					Status
		Land Use	Air Quality	Biology	Cultural / Tribal	Recreation	
Project B: Park Corporation Yard Improvement Project	Pismo State Beach Corporation Yard. Highway 1 near Grover Beach	X	X	X	X		Potential Future
Project D: Oceano Campground Infrastructure Improvement Project	Pismo State Beach. Pier Avenue near Grover Beach	X	X	X	X	X	Potential Future
Project E: Grand Avenue and Pier Avenue Kiosks, Pier Avenue Lifeguard Tower	Pismo State Beach. Pier and Grand avenues near Grover Beach	X	X	X		X	Potential Future
Project F: North Beach Campground Facility Improvements	Pismo State Beach. In Pismo Beach	X	X	X	X	X	Potential Future
Project G: Butterfly Grove Public Access	Pismo State Beach. In Pismo Beach	X		X	X	X	Potential Future
Project H: Pismo State Beach Boardwalk	Pismo State Beach. Between Grand Ave. and Pier Ave. near Grover Beach	X	X	X	X	X	Potential Future
U.S. Fish and Wildlife Service							
Guadalupe-Nipomo Dunes National Wildlife Refuge Final Comprehensive Conservation Plan	Guadalupe-Nipomo Dunes National Wildlife Refuge south of Oso Flaco Lake Natural Area			X		X	Approved in 2016
Local Agencies							
Arroyo Grande Creek Channel Waterway Management Plan (sediment and vegetation removal)	Arroyo Grande Creek			X			Approved in 2010



Potential Future Covered Activities

- CA-28 Cable fence replacement
- CA-38 Grover Beach Lodge
- CA-41 Pismo Creek Estuary bridge options
- CA-42 Riding in 40 Acres
- CA-43 Safety & Education Center replacement
- CA-44 PMRP, Track-out device
- CA-44 PMRP, Foredune to be planted
- CA-44 PMRP, Wind fencing converting to vegetation
- CA-48 Oso Flaco Lake boardwalk replacement

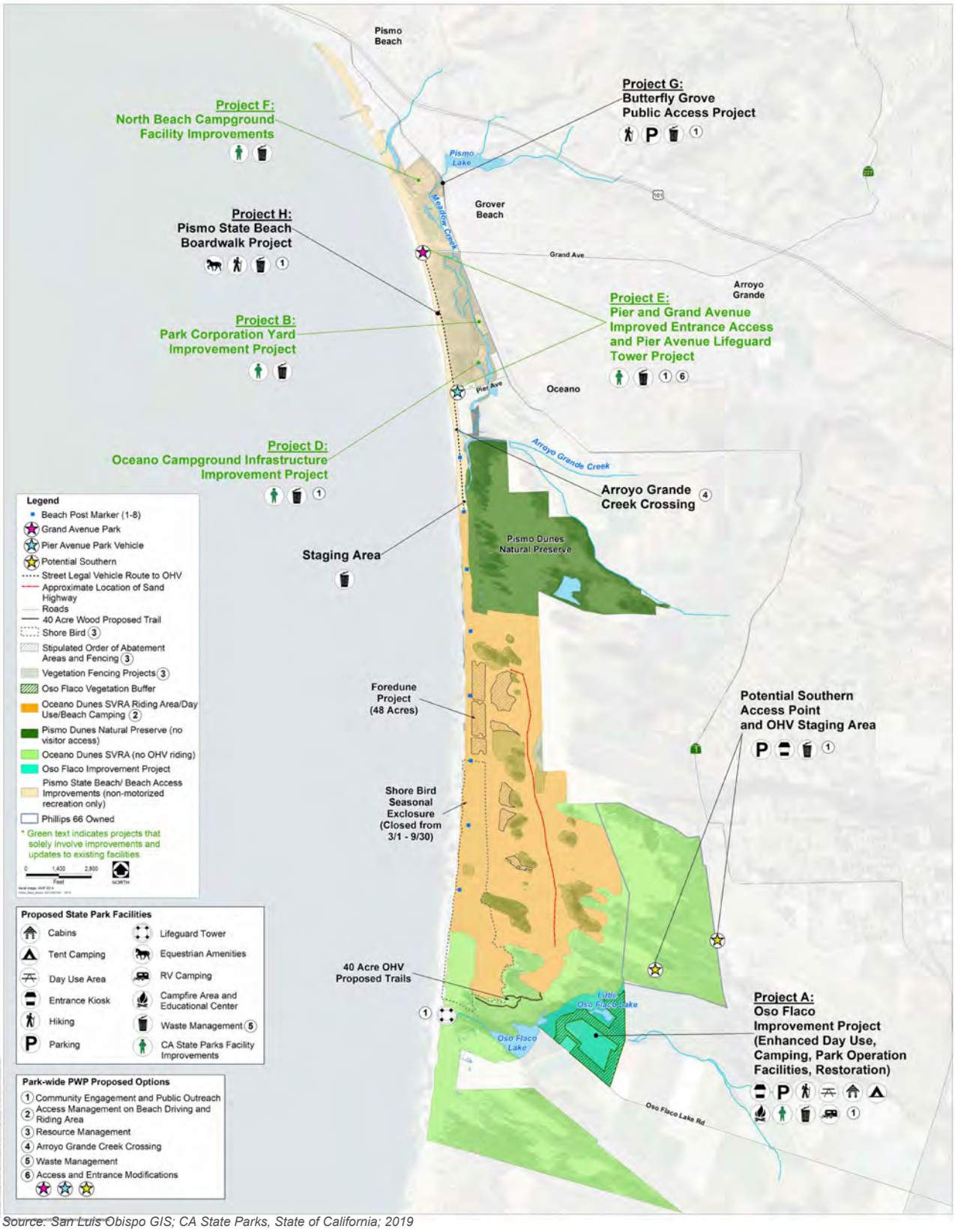
Base Map Features

- Oceano Dunes SVRA
- Pismo State Beach
- Seasonal exclosure
- Marker post
- Waterbody
- Stream
- Highway
- Access road

February 2020
Source: CDPR, 2020; MIG, 2020

Figure 3-1 Potential Future Covered Activity

CDPR, Oceano Dunes District Habitat Conservation Plan EIR



Source: San Luis Obispo GIS; CA State Parks, State of California; 2019

Figure 3-2 Cumulative Projects from PWP Scoping Meetings

CDPR, Oceano Dunes District Habitat Conservation Plan EIR

Chapter 4 LAND USE PLANS AND POLICIES

4.1 REGULATORY SETTING

The proposed HCP's new activities would be conducted on state-owned and state-operated land that, with the exception of coastal development permitting typically conducted through local agencies, is not subject to local land use restrictions and zoning regulations. None of the four HCP proposed new activities (SNPL chick and egg capture for captive rearing [CA-12b]; mechanical trash removal [CA-21]; seasonal exclosure reductions [CA-50]; or CDPR's use of UAS [CA-52]) require a new CDP. Thus, this chapter does not incorporate San Luis Obispo plans and policies that may apply to contemplated future projects proposed for ITP coverage, as those activities would be reviewed for CEQA and permitting purposes when they are proposed by CDPR (see section 2.4.2.3 and Chapter 3).

4.1.1 California State Parks – Pismo State Beach and Pismo Dunes SVRA General Development Plan and Resource Management Plan

The Pismo State Beach and Pismo Dunes SVRA General Development Plan and Resource Management Plan was approved in April 1975 (CDPR, 1975). The purpose of the plan was to address the then-overcrowded conditions at the park units and provide a guidance document to direct growth and management of park resources into the future. The General Development Plan and Resource Management Plan makes recommendations regarding controlled vehicle access, reduction in vehicle traffic on the beach, and continuity in its administration of recreational lands and expansion of park lands through acquisition of private and public lands.

The General Development Plan has been amended twice. In 1982 it was amended to allow for the Grover Beach Lodge at Grand Avenue (CDPR, 1982a). It was amended again in 1994 (CDPR, 1994) to reflect the results of the Pismo Dunes SVRA Access Corridor Project, which concluded that the Grand and Pier Avenue entrances were the Environmentally Preferred alternative, together with the staging area that remains in use today (CDPR, 2004). Pismo Dunes SVRA is now called Oceano Dunes SVRA.

Pismo State Beach and Oceano Dunes SVRA fall under three different park classifications: State Beach (PRC § 5019.56(c)), Natural Preserve (PRC § 5019.17), and SVRA (PRC § 5090.43). The PRC describes these classifications and prescribes management and operations guidelines specific to each classification (HCP section 1.5.8).

Pismo State Beach. Pismo State Beach was established in 1934 and expanded through acquisitions. It presently comprises 1,515 acres. This beach extends southward from the City of Pismo Beach for approximately 7.5 miles. The park unit encompasses beach, creeks and lagoons, natural dunes, campgrounds, and a golf course (Figure 2-4). The Resource Management Plan sets forth the following declarations for Pismo State Beach:

> **Declaration of Purpose:** The purpose of Pismo State Beach is to make available to the people an outstanding coastal area of beach and sand dunes located in and southward from the City of Pismo Beach in San Luis Obispo County. Specific recreational activities to be perpetuated and provided for include the aesthetic enjoyment of dunes and shore; beach vehicular travel, when consistent with the perpetuation of the natural values; camping, both

> in established inland facilities and on the beach in appropriate zones; fishing and clamming under appropriate applicable regulations; and walking or riding horseback in the sand dune areas.
>
> **Declaration of Management Policy:** Pismo State Beach will be managed by CDPR to perpetuate and enhance the recreational opportunities afforded by this 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 the various activities and uses in such a way that the resources of the area are protected and perpetuated to ensure their continuous availability to the people. All activities within Pismo State Beach shall be carried out under the guidelines established by the Resource Management Directives of CDPR.

Pismo Dunes Natural Preserve (Dunes Preserve). The Pismo Dunes Natural Preserve is managed under the Pismo State Beach park unit. The preserve was established in 1974 and comprises 695 acres of vegetated and bare sand dunes. The Resource Management Plan sets the following declarations for the Pismo Dunes Natural Preserve:

> **Declaration of Purpose:** Pismo Dunes Natural Preserve is established to perpetuate in essentially natural condition a substantial tract of sand dunes in an area where they attain outstanding development and where they may easily be visited and enjoyed by interested persons. Full protection is also afforded to all archaeological sites located within the unit and to all natural vegetation and wildlife occurring within it.
>
> **Declaration of Management Policy:** CDPR will manage the [Dunes Preserve] in accordance with the Public Resources Code 5001.5(f) and with the CDPR Resource Management Directives. It will be kept free not only of roads, structures, and other facilities, but also of dune stabilization projects of all kinds. Motorized vehicles of any type, except in cases of extreme emergency, are prohibited.

Oceano Dunes SVRA. SVRAs consist of lands selected, developed, and operated to provide OHV recreation opportunities. Areas must be developed, managed, and operated for the purpose of providing the fullest appropriate public use of the vehicular recreational opportunities present, in accordance with the Off-Highway Motor Vehicle Recreation Act of 2003 (PRC § 5090.01 *et seq.*), while providing for the conservation of cultural resources and the conservation and improvement of natural resource values over time. Oceano Dunes SVRA is 3,490 acres and is contiguous with Pismo State Beach. As a result, the vehicle operations at Pismo State Beach and Oceano Dunes SVRA are managed as an SVRA. Between the two park units, approximately 1,305 acres are set aside for OHV use in what is called the “open riding area,” the majority of which is within Oceano Dunes SVRA. Within the SVRA, well over 2,100 acres outside of the open riding area are maintained in a largely natural state and 202 acres are leased as agricultural land.

The General Development Plan provides the following Declarations of Purpose and Management Policy for Oceano Dunes SVRA:

> **Declaration of Purpose:** [Oceano] Dunes SVRA is to make available to the people opportunities for recreational use of OHVs in a large area of unstabilized sand dunes exceptionally adapted to this recreational activity; to regulate such uses in the interest of visitor safety and environmental protection; and to provide appropriate related facilities to serve the users of the area. At the same time, the area is established to afford protection to surrounding stabilized sand dunes that embrace some areas of great ecological interest and significance, including freshwater lakes. These areas are important not only in their own right, but also as key elements in the environment within which the vehicular activities will take place and in the quality of the visitor experience arising from those activities. This protection is to be afforded by exclusion of vehicular activities, by establishment of natural preserves in appropriate locations, and by other measures as required.
>
> **Declaration of Management Policy:** CDPR will manage … [Oceano] Dunes SVRA in ways that perpetuate and enhance the uses and values enumerated in the declaration of purpose, that reduce or eliminate conflicts between patterns of use arising from the kinds of resources present in the area, and that forward mutual understanding between the diverse groups of visitors and interested persons who use this area for various recreational and scientific pursuits. Operating and management procedures will provide for the protection and perpetuation of the several islands of vegetation existing within the designated vehicular use areas. All departmental activities at… [Oceano] Dunes SVRA will be carried out within the guidelines established by the Resource Management Directives of CDPR.

4.1.2 California State Parks – Department Operations Manual

The Department Operations Manual (CDPR, 2005a) states the following department policy regarding management and protection of special-status species and beach grooming relevant to SNPL chick and egg capture for captive rearing (CA-12b), exclosure reductions (CA-50), and mechanical trash removal (CA-21). The DOM does not state policy specific to drone use (CA-52).

0310.5.1 Protection of Rare, Threatened and Endangered Plants and Their Habitats Policy. It is the policy of the Department to protect rare plants and their habitats in fulfillment of its mission to help preserve the State's extraordinary biological diversity, and in accordance with the California Endangered Species Act and the California Native Plant Protection Act. These taxa and habitats will be protected in the context of the native environmental complexes in which they evolved, when feasible.

0310.5.3 Park Projects and Plant Species of Concern Policy. Prior to conducting projects such as facility development or exotic plant eradication, the Department will determine whether any plant species of concern are in the proposed project area. If plant species of concern are found, the Department will attempt to modify the project to avoid impacts to populations of these plants.

Permits, such as an Incidental Take Permit from the California Department of Fish and Game (CDFG) (California Fish and Game Code § 2081), are required if the proposed project cannot be relocated or re-designed to avoid impacts to plants listed as Threatened or Endangered under the California Endangered Species Act. Project proponents will contact the CDFG to obtain necessary permits.

If a project is proposed for an area containing plants listed under the Federal Endangered Species Act and the proposed project is on Federal property, Federal funds are being used, or a Federal permit (such as a Clean Water Act 404 Permit) is required, a Section 7 Consultation with the U.S. Fish and Wildlife Service (USFWS) or an Incidental Take Permit from the USFWS may be required. When there is such a Federal nexus, the USFWS should be consulted for guidance in fulfilling requirements of the Federal Endangered Species Act (see DOM Section 0315.3.1).

0311.4.2 Beach Grooming. Sandy coastal beaches are prime recreational assets of the State Park System but are also important ecosystems with characteristic physical and biological processes and inhabitants. Beach wrack consists of rafts of offshore kelp that are carried in by the wind and tides and deposited on the beach, providing food and shelter for the organisms that reside in and on it.

Beach grooming, or the routine mechanical removal of trash and other debris, is carried out on some coastal beaches for public safety and/or aesthetic reasons, especially on beaches that are heavily used for recreation. Beach grooming does not refer to annual beach clean-up events or one-time efforts following large storms. Evidence suggests that grooming using mechanical rakes in some instances alters natural beach processes by reducing the establishment of native beach plants, widening the portion of beach exposed to wind transport of sand and potentially exacerbating sand loss.

0311.4.2.1 Beach Grooming Policy. Where needed, coastal districts will develop beach grooming strategies that are appropriate for the primary purpose for which the unit was established, the classification of the unit, the amount of public use the beach receives, and in consideration of potential impacts to natural resource values and processes. The districts should limit the amount or type of grooming used to that necessary for public health and safety, while allowing natural physical and biological uses of beach wrack to continue.

0311.5.2.1 Special Animal Policy. It is the policy of the Department to protect species listed under the federal or state endangered species acts that are native to State Park System units. The Department will conserve listed species and avoid detrimental effects by:

a. Participating in the recovery planning process;

b. Working with other agencies to help ensure that any formal delineation of critical habitat, essential habitat, and/or recovery areas on State Park System lands is compatible with State Park System management goals; and

c. Cooperating with responsible state and federal agencies to support the protection and recovery of listed species by maintaining the species and the habitats upon which they depend and reducing negative impacts when feasible.

0311.5.2.3 Park Projects and Animals of Special Concern. Prior to conducting projects such as facility development, habitat restoration, or exotic plant eradication, the Department will determine whether any animal species of concern are found in the proposed project area. The Department will attempt to modify the project to avoid impacts to populations of sensitive

animals found in or near to the proposed project area. Permits, such as an Incidental Take Permit from the CDFG (Fish and Game Code § 2081), are required if the proposed project cannot be relocated or re-designed to avoid impacts to animals listed as threatened or endangered under the California Endangered Species Act. Departmental project proponents will consult with the CDFG to obtain any necessary permits.

If a proposed project may cause harm to animals listed under the Federal Endangered Species Act, an Incidental Take Permit from the USFWS or NOAA Fisheries may be required if the project is on Federal property, Federal funds are being used, or a Federal Permit (such as a Clean Water Act 404 Permit) is required. When there is such a federal nexus, the USFWS or NOAA Fisheries should be consulted for guidance in fulfilling requirements of the Federal Endangered Species Act.

4.1.3 California Coastal Act

The California Coastal Act (PRC § 30000 *et seq.*) identifies the Coastal Zone as a valuable natural resource that should be protected from deterioration and destruction to promote public safety, health, welfare, and to protect public and private property, wildlife, marine fisheries, 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 5 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 an LCP, the CCC'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, and it continues to enforce and consider amendments or extensions of CDPs that it issued prior to LCP certification.

4.1.3.1 Definitions

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

- **"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…; 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…. 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).
- **"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 (SHPO); 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).

4.1.3.2 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. Table 4-1. below summarizes the standards that apply to the proposed HCP new activities (i.e., SNPL chick and egg capture for captive rearing if in harm's way [CA-12b]; mechanical trash

removal [CA-21]; reduction of the Boneyard Exclosure and 6 Exclosure [CA-50]; and CDPR's use of UAS [CA-52]). Although CDPR does not seek a new or amended CDP, the HCP's consistency with these requirements is assessed below in EIR section 4.3.4 for informational purposes. It does not include Coastal Act standards that clearly do not apply to the proposed HCP new activities, such as standards related to land conversion, water-related activity, or new development.

Table 4-1. Coastal Act Planning and Management Policies Relevant to Oceano Dunes HCP

PRC Section	Title and Summary of Requirement
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.
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.
30214	**Implementation of public access policies:** Public access policies shall take into account topographic and geologic site characteristics.
30223	**Upland areas:** Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.
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.
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.
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.
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.
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.

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

Oceano Dunes SVRA operates under a CDP issued by the CCC in 1982 for installation of entrance kiosks at Grand and Pier avenues and fencing to protect wetlands and vegetated dunes. The CDP has been amended multiple times as shown in Table 4-2. The permit is 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. The Oceano Dunes HCP does not propose any activities requiring an amendment to its existing CDP 4-82-300 conditions, as amended.

Table 4-2. Coastal Development Permit 4-82-300 and Amendments

Date	Permit	Purpose
June 7, 1982	4-82-300	Fencing around SVRA riding area perimeter and park entrance kiosks
August 26, 1982	4-82-300 A1	Delay effective date of implementing the 500-campsite daily limit, move location of the interim staging area, provide more specific fencing requirements
June 21, 1983	4-82-300 A2	Permit alteration of protective fence and barrier alignments within Pismo [Oceano] Dunes SVRA
August 24, 1984	4-82-300 A3	Adjust the fence line to allow for OHV use in historically unvegetated open sand areas, as well as areas that were unlikely to become revegetated after damage from past vehicular use
September 10, 1991	4-82-300 A4	Modify Special Condition 1(c) by prohibiting equestrian use in the Oso Flaco Lake area
May 7, 2001	4-82-300 A5	Amend conditions concerning appropriate limits on day use at Oceano Dunes SVRA, to establish day and overnight use limits and a Technical Review Team

4.1.4 Oceano County Airport Land Use Plan

Oceano County Airport is located in unincorporated SLO County west of State Route 1, south of Pier Avenue, and just north of the Pismo Dunes Natural Preserve (see Figure 2-2). This civil, general aviation airport averages approximately 27 aircraft per day (AirNav, 2018). The airport land use plan establishes land use planning areas, which dictate allowable land uses for areas surrounding the airport (airport overlay zone). The Oceano County Airport Land Use Plan (ALUP) covers the central portion of the HCP area, extending approximately 4,500 feet around the runway.

The SLO County Airport Land Use Commission (ALUC) provides for the orderly development of areas surrounding public use airports. In carrying out this duty, the ALUC prepares Airport Land Use Plans and reviews county and city actions that 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 ALUP is intended to protect the long-term viability of the airport by ensuring that 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 (SLOALUC, 2007). 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 HCP proposes mechanical trash removal (CA-21) within the airport land use planning boundaries for Area OA (open space areas exposed to severe/significant airport impacts) and Area TP-2 (areas exposed to minimal airport impact). Relevant policies to this activity include the following:

- **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 of San Luis Obispo County and has been determined by that Commission to be consistent with this ALUP. If a project has been determined by the ALUC to be inconsistent, the project or land use may not be established and no building or use permit may be issued for such project or land use unless and until:

    a) The Board of Supervisors has voted to override the ALUC's determination of inconsistency by a four-fifths majority vote, and

    b) The Board of Supervisors has made specific findings that the proposed project or land use is consistent with the purposes of the State Aeronautics Act, as stated in Public Utilities Code section 26770(a):

    "It is the purpose of this article to protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards around public airports to the extent that these areas are not already devoted to incompatible uses."

    c) The Board of Supervisors has, at a time no less than 45 days prior to its decision to overrule the ALUC, provided to the ALUC and to the Division of Aeronautics of the California Department of Transportation a copy of its proposed decision and of required findings in support of such decision and has included (in its decision to overrule the ALUC) the comments from the ALUC and from the Division of Aeronautics.

With regard 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 projects such as the proposed HCP is not a responsibility mandated to the ALUC when such projects do not require adoption or amendment of a general plan, zoning ordinance, etc.

4.2 ENVIRONMENTAL SETTING

The HCP area comprises 5,005 acres of CDPR land in Pismo State Beach and Oceano Dunes SVRA located on the central coast of California in SLO County. Adjacent communities include

the City of Pismo Beach, City of Grover Beach, and the unincorporated community of Oceano (Figure 4-1 Local Land Use Planning Areas).

The HCP area comprises the ocean shoreline with its adjoining natural landscapes and ecosystems; developed areas include campgrounds, a golf course, boardwalk trails, park entrance kiosks and parking areas, ranger station, and corporation yard, and peripheral agricultural land. A description of the land use and activities associated with park operations is presented in EIR section 2.4.2.1 and HCP section 2.2. Land use acreages are presented in Table 2-1. HCP Area Land Use Acreages.

Grand Avenue is a major arterial road that provides access to Pismo State Beach and Oceano Dunes SVRA. Between the public entrance kiosk and State Route 1, West Grand Avenue is primarily bordered by vegetated dunes (on the south) and existing commercial development (on the north). Pier Avenue in Oceano is another major arterial road providing access to Pismo State Beach and Oceano Dunes SVRA. Development on Pier Avenue west of Oceano Lagoon includes the Oceano Campground and residential and commercial uses. Other notable pedestrian access areas include Main and Cypress streets located north of the Pismo Beach Pier and Oso Flaco Lake boardwalk in the southern portion of Oceano Dunes SVRA.

4.3 PROJECT IMPACTS

4.3.1 Thresholds of Significance

Consistent with CEQA Guidelines Appendix G, the project would have a significant impact to land use if it would:

- Physically divide an established community;
- 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; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

The Oceano Dunes District HCP would not result in the construction of any physical barriers in surrounding neighborhoods. Therefore, the impact to physically divide an established community is not further discussed in this EIR.

In addition, the “project” analyzed in this EIR is the implementation of an HCP. There are no other applicable HCPs or NCCPs in effect in the HCP area. The Oceano Dunes District HCP would thus not conflict with any other HCP or NCCP plans; therefore, conflict with any applicable HCP or NCCP is not further discussed in this EIR.

4.3.2 Conformance with Pismo State Beach and Oceano Dunes SVRA General Development and Resource Management Plan

The majority of the covered activities included in the HCP are existing activities that have been occurring for many years. The proposed HCP new activities, SNPL chick and egg capture for captive rearing (CA-12b), mechanical trash removal (CA-21), seasonal exclosure reductions (CA-50), and CDPR’s use of UAS (CA-52) do not include development. The HCP identifies

potential future activities that would be covered by the federal ITP (EIR section 2.4.2.3). These future activities are as-yet-unplanned and would be subject to subsequent environmental review and approval (EIR section 1.5 and section 2.5.3). Potential future projects are considered in the cumulative impacts (EIR section 4.4).

SNPL and CLTE Management – SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreational Activities and Other Non-Covered Species Management Activities (CA-12b). CDPR monitors would capture SNPL chicks or eggs if they were threatened by covered activities not related to covered species management (e.g., motorized recreation, new proposed activities) and relocate the chicks and/or eggs to a captive-rearing facility. This activity supports the conservation efforts consistent with General Plan policy direction. SNPL chick and egg capture for captive rearing would not conflict with the General Development and Resource Management Plan and therefore would have ***no impact*** on state general plan policy.

General Facilities Maintenance – Mechanical Trash Removal (CA-21). The HCP includes mechanical trash removal on beach sand to remove debris and trash as a new activity. This management action would have a positive impact of removing trash that could endanger people's health, pollute local water bodies, or degrade biological resources by endangering wildlife, the ocean, and shoreline habitat. Furthermore, the existing RWQCB MS4 permit requires Oceano Dunes District to prevent trash from entering waterways and the ocean. Conversely, mechanical trash removal would remove organic material from the HCP area as well as trash, and it could result in adverse impacts to biological resources on the beach (EIR section 6.3). Mechanical trash removal would be limited to areas of the beach currently open for public use outside of sensitive habitat areas. Mechanical trash removal activity could result in increased emissions of PM. Any health risk associated with a potential increase in exceedances of ambient air quality standards would be avoided through air quality monitoring or implementing dust control outside of the open riding area (see EIR sections 5.3 and 5.5; Mitigation Measure AIR-1A and AIR-1D). The proposed mechanical trash removal would not conflict with the General Development and Resource Management Plan. The impact on state general plan policy is ***less than significant.***

Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50). The HCP proposes incremental reduction of the 6 Exclosure, if certain conditions can be met (see EIR section 5.5 and section 6.5), and elimination of the East Boneyard Exclosure. These two areas are exclosed seasonally for 7 months of the year (March 1 through September 30) to provide protected nesting habitat for SNPL and CLTE. The proposed reduction in the size of these exclosures is consistent with the General Development Plan management policy of managing the SVRA to reduce conflicts between recreational use, congestion, safety, and health. The elimination of the East Boneyard Exclosure would expand the area used for open sand dune riding area by approximately 49 acres. The reduced 6 Exclosure would expand the flat beach area along the shoreline open to year-round camping and OHV recreation by up to 60 acres. The increase in available shoreline during the summer season would reduce congestion in a heavily used area. Combined, the two exclosure reductions would open year-round access on up to 109 coastal acres and provide recreational benefit (see EIR section 8.3).

The HCP's conservation program, including the AMMs, would ensure the exclosure reduction is conducted in such a way that nesting SNPL and CLTE breeding success is perpetuated and biological resources are protected (see EIR section 6.3). Any health risk associated with a potential increase in exceedances of ambient air quality standards would be avoided through air quality monitoring and reversal of the exclosure reduction if performance standards are not met

(see EIR sections 5.3 and 5.5; Mitigation Measure AIR-1A through Mitigation Measure AIR-1C) or implementing dust control outside of the open riding area. As such, the exclosure reductions would not conflict with the General Development and Resource Management Plan policies of protecting natural resources. The impact on state general plan policy is ***less than significant.***

CDPR UAS Use for Park Activities (CA-52). CDPR's use of UAS (e.g., drones) is proposed for data collection purposes such as monitoring of habitat conditions. This aerial equipment would be used to support the conservation program effort and is consistent with CDPR policy direction for management and protection of natural resources. UAS use would not conflict with the General Development and Resource Management Plan and therefore it would have ***no impact*** on state general plan policy.

4.3.3 Conformance with California State Parks Department of Operations Manual Grooming Policy

Trash poses a danger to people's health, wildlife, the ocean, and shoreline habitat, and it needs to be removed from the environment. CDPR has a trash control program including the availability of dumpsters at Post 2. Further, CDPR must comply with MS4 requirements from the RWQCB, which requires prevention of all trash to be removed from waterways and the ocean.

As an additional tool for removing litter from the beach, CDPR proposes using a mechanical device (CA-21) in multiple areas receiving heavy visitor use. CDPR would follow best practices, including keeping the device outside of sensitive habitat areas and above the high tide (wrack) line, avoiding all plants and animals, bypassing cultural sites, and keeping a safe distance from visitors. Mechanical trash removal would occur infrequently in any given area, allowing natural physical and biological uses of beach wrack to continue. Pismo State Beach and Oceano Dunes SVRA are heavily used recreation areas. As such, mechanical trash removal with the proposed limitations is consistent with the Department of Operations Manual, section 300 regarding beach grooming and beach grooming policy (EIR section 4.1.2).

4.3.4 Conformance with California Coastal Act

EIR Appendix B contains an extensive list of HCP AMMs, which avoid or minimize the potential adverse biological effects on the covered species. The following discussion summarizes the conformance of the proposed HCP new activities, SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b), mechanical trash removal (CA-21), reduction of the seasonal exclosure (CA-50), and CDPR's use of UAS (CA-52) with the articles of Chapter 3 of the Coastal Act, including specified mitigation measures identified in this EIR. Conformance with specific policies is discussed below and summarized in Table 4-3..

Public Access. Implementation of the proposed HCP new activities would not interfere with the public's right to access the sea. SNPL chick and egg capture if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b) and CDPR's use of UAS would have ***no impact*** on public access. Mechanical trash removal (CA-21) is temporal and transient; the equipment operation would not require beach closure or substantially impede public access. Operations would occur when park visitation is low (e.g., early morning hours) to minimize disrupting visitor uses. Exclosure reductions (CA-50) increase public access by removing a 7-month seasonal restriction on up to 109 acres if air quality and biological criteria are met (EIR sections 5.50 and 6.5).

Recreation. Implementation of the proposed HCP new activities would not interfere with existing, historical, and traditional coastal recreational opportunities. The new covered activities proposed do not result in a net loss of recreational land currently available for public use, including OHV and non-OHV activities. SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b) and CDPR's use of UAS would have ***no impact*** on public access. Mechanical trash removal activity (CA-21) is temporal and transient. Equipment operation would not require beach closure or otherwise reduce recreational uses, opportunity, or access. Potential reductions in existing exclosures (CA-50; if supported by scientific analysis that the reductions do not worsen air quality or result in risks to covered species; EIR sections 5.5 and 6.5) would increase the acreage of camping and riding area available throughout the year.

Marine Environment. Implementation of the HCP proposed new covered activities would generally not affect the marine environment. The OHMVR Division protects against oil or hazardous substance spills in accordance with existing regulations and requirements as part of existing operations and maintenance (EIR section 10.3, Hydrology/Water Quality). The proposed HCP new activities (i.e., SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities [CA-12b]; mechanical trash removal [CA-21]; reduction of the Boneyard Exclosure and 6 Exclosure [CA-50]; and CDPR's use of UAS [CA-52]) would not result in the placement of fill into coastal or other water resources and would not impact commercial fishing or recreational boating facilities. Mechanical trash removal (CA-21) would occur above the wrack line, would avoid creek mouths and lagoon areas by more than 1,000 feet, and would under no circumstances occur in any water body. Biological monitors would be required to clear groomed areas prior to each deployment of the grooming equipment. Reductions in seasonal exclosure fencing (CA-50) would not affect the marine environment.

Land Resources. The HCP proposed new covered activities would not interfere with existing management measures undertaken in the HCP area to protect sensitive biological resources including habitat, and cultural resources. Proposed SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b), mechanical trash removal (CA-21), seasonal exclosure reduction (CA-50), or CDPR's use of UAS (CA-52) would not impede the viability of any active agricultural lands in the vicinity of the plan area. Biological monitors would check areas for presence of listed species prior to each deployment of the trash removal equipment, and if found, CDPR would work with staff to avoid impacting the species (e.g., by finding another location for planned activities or waiting until the wildlife moves on their own). Cultural resource monitors would be required to review maps prior to trash removal, and all known sites would be avoided as well as any unknown sites that may be uncovered during trash removal operations.

Development. Implementation of the HCP does not directly include or approve coastal zone development subject to permit pursuant to PRC section 30106. The new management actions proposed by the HCP (SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities [CA-12b], mechanical trash removal [CA-21], reduction of the Boneyard Exclosure and 6 Exclosure [CA-50], and CDPR's use of UAS [CA-52]) do not constitute new site development. Although modifications to seasonal exclosure fencing does allow for seven additional months of public access on up to 109 acres of land within the HCP area, such adjustments to exclosure fencing

have not required a CDP. Non-recurring or future development included as a covered activity under the HCP would be subject to future development approvals, as applicable, from the relevant jurisdiction(s) in which the development is located (EIR section 2.5.3).

Visual Resources. HCP proposed new covered activities (SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities [CA-12b], mechanical trash removal [CA-21], reduction of the Boneyard Exclosure and 6 Exclosure [CA-50], and CDPR's use of UAS [CA-52]) would not cause adverse effects on the scenic or visual quality of the area. SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b) and CDPR's use of UAS (CA-52) would not alter the physical appearance of the environment. Mechanical trash removal (CA-21) is a temporary and transient maintenance activity that would remove trash and debris. The proposed reduction of the seasonal exclosure (CA-50) would eliminate the seasonal closure fencing at East Boneyard and incrementally reduce fencing at 6 Exclosure, allowing for year-round rather than seasonal recreational access on up to 109 acres if air quality and biological criteria and other considerations are met (see EIR sections 5.5 and 6.5). The physical changes associated with mechanical trash removal (CA-21) and exclosure reductions (CA-50) would not result in a significant adverse change in the scenic nature and existing visual character of the HCP area.

As summarized above, the proposed HCP's new covered activities would not conflict with the California Coastal Act. Thus, the impact is considered ***less than significant***.

Table 4-3. Consistency of HCP Proposed New Activity with Coastal Act Planning and Management Policies

PRC Section	Project Consistency Analysis
30210 Access; recreational opportunities; posting	The HCP proposed new activities would not interfere with existing coastal access (see Project Description and Recreation and Public Access). New activities proposed by the HCP are not expected to result in a net loss of land currently open to OHV use. Mechanical trash removal is a maintenance activity that is transient and temporary for the duration the equipment is in use and does not require closure or signage during equipment operation. The HCP proposes to open certain exclosure areas, subject to specific criteria and other considerations, which could increase areas that are open to OHV use during the year. This would have a positive effect on access and recreation.
30213 Lower cost visitor and recreation facilities	The HCP proposed new activities would not adversely impact existing visitor-serving facilities or low-cost camping opportunities at Oceano Dunes SVRA and would not limit or interfere with coastal vehicular recreational opportunities. The HCP has the potential to increase the acreage open to OHV use and beach camping that is currently closed 7 months of the year, and therefore it could have a positive effect on recreation. The HCP does not provide for an expansion of any exclosures or areas currently closed to OHV use. Covered species decline would stop and likely reverse the reduction of exclosure boundaries, but the HCP does not provide for the expansion of the Post 6 northern boundary. Therefore, no reduction in recreational use acreage is anticipated as part of the implementation of the HCP.

Table 4-3. Consistency of HCP Proposed New Activity with Coastal Act Planning and Management Policies

PRC Section	Project Consistency Analysis
30214 Implementation of public access policies	The HCP proposed new activities would not interfere with public access to the beach or coastal zone (see Project Description, and Recreation and Public Access), could facilitate year-round access to additional shoreline, and would not result in substantial adverse effects to geology and soils (EIR section 10.3).
30223 Upland areas	The HCP proposed new activities would not substantially alter upland habitats (see, EIR section 6.3). Mechanical trash removal would occur in high-use beach areas identified in Figure 2-8 and avoid upland areas. The potential exclosure reduction would not take place in upland habitat.
30230 Marine resources; maintenance	The HCP proposed new activities would not result in substantial adverse effects to marine resources. Mechanical trash removal would occur above the wrack line and avoid creek and lagoon areas, and it would help prevent trash and debris from beach use from entering the ocean; therefore, it would be a benefit to marine resources.
30231 Biological Productivity; water quality:	The HCP proposed new activities would not result in substantial adverse effects to biological resources. The purpose of the HCP is to implement activities to protect covered species, including SNPL, CLTE, CRLF, tidewater goby, and covered plant species.
30232 Oil and hazardous substance spills	Standard operations and maintenance activities in the HCP area include protection against spills of oil and other potentially hazardous substances. CDPR provides ongoing maintenance and upkeep of equipment, staff education, spill containment kits; basic activities to reduce the potential from spills; and proper clean-up and disposal of spilled material. Mechanical trash removal equipment (CA-21) would be operated consistent with CDPR vehicles on the beach. Exclosure reduction (CA-50) would not increase vehicle use on the beach, as existing CDP vehicle use limits would remain in effect. These new covered activities would not increase impacts related to oil and hazardous substance spills (see EIR section 10.3.6, Hydrology and Water Quality).
30240 Environmentally sensitive habitat areas, adjacent developments	Implementation of the HCP would protect sensitive habitat areas of covered species, including SNPL, CLTE, CRLF, tidewater goby, and federally-listed plants. AMMs are incorporated into the HCP to ensure that covered activities protect environmentally sensitive habitat areas. See Chapter 6 Biology for additional information.
30253 Minimization of adverse impacts	The EIR identifies potential adverse impacts on air quality related to mechanical trash removal (CA-21) and exclosure reduction (CA-50) and identifies mitigation measures to reduce the effect (see EIR sections 5.3 and 5.5). Any health risk associated with a potential increase in exceedances of ambient air quality standards would be avoided through air quality monitoring and reversal of the exclosure reduction if performance standards are not met or by implementing dust control outside of the open riding area.

4.3.5 Conformance with Oceano County Airport Land Use Plan

The HCP area includes lands within ALUP planning areas and FAA airport surfaces associated with Oceano County Airport; however, the HCP proposed new activities do not include new buildings, structures, construction, or uses within the ALUP planning area.

The proposed HCP would not conflict with the Oceano County ALUP because it would not impact aviation patterns, result in a hazard to air navigation, or expose people visiting, living, or working in the HCP area to a safety hazard or excessive noise, nor is it dependent on the height of any proposed structures or vegetation. The HCP does not directly authorize or approve "development" subject to land use or building permits. Future development included as a covered activity under the HCP would be subject to future land use and CEQA approvals.

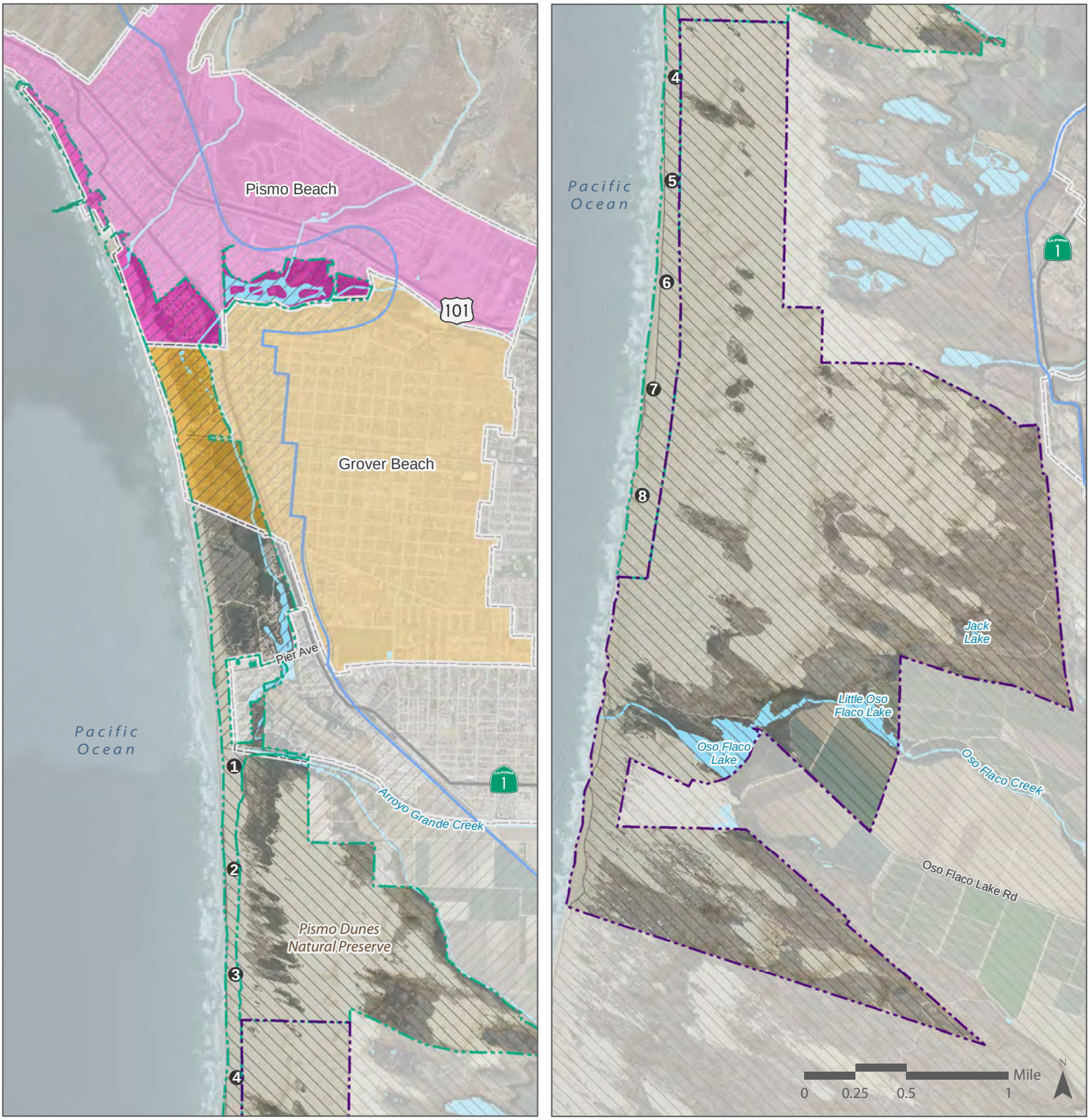
The HCP guides the management and operation of Pismo State Beach and Oceano Dunes SVRA to avoid or minimize impacts to covered species. The HCP proposed new covered activities (SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities [CA-12b], mechanical trash removal [CA-21], reduction of the Boneyard Exclosure and 6 Exclosure [CA-50], and CDPR's use of UAS [CA-52]) do not include typical structural development of built features in the environment, such as roads, buildings, power lines, or other built structures. The proposed new activities would not change land use or intensity of uses in the HCP area. The proposed new activities 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. CDPR would not operate UAS (CA-52) above 400 feet and would comply with all airport restrictions. Thus, the HCP would not conflict with the Oceano County ALUP, and there would be ***no impact***.

4.4 CUMULATIVE IMPACTS

The HCP proposed new activities of SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b), mechanical trash removal (CA-21), seasonal exclosure boundary changes (East Boneyard Exclosure and 6 Exclosure; CA-50), and CDPR's use of UAS (CA-52) would not conflict with land use plans and policies and they would not combine with impacts from other foreseeable projects listed in EIR section 3.3.3 to incrementally increase land use impacts. None of the projects considered for cumulative impacts would occur in the beach area proposed for mechanical trash removal, seasonal exclosure reduction area, or drone use areas. These activities would not change the existing land uses within the HCP area or change the intensity of the existing recreational use. The HCP would not conflict with local LCP policies and therefore would not contribute toward potential impacts of future projects that may occur in the HCP area or adjacent communities. For these reasons, the HCP would have ***no cumulative impact*** on land use.

4.5 MITIGATION MEASURES

No significant impacts to land use plans and policies have been identified for the project based on the analysis contained in EIR sections 4.3 and 4.4 above. No mitigation is required.



Local Land Use Boundaries

- City of Grover Beach
- City of Pismo Beach
- Coastal Zone Boundary
- Urban and village reserve boundary

Local Land Use Planning Agencies

- San Luis Bay Coastal Planning Area
- South County Coastal Planning Area

Base Map Features

- Oceano Dunes SVRA
- Pismo State Beach
- Marker post
- Waterbody
- Stream
- Highway
- Access road

February 2020
Source: ESRI, 2018; CDPR 2020; SLO County, 2018 MIG, 2020

Figure 4-1 Local Land Use Planning Areas

CDPR, Oceano Dunes District Habitat Conservation Plan EIR

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Chapter 5 AIR QUALITY

5.1 REGULATORY SETTING

5.1.1 Regulated Air Pollutants

The U.S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for six common air pollutants: ozone (O_3), carbon monoxide (CO); nitrogen dioxide (NO_2); sulfur dioxide (SO_2); particulate matter (PM)—which consists of "inhalable coarse" PM (particles with an aerodynamic diameter between 2.5 and 10 microns in diameter, or PM_{10}) and "fine" PM (particles with an aerodynamic diameter smaller than 2.5 microns, or $PM_{2.5}$); and lead. The U.S. EPA refers to these six common pollutants as "criteria" pollutants because the agency regulates the pollutants on the basis of human health and/or environmentally based criteria.

The California Air Resources Board (CARB) has established California Ambient Air Quality Standards (CAAQS) for the six common air pollutants regulated by the federal Clean Air Act (the CAAQS are more stringent than the NAAQS), plus the following additional air pollutants: hydrogen sulfide (H_2S), sulfates (SO_X), vinyl chloride, and visibility-reducing particles.

A description of the air pollutants associated with the proposed HCP and its vicinity is provided below. As described in EIR section 5.1.2, PM and O_3 are the primary pollutants of concern in southern San Luis Obispo County. The other criteria air pollutants, such as CO, SO_2, SO_X, lead, vinyl chloride, and visibility-reducing particles, are generally of lesser concern and are not typically associated with the covered activities proposed under HCP implementation. Accordingly, O_3, ozone precursors, and PM are the only criteria air pollutants discussed in detail below.

- **Ground-level Ozone**, or smog, is not emitted directly into the atmosphere. It is created from chemical reactions between oxides of nitrogen (NO_X) and volatile organic compounds (VOCs), also called reactive organic gases (ROG), in the presence of sunlight (US EPA, 2018). Thus, ozone formation is typically highest on hot sunny days in urban areas with NO_X and ROG pollution. Ozone irritates the nose, throat, and air pathways and can cause or aggravate shortness of breath, coughing, asthma attacks, and lung diseases such as emphysema and bronchitis.
- **Nitrogen Dioxide (NO_2)** is a by-product of combustion. NO_2 is not directly emitted but is formed through a reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_X and are major contributors to ozone formation. NO_2 also contributes to the formation of particulate matter. NO_2 can cause breathing difficulties at high concentrations (US EPA, 2016a).
- **Particulate Matter**, also known as particle pollution, is a mixture of extremely small solid and liquid particles made up of a variety of components such as organic chemicals, metals, and soil and dust particles (US EPA, 2016b). Figure 5-1 Particulate Matter provides a graphical depiction of the size of PM_{10} and $PM_{2.5}$.
    - PM_{10}, also known as inhalable coarse, respirable, or suspended PM_{10}, consists of particles less than or equal to 10 micrometers in diameter (approximately $1/7^{th}$ the thickness of a human hair). These particles can be inhaled deep into the lungs and

possibly enter the blood stream, causing health effects that include, but are not limited to, increased respiratory symptoms (e.g., irritation, coughing), decreased lung capacity, aggravated asthma, irregular heartbeats, heart attacks, and premature death in people with heart or lung disease (US EPA, 2016b).

- $PM_{2.5}$, also known as fine PM, consists of particles less than or equal to 2.5 micrometers in diameter (approximately $1/30^{th}$ the thickness of a human hair). These particles pose an increased risk because they can penetrate the deepest parts of the lung, leading to and exacerbating heart and lung health effects (US EPA, 2016b).

5.1.1.1 Federal and State Clean Air Acts

The federal Clean Air Act, as amended, provides the overarching basis for both federal and state air pollution prevention, control, and regulation. The Act establishes the U.S. EPA's responsibilities for protecting and improving the nation's air quality. The U.S. EPA oversees federal programs for setting air quality standards and designating attainment status, permitting new and modified stationary sources of pollutants, controlling emissions of hazardous air pollutants, and reducing emissions from motor vehicles and other mobile sources. The U.S. EPA also requires that each state prepare and submit a State Implementation Plan (SIP) that consists of background information, rules, technical documentation, and agreements that an individual state will use to attain compliance with the NAAQS within federally imposed deadlines. State and local agencies implement the plans and rules associated with the SIP, but the rules are also federally enforceable. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act. In California, both the federal and state Clean Air Acts are administered by CARB. It sets all air quality standards, including emission standards for vehicles, fuels, and consumer goods, as well as monitors air quality and sets control measures for toxic air contaminants. CARB oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional level.

5.1.1.2 Interpretation of NAAQS for PM_{10} (24-Hour Standard)

Title 40 of the U.S. Code of Federal Regulations (CFR), Part 50, National Primary and Secondary Ambient Air Quality Standards, Section 50.6, sets forth that the primary and secondary 24-hour NAAQS for PM_{10} are 150 micrograms per cubic meter ($\mu g/m^3$), 24-hour average concentration. The primary and secondary 24-hour NAAQS for PM_{10} are attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one, as determined pursuant to Appendix K to Part 50, Interpretation of the National Ambient Air Quality Standards for Particulate Matter.

Appendix K to 40 CFR Part 50 sets forth the computations used to analyze PM data to determine attainment of the 24-hour PM_{10} NAAQS. Section 1.0 of Appendix K defines several key terms used in the attainment computations, including "daily value," which is the 24-hour average concentration of PM_{10} calculated or measured from midnight to midnight (local time), "exceedance," which is a daily value that is above the level of the 24-hour standard after rounding to the nearest 10 $\mu g/m^3$ (i.e., values ending in 5 or greater are to be rounded up), and "year," which refers to a calendar year.

In general, the amount of monitoring data necessary to demonstrate attainment with the 24-hour NAAQS varies with sampling frequency, data capture rate, and the number of years of record available for review. Section 2.1 of Appendix K describes that, in the simplest case for a PM_{10} attainment determination, the number of expected exceedances at a site is determined by recording the number of exceedances in each calendar year and then averaging them over the past 3 calendar years. This simple case is most similar to the situation in the South County region, since the SLOAPCD's monitoring stations in this region (CDF, Mesa2, NRP) currently measure the 24-hour average PM_{10} concentration on a daily basis. Thus, in general, given the current monitoring stations operated by the SLOAPCD and their monitoring frequency (daily), the U.S. EPA could determine nonattainment of the 24-hour PM_{10} NAAQS with three exceedances in a single calendar year, or one exceedance in each of 3 consecutive calendar years. The U.S. EPA may consider more than 3 years of data in an attainment determination if the data is representative and complete.

More complex attainment calculations are used if PM_{10} monitoring is conducted on a less frequent basis (e.g., every other day, every sixth day) as set forth in 40 CFR Part 58. In addition, Appendix K sets forth specific numerical rounding procedures for the computational equations used to determine attainment. Finally, in some cases, there are less stringent data requirements for showing that a monitor has failed an attainment test[7].

5.1.1.3 Interpretation of NAAQS for $PM_{2.5}$ (24-Hour)

Title 40 of CFR, Part 50, National Primary and Secondary Ambient Air Quality Standards sections 50.13 and 50.18 set forth that the most recent (2012) primary and secondary 24-hour NAAQS for $PM_{2.5}$ are 35 $\mu g/m^3$, 24-hour average concentration. The primary and secondary 24-hour NAAQS for $PM_{2.5}$ are attained when the 98th percentile 24-hour concentration[8], as determined pursuant to Appendix N to Part 50, Interpretation of the National Ambient Air Quality Standards for $PM_{2.5}$, is less than or equal to 35 $\mu g/m^3$.

Appendix N to 40 CFR Part 50 sets forth the computations used to analyze PM data to determine attainment of the 24-hour $PM_{2.5}$ NAAQS. Section 1.0 of Appendix N defines several key terms used in the attainment computations, including daily value (similar to the definition used for PM_{10} attainment); "98th percentile," which is the smallest daily value out of a year of $PM_{2.5}$ mass monitoring data below which no more than 98 percent of all daily values fall using prescribed ranking and selection methods; and "quarter," which refers to a calendar quarter (e.g., January through March). Like PM_{10} (see EIR section 5.1.1.2), the amount of monitoring data necessary to demonstrate attainment with the $PM_{2.5}$ 24-hour NAAQS varies with sampling frequency, data capture rate, and the number of years of record available for review. In general, Appendix N

[7] Pursuant to Section 2.3(c), less data may be sufficient if the data unambiguously establishes nonattainment. Appendix K provides the following specific example of how nonattainment may be demonstrated when data fail to meet some requirements: "Nonattainment of the 24-hour primary standards can be established by the observed annual number of exceedances (e.g., four observed exceedances in a single year), or by the estimated number of exceedances derived from the observed number of exceedances and the required number of scheduled samples (e.g., two observed exceedances with every-other-day sampling)."

[8] In general, the 98th percentile represents the value below which 98% of recorded measurement's fall. For example, if there were 365 different daily 24-hour average measurements, the 98th percentile would be the concentration on the day with the eighth highest average $PM_{2.5}$ concentration (365-(0.98*365))=7.3).

sections 4.2 and 4.5 describe that 3 years of valid annual $PM_{2.5}$ 98th percentile mass concentrations are required to determine attainment of the 24-hour $PM_{2.5}$ NAAQS; however, Appendix N prescribes specific computational methods and equations, as well as rounding procedures, to use in the attainment determination.

5.1.1.4 Interpretation of NAAQS for $PM_{2.5}$ (Annual Average)

Title 40 of CFR, Part 50, National Primary and Secondary Ambient Air Quality Standards, sections 50.13 and 50.18, set forth that the most recent (2012) primary annual average NAAQS for $PM_{2.5}$ is 12.0 µg/m^3. The primary annual average NAAQS for $PM_{2.5}$ is attained when the annual average, as determined pursuant to Appendix N to Part 50, Interpretation of the National Ambient Air Quality Standards for $PM_{2.5}$, is less than or equal to 12.0 µg/m^3.

Appendix N to 40 CFR Part 50 sets forth the computations used to analyze PM data to determine attainment of the annual average $PM_{2.5}$ NAAQS. In general, Appendix N sections 4.1 and 4.4 describe that 3 years of valid annual average $PM_{2.5}$ concentrations, as computed from quarterly averages, are required to determine attainment of the 24-hour $PM_{2.5}$ NAAQS; however, Appendix N prescribes specific computational methods and equations, as well as rounding procedures, to use in the attainment determination.

5.1.1.5 Interpretation of CAAQS for PM

Title 17 of the California Code of Regulations (CCR), section 70200, Table of Standards, sets forth that the CAAQS for $PM_{2.5}$ and PM_{10} are violated when concentrations exceed the CAAQS (i.e., values may be equaled). Furthermore, 17 CCR § 70301(b) stipulates that the data used for determining attainment designations shall be based on the data for record for 3 calendar years prior to the year in which the designation is made or the annual review of the designation is conducted, while section 70303(a)(1) sets forth that an area will be designated nonattainment for a pollutant if the data for record show at least one violation of a state standard for that pollutant in the area, and the measurement of the violation meets CARB criteria for data representativeness.

5.1.2 Attainment Status

The federal and state governments have established emissions standards and limits for air pollutants that may reasonably be anticipated to endanger public health or welfare. These standards typically take one of two forms: standards or requirements that are applicable to specific types of facilities or equipment (e.g., petroleum refining, metal smelting), or concentration-based standards that are applicable to overall ambient air quality. Air quality conditions are best described and understood in the context of these standards; areas that meet, or attain, concentration-based ambient air quality standards are considered to have levels of pollutants in the ambient air that, based on the latest scientific knowledge, do not endanger public health or welfare.

- **Attainment.** A region is “in attainment” if monitoring shows ambient concentrations of a specific pollutant are less than or equal to the NAAQS or CAAQS. In addition, an area that has been re-designated from nonattainment to attainment is classified as a “maintenance area” for 10 years to ensure that the air quality improvements are sustained.

- **Nonattainment.** If the NAAQS or CAAQS are not met, the region is designated as nonattainment for that pollutant. It is important to note that some NAAQS and CAAQS require multiple exceedances of the standard in order for a region to be classified as nonattainment (see EIR section 5.1.1). Federal and state laws require nonattainment areas to develop strategies, implementation plans, and control measures to reduce pollutant concentrations to levels that meet, or attain, standards.
- **Unclassified.** An area is unclassified if the ambient air quality monitoring data are incomplete and do not support a designation of attainment or nonattainment.

Table 5-1. Ambient Air Quality Standards and SCCAB Attainment Status below lists the NAAQS and CAAQS and summarizes the South Central Coast Air Basin (SCCAB) attainment status for ozone and particulate matter. The SCCAB is in attainment or unclassified for all other criteria air pollutants.

Table 5-1. Ambient Air Quality Standards and SCCAB Attainment Status

Pollutant	Averaging Time	California AAQS (A)		National AAQS (B)	
		Standard (C)	Attainment Status (D)	Standard (C)	Attainment Status (D)
Ozone	1-Hour	180 µg/m^3	**N**	–	–
	8-Hour	137 µg/m^3	**N**	137 µg/m^3	**N**(E)
PM_{10}	24-Hour	50 µg/m^3	**N**	150 µg/m^3	A
	Annual Average	20 µg/m^3	**N**	–	–
$PM_{2.5}$	24-Hour	–	–	35 µg/m^3	A
	Annual Average	12 µg/m^3	A	12 µg/m^3	A

Source: (SLOAPCD, 2017a), modified by MIG.

(A) Table does not list CAAQS for CO, N_2O, SO_2, SO_X, lead, vinyl chloride, and visibility reducing particles. California standards for ozone and suspended PM_{10} and $PM_{2.5}$ are values that are not to be exceeded. For a listing of all CAAQS and NAAQS standards and SCCAB attainment status, see: https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/AttainmentStatus22February2017.pdf

(B) Standards shown are the primary NAAQS designed to protect public health.

(C) All standards are shown in terms of micrograms per cubic meter (µg/m^3) for comparison purposes.

(D) A= Attainment, N= Nonattainment, U/A=Unclassifiable/Attainment.

(E) This non-attainment designation corresponds to Eastern San Luis Obispo County; Western San Luis Obispo County is in attainment. Specifically, San Luis Obispo County has been designated non-attainment east of the -120.4 deg Longitude line, in areas of San Luis Obispo County that are south of latitude 35.45 degrees, and east of the -120.3 degree Longitude line, in areas of San Luis Obispo County that are north of latitude 35.45 degrees. Oceano Dunes SVRA is in the portion of San Luis Obispo County that is in attainment for federal ozone standards.

The SLOAPCD, the local agency charged with preserving air quality, divides San Luis Obispo 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 San Luis Obispo County. The SLOAPCD maintains and operates three ambient air quality monitoring

stations in the South County Region: CDF, Mesa2, and Nipomo Regional Park (NRP) (SLOAPCD, 2014). These stations measure ambient concentrations of PM_{10} and $PM_{2.5}$.[9]

Of SLOAPCD's three monitoring stations in the South County Region, CDF is the closest to Oceano Dunes SVRA, approximately 0.5 miles southeast of Oceano Dunes SVRA (as measured in the prevailing wind direction; Figure 5-2). The NRP station is the farthest away from Oceano Dunes SVRA, more than 5 miles southeast of the SVRA. Mesa2 is of middle proximity, approximately 2 miles southeast of the SVRA. A fourth South County Region monitoring station, referred to as the Oso Flaco monitoring station, was installed in 2015 in the southeastern-most corner of the Oceano Dunes District boundary and is operated by CDPR with support from SLOAPCD.[10]

Table 5-2. South County Monitoring Days Above 24-Hour State PM_{10} Standard[1] shows the number of days from January 2013 to March 2019 that CDF, Mesa2, NRP, and Oso Flaco monitoring stations measured levels of PM that are above the state's 24-hour standard for PM_{10}, which is set at 50 µg/m^3. Data available from the Oso Flaco monitoring station, which has been operating for a shorter time period, is also included.

Table 5-2. South County Monitoring Days Above 24-Hour State PM_{10} Standard[1]

Monitoring Year	South County Monitoring Station			
	CDF[2]	Mesa2[2]	NRP[2]	Oso Flaco[3]
2013	93	55	20	–
2014	79	39	9	–
2015	62	30	8	1
2016	71	43	13	10
2017	97	52	18	12
2018	54	41	18	9
2019[4]	55	38	13	6

Sources: (SLOAPCD, 2014) (2016a) (2016b) (2017b) (2018a); (CARB, 2020).

[1] The state 24-hour PM_{10} standard is set at 50 µg/m^3. The state also maintains an average annual PM_{10} standard of 20 µg/m^3.

[2] Operated by SLOAPCD.

[3] Operated by CDPR, with SLOAPCD support; data collection interrupted December 2016-March 2017.

[4] The data for 2019 is preliminary and requires validation. In actuality, exceedances could be lower.

As shown in Table 5-2., the CDF monitoring station annually reports more exceedances of the state PM_{10} standard compared to the other monitoring stations. Table 5-3. presents exceedances

[9] CDF, Mesa2, and NRP all measure ambient PM_{10} concentrations. Only CDF and Mesa2 measure ambient concentrations of $PM_{2.5}$; NRP does not.

[10] The Oso Flaco monitor, which monitors PM_{10} but not $PM_{2.5}$, was discontinued in December 2016 and reinstalled in March 2017.

of federal PM_{10} and $PM_{2.5}$ standards (24-hour and annual) as well as annual state PM_{10} and $PM_{2.5}$ exceedances at the CDF monitoring station.

As shown in Table 5-3., the 24-hour state standard for PM_{10} has been exceeded more often than the national standard. This is a result of the state standard (50 µg/m^3) being more stringent than the federal standard (150 µg/m^3), by a factor of one-third. In addition, the CAAQS and NAAQS annual $PM_{2.5}$ standard (12 µg/m^3) was exceeded in 2013, 2014, and 2017.

Table 5-3. Exceedances of Federal PM_{10} and $PM_{2.5}$ Standards and Annual State PM_{10} and $PM_{2.5}$ Standards at SLOAPCD CDF Monitoring Station

Year	NAAQS			CAAQS		
	24-hour		Annual	24-hour	Annual	
	PM_{10}	$PM_{2.5}$	$PM_{2.5}$	PM_{10}	PM_{10}	$PM_{2.5}$
2013	2	3	**Y**	93	**Y**	**Y**
2014	2	4	**Y**	79	**Y**	**Y**
2015	0	1	N	62	**Y**	N
2016	0	0	N	71	**Y**	N
2017	0	0	**Y**	97	**Y**	**Y**
2018	0	2	N	54	**Y**	N
2019[1]	0	0	–	55	–	–

Source: (SLOAPCD, 2014) (2016a) (2016b) (2017b) (2018a) (SLOAPCD, 2019); (CARB, 2020).

[1] The data for 2019 is preliminary and requires validation. In actuality, exceedances could be lower. Additionally, since the 2019 data has not yet been validated, it is unknown how many times, if at all, annual standards were exceeded.

5.1.3 San Luis Obispo County Air Pollution Control District

The SLOAPCD has primary responsibility for regulating sources of air pollution situated within its jurisdictional boundaries. To this end, the SLOAPCD implements air quality programs required by state and federal mandates, enforces rules and regulations based on air pollution laws, and educates businesses and residents about their roles in protecting air quality.

5.1.3.1 2001 Clean Air Plan

In 2001, the SLOAPCD adopted its *2001 Clean Air Plan*. This plan updates the 1998 Clean Air Plan and identifies control measures to reduce ROG and NOx emissions, precursors to ozone, as well as PM emissions. The *2001 Clean Air Plan* identifies the control measures necessary to attain ozone air quality standards. The 2001 Clean Air Plan includes ozone precursor pollutant emissions of reactive organic gases and oxides of nitrogen from mobile and area-wide emission sources in its reference (1991) and forecasted (2015) emissions inventories, and it plans for achieving attainment of air quality standards. Although some of the control measures set forth for controlling ROG and NOx emissions have a co-benefit of reducing PM emissions, the plan does not identify any control measures solely related to the reductions of PM emissions. As stated in the *2001 Clean Air Plan*, "The District expects to formally address PM_{10} nonattainment in future planning efforts" (SLOAPCD, 2001).

5.1.3.2 Rules and Regulations

The following rules and regulations potentially apply to the proposed Oceano Dunes HCP:

Rule 402, Nuisance, Visible Emissions. Rule 402, Nuisance, Visible Emissions, establishes that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Rule 1001, Coastal Dunes Dust Control Requirements. Rule 1001, Coastal Dunes Dust Control Requirements, establishes standards for the operators of coastal dune vehicle activity areas greater than 100 acres in size. Section C of the SLOAPCD Rule 1001 outlines the rule's general requirements, which are:

1) Development and implementation of a Temporary Baseline Monitoring to determine existing PM_{10} concentrations at Air Pollution Control Officer (APCO)-approved Coastal Dune Vehicle Activity Areas and Control Site monitoring locations prior to implementing PM_{10} control measures and Compliance Monitoring.
2) Development and implementation of an APCO-approved Particulate Matter Reduction Plan (PMRP) that contains:
    a) An APCO-approved PM_{10} Compliance Monitoring network consisting of at least one Coastal Dune Vehicle Activity Areas Monitor and at least one Control Site Monitor;
    b) A description of all PM_{10} 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;
3) Compliance with a performance standard that requires PM_{10} concentrations at the APCO-approved Coastal Dune Vehicle Activity Areas Monitor to be no more than 20 percent higher than the PM_{10} concentrations at the APCO-approved Control Site Monitor. The performance standard applies only when the 24-hour average PM_{10} concentrations at the approved Coastal Dune Vehicle Activity Areas Monitor exceeds 55 micrograms per cubic meter.
4) Complete all environmental review requirements and obtain land use agency approval for PMRP projects.

5.1.4 Stipulated Abatement Order, Case No. 17-01 and Draft PMRP

On September 10, 2017, the SLOAPCD filed a Petition for Abatement Order with the SLOAPCD Hearing Board against the OHMVR Division with regard to alleged nuisances as a result of PM emissions from Oceano Dunes SVRA (SLOAPCD, 2018b). The petition was heard at a number of Board meetings from November 13, 2017 to April 30, 2018 and resulted in the filing and issuance of the Stipulated Order of Abatement (SOA) Case No. 17-01, which was amended in November 2019. The following summarizes the primary components of the SOA:

1) Initial Particulate Matter Reduction Actions

a) The OHMVR Division shall fence off specified portions of Oceano Dunes SVRA for dust control activities.
b) The OHMVR Division shall install APCO-approved sand track-out control devices at the Grand and Pier Avenue entrances to Oceano Dunes SVRA by June 30, 2019.

2) Particulate Matter Reduction Plan (PMRP)

a) The OHMVR Division shall develop and implement a PMRP over a four-year period that is designed to achieve state and federal ambient PM_{10} air quality standards.
b) The PMRP shall begin by establishing an initial target of reducing the maximum 24-hour PM_{10} baseline emissions by 50 percent[11]. The modeling demonstrating this reduction will be carried out by CARB or another modeling group approved by the Scientific Advisory Group (SAG) developed as a requirement of the SOA. The SAG is comprised of experts in the fields of dune morphology, aeolian erosion control, soil ecology, shoreline botany, biophysical sand crust formation, and air quality modeling, among other disciplines.
c) A draft PMRP shall be submitted to the APCO and SAG by no later than February 1, 2019 for the APCO's approval.

3) Annual Report and Work Plan

a) On an annual basis (during PMRP implementation), the OHMVR Division shall develop, with assistance from the SAG, a Report and Work Plan for APCO review and approval. To help facilitate the Annual Report and Work Plan process, OHMVR Division shall provide Interim Work Plans to the SAG. This schedule is to be determined by the SAG.
b) The Annual Reports and Work Plans shall include a detailed schedule of activities with deadlines on measures that will be taken for the upcoming year.
c) The Annual Reports shall summarize actions taken over the prior year, their effectiveness, and additional metrics or measures that may be needed to achieve reductions for the following year. Each Report will contain, using air quality modeling, the estimated reductions attributable to proposed dust control measures for the following year.

CDPR submitted a Draft PMRP to the SLOAPCD in June 2019 (CDPR, 2019), which includes an implementation plan specifying actions that will be undertaken through December 2023. The types of control measures contemplated in the Draft PMRP generally include re-establishing a continuous foredune near the high water line, converting open sand back dune areas by planting native vegetation cover, installing and operating sand track-out devices, and emplacing porous fencing (i.e., wind fencing) and artificial roughness elements (e.g., strawbales). Attachment 8 of the Draft PMRP consists of a checklist that would be used to track the implementation of various measures, such as tracking how plant density changes over time in a new foredune area.

In addition to installing control measures, the Draft PMRP identifies seven supporting actions that would be undertaken to inform continued PMRP implementation. Such measures include,

[11] This stipulated emission reduction requirement of fifty percent is based on a modeling scenario for the period May 1, 2013 through August 31, 2013. This reduction requirement may be altered by the SAG in the future.

but are not limited to, updated PI-SWERL measurements, additional air quality monitoring, and collection of topographic and upper-air data. These supporting actions, which would be undertaken concurrently with control measures, would provide CDPR with new, high-resolution data that supports an adaptive management approach to dust control, as envisioned in the Draft PMRP.

In compliance with the November 2019 SOA amendments, CDPR fenced off 48 acres of shoreline area, which CDPR proposes to vegetate or otherwise create a foredune. Given that the foredune closure is within a prime camping location, CDPR has administratively reduced the number of daily camping units from 1,000 down to 500. PMRP implementation, including foredune development, is subject to the findings of ongoing CEQA review separate from the HCP.

5.2 ENVIRONMENTAL SETTING

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 HCP project area is located along the central coast of California, within the SCCAB. The SCCAB encompasses all of San Luis Obispo, Santa Barbara, and Ventura counties (approximately 8,000 square miles) and is bounded on the west and south by the Pacific Ocean. The SLOAPCD is the primary agency responsible for monitoring and maintaining air quality in the portion of the SCCAB where the project area is located, which is southwestern San Luis Obispo County.

Windblown dust in southwestern San Luis Obispo County is, and has been, an issue of focused public concern and academic research for more than a decade. PM emissions from Oceano Dunes SVRA have been subject to a number of regulatory requirements that have shaped the SVRA's environmental setting, as described in this EIR (see EIR section 5.1). Most recently, CDPR signed an SOA with the SLOAPCD Hearing Board to develop a PMRP designed to achieve state and federal air quality standards. Future dust control actions that will be implemented pursuant to this regulatory requirement would occur (at a minimum) during the first 4 years of HCP implementation. Although the specific actions that would be implemented are still being determined, the dust control measures identified in the Draft PMRP (see EIR section 5.1.4) will further change the environmental setting of Oceano Dunes SVRA.

5.2.1 Topography and Meteorology

Topography and climate throughout the SCCAB vary and are influenced by the basin's proximity to the Pacific Ocean and the Coast and Transverse ranges that trend in a general northwest-southeast and east-west orientation, respectively, within the basin. The SCCAB experiences a Mediterranean-type climate that is characterized by warm, dry summers and cool, wet winters. The north Pacific high-pressure system, a semi-permanent area of high pressure centered over the north Pacific Ocean, pushes storms to the north during the summer. During the winter, the pressure center moves south, bringing rain and cooler temperatures.

Near the coast, onshore breezes moderate summer and winter temperatures. Average maximum temperatures in the summer are typically in the 60s and 70s; average minimum temperatures in winter are typically in the 40s and 50s. Precipitation near the coast averages between 15 and 25 inches per year. The Coast and Transverse ranges that run through the basin serve to keep inland

portions of the SCCAB warmer and dryer. Although average minimum temperatures in inland areas also typically range from the 40s to 50s, average maximum temperatures are in the high 70s, and daily maximums can exceed 100 degrees Fahrenheit. Precipitation in inland portions of the SCCAB averages less than 15 inches per year.

5.2.2 Prevailing Winds, 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. According to the California Geological Survey, 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, where 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 5-3. 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.

5.2.3 Dust and PM Studies at Oceano Dunes SVRA

The SLOAPCD and the OHMVR Division have completed numerous studies that examined dust and PM generation at Oceano Dunes SVRA. 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 PM 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 PM_{10} 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, 2013). 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 of the downwind dispersion of PM_{10} during high wind events varied, with the main variable being the severity of the PM_{10} concentrations. The study also concluded that wind direction near the shore is stronger and less variable than winds 5 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 PM_{10} concentrations measured by the SLOAPCD's CDF, Mesa2, and NRP monitoring stations during the community monitoring project.

Wind and PM_{10} Characteristics at Oceano Dunes SVRA 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 PM_{10} 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. The study further documented wind direction in the dune complex tended to have a more westerly component near the shore in the northern section of the Pismo Dunes Natural Preserve than in the southern portion; the southern portion maintained higher frequency of winds from the west-northwest.

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[12] 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 PM_{10} emissions were highest within the La Grande tract. Although the study could not explain why PM_{10} emissivity within the La Grande tract was the highest, it did note that factors such as sand grain size, meteorology, and topography all influence PM_{10} emissions (both potential and actual).

Particle Size Distribution Characteristics and PI-SWERL PM_{10} 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 PM_{10} emissions measured in previous studies. The study did not find a link between the

[12] Emissivity, in this context, is generally a measure of emissions over a specific area and time.

amount of fine particle material (i.e., PM_{10}-sized) present in sediment and PM_{10} 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. 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 PM_{10} emissions. The PM_{10} emissions measured with the PI-SWERL show a pattern that is corroborated by the temporary monitoring networks, with higher PM_{10} 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" (DRI, 2015b, p. 20).

Dust Control Project Oceano Dunes SVRA 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 PM_{10} 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 percent for areas in the interior of the array. In addition, over the 3-month period the fencing was in place, the downwind concentration of PM_{10} at the trailing edge of the fence array was approximately 20 to 37 percent lower than the upwind PM_{10} concentration during moderate windy periods (approximately 10 to 12 miles per hour); during high wind conditions downwind concentrations were approximately 5 to 30 percent lower than concentrations upwind of the fence array.

Updated Wind Erodibility Measurements at and Near the Oceano Dunes State Vehicular Recreation Area: Draft Overview of Findings (DRI, 2016). This OHMVR Division study provided an update on a series of PI-SWERL measurements that were completed since the original measurements in 2013. The study discussed emissivity changes at the plover exclosure, an array of straw bales that were installed in 2014, the wind fence area installed in 2015, and other, previous PI-SWERL transect areas. The report's major findings were that: 1) the 2015 PI-SWERL measurements exhibited signs of being influenced by environmental conditions, 2) there was a correlation between emissivity and OHV activity at the plover exclosure, and 3) consecutive monitoring at straw bale installation and fence deployment areas revealed fairly consistent values for emissivity. The observation that additional OHV activity in an exclosure area may result in increased emissions was based on a comparison of measurements taken before the exclosure was reduced (August 2013, September 2014, and September 2015) and after it had been open to riding (March 2016). The analysis found the increase in emissions was by a factor of two to three.

2016 Aerosol Particle Profiler (APP) Monitoring Network: Summary of Findings (DRI, 2017). This OHMVR Division study summarized the results of monitoring conducted with environmental beta attenuation monitors (E-BAM) and six additional PM monitors during 2016 to better understand how well sand fencing and straw bales reduce ambient concentrations of PM within Oceano Dunes SVRA. In addition, the supplemental monitoring also provided a more complete picture of wind speed and direction along the path from Oceano Dunes SVRA to the SLOACPD's CDF monitoring station, located approximately 1.2 miles downwind of the SVRA, and examined how PM concentrations change over time and space as wind travels over the SVRA toward CDF. Two preliminary findings of the report were that: 1) for comparable winds, PM emissions are higher in the late summer than in early summer, (suggesting that a physical

change in the emission system or environmental conditions create conditions for higher emissions); and 2) wind direction distributions across the network suggest PM concentrations measured at CDF are most influenced by a narrow, upwind source area from 290 to 295 degrees north-northwest and essentially follow a straight line from shore.[13]

Although the OHMVR Division and the SLOAPCD collaborated on the development and analysis of most of the studies listed above, the specific findings and conclusions of each report have not been fully accepted by both agencies.

5.2.4 Oceano Dunes SVRA PM_{10} Emissions Mapping

Over the last few years, CARB and DRI have provided technical expertise and guidance to the OHMVR Division and SLOAPCD to help develop appropriate solutions for addressing fugitive PM_{10} emissions from Oceano Dunes SVRA. Most recently, DRI developed a 3-dimensional atmospheric dispersion model that simulates emissions and wind conditions in the SVRA to estimate PM_{10} concentrations within the communities east and southeast of the SVRA. The DRI model is supported by CARB and the SAG for use in meeting the requirements of the SOA (see section 5.1.4; OHMVRD 2019, p. 3-3). The model uses much of the data generated by the studies listed in EIR section 5.2.3 to develop the model. In particular, the data collected by the PI-SWERL provide a relative comparison of how emissive, or how much PM_{10} and dust, is generated by different areas of the dunes during the same meteorological conditions.

Areas of high and low PM_{10} emission potential within Oceano Dunes SVRA, as determined by the latest modeling conducted for the SOA and Draft PMRP, are shown in Figure 5-4 Oceano Dunes SVRA Heat Mapping (OHMVRD, 2019). Figure 5-4 shows the average PM_{10} emission rates throughout the SVRA on the 10 windiest days between May 1, 2013 and August 31, 2013.[14] Portions of the SVRA depicted in red reflect areas with higher PM_{10} emissions; areas in tan have lower PM emissions. The 6 Exclosure is located near the coast in an area exhibiting relatively lower emissivity than areas to the north and northwest of the 6 Exclosure. The East Boneyard Exclosure, located along the SVRA's southern border, is in an area that has relatively lower emissivity than other, more northern areas of the SVRA. In contrast to the 6 Exclosure, the East Boneyard Exclosure is not bordered by areas with higher relative emissivity.

The relatively lower emissivity potentially present within the East Boneyard Exclosure and 6 Exclosure indicates that these areas are not currently identified as key contributors to downwind PM_{10} concentrations. The OHMVR Division, therefore, would not prioritize these areas for dust control unless new information becomes available that changes the current understanding of the potential emissivity in the 6 Exclosure and East Boneyard Exclosure.

5.2.5 Air Quality Sensitive Receptors

Sensitive receptors are people that have an increased sensitivity to air pollution or environmental contaminants. A sensitive receptor is generically defined as a location where human populations, especially children, seniors, and sick persons, are located where there is reasonable expectation

[13] Although Table 4 of the report identifies the upwind source area for the CDF monitoring station being 290° to 295° north-northwest, the confidence level is low, and the report states that confidence would be bolstered with additional years of data.

[14] See footnote 7 for an explanation of why this date range was modeled.

of continuous human exposure to air pollutants. These typically include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling unit(s). For the purposes of this EIR, sensitive receptors include the residences on and around the Nipomo Mesa, downwind of Oceano Dunes SVRA, and schools including, but not limited to Lopez Continuation High School, Mesa Middle School, and Lange (Dorothea) Elementary School.

5.3 PROJECT IMPACTS

5.3.1 Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed HCP would have a significant air quality impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The proposed HCP would not conflict with or obstruct implementation of the SLOAPCD *2001 Clean Air Plan*. The proposed HCP would not result in changes to park visitation or vehicle use levels and is therefore consistent with the growth assumptions and emission-generating characteristics and assumptions used by the SLOAPCD to forecast emissions in the *2001 Clean Air Plan*, as well as the measures and strategies identified to reduce emissions. In addition, there are no control measures applicable to the actions proposed in this EIR. Thus, the project would not conflict with or obstruct implementation of the SLOAPCD 2001 *Clean Air Plan*. Accordingly, the impact on an applicable air quality plan is not discussed further in this EIR.

The proposed capture of SNPL chicks and eggs for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b) does not involve use of equipment or generate emissions. Indirect vehicle emissions from this activity would occur as part of existing CDPR monitoring activities. As such, impacts associated with CA-12b are not discussed further in this EIR.

The proposed CDPR UAS Use for Park Activities (CA-52) would require the use of equipment powered by an electric motor. Though there may be some imbedded, indirect emissions associated with electricity consumption of the UAS, these emissions would be nominal and occur off site. As such, impacts associated with CA-52 are not discussed further in this EIR.

The proposed HCP does not include activities or project components that would create objectionable odors. The proposed mechanical trash removal activity (CA-21) may result in odors associated with fuel combustion needed to power the vehicle. This equipment would be mobile and generally located in areas of the SVRA away from sensitive receptor locations. Odors at this distance would readily disperse and any effects of transient receptors (e.g., OHV riders or campers in the SVRA) would be temporary and short in duration. No odor impact would occur. Therefore, odor impacts are not discussed further in this EIR.

5.3.2 Cumulatively Considerable Net Increase of Criteria Air Pollutants and Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

Many of the operational activities proposed for HCP coverage are existing and ongoing and, therefore, are considered part of baseline conditions for this project.

The implementation of mechanical trash removal (CA-21) and the reduction of the East Boneyard Exclosure and 6 Exclosure (CA-50) could change dune surface emissivity in areas where these activities occur. Although there is uncertainty regarding the likelihood and magnitude of the change, an increase in dust emissions from dune surfaces attributable to CA-21 or CA-50 could result in higher PM_{10} concentrations downwind of Oceano Dunes SVRA, potentially leading to changes in the number of CAAQS and/or NAAQS exceedances at APCD monitoring stations. CA-21 and CA-50 could change surface emissivity in different ways. Accordingly, these two activities are discussed independently of one another, with significance conclusions drawn in EIR sections 5.3.2.1 and 5.3.2.2. Due to the uncertainty regarding the likelihood and the magnitude of potential changes in emissivity resulting from these activities, potential impacts are discussed qualitatively in nature.

5.3.2.1 Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50)

The East Boneyard Exclosure and 6 Exclosure are two areas within the seasonal exclosure[15] that are approximately 49 and 60 acres in size, respectively. Combined, the two exclosures (109 acres) represent less than 10 percent of the open riding and camping area (1,305 acres). Individually, they represent approximately 4 percent (for East Boneyard Exclosure) and 5 percent (for the 6 Exclosure) of the SVRA's open riding and camping area. Under the HCP, the OHMVR Division would annually reduce (i.e., no longer fence off, meaning the area would be open to year-round riding and camping) the 6 Exclosure in 328-foot increments (equal to 12 percent of the total length of the 6 Exclosure, or approximately 7.5 acres) as long as specific biological criteria are met (see HCP section 5.2.3). These approximately 7.5-acre annual increments, which are assessed in a north-to-south manner, each reflect approximately 0.55 percent of the open riding and camping area.[16] Under the fastest timeframe, it would take approximately 8 years to fully reduce the 6 Exclosure. In contrast, during the first year of HCP implementation, the East Boneyard Exclosure would be eliminated (i.e., the full 49 acres would be available for year-round riding).

As described in EIR section 5.2.4, the OHMVR Division, SLOAPCD, CARB, and DRI have studied the dynamics of dust generation at Oceano Dunes SVRA and developed a modeling tool that is intended to identify areas at Oceano Dunes SVRA that should be prioritized for dust

[15] A seasonal exclosure is an area of Oceano Dunes SVRA that is fenced off during the breeding season of the CLTE and SNPL, March 1st through September 30th. The remaining portion of the year (i.e., October 1st to the end of February), these areas are open to riding. To make the exclosure suitable habitat for CLTE and SNPL, the OHMVR Division imports wrack, wood chips, and other suitable habit material, and disperses it throughout the exclosure area. Wrack consists of seaweed, driftwood, and other organic materials (see EIR section 4.1.2).

[16] Though the HCP proposes incremental reductions of the 6 Exclosure, it is unclear at this time if the OHMVR Division would proceed with the reductions in a north-to-south manner or in an east-to-west manner. For the purposes of this EIR's analysis, reduction of the 6 Exclosure in a north-to-south manner is assumed to be a worst-case scenario, based on the 6 Exclosure's proximity to higher emitting areas immediately north and east of the exclosure and because of its location upwind of the CDF monitoring station.

control activities, such as the installation of temporary dust control measures (wind fencing, straw bales) or planting of vegetation as a permanent dust control measure. The current modeling tool reflects dust emissions based on the historical data collected at and in the vicinity of Oceano Dunes SVRA, and thus reflects existing recreational patterns, including the seasonal exclosures and any effect these exclosures have on dust generation at Oceano Dunes SVRA.

CA-50 (and CA-21) are proposed activities that would have effects on emissivity not currently accounted for in the OHMVR Division, SLOAPCD, and CARB dust control modeling effort, since the underlying data for surface emissivity are from the 2013 calendar year. Although the Boneyard Exclosure and 6 Exclosure are areas already open to OHV recreation from October 1st through February 28th, additional OHV recreation in these areas from March 1st through September 30th (the CLTE and SNPL breeding season), which includes the spring windy season at the SVRA, could result in changes to dust emissions originating from the East Boneyard Exclosure and 6 Exclosure. The likelihood for changes to occur within the East Boneyard Exclosure and 6 Exclosure and the potential effects on downwind air quality and ambient air quality standards if a change does occur are discussed below.

Potential Changes in Surface Emissivity (Dust Emissions)

As shown in Figure 5-4, dust emission from surfaces in Oceano Dunes SVRA open riding and camping area vary, with some areas having higher emissions and other areas having lower emissions. The latest modeling conducted in accordance with the SOA indicates the East Boneyard Exclosure and 6 Exclosure are areas of relatively lower emissions (see Figure 5-4), although there is no conclusive reasoning for why these areas have lower relative emissions. In the report titled *Updated Wind Erodibility Measurements at and Near the Oceano Dunes SVRA: Draft Overview of Findings*, discussed in EIR section 5.2.3, DRI compared PI-SWERL measurements taken within the larger Seasonal Exclosure (which includes the 6 Exclosure) in August 2013, September 2014, and September 2015 (with the exclosure in place and surface material[17] distributed throughout the exclosure area) to measurements taken in March 2016 (5 months following the exclosure removal). The report found that PI-SWERL measurements taken in March (after 5 months of OHV recreation in the exclosure area) were, on average, 2 to 3 times higher than PI-SWERL measurements taken in August and September when OHV recreation was prohibited within the exclosure. The report observed the increase was "likely associated with OHV travel," but also noted, "it would be instructive to repeat these measurements to ensure that the apparent effect of OHV riding was not an anomalous finding" (DRI, 2016).[18] The emissivity increases reported by DRI in the 2016 report were not seen in other areas of Oceano Dunes SVRA where OHV use was relatively constant (i.e., measurements taken outside the exclosure

[17] Surface material in this context, and as used throughout the rest of this chapter, refers to wood chips, plants, wrack and other habitat suitable substances for the CLTE and SNPL.

[18] As discussed further on in the section, these conclusions were based on 23 measurements made during the 2016 monitoring campaign that could be compared to the data from the 2013 monitoring campaign. Nine (9) tests were conducted in the 6 Exclosure at seven (7) distinct locations, and six (6) tests conducted in the East Boneyard Exclosure at four (4) distinct locations. This equates to approximately 8.6 acres per test location in the 6 Exclosure and approximately 12.3 acres per test location (Etyemezian, 2019).

areas); however, DRI did not provide a quantitative measurement of the OHV activity that led to the measured change.

In addition to discussing the observed increase in emissivity associated with OHV riding, the report also discussed other factors that could alter emissivity in the exclosure areas, stating, "it is not clear to what extent the Plover exclosure represents the characteristics of the wider ODSVRA, especially since it is known that stabilizing materials (e.g., wood chips) have been added to the surface from time to time in support of Plover nesting activities" (DRI, 2016).[19] Furthermore, the samples within the East Boneyard Exclosure were taken on relatively flat dune surfaces (due to the constraints of the PI-SWERL instrument), which means the data gathered may or may not be representative of overall emission potential in this portion of the SVRA due to large topographical changes present in the East Boneyard Exclosure area.

It is uncertain at this point what amount of change, if any, year-round OHV recreation in the East Boneyard Exclosure and 6 Exclosure would have on overall dust emissions downwind of the SVRA. Based on observations made by DRI in *Updated Wind Erodibility Measurements at and Near the Oceano Dunes SVRA: Draft Overview of Findings*, there is potential for surface emissivity to increase under elimination of the East Boneyard Exclosure and 6 Exclosure, and the emissivity increases observed after the seasonal exclosure had been reduced for approximately 5 months were shown to be 2 to 3 times higher than those when the seasonal exclosure had been fenced off. OHV riding could have contributed to the measured increases; however, conditions at the East Boneyard Exclosure and 6 Exclosure differ from one another in some ways. Whereas the 6 Exclosure is located closer to the shore and has suitable habitat material imported to the site prior to the CLTE and SNPL nesting season, the East Boneyard Exclosure is located further inland, has no suitable habitat material imported prior to the nesting season, and the open dunes shift rapidly in the East Boneyard area. Despite varying conditions at the two sites, DRI's observations suggest that reducing the East Boneyard Exclosure and 6 Exclosure could increase PM and dust emission potential if they are open to OHV riding throughout the entire year.

It is uncertain what effect this increase would have on overall PM_{10} emissions from the Oceano Dunes SVRA dust generation system. As shown in Figure 5-4, the East Boneyard Exclosure and 6 Exclosure are already some of the lowest emitting areas within the SVRA. This means that, even if PM emissions were to increase two or even threefold (the magnitude observed by DRI after 5 months of the seasonal exclosure being reduced), the rates still would still be less than the highest emitting portions of the SVRA (e.g., the area north of the 6 Exclosure and the area southwest of Pavilion Hill). In other words, any potential increases in PM and dust emissions (particularly at the 6 Exclosure, which would be reduced incrementally) would be relatively minor compared to the highest emitting areas and in the context of overall mass emissions of PM_{10} from Oceano Dunes SVRA.

[19] Although current emissions from the 6 Exclosure may be abated somewhat by surface material brought into the exclosure prior to the CLTE and SNPL nesting season, OHVs and other vehicle activity in the 6 Exclosure during the non-nesting season may change the stabilizing properties of the added material. In contrast, the portion of the dune complex located in the East Boneyard Exclosure does not have any habitat enhancing materials imported, which might serve to stabilize the dune surface. The East Boneyard Exclosure is also located in an area where the sand dunes shift rapidly.

Nonetheless, potential changes in surface emissivity characteristics caused by implementation of CA-50 is not accounted for in the current SOA modeling (see section 5.1.4) and thus, could interfere with current dust reduction goals set by the SOA. In addition, increases in surface emissivity could lead to the entrainment of more dust and PM in the wind, resulting in higher ambient pollutant concentrations measured at SLOAPCD and OHMVR Division monitoring stations (i.e., CDF, Mesa2, NRP, and Oso Flaco) and potential violations of ambient air quality standards. The potential for increases in surface emissivity to lead to higher measured pollutant concentration at the SLOAPCD's two closest monitoring sites, CDF and Mesa2, is discussed below.

Potential Changes to Ambient Air Quality and CDF and Mesa2 Monitoring Stations

The 6 Exclosure and East Boneyard Exclosure are located in two different geographic areas of Oceano Dunes SVRA. Whereas the 6 Exclosure is located along the shoreline, approximately halfway between the SVRA's northern and southern borders, the East Boneyard Exclosure is inset from the shore, along the SVRA's southern border. As such, any potential changes to emission characteristics in the two areas would be most notable at different downwind locations.

6 Exclosure. As discussed in the report titled *2016 Aerosol Particulate Profiler (APP) Monitoring Network: Summary of Finding*s (see EIR section 5.2.3), DRI evaluated wind speed and direction along the path from Oceano Dunes SVRA to the SLOACPD's CDF monitoring station and concluded that PM_{10} concentrations at CDF are most influenced by wind and windblown dust from the area spanning 290° and 295° upwind of the monitoring station.[20]

As shown in Figure 5-5 Source Area Upwind of CDF and Mesa2 (290° and 295°), the northernmost portion of the 6 Exclosure is located within the 290° to 295° area of influence, upwind of the CDF site. The proposed incremental, approximately 7.5-acre reductions of the 6 Exclosure may take place from north to south, thus keeping continuity between the remaining portion of the 6 Exclosure and other seasonal ones to the south (e.g., 7 Exclosure) or may occur in an alternate configuration.[21] The initial 7.5-acre reduction proposed for the 6 Exclosure represents approximately 4 percent of the total 193-acre upwind area of influence for the CDF monitoring station. If conditions are satisfied to continue annual reductions of the 6 Exclosure, then additional annual reductions would occur until the entire portion of the 6 Exclosure upwind of the CDF source area is open to year-round riding; however, only one additional, potential annual reduction would be within the 290° to 295° area of influence of the CDF monitoring station. In total, approximately 12.5 acres of eliminated 6 Exclosure would be within the 290° to 295° CDF upwind area of influence (equal to 6 percent of the 193-acre upwind area of influence). This area is located 2.4 miles from the CDF monitoring site but would have the highest potential to cause or contribute to measured exceedances of NAAQS or CAAQS at the CDF monitoring station.

East Boneyard Exclosure. The proposed 49-acre reduction of the East Boneyard Exclosure would occur during the first year of HCP implementation. No recent studies have been

[20] As noted in Table 4 on page 35 of the study, the confidence level of this conclusion/observation is low since it is only based on data from the 2016 calendar year. It goes on to state that additional years' data would bolster confidence.

[21] In terms of area, this 100-meter/328-foot reduction equates to approximately 7.5-acre increments.

conducted for the portions of Oceano Dunes SVRA that influence PM concentrations at the Mesa2 monitoring site; however, applying the same narrow area of influence documented for the CDF site (290° and 295° upwind) to the Mesa2 monitor reveals that a small portion (approximately 1 acre) of the northern East Boneyard Exclosure falls within the upwind area of influence for Mesa2 (see Figure 5-5). The narrow upwind area of influence for the Mesa2 station is approximately 500 acres in total size; the reduction in the East Boneyard Exclosure encompasses approximately 0.4 percent (1 acre) of the 500-acre upwind area of influence for Mesa2 and is located approximately 3.6 miles from the Mesa2 monitoring station.

It is important to note the 290° to 295° upwind area of influence identified for the CDF site is not definitive. In its report, DRI noted the confidence level for the wind direction observation for CDF was low, and additional years' data would be needed to bolster confidence (DRI 2017; p. 35). Therefore, in actuality, the range in wind direction that influences measurements at the CDF site (and for the purposes of this EIR the Mesa2 site) may be larger. In addition, although there may be an upwind area that most influences measured concentrations at any particular site, not all emissions are from that specific upwind area of influence; PM and dust emissions from other portions of the SVRA still contribute to concentrations measured at CDF and Mesa2, but to a lesser extent.

Though the 1 acre of the East Boneyard in the 290° to 295° Mesa2 upwind area of influence is relatively small, and the Mesa2 monitoring station (on average) monitors approximately half the amount of CAAQS exceedances as CDF, increases in surface emissivity and dust generation in the East Boneyard area could possibly cause or contribute to measured exceedances of NAAQS or CAAQS at Mesa2.

Significance Determination

The potential for CA-50 to increase surface emissivity and dust generation in a manner that adversely affects ambient air quality and causes or contributes to existing or projected violations of the NAAQS and/or CAAQS is limited for several reasons. First, any potential changes to surface emissivity in the East Boneyard Exclosure and 6 Exclosure would occur in relatively lower-emitting areas, and the existing data indicates that these areas, after having undergone an increase, would still be relatively low compared to other areas of the SVRA. Second, the East Boneyard Exclosure and 6 Exclosure are located approximately 2.4 and 3.6 miles, respectively, from the air quality monitoring station on which they are most like to have the greatest influence. Third, as described in EIR section 5.1.1, NAAQS attainment determinations are based on prescribed computational equations, and generally more than one exceedance of the NAAQS standard must occur for a violation of the standard to occur. Thus, a single exceedance would not necessarily result in a violation of the NAAQS standards for PM_{10} or $PM_{2.5}$. The CAAQS are generally more stringent than the NAAQS, in that a single exceedance of the PM_{10} or $PM_{2.5}$ State standards can be considered a violation of the CAAQS.

The implementation of CA-50 would more likely contribute to CAAQS exceedances than NAAQS exceedances at CDF and Mesa2 if left unchecked. As discussed in EIR section 5.1.2, historically, the CAAQS have been exceeded more frequently than the NAAQS, and unlike the CAAQS, the NAAQS stipulate that individual, daily exceedances do not necessarily constitute a violation. The implementation of CA-50 could, over the short term, impede air quality improvements (i.e., increase the number of CAAQS and NAAQS exceedances and potentially

increase CAAQS and NAAQS violations) as well as potentially affect public health in an adverse way.[22]

Accordingly, potential increases in surface emissivity and dust generation from within the reduced exclosure areas as a result of proposed CA-50 are considered to be a potentially significant impact. Although the potential for this impact to occur is considered limited based on the amount of exclosure areas in relation to the overall riding area, the current emissivity characteristics of the exclosure area, and the rate at which the 6 Exclosure would be reduced, increases in emissivity and dust generation could exacerbate sensitive receptor exposure to substantial pollutant concentrations and/or cause or contribute to exceedances of ambient air quality standards. To ensure that proposed CA-50 does not cause or contribute to adverse changes in ambient air quality or violations of NAAQS and CAAQS for $PM_{2.5}$ and PM_{10}, the OHMVR Division would implement Mitigation Measures AIR-1A, AIR-1B, and AIR-1C (see EIR section 5.5). Mitigation Measure AIR-1A would require quarterly emission monitoring[23] of the reduced exclosure areas using one or more methods accepted by the OHMVR Division, the SAG, and the SLOAPCD for measuring surface emissivity and dust generation at Oceano Dunes SVRA (e.g., PI-SWERL, ambient PM_{10} monitors, etc.). If the monitoring shows emissivity within the new areas available for year-round OHV recreation increases by a factor of three or more,[24] the OHMVR Division would implement Mitigation Measures AIR-1B and AIR-1C, respectively, to control and/or offset emissions, so there is no net change in dust generation and downwind PM_{10} concentrations at Oceano Dunes SVRA. With the implementation of Mitigation Measures AIR-1A, AIR-1B, and AIR-1C, this impact would be ***less than significant with mitigation incorporated***.

5.3.2.2 General Facilities Maintenance (CA-21)

Under CA-21, CDPR would add mechanical trash removal to its facility maintenance operations. The primary goal of this activity is to improve the safety of visitors and wildlife by removing litter and debris, which is most likely to be found in areas of Pismo State Beach and the SVRA that experience higher visitation. Mechanical trash removal would focus on a narrow (200- to 300-foot-wide), approximately 140-acre band running from Grand Avenue to Post 6, with treatment potentially occurring in other locations pending resource staff review. Although the total area targeted for treatment is roughly 140 acres, the maximum amount of area treated per day could be as high as approximately 24 acres. Some areas may be treated several times a month during a busy season, whereas others only once or twice a year, if at all. The process of

[22] As described in EIR section 5.1.2, the CAAQS and NAAQS are air quality standards adopted with the intent of protecting public health.

[23] Since DRI's preliminary finding that OHV activity may be correlated with higher emissivity was based on data points separated by six-month intervals, monitoring on a 3-month interval would provide the OHMVR Division and the SAG with finer resolution data on potential emission changes. This finer resolution data may provide greater insight into larger phenomena that may affect emissions over the course of the year. The provision that future reductions would be halted after three consecutive increases would ensure potential, measured changes are not attributable to temporal shifts.

[24] A factor of three or more is based on DRI's observation that emissivity in the seasonal exclosure had increased after the seasonal exclosure areas had been reduced for approximately 5 months (DRI, 2016).

mechanical trash removal would actively disturb the surface of the sand and remove debris and organic material from the top approximately 2 to 6 inches of the sand surface.

The physical process of raking the sand for trash removal would create microtopographic changes in dune surfaces that are likely to be similar to that caused by existing recreational and maintenance activities. It would also remove debris that could pose a safety issue to visitors and wildlife. Treatment would likely take place in beach areas experiencing higher visitation, since there is a greater potential for anthropogenic material (e.g., charcoal, beach toys, wood, etc.) to be left behind at these locations. Areas of higher visitation are already subject to higher disturbance associated with recreational and maintenance activities and therefore, the effects of mechanical trash removal activities in terms of active dune surface disturbance would be similar to current, existing conditions. Any microtopographic changes that could alter emissivity characteristics of the raked area would be short-lived since, being in more traveled areas, OHV activity, camping, and/or park maintenance activities that result in travel over the sand would quickly return the dune surface to its existing conditions prior to the mechanical trash removal. Although the physical, microtopographic changes may be short-lived, removing materials from the surface of the sand could potentially increase PM emissions from portions of the SVRA that have undergone treatment. According to a literature review of published research papers on the effects of mechanical trash removal, one paper documented emissivity increases after mechanical trash removal had occurred. Some level of uncertainty exists regarding the findings of the report as they apply to PM emissions at Oceano Dunes SVRA.

In the research paper *Loss of Coastal Strand Habitat in Southern California: The Role of Beach Grooming*, Jenifer E. Dugan and David M. Hubbard investigated the effects of beach grooming on sand transport (Dugan & David, 2010). Although the paper ultimately concluded that beach grooming at San Buenaventura State Beach increased the rate of aeolian sand transport by 10 to 1,000 times compared to ungroomed portions of the beach, the conditions under which these conclusions were drawn differ from those at Oceano Dunes SVRA because the portion of ungroomed beach used in the study had been ungroomed since 1999, approximately 13 to 14 years before the study was conducted, was already partially vegetated, and had wrack (kelp and organic debris washed onto the beach) cover approximately five times greater than the groomed portion of beach used in the study. The portions of Oceano Dunes SVRA proposed for mechanical trash removal are located inland of the shoreline, where vegetation and wrack do not currently exist. In addition to having more material present on the sand surface (e.g., wrack), the ungroomed portions of San Buenaventura State Beach studied for aeolian transport had been artificially seeded by the researchers, leading to a higher rate of vegetation at and upwind of the sand transport samplers used in the study. Wrack, vegetation, and other items on the surface of the sand have been well documented as ways to control aeolian transport (i.e., if the top layer of sand is covered, it does not have the potential to emit sand during wind events).

Although the conditions under which the study conducted by Dugan and Hubbard differ from those present at Oceano Dunes SVRA, the physical process of removing debris from the surface of the sand at either location would have a similar effect on the aeolian transport process. During a recent field test conducted with the piece of equipment that would be used for the proposed mechanical trash removal activity at Oceano Dunes SVRA, CDPR staff assessed the materials that were collected by the machine. The results of the analysis showed that approximately 22 percent of the material collected was trash (e.g., paper, plastic debris, glass, etc.) and the remaining 78 percent of the material was organic (e.g., wood and charcoal) or rock. While these

types of material, natural or anthropogenic, are not the same as the wrack material observed at the San Buenaventura State Beach, they could offer similar, surface-stabilizing properties based on their location and density. The removal of such items from the surface of the sand at Oceano Dunes SVRA could, in turn, increase emissivity in portions of the SVRA that have been raked but not at the same rates observed by Dugan and Hubbard, since conditions at Oceano Dunes SVRA are regularly disturbed, free of vegetation, and not seeded to artificially high vegetation rates.

Significance Determination

The frequency of mechanical trash removal that would be conducted at Oceano Dunes SVRA and what effects it could have on long-term surface emissivity in the areas that have been treated are unknown. Areas experiencing higher visitation are more likely to be subject to mechanical trash removal activities, since there would be a higher likelihood of visitors leaving items behind. Since it is unknown what quantity of trash and debris are currently located within the portion of the SVRA that would undergo treatment, it cannot be determined at this time what level of stabilization the existing trash and organic material provide. Nonetheless, based on observations made by Dugan and Hubbard, removing material from the top layer of sand would likely increase the emissivity in areas that have undergone treatment. The potential increases in emissivity in areas that already exhibit a relatively higher potential to emit than other portions of the SVRA (e.g., the area between Post 4 and the northern boundary of the existing seasonal exclosure [see Figure 5-4]), and which are located in or near the upwind area of influence for the CDF monitoring station (see EIR section 5.3.2.1), are considered to be a potentially significant impact.

To address this potentially significant impact, the OHMVR Division would implement Mitigation Measures AIR-1A and AIR-1D. Mitigation Measure AIR-1A requires the periodic monitoring of areas undergoing mechanical trash removal to determine how surface emissivity may change after mechanical trash removal has occurred. If the monitoring shows an increase in emissivity south of Post 4, the CDPR shall implement Mitigation Measure AIR-1D, which requires the cessation of mechanical trash removal in that area until dust control measures have been deployed to fully offset the increase in emissions from the area.[25,26] The CDPR shall continue to monitor emissivity until it has been demonstrated that emissivity levels in the area

[25] Although monitoring would be conducted for all areas undergoing mechanical trash removal (i.e., from Grand Avenue to Post 6), the area north of Post 4 exhibits relatively low emission potential, is located upwind of a large foredune system in the Pismo Dunes Natural Preserve and has not been identified as an area that substantially contributes to PM concentrations at the CDF or any other monitoring station. As such, Mitigation Measure AIR-1D focuses on the areas proposed for mechanical trash removal that already exhibit high emission potential and which are located near or within the upwind area of influence for the CDF monitoring station.

[26] Whereas a threefold increase in emissivity in the East Boneyard Exclosure and 6 Exclosure areas would be relatively minor since they currently have a low baseline potential to emit, any increases in surface emissivity due to mechanical trash removal south of Post 4 would occur in areas that already have a relatively higher baseline potential to emit. As such, potential emissivity changes associated with mechanical trash removal south of Post 4 are considered potentially significant.

undergoing mechanical trash removal have stabilized and adequate control measures have been implemented to offset the net increase in emissions resulting from the implementation of CA-21.

With the implementation of Mitigation Measures AIR-1A and AIR-1D, this impact would be ***less than significant with mitigation incorporated***

5.4 CUMULATIVE IMPACTS

The proposed project would not result in a cumulatively considerable air quality impact with mitigation incorporated.

Some of the future activities covered by the HCP, but which are not proposed projects in this EIR (see Table 3-1.), could generate or reduce PM_{10} and $PM_{2.5}$. Construction of new projects[27] at the SVRA in the future could generate fugitive dust emissions from surface disturbance (e.g., site preparation and grading) and exhaust emissions from equipment operation (e.g., excavators, loaders, worker trucks/cars, etc.). These projects would be subject to future environmental review and would implement fugitive dust control measures, as necessary, to comply with the SLOAPCD's thresholds of significance, such as the 2.5-ton-per-quarter threshold established for PM_{10}. Conversely, implementation of the PMRP (CA-44) would reduce fugitive dust emissions from the SVRA. As part of the PMRP, the OHMVR Division is proposing to develop a 48-acre vegetated foredune, plant up to 4 additional acres of foredune vegetation, install additional wind fencing and other seasonal dust control measures (e.g., straw bales), and plant up to 319 additional acres of backdune vegetation throughout the SVRA. These activities would control fugitive dust emissions from within the SVRA and reduce concentrations of dust and PM downwind of the SVRA. Thus, the PMRP is anticipated to have a beneficial effect on air quality, although the actual benefit resulting from the PMRP is not known at this time and may not be known with certainty until such time as the PMRP is fully implemented. The 48-acre foredune area has been fenced but not planted or otherwise treated pending CEQA and other approvals.

Emissions of PM_{10} and $PM_{2.5}$ could also be generated during operational activities associated with future projects associated with the PWP (Table 3-1.). For example, improving campgrounds (e.g., Project D: Oceano Campground Infrastructure Improvement Project and Project F: North Beach Campground Facility Improvements) or opening a new portion of the SVRA for riding (e.g., Riding in 40 Acres [CA-42]) could increase OHV activity in some portions of the SVRA while decreasing it in others. This shift in vehicular activity could change the amount and/or the geographic distribution of emissions within the SVRA.

Criteria air pollutants (e.g., PM_{10} and $PM_{2.5}$) generated by potential future activities could combine with temporary fugitive dust emission increases[28] associated with the implementation of CA-50 and CA-21 (see EIR sections 5.3.2.1 and 5.3.2.2, respectively); however, the proposed project's incremental contribution to cumulative emission impacts would be less than significant.

[27] The future projects identified in Table 3-1. that could have an adverse effect on air quality during project construction include: Grover Beach Lodge and Conference Center (CA-38), Riding in 40 Acres (CA-42), Special Projects (CA-49), and various PWP projects.

[28] Temporary in this context refers to emission increases that may occur and that would need to be offset under the implementation of Mitigation Measures AIR-1B through AIR-1D.

The discussion of potential impacts presented in EIR section 5.3 is cumulative in nature. In considering potential cumulative air quality impacts, it is important to note that a region's non-attainment status is generally attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of regional ambient air quality standards. Instead, a project's individual emissions contribute to overall air quality conditions. If a project's contribution to cumulative air quality conditions is considerable, then the project's cumulative impact on air quality would be considered significant.

The proposed project would implement Mitigation Measures AIR-1A through AIR-1D, which require emission increases associated with the implementation of CA-50 and CA-21 to be evaluated and steps taken to offset increases in emissions if they are found to cause or substantially contribute to a violation of state and/or federal air quality standards. In addition, cumulative emission increases associated with the activities proposed in the HCP, and those associated with future projects, would be assessed during development of the PMRP and Annual Work Plans, which are required to be designed such that state and federal PM_{10} air quality standards will be achieved. As such, the cumulative air quality impact of the project would be ***less than significant with mitigation incorporated***.

5.5 MITIGATION MEASURES

Impact AIR-1: The proposed new covered activities of mechanical trash removal (CA-21) and reducing the East Boneyard Exclosure and 6 Exclosure (CA-50) could potentially change dune surface emissivity, increase dust generation, expose persons to substantial pollutant concentrations, and cause or contribute to exceedances of $PM_{2.5}$ and/or PM_{10} ambient air quality standards.

Mitigation Measure AIR-1A: To ensure that implementation of the HCP does not cause or contribute to violations of air quality standards, the OHMVR Division shall undertake the following monitoring actions.

1) Annually, the OHMVR Division shall identify boundary changes to the 6 Exclosure implemented under CA-50 and disclose this information to the SAG convened under the Stipulated Order of Abatement Case No. 17-01.
2) Prior to initiating mechanical trash removal activities, the OHMVR Division shall divide the trash removal treatment area into appropriate subareas that take into account, but are not limited to, geographic continuity and anticipated level of treatment.
3) In collaboration with the SAG, the OHMVR Division shall evaluate and establish baseline dust/PM_{10} generation in the East Boneyard Exclosure and 6 Exclosure and in the areas proposed for mechanical trash removal. This baseline may be based on:
   a) Historical data;
   b) New data; and/or
   c) A combination of historical and new data.
4) Every 3 months, the OHMVR Division shall conduct emission monitoring at one or more locations within/around the reduced East Boneyard Exclosure and 6 Exclosure areas and within the designated areas that have undergone mechanical trash removal. The specific number and location(s) of the monitoring, as well as instrumentation used for the

monitoring, shall be determined in consultation with the SAG, and the data produced shall be made readily available to the SAG.

5) Based on the emissions monitoring conducted pursuant to item 4) above:
   a) If the average value at a monitoring location associated with the 6 Exclosure shows the area is experiencing an increased emission factor of three or more (compared to baseline conditions) for three or more consecutive monitoring efforts, additional annual reductions of the 6 Exclosure area shall be halted, and the OHMVR Division shall implement Mitigation Measure AIR-1B.
   b) If the average value at a monitoring location associated with East Boneyard shows the area is experiencing an increased emission factor of three or more (compared to baseline conditions) for three or more consecutive monitoring efforts, the OHMVR Division shall implement Mitigation Measure AIR-1C.
   c) If the average value in an area south of Post 4 that has undergone mechanical trash removal shows any measurable increase in emission potential (compared to baseline conditions) after the area has been raked, additional mechanical trash removal of that area shall not occur until the requirements identified in Mitigation Measure AIR-1D have been met. This requirement does not supersede the requirements set for the 6 Exclosure or East Boneyard Exclosure areas by subsections 5a and 5b, respectively.

Mitigation Measure AIR-1B: To ensure that reduction of the 6 Exclosure does not cause or contribute to violations of air quality standards, the OHMVR Division shall undertake the following actions.

1) If, through modeling or other statistical analysis, it is determined that the increased emissions from the 6 Exclosure have caused or substantially contributed to a violation of state and/or federal air quality standards, the OHMVR Division shall, in consultation with the SAG, determine measures that offset increased emission concentrations. These measures may include, but are not limited to:
   a) Returning the exclosure to existing conditions,
   b) Administering a surface treatment on the area of the exclosure that has been reduced, or
   c) Controlling dust from another portion of the HCP area that is equivalent to the measured increase from the exclosure area that caused the violation. In no case shall the control measure acreage cause a loss of camping and motorized recreation that exceeds the acreage gained by reducing the 6 Exclosure.
2) Additional exclosure reduction activities may be resumed when, in consultation with the SAG, it has been determined that the change in emissions from the 6 Exclosure has not caused or substantially contributed to a violation of state and/or federal air quality standards.
3) The OHMVR Division may reduce/cease monitoring of the reduced exclosure areas being carried out pursuant to Mitigation Measure AIR-1A under the following criteria.
   a) Monitoring may be reduced to an interval of once every 6 months if the OHMVR Division no longer proposes to reduce the size of the 6 Exclosure, the monitoring has demonstrated emissions in the reduced exclosure area have stabilized over a period no less than 1 year, and modeling/statistical analysis is not being conducted for the initial emissions rate being analyzed pursuant to item 1) above.

b) Monitoring may cease if the OHMVR Division no longer proposes to reduce the size of the 6 Exclosure, the monitoring has demonstrated that emissions in the reduced exclosure area have stabilized over no less than 2 years, and modeling/statistical analysis is not being conducted for that emissions rate pursuant to item 1) above.
c) If at any time an exclosure is reduced, monitoring shall resume pursuant to Mitigation Measure AIR-1A at a rate of once every 3 months. Conditions 3a) and 3b) must then be met again to decrease the frequency of the monitoring after reducing an area of an exclosure.

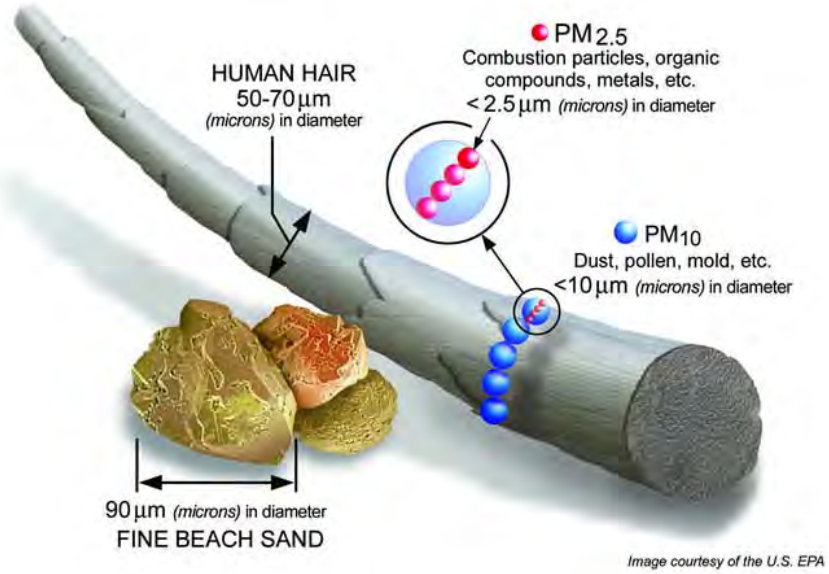
Mitigation Measure AIR-1C: To ensure reduction of the East Boneyard Exclosure does not cause or contribute to violations of air quality standards, the OHMVR Division shall undertake the following actions.

1) If, through modeling or other statistical analysis, it is determined that the increased emissions from the East Boneyard have caused or substantially contributed to a violation of state and/or federal air quality standards (i.e., independent of larger meteorological phenomena), the OHMVR Division shall, in consultation with the SAG, determine another portion of the HCP area outside of the open riding area to control dust. The area controlled shall be equivalent to the measured amount of PM increased from the exclosure area that caused the violation; however, in no case shall the control measure acreage cause a loss of camping and motorized recreation that exceeds the acreage gained by reducing the Boneyard Exclosure.
2) The OHMVR Division may reduce/cease monitoring of the reduced exclosure areas being carried our pursuant to Mitigation Measure AIR-1A under the following criteria.
   a) Monitoring may be reduced to an interval of once every 6 months if the monitoring has demonstrated that emissions in the reduced exclosure area have stabilized over a period no less than 1 year, and modeling/statistical analysis is not being conducted for the initial emissions rate being analyzed pursuant to item 1) above.
   b) Monitoring may cease if it has been demonstrated that emissions in the reduced exclosure area have stabilized over no less than 2 years, and modeling/statistical analysis is not being conducted for that emissions rate pursuant to item 1) above.

Mitigation Measure AIR-1D: To ensure that implementation of mechanical trash removal does not cause or contribute to violations of air quality standards, the OHMVR Division shall undertake the following actions.

1) If mechanical trash removal has increased emissivity in an area south of Post 4 (or other area determined by the SAG), the OHMVR Division shall, in consultation with the SAG, identify and implement measures that offset the increased emission concentrations. These measures may include, but are not limited to:
   a) Permanently discontinuing mechanical trash removal activities in the area that has experienced an increase in emissivity so it can return to baseline conditions, or
   b) Controlling dust from another portion of the HCP area that is equivalent to the measured increase in emissivity from the raked area; however, in no case shall the control measure cause a loss of camping and motorized recreation acreage.
2) Mechanical trash removal activities may be resumed when, in consultation with the SAG, it has been determined the change in emissions from the area that underwent mechanical trash removal has been fully offset.

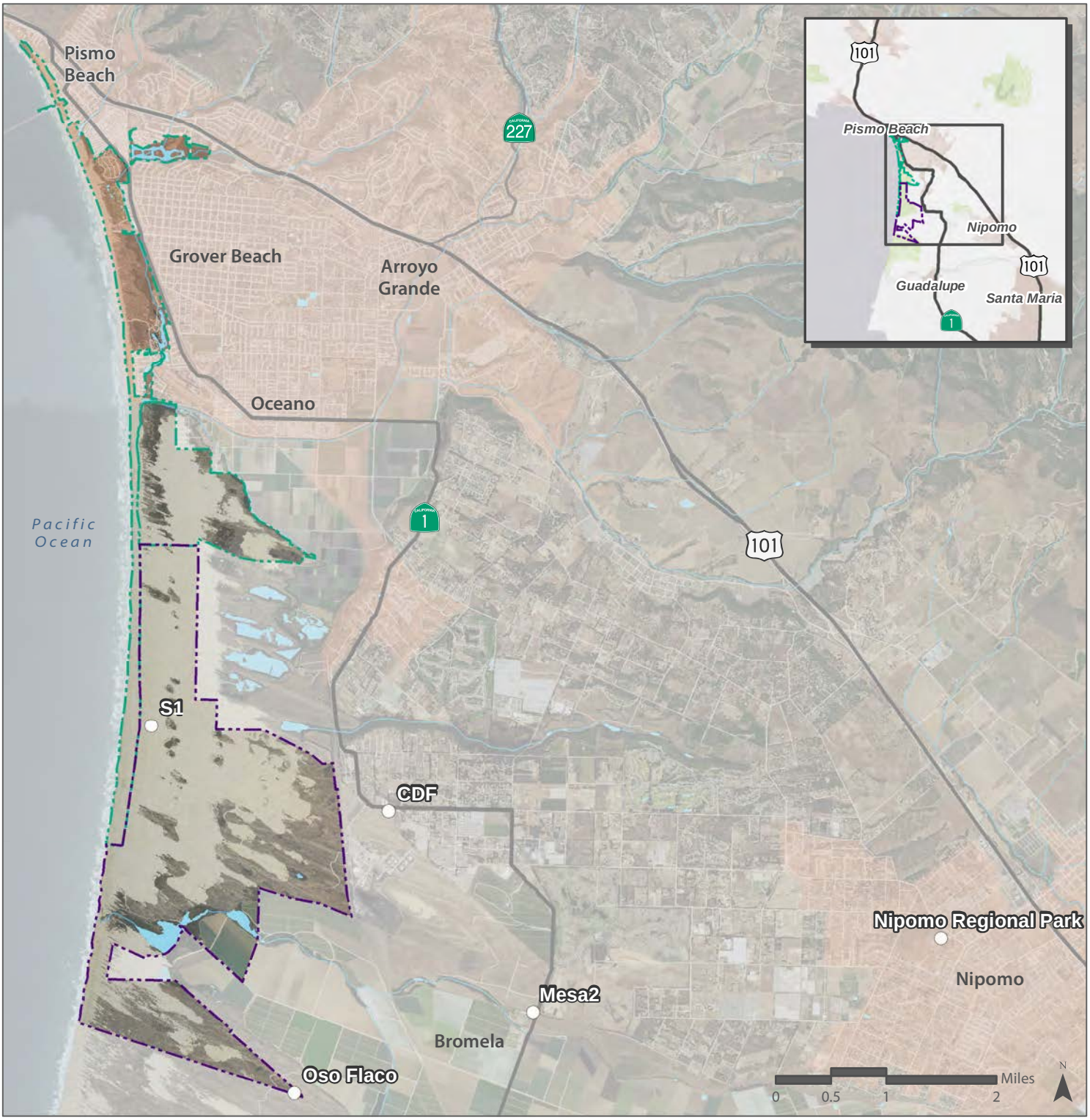
3) The OHMVR Division may reduce/cease monitoring being carried out pursuant to Mitigation Measure AIR-1A for areas that have undergone mechanical trash removal under the following criteria.
   a) Monitoring may be reduced to an interval of once every 6 months if the monitoring has demonstrated that emissions in the mechanically raked area have stabilized over a period no less than 1 year (i.e., new maximum emissivity values are not being recorded), control measures have been implemented that fully offset the maximum increase in emissions after the mechanical trash removal has occurred (i.e., immediately after the area has been raked), and modeling/statistical analysis is not being conducted for the initial emissions rate being analyzed pursuant to item 1) above.
   b) Monitoring may cease if the OHMVR Division no longer proposes to mechanically rake an area, or the monitoring has demonstrated that emissions in the mechanically raked area have stabilized over no less than 2 years (i.e., no new maximum emissivity values have been recorded), and modeling/statistical analysis is not being conducted for that emissions rate pursuant to item 1) above.
   c) If at any time a new area of the HCP area is proposed for mechanical trash removal, its baseline emissivity shall be documented, and monitoring shall occur pursuant to Mitigation Measure AIR-1A at a rate of once every 3 months. Conditions 3a) and 3b) must then be met again to decrease the frequency of the monitoring after a mechanically raked area has recorded an increased emissivity factor compared to baseline conditions.



PM_{10} particles are approximately five to seven times smaller than the diameter of a human hair.
$PM_{2.5}$ particles are approximately 20 to 25 times smaller than the diameter of a human hair.

Source: U.S. EPA 2013b

Figure 5-1 Particulate Matter



Air Quality Monitoring Stations

- Existing air quality monitor

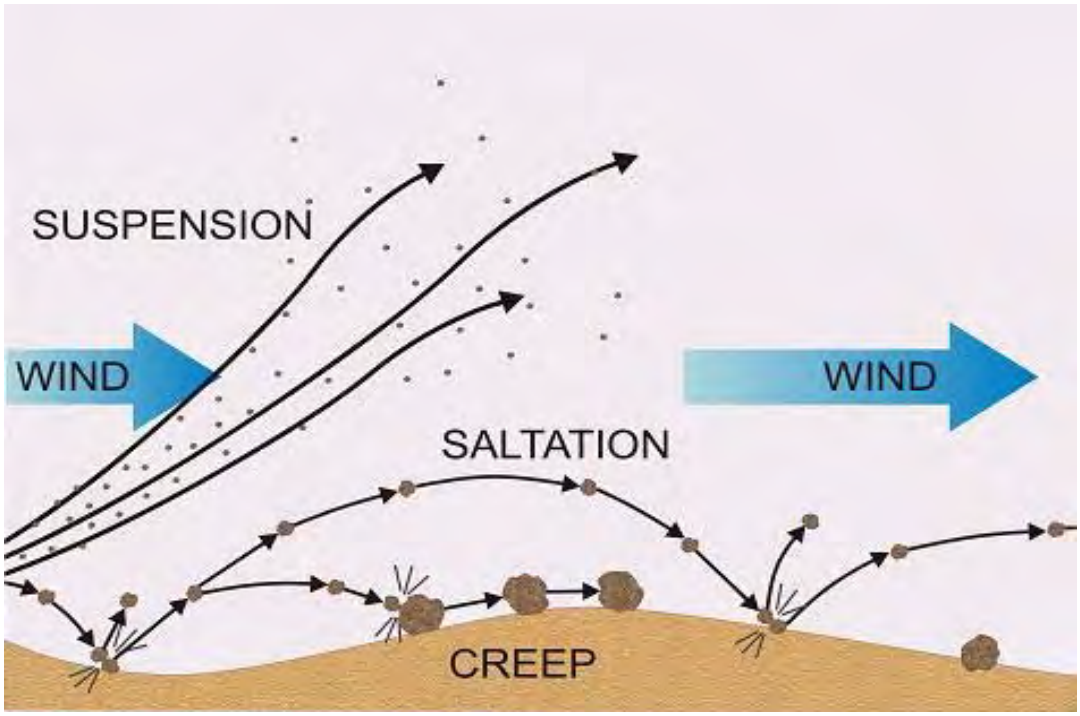
Base Map Features

- Oceano Dunes SVRA
- Pismo State Beach
- Urban Areas
- Waterbody
- Stream
- Highway

February 2020
Source: ARB, 2014; SLO Co Open GIS, 2017; CDPR, 2020 MIG, 2020

Figure 5-2 HCP Area and Air Quality Monitoring Stations

CDPR, Oceano Dunes District Habitat Conservation Plan EIR

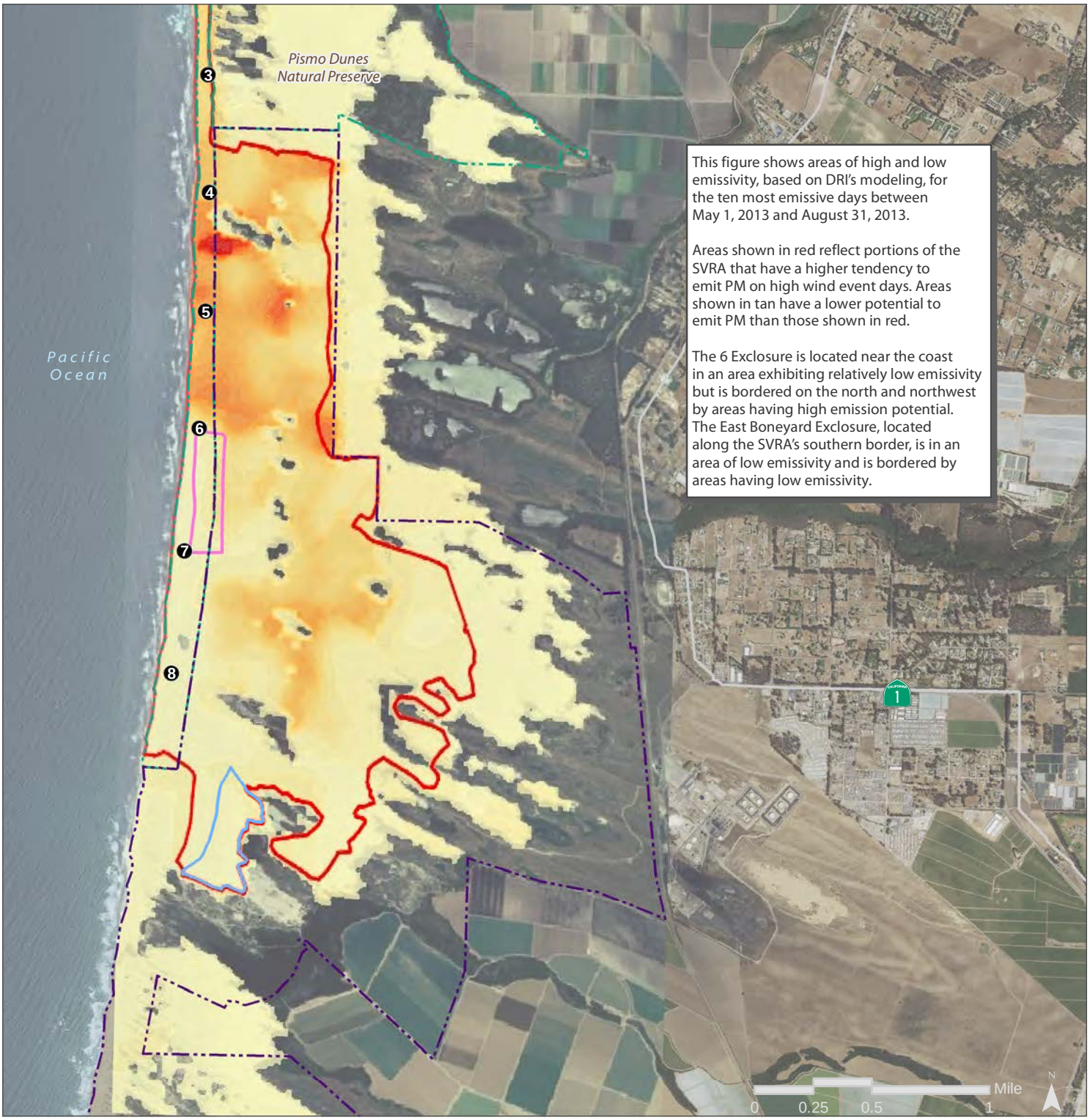


Wind results in sand creep or saltation and the suspension of fine particles.

Source: Jaison 2012

MIG

Figure 5-3 Saltation and Dust Generation Process



Oceano Dunes SVRA Emissions

0.0 6.0 12.0 18.0 24.0 30.0 36.0 42.0

Emissions x 10^3 [Tons/day]

Proposed New Covered Activities

- CA-50 6 Exclosure reduction*
- CA-50 Boneyard Exclosure reduction*

*Approximate location

Base Map Features

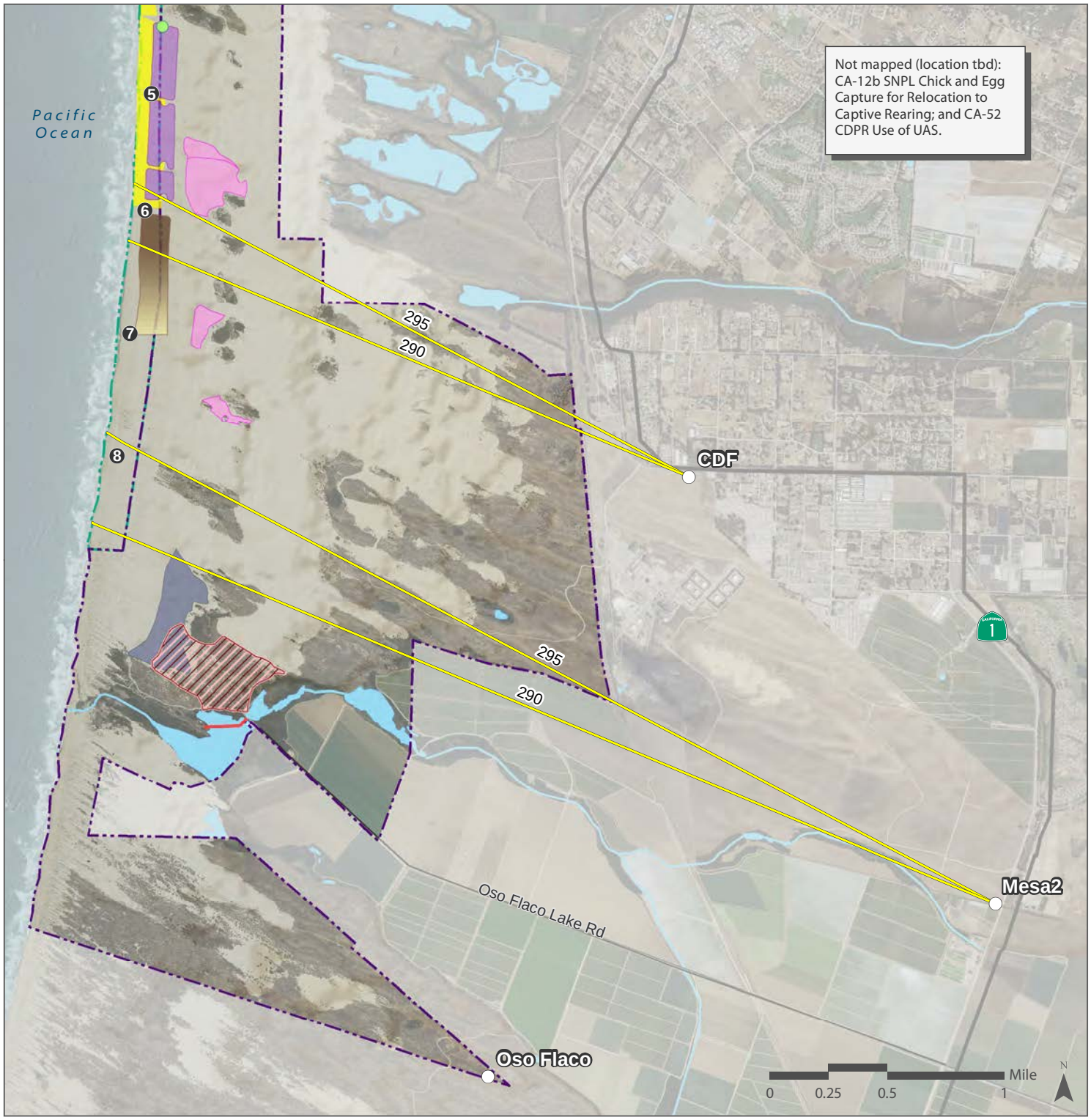
- Oceano Dunes SVRA
- Pismo State Beach
- Oceano Dunes SVRA open riding area boundary
- Marker post
- Highway

MIG

February 2020
Source: CDPR, 2020; MIG, 2020

Figure 5-4 Oceano Dunes SVRA Heat Mapping

CDPR, Oceano Dunes District Habitat Conservation Plan EIR



Air Quality Features

- Existing air quality monitor
- Degree line

Proposed New Covered Activities

- CA-21 Mechanical trash removal*
- CA-50 6 Exclosure reduction*
- CA-50 Boneyard Exclosure reduction*

*Approximate location

Potential Future Covered Activities

- CA-42 Riding in 40 Acres
- CA-43 Safety & Education Center replacement
- CA-44 PMRP, Foredune to be planted
- CA-44 PMRP, Wind fencing converting to vegetation
- CA-48 Oso Flaco Lake boardwalk replacement

Base Map Features

- Oceano Dunes SVRA
- Pismo State Beach
- Marker post
- Waterbody
- Stream
- Highway
- Access road

MIG

February 2020
Source: CGS, 2013
ARB, 2018; CDPR, 2020
CGS, 2013; MIG, 2020

Figure 5-5 Source Area Upwind of CDF and Mesa2 (290° and 295°)

CDPR, Oceano Dunes District Habitat Conservation Plan EIR

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Chapter 6 BIOLOGICAL RESOURCES

6.1 REGULATORY SETTING

This section describes the applicable federal and state laws and regulations governing biological resources. The FESA, Migratory Bird Treaty Act (MBTA), and Clean Water Act (CWA) are the principal federal laws relevant to biological resources in the HCP area. In addition to CEQA, the principal state laws regulating biological resources are CESA, additional California Fish and Game Code[29] sections, and the Porter-Cologne Water Quality Act.

6.1.1 Federal Endangered Species Act

FESA (16 U.S.C. §§ 1531–1544) provides for the conservation of ecosystems (both through federal action and by encouraging the establishment of state programs) upon which threatened and endangered species of fish, wildlife, and plants depend. FESA is enforced by USFWS—part of the Department of Interior—for terrestrial and non-marine fish and by NOAA Fisheries—part of the Department of Commerce—for marine species, including steelhead and other anadromous fish. 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. Key FESA provisions are described below.

Section 3. Section 3 of FESA provides for the designation of critical habitat for listed species. Section 3 defines critical habitat as: (i) the specific areas within the geographical area occupied by the species at the time it is listed on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed, upon determination that such areas are essential for the conservation of the species. The term "conservation" is defined in section 3 as "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary." Therefore, critical habitat includes biologically suitable areas necessary for recovery of the species. Critical habitat may also include an area that is not currently occupied by the species but that will be needed for its recovery.

Section 7. Section 7 of FESA requires federal agencies to ensure that their actions, including issuing permits, do not jeopardize the continued existence of listed species or destroy or adversely modify listed species' critical habitat. "Jeopardize the continued existence of…" means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 Code of Federal Regulations [CFR] § 402.02). "Destruction or adverse modification…" means "a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. Such alterations may include … those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features" (50 CFR § 402.02). USFWS issuance of an ITP under FESA

[29] All Fish and Game Code references are to the California Fish and Game Code

section 10(a)(1)(B) is a federal action subject to FESA section 7. As a federal agency issuing a discretionary permit, the USFWS is required to consult with itself (i.e., conduct an internal consultation). Delivery of the HCP and a section 10(a)(1)(B) permit application initiates the section 7 consultation process within the USFWS.

Section 9. Section 9 of FESA and federal regulation pursuant to FESA section 4(d) prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the USFWS to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the USFWS as intentional or negligent actions that create the likelihood of injury to listed species by annoying them to such an extent as to significantly disrupt normal behavioral patterns that include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

Section 10. Recovery and interstate commerce permits are issued to allow for take as part of activities intended to foster the recovery of listed species under FESA section 10(a)(1)(A). A typical use of a recovery permit is to allow for scientific research on a listed species in order to better understand the species' long-term survival needs. Interstate commerce permits also allow transport and sale of listed species across state lines (e.g., for purposes such as a breeding program).

Individuals and state and local agencies proposing an action that is expected to result in the take of federally-listed species are encouraged to apply for an ITP under FESA section 10(a)(1)(B) to be in compliance with the law. Such permits are issued by the USFWS when take is not the intention of and is incidental to otherwise legal activities. An ITP application must be accompanied by an HCP. The regulatory standard under section 10(a)(1)(B) is that the effects of authorized incidental take must be minimized and mitigated to the maximum extent practicable. Under section 10(a)(1)(B), a proposed project also must not appreciably reduce the likelihood of the survival and recovery of the species in the wild, and adequate funding for a plan to minimize and mitigate impacts must be ensured.

Section 11. Pursuant to FESA section 11(a) and (b), any person who knowingly violates section 9 or any permit, certificate, or regulation related to section 9 may be subject to civil penalties of up to $25,000 for each violation or criminal penalties up to $50,000 and/or imprisonment of up to 1 year.

6.1.2 Migratory Bird Treaty Act

The federal MBTA of 1918 (16 USC § 703 *et seq.*) makes it unlawful to pursue, hunt, capture, kill, possess, or attempt to do the same to any migratory bird or part, nest, or egg of such bird listed in wildlife protection treaties between the United States and Great Britain, the Republic of Mexico, Japan, and Russia. In 2017, the USFWS issued a memorandum stating that the MBTA does not prohibit incidental take; therefore, the MBTA is currently limited to purposeful actions, such as hunting and poaching. The MBTA authorizes the Secretary of the Interior to issue Special Purpose Permits. The procedures for securing such permits are found in Title 50 of the Code of Federal Regulations, together with a list of the migratory birds covered by the MBTA. The USFWS has determined that an ITP issued under Section 10 of the ESA also constitutes a

Special Purpose Permit under 50 CFR 21.27, and any take allowed under an ITP will not be in violation of the Migratory Bird Treaty Act.

6.1.3 Clean Water Act

The federal 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 nine RWQCBs, to certify that the discharge complies with all state water quality standards.

6.1.4 California Endangered Species Act

Section 2080 of the Fish and Game Code prohibits "take" of any species that CDFW determines to be an endangered species or a threatened species, except as otherwise provided. Take is defined in section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Unlike FESA, the definition of take under CESA does not include harm or harassment. Like FESA, CESA allows for take incidental to otherwise lawful activities.

Section 2081 of the Fish and Game Code allows CDFW to authorize acts that are otherwise prohibited pursuant to section 2080 of the Fish and Game Code. Section 2081(a) allows CDFW to authorize the import, export, take, or possession of endangered, threatened, or candidate species through a permit or memorandum of understanding for scientific, educational, or management purposes. Section 2081(b) allows CDFW to authorize take that is incidental to an otherwise lawful activity. Section 2835 of the Fish and Game Code allows CDFW to authorize by permit the taking of any covered species, including those designated as fully protected species, whose conservation and management is provided for in an NCCP approved by CDFW.

6.1.5 California Fish and Game Code

6.1.5.1 Lake or Streambed Alteration Agreements

Sections 1600–1607 of the Fish and Game Code require that a Notification of Lake or Streambed Alteration Agreement application be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW reviews the proposed actions in the application and, if necessary, prepares a Lake or Streambed Alteration Agreement that includes measures to protect affected fish and wildlife resources.

6.1.5.2 Native Plant Protection Act

The Native Plant Protection Act (NPPA) was created in 1977 with the intent to preserve, protect, and enhance rare and endangered plants in California (Fish and Game Code § 1900–1913). The

NPPA is administered by CDFW, which has the authority to designate native plants as endangered or rare and to protect them from "take." CDFW maintains a list of plant species that have been officially classified as endangered, threatened, or rare. These special-status plants have special protection under California law.

6.1.5.3 Non-Game Mammals

Sections 4150–4155 of the Fish and Game Code protect non-game mammals, including bats. Section 4150 states "A mammal occurring naturally in California that is not a game mammal, fully protected mammal, or fur-bearing mammal is a non-game mammal. A non-game mammal may not be taken or possessed except as provided in this code or in accordance with regulations adopted by the commission." The non-game mammals that may be taken or possessed are primarily those that cause crop or property damage. All bats are classified as a non-game mammal and are protected under the Fish and Game Code.

6.1.5.4 Fully Protected Species and Species of Special Concern

The classification of California fully protected (CFP) species was CDFW's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or FESA. The Fish and Game Code sections that list CFP species (§ 5515 for fish, § 5050 for amphibian and reptiles, § 3511 for birds, § 4700 for mammals) state that these species "…may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species." Take of these species may be authorized under limited circumstances, including for necessary scientific research, which includes efforts to recover state-listed species, or pursuant to an NCCP. This language makes the CFP designation the strongest and most restrictive regarding the "take" of these species.

California species of special concern (CSSC) are broadly defined as animals not currently listed under FESA or CESA, but which are nonetheless of concern to CDFW because they are declining at a rate that could result in listing or that 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 by CDFW, land managers, consulting biologists, and others, and is intended to focus attention on the species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. 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.

6.1.5.5 Nesting Birds

Eggs and nests of all birds (including raptors and passerines) are protected under Fish and Game Code section 3503. In addition, birds of prey are protected under Fish and Game Code section 3503.5, egrets, osprey, and other specified birds are protected under Fish and Game Code section 3505, and migratory non-game birds are protected under Fish and Game Code section 3800.

6.1.6 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 established the State Water Resources Control Board (State Water Board) and divided the state into nine regions that are overseen by a

RWQCB. The State Water Board 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. The RWQCBs are generally responsible for implementing CWA Section 401, among others, described above.

6.1.7 California Coastal Act

As described in greater detail in EIR section 4.1.2, 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 that 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 an "environmentally sensitive habitat area" (ESHA) to mean an area 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)

6.1.8 Public Resources Code (PRC) Section 5090.35

PRC section 5090.35 (c)(1) 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 conserve and improve wildlife habitats for each SVRA. If the OHMVR Division determines the WHPP is not being met in any portion of an SVRA, the OHMVR Division must temporarily close the noncompliant portion until the WHPP 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 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.

Oceano Dunes SVRA prepared its first WHPP in 1991 with the goal to protect and maintain habitats, plant and wildlife species, and other sensitive wildlife in the SVRA. The Oceano Dunes SVRA WHPP is updated, as needed, and includes a description of the natural environment in the SVRA, lists of species observed in the SVRA, and protocols for monitoring and recording vegetation types and rare species, the monarch butterfly grove in Pismo State Beach, terrestrial and shorebirds, herptofauna, fish, small mammals, and bats. Large mammals are recorded incidentally as part of the SNPL and CLTE predator management program and may be subject to more monitoring in the future (CDPR, 2017). The WHPP is currently being updated in compliance with Senate Bill 249.

6.2 ENVIRONMENTAL SETTING

This section describes the vegetation and habitat types in the HCP area. The information is based on data developed for the HCP, including the Vegetation Mapping Report (MIG|TRA, 2015) and CDPR surveys. The Vegetation Mapping Report is HCP Appendix I. No significant changes in land use or habitat types have occurred since those surveys were completed.

6.2.1 HCP Area Habitat Types and Vegetation Alliances

6.2.1.1 Physical Setting and Habitat Types

The HCP area has a Mediterranean climate characterized by year-round mild temperatures, moist winters, and warm dry summers. Due to the marine influence, temperatures remain moderate during summer and winter. Low clouds move inland at night and recede during the day. Winds are consistent, and the wind direction is predominantly from the west and northwest.

The area is within the Coast Range geomorphic province of California, at the intersection of the Pacific and North American tectonic plates. The province is dominated by northwest-trending mountain ranges and valleys, almost parallel to the San Andreas Fault, located about 40 miles to the east of the HCP area.

The HCP area is within an 18-mile stretch of the Guadalupe-Nipomo Dunes Complex, a relatively intact coastal dune and dune scrub ecosystem varying in width from 2 to 5 miles. The Guadalupe-Nipomo Dunes Complex extends from Pismo Beach to Point Sal, and roughly from State Route 1 west to the Pacific Ocean in San Luis Obispo and Santa Barbara counties.

The HCP area is dominated by sand dunes, and has elevations ranging from sea level to about 192 feet above mean sea level. The topography is flat adjacent to the ocean and undulates through the dunes east of the beach. Dune crests run north to south. On the western (windward, or fore-) side of the dunes, the slopes are gentle. On the eastern (leeward, or back-) side of the dunes the slopes are steep. Wave action, wind, and water erosion cause the dunes to move slowly over time. Lake, creek, and wetland areas are generally flat or gently sloped. The HCP area is in two major watersheds—the Arroyo Grande Creek watershed in the northern portion of the SVRA and the Oso Flaco Creek watershed in the southern portion of the SVRA. It is traversed by Pismo Creek, Carpenter Creek, Meadow Creek, Arroyo Grande Creek, and Oso Flaco Creek. It contains Oso Flaco Lake, Pismo Lake, and occasional slack lakes in the dunes.

The habitats in the HCP area include open sandy beach, dune (fore- and back-), lake, freshwater stream, coastal lagoon, wetland, riparian, woodlands, agriculture, and developed. Forty-six vegetation alliances are described in the Vegetation Mapping Report following the Manual of California Vegetation (Sawyer, Keeler-Wolf, & Evens, 2009) classification system. These are summarized below; more detail can be found in the Vegetation Mapping Report (MIG|TRA, 2015) in HCP Appendix I.

6.2.1.2 Overview

The sandy beaches in the HCP area are a harsh environment where most plants are unable to survive. Behind them are the dunes, which may be divided into two zones—foredunes and backdunes—characterized by their location and dominant vegetation. Foredunes, which begin at the high tide line and include vast natural areas of open sand sheet, are characterized as low, wind-deposited dunes that are sparsely vegetated with the hardiest of dune stabilizing plants. When vegetation can gain a foothold, only low-growing plants with deep root systems can survive, such as sand verbena (*Abronia* spp.) and beach bur (*Ambrosia chamissonis*). The strong winds, storm waves, salt spray, lack of fresh water, nutrient-poor substrate (i.e., sand), and alternating periods of sand burial and erosion make this area uninhabitable for other types of plants. The backdunes, located behind the foredunes, are more stabilized and vegetated than the foredunes due to less wind and other erosive forces. The backdunes are dominated by dune scrub species like mock heather (*Ericameria ericoides*), silver dune lupine (*Lupinus chamissonis*), seacliff buckwheat (*Eriogonum parviflorum*), and dune ragwort (*Senecio blochmaniae*).

Wetland and riparian habitats surround Oso Flaco Lake, Little Oso Flaco Lake, and Pismo Lake and are scattered throughout the South Oso Flaco area and the Phillips 66 Leasehold area and along streams. The wetlands include salt marshes, fresh- and brackish-water marshes, swamps, mudflats, and the dune slack lakes. Dune slack lakes are flats eroded by wind down to the water table to form wetland “slacks” (i.e., seasonally flooded marshes and flats near sea level). Plants that live within these coastal wetland environments are adapted to dynamic environmental conditions including high salinity concentrations and extreme temperatures (McLeod, 2001).

Woodland habitats are limited in size and are largely comprised of non-native species, including eucalyptus (*Eucalyptus* sp.), Monterey cypress (*Callitropsis macrocarpa*), Torrey pine (*Pinus torreyana*), and Monterey pine (*Pinus radiata*). A few native coast live oaks (*Quercus agrifolia*) are present, scattered as single trees in the backdunes. The pines are similarly scattered, but the eucalyptus form groves at some sites, including the monarch butterfly grove near State Route 1.

Invasive non-native plants include European beach grass (*Ammophila arenaria*), perennial veldt grass (*Ehrharta erecta*), and iceplant (*Carpobrotus* spp.). These species were planted to stabilize the dunes many years prior to CDPR acquisition and are still planted by neighboring landowners. The foredune system of the Pismo Dunes Natural Preserve is stabilized with the European beach grass, which forms dense mats. As a result, these dunes are unusually tall compared to other foredunes in Oceano Dunes SVRA that are stabilized with native vegetation, perennial veldt grass, or iceplant. The Oceano Dunes District actively controls European beach grass, perennial veldt grass, jubata grass (*Cortaderia jubata*), iceplant, Cape ivy (*Delairea odorata*), and Russian wheat grass (*Elytrigia juncea* ssp. *boreali-atlantica*).

6.2.1.3 Vegetation Alliances

Vegetation alliances are defined by the dominant or co-dominant species, following the classification system in the Manual of California Vegetation, Second Edition (Sawyer, Keeler-Wolf, & Evens, 2009). Some parts of the HCP area have dominant plants with no corresponding alliance in the MCV2; in those cases, CDPR staff and their consultants created alliances. The vegetation alliances in the entire HCP area are summarized in Table 6-1. and shown on Figure 6-1 Vegetation Types in the HCP Area.

Table 6-1. Vegetation Types and Other Land Coverage Including Acreages within HCP Area

Vegetation Type	Acres	Percentage of total HCP Area
Sand	2,499	49.93
Silver dune lupine – mock heather scrub	1,079	21.56
Arroyo willow thicket	370	7.39
European beach grass sward (invasive)	192	3.84
Dune mat	140	2.80
Native wetland alliances	136	2.72
Agriculture	134	2.68
Other non-native alliances	120	2.40
Other native upland alliances	89	1.78
Perennial veldt grass stand (invasive)	88	1.76
Disturbed/developed	86	1.71
Open water	72	1.43
Total	**5,005**	**100.00**

The dominant vegetation in the HCP area is the native upland silver dune lupine – mock heather scrub alliance, which occurs primarily in the backdune. Arroyo willow (*Salix lasiolepis*) thickets are the second most prevalent alliance, also occurring in the backdune. Although arroyo willow is considered a wetland alliance, standing water or other wetland species are not associated with every arroyo willow stand. European beach grass swards, which occur in foredune uplands, are the third most prevalent alliance.

The “native wetland alliances” include black cottonwood (*Populus trichocarpa*) forest, wax myrtle scrub (*Morella californica*), blue elderberry (*Sambucuc nigra* ssp. *caerulea*) stands, California bulrush marsh (*Schoenoplectus californicus*), salt/dune rush (*Juncus lescurii*) swales, field sedge (*Carex praegracilis*) meadows, cattail (*Typha latifolia*) marshes, mats of bur-reed (*Sparganium eurycarpum*) leaves, pickleweed (*Sarcocornia [Salicornia] pacifica*) mats, salt grass (*Distichlis spicata*) flats, pacific silverweed (*Argentina egedii*) marshes, jaumea (*Jaumea carnosa*) mats, American bulrush (*Scirpus americanus*) marsh, and duckweed (*Lemna minor*) blooms alliances.

The "other non-native alliances" include eucalyptus groves, Monterey pine forest, Torrey pine stands, Monterey cypress stands, pepper tree (*Schinus molle/terbinthifolius*) or myoporum (*Myoporum laetum*) groves, beach pine forest, golden wattle (*Acacia longifolia*) stands, ice plant mats, Russian wheat grass stands, searocket (*Extriplex californica*) stands, annual brome (*Bromus diandrus-Brachpodium distachyon*) grasslands, fields of fat hen and brass buttons (*Atriplex prostrata-Cotula coronopifolia*), and white sweetclover (*Melilotus albus*) mats alliances.

The "other native upland alliances" include coast live oak woodland, coyote brush (*Baccharis pilularis*) scrub, Blochman's groundsel (*Senecio blochmaniae*) scrub, giant coreopsis (*Coreopsis [Leptosyne] gigantea*) scrub, coast brambles (*Rubus ursinus*), deer weed (*Lotus scoparius*) scrub, California coffee berry (*Frangula californica*) scrub, poison oak (*Toxicodendron diversilobum*) scrub, California sagebrush-black sagebrush (*Artemisia californica-Salvia mellifera*) scrub, crisp monardella (*Monardella undulata* ssp. *crispa*) stands, California sandaster (*Corethrogyne filaginifolia*) mats, tall stephanomeria (*Stephanomeria virgata*) meadows, wedge-leaved horkelia-California spineflower (*Horkelia cuneata–Mucronea californica*) meadows, and giant wildrye (*Leymus [Elymus] condensatus*) grassland alliances.

6.2.2 Wildlife in the HCP Area

Numerous species of invertebrates, marine and freshwater fish, reptiles and amphibians, birds, and mammals depend on the dune ecosystem in the HCP area. CDPR surveys of Pismo State Beach and Oceano Dunes SVRA have detected over a dozen species of fish; 28 species of reptiles and amphibians; 19 species of mammals, including marine mammals; and numerous bird species (CDPR, 2017). Over 200 species of birds live in or migrate through the Guadalupe-Nipomo Dunes Complex. Common wildlife observed in the HCP area are discussed below.

6.2.2.1 Beach and Dune Habitats

The beach supports a burrowing invertebrate population that depends on the ocean for food. The invertebrates provide food for a wide variety of bird species that feed along the shoreline. Willets (*Catoptrophorus semipalmatus*), marbled godwits (*Limosa fedoa*), and sanderlings (*Calidris alba*) search for food in the sand. Seaweed wrack that washes onshore also supports invertebrates that provide food for birds. Several species of gulls (*Laridae* sp.) frequent the beach to scavenge carcasses that have washed ashore, as do some terrestrial birds such as the Brewer's blackbird (*Euphagus cyanocephalus*) and white-crowned sparrow (*Zonotrichia leucophrys*). East of the beach, wind-created sand dunes and their vegetation offer some protection for wildlife. 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 dune scrub and may themselves become food for predators such as great horned owl (*Bubo virginianus*), coyote (*Canis latrans*), and bobcat (*Lynx rufus*). Migrating waterfowl stop at the wetlands and aquatic habitats in the HCP area to roost or loaf.

6.2.2.2 Riparian Habitat

Riparian habitat, with its constantly available water and dense, diverse vegetation of trees, shrubs, and herbs provide abundant food and cover to many wildlife species. The moist riparian area produces abundant insect life, food for many insectivorous amphibians, birds, and mammals

such as the Pacific treefrog (*Pseudacris [=Hyla] regilla*), western skink (*Eumeces skiltonianus*), Wilson's warbler (*Wilsonia pusilla*), black phoebe (*Sayornis nigricans*), Pacific-slope flycatcher (*Empidonax difficilis*), northern rough-winged swallow (*Stelgidopteryx serripennis*), and ornate shrew (*Sorex ornatus*). Omnivorous inhabitants include the dusky-footed woodrat (*Neotoma fuscipes*), opossum (*Didelphis virginiana*), and raccoon (*Procyon lotor*). Predators include garter snake (*Thamnophis* sp.), black-crowned night heron (*Nycticorax nycticorax*), red-shouldered hawk (*Buteo lineatus*), and gray fox (*Urocyon cinereoargenteus*).

6.2.2.3 Aquatic Habitat

Freshwater creeks and lakes provide habitat for aquatic macroinvertebrates that, along with vegetative detritus in the form of leaf litter and woody debris, form the base of the stream food chain. Freshwater streams or creeks support resident rainbow trout (*Oncorhynchus mykiss*) and steelhead (i.e., seagoing [anadromous] rainbow trout) as well as other native fishes such as threespine stickleback (*Gasterosteus aculeatus*), speckled dace (*Rhinichthys osculus*), Pacific lamprey (*Entosphenus tridentatus*), and prickly sculpin (*Cottus asper*). Estuarine environments support tidewater goby and steelhead. Slow-moving sections of streams provide important habitat for native amphibians and reptiles such as California red-legged frog (CRLF; *Rana draytonii*), and western pond turtles (*Emys marmorata*). Ephemeral and intermittent tributary streams may provide important habitat for western toad (*Bufo boreas*) and western spadefoot toad (*Spea hammondii*). A high variety of insects, birds, amphibians, reptiles, and mammals utilize the riparian vegetation associated with freshwater aquatic habitat.

6.2.2.4 Other Habitats

The HCP area also includes disturbed/developed habitat such as the North Beach Campground, the Oceano Campground, the Pismo Beach Golf Course, and the Ranger Station and yard. Animal species typical of urban coastal areas would be expected to occur here, such as western fence lizard, sparrows, finches, blackbirds, gulls, racoon, opossum, mice, and black rats.

6.2.3 Special-Status Species

Special-status species are those plants and animals that are legally protected or otherwise recognized as vulnerable to habitat loss or population decline by federal, state, or local resource conservation agencies and organizations. 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 California Native Plant Protection Act (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, 2018b)
- Listed on CDFW's Watchlist
- USFWS Birds of Conservation Concern (BCC) (USFWS, 2008)

- 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 California Native Plant Society (CNPS) and CDFW to be "rare, threatened, or endangered in California" (California Rare Plant Ranks [CRPR] 1A, 1B, and 2) (CNPS, 2017) (CDFW, 2019)
    - 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, CRPR 3 and 4 species were considered locally significant for the purposes of this report.[30]

Special-status species with potential to occur within the HCP area are identified in EIR Appendix C. The list was compiled based on information from USFWS, CDPR, California Natural Diversity Database (CNDDB), and the CNPS Inventory of Rare and Endangered Plants. A total of 52 animal species and 33 plant species have been recorded within the HCP area and/or have potential to occur within the HCP area (see Table C-1 and C-3). Of the species known to occur in the HCP area, many do not occur in the areas of existing covered activities or areas where new activity is proposed under the HCP.

The HCP impact area is limited to those areas affected by existing and new proposed covered activities as discussed in the EIR Project Description and listed in Table 2-4. Species occurring outside of the existing and new covered activity areas and/or those that are extremely uncommon in the HCP area would not be expected to be impacted by the HCP and are therefore dismissed from further consideration in this analysis. Species with potential to be impacted by existing or new proposed covered activities are summarized below and listed in Table 6-2 (animal species) and Table 6-3 (plant species).

Many of the activities proposed in the HCP are existing and ongoing and are therefore considered part of baseline conditions for the project (section 2.4.2.1). These ongoing species impacts occurring in areas where existing activities covered by the HCP occur are addressed in EIR Appendix D. Species impacts associated with the new proposed activities are addressed in project impacts (section 6.3.2). The potential for contemplated future activities covered by the HCP to contribute to project impacts to special-status species is addressed in cumulative impacts (EIR section 6.3.5). A brief summary of special-status species that occur in the HCP area and their potential to be impacted by the existing and new proposed activities follows. Descriptions of special-status species with potential to be impacted by existing or proposed new activities are provided in EIR Appendix C.

Invertebrates. One special-status invertebrate, monarch butterfly (*Danaus plexippus*), occurs within the HCP area. A population of overwintering monarchs is present in the eucalyptus and

[30] 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.

Monterey cypress tree grove, known as Monarch Grove, at Pismo State Beach adjacent to the North Beach Campground. The monarch may roost in other areas of the HCP area containing eucalyptus, Monterey pine, or Monterey cypress trees. The proposed HCP does not include existing or introduce new covered activities into Monarch Grove or in other areas containing potential roost sites that would directly impact monarch butterflies. Some activities are conducted within the Monarch Grove, but these activities are conducted outside the monarch wintering period and are intended to benefit the species by improving overwintering habitat. Therefore, monarch butterfly would not be impacted by the proposed HCP and is not considered further in this analysis.

Fish. Two special-status fish species are known to occur in the HCP area: tidewater goby (*Eucyclogobius newberryi*) and steelhead (*Oncorhynchus mykiss irideus*) South-Central California Coast Ecologically Significant Unit (ESU). The tidewater goby is a covered species in the HCP. Impacts to tidewater goby are expected from existing covered activities and are described in more detail in EIR Appendix D. Tidewater goby is known to occur in Arroyo Grande Creek/Lagoon and Pismo Creek within the HCP area. The proposed new HCP activities (i.e., SNPL chick and egg capture for relocation [CA-12b]; mechanical trash removal [CA-21]; exclosure reductions [CA-50]; and CDPR use of UAS [CA-52]) would not occur in tidewater goby habitat and would not impact this species. Therefore, tidewater goby is not considered further in this analysis.

Steelhead occurs in Arroyo Grande Creek and Pismo Creek, which are the only two creeks that are connected to the ocean for steelhead migration. CDPR staff monitor fish populations in these areas one to four times per year (CDPR, 2017). The steelhead South-Central California Coast ESU is not a covered species because NOAA Fisheries concluded that the existing covered activities listed in the HCP are not likely to take steelhead with the implementation of AMMs (NOAA Fisheries, 2008). In addition, the HCP does not introduce new covered activities into aquatic areas such as Arroyo Grande Creek and Pismo Creek where steelhead occur. Therefore, steelhead would not be impacted by the new proposed activities in the HCP and is not considered further in this analysis.

Amphibians and Reptiles. CDPR staff conduct regular surveys for amphibians and reptiles according to protocols described in the WHPP. Three special-status amphibians, including CRLF, western spadefoot (*Spea hammondii*), and coast range newt (*Taricha torosa*), and four special-status reptile species, including coast (California) horned lizard (*Phrynosoma coronatum*), silvery legless lizard (*Anniella pulchra*), two-striped garter snake (*Thamnophis hammondii*), and western pond turtle, are known to occur in the HCP area. Impacts to CRLF, western spadefoot, coast horned lizard, silvery legless lizard, and western pond turtle are expected from existing covered activities and are described in more detail in EIR Appendix D.

CRLF is a covered species in the HCP. Impacts to CRLF, western spadefoot, coast horned lizard, and silvery legless lizard could also occur from new proposed activities (i.e., mechanical trash removal [CA-21] and seasonal exclosure reduction [CA-50]) if an individual was present in or dispersing through upland habitat during these activities, although the potential for this to occur is low. Impacts from new proposed activities are discussed further in EIR section 6.3 below.

Impacts to two-striped garter snake and coast range newts are not expected from existing activities because they are likely very rare in the HCP area; therefore, the potential for any impacts to occur are low. In addition, the HCP does not introduce new covered activities into

aquatic habitat area such as Oso Flaco Lake or Arroyo Grande Creek where two-striped garter snake and coast range newts are likely to occur. Therefore, two-striped garter snake and coast range newt would not be impacted by the new proposed activities in the HCP and are unlikely to be impacted by existing covered activities and are not considered further in this analysis.

The HCP does not introduce new covered activities into aquatic habitat area such as Oso Flaco Lake, Oceano Lagoon, and Arroyo Grande Creek where western pond turtles are likely to occur. Therefore, western pond turtle would not be impacted by the new proposed activities in the HCP and are not considered further in this analysis.

Birds. There are 37 special-status bird species known to occur in the HCP area. Birds are the most widespread and prevalent species in the HCP area. A distinction is made between breeding birds versus foraging, roosting, migrating, or loafing birds because breeding birds are more susceptible to disturbance that can result in reproductive failure. For 23 of these bird species, the HCP area is outside of their known breeding range, although they are known to be migrants or winter residents in the HCP area and occur there seasonally and/or infrequently. As such, the HCP covered activities, including existing and new proposed covered activities, are generally expected to have short-term, temporary disturbance to wintering or migrating birds when covered activities occur in the same area where individuals or flocks are passing through, foraging, or roosting. Impacts to wintering/migrating birds from existing covered activities are described in more detail in EIR Appendix D. Impacts to wintering/migrating birds from proposed new covered activities (i.e., egg and chick capture for captive rearing if they are observed to be in harm's way [CA-12b], mechanical trash removal [CA-21], seasonal exclosure reduction [CA-50], and CDPR's use of UAS [CA-52]) are described in more detail in EIR section 6.3 below.

There are nine special-status bird species that nest in the HCP area and/or occur in the HCP area during the breeding season and likely nest nearby, including the two covered bird species (SNPL and CLTE). Common nesting birds also occur throughout the HCP area, including in developed areas. Impacts to nesting birds, including special-status nesting bird species, are expected from existing covered activities and are described in more detail in EIR Appendix D. In addition, proposed new covered activities (i.e., egg and chick capture for captive rearing if they are observed to be in harm's way [CA-12b], mechanical trash removal [CA-21], and seasonal exclosure reduction [CA-50]) could impact nesting birds, including special-status nesting birds, and are described in more detail in EIR section 6.3 below.

There are five special-status bird species that have been observed in the HCP area but are not expected to be impacted by existing or proposed new covered activities, including the wood stork (*Mycteria americana*), golden eagle (*Aquila chrysaetos*), California black rail (*Laterallus jamaicensis* ssp. *coturniculus*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), and olive-sided flycatcher (*Contopus cooperi*). Wood stork, golden eagle, western yellow-billed cuckoo, and olive-sided flycatcher are likely rare migrants in the HCP area and are not expected to occur in most years. California black rail has not been observed in the HCP area since 1991. As a result, these species would not be impacted by existing or new proposed covered activities in the HCP and are not considered further in this analysis.

Two special-status bird species, including least bittern (*Ixobrychus exilis*) and yellow-breasted chat (*Icteria virens*), could be impacted by existing activities. Impacts to these species from existing covered activities are described in more detail in EIR Appendix D. These species are not expected to be impacted by new proposed activities because the activities would not occur in

suitable habitat. As a result, these species would not be impacted by new proposed covered activities in the HCP and are not considered further in this analysis.

Mammals. Five special-status mammal species occur in or immediately adjacent to the HCP area, including pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus blossevillii*), Townsend's big-eared bat (*Corynorhinus townsendii*), American badger (*Taxidea taxus*), and southern sea otter (*Enhydra lutris nereis*). Pallid bat, western red bat, and Townsend's big-eared bat have been detected during acoustic surveys in the HCP area at Oso Flaco Lake and Oceano Lagoon. These bats and other common bat species could be impacted by existing covered activities that remove or occur near roost trees, including routine riparian maintenance activities. American badger could also be impacted by existing covered activities that occur in open sand areas where American badger or badger sign (e.g., dens) have been found. Impacts on special-status bats and American badger from existing covered activities are described in more detail in EIR Appendix D. Impacts to American badger from proposed new covered activities are described in more detail in EIR section 6.3 below.

SNPL chick and egg capture for captive rearing if observed to be threatened by covered activities (CA-12b), mechanical trash removal (CA-21) and seasonal exclosure reduction (CA-50) would not occur in habitat where bats would be expected to forage (e.g., aquatic habitat) or roost (e.g., riparian habitat, tree stands) and would, therefore, have no impact on bats. CDPR UAS use (CA-52) would occur during the day when bats are not active and UAS would not be flown in tree stands or riparian areas; therefore, bats would not be impacted by UAS activity. As a result, bats would not be impacted by new proposed covered activities in the HCP and are not considered further in this analysis.

Southern sea otter is occasionally seen offshore in the HCP area. Existing covered activities and proposed new covered activities would not occur in areas where southern sea otter occurs. Therefore, the southern sea otter is not further discussed in this analysis.

Plants. There are 25 special-status plants either known to occur or that have potential to occur within the HCP area that could be impacted by existing or new proposed activities, including the 6 listed species covered by the HCP (marsh sandwort, La Graciosa thistle, surf thistle, beach spectaclepod, Nipomo Mesa lupine, and Gambel's watercress). All of these plants are known to occur in vegetated portions of the HCP area. Impacts on special-status plants from existing covered activities are described in more detail in EIR Appendix D. Impacts to some special-status plants could occur from proposed new covered activities (i.e., mechanical trash removal [CA-21] and seasonal exclosure reduction [CA-50]). Those species potentially impacted by proposed new covered activities are identified in Table 6-3 and are described in more detail in EIR section 6.3 below. Those species not occurring in areas affected by proposed new covered activities are not considered further in this analysis.

Table 6-2. Special-Status Animal Species in the HCP Area

Species	Listing Status[1]	Species Occurrence in HCP Area	Potential Impacts from Existing Covered Activities	Potential Impacts from Proposed New Covered Activities
Invertebrates				
monarch butterfly *Danaus plexippus*	Under review	Roosts in Pismo State Beach. May roost elsewhere, within eucalyptus groves, Monterey pine forest, and Monterey cypress forest.	**No**. Existing covered activities do not occur within the overwintering period for monarch in the tree grove at Pismo State Beach, and removal of suitable roost trees does not occur in other HCP locations where this species may occur. Any activities within the Monarch Grove outside the winter season are conducted to improve monarch overwintering habitat.	**No**. HCP proposes no new activity in roosting habitat.
Fish				
tidewater goby *Eucyclogobius newberryi*	FE, CSSC	Occurs in Arroyo Grande Creek, Carpenter Creek, Oceano (Meadow Creek) Lagoon, Oso Flaco Creek, and Pismo Creek. Critical habitat is present in the HCP area.	**Yes**. Existing covered activities occur in suitable habitat areas and could impact individuals or nest burrows.	**No**. HCP proposes no new activity in habitat areas.
steelhead - south/central California coast ESU *Oncorhynchus mykiss irideus*	FT	Occurs in Pismo Creek and Arroyo Grande Creek. This species is localized to these creek systems and their confluences with the Pacific Ocean.	**No**. Letter from NOAA Fisheries to CDPR dated December 23, 2008, found that unauthorized steelhead take from existing covered activities was unlikely. Specific to Arroyo Grande Creek, NOAA Fisheries concluded vehicle crossings do not occur under conditions that could cause direct contact with steelhead or that diminish the value of the creek as steelhead habitat.	**No**. HCP proposes no new activity in habitat areas.

Table 6-2. Special-Status Animal Species in the HCP Area

Species	Listing Status[1]	Species Occurrence in HCP Area	Potential Impacts from Existing Covered Activities	Potential Impacts from Proposed New Covered Activities
Amphibians and Reptiles				
California red-legged frog *Rana draytonii*	FT, CSSC	Occurs in Arroyo Grande Creek and Estuary, Oso Flaco Lake, and Little Oso Flaco Lake. May use other water features throughout the HCP area.	**Yes.** Existing covered activities occur in suitable aquatic habitat areas and could impact suitable habitat, eggs, tadpoles, or adults/juveniles. Impacts in upland habitat are expected to be rare, although dispersing individuals could be injured or killed.	**Yes.** HCP proposes new activity in suitable upland habitat and, although unlikely, could impact dispersing individuals.
western spadefoot *Spea hammondii*	CSSC	Often difficult to detect due to extended periods of its life cycle spent underground. Very little is known about this species within the HCP area and the few sightings that exist have been incidental. Documented at Oso Flaco Lake in 2000 and within the Eucalyptus South vegetation island in 2011. Other ephemeral water sources within the HCP area may be used by this species for breeding. Vegetation islands may be used during dispersal and winter.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact individuals in burrows or within aquatic habitat.	**Yes.** Although new proposed covered activities occur in suitable upland dispersal habitat areas, this species is likely rare in the HCP area. As a result, potential for new proposed covered activities to impact this species is very low.
coast range newt *Taricha torosa*	CSSC	Infrequently observed in the HCP area within or near aquatic habitat. Suitable habitat for this species is limited to aquatic habitat and areas near aquatic habitat.	**Unlikely.** Although existing covered activities occur in suitable habitat areas, this species is likely rare in the HCP area. As a result, potential for covered activities to impact this species is very low.	**No.** HCP proposes no new activity in habitat areas.
coast (California) horned lizard *Phrynosoma coronatum*	CSSC	Documented in 2006 at Little Oso Flaco Lake. This species may utilize a variety of habitat locations within the HCP area, especially the	**Yes.** Existing covered activities occur in suitable habitat areas and could impact individuals or habitat.	**Yes.** HCP proposes new activity in suitable upland habitat and, although unlikely, could impact dispersing individuals.

Table 6-2. Special-Status Animal Species in the HCP Area

Species	Listing Status[1]	Species Occurrence in HCP Area	Potential Impacts from Existing Covered Activities	Potential Impacts from Proposed New Covered Activities
		western interface of sand and silver dune lupine – mock heather scrub habitat.		
silvery legless lizard *Anniella pulchra*	CSSC	Documented in Oceano Dunes SVRA in vegetation islands, Oceano Campground, at Oso Flaco Lake, Little Oso Flaco Lake, Jack Lake, and near Lettuce Lake. Other similar habitat near freshwater within the HCP area may also be used by this species.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact individuals or habitat.	**Yes.** HCP proposes new activity in suitable upland habitat and, although unlikely, could impact dispersing individuals.
two-striped garter snake *Thamnophis hammondii*	CSSC	Documented at Oso Flaco Lake. Other suitable habitat along Arroyo Grande Creek and Oso Flaco Creeks may be utilized by this species.	**Unlikely.** Although existing covered activities occur in suitable habitat areas, this species is likely rare in the HCP area. As a result, potential for covered activities to impact this species is very low.	**No.** HCP proposes no new activity in habitat areas.
western pond turtle *Emys marmorata*	CSSC	Documented in Oso Flaco Lake and Arroyo Grande Creek. Other freshwater habitat within the HCP area may be used.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact individuals or habitat.	**No.** HCP proposes no new activity in habitat areas.
Birds				
western snowy plover *Charadrius nivosus nivosus*	FT, CSSC	Nests and forages in habitat along the beach and foredunes. Winters in the HCP area.	**Yes.** Existing covered activities occur in suitable habitat areas. Impacts to breeding and wintering birds and breeding/ wintering habitat modification is known to occur.	**Yes.** HCP proposes new activity in and adjacent to nesting habitat.
California least tern *Sternula antillarum browni*	FE, SE, CFP	Nests along the beach. Most commonly observed foraging over the ocean, though they are regularly observed foraging at Oso Flaco Lake and Pismo Lake, as	**Yes.** Existing covered activities occur in suitable habitat areas. Impacts to breeding birds and breeding habitat	**Yes.** HCP proposes new activity in nesting habitat.

Table 6-2. Special-Status Animal Species in the HCP Area

Species	Listing Status[1]	Species Occurrence in HCP Area	Potential Impacts from Existing Covered Activities	Potential Impacts from Proposed New Covered Activities
		well as at the small lagoon that forms at the mouth of Pismo Creek.	modification known to occur.	
brant *Branta bernicla*	CSSC (wintering and staging)	Outside the known breeding range. Suitable wintering habitat includes Pismo Lagoon, Oso Flaco Lake, and Oceano Lagoon.	**Yes.**[2] No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**Yes.**[2] No impacts to nesting birds would occur. HCP proposed new covered activities that could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
redhead *Aythya Americana*	CSSC (nesting)	Outside the known breeding range. Observed within the HCP area at Oso Flaco Lake as recently as October 2015. Suitable resting and foraging habitat includes large water bodies like Pismo Lagoon, Oso Flaco Lake, and Oceano Lagoon.	**Yes.**[2] No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**Yes.**[2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
common loon *Gavia immer*	CSSC (nesting)	Outside the known breeding range. Suitable roosting and foraging habitat includes Pismo Lagoon, Oso Flaco Lake, and Oceano Lagoon.	**Yes**[2]**.** No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
wood stork *Mycteria Americana*	CSSC	Outside the known breeding range. This species was observed near Oso Flaco Lake in 2011. Suitable roosting and foraging habitat includes Oso Flaco Lake, Pismo Lake, Pismo Lagoon, and Oceano Lagoon.	**Unlikely.** Although existing covered activities occur in suitable habitat areas, this species is likely rare in the HCP area. As a result, potential for covered activities to impact this species is very low.	**No**. HCP proposes no new activity in habitat areas.
double-crested cormorant	SWL	Not known to nest within the HCP area.	**Yes**[2]**.** No impacts to nesting birds occur.	**Yes.** [2] No impacts to nesting birds would

Table 6-2. Special-Status Animal Species in the HCP Area

Species	Listing Status[1]	Species Occurrence in HCP Area	Potential Impacts from Existing Covered Activities	Potential Impacts from Proposed New Covered Activities
Phalacrocorax auratus	(nesting colony)	Foraging, roosting, and loafing sites are located anywhere near water bodies and on trees near water bodies.	Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
American white pelican *Pelecanus erythrorhynchos*	CSSC (nesting colony)	Outside the known breeding range. This species is frequently observed foraging at Oso Flaco Lake. Suitable foraging habitat in the HCP area includes Pismo Creek, Pismo Lake, Meadow Creek, Oceano Lagoon, Arroyo Grande Creek, Oso Flaco Lakes, and Oso Flaco Creek.	**Yes.** [2] No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
California brown pelican *Pelecanus occidentalis californicus*	CFP (nesting colony and communal roosts)	Outside the known breeding range. California brown pelicans are frequently observed roosting in the HCP area on the beach and Oso Flaco Lake. Suitable roosting and loafing habitat includes the beach, undisturbed dunes, and Oso Flaco Lake.	**Yes.** [2] No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
least bittern *Ixobrychus exilis*	CSSC, BCC Concern (nesting)	Confirmed breeding at Oso Flaco Lake as recently as May 2016. Suitable breeding/ nesting habitat may include dense emergent vegetation around Oso Flaco Lake, Pismo Lake, Oceano Lagoon, and Little Oso Flaco Lake.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact eggs, chicks, and adults/juveniles.	**No.** HCP proposes no new activity in habitat areas.
osprey *Pandion haliaetus*	SWL (nesting)	Outside the known breeding range. Ospreys have been observed foraging and perching within the HCP area,	**Yes.** [2] No impacts to nesting birds occur. However, existing covered activities could have short-term,	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term,

Table 6-2. Special-Status Animal Species in the HCP Area

Species	Listing Status[1]	Species Occurrence in HCP Area	Potential Impacts from Existing Covered Activities	Potential Impacts from Proposed New Covered Activities
		including Oso Flaco Lake. Suitable overwintering habitat includes trees around Oso Flaco Lake, Little Oso Flaco Lake, Oceano Lagoon, Pismo Lake, Pismo Creek, Arroyo Grande Creek, and Oso Flaco Creek.	temporary impacts on wintering/migrating individuals where they are passing through, foraging, or roosting. Osprey individuals are also removed as part of the SNPL and CLTE predator management program in the HCP area.	temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
white-tailed kite *Elanus leucurus*	CFP	Suitable breeding/nesting habitat may include North Beach campground, Le Sage Rivera Golf Course, Oceano Campground, and isolated stands of Monterey pine forest, beach pine, and coast live oak woodland located throughout the dunes.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact eggs, chicks, and adults/juveniles.	**Yes.** HCP proposes new activity in suitable nesting habitat areas.
golden eagle *Aquila chrysaetos*	CFP	Not known to nest within the HCP area and only infrequently observed. A golden eagle was observed flying over Oso Flaco Lake in December 2015. Oso Flaco Lake, the North Beach campground, Le Sage Rivera Golf Course, Oceano Campground, and isolated stands of Monterey pine forest, beach pine, and coast live oak woodland located throughout the dunes provide suitable nesting and perching habitat. The open beach and agricultural areas provide suitable foraging habitat.	**Unlikely.** Although existing covered activities occur in suitable habitat areas, this species is likely rare in the HCP area. As a result, potential for covered activities to impact this species is very low.	**No.** HCP proposes no new activity in habitat areas.

Table 6-2. Special-Status Animal Species in the HCP Area

Species	Listing Status[1]	Species Occurrence in HCP Area	Potential Impacts from Existing Covered Activities	Potential Impacts from Proposed New Covered Activities
northern harrier *Circus cyaneus*	CSSC	Rare breeder in the Oso Flaco area. Suitable nesting habitat includes Oso Flaco Lake, Little Oso Flaco Lake, Oceano Lagoon, and Pismo Lake.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact eggs, chicks, and adults/juveniles.	**Yes.** HCP proposes new activity in suitable nesting habitat areas.
California black rail *Laterallus jamaicensis ssp. coturniculus*	ST, CFP, BCC	Historically present and known to breed at Oso Flaco Lake. Not observed since 1991. Suitable foraging, nesting, and roosting habitat may include Oso Flaco Lake, Little Oso Flaco Lake, and Pismo Lake.	**Unlikely.** Although existing covered activities occur in suitable habitat areas, this species is likely rare in the HCP area. As a result, potential for covered activities to impact this species is very low.	**No.** HCP proposes no new activity in habitat areas.
long-billed curlew *Numenius americanus*	SWL, BCC (nesting)	Outside the known breeding range. Suitable foraging and roosting habitat are located throughout HCP area along the beach.	**Yes.** [2] No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
marbled murrelet *Brachyramphus marmoratus*	FT, SE	Outside the known breeding range. Suitable foraging habitat within HCP area is located off-shore and at Pismo Lake, Pismo Lagoon, Oceano Lagoon, and at the mouths of Pismo Creek, Arroyo Grande Creek, and Oso Flaco Creek.	**Yes.** No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**No.** HCP proposes no new activity in habitat areas.
California gull *Larus californicus*	SWL (nesting colony)	Outside the known breeding range. This species may utilize a wide range of habitats within the HCP area for foraging and roosting habitat.	**Yes.** No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting. California gull	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing

Table 6-2. Special-Status Animal Species in the HCP Area

Species	Listing Status[1]	Species Occurrence in HCP Area	Potential Impacts from Existing Covered Activities	Potential Impacts from Proposed New Covered Activities
			individuals are also removed as part of the SNPL and CLTE predator management program in the HCP area.	through, foraging, or roosting.
black tern *Chidonias niger*	CSSC	Outside the known breeding range. May forage in areas with low emergent vegetation on the north and east margins of Oso Flaco Lake, the southern margins of Little Oso Flaco Lake, and along the border of the large wetland directly south of Oso Flaco Lake.	**Yes.** [2] No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
elegant tern *Thalasseus elegans*	SWL (nesting colony)	Outside the known breeding range. Migrants may utilize the ocean shore and the banks of Pismo, Oceano, and Arroyo Grande Lagoons within the HCP area for roosting and/or foraging.	**Yes.** [2] No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
black skimmer *Rynchops niger*	CSSC, BCC (nesting colony)	Outside the known breeding range. This species has been observed foraging along the Arroyo Grande Creek mouth. This species may utilize the beaches and estuary areas throughout the HCP area as migrating and wintering habitat.	**Yes.** [2] No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT, SE, BCC (nesting)	The HCP area is outside the current known breeding range and wintering range for this species. Any observations are likely rare migrants. Observed at Oso Flaco Lake in 1999 and at Oceano Lagoon in 2010.	**Unlikely.** Although existing covered activities occur in suitable habitat areas, this species is likely rare in the HCP area. As a result, potential for covered activities to impact this species is very low.	**Unlikely.** Although the HCP proposes new covered activities in suitable habitat areas, this species is likely rare in the HCP area. As a result, potential for covered activities to impact this species is very low.

Table 6-2. Special-Status Animal Species in the HCP Area

Species	Listing Status[1]	Species Occurrence in HCP Area	Potential Impacts from Existing Covered Activities	Potential Impacts from Proposed New Covered Activities
western burrowing owl *Athene cunicularia*	CSSC, BCC	Known to winter in the HCP area, but not known to breed within the area. Has been observed at Oso Flaco Lake, Grand Avenue ramp, Phillips 66 Leasehold, near the chemical toilets on the beach, and at Oceano Lagoon.	**Yes.** No impacts to nesting birds occur. Existing covered activities occur in suitable habitat areas and could impact wintering individuals.	**Yes**. No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
Vaux's swift *Chaetura vauxi*	CSSC (nesting)	Outside the known breeding range. Observed at Oso Flaco Lake as recently as May 2015.	**Yes.** [2] No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
black swift *Cypseloides niger*	CSSC, BCC (nesting)	Outside the known breeding range. Observed in the HCP area at Oso Flaco Lake as recently as 2016.	**Yes.** [2] No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
American peregrine falcon *Falco peregrines ssp. anatum*	CFP	Regularly observed in flight and hunting in the HCP area. Not known to nest in the area.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact adults/juveniles.	**Yes**. HCP proposes new activity in suitable habitat areas.
olive-sided flycatcher *Contopus cooperi*	CSSC, BCC (nesting)	Observed in the HCP area at Oso Flaco Lake, Meadow Creek, and Oceano Campground. This species is an uncommon breeder in San Luis Obispo County, but could breed within willows, oaks,	**Unlikely.** Although existing covered activities occur in suitable habitat areas, this species is likely rare in the HCP area. As a result, potential for covered activities to impact this species is very low.	**Unlikely.** Although the HCP proposes new covered activities in suitable habitat areas, this species is likely rare in the HCP area. As a result, potential for covered activities to impact this species is very low.

Table 6-2. Special-Status Animal Species in the HCP Area

Species	Listing Status[1]	Species Occurrence in HCP Area	Potential Impacts from Existing Covered Activities	Potential Impacts from Proposed New Covered Activities
		and eucalyptus trees present in the HCP area.		
willow flycatcher *Empidonax trailii*	SE, BCC (nesting)	Outside the known breeding range. Observed at Oso Flaco Lake and at Oceano Lagoon as recently as 2016.	**Yes.** [2] No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
loggerhead shrike *Lanius ludovicianus*	CSSC, BCC (nesting)	Regularly observed in the HCP area. Known to nest and forage in the area.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact eggs, chicks, and adults/juveniles.	**Yes**. HCP proposes new activity in suitable nesting habitat areas.
California horned lark *Eremophila alpestris actia*	SWL	This species has been observed in the HCP area and the National Wildlife Refuge to the south of the HCP area. May nest and forage in a variety of low grass or bare habitats within the HCP area.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact eggs, chicks, and adults/juveniles.	**Yes**. HCP proposes new activity in suitable nesting habitat areas.
bank swallow *Riparia riparia*	ST (nesting)	Outside the known breeding range. Observed foraging in the HCP area as recently as 2016.	**Yes.** [2] No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
Lucy's warbler *Oreothlypis luciae*	CSSC, BCC (nesting)	Outside the known breeding range. Observed foraging in the HCP area at Oso Flaco Lake and Oceano Lagoon as recently as 2015.	**Yes.** [2] No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.

Table 6-2. Special-Status Animal Species in the HCP Area

Species	Listing Status[1]	Species Occurrence in HCP Area	Potential Impacts from Existing Covered Activities	Potential Impacts from Proposed New Covered Activities
yellow warbler *Setophaga petechia*	CSSC, BCC (nesting)	Documented at Arroyo Grande Creek, Jack Lake, Little Oso Flaco Lake, and Oso Flaco Lake. Marginal foraging and nesting habitat is present.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact eggs, chicks, and adults/juveniles.	**Yes**. HCP proposes new activity in suitable nesting habitat areas.
yellow-breasted chat *Icteria virens*	CSSC (nesting)	Documented at the Oso Flaco Maps Station in 2000 and at Oso Flaco Lake in 2015. Nesting in the area is not confirmed.	**Unlikely.** Although existing covered activities occur in suitable habitat areas, this species is likely rare in the HCP area. As a result, potential for covered activities to impact this species is very low.	**No**. HCP proposes no new activity in habitat areas.
summer tanager *Piranga rubra*	CSSC (nesting)	Outside the known breeding range. Observed at Oso Flaco Lake as recently as December 2016.	**Yes.** [2] No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
tricolored blackbird *Agelaius tricolor*	CSSC, BCC (nesting)	Observed at Oso Flaco Lake as recently as August 2016. No nesting documented in the area.	**Yes.** [2] No impacts to nesting birds would occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.
yellow-headed blackbird *Xanthocephalus xanthocephalus*	CSSC (nesting)	Outside the known breeding range. Observed near Oceano Lagoon and at Oso Flaco lake as recently as 2016.	**Yes.** [2] No impacts to nesting birds occur. Existing covered activities could have short-term, temporary impacts on wintering/ migrating birds where they are passing through, foraging, or roosting.	**Yes.** [2] No impacts to nesting birds would occur. HCP proposed new covered activities could have short-term, temporary impacts on wintering/migrating birds where they are passing through, foraging, or roosting.

Table 6-2. Special-Status Animal Species in the HCP Area

Species	Listing Status[1]	Species Occurrence in HCP Area	Potential Impacts from Existing Covered Activities	Potential Impacts from Proposed New Covered Activities
Mammals				
pallid bat *Antrozous pallidus*	CSSC	Pallid bats were detected during passive acoustic surveys at Oceano Lagoon in June 2017.	**Yes.** Existing covered activities occur in areas where roosts could be present.	**No**. HCP proposes no new activity in habitat areas.
Townsend's big-eared bat *Corynorhinus townsendii*	CSSC	Townsend's big-eared bats were detected during passive acoustic surveys at Oceano Lagoon in June 2017.	**Yes.** Existing covered activities occur in areas where roosts could be present.	**No**. HCP proposes no new activity in habitat areas.
Western red bat *Lasiurus blossevillii*	CSSC	Western red bats were detected during passive acoustic surveys at Oceano Lagoon in June 2017.	**Yes.** Existing covered activities occur in areas where roosts could be present.	**No**. HCP proposes no new activity in habitat areas.
southern sea otter *Enhydra lutris nereis*	FT, CFP	Southern sea otters are occasionally seen offshore of the HCP area.	**No.** Present offshore only. Existing covered activities (e.g., boating and kiteboarding) are unlikely to occur in areas where this species is foraging or resting.	**No**. HCP proposes no new activity in habitat areas.
American badger *Taxidea taxus*	CSSC	Has been observed in vegetation islands, and nearby Phillips 66 Leasehold. Inactive badger dens have also been observed throughout Oceano Dunes SVRA.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact burrowing individuals.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact burrowing individuals.

[1]Listing Status Key:

FE – Federal Endangered
FT – Federal Threatened
Under Review – USFWS is evaluating for Federal listing
BCC – USFWS Birds of Conservation Concern
SE – State Endangered
ST – State Threatened SC – Candidate for State listing
CFP – California Fully Protected
CSSC – California Species of Special Concern
SWL – State Watch List

[2] Any impacts to these special-status non-nesting migratory bird species would be localized, temporary, and/or short-term in duration; therefore, impacts to these species would not require a permit or authorization. Impacts to these species are not included under the discussion of special-status species and are acknowledged in this EIR under a separate heading titled Wintering/Migratory Birds.

Table 6-3. Special-Status Plant Species in the HCP Area

Species	Listing Status	Species Occurrence in HCP Area	Potential Impacts from Existing Covered Activities	Potential Impacts from Proposed New Covered Activities
red sand verbena *Abronia maritima*	CRPR 4.2	Known to occur in and around the HCP area, including near Strand Way, Pismo Dunes Natural Preserve, and on vegetation islands.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact red sand verbena.	**Yes**. HCP proposes new activities in suitable habitat areas.
sand mesa manzanita *Arctostaphylos rudis*	CRPR 1B.2	Observed within the Phillips 66 Leasehold by CDPR staff.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact sand mesa manzanita.	**No.** HCP proposes no new activities in suitable habitat areas.
marsh sandwort *Arenaria paludicola*	FE, SE, CRPR 1B.1	Only known extant population at Oso Flaco Lake. Observed during 2018 surveys.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact marsh sandwort.	**No.** HCP proposes no new activities in suitable habitat areas.
Nuttall's milkvetch *Astragalus nuttallii* var. *nuttallii*	CRPR 4.2	Known from CDPR surveys and CNDDB records to occur within Oceano Dunes SVRA including in Pismo Dunes Natural Preserve, Phillips 66 Leasehold, Oso Flaco, and vegetation islands.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact Nuttall's milkvetch.	**No.** HCP proposes no new activities in suitable habitat areas.
Monterey Coast paintbrush *Castilleja latifolia* ssp. *latifolia*	CRPR 4.3	Known from CDPR surveys to be widespread in the HCP area, including Carpenter Creek, Oso Flaco Lake, vegetation islands, Pismo Dunes Natural Preserve, and Phillips 66 Leasehold.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact Monterey Coast paintbrush.	**No.** HCP proposes no new activities in suitable habitat areas.
coastal goosefoot *Chenopodium littoreum*	CRPR 1B.2	Known from CDPR surveys and CNDDB records to occur at Oso Flaco and Phillips 66 Leasehold.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact coastal goosefoot.	**Yes.** HCP proposes new activities in suitable habitat areas.
Douglas's spineflower *Chorizanthe douglasii*	CRPR 4.3	Documented during previous CDPR surveys to occur within the Pavilion Hill vegetation island.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact Douglas's spineflower.	**No.** HCP proposes no new activity in habitat areas.

Table 6-3. Special-Status Plant Species in the HCP Area

Species	Listing Status	Species Occurrence in HCP Area	Potential Impacts from Existing Covered Activities	Potential Impacts from Proposed New Covered Activities
surf thistle *Cirsium rhothophilum*	ST, CRPR 1B.2	Observed in CDPR surveys near Oso Flaco Creek and in the foredunes of the South Oso Flaco area.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact surf thistle.	**No.** HCP proposes no new activities in suitable habitat areas.
La Graciosa thistle *Cirsium scariosum* var. *loncholepis*	FE, ST, CRPR 1B.1	Known from CDPR surveys and CNDDB records to occur at Oso Flaco Lake, near Jack Lake, in the Callander Dunes, and at the Dune Lake complex.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact La Graciosa thistle.	**Yes.** HCP proposes new activities in suitable habitat areas.
dune larkspur *Delphinium parryi* ssp. *blochmaniae*	CRPR 1B.2	Observed in the HCP area by CDPR staff almost every year within the Phillips 66 Leasehold and at South Oso Flaco.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact dune larkspur.	**No.** HCP proposes no new activities in suitable habitat areas.
beach spectaclepod *Dithyrea maritima*	ST, CRPR 1B.1	Known to occur at Oso Flaco Lake and south of Oso Flaco Lake from CDPR and CNDDB records.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact beach spectaclepod.	**No.** HCP proposes no new activities in suitable habitat areas.
Blochman's leafy daisy *Erigeron blochmaniae*	CRPR 1B.2	Locally common and widespread throughout the HCP area.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact Blochman's leafy daisy.	**Yes.** HCP proposes new activities in suitable habitat areas.
suffrutescent wallflower *Erysimum suffrutescens*	CRPR 4.2	Locally common and widespread throughout the HCP area.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact suffrutescent wallflower.	**Yes.** HCP proposes new activities in suitable habitat areas.
Kellogg's horkelia *Horkelia cuneata* var. *sericea*	CRPR 1B.1	Observed in the Pismo Dunes Natural Preserve, in Pismo State Beach and in the Phillips 66 Leasehold during Oceano Dunes District surveys.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact Kellogg's horkelia.	**No.** HCP proposes no new activities in suitable habitat areas.
Southwestern spiny rush *Juncus acutus* ssp. *leopoldii*	CRPR 4.2	Observed in the HCP area in the Pismo Dunes Natural Preserve and at the Eucalyptus Tree vegetation island during previous Oceano Dunes District surveys.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact southwestern spiny rush.	**No.** HCP proposes no new activities in suitable habitat areas.

Table 6-3. Special-Status Plant Species in the HCP Area

Species	Listing Status	Species Occurrence in HCP Area	Potential Impacts from Existing Covered Activities	Potential Impacts from Proposed New Covered Activities
fuzzy prickly phlox *Linanthus californicus*	CRPR 4.2	Observed during previous CDPR surveys in the Pismo Dunes Natural Preserve, Phillips 66 Leasehold, and the backdunes of South Oso Flaco.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact fuzzy prickly phlox.	**Yes.** HCP proposes new activities in suitable habitat areas.
Nipomo Mesa lupine *Lupinus nipomensis*	FE, SE, CRPR 1B.1	Observed in the HCP area in the eastern part of the Phillips 66 Leasehold in SLO County Land Conservancy surveys; also known from CNDDB records.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact Nipomo Mesa lupine.	**No.** HCP proposes no new activities in suitable habitat areas.
dunedelion *Malacothrix incana*	CRPR 4.3	Observed during CDPR surveys at the Pavilion Hill vegetation island, 7.5 revegetation area, and near Oso Flaco Lake and Creek.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact dunedelion.	**Yes.** HCP proposes new activities in suitable habitat areas.
crisp monardella *Monardella undulata* ssp. *crispa*	CRPR 1B.2	Locally common and widespread throughout the HCP area. Occurs within the vegetation island habitats and at the edges of other vegetation within the HCP area according to 2012 vegetation mapping and CNDDB records.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact crisp monardella.	**Yes.** HCP proposes new activities in suitable habitat areas.
San Luis Obispo monardella *Monardella undulata* ssp. *undulata*	CRPR 1B.2	Observed in the Pismo Dunes Natural Preserve, in the southern part of the Phillips 66 Leasehold, and in the southern backdunes of south Oso Flaco in CDPR surveys; also known from nearby CNDDB records.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact San Luis Obispo monardella.	**Yes.** HCP proposes new activities in suitable habitat areas.
California spineflower *Mucronea californica*	CRPR 4.2	Observed during CDPR surveys in the Pismo Dunes Natural Preserve, Phillips 66 Leasehold, and South Oso Flaco.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact California spineflower.	**Yes.** HCP proposes new activities in suitable habitat areas.

Table 6-3. Special-Status Plant Species in the HCP Area

Species	Listing Status	Species Occurrence in HCP Area	Potential Impacts from Existing Covered Activities	Potential Impacts from Proposed New Covered Activities
Gambel's watercress *Nasturtium gambelii*	FE, ST, CRPR 1B.1	Known from the HCP area at Oso Flaco Lake.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact Gambel's watercress.	**No.** HCP proposes no new activities in suitable habitat areas.
Hickman's popcorn flower *Plagiobothrys chorisianus* var. *hickmanii*	CRPR 4.2	Observed during CDPR surveys at four vegetation islands, in the Phillips 66 Leasehold, and at Maidenform.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact Hickman's popcorn flower.	**Yes.** HCP proposes new activities in suitable habitat areas.
sand almond *Prunus fasciculata* var. *punctate*	CRPR 4.3	Observed during CDPR surveys within the Phillips 66 Leasehold.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact sand almond.	**No.** HCP proposes no new activities in suitable habitat areas.
Blochman's groundsel *Senecio blochmaniae*	CRPR 4.2	Locally common and widespread throughout HCP area.	**Yes.** Existing covered activities occur in suitable habitat areas and could impact Blochman's groundsel.	**Yes.** HCP proposes new activities in suitable habitat areas.

[1] Listing Status Key:
FE – Federal Endangered
FT – Federal Threatened
SE – State Endangered
ST – State Threatened
SR – State Rare

California Rare Plant Rank:
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere.
CRPR 2: Plants rare, threatened, or endangered in Calif. but common elsewhere.
CRPR 3: More information about this plant needed (Review List).
CRPR 4: Limited distribution (Watch List).

CRPR Threat Code extensions and their meanings:
1 – Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
2 – Fairly endangered in California (20-80% occurrences threatened)
3 – Not very endangered in California (<20% of occurrences threatened or no current threats known).

6.2.4 Wildlife Movement and Nurseries

Wildlife corridors play an important role in countering habitat fragmentation. A wildlife corridor is a landscape element that serves as a linkage between historically connected habitats or landscapes that are otherwise separated and is meant to provide avenues along which wildlife can travel, migrate, and meet mates; plants can propagate; genetic interchange can occur; populations can move in response to environmental changes and natural disasters; and individuals can re-colonize habitats from which populations have been locally extirpated. Corridors can consist of a sequence of stepping-stones across the landscape (i.e., discontinuous areas of habitat such as isolated wetlands and roadside vegetation), continuous lineal strips of vegetation and habitat

(e.g., riparian strips and ridge lines), or they may be parts of larger habitat areas of known or likely importance to local wildlife.

Nursery sites are locations within the range of the species where the conditions are favorable for wildlife to successfully raise young each year and maintain population levels.

The 5,005-acre HCP area includes ample area for wildlife movement along the coast, particularly when viewed in the greater setting. The HCP area is bounded by the City of Pismo Beach to the north, the Guadalupe-Nipomo Dunes National Wildlife Refuge to the south, urban and agricultural land to the east, and the Pacific Ocean to the west. Pismo State Beach and Oceano Dunes SVRA contain approximately 25 percent of the 18-mile linear shoreline of the overall Guadalupe-Nipomo Dunes complex. The Guadalupe-Nipomo Dunes complex extends from Pismo Beach south to Point Sal and roughly from State Route 1 to the Pacific Ocean in San Luis Obispo and Santa Barbara counties. The Guadalupe-Nipomo Dunes complex is a relatively intact coastal dune and dune scrub ecosystem varying in width from 2 to 5 miles.

The Guadalupe-Nipomo Dunes complex, including the HCP area, provides movement opportunities for terrestrial wildlife over a large swath of intact coastal dunes and dune scrub habitat. In addition, the HCP area falls within the Pacific flyway migration route and provides a stopover site for numerous migrating birds that require food and resources along the shoreline, as well as areas where they can roost and loaf using wrack as a wind block. Creeks within the HCP area provide wildlife movement corridors for aquatic wildlife, including special-status species such as tidewater goby, steelhead, CRLF, and western pond turtle. The HCP area is bordered by the ocean to the west, which comprises a vast movement corridor for saltwater fish, seabirds, marine mammals, and other marine species. Wildlife movement toward the east is restricted by developed agricultural and urban land.

Existing and proposed new activities would impact wildlife movement. Impacts to wildlife movement from existing covered activities are described in more detail in EIR Appendix D. Impacts to wildlife movement from proposed new covered activities are described in more detail in EIR section 6.3 below.

6.2.5 Sensitive Natural Communities, including Riparian

Natural communities include vegetation communities designated by USFWS, CDFW, CCC, and other federal, state, or local agencies. There are numerous CDFW sensitive natural communities within the HCP area, including central dune scrub, central foredunes, coastal and valley freshwater marsh, black cottonwood forest, coast live oak (*Quercus agrifolia*) woodland, dune mat, Beach pine (*Pinus contorta* ssp. *contorta*) forest, silver dune lupine (*Lupinus chamissonis*) – mock heather scrub (*Ericameria ericoides*), Arroyo willow (*Salix lasiolepis*) thickets, coyote brush (*Baccharis pilularis*) scrub, wax myrtle (*Morella californica*) scrub, giant coreopsis (*Coreopsis gigantea*) scrub, coastal brambles, blue elderberry (*Sambucus nigra* ssp. *caerulea*) stands, California bulrush (*Schoenoplectus californicus*) marsh, salt rush swales, field sedge (*Carex praegracilis*) meadows, mats of bur-reed (*Sparganium eurycarpum*) leaves, pickleweed (*Sarcocornia pacifica*) mats, Pacific silverweed (*Argentina egedii*) marshes, giant wild rye (*Leymus condensatus*) grassland, and American bulrush (*Schoenoplectus americanus*) marsh.

Critical habitat designated by the USFWS is present within the HCP area, including for SNPL, tidewater goby, and La Graciosa thistle.

The HCP area also contains several ESHAs as defined by the City of Grover Beach LCP (City of Grover Beach, 2014), City of Pismo Beach LCP (City of Pismo Beach, 2014), and San Luis Obispo County LCP (County of San Luis Obispo, 2008). Specifically, the HCP area ESHAs include the intertidal zone, sand dunes, coastal streams (e.g., Arroyo Grande Creek, Pismo Creek, Meadow Creek, and Oso Flaco Creek), riparian woodland, perennial freshwater marsh, freshwater lakes (e.g., Pismo Lake and Oso Flaco Lake), wetlands, and habitat that supports threatened and endangered species.

Existing and proposed new activities would impact sensitive natural communities. Impacts to sensitive natural communities from existing covered activities are described in more detail in EIR Appendix D. Impacts to sensitive natural communities from proposed new covered activities are described in more detail in EIR section 6.3 below.

6.2.6 Jurisdictional Waters, including Wetlands

Jurisdictional waters are waters of the U.S. and State that are subject to the jurisdiction of the federal government under the CWA and the state government under the CWA, Porter Cologne Act, and the California Coastal Act. See the regulatory setting in EIR section 6.1 for more detailed explanation. Jurisdictional waters essentially include all aquatic features, although the extent of jurisdiction varies by agency. Wetlands are defined by the federal government as those areas "that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3(b)).

Aquatic features in the HCP area include Pismo Creek, Carpenter Creek, Meadow Creek, Arroyo Grande Creek, and Oso Flaco Creek. The HCP area also contains Oso Flaco Lake, Pismo Lake, and occasional slack lakes in the dunes. Wetlands can occur in or near any of these aquatic features in any particular year. Wetland habitat is perennially present along the margins of the lakes. Wetland alliances also occur in the vegetated islands, the foredunes and backdunes, in South Oso Flaco, in the Pismo State Beach area, the North Beach Campground area, and the Phillips 66 Leasehold. The Vegetation Mapping Report (MIG|TRA, 2015) in HCP Appendix I maps the following wetland alliances within the HCP area: arroyo willow thickets (395 acres), wax myrtle scrub (10 acres), California bulrush marsh (45 acres), salt rush swales (15 acres), cattail marshes (3 acres), mats of bur-reed leaves (1 acre), pickleweed mats (1 acre), salt grass flats (1 acre), Pacific silverweed marsh (0.4 acre), American bulrush marsh (0.2 acre), duckweed blooms (36 acres, i.e., Oso Flaco Lake), field sedge meadows (4 acres), and jaumea mats (0.1 acre).

Existing activities impact jurisdictional waters as described in EIR Appendix D. Proposed new activities would not occur in or near jurisdictional waters. As a result, jurisdictional waters would not be impacted by new proposed covered activities in the HCP and are not considered further in this analysis.

6.2.7 Effects of Existing Activities

HCP covered activities for visitor use (CA-1 through CA-11); natural resource management (CA-12 through CA-19, except new SNPL chick and egg capture for captive rearing if observed to be threatened by recreation activity or non-covered species management activities [AMM 22]; park maintenance (CA-20 through CA-31, except new mechanical trash removal); visitor services (CA-32 through CA-39); and other park operations (CA-40, CA-44 through 47, except

new dust control activities associated with the PMRP and CA-50) are all existing activities occurring within Pismo State Beach and Oceano Dunes SVRA. All of these existing activities have known impacts on biological resources within the park units. Effects of these existing covered activities on special-status species fall into five categories: mortality or injury, disturbance, habitat reduction, indirect impacts, and beneficial effects, as defined below.

- **Mortality or Injury.** The covered activity has directly caused mortality or injury to a species in the past or has the potential to do so within the permit term of the HCP due to the nature of the activity. Examples include, but are not limited to, species being struck by a vehicle or being stepped on by pedestrians.
- **Disturbance.** The covered activity has caused disturbance to a species in the past or has the potential to do so within the permit term of the HCP due to the nature of the activity. Disturbance means causing stress to an individual or group of species such that they alter their natural behavior, potentially resulting in reduced breeding or foraging success, or even in some cases injury or mortality of one or more individuals. Disturbance also includes short-term impacts to species habitat, such as a temporary increase in turbidity in aquatic habitats.
- **Habitat Impacts.** The covered activity has resulted in a permanent reduction or alteration of species habitat in the past or has the potential to do so within the permit term of the HCP due to the nature of the activity. Examples of permanent habitat impacts include, but are not limited to, the reduction in habitat quality from motorized vehicle recreation or the permanent loss of habitat from covered activities.
- **Indirect Impacts.** The covered activity has caused indirect impacts to species in the past or has the potential to do so within the permit term of the HCP due to the nature of the activity. Indirect impacts include indirect negative effects to species from covered activities, such as an increase in the likelihood of predation or disease, or exposure to pollutants.
- **Beneficial Effects.** Covered activities with beneficial effects reduce the likelihood of species mortality of injury from other covered activities, protect species breeding and foraging habitat, and/or aid in the maintenance or recovery of species populations. Examples include the breeding season exclosures and monitoring for SNPL and CLTE, the CRLF surveys, the tidewater goby and salmonid surveys, and the listed plant management activities.

CDPR manages the effects of existing covered activities through implementing many AMMs such as recreation use restrictions, protective fencing of sensitive areas, habitat enhancements, enforcement patrols, and monitoring. Management measures employed by CDPR for the conservation of covered species are identified as AMMs listed in EIR Appendix B and briefly described below in EIR section 6.2.8.

Special-status species impacted by existing activities are described above in EIR section 6.2.3 and Table 6-2 and Table 6-3. The risk of impact to special-status animal species and special-status plant species from existing covered activities are summarized in Table 6-4 (animals) and Table 6-5 (plants). The risks of impact are classified as either high (H), moderate (M), low (L), no (N), and/or beneficial impact (B), as defined in the tables. Risk is defined as both the likelihood and magnitude of effect. As a result, risk is weighing both the frequency and severity

of the impact. Therefore, even though an impact may be expected to occur, it may not result in a high or moderate risk if the impact is considered infrequent or is not severe. The potential for existing ongoing activities occurring at Pismo State Beach and Oceano Dunes SVRA to affect these special-status species is characterized in EIR Appendix D. Effects to special-status species from these activities are existing baseline environmental conditions.

Table 6-4. Risk of Impact of Existing Covered Activities to Special-Status Animal Species[1]

Covered Activity	HCP Covered Animals				Non-Covered Animals							
	Western Snowy Plover	California Least Tern	California Red-legged Frog	Tidewater Goby	California (Coast) Horned Lizard	Silvery Legless Lizard	Western Spadefoot	Western Pond Turtle	Burrowing Owls	Nesting Birds[2]	Bats	American Badger
Park Visitor Activities												
CA-1 Motorized Recreation	H	H	L	N	L	L	L	N	L	L	M	L
CA-2 Camping	M	M	L	N	L	L	L	L	L	L	M	L
CA-3 Pedestrian Activities	M	M	L	L	M	M	L	L	L	L	L	L
CA-4 Bicycling and Golfing	L	L	N	N	L	L	N	N	L	L	N	N
CA-5 Fishing	L	L	L	N	N	N	L	L	N	L	N	N
CA-6 Dog walking	L	L	L	L	L	L	L	L	L	L	L	L
CA-7 Equestrian Recreation	L	L	L	L	L	L	L	L	L	L	N	L
CA-8 Boating/ Surfing	L	L	L	N	N	N	L	L	N	L	N	N
CA-9 Aerial/Wind-Driven Activities	L	N	N	N	N	N	N	N	L	L	N	L
CA-10 Holidays	H	H	L	L	M	M	L	M	L	M	M	L
CA-11 Special Events	M	M	L	N	L	L	L	L	L	M	L	L
Natural Resources Management												
CA-12a and CA-12b SNPL and CLTE Management	H, B	H, B	N	N	N	N	N	N	L	H	N	N
CA-13 TG and Salmonid Surveys	L	L	L	H, B	N	N	L	L	N	L	N	N
CA-14 CRLF Surveys and Management	L	L	H, B	L	N	N	M, B	M, B	N	L	N	N

Table 6-4. Risk of Impact of Existing Covered Activities to Special-Status Animal Species[1]

Covered Activity	HCP Covered Animals				Non-Covered Animals							
	Western Snowy Plover	California Least Tern	California Red-legged Frog	Tidewater Goby	California (Coast) Horned Lizard	Silvery Legless Lizard	Western Spadefoot	Western Pond Turtle	Burrowing Owls	Nesting Birds[2]	Bats	American Badger
CA-15 Listed Plant Management (monitoring)	L	L	M, B	N	M, B	M, B	M, B	M, B	L	M, B	N	M, B
CA-16 Habitat Restoration	L	L	N	N	L, B	L, B	N	N	L	L	N	L
CA-17 Invasive Plant and Animal Control	M, B	N	M, B	M, B	M, B	M, B	M, B	M, B	L	M, B	N	M, B
CA-18 HMS	M, B	M, B	L	L	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B
CA-19 Water Quality Monitoring Projects	L	L	M, B	M, B	N	N	M, B	M, B	N	M, B	N	N
Park Maintenance												
CA-20 Campground Maintenance	N	N	N	N	N	N	N	N	N	L	N	N
CA-21 General Facilities Maintenance	L	L	L	N	L	L	L	N	L	L	N	L
CA-22 Trash Control	L, B	L, B	L	N	L	L	L	N	L	L	N	L
CA-23 Wind Fencing	L	L	N	N	L	L	N	N	L	L	N	N
CA-24 Sand Ramp/Other Vehicle Access	L	N	N	N	N	N	N	N	L	L	N	N
CA-25 Street Sweeping	N	N	N	N	N	N	N	N	L	N	N	N
CA-26 Routine Riparian Maintenance	N	L	M	L	L	L	L	L, B	N	L	L	N
CA-27 Perimeter and Veg Island Fencing	L	L	N	N	L	L	N	N	L	L	N	L
CA-28 Cable Fence Maintenance	L	N	N	N	L	L	N	N	N	L	N	N
CA-29 Heavy Equipment Response	L	L	L	N	L	L	L	N	L	L	N	L
Visitor Services												
CA-30 Minor Grading	L	L	N	N	L	L	N	N	L	L	N	L
CA-31 Boardwalk/Other Pedestrian Maintenance	L	L	L	N	L	L	L	L	L	L	N	N
CA-32 Ranger, Lifeguard, Park Patrols	L	L	L	N	L	L	L	N	L	L	N	L

Table 6-4. Risk of Impact of Existing Covered Activities to Special-Status Animal Species[1]

Covered Activity	HCP Covered Animals				Non-Covered Animals							
	Western Snowy Plover	California Least Tern	California Red-legged Frog	Tidewater Goby	California (Coast) Horned Lizard	Silvery Legless Lizard	Western Spadefoot	Western Pond Turtle	Burrowing Owls	Nesting Birds[2]	Bats	American Badger
CA-33 Emergency Response	M	M	L	L	L	L	L	L	L	L	N	L
CA-34 Access by Non-CDPR Vehicles	M	L	L	N	L	L	L	N	L	L	N	L
CA-35 ASI Courses (ATV and RUV)	N	N	N	N	L	L	N	N	L	L	N	N
CA-36 Beach Concessions	L	L	N	N	L	L	N	N	L	L	N	N
CA-37 PB Golf Course Operations	N	N	M	N	N	N	N	L	N	L	N	N
CA-39 Natural History/Interpretation	N	L	N	N	N	N	N	N	N	L	N	N
Other Activities												
CA-40 Vehicle Crossing of Creeks	L	L	L	M	N	N	L	L	N	L	N	N
CA-44 Dust Control Activities	M	M	L, B	N	L, B	L, B	L, B	N	M	M	N	L, B
CA-45 Cultural Resources Management	L	L	L	N	L	L	L	N	L	L	N	L
CA-46 CDPR Ag Land Management	N	N	L	N	N	N	N	N	N	N	N	N
CA-47 Maintenance of a Bioreactor on Ag Lands	N	N	N	N	N	N	N	N	N	N	N	N
CA-51 Use of Pesticides	L	L	M, B	M, B	M, B	M, B	M, B	M, B	L	M, B	N	M, B

[1] If both adverse and beneficial impacts can occur, both are shown as defined below. The discussion for each species within this section details the individual impacts.

[2] Nesting birds includes both common and special-status nesting bird species.

High (H). The covered activity has in the past or is highly likely in the HCP permit term to cause direct mortality, injury, or reproductive failure of one or more individuals of a covered species in most years (more than once every 2 years); and/or a degree of disturbance or indirect impacts that is highly likely to result in mortality, injury, or reproductive failure of one or more individuals of a covered species in most years. Permanent loss or reduction in quality of 1 acre or more of primary breeding habitat of one or more covered species also falls into this impact level. In the case of **beneficial (B)** effects, this category applies to covered activities that have a primary purpose of aiding in the protection and recovery of the target covered species, including protective fencing, surveys and monitoring, habitat enhancement, predator control, etc.

Moderate (M). The covered activity has in the past, or may possibly in the HCP permit term, cause direct mortality, injury, or reproductive failure of one or more individuals of a covered species in some years (not more than once every 2 years); and/or a degree of disturbance or indirect impacts that could cause mortality, injury, or reproductive failure of one or more individuals

Table 6-4. Risk of Impact of Existing Covered Activities to Special-Status Animal Species[1]

Covered Activity	HCP Covered Animals				Non-Covered Animals							
	Western Snowy Plover	California Least Tern	California Red-legged Frog	Tidewater Goby	California (Coast) Horned Lizard	Silvery Legless Lizard	Western Spadefoot	Western Pond Turtle	Burrowing Owls	Nesting Birds[2]	Bats	American Badger

of a covered species in some years. Permanent loss or reduction in quality of 1 or more acre of secondary (dispersal, foraging, aestivation, roosting, etc.) habitat of one or more covered species also falls into this impact level. In the case of **beneficial (B)** effects, this category applies to covered activities that have a purpose of restoring and protecting natural resources generally but not necessarily a specific covered species, which have a secondary beneficial effect to a covered species.

Low (L). The covered activity is unlikely to cause mortality, injury, or reproductive failure; however, the covered activity will likely result in a degree of disturbance or indirect impacts that could disrupt the normal behavior patterns (e.g., breeding, feeding, sheltering) of one or more individuals of a covered species. Permanent loss or reduction in quality of 1 or more acre of tertiary (rarely used) habitat or temporary disturbance to habitat of one or more covered species also falls into this impact level. In the case of **beneficial (B)** effects, this category applies to covered activities that do not have a purpose related to natural resources protection, but nevertheless have some degree of beneficial effect to a covered species.

No Impact (N). The covered activity has not caused mortality, injury, or reproductive failure of a covered species in the past and does not have the potential to do so within the permit term of the HCP. The covered activity has not caused disturbance or indirect impacts in the past and is unlikely to during the permit term. The covered activity would also have no permanent or temporary impacts to covered species habitat. There are also no beneficial effects at the no impact level.

Table 6-5. Risk of Impact of Existing Covered Activities to Special-Status Plant Species

Covered Activity	Red sand verbena	**Marsh sandwort**	Sand mesa manzanita	Nuttall's milkvetch	Monterey Coast paintbrush	Coastal goosefoot	Douglas's spineflower	**Surf thistle**	**La Graciosa thistle**	Dune larkspur	**Beach spectaclepod**	Blochman's leafy daisy	Suffrutescent wallflower	Kellogg's horkelia	Southwestern spiny rush	Fuzzy prickly phlox	**Nipomo Mesa lupine**	Dunedelion	Crisp monardella	San Luis Obispo monardella	California spineflower	**Gambel's watercress**	Hickman's popcorn flower	sand almond	Blochman's groundsel
Park Visitor Activity																									
CA-1 Motorized Recreation	L	N	N	N	L	L	L	L	L	N	L	L	L	N	L	L	N	L	L	L	L	N	L	L	L
CA-2 Camping	L	N	N	N	L	L	L	L	L	N	L	L	L	N	L	L	N	L	L	L	L	N	N	L	N
CA-3 Pedestrian Activities	M	N	N	M	M	M	M	M	M	M	M	M	M	M	M	M	N	M	M	M	M	N	M	M	M
CA-4 Bicycling and Golfing	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CA-5 Fishing	N	L	N	N	N	N	N	N	L	N	N	N	N	N	N	N	N	N	N	N	N	L	N	N	N
CA-6 Dog Walking	L	N	N	L	L	L	L	L	L	L	L	L	L	N	L	L	N	L	L	L	L	N	L	L	L
CA-7 Equestrian Recreation	L	N	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	N	L	L	L
CA-8 Boating/ Surfing	N	L	N	N	N	N	N	N	L	N	N	N	N	N	N	N	N	N	N	N	N	L	N	N	N

Table 6-5. Risk of Impact of Existing Covered Activities to Special-Status Plant Species

Covered Activity	Red sand verbena	**Marsh sandwort**	Sand mesa manzanita	Nuttall's milkvetch	Monterey Coast paintbrush	Coastal goosefoot	Douglas's spineflower	**Surf thistle**	**La Graciosa thistle**	Dune larkspur	**Beach spectaclepod**	Blochman's leafy daisy	Suffrutescent wallflower	Kellogg's horkelia	Southwestern spiny rush	Fuzzy prickly phlox	**Nipomo Mesa lupine**	Dunedelion	Crisp monardella	San Luis Obispo monardella	California spineflower	**Gambel's watercress**	Hickman's popcorn flower	sand almond	Blochman's groundsel
CA-9 Aerial/Wind-Driven Activities	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CA-10 Holidays	M	N	N	M	M	M	M	M	M	M	M	M	M	M	M	M	N	M	M	M	M	N	M	M	M
CA-11 Special Events	M	N	N	M	M	M	M	M	M	M	M	M	M	M	M	M	N	M	M	M	M	N	M	M	M
Natural Resources Management																									
CA-12a and CA-12b SNPL and CLTE Management	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CA-13 TG and Salmonid Surveys	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CA-14 CRLF Surveys and Management	N	L	N	N	N	N	N	N	L	N	N	N	N	N	N	N	N	N	N	N	N	L	N	N	N

Table 6-5. Risk of Impact of Existing Covered Activities to Special-Status Plant Species

Covered Activity	Red sand verbena	**Marsh sandwort**	Sand mesa manzanita	Nuttall's milkvetch	Monterey Coast paintbrush	Coastal goosefoot	Douglas's spineflower	**Surf thistle**	**La Graciosa thistle**	Dune larkspur	**Beach spectaclepod**	Blochman's leafy daisy	Suffrutescent wallflower	Kellogg's horkelia	Southwestern spiny rush	Fuzzy prickly phlox	**Nipomo Mesa lupine**	Dunedelion	Crisp monardella	San Luis Obispo monardella	California spineflower	**Gambel's watercress**	Hickman's popcorn flower	sand almond	Blochman's groundsel
CA-15 Listed Plant Management	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B
CA-16 Habitat Restoration Program	L,B	N	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	N	L,B	L,B	L,B
CA-17 Invasive Plant and Animal Control	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B
CA-18 HMS	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B	L,B
CA-19 Water Quality Monitoring Projects	N	L	N	N	N	N	N	N	L	N	N	N	N	N	N	N	N	N	N	N	N	L	N	N	N
Park Maintenance																									
CA-20 Campground Maintenance	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Table 6-5. Risk of Impact of Existing Covered Activities to Special-Status Plant Species

Covered Activity	Red sand verbena	**Marsh sandwort**	Sand mesa manzanita	Nuttall's milkvetch	Monterey Coast paintbrush	Coastal goosefoot	Douglas's spineflower	**Surf thistle**	**La Graciosa thistle**	Dune larkspur	**Beach spectaclepod**	Blochman's leafy daisy	Suffrutescent wallflower	Kellogg's horkelia	Southwestern spiny rush	Fuzzy prickly phlox	**Nipomo Mesa lupine**	Dunedelion	Crisp monardella	San Luis Obispo monardella	California spineflower	**Gambel's watercress**	Hickman's popcorn flower	sand almond	Blochman's groundsel
CA-21 General Facilities Maintenance	L	N	N	N	L	L	L	L	L	L	L	L	L	N	L	L	N	L	L	L	L	N	L	L	L
CA-22 Trash Control	L	N	N	N	L	L	L	L	L	L	L	L	L	N	L	L	N	L	L	L	L	N	L	L	L
CA-23 Wind Fencing	L	N	N	N	L	L	L	L	L	N	L	L	L	N	L	L	N	L	L	N	L	N	L	L	L
CA-24 Sand Ramp/Other Vehicle Access	L	N	N	N	L	L	L	L	L	N	L	L	L	N	L	L	N	L	L	N	L	N	L	L	L
CA-25 Street Sweeping	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CA-26 Routine Riparian Maintenance	N	L	N	N	N	N	N	N	L	N	N	N	N	N	N	N	N	N	N	N	N	L	N	N	N
CA-27 Perimeter and Veg Island Fencing	L	N	N	N	L	N	L	L	L	N	L	L	L	N	N	N	N	L	L	N	N	N	N	L	L

Table 6-5. Risk of Impact of Existing Covered Activities to Special-Status Plant Species

Covered Activity	Red sand verbena	**Marsh sandwort**	Sand mesa manzanita	Nuttall's milkvetch	Monterey Coast paintbrush	Coastal goosefoot	Douglas's spineflower	**Surf thistle**	**La Graciosa thistle**	Dune larkspur	**Beach spectaclepod**	Blochman's leafy daisy	Suffrutescent wallflower	Kellogg's horkelia	Southwestern spiny rush	Fuzzy prickly phlox	**Nipomo Mesa lupine**	Dunedelion	Crisp monardella	San Luis Obispo monardella	California spineflower	**Gambel's watercress**	Hickman's popcorn flower	sand almond	Blochman's groundsel
CA-28 Cable Fence Maintenance	L	N	N	N	L	L	L	L	L	L	L	L	L	N	L	L	N	L	L	L	L	N	L	L	L
CA-29 Heavy Equipment Response	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Visitor Services																									
CA-30 Minor Grading	L	N	N	N	L	L	L	L	L	N	L	L	L	N	L	L	N	L	L	N	L	N	L	L	L
CA-31 Boardwalk/ Other Pedestrian Maintenance	L	N	N	L	L	L	L	L	L	L	L	L	L	N	L	L	N	L	L	L	L	N	L	L	L
CA-32 Ranger, Lifeguard, Park Patrols	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CA-33 Emergency Response	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L

Table 6-5. Risk of Impact of Existing Covered Activities to Special-Status Plant Species

Covered Activity	Red sand verbena	**Marsh sandwort**	Sand mesa manzanita	Nuttall's milkvetch	Monterey Coast paintbrush	Coastal goosefoot	Douglas's spineflower	**Surf thistle**	**La Graciosa thistle**	Dune larkspur	**Beach spectaclepod**	Blochman's leafy daisy	Suffrutescent wallflower	Kellogg's horkelia	Southwestern spiny rush	Fuzzy prickly phlox	**Nipomo Mesa lupine**	Dunedelion	Crisp monardella	San Luis Obispo monardella	California spineflower	**Gambel's watercress**	Hickman's popcorn flower	sand almond	Blochman's groundsel
CA-34 Access by Non-CDPR Vehicles	L	N	N	N	L	L	L	L	L	L	L	L	L	N	L	L	N	L	L	L	L	N	L	L	L
CA-35 ASI Courses (ATV and RUV)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CA-36 Beach Concessions	L	N	N	N	L	L	L	L	L	L	L	L	L	N	L	L	N	L	L	L	L	N	L	L	L
CA-37 PB Golf Course Operations	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CA-39 Natural History/ Interpretation	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Other Activities																									
CA-40 Vehicle Crossing of Creeks	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Table 6-5. Risk of Impact of Existing Covered Activities to Special-Status Plant Species

Covered Activity	Red sand verbena	**Marsh sandwort**	Sand mesa manzanita	Nuttall's milkvetch	Monterey Coast paintbrush	Coastal goosefoot	Douglas's spineflower	**Surf thistle**	**La Graciosa thistle**	Dune larkspur	**Beach spectaclepod**	Blochman's leafy daisy	Suffrutescent wallflower	Kellogg's horkelia	Southwestern spiny rush	Fuzzy prickly phlox	**Nipomo Mesa lupine**	Dunedelion	Crisp monardella	San Luis Obispo monardella	California spineflower	**Gambel's watercress**	Hickman's popcorn flower	sand almond	Blochman's groundsel
CA-44 Dust Control Activities	L	N	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	N	L	L	L
CA-45 Cultural Resource Management	L	N	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	N	L	L	L
CA-46 CDPR Ag Land Management	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CA-47 Bioreactor Maintenance on Ag Land	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CA-51 Use of Pesticides	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B

Moderate (M). Activity and habitat may overlap in an area where species has been documented. Activity may alter habitat to a lesser extent.

Low (L). Activity and habitat may overlap. Activity may encroach upon habitat, but not alter it.

No Impact (N). Activity and habitat do not overlap.

Beneficial (B). Activity benefits species and/or habitat.

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6.2.8 Avoidance and Minimization Measures (AMMs)

The proposed HCP incorporates AMMs as project components that are designed to minimize impacts to the covered species and their environment. The application of AMMs is presumed, and therefore they are not considered mitigation measures but rather resource protection measures that are part of the proposed HCP. Thus, the AMMs are considered to be in place when determining the level of impact, as described in the biological impact assessment.

A summary listing of HCP AMMs is presented in EIR Appendix B. There are 140 AMMs for protecting SNPL, 126 AMMs for CLTE, 49 AMMs for CRLF, 55 for tidewater goby, and 38 AMMs for the covered plant species. These measures are designed to protect the covered species from potentially significant impacts caused by the covered activities.

Fish. The HCP includes AMMs specifically for the protection of tidewater goby, including, but not limited to, visitor and park personnel education, signage, minimizing/excluding human and dog activities in tidewater goby habitat, seasonal closures, enforcement (particularly during periods of high use), minimizing disturbance during surveys for fish and amphibians, minimizing erosion, assuring sustained water flows, and pre-construction surveys.

Amphibians and Reptiles. The HCP specifies AMMs to protect CRLF, including, but not limited to, visitor and employee education, posted speed limits, trash management and predator control, monitoring of creek crossings, pre-activity surveys, decontamination of equipment, non-native vegetation management, controlling activities that can cause turbidity, biological monitoring during construction and maintenance activities, timing construction/maintenance to avoid the breeding season, and control of pesticide use. The AMMs specifically target Arroyo Grande Creek, Carpenter Creek, Pismo Creek, Arroyo Grande Creek Lagoon, Oceano Lagoon, Pismo Lagoon, Oso Flaco Creek, Pismo Lake, dune lakes and wetlands, the campgrounds and golf course (maintenance in uplands), riparian areas, and areas subject to cultural resources management. HCP AMMs for CRLF may also provide protection for western spadefoot toad and western pond turtle.

Birds. The HCP specifies AMMs to protect SNPL and CLTE, including, but not limited to, visitor and employee education, posted speed limits, trash management and predator control, seasonal exclosure and single-nest exclosure fencing, monitoring, habitat enhancement, and no-disturbance buffers. The AMMS target areas where SNPL and CLTE are known to nest along the shoreline, but also include other suitable habitat areas where SNPL and CLTE could occur. HCP AMMs for SNPL and CLTE may also provide protection for migrant and winter resident birds, as well as some other nesting birds (e.g., ground nesting birds such as California horned lark).

Plants. The HCP specifies AMMs to protect covered plants in the HCP area, including, but not limited to, visitor and employee education, habitat restoration, and pre-activity surveys. HCP AMMs for covered plants may also provide protection for some wildlife species that occur within similar habitats (e.g., coast horned lizard, silvery legless lizard).

6.3 PROJECT IMPACTS

The proposed HCP includes existing, new proposed, and potential future covered activities. The majority of HCP covered activities presently occur in the HCP area and have been occurring for decades. Table 2-4. in the EIR project description identifies those activities that are ongoing, and those that are new activities or may be considered in the future. Biological effects of ongoing

existing covered activities are part of the environmental setting as described in EIR section 6.2.7 and EIR Appendix D. The HCP does not propose changes to these existing activities; therefore, there are no new impacts associated with these existing covered activities; these activities do not change the environmental baseline and therefore are not further considered in this impact analysis.

Four new covered activities are proposed that would modify park operations: SNPL chick and egg capture for captive rearing if observed to be threatened by recreation activities and other non-covered species management activities (CA-12b); mechanical trash removal (CA-21); reduction of the Boneyard Exclosure and 6 Exclosure (CA-50); and CDPR's use of UAS (CA-52). The biological impacts of these four changes to park operations are addressed in this section. The impact analysis assumes that the AMMs included in the HCP are incorporated into the new covered activities.

Ten covered activities identified in the HCP are potential future projects contemplated by CDPR: SNPL adult banding (CA-12b), propagation and outplanting of listed plants (CA-15); cable fence replacement (CA-28); Grover Beach Lodge (CA-38); Pismo Creek estuary seasonal (floating) bridge (CA-41); riding in 40 Acres (CA-42); safety and education center replacement (CA-43); dust control activities – new PMRP (CA-44); Oso Flaco Lake boardwalk replacement (CA-48); and special projects (CA-49). Other than dust control activities – new PMRP (CA-44), these projects are not specifically proposed now for implementation but may be considered by CDPR in the future. New PMRP planning is well underway. All of these projects would be subject to separate environmental review and approval processes as described in EIR section 2.5.3. These potential future activities are addressed in the cumulative impact analysis in EIR section 6.3.5. The cumulative impact analysis assumes that the AMMs included in the HCP are incorporated into these potential future covered activities.

6.3.1 Thresholds of Significance

Consistent with the CEQA Guidelines Appendix G Checklist, the project would have a significant impact to 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 riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrologic interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;

- Conflict with the provisions of an adopted HCP, Natural Community Conservation Plan (NCCP), or other approved local, regional, or state HCP.

As described in Chapter 3, the HCP proposed new covered activities are limited to SNPL chick and egg capture for captive rearing if observed to be threatened by recreation activities and other non-covered species management activities (CA-12b; AMM 22), mechanical trash removal (CA-21), reduction of the Boneyard Exclosure and 6 Exclosure (CA-50), and CDPR's use of UAS (CA-52).

HCP proposed new covered activities would not occur in jurisdictional waters, including wetlands or slack lakes. As a result, proposed new covered activities would have no impact on jurisdictional waters or wetlands, and therefore this impact is not further discussed.

The proposed action is adoption of a new HCP governing Pismo State Beach and Oceano Dunes SVRA. The HCP new covered activities do not conflict with any local policies protecting biological resources nor do they conflict with any other HCP. There is no HCP, NCCP, or other approved local, regional, or state HCP in effect in the HCP area. Accordingly, this impact is not discussed further in this EIR.

6.3.2 Special-Status Species

The following analysis addresses impacts to special-status species caused by new activities (CA-12b, CA-21, CA-50, and CA-52) proposed by the HCP. An overview of the risk of impacts of these activities on special-status species is presented in Table 6-6 and Table 6-7. Risk is defined as both the likelihood and magnitude of effect. As a result, risk is weighing both the frequency and severity of the impact. Therefore, even though an impact may be expected to occur, it may not result in a high or moderate risk if the impact is considered infrequent or is not severe. The risks of impact are classified as either high (H), moderate (M), low (L), no (N), and/or beneficial impact (B). These classifications are defined in the tables. Per the project impact analysis presented in EIR section 6.2.3 the HCP proposed new covered activities (CA-12b, CA-21, CA-50, and CA-52) would not have impacts on tidewater goby, western pond turtle, bats, marsh sandwort, sand mesa manzanita, Nuttall's milkvetch, Monterey paintbrush, Douglas spineflower, surf thistle, dune larkspur, beach spectaclepod, Kellogg's horkelia, southwestern spiny rush, Nipomo Mesa lupine, Gambel's watercress, and sand almond; therefore, these species are dismissed from further discussion in this EIR. Impacts of potential future covered activities are addressed in the cumulative analysis in EIR section 6.3.5.

Table 6-6. Risk of Impact of Proposed New Covered Activities on Special-Status Animal Species[1,2]

Covered Activity	HCP-Covered Animals			Non-Covered Animals					
	Western Snowy Plover	California Least Tern	California Red-legged Frog	California (Coast) Horned Lizard	Silvery Legless Lizard	Western Spadefoot	Burrowing Owls	Nesting Birds[3]	American Badger
Natural Resource Management									
CA-12b SNPL and CLTE Management – SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreation Activities and Other Non-Covered Species Management Activities	H, B	L	N	N	N	N	L	L	N
Park Maintenance									
CA-21 General Facilities Maintenance – Mechanical Trash Removal	M	L	L	L	L	L	L	L	L
Other Activities									
CA-50 Reduction of the Boneyard Exclosure and 6 Exclosure	H	H	L	L	L	L	N	L	N
CA-52 CDPR UAS Use for Park Activities	L, B	L, B	N	N	N	N	L	M	L

[1] If both adverse and beneficial impacts can occur, both are shown as defined below. The discussion for each species within this section details the individual impacts.

[2] Per the project impact analysis presented in EIR section 6.2.3 the HCP proposed new covered activities would not have impacts on tidewater goby, western pond turtle, and bats.

[3] Nesting birds includes both common and special-status nesting bird species.

High (H). The covered activity has in the past or is highly likely in the HCP permit term to cause direct mortality, injury, or reproductive failure of one or more individuals of a covered species in most years (more than once every 2 years); and/or a degree of disturbance or indirect impacts that is highly likely to result in mortality, injury, or reproductive failure of one or more individuals of a covered species in most years. Permanent loss or reduction in quality of 1 acre or more of primary breeding habitat of one or more covered species also falls into this impact level. In the case of **beneficial (B)** effects, this category applies to covered activities that have a primary purpose of aiding in the protection and recovery of the target covered species, including protective fencing, surveys and monitoring, habitat enhancement, predator or invasive species control, etc.

Moderate (M). The covered activity has in the past, or may possibly in the HCP permit term, cause direct mortality, injury, or reproductive failure of one or more individuals of a covered species in some years (not more than once every 2 years); and/or a degree of disturbance or indirect impacts that could cause mortality, injury, or reproductive failure of one or more individuals of a covered species in some years. Permanent loss or reduction in quality of 1 or more acre of secondary (dispersal, foraging, aestivation, roosting, etc.) habitat of one or more covered species also falls into this impact level. In the case of **beneficial (B)** effects, this category applies to covered activities that have a purpose of restoring and protecting natural resources generally but not necessarily a specific covered species, which have a secondary beneficial effect to a covered species.

Table 6-6. Risk of Impact of Proposed New Covered Activities on Special-Status Animal Species[1,2]

Covered Activity	HCP-Covered Animals			Non-Covered Animals					
	Western Snowy Plover	California Least Tern	California Red-legged Frog	California (Coast) Horned Lizard	Silvery Legless Lizard	Western Spadefoot	Burrowing Owls	Nesting Birds[3]	American Badger

Low (L). The covered activity is unlikely to cause mortality, injury, or reproductive failure; however, the covered activity will likely result in a degree of disturbance or indirect impacts that could disrupt the normal behavior patterns (e.g., breeding, feeding, sheltering) of one or more individuals of a covered species. Permanent loss or reduction in quality of 1 or more acre of tertiary (rarely used) habitat or temporary disturbance to habitat of one or more covered species also falls into this impact level. In the case of beneficial (B) effects, this category applies to covered activities that do not have a purpose related to natural resources protection, but nevertheless have some degree of beneficial effect to a covered species.

No Impact (N). The covered activity has not caused mortality, injury, or reproductive failure of a covered species in the past and does not have the potential to do so within the permit term of the HCP. The covered activity has not caused disturbance or indirect impacts in the past and is unlikely to during the permit term. The covered activity would also have no permanent or temporary impacts to covered species habitat. There are also no beneficial effects at the no impact level.

Table 6-7. Risk of Impact of New Covered Activities to Special-Status Plant Species[1]

Covered Activity	Red sand verbena	Coastal goosefoot	**La Graciosa thistle**	Blochman's leafy daisy	Suffrutescent wallflower	Fuzzy prickly phlox	Dunedelion	Crisp monardella	San Luis Obispo monardella	California spineflower	Hickman's popcorn flower	Blochman's groundsel
Natural Resources Management												
CA-12b SNPL and CLTE Management – SNPL Chick and Egg Capture for Captive Rearing if Observed Threatened by Recreation Activities and Other Non-Covered Species Management Activity	L	L	L	L	L	L	L	L	L	L	L	L

Table 6-7. Risk of Impact of New Covered Activities to Special-Status Plant Species[1]

Covered Activity	Red sand verbena	Coastal goosefoot	**La Graciosa thistle**	Blochman's leafy daisy	Suffrutescent wallflower	Fuzzy prickly phlox	Dunedelion	Crisp monardella	San Luis Obispo monardella	California spineflower	Hickman's popcorn flower	Blochman's groundsel
Park Maintenance												
CA-21 General Facilities Maintenance – Mechanical Trash Removal	L	L	L	L	L	L	L	L	L	L	L	L
Other Activities												
CA-50 Reduction of the Boneyard Exclosure and 6 Exclosure	L	L	L	L	L	L	L	L	L	L	L	L
CA-52 CDPR UAS Use for Park Activities	N	N	N	N	N	N	N	N	N	N	N	N

[1] Per the project impact analysis presented in EIR section 6.2.3 the HCP proposed new covered activities would not have impacts on marsh sandwort, sand mesa manzanita, Nuttall's milkvetch, Monterey paintbrush, Douglas spineflower, surf thistle, dune larkspur, beach spectaclepod, Kellogg's horkelia, southwestern spiny rush, Nipomo Mesa lupine, Gambel's watercress, and sand almond.

Low (L). Activity and habitat may overlap. Activity may encroach upon habitat, but not alter it.

No Impact (N). Activity and habitat do not overlap.

6.3.2.1 Western Snowy Plover

SNPL and CLTE Management – SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreation Activities and Other Non-Covered Species Management Activities (CA-12b; AMM 22). SNPL chick and egg capture requires handling chicks and/or eggs at high risk of being injured or killed by covered activities to relocate them to an authorized wildlife facility. This activity would result in increased stress and vigilance of chicks while monitors attempt to capture the chicks. In addition, captive rearing is not always successful, and eggs or chicks may not survive in the captive facility. Despite this potential outcome, captive rearing has been documented as successful in a few studies (Neuman, et al., 2013) (Powell & Cuthbert, 1993), (Powell, Cuthbert, Wemmer, Doolittle, & Feirer, 1997) and, in studies where survival of captive-reared young is low, proponents of the technique point out that even small numbers that survive and breed indicate some success toward conservation of the species since otherwise the eggs or chicks would not have survived (Neuman, et al., 2013) (Roche, Cuthbert, & Arnold, 2008).

In the past, under the ongoing SNPL and CLTE management program, approximately 112 SNPL eggs and 52 SNPL chicks within the HCP area have been salvaged when they were found abandoned or injured. This ongoing salvage of eggs and chicks is included in the HCP as AMM 90 and described in EIR Appendix D. The take associated with the ongoing salvage of eggs and

chicks is attributed to the HCP area's existing level of take, separate from AMM 22. A portion of these individuals have survived to fledging age in a captive-rearing facility. These fledglings have been released back into the wild, and many were documented as integrating into the wild SNPL population and breeding, although not necessarily within the HCP area. As a result, capturing SNPL eggs and chicks that are threatened by recreation activities and other non-covered species management activities as proposed under AMM 22 would be beneficial to any chicks and eggs removed since otherwise the eggs and chicks would not have survived. Furthermore, new SNPL AMM 22 establishes a threshold (i.e., 8 eggs and 8 chicks) at which point CDPR would contact the USFWS and discuss appropriate AMMs (e.g., expanding the exclosure along the shoreline to provide additional protected foraging habitat, increasing monitoring along the shoreline, increasing signage in the breeding area) to ensure additional take does not occur from covered activities not related to covered species management (e.g., motorized recreation, new proposed activities). As a result, the impact would be ***less than significant***.

General Facilities Maintenance – Mechanical Trash Removal (CA-21). Mechanical trash removal would only occur above the wrack line and would be set back from creeks, riparian areas, and foredunes. Mechanical trash removal would not occur within vegetated areas or areas encompassed by the seasonal exclosure (i.e., from Post 6 south) but would occur within favorable SNPL nesting and wintering habitat (i.e., primary and secondary habitat). Mechanical trash removal would be subject to SNPL AMMs 104 through 109, which include surveying the area for SNPL presence prior to mechanical trash removal and use of a biological monitor. Implementation of these measures would prevent the potential for mortality or injury of SNPL from equipment operation, and mortality and injury impacts would be ***less than significant***.

Mechanical trash removal activities would not be conducted within 500 feet of any known SNPL nesting area (e.g., the seasonal exclosure, bumpouts, and individual nest exclosures) and is therefore unlikely to disturb nesting SNPL. SNPL are known to winter in areas where mechanical trash removal may occur. If SNPL are foraging or roosting in areas where mechanical trash removal occurs, they could be temporarily disturbed by the activities and/or precluded from foraging and roosting in these areas. SNPL AMMs 104 and 109 would be implemented to reduce the disturbance-related impacts on foraging and/or roosting wintering SNPL to ***less than significant***.

Mechanical trash removal would not be conducted within 500 feet of the seasonal exclosure area during the breeding or non-breeding season; therefore, SNPL habitat in the seasonal exclosure would remain undisturbed by mechanical trash removal year-round. In addition, mechanical trash removal would not be conducted at or below the active wrack line; therefore, SNPL foraging habitat along the shoreline would not be impacted. Although mechanical trash removal would not occur within 500 feet of the seasonal exclosure, mechanical trash removal could affect favorable SNPL nesting habitat (i.e., primary and secondary habitat) outside of the seasonal exclosure by altering dune composition and topography. However, most mechanical trash removal would be conducted in areas where recreation activities have been concentrated and the substrate is already highly disturbed. These areas are unlikely to support the appropriate SNPL nesting habitat due to the high level of recreation; therefore, SNPL are not expected to nest in the areas where mechanical trash removal would typically occur. As a result, mechanical trash removal would have ***less-than-significant*** impacts on active SNPL nesting habitat.

Although mechanical trash removal would occur above the active wrack line, mechanical trash removal during the summer could remove scattered debris (e.g., driftwood and kelp) from the previous winter wrack line still present in the beach area above the active wrack line, which is likely important habitat for wrack-associated beach invertebrates. If mechanical trash removal occurs frequently, this material may not have time to naturally develop again and species richness, abundance, and biomass of wrack-associated invertebrates that are important SNPL prey resources could decline. As a result, wintering SNPL could be impacted by a reduced prey source. CDPR will implement AMM 109 that includes studying the impact of mechanical trash removal on wrack-associated invertebrates. If a significant decline in invertebrates is observed, CDPR would implement additional measures to reduce the impact, such as conducting habitat enhancement in mechanical trash removal areas, reducing the frequency of mechanical trash removal, and/or reducing the mechanical trash removal locations. As a result, mechanical trash removal would have ***less-than-significant*** impacts on wintering SNPL foraging opportunities and the quality of their habitat.

SNPL Critical Habitat: Mechanical trash removal could occur within SNPL critical habitat that is outside the seasonal exclosure. Mechanical trash removal would not be conducted at or below the active wrack line; therefore, these activities are not anticipated to impact any physical and biological features related to shoreline habitat areas for SNPL feeding (i.e., foraging habitat) at or below this wrack line. Mechanical trash removal could remove favorable constituents within SNPL nesting habitat (i.e., primary and secondary habitat) outside the seasonal exclosure by altering dune composition and topography. Specifically, mechanical trash removal could reduce microtopography and organic surface materials (e.g., driftwood) that are scattered throughout the HCP area above the wrack line.

Most mechanical trash removal would be conducted to remove litter in areas where recreation activities have been concentrated. These areas only support marginally suitable SNPL nesting habitat due to the ongoing high level of recreation (i.e., presence of humans, pets, vehicles, and/or human attracted predators), and SNPL are not currently known to nest in these areas. CDPR also implements habitat enhancement (CA-12b), which helps offset the impacts of vehicle activity occurring in the exclosure area during the winter and is also expected to offset some impacts of mechanical trash removal on breeding SNPL to ensure that favorable nesting habitat remains in the HCP area despite these covered activities. Specifically, the habitat enhancement activity includes collecting wrack and placing it on the shoreline of the Southern Exclosure at the beginning of the breeding season to provide cover for nesting SNPL and inoculating the wrack with talitrids (commonly called beach hoppers) to ensure a sustainable population of wrack-associated invertebrates, which are SNPL prey, are present in main SNPL breeding and foraging area (i.e., the exclosure area).

Although mechanical trash removal would occur above the active wrack line, mechanical trash removal during the summer could remove scattered debris (e.g., driftwood and kelp) from the previous winter wrack line still present in the beach area above the active wrack line, which is likely important habitat for wrack-associated beach invertebrates. If mechanical trash removal occurs frequently, this material may not have time to naturally develop again and species richness, abundance, and biomass of wrack-associated invertebrates that are important SNPL prey resources could decline. While CDPR implements habitat enhancement (CA-12b) that ensures a sustainable population of wrack-associated invertebrates (SNPL prey) are present in main SNPL breeding and foraging area, it has minimal benefit to invertebrate populations in

active mechanical trash removal areas. As a result, a reduced prey source in mechanical trash removal areas may not impact SNPL during the breeding season due CDPR's habitat enhancements but could impact wintering SNPL when habitat enhancements are not provided. CDPR would implement AMM 109 to study the impact of mechanical trash removal on wrack-associated invertebrates. If a significant decline in invertebrates is observed, CDPR will implement additional measures to reduce the impact, such as conducting habitat enhancement in mechanical trash removal areas, reducing the frequency of mechanical trash removal, and/or reducing the mechanical trash removal locations. As a result, impacts to critical habitat from mechanical trash removal would be ***less than significant***, and critical habitat for SNPL would not be adversely changed by mechanical trash removal activities.

Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50)[31]. Reduction of the Boneyard Exclosure and 6 Exclosure is not expected to result in additional impacts to adult and/or juvenile SNPL beyond those described above for motorized recreation (CA-1) and pedestrian activities (CA-3) since SNPL AMMs would be implemented, as appropriate, including installing single-nest exclosures or bumpouts around any SNPL nest within the open riding area, and any SNPL adults and/or juveniles found outside an exclosure would typically be expected to fly out of harm's way.

Elimination of East Boneyard Exclosure (approximately 49 acres) and incremental elimination of 6 Exclosure (60 acres) could result in the permanent loss of up to 109 acres of protected breeding habitat. This reduction represents approximately one-third of the 368 acres of SNPL breeding habitat currently protected by the seasonal exclosure (300 acres in the Southern Exclosure and 68 acres in the Oso Flaco Exclosure).

Although the East Boneyard Exclosure is considered suitable habitat for SNPL, it has supported only seven SNPL nests (i.e., a single nest in seven different breeding seasons) since 2005, indicating that this area may not provide ideal nesting habitat for SNPL and they are thus unlikely to nest in this area. Any nest that was established in this area once the exclosure fencing is removed would be protected by a single-nest exclosure, and a 100-foot buffer would be implemented as described in the SNPL AMMs. SNPL are known to nest within the West Boneyard Exclosure, and the East Boneyard Exclosure has provided a buffer from any recreational disturbance in the open riding area. Removal of the East Boneyard Exclosure would thus result in motorized recreation activities adjacent to the West Boneyard Exclosure where SNPL could nest. However, if any SNPL within the West Boneyard Exclosure are observed to be disturbed by increased recreation and/or new travel patterns within the former adjacent East Boneyard Exclosure, a bumpout would be installed as described in the SNPL AMMs to ensure that disturbance in this area is minimized. As a result, removal of the East Boneyard Exclosure would have a ***less-than-significant*** impact on nesting SNPL.

Currently, the Boneyard gate is inaccessible during the SNPL breeding season since it is enclosed within the East Boneyard Exclosure. If the East Boneyard Exclosure is removed, then recreationists can once again access the Boneyard gate during the breeding season. SNPL

[31] CDPR may reduce the exclosure via other configurations, such as east-to-west. However, the north-to-south configuration is anticipated to be the most impactful scenario to SNPL due to the simultaneous loss of protected nesting and foraging habitat. Therefore, for purposes of analysis this section focuses on the worst-case scenario (i.e., a north-to-south, 328-foot or approximately 7.5-acre reduction).

frequently nest in the Oso Flaco area, and any SNPL that nest within South Oso Flaco could be disturbed by recreationists that enter South Oso Flaco through the Boneyard gate. However, the Oso Flaco fence at the south end of East Boneyard would be moved, as necessary, to ensure that recreational access to South Oso Flaco from the former East Boneyard area would continue to be limited. As a result, this impact would be ***less than significant***.

The 6 Exclosure has had greater nesting success and is one of the higher producing exclosure areas. From 2005 to 2018, between 25 and 73 (i.e., 25 to 45 percent of the total SNPL nests at Oceano Dunes SVRA) SNPL nests have been established in the 6 Exclosure annually. Therefore, reduction of the 6 Exclosure could expose nesting, foraging, and/or roosting SNPL to recreation and other activities. Individuals not protected by the exclosure fence could be killed, injured, or disturbed if activities occur close by. Based on historical data in the HCP area from 2005 to 2018, the most nests established in the first 328 feet of the 6 Exclosure in a year has been six nests. As a result, although unlikely[32], it is possible that up to six nests could be exposed to recreation and other activities during the first incremental decrease of the 6 Exclosure if SNPL do not move south into the remaining protected area. Ultimately, although unlikely, if the entire 6 Exclosure is removed, between 25 and 73 nests could be exposed to recreation. In addition, as the SNPL population increases, it is possible more SNPL breeding activity would occur in the open riding area.

From 2005 to 2018, the average density of SNPL nests within the 6 Exclosure has ranged from 0.5 to 1.9 nest/acre. Adult territorial aggression towards SNPL chicks has been observed along the shoreline and occasionally observed within the seasonal exclosure when chicks from one brood move into the territory of another brood. Adult aggression toward chicks can injure or kill the chick or expose it to inclement weather, starvation, and/or predation. Currently, territorial aggression in the seasonal exclosure is only occasionally observed. However, reduction of the 6 Exclosure could exacerbate the territorial aggression within the seasonal exclosure by reducing the amount of habitat available for nesting so that nests must be established in closer proximity, and chicks would be more likely to enter the territory of another brood. In addition, as the SNPL population increases, it is possible more SNPL breeding activity may move into the open riding area.

The maximum number of SNPL nests during one breeding season within 1 acre in the 6 Exclosure from 2005 to 2018 has not exceeded seven nests, and some portion of those nests was active during the same time period. Therefore, for purposes of analysis, this suggests that the maximum optimal density for SNPL nests within an acre of the 6 Exclosure is seven nests. If the 6 Exclosure is reduced by 328 feet in a breeding season, SNPL that previously nested in that portion of the seasonal exclosure are expected to move into the remaining protected area (Lafferty, Goodman, & Sandoval, 2006), which would contract the SNPL nest distribution and increase the density of nests in the remaining exclosure area. Ideally, habitat would be available for SNPL to continue to nest at a favorable density; however, in a worst-case-scenario, nest density within a breeding season could exceed the maximum optimal density in some areas of the exclosure by at least one nest in the first 328-foot exclosure reduction. This trend would

[32] Most SNPL are expected to move south into the protection of the exclosure to avoid disturbance from recreation activity. This has been observed at Coal Oil Point Reserve (Lafferty, Goodman, & Sandoval, 2006) where SNPL increased in abundance and contracted their distribution to within the protected area to avoid recreation disturbance.

continue if the exclosure continued to be reduced by 328 feet (approximately 7.5 acres) each breeding season.

Adult territorial aggression towards SNPL chicks has been commonly observed along the shoreline when foraging chicks move into the territory of another brood. Adult aggression toward chicks on the shoreline can injure or kill the chick and/or separate them from the attending adult. In addition, adult aggression can result in chicks along the exclosure shoreline leaving the protection of the seasonal exclosure and entering the open riding area where they are at risk of being struck by a vehicle. Reduction of the 6 Exclosure (especially if the exclosure is reduced from north to south) would exacerbate this territorial aggression issue by reducing the amount of protected shoreline habitat available for foraging so that broods would either forage in closer proximity to another brood or leave the protection of the exclosure to avoid entering the territory of another brood. Historical nest data indicates between 25 and 73 nests have been established annually in the 6 Exclosure between 2005 and 2018; therefore, if the entire 6 Exclosure is removed, although unlikely, it could result in 75 to 219 chicks moving into the open riding area to forage where they are at risk of being struck by a vehicle.

To ensure that SNPL nesting levels in the HCP area continue to contribute to the overall success of the population, the HCP ensures that the 6 Exclosure would not be reduced unless specific criteria are met, including obtaining a breeding population size greater than 155 SNPL for 3 consecutive years and a fledge rate of 1.0 fledgling per pair over the same period (Chapter 5 in the HCP). In addition, any nests found outside a seasonal exclosure would be protected by a single-nest exclosure, thus reducing the likelihood of direct impacts to nesting SNPL. Monitors would also track SNPL chicks that are hatched within the riding area to determine travel routes and patterns associated with foraging and exploration and protect them with symbolic fencing to keep vehicles away, and bumpouts would be installed as necessary to reduce disturbance to SNPL nesting near the areas open to motorized recreation. In addition, all other SNPL AMMs (HCP Table 5-2) would apply to this activity, as appropriate.

Although these measures would reduce impacts to eggs and chicks in the riding area, some eggs and chicks may still need to be captured and brought to a captive-rearing facility to prevent mortality and injury. The number of eggs or chicks that may need to be captured for captive rearing is difficult to predict at this time. Therefore, new SNPL AMM 22[33] establishes a maximum number of egg or chick capture (i.e., up to 12 eggs/4 nests and/or 12 chicks/4 broods per year) for covered activities not related to covered species management (e.g., motorized recreation). The measure also establishes a threshold (i.e., 8 eggs and 8 chicks) at which point CDPR would contact the USFWS and discuss appropriate AMMs (e.g., expanding the exclosure along the shoreline to provide additional protected foraging habitat, increasing monitoring along the shoreline, increasing signage in the breeding area) to reduce impacts and additional take that could occur from covered activities not related to covered species management. With these measures the reduction of East Boneyard Exclosure and 6 Exclosure are expected to have a ***less-than-significant*** impact on SNPL by ensuring that a viable population of SNPL continues to breed within the HCP area.

[33] A discussion of eggs and chick capture associated with the ongoing salvage and rescue activities conducted as part of CDPR's SNPL and CLTE Management Program (AMM 90) is included in EIR Appendix D.

SNPL Critical Habitat: East Boneyard Exclosure is not located within critical habitat. Up to 60 acres (i.e., the 6 Exclosure) would continue to be closed to motorized vehicles during the SNPL and CLTE breeding season until certain criteria are met and the 6 Exclosure can be reduced by 328-foot or similar increments (Chapter 5 in the HCP). Ultimately, 60 acres of critical habitat could once again be open year-round to motorized recreation as a result of removing the 6 Exclosure.

Heavy recreational use in the 6 Exclosure reduction area may reduce the quality of designated SNPL critical habitat for nesting or wintering activities. Specifically, SNPL may continue to use areas that are heavily used by humans, but productivity may be limited, and/or frequent disturbance of wintering flocks may occur. However, heavy recreational use in critical habitat was occurring within the HCP area at the time critical habitat was designated. In addition, although exclosures do reduce disturbance, seasonal exclosures were not considered in the designation of critical habitat and were, therefore, not included as part of the physical and biological features essential to the conservation of the species. Therefore, reduction of the 6 Exclosure would not modify the physical and biological features described in critical habitat designation and this impact would be ***less than significant***.

CDPR UAS Use for Park Activities (CA-52). CDPR may use UAS (e.g., drones) in the HCP area to reduce the time and cost associated with data collection, especially in more remote areas. CDPR would avoid flying UAS in areas where breeding SNPL would be affected, if possible. However, CDPR may use UAS in or near SNPL nesting or brood rearing habitat during the breeding season for some activities (e.g., predator identification, habitat enhancement, SNPL monitoring). In 2018, prior to the SNPL breeding season, CDPR staff assessed the ability of a UAS to capture the amount of wrack present on the shoreline within SNPL breeding habitat. The UAS was tested over a period of a week and found to be highly effective at assessing nesting habitat enhancements distributed by staff. During the UAS flight, CDPR observed a small flock of SNPL and other shorebirds nearby. The flock of SNPL and other shorebirds did not flush or crouch in response to the UAS. Vas et al. (2015) also assessed reactions by a variety of waterbirds to approaches by UAS and found that the birds remained unaffected in most cases, suggesting the potential to use UAS without significant disturbance.

In addition, SNPL AMMs 123 through 135 would be implemented during breeding season to ensure disturbance from UAS is minimized, including, but not limited to, initiating flights at least 328 feet from the closest known nest location, following existing monitoring guidelines that have been established by USFWS, having a trained biologist scan the area for roosting and nesting SNPL before every flight, having a trained biologist monitor the flight if SNPL are observed, flying UAS at least 100 feet above ground at all times and moving UAS to higher altitude or aborting the mission if UAS are observed disturbing nests or broods, and ensuring the flight plan does not include erratic flight patterns that could be interpreted as an avian predator. As a result, impacts from UAS are expected to be ***less than significant***. Overall, UAS would likely have ***beneficial effects*** by collecting valuable information on SNPL habitat, predators, and breeding that will inform future management decisions within the HCP area.

UAS may be used during the non-breeding season throughout the HCP area and during the breeding season outside occupied SNPL breeding habitat and could disturb roosting and/or foraging SNPL. Vas et al. (2015) assessed reactions by a variety of waterbirds to approaches by UAS and found that the birds remained unaffected in most cases, suggesting the potential to use UAS without significant disturbance. In addition, SNPL AMMs 123 through 140 would be

implemented to ensure disturbance from UAS is minimized, including, but not limited to, ensuring UAS flight patterns are not erratic so they are not interpreted as an avian predator, scanning the area for roosting or foraging SNPL prior to every flight, flying UAS at least 100 feet above ground, and ensuring all flights are approved by the Senior Environmental Scientist. As a result, UAS are expected to have ***less-than-significant*** impact on foraging and/or roosting SNPL during the non-breeding season and/or outside occupied SNPL breeding habitat during the breeding season. Overall, UAS would likely have ***beneficial effects*** by collecting valuable information on SNPL habitat, predators, and breeding that will inform future management decisions within the HCP area.

Take of SNPL from Proposed New Covered Activities

Take numbers identified in the HCP include take for existing, proposed new, and potential future covered activities. Take numbers in the HCP are defined as mortality, injury, capture, abandonment, or chicks in the open riding area at risk of being struck by a vehicle.

Most of the highest documented take numbers reflect worst-case conditions. Those worst-case conditions are based both on past observations of mortality and injury, as well as observations of events that could potentially cause mortality or injury, such as chicks entering the open riding area or nests being abandoned after an adult has been observed being disturbed by recreation. The worst-case numbers were estimated with the recognition that historical data may undercount mortality; not every egg or individual SNPL may have been detected (Table 6-8.). Although the worst-case scenario of take has been observed or is thought to have occurred in the past, this level of take is not expected to occur within the HCP area in most years (if at all). Take for most years is lower than the worst-case scenario for take as documented in the monitoring data collected by CDPR since 2002 (Table 6-8.).

Of the four new proposed covered activities, mechanical trash removal (CA-21) and CDPR's use of UAS (CA-52) are not expected to cause take (defined above) of SNPL.

Reducing the 6 Exclosure (CA-50) could potentially increase take of SNPL chicks and eggs above existing worst-case take potential. No increase in take of SNPL adults and juveniles is expected to occur from CA-50 above the worst-case baseline conditions.

The HCP includes as a new covered activity SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b; AMM 22), which allows capture and captive rearing of eggs and chicks that would otherwise be at risk of take from covered activities not related to covered species management, such as motorized recreation and new proposed activities (Table 2-6.).[34] New SNPL AMM 22 specifies that egg and chick capture for this purpose is limited to up to 12 eggs and 12 chicks per year, and only if this action is determined to be appropriate by a CDPR Senior Environmental Scientist. CA-12b is formalized as new SNPL AMM 22 because it serves to reduce direct mortality or injury that might otherwise occur from covered activities (e.g., CA-1 Motorized Recreation, CA-50 Reduction of 6 Exclosure, CA-44 – New PMRP). Although AMM

[34] Currently, CDPR attempts to protect nests and/or move chicks back into the safety of the seasonal exclosure; however, chicks and eggs are still at risk of being injured or killed by covered activities. As a result, injury or mortality could occur if eggs or chicks are not observed by monitors and/or if chicks move back into areas where covered activities occur.

22 would be implemented as a response to potential mortality, injury, or harm, the capture itself is a form of take. As a result, AMM 22 would result in additional take above the worst-case scenario since this is a protective measure that would be used in lieu of protecting nests or moving chicks back to the safety of the seasonal exclosure.

It is difficult to forecast precisely which ongoing, new, and future covered activities may trigger implementation of SNPL AMM 22 from year to year. Attributing take to a specific activity can be difficult since, ultimately, take associated with some of these activities is speculative. For example, the 48-acre foredune closure was installed in December 2019, so although the closure is an existing condition, its effects have not yet been observed over the course of an SNPL and CLTE breeding season.

For purposes of this analysis, this EIR assumes that the new proposed CA-12b – Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreational Activity and Other Non-Covered Species Management Activities (AMM 22) would result in additional take (capture) that was not previously conducted because currently CDPR attempts to protect nests and move chicks back to the safety of the seasonal exclosure. In addition, this EIR assumes that the new proposed (CA-50 – Reduction of 6 Exclosure) and future (CA-44 – New PMRP) covered activities could create an increased risk of mortality or injury of SNPL chicks and eggs above baseline conditions. As a result, this EIR apportions the increased take of 12 eggs and 12 chicks equally among CA-12b – Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreational Activity and Other Non-Covered Species Management Activities (AMM 22), CA-50 – Reduction of 6 Exclosure, and CA-44 – New PMRP (a future activity discussed in EIR section 6.4.1.1). This analysis assigns 1/3 of the take increase to chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b, AMM 22), 1/3 of the take increase to the 6 Exclosure reduction (CA-50), and 1/3 of the take increase to the dust control foredune installation (CA-44 – New PMRP). Take of 4 eggs and 4 chicks is thus attributed to each of these activities for a total of 12 eggs and 12 chicks. Therefore, the total take of SNPL above baseline conditions associated with the proposed new covered activities (CA-12b [AMM 22], CA-21, CA-50, CA-52) is 8 eggs and 8 chicks. New take associated with CA-44 – New PMRP and other future activities is discussed further in EIR section 6.4.1.1.

The potential for an increased loss of up to 8 eggs and 8 chicks annually is significant to a federally-listed threatened species; however, this loss must be considered in the context of the overall conservation program implemented by CDPR in the HCP area. In 2001, CDPR began daily monitoring of SNPL nests. Since then the SNPL management program has evolved to include surveys, habitat enhancements, predator management, seasonal nesting area protections, law enforcement, and trash control. While past implementation of SNPL AMMs has not eliminated take of SNPL from visitor use or park operations, SNPL breeding success within the protected nesting areas has substantially increased the SNPL breeding population in the HCP area from 32 breeding adults in 2002 to 201 breeding adults in 2018 (HCP Table 3-8). SNPL continue to breed and forage and increase in numbers where active conservation management provides habitat enhancement and protection (HCP section 3.3.1). This side-by-side existence of visitor recreation and successful SNPL conservation is expected to continue in the future. The potential loss of four eggs and four chicks is not expected to diminish the enlarged SNPL population sustained by CDPR's conservation program or hinder species recovery efforts. As a

result, the SNPL take impact associated with the proposed new covered activities is ***less than significant***.

Table 6-8. Summary of Historic (2002–2018) and Proposed SNPL Permitted Take

Highest Documented Take[1]	Additional Documented Take	Years Without Documented Take	Population Range (2002–2018)	Proposed Annual[2] and 5-Year Running[3] Permitted Take
Covered Activity: Park operations, recreation, and other non-covered species management activities[4]				
Adults/Juveniles				
2017: 7 adults/juveniles killed and 2 adults/juveniles injured.	8 adults/juveniles killed in 2016 and 2018. 1–3 adults/juveniles killed in 2002 and each year from 2004 through 2015.	2003	32–226 breeding adults	Annual Take: 12 adults/juveniles. 5-year Running Take: 45 adults/juveniles.
Chicks				
2016: 6 chicks abandoned due to recreational disturbance. 2016: 19 chicks in the open riding area at risk of being struck by a vehicle[5].	1–15 chicks in the open riding area at risk of being struck by a vehicle[5] in 2002, 2003, 2011, 2012, 2013, 2014, 2015, 2017, and 2018.	2004, 2005, 2006, 2007, 2008, 2009, 2010	62–547 chicks	Annual Take: 28 chicks[6]. 5-year Running Take: 88 chicks.
Eggs				
2014: 12 eggs abandoned likely due to recreation disturbance and/or found in the open riding area.	1–6 eggs abandoned likely due to recreation disturbance and/or at risk of take if they are outside the exclosure in 2003, 2004, 2006, 2008, 2009, 2010, 2011, 2012, 2016, and 2017.	2002, 2005, 2007, 2013, 2015, 2018	35–281 nests	Annual Take: 27 eggs[7]. 5-year Running Take: 79 eggs.
Covered Activity: Covered species management-related activities[8]				
Adults/Juveniles				
2017: 5 adults/ juveniles captured and brought to captive rearing. 2016: 4 adults/ juveniles found injured or dead with wing injuries and it was suspected this	1–4 adults/juveniles captured and brought to captive rearing in 2005, 2006, 2007, 2009, 2012, 2014, 2016, and 2018. 1–2 adults/juveniles found injured or killed due to suspected fence strike or predation at a single-nest exclosure in 2003, 2004,	2002, 2008	32–226 breeding adults	Annual Take: 9 adults/juveniles. 5-year Running Take: 17 adults/juveniles.

Table 6-8. Summary of Historic (2002–2018) and Proposed SNPL Permitted Take

Highest Documented Take[1]	Additional Documented Take	Years Without Documented Take	Population Range (2002–2018)	Proposed Annual[2] and 5-Year Running[3] Permitted Take
was from striking an exclosure fence.	2007, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2017, and 2018.			
Chicks				
2017: 8 chicks captured and brought to captive rearing. 2005 and 2016: 3 chicks killed due to suspected predation at a single-nest exclosure.	1–6 chicks captured and brought to captive rearing in 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2016, and 2018. 1 chick abandoned or injured due to monitoring activities in 2011 and 2018.	2015	62–547 chicks	Annual Take: 11 chicks. 5-year Running Take: 26 chicks.
Eggs				
2014: 26 eggs captured and brought to captive rearing. 2008: 18 eggs lost due to suspected predation at a single-nest exclosure.	1–15 eggs captured and brought to captive rearing in 2003, 2004, 2006, 2008, 2009, 2011, 2012, 2013, 2017, and 2018. 1–15 eggs lost due to suspected predation at a single-nest exclosure and/or injury during monitoring activities in 2004, 2005, 2006, 2009, 2010, 2011, 2012, 2013, 2014, and 2017.	2002, 2007, 2015, 2016	35–281 nests	Annual Take: 41 eggs. 5-year Running Take: 80 eggs.
Covered Activity: Banding activities (Capture only)				
Adults are currently not banded in the HCP area. From 2003 to 2018, between 156 and 423 chicks have been banded each breeding season.				35 adults/juveniles 500 chicks

Source: CDPR 2002–2018.

[1]Documented means take was observed or circumstances indicate take was potentially caused by park operations, recreation, or other non-species management covered activities. Actual cause of mortality or injury is often unknown. Take is defined as mortality, injury, capture, abandonment, or chicks in the open riding area at risk or being struck by a vehicle.

[2]Annual take numbers presented in this HCP are based on worst-case past observations of mortality and injury that have rarely been observed during the timeframe from 2002 to 2018 and do not happen every year. The numbers do recognize that not every egg or individual SNPL may be detected.

[3]The 5-year running take number is intended to represent the typical take levels in most years but account for 1 or 2 years in which a higher amount of take may occur and will not trigger an amendment to the HCP.

Table 6-8. Summary of Historic (2002–2018) and Proposed SNPL Permitted Take

Highest Documented Take[1]	Additional Documented Take	Years Without Documented Take	Population Range (2002–2018)	Proposed Annual[2] and 5-Year Running[3] Permitted Take

[4] These take numbers include capture of SNPL eggs and chicks if they are observed to be threatened by covered activities not related to covered species management (e.g., motorized recreation or new proposed activities). Although this form of take is considered capture only, these are included in the total take number since the eggs and chicks are removed from the population in the HCP area and because they would likely not survive if they were not captured for captive rearing.

[5]Chicks in the open riding area are considered to be at risk of being struck by a vehicle since they cannot fly. Despite this, the majority of chicks are not injured or killed due to the implementation of AMMs. However, some portion of these chicks may enter the open riding area and may not be observed or protected.

[6]The HCP includes capture of up to 12 chicks (i.e., 4 broods) each year if they are determined to be threatened by covered activities if they are determined to be threatened by recreational activity and other non-covered species management activities, including new proposed activities.

[7]The HCP includes capture of up to 12 eggs (i.e., 4 nests) each year if they are determined to be threatened by recreational activity and other non-covered species management activities, including new proposed activities.

[8] These take numbers are associated with the ongoing natural resources management program and include salvage and rescue of SNPL adults/juveniles, chicks, and eggs if they are observed to be injured, abandoned, or sick. Although this form of take is considered capture only, the any SNPL captured are removed from the population in the HCP area.

6.3.2.2 California Least Tern

SNPL and CLTE Management – SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreation Activities and other Non-Covered Species Management Activities (CA-12b). CLTE would not be captured for captive rearing since captive-rearing facilities for CLTE are not currently available and releasing CLTE to integrate into wild populations has proven challenging since CLTE typically migrate together as a family or in groups. As a result, no direct impacts to CLTE from SNPL egg and chick capture would occur.

SNPL chick and egg capture to prevent mortality from non-covered species management activities (e.g., motorized recreation) would occur outside the seasonal exclosure where SNPL eggs and chicks are at risk of being struck by vehicles. Since the majority of CLTE nest within the exclosure, impacts from this activity are expected to minimal. In the rare case that a CLTE nest or chick occurs outside the seasonal exclosure near a SNPL nest or brood being rescued, CLTE could be flushed from the nest or chicks could be separated from adults. However, as stated previously, this situation is unlikely to occur. In addition, SNPL chick and egg capture activities would be conducted by a USFWS-approved or 10 (a)(1)(A) permitted biologist that would implement appropriate CLTE AMMs to ensure any disturbance to CLTE is minimized. As a result, this impact is ***less than significant***.

General Facilities Maintenance – Mechanical Trash Removal (CA-21). Mechanical trash removal would not occur within areas encompassed by the seasonal exclosure (i.e., from Post 6 south). Mechanical trash removal would be subject to CLTE AMMs 91 through 95, which include surveying the area for CLTE presence prior to mechanical trash removal and use of a biological monitor. Implementation of these measures would prevent mortality or injury of CLTE from equipment operation and this impact would be ***less than significant***.

Mechanical trash removal activities would not be conducted within 500 feet of any known CLTE nesting area (e.g., the seasonal exclosure, bumpouts, and individual nest exclosures) and is therefore unlikely to disturb nesting CLTE. CLTE AMMs 91 through 95 would also be implemented to reduce these impacts to ***less than significant***.

Mechanical trash removal would not be conducted in the seasonal exclosure area during the breeding season or in non-breeding (winter) season when the exclosure is no longer up; therefore, CLTE habitat in the seasonal exclosure would not be affected. Mechanical trash removal could affect favorable CLTE nesting habitat (i.e., primary and secondary habitat) outside the seasonal exclosure by altering dune composition and topography. Specifically, mechanical trash removal could reduce organic surface materials (e.g., driftwood) and microtopography. However, CLTE rarely nest outside the protection of the Southern Exclosure. In addition, most mechanical trash removal would be conducted to remove litter in areas where recreation activities have been concentrated and the substrate is already highly disturbed. These areas are unlikely to support the appropriate CLTE nesting habitat due to the high level of recreation; therefore, CLTE are not expected to nest in the areas where mechanical trash removal would typically occur. As a result, mechanical trash removal would have a ***less-than-significant*** impact on CLTE nesting habitat.

Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50). Reduction of the Boneyard Exclosure and 6 Exclosure is not expected to result in additional impacts to adult and/or juvenile CLTE beyond those described above for motorized recreation (CA-1) and pedestrian activities (CA-3) since CLTE almost exclusively nest within the protection of an exclosure fences. In addition, CLTE AMMs would be implemented, as appropriate, including installing single-nest exclosures or bumpouts around any CLTE nest within the open riding area and any CLTE adults and/or juveniles found outside an exclosure would typically be expected to fly out of harm's way.

Elimination of East Boneyard (49 acres) and incremental elimination of 6 Exclosure (60 acres) could result in the permanent loss of up to 109 acres of protected breeding habitat. This reduction represents approximately one-third of the 368 acres of CLTE breeding habitat currently protected by the seasonal exclosure (300 acres in the Southern Exclosure and 68 acres in Oso Flaco Exclosure).

Removal of the East Boneyard Exclosure from the Southern Exclosure is expected to be accomplished with ***no*** direct impact on nesting CLTE at East Boneyard because CLTE have not nested there for 14 years (i.e., since 2005). CLTE are also not known to form their night roost in the East Boneyard Exclosure; therefore, the East Boneyard Exclosure is expected to be removed with ***no direct impact*** on roosting CLTE.

CLTE are known to nest within the West Boneyard Exclosure and previously the East Boneyard Exclosure provided a buffer from any recreational disturbance in the open riding area. Removal of the East Boneyard Exclosure would thus result in motorized recreation activities adjacent to the West Boneyard Exclosure where CLTE could nest. However, if any CLTE within the West Boneyard Exclosure are observed to be disturbed by increased recreation and/or new travel patterns within the former adjacent East Boneyard Exclosure, a bumpout would be installed as described in the CLTE AMMs to ensure that disturbance in this area is minimized. As a result, this impact is ***less than significant***.

The 6 Exclosure has had greater nesting success and is one of the higher producing exclosure areas. From 2005 to 2018, between 4 and 39 (i.e., 35 to 80 percent of the total CLTE nests) CLTE nests were established in the 6 Exclosure annually. Therefore, removal of some of the 6 Exclosure could expose nesting and/or roosting CLTE to recreation and other activities. Individuals not protected by the exclosure fence could be killed, injured, or disturbed if activities occur close by. However, from 2005 to 2018, only one CLTE nest has occurred within the upper 328 feet[35] of the 6 Exclosure. As a result, the 6 Exclosure reduction could expose one nest during the first incremental decrease of the exclosure, although this is unlikely since CLTE are expected to avoid areas that are regularly disturbed and continue to move south in the protected seasonal exclosure area. If the entire 6 Exclosure is removed, between 4 and 39 nests could be exposed to recreation, assuming they do not relocate. In addition, if the CLTE population increases, more CLTE breeding activity could potentially occur in the open riding area.

During the breeding season, adult CLTE not engaged in incubation or chick care often assemble in a communal night roost and are joined by fledglings later in the breeding season. From 2007 to 2018, the high count of CLTE in the night roost has ranged from 35 to 95. The CLTE night roost has been located in the northern portion of the 6 Exclosure since 2004, except in 2015 when CLTE also used the 7 Exclosure. Therefore, reduction of the 6 Exclosure would reduce the habitat available for the CLTE night roost. Although unlikely,[36] if CLTE do form the night roost in the former 6 Exclosure area that is open to vehicles and recreation, from 35 to 95 individuals could be susceptible to vehicle strike and/or disturbance from recreation. Disturbance could deter CLTE from resting and could result in increased vigilance and stress.

From 2005 to 2018, the average density of CLTE nests within the 6 Exclosure has ranged from 0.01 to 0.9 nest/acre. CLTE chicks and adults have been observed leaving the exclosure and entering the open riding area in some years. Reduction of the 6 Exclosure could exacerbate this this issue by reducing the amount of habitat available for nesting and rearing so chicks and adults are pushed into the open riding area more frequently. If the 6 Exclosure is reduced incrementally by 328 feet nests CLTE outside the exclosure could move south into the remaining protected area, which would increase the density of nests in the 6 Exclosure. Ideally, the nest would be established in habitat available for CLTE to continue to nest without adverse interactions; however, it is estimated that in a worst-case-scenario nest density could increase to a point where CLTE nests and chicks would be pushed into the open riding area.

To ensure that CLTE continue to nest and roost within the HCP area at levels that contribute to the overall population of CLTE, the 6 Exclosure would not be reduced unless specific criteria are met and maintained (Chapter 5 in the HCP), including obtaining a CLTE breeding population with a 5-year average of 35 nesting pairs and a fledge rate of 1.0 fledglings per pair over the same period. In addition, the exclosure would be reduced in 328-foot increments, or alternative incremental reductions of similar acreage, allowing for close monitoring of and response to any nests initiated outside the exclosure. Any such nests would be protected by a single-nest exclosure or bumpout and a 330-foot buffer would be implemented around the single-nest

[35] CDPR may reduce the exclosure via other configurations, such as east-to-west, but for purposes of analysis this section focuses on a north-to-south, 328-foot (approximately 7.5 acre) reduction.

[36] CLTE are expected to move south and form a night roost in the protected area that is free of disturbance. In addition, the night roost is regularly monitored, so impacts a change in night roost location is expected to be observed quickly.

exclosure, thus reducing the likelihood of impacting nesting CLTE. If a CLTE chick is observed traveling outside a single-nest exclosure, the fencing would be modified to ensure a minimum 330-foot radius and increased if needed up to 600 feet in radius with silt fencing used around the exclosure fence to ensure that vehicles do not crush eggs or strike chicks (CLTE AMMs 14 and 15). Furthermore, monitors would track changes in the night roosting behavior of CLTE and ensure the night roosts are protected within an exclosure (CLTE AMM 16). With these measures in place, the reduction of the Boneyard Exclosure and 6 Exclosure are expected to have a ***less-than-significant*** impact on CLTE by minimizing mortality and disturbance-related impacts and by continuing to support a viable population of CLTE to breed within the HCP area.

CDPR UAS Use for Park Activities (CA-52). Impacts from CDPR's use of UAS (e.g., drones) in the HCP area on CLTE are similar to those discussed above for SNPL. CLTE AMMs 112 through 125 would be implemented to ensure disturbance from UAS is minimized, including, but not limited to, initiating flights at least 328 feet from the closest known nest location, following existing monitoring guidelines that have been established by USFWS, having a trained biologist scan the area for roosting and nesting CLTE before every flight, having a trained biologist monitor the flight if CLTE are observed, flying UAS at least 100 feet above ground at all times and moving UAS to higher altitude or aborting the mission if UAS are observed disturbing nests or chicks, and ensuring the flight plan does not include erratic flight patterns that could be interpreted as an avian predator. As a result, impacts from UAS are expected to be ***less than significant***. Overall, UAS would likely have ***beneficial effects*** by collecting valuable information on CLTE habitat, predators, and breeding that will inform future management decisions within the HCP area.

Take of CLTE from Proposed New Covered Activities

Take numbers identified in the HCP include take for existing covered activities. Take numbers in the HCP are defined as mortality, injury, capture, abandonment, or chicks in the open riding area at risk or being struck by a vehicle. The take numbers reflect worst-case conditions based on past observations of mortality and injury, as well as observations of events that could cause mortality or injury, such as chicks entering the open riding area or nests being abandoned after an adult has been observed being disturbed by recreation. The worst-case numbers were estimated with the recognition that historical data may undercount mortality; not every egg or individual CLTE may be detected (Table 6-9.). Although the worst-case scenario of take has been observed or is thought to have occurred in the past, this level of take is not expected to occur within the HCP area in most years (if at all). Take for most years is lower than the worst-case scenario for take as documented in the monitoring data collected by CDPR since 2002 (Table 6-9.).

The four new proposed covered activities would not contribute to CLTE take numbers identified in the HCP. CA-12b SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities only pertains to SNPL and would not impact CLTE. CA-21 mechanical trash removal would not occur within 500 feet of known CLTE nesting areas and is unlikely to impact CLTE. CA-50 Reduction of the Boneyard Exclosure and 6 Exclosure could potentially result in increased numbers of CLTE entering the open riding area; however, with existing AMMs, the potential number of CLTE injuries or mortalities is not expected to exceed the existing worst-case take potential. Therefore, no increase in take of CLTE adults and juveniles is expected to occur from CA-50 above worst-case baseline conditions. CA-52 CDPR UAS Use for Park Activities would be restricted in

proximity and flight pattern to avoid impact to CLTE. As a result, the proposed new covered activities would have ***no impact*** on CLTE take.

Table 6-9. Summary of Historic (2002–2018) and Proposed CLTE Permitted Take

Highest Documented Take[1]	Additional Documented Take	Years Without Documented Take	Population Size (2002–2018)	Proposed Annual[2] and 5-Year Running[3] Permitted Take
Covered Activity: Park operations, recreation, and other non-covered species management activities				
Adults/Juveniles				
2003: 2 adult/ juveniles died. 2008: Up to 12 juveniles in the open riding area at risk of being struck by a vehicle.[4]	One adult/juvenile killed or injured in 2010, 2013, 2014, and 2017. 2–8 juveniles in the open riding area at risk of being struck by a vehicle[4] in 2006, 2007, 2009, 2011, and 2012.	2002, 2004, 2005, 2015, 2016, 2018	21–66 breeding pairs	Annual Take: 6 adults/juveniles. 5-year Running Take: 10 adults/juveniles.
Chicks				
2008: 8 chicks in the open riding area at risk of being struck by a vehicle.[5]	1–6 chicks in the open riding area at risk of being struck by a vehicle[5] in 2007, 2009, 2010, 2011, 2013, and 2015.	2002, 2003, 2004, 2005, 2006, 2012, 2014, 2016, 2017, 2018	27–101 chicks	Annual Take: 8 chicks[6]. 5-year Running Take: 24 chicks.
Eggs				
2011: 4 eggs abandoned and thought to be due to recreation disturbance.	1–2 nests abandoned or found in the open riding area and at risk of being crushed in 2004, 2005, 2009, and 2014.	2002, 2003, 2006, 2007, 2008, 2010, 2012, 2013, 2015, 2016, 2017, 2018	22–79 nests (each nest had 1–2 eggs)	Annual Take: 8 eggs[7]. 5-year Running Take: 22 eggs.
Covered Activity: Covered species management-related activities[8]				
Adults/Juveniles				
2014: 6 adults/ juveniles found injured or dead with wing injuries, and it was suspected this was from striking an exclosure fence.	1–2 adults/ juveniles found injured or killed in 2009, 2010, 2011, 2013, 2015, 2016, and 2017.	2002, 2003, 2004, 2005, 2006, 2007, 2008, 2012, 2018	21–66 breeding pairs	Annual Take: 7 adults/juveniles. 5-year Running Take: 15 adults/juveniles.

Table 6-9. Summary of Historic (2002–2018) and Proposed CLTE Permitted Take

Highest Documented Take[1]	Additional Documented Take	Years Without Documented Take	Population Size (2002–2018)	Proposed Annual[2] and 5-Year Running[3] Permitted Take
Chicks				
2010: 1 chick found with fence wire around its wing.	None	2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018	27–101 chicks	Annual Take: 4 chicks[8]. 5-year Running Take: 20 chicks.
Eggs				
None	None	2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018	22–79 nests (each nest had 1-2 eggs)	Annual Take: 4 eggs[8]. 5-year Running Take: 20 eggs.
Covered Activity: Banding activities (Capture only)				
From 2003 to 2018, between 35 and 101 chicks have been banded each breeding season.				150 chicks

Source: CDPR 2002–2018.

[1]Documented means that take was observed or circumstances indicate take was potentially caused by park operations, recreation, and other non-species management covered activities. Actual cause of mortality or injury is often unknown. Take is defined as mortality, injury, capture, abandonment, or juveniles or chicks in the open riding area at risk or being struck by a vehicle.

[2]Annual take numbers presented in this HCP are based on worst-case past observations of mortality and injury that have rarely been observed during the timeframe from 2002 to 2018 and do not happen every year. The numbers do recognize that not every egg or individual CLTE may be detected.

[3]The 5-year running take number is intended to represent the typical take levels in most years, but account for 1 or 2 years in which a higher amount of take may occur and will not trigger an amendment to the HCP.

[4]Juveniles in the open riding area are considered to be at risk of being struck by a vehicle since they are inexperienced fliers. Despite this, the majority of juveniles are not injured or killed due to the implementation of AMMs. However, some portion of these juveniles may enter the open riding area and may not be observed or protected.

[5]Chicks in the open riding area are considered to be at risk of being struck by a vehicle since they cannot fly. Despite this, the majority of chicks are not injured or killed due to the implementation of AMMs. However, some portion of these chicks may enter the open riding area and may not be observed or protected.

[6]The HCP assumes that up to 2 chicks could be abandoned each year due to adult mortality associated with recreation activities or from the adult abandoning the chicks due to disturbance from recreation.

[7]Eggs are sometimes found abandoned and the cause of abandonment is often undetermined. This HCP assumes that up to 1 nest (i.e., 2 eggs) could be abandoned each year due to adult mortality from vehicle strike or from the adult abandoning the nest due to disturbance from recreation.

[8]Chicks and eggs have rarely (if ever) been observed injured or killed due to management activities. Despite this, chick or egg injury or loss could occur when monitors enter the exclosure, install exclosures, or conduct banding activities. As a result, this HCP assumes that up to 4 chicks could be injured or killed, and 2 nests (i.e., 4 eggs) could be lost each year due to management activities.

6.3.2.3 California Red-Legged Frog

SNPL and CLTE Management – SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreation Activities and Other Non-Covered Species Management Activities (CA-12b). SNPL chick and egg capture would have ***no impact*** on CRLF.

General Facilities Maintenance – Mechanical Trash Removal (CA-21). Mechanical trash removal would not occur in aquatic habitat areas or in vegetated dunes. CRLF may disperse through upland habitat in the geographic areas proposed for mechanical trash removal north of Post 6. Mechanical trash removal could kill or injure a CRLF if it dispersed through the area while mechanical trash removal was occurring. Mechanical trash removal would not occur at night when most dispersal occurs and, therefore, would be unlikely to impact CRLF. Therefore, the impact of this activity on CRLF would be ***less than significant***.

Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50). CRLF occurs in the HCP area in suitable aquatic habitat, including Oso Flaco Lake and Arroyo Grande Creek. The East Boneyard Exclosure and 6 Exclosure are not located in aquatic habitat; therefore, this activity would have ***no impact*** CRLF in aquatic habitat.

CRLF may disperse through upland habitat in the geographic areas proposed for exclosure reduction. CRLF typically disperse at night during wet weather. It is unlikely that visitor uses, such as motorized recreation, would be occurring at times when CRLF disperse. In addition, CRLF dispersal through areas open to motorized recreation is likely infrequent. Therefore, the impact of exclosure reductions on CRLF is ***less than significant***.

CDPR UAS Use for Park Activities (CA-52). UAS are not anticipated to disturb CRLF. Therefore, ***no impact*** on CRLF would occur.

Take of CRLF from Proposed New Covered Activities

Take numbers identified in the HCP include take for existing and potential future covered activities (Table 6-10.). Take numbers in the HCP are defined as mortality, injury, capture, and habitat loss.

Take of CRLF associated with park visitor and operations activities has not been observed in the HCP area, and few CRLF have ever been documented in the HCP area. Therefore, the take numbers for CRLF reflect worst-case conditions based on past observations of events that could cause mortality or injury. The worst-case numbers were estimated with the recognition that not every CRLF adult, subadult, tadpole, or egg mass may be detected. Although worst-case scenario of take could have occurred in the past, this level of take is not expected to occur within the HCP area in most years (if at all).

The HCP is not requesting additional take of CRLF from proposed new covered activities beyond baseline conditions. No additional take is anticipated from four proposed new activities (CA-12b SNPL Chick and Egg Capture for Captive Rearing if observed to be threatened by recreational activity and other non-covered species management activities, CA-21 Mechanical Trash Removal, CA-50 Reduction of the Boneyard Exclosure and 6 Exclosure, and CA-52 CDPR UAS Use for Park Activities) due to the low potential for CRLF to be present in the area where or when these activities occur. None of the proposed new covered activities would reduce CRLF habitat. As a result, the proposed new covered activities would have ***no impact*** on CRLF take.

Table 6-10. Summary of Proposed CRLF Permitted Take		
Covered Activity	**Estimated Maximum Annual Take**	**Estimated Take of Individual CRLF over the Permit Term**
Park operations, recreation, and other non-covered species management in aquatic habitat	4 adults/sub-adults/ juveniles 2 tadpoles 2 egg masses	20 adults/sub-adults/ juveniles 10 tadpoles 10 egg masses
Park operations, recreation, and other non-covered species management in CRLF upland habitat	5 adults/sub-adults/ juveniles	15 adults/sub-adults/ juveniles
Covered Species Management Activities	2 adults/sub-adults/ juveniles 10 tadpoles 10 egg masses	20 adults/sub-adults/ juveniles 50 tadpoles 50 egg masses
CRLF Dipnet Surveys (capture only)	20 adults/sub-adults/ juveniles 50 tadpoles	N/A

6.3.2.4 Western Spadefoot Toad

SNPL and CLTE Management – SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreation Activities and Other Non-Covered Species Management Activities (CA-12b). Western spadefoot toads are not expected to occur where SNPL adult, juveniles, chicks, and eggs are present. Therefore, SNPL chick and egg capture would have ***no impact*** on western spadefoot toad.

General Facilities Maintenance – Mechanical Trash Removal (CA-21). Mechanical trash removal would not occur in aquatic habitat areas or in vegetated dunes. Western spadefoot toad may disperse through upland habitat or burrow in upland habitat in the geographic areas proposed for mechanical trash removal north of Post 6. Mechanical trash removal could kill or injure a western spadefoot toad if it dispersed through the area while mechanical trash removal was occurring. Mechanical trash removal would not occur at night when most dispersal occurs and, therefore, would be unlikely to impact western spadefoot toad. In addition, western spadefoot toads are thought to be rare in the HCP area and dispersal through or aestivation in areas open to motorized recreation is likely very rare, if it occurs at all. Therefore, the impact of this activity on western spadefoot toad would be ***less than significant***.

Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50). Western spadefoot toad is thought to be rare in the HCP area. However, it could occur in the HCP area in suitable aquatic habitat, including Oso Flaco Lake. The East Boneyard Exclosure and 6 Exclosure are not located in aquatic habitat; therefore, this activity would have ***no impact*** western spadefoot toad in aquatic habitat.

Western spadefoot toad may disperse through upland habitat or aestivate underground in the geographic areas proposed for exclosure reduction. Western spadefoot toad typically disperses at night during wet weather. It is unlikely that visitor uses, such as motorized recreation, would be

occurring at times when western spadefoot toads disperse. In addition, western spadefoot toads are thought to be rare in the HCP area and dispersal through or aestivation in areas open to motorized recreation is likely very rare, if it occurs at all. Therefore, the impact of exclosure reductions on western spadefoot toad is ***less than significant***.

CDPR UAS Use for Park Activities (CA-52). UAS are not anticipated to disturb western spadefoot toad. Therefore, ***no impact*** on western spadefoot toad would occur.

6.3.2.5 Coast (California) Horned Lizard and Silvery Legless Lizard

SNPL and CLTE Management – SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreation Activities and Other Non-Covered Species Management Activities (CA-12b). Coast horned lizards and silvery legless lizards are not expected to occur where SNPL adults, juveniles, chicks, and eggs are present. Therefore, SNPL chick and egg capture would have ***no impact*** on coast horned lizard and silvery legless lizard.

General Facilities Maintenance – Mechanical Trash Removal (CA-21). Mechanical trash removal would not occur in vegetated dunes or vegetation islands. Coast horned lizard or silvery legless lizard may disperse through upland habitat in the geographic areas proposed for mechanical trash removal north of Post 6. Mechanical trash removal could kill or injure these species if it dispersed through the area while mechanical trash removal was occurring. Although areas where mechanical trash removal would occur are considered suitable upland habitat for coast horned lizard and silvery legless lizard, and these species could disperse through and be injured or killed by mechanical trash removal equipment, this habitat is likely infrequently used by these species for dispersal over other more suitable habitats since these areas provide minimal cover. As a result, the risk this activity injuring or killing a coast horned lizard or silvery legless lizard is expected to be low. Therefore, the impact of mechanical trash removal activity on coast horned lizard or silvery legless lizard would be ***less than significant***.

Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50). Coast horned lizard has rarely been observed in the HCP area and it unlikely to be found within the East Boneyard Exclosure or 6 Exclosure. If present, coast horned lizard and silvery legless lizard are most likely to occur within the vegetated areas, which would still be closed off to motorized recreation. Coast horned lizard and silvery legless lizard may disperse through upland habitat in the geographic areas proposed for exclosure reduction. However, dispersal through areas open to motorized recreation is likely infrequent. Therefore. this activity would have a ***less-than-significant*** impact on coast horned lizard and silvery legless lizard.

CDPR UAS Use for Park Activities (CA-52). UAS are not anticipated to disturb coast horned lizard or silvery legless lizard. Therefore, ***no impact*** on these species would occur.

6.3.2.6 Western Burrowing Owl

SNPL and CLTE Management – SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreation Activities and Other Non-Covered Species Management Activities (CA-12b). SNPL chick and egg capture would occur during the avian breeding season; therefore, activities would have ***no impact*** on western burrowing owl which only occur in the HCP area in the winter.

General Facilities Maintenance – Mechanical Trash Removal (CA-21). Burrowing owls would be expected to fly out of harm's way if they are within the mechanical trash removal area.

Mechanical trash removal could result in destruction of burrowing owl burrows or other winter cover locations and temporarily displace wintering burrowing owls and/or alter normal behavior patterns. However, the risk of this impact occurring is low since western burrowing owl is uncommon within the HCP area. In addition, mechanical trash removal equipment would travel at a speed of no more than 10 mph and a CDPR Environmental Scientist would survey the area prior to equipment use. As a result, impacts would be ***less than significant***.

Mechanical trash removal could alter suitable wintering habitat by changing the microtopography or removing organic material (e.g., woody debris); however, these activities would be implemented in areas of high visitation where burrowing owl are less likely to occur due to the ongoing level of disturbance; therefore, the risk of this impact is low. In addition, driftwood and other organic materials would be expected to naturally develop again over time in many mechanical trash removal areas. Therefore, any impacts from mechanical trash removal to habitat would be ***less than significant***.

Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50). Western burrowing owl only occurs in the HCP area in the winter when the East Boneyard Exclosure and 6 Exclosure are not present. As a result, reducing the East Boneyard Exclosure and 6 Exclosure would have ***no impact*** on western burrowing owl.

CDPR UAS Use for Park Activities (CA-52). CDPR may use UAS (e.g., drones) in the HCP area to cut down on the time and cost associated with data collection, especially in more remote areas. UAS flying over burrowing owl individuals could result in an individual flushing from the area or displaying increased vigilance. If the UAS is seen as a great enough threat, a burrowing owl could abandon its burrow or other winter cover and be exposed to predation and/or inclement weather. However, as part of the natural resources management program in the HCP area, AMMs would be implemented to ensure disturbance from UAS is minimized, including, but not limited to, ensuring UAS flight patterns are not erratic so they are not interpreted as an avian predator, flying UAS at least 100 feet above ground, and ensuring all flights are approved by the Environmental Resources Project Manager. As a result, UAS are expected to have ***less-than-significant*** impacts on burrowing owl.

6.3.2.7 Nesting Birds

SNPL and CLTE Management – SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreation Activities and Other Non-Covered Species Management Activities (CA-12b). SNPL chick and egg capture would occur on the open sand beaches when SNPL eggs or chicks are found to be at risk of being crushed, killed, or injured, especially from motorized recreation. The only birds known to nest on the open sand beaches are ground nesting birds, such as California horned lark and killdeer (*Charadrius vociferus*). If a nest was located within or near a SNPL nest or chick that was captured for captive rearing, this activity could result in destruction of the nest or disturbance of the chicks/incubating adults. However, this activity would be conducted by a 10 (a)(1)(A) permitted biologist (or a biologist approved by the USFWS) that would ensure any disturbance to other nesting birds was minimized. In addition, as part of CDPR's standard practices, nesting bird surveys would be conducted, as determined to be necessary by a CDPR Environmental Scientist, prior to conducting activities. If a nest is observed, activities would be delayed until appropriate AMMs are in place. AMMs would include a no-disturbance buffer, as determined by CDPR Environmental Scientist staff, and/or biological monitoring. As a result, this impact would be ***less than significant***.

General Facilities Maintenance – Mechanical Trash Removal (CA-21). Mechanical trash removal would only occur above the wrack line and would be set back from creeks, riparian areas, and foredunes. As a result, riparian and aquatic nesting birds would not be impacted by the mechanical trash removal. Mechanical trash removal would also not occur within vegetated areas or areas encompassed by the seasonal exclosure (i.e., from Post 6 south).

Mechanical trash removal activities could result in equipment injuring or killing a ground-nesting bird, including California horned lark, within the area where activities occur. Mechanical trash removal activities could also disturb nesting birds within or adjacent to the area where activities would occur. Nesting adults could be driven from the nest and, ultimately, neglect or abandon the eggs or chicks. Foraging adults and chicks (if precocial) interrupted by humans stop foraging and move away from the area until the disturbance has passed. However, mechanical trash removal would occur in areas where recreation disturbance is already high and, therefore, birds are unlikely to nest. In addition, as part of the natural resource management program in the HCP area, CDPR Environmental Scientist staff would inspect and approve the area subject to mechanical trash removal prior to each deployment. As a result, impacts from mechanical trash removal activities on nesting birds would be ***less than significant***.

Mechanical trash removal could affect favorable nesting habitat for some ground nesting birds (e.g., California horned lark, killdeer) above the wrack line by altering dune composition and topography. Specifically, mechanical trash removal could reduce organic surface materials (e.g., driftwood) and microtopography. Most mechanical trash removal would be conducted to remove litter in areas where recreation activities have been concentrated and the substrate is already highly disturbed. In addition, due to the high level of disturbance already occurring in these areas, birds are unlikely to nest in mechanical trash removal locations. As a result, mechanical trash removal would have ***less-than-significant*** impacts on ground nesting bird habitat.

Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50) The East Boneyard Exclosure and 6 Exclosure do not contain suitable nesting habitat for most nesting birds in the HCP area, including shrub- and tree-nesting species, such as raptors. As a result, ***no impact*** to these birds or their nests would occur from reducing the East Boneyard Exclosure and 6 Exclosure.

California horned lark is a ground nester and has infrequently been observed nesting within the seasonal exclosure area each year. Only a few (if any) California horned lark are likely to be nesting within the East Boneyard Exclosure or 6 Exclosure since this species is sensitive to disturbance and is thought to be an uncommon nester in the region. If present, removal of the Boneyard Exclosure and/or the 6 Exclosure could expose nesting California horned lark to recreation and other activities. Individuals not protected by the exclosure fence could be killed, injured, or disturbed if activities occur close by. California horned larks are unlikely to nest within the Southern Exclosure area, and any such nests would be observed while conducting surveys for SNPL and CLTE. In addition, if a nest was observed, AMMs (e.g., no-disturbance buffer, biological monitoring) would be implemented to comply with the California Fish and Game Code. As a result, this impact would be ***less than significant***.

CDPR UAS Use for Park Activities (CA-52). CDPR may use UAS (e.g., drones) in the HCP area to reduce the time and cost associated with data collection, especially in more remote areas. CDPR may use UAS for some activities (e.g., predator management, habitat enhancement, SNPL monitoring) during the breeding season in areas where nesting birds maybe located. When drones are flown too close to bird nests, the noise and unfamiliar presence of drones could drive adult birds from the nest, which could lead to neglect or abandonment of eggs or chicks. Some

birds, particularly raptors, are territorial and drones may be perceived as a threat that should be attacked. This could divert adults from caring for their eggs or young or from foraging. As part of the natural resources program in the HCP area, measures are implemented to minimize impacts from UAS, including, but not limited to, ensuring UAS flight patterns are not erratic so they are not interpreted as an avian predator, flying UAS at least 100 feet above ground, and ensuring all flights are approved by the Senior Environmental Scientist. As a result, impacts from UAS are expected to be ***less than significant***. Overall, UAS would likely have ***beneficial*** impacts by collecting valuable information on habitat, nest locations (e.g., raptor nests), and predators within the HCP area.

6.3.2.8 American Badger

SNPL and CLTE Management – SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreation Activities and Other Non-Covered Species Management Activities (CA-12b), General Facilities Maintenance – Mechanical Trash Removal (CA-21), and Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50). American badgers and/or badger dens have never been observed within the areas open to motorized recreation. American badger tracks were observed in April 2019 in the open riding area within and near BBQ flats and adjacent vegetation islands. This is the first time badger tracks or any other sign have been observed in this area, and the tracks indicate the badger was using the vegetation islands, which are closed to motorized recreation. Overall, American badgers are unlikely to occur in areas open to motorized recreation. As a result, these activities would have ***no impact*** on American badger.

CDPR UAS Use for Park Activities (CA-52). UAS have been shown to increase the heart rate of bears and cause female bears with cubs to run (Ditmer, et al., 2015). Therefore, UAS in the HCP area could result in a stress response from badgers or cause badgers to abandon their dens. However, as part of the natural resource management program, CDPR implements regulations for UAS flights including regulating the flight heights and ensuring all flights are approved by the Senior Environmental Scientist. As a result, this impact on American badger would be ***less than significant***.

6.3.2.9 Plants

SNPL and CLTE Management – SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreation Activities and Other Non-Covered Species Management Activities (CA-12b). SNPL chick and egg capture would occur on foot in open sand areas and would have ***no impact*** on special-status plant species.

General Facilities Maintenance – Mechanical Trash Removal (CA-21). Mechanical trash removal may be implemented year-round from the Grand Avenue entrance area south to Post 6 within open sand areas. Mechanical trash removal would be set back from all vegetated areas and from creeks and lagoons. Although unlikely, some special-status plant species could occur within sand dune areas and/or areas with sparse vegetation north of Post 6, including, but not limited to, Blochman's groundsel, Hickman's popcorn flower, Blochman's leaf daisy, California spineflower, coastal goosefoot, crisp monardella, dunedelion, fuzzy prickly phlox, red sand verbena, and suffrutescent wallflower. If special-status plant species were to occur in the areas where mechanical trash removal is allowed, these activities could crush or destroy special-status plant species individuals. However, mechanical trash removal would be conducted to remove litter in areas where recreation activities have been concentrated and the substrate is already

highly disturbed. These areas are unlikely to support special-status plants due to the high level of recreation. As a result, impacts from mechanical trash removal would be ***less than significant***.

Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50). Reducing the size of the seasonal exclosure by eliminating the 6 Exclosure and East Boneyard areas would impact open sand areas (Boneyard) and beach (6 Exclosure) and allow year-round motorized activities in these areas. The impacts would, thus, be similar to those described for motorized recreation (CA-1) in EIR Appendix D and would be ***less than significant***.

CDPR UAS Use for Park Activities (CA-52). UAS would have ***no impact*** on special-status plant species.

6.3.3 Sensitive Habitats

SNPL and CLTE Management – SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreation Activities and Other Non-Covered Species Management Activities (CA-12b). SNPL chick and egg capture would occur on foot in open sand areas and would have ***no impact*** sensitive habitats.

General Facilities Maintenance – Mechanical Trash Removal (CA-21). Mechanical trash removal is proposed to occur within unvegetated areas along the shoreline and margin of the foredunes, above the wrack line (i.e., outside of the intertidal zone). Mechanical trash removal would also avoid all live vegetation and aquatic areas. As a result, mechanical trash removal is only expected to impact bare, open sand areas. However, mechanical trash removal may occur within SNPL critical habitat (as described above in EIR section 6.3.2.1) and La Graciosa thistle critical habitat as well as ESHA defined by the CCC. Critical habitat and ESHA are considered to be sensitive habitat. Mechanical trash removal could temporarily remove favorable constituents within SNPL and La Graciosa thistle critical habitat as well as ESHA by altering dune composition and topography. Specifically, mechanical trash removal could reduce organic surface materials (e.g., driftwood) and microtopography. Most mechanical trash removal would be conducted to remove litter in areas where recreation activities have been concentrated. These areas have always supported an ongoing high level of recreation (i.e., presence of humans, pets, vehicles, and/or human attracted predators)[37] and, therefore, critical habitat and ESHA in this area has a reduced value. In addition, mechanical trash removal may improve the habitat by removing trash from the area. As a result, impacts to sensitive natural communities would be ***less than significant***.

Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50). The East Boneyard Exclosure and 6 Exclosure reduction would open new areas to motorized vehicle and pedestrian recreation during the SNPL and CLTE breeding season. Most of these areas consist of bare sand and any exposed native vegetation would continue to be protected with fencing. The East Boneyard Exclosure and 6 Exclosure are removed during the winter each year and open to motorized recreation where visitors can drive through ESHA, SNPL critical habitat, and La Graciosa thistle

[37] USFWS acknowledged that SNPL critical habitat at Oceano Dunes SVRA was already degraded at the time of listing by recreation activities, but it did not preclude the USFWS from designating it as critical habitat (USFWS 2012a).

critical habitat. Therefore, no changes to the existing impacts on sensitive natural communities would be expected and impacts would be ***less than significant***.

CDPR UAS Use for Park Activities (CA-52). UAS would have ***no impact*** on sensitive natural communities.

6.3.4 Wildlife Movement

SNPL and CLTE Management – SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreation Activities and Other Non-Covered Species Management Activities (CA-12b). SNPL chick and egg capture would occur on foot in open sand areas. This activity could deter wildlife from moving through the area during the period of disturbance; however, it would not create an impediment to wildlife movement. As a result, the impact is ***less than significant***.

General Facilities Maintenance – Mechanical Trash Removal (CA-21). Mechanical trash removal would occur in most heavily used beach areas at Grand Avenue and Pier Avenue and between Post 2 and Post 6. Tractor use could deter wildlife from moving through the area during the period of disturbance; however, tractor use would not create an impediment to wildlife movement. As a result, the impact is ***less than significant***.

Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50). Reduction of the East Boneyard Exclosure and 6 Exclosure would expose 109 acres of additional habitat to motorized and non-motorized recreation, which would likely deter wildlife from moving through the previously protected area. However, motorized and non-motorized recreation are already occurring in areas surrounding the East Boneyard Exclosure and 6 Exclosure; therefore, wildlife species are likely already deterred from moving through much of this area. In addition, wildlife with low dispersal distances, such as small mammals and reptiles, would be impacted by the exclosure reduction since they may avoid moving through the area open to recreation and, therefore, the exclosure reduction would restrict the habitat available for them move through. Despite this, the exclosure reduction would not create a barrier or impediment to wildlife movement in the HCP area since habitat free from recreation activities would still be available in the HCP area. Removing the exclosure fencing, which currently creates a physical barrier to large mammals migrating through the area, would allow large mammals to move through an additional 109 acres of habitat, although this is unlikely since the area is subject to a large amount of recreation disturbance and large mammals may not use this area during migration anyway. As a result, exposure of an additional 109 acres of additional habitat to recreation would have ***less-than-significant*** impacts on wildlife movement.

CDPR UAS Use for Park Activities (CA-52). UAS use could result in temporary disruption of wildlife movement during use by deterring them from migrating through the area. However, no barriers or impediments to wildlife movement would occur. As a result, all impacts would be temporary and are considered ***less than significant.***

6.3.5 Wintering/Migratory Birds

SNPL and CLTE Management – SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreation Activities and Other Non-Covered Species Management Activities (CA-12b). SNPL chick and egg capture would occur during the avian breeding season; therefore, activities would have ***no impact*** on wintering/migratory birds.

General Facilities Maintenance – Mechanical Trash Removal (CA-21). Mechanical trash removal would only occur above the wrack line and would be set back from creeks, riparian areas, and foredunes. Mechanical trash removal would also not occur within vegetated areas or areas encompassed by the seasonal exclosure (i.e., from Post 6 south). Mechanical trash removal activities could result in equipment injuring or killing a foraging or roosting wintering/migratory bird within the area where activities occur. However, as part of the natural resource management program in the HCP area, mechanical trash removal equipment would not exceed 10 miles per hour; therefore, most wintering/migratory birds would be expected to fly out of harm's way. In addition, CDPR Environmental Scientist staff would inspect and approve the area subject to mechanical trash removal prior to each deployment. As a result, mortality and/or injury to wintering/migratory birds are not expected and impacts from mechanical trash removal activities on wintering/migratory birds would be ***less than significant***.

Mechanical trash removal activities could disturb wintering/migratory birds by temporarily flushing them and/or precluding them from foraging and roosting in these areas. However, this disturbance would be relatively short-term and temporary. Mechanical trash removal is also typically conducted in areas of high recreation that are already subject to disturbance. Likewise, additional open beach foraging habitat is present in the HCP area for wintering and migratory birds to forage during the period of disturbance. As a result, disturbance from mechanical trash removal would be minimal and impacts from mechanical trash removal activities on wintering/migratory birds would be ***less than significant***.

Mechanical trash removal could affect favorable foraging and/or roosting habitat for wintering/migratory birds above the wrack line by altering dune composition and topography. Specifically, mechanical trash removal could reduce organic surface materials (e.g., driftwood) and microtopography. Most mechanical trash removal would be conducted to remove litter in areas where recreation activities have been concentrated and the substrate is already highly disturbed. These areas are already expected to be subject to habitat alteration that could reduce organic surface material and microtopography. As a result, mechanical trash removal would have ***less than significant*** habitat impacts on wintering/migratory bird foraging and/or roosting habitat.

Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50). Reducing the East Boneyard Exclosure and 6 Exclosure would not impact wintering birds since the exclosure would not be present during the winter. Some birds could migrate through the HCP area when the exclosure is still present and could forage and/or roost in the HCP area. Reducing the East Boneyard Exclosure and 6 Exclosure would likely have limited impacts on migrating birds, since most migrating birds would not be expected to use the exclosures for foraging and/or roosting. If migrating birds did use the East Boneyard or 6 Exclosure for foraging and/or roosting, reduction of the exclosure could expose migrating birds to motorized and/or non-motorized recreation, which could temporarily displace foraging birds, altering their normal behavior patterns. In addition, although most birds would be expected to fly out of harm's way, some foraging or roosting birds (especially those found in flocks) within areas that were previously protected by the East Boneyard Exclosure and/or 6 Exclosure where motorized vehicles would be permitted could be struck by vehicles and injured or killed. However, as part of their natural resource management program, CDPR implements measures, including, but not limited, to enforcing speed limits along the shoreline, providing educational materials and conducting ranger patrols to enforce natural resource and other regulations. As a result, the impact from reducing the East

Boneyard Exclosure and 6 Exclosure on migrating birds within the HCP area would be ***less than significant***.

CDPR UAS Use for Park Activities (CA-52). CDPR may use UAS (e.g., drones) in the HCP area to cut down on the time and cost associated with data collection, especially in more remote areas. CDPR may use UAS for some activities (e.g., predator management, habitat enhancement, SNPL monitoring) during the non-breeding season in areas where migratory birds maybe present. When drones are flown too close to flocks or individual birds, the noise and unfamiliar presence of drones could deter flocks or individual birds from foraging and or roosting. However, any impacts would be temporary and only last during the time the drone is being flown over. In addition, as part of the natural resources program in the HCP area, measures are implemented to minimize impacts from UAS, including, but not limited to, flying UAS at least 100 feet above ground and ensuring all flights are approved by the Environmental Resources Project Manager. As a result, impacts from UAS are expected to be ***less than significant***.

6.4 CUMULATIVE IMPACTS

6.4.1 Special-Status Species

Per the project impact analysis presented in EIR section 6.2.3 the HCP proposed new covered activities (CA-12b, CA-21, CA-50, and CA-52) would not have impacts on tidewater goby, western pond turtle, bats, marsh sandwort, sand mesa manzanita, Nuttall's milkvetch, Monterey paintbrush, Douglas spineflower, surf thistle, dune larkspur, beach spectaclepod, Kellogg's horkelia, southwestern spiny rush, Nipomo Mesa lupine, Gambel's watercress, and sand almond; therefore, there would be no cumulative impacts on these species, and they are dismissed from further discussion in this EIR. Direct and indirect impacts of potential future projects contemplated by the HCP on these species would be evaluated at the time they are proposed. The HCP proposed new covered activities would have potential impacts on the remaining special-status species, including certain HCP covered species. These impacts have been determined to be less than significant. The proposed new HCP covered activities could result in a significant cumulative impact if they impact the same species and habitats as foreseeable future projects. The cumulative effects would be less than significant if the AMMs or mitigation measures mitigate the potential impacts and there is not a significant cumulative loss of habitat or special-status species.

Potential future projects considered in the cumulative analysis are identified in EIR section 3.3, Table 3-1.. An overview of the risk of impacts of these activities on special-status species, where risk is defined as the likelihood and magnitude of effect, is presented in Table 6-11 (wildlife) and Table 6-12 (plants). Risk is defined as both the likelihood and magnitude of effect. As a result, risk is weighing both the frequency and severity of the impact. Therefore, even though an impact may be expected to occur, it may not result in a high or moderate risk if the impact is considered infrequent or is not severe. The risks of impact are classified as either high (H), moderate (M), low (L), no (N), and/or beneficial (B). These classifications are defined in the tables.

Table 6-11. Cumulative Risk of Impacts to Special-Status Animal Species[1, 2]

Covered Activity	HCP-Covered Animals			Non-Covered Animals					
	Western Snowy Plover	California Least Tern	California Red-legged Frog	California Horned Lizard	Silvery Legless Lizard	Western Spadefoot	Burrowing Owl	Nesting Birds[3]	American Badger
HCP Potential Future Covered Activities									
CA-12b SNPL Adult Banding	H, B	L	N	N	N	N	L	L	N
CA-15 Listed Plant Management – Propagation and Outplanting	L	L	L	L, B	L, B	L	L	L	L
CA-28 Cable Fence Maintenance – Replacement	L	N	N	L	L	N	N	N	N
CA-38 Grover Beach Lodge and Conference Center	L	N	N	L	L	N	N	L	N
CA-41 Pismo Creek Estuary Seasonal (Floating) Bridge	L	L	L	N	N	L	N	L	N
CA-42 Riding in 40 Acres	N	L	L	M	M	L	L	L	L
CA-43 Replacement of the Safety and Education Center	L	L	L	L	L	L	L	L	L
CA-44 Dust Control Activities – New PMRP	H	H	L, B	L, B	L, B	L, B	L	M	L
CA-48 Oso Flaco Lake Boardwalk Replacement	N	L	M	N	N	L	N	L	N
CA-49 Special Projects	M	M	L	L	L	L	L	L	L
CDPR Public Works Plan Projects									
Project A: Oso Flaco Campground and Day Use Project	M	M	M	M	M	L	L	M	L
Project B: Park Corporation Yard Improvement Project	N	N	N	N	N	N	N	M	N
Project D: Oceano Campground Infrastructure Improvement Project	N	N	L	L	M	N	N	M	N
Project E: Grand Avenue and Pier Avenue Kiosks, Pier Avenue Lifeguard Tower	N	N	N	N	N	N	L	M	N
Project F: North Beach Campground Facility Improvements	N	N	L	L	M	N	N	M	N

Table 6-11. Cumulative Risk of Impacts to Special-Status Animal Species[1, 2]

Covered Activity	HCP-Covered Animals			Non-Covered Animals					
	Western Snowy Plover	California Least Tern	California Red-legged Frog	California Horned Lizard	Silvery Legless Lizard	Western Spadefoot	Burrowing Owl	Nesting Birds[3]	American Badger
Project G: Butterfly Grove Public Access	N	N	N	N	N	N	N	M	N
Project H: Pismo State Beach Boardwalk	L	N	L	M	M	L	L	M	L
USFWS									
Guadalupe-Nipomo Dunes National Wildlife Refuge Final Comprehensive Conservation Plan	M, B	M, B	M, B	M, B	M, B	M, B	M, B	M, B	N
Local Agencies									
Arroyo Grande Creek Channel Waterway Management Plan	N	N	M	L	N	N	N	L	N

[1] If both adverse and beneficial impacts can occur, both are shown as defined below. The discussion for each species within this section details the individual impacts.

[2] Per the project impact analysis presented in EIR section 6.2.3 the HCP proposed new covered activities would not have impacts on tidewater goby, western pond turtle, and bats.

[3] Nesting birds includes both common and special-status nesting bird species.

High (H). The covered activity has in the past or is highly likely in the HCP permit term to cause direct mortality, injury, or reproductive failure of one or more individuals of a covered species in most years (more than once every 2 years); and/or a degree of disturbance or indirect impacts that is highly likely to result in mortality, injury, or reproductive failure of one or more individuals of a covered species in most years. Permanent loss or reduction in quality of 1 acre or more of primary breeding habitat of one or more covered species also falls into this impact level. In the case of **beneficial (B)** effects, this category applies to covered activities that have a primary purpose of aiding in the protection and recovery of the target covered species, including protective fencing, surveys and monitoring, habitat enhancement, predator or invasive species control, etc.

Low (L). The covered activity is unlikely to cause mortality, injury, or reproductive failure; however, the covered activity will likely result in a degree of disturbance or indirect impacts that could disrupt the normal behavior patterns (e.g., breeding, feeding, sheltering) of one or more individuals of a covered species. Permanent loss or reduction in quality of 1 or more acre of tertiary (rarely used) habitat or temporary disturbance to habitat of one or more covered species also falls into this impact level. In the case of **beneficial (B)** effects, this category applies to covered activities that do not have a purpose related to natural resources protection, but nevertheless have some degree of beneficial effect to a covered species.

No Impact (N). The covered activity has not caused mortality, injury, or reproductive failure of a covered species in the past and does not have the potential to do so within the permit term of the HCP. The covered activity has not caused disturbance or indirect impacts in the past and is unlikely to during the permit term. The covered activity would also have no permanent or temporary impacts to covered species habitat. There are also no beneficial effects at the no impact level.

Table 6-12. Cumulative Impacts to Special-Status Plant Species[1]

Covered Activity	Red sand verbena	Coastal goosefoot	**La Graciosa thistle**	Blochman's leafy daisy	Suffrutescent wallflower	Fuzzy prickly phlox	Dunedelion	Crisp monardella	San Luis Obispo monardella	California spineflower	Hickman's popcorn flower	Blochman's groundsel
HCP Potential Future Covered Activities												
CA-12b SNPL Adult Banding	L	L	L	L	L	L	L	L	L	L	L	L
CA-15 Listed Plant Management – Propagation and Outplanting	L, B	L, B	L, B	L, B	L, B	L, B	L, B	L, B	L, B	L, B	L, B	L, B
CA-28 Cable Fence Replacement	N	N	N	N	N	N	N	N	N	N	N	N
CA-38 Grover Beach Lodge and Conference Center	N	N	N	L	N	N	N	N	N	N	N	L
CA-41 Pismo Creek Estuary Seasonal (Floating) Bridge	L	N	L	N	N	N	N	N	N	N	N	N
CA-42 Riding in 40 Acres	N	L	N	L	L	L	L	L	L	L	N	L
CA-43 Replacement of the Safety and Education Center	N	N	N	N	N	N	N	N	N	N	N	N
CA-44 Dust Control Activities – New PMRP	L, B	L, B	L, B	L, B	L, B	L, B	L, B	L, B	L, B	L, B	L, B	L, B
CA-48 Oso Flaco Lake Boardwalk Replacement	N	N	N	N	N	N	N	N	N	N	N	N
CA-49 Special Projects	L	L	L	L	L	L	L	L	L	L	L	L
CDPR Public Works Plan Projects												
Project A: Oso Flaco Campground and Day Use Project	L	N	L	L	L	L	N	L	L	L	N	L
Project B: Park Corporation Yard Improvement Project	N	N	N	N	N	N	N	N	N	N	N	N
Project D: Oceano Campground Infrastructure Improvement Project	N	N	N	N	N	N	N	N	N	N	N	N
Project E: Grand Avenue and Pier Avenue Kiosks, Pier Avenue Lifeguard Tower	N	N	N	N	N	N	N	N	N	N	N	N

Table 6-12. Cumulative Impacts to Special-Status Plant Species[1]

Covered Activity	Red sand verbena	Coastal goosefoot	**La Graciosa thistle**	Blochman's leafy daisy	Suffrutescent wallflower	Fuzzy prickly phlox	Dunedelion	Crisp monardella	San Luis Obispo monardella	California spineflower	Hickman's popcorn flower	Blochman's groundsel
Project F: North Beach Campground Facility Improvements	N	N	N	N	N	N	N	N	N	N	N	N
Project G: Butterfly Grove Public Access	N	N	N	N	N	N	N	N	N	N	N	N
Project H: Pismo State Beach Boardwalk	L	L	L	L	L	L	N	L	L	L	N	L
USFWS												
Guadalupe-Nipomo Dunes National Wildlife Refuge Final Comprehensive Conservation Plan	B	B	B	B	B	B	B	B	B	B	N	B
Local Agencies												
Arroyo Grande Creek Channel Waterway Management Plan	N	N	N	N	N	N	N	N	N	N	N	N

[1] Per the project impact analysis presented in EIR section 6.2.3 the HCP proposed new covered activities would not have impacts on marsh sandwort, sand mesa manzanita, Nuttall's milkvetch, Monterey paintbrush, Douglas spineflower, surf thistle, dune larkspur, beach spectaclepod, Kellogg's horkelia, southwestern spiny rush, Nipomo Mesa lupine, Gambel's watercress, and sand almond.

High (H). Activity and habitat overlap in an area where species has been documented. Species is common throughout the HCP area. Activity may alter habitat.

Low (L). Activity and habitat may overlap. Activity may encroach upon habitat, but not alter it.

No Impact (N). Activity and habitat do not overlap.

Beneficial (B). Activity benefits species and/or habitat.

6.4.1.1 Western Snowy Plover

HCP Potential Future Covered Activities

SNPL/CLTE Management (CA-12b) – SNPL Adult Banding. Currently, adult SNPL are not banded in the HCP area; however, CDPR may request permission from the USFWS to band adults at a later date. Banding adults could pose risk of injury or mortality to adults. In addition, banding could substantially disturb nesting SNPL and ultimately cause them to abandon their eggs or chicks. To reduce these impacts, CDPR would implement established protocols during banding in accordance with the SNPL and CLTE management program. Specifically, a master

bander would be used to band any SNPL in the HCP area. In addition, monitors and master banders would be required to have a 10(a)(1)(A) Recovery Permit and/or be approved by the USFWS and follow careful protocols designed to minimize any adverse effects on SNPL during these activities. Furthermore, monitors that enter the exclosure would be aware of the location of nests, brood, and adults in order to minimize situations where an adult might abandon eggs or chicks. Ultimately, banding SNPL adults would provide beneficial information on adult mortality/survival, as well as population status and distribution. As a result, the impact would be ***less than significant***.

Listed Plant Management – Propagation and Outplanting (CA-15). Most listed plants do not occur in areas where SNPL would nest, forage, or roost. Beach spectaclepod and surf thistle occur in North and South Oso Flaco during the breeding season. Because of the timing of their blooming and growth periods, both plant species can only be accurately identified by doing surveys during the SNPL breeding season. Any propagation or outplanting of beach spectaclepod or surf thistle would be conducted by a 10(a)(1)(A) SNPL- and CLTE-permitted (or a USFWS-approved) biologist, or by crews working under the direction of the permitted/USFWS-approved biologist. As a result, no mortality or injury of SNPL is expected to occur. However, propagation and outplanting of these species could disturb nesting SNPL and deter them from incubating eggs or brooding chicks during the period of disturbance. CDPR staff would implement AMMs, including, but not limited to, SNPL AMMs 93 through 98 to minimize any impacts to SNPL. As a result, any disturbance-related impacts would be ***less than significant***.

Cable Fence Maintenance – Replacement (CA-28). Replacement of the cable fence would occur during the non-breeding season. Cable fence replacement could be disruptive to wintering SNPL by interrupting foraging and/or roosting behavior. In addition, the noise associated with removing posts, excavating sand, and pile driving could displace foraging and/or roosting wintering SNPL, as well as cause increased vigilance. To minimize impacts associated with cable fence replacement, replacement of the cable fence would occur infrequently (i.e., every 10–15 years) and would be subject to pre-construction SNPL surveys. Any cable fence replacement work needed in or near SNPL foraging or roosting habitat would be conducted when SNPL were not observed to be present within 150 feet of the work area. Therefore, any disturbance-related impacts to wintering SNPL from cable fence replacement would be ***less than significant***.

Grover Beach Lodge and Conference Center (CA-38). Impacts to SNPL were analyzed as part of the Grover Beach Lodge EIR (SWCA Environmental Consultants, 2012). Central dune scrub habitat in the Grover Beach Lodge project area was determined to have potential to support wintering SNPL, and impacts could occur during construction. Pre-construction surveys were required to be conducted between October and February, and activities were not permitted within 500 feet of any wintering SNPL observed during the surveys. As a result, impact to wintering SNPL from the Grover Beach Lodge would be ***less than significant***.

Pismo Creek Estuary Seasonal (Floating) Bridge (CA-41). Direct mortality of SNPL eggs, chicks, juveniles, and/or adults from bridge construction or use would not occur from the construction or use of the Pismo Creek Estuary seasonal bridge. The bridge is located outside of SNPL breeding habitat and would have ***no impact*** on nesting SNPL. SNPL could forage or roost near the bridge location; therefore, visitor bridge use could disrupt foraging or roosting SNPL and displace SNPL from foraging or roosting habitat and/or deter them from foraging or roosting in the area during the disturbance. SNPL AMM 114 would close the bridge to public use until

the birds have left the area if visitor activities are significantly disrupting SNPL foraging and/or roosting behavior. With implementation of this measure, the impact to SNPL would be ***less than significant.***

Riding in 40 Acres (CA-42). Riding in 40 Acres would not occur within SNPL nesting, foraging, or roosting habitat. As a result, ***no impact*** would occur.

Replacement of the Safety and Education Center (CA-43). The safety and education center is located between Post 4 and Post 5, just south of Pavilion Hill. The kiosk comprises a simple metal frame structure supporting informational panels. Replacement of this structure would involve minimal ground disturbance. The kiosk is outside of the SNPL typical nesting area, which is south of Post 6. Any nests that may occur outside the typical SNPL nesting area in or near the safety and education center area would be identified by park staff through routine monitoring that is conducted as part of the SNPL management program and protected (SNPL AMMs 8 through 19). As a result, ***no impact*** to nesting SNPL is expected.

Replacement of the safety and education center could disturb foraging and/or roosting SNPL by displacing them from suitable foraging and/or roosting habitat during the disturbance and or deterring them from foraging and/or roosting during the disturbance. CDPR would conduct pre-construction surveys for SNPL prior to starting work and delay activity until SNPL are no longer present (SNPL AMM 102). As a result, potential impacts to foraging and/or roosting SNPL from kiosk maintenance or replacement would be ***less than significant***.

Dust Control Activities – New PMRP (CA-44). Impacts to SNPL from dust control activities are described in HCP section 4.3.1.5.5. Most new dust control activities would occur within the backdunes, which is considered tertiary habitat for SNPL. Impacts in tertiary habitat would not impact SNPL.

The implementation of the HCP would ensure that all impacts on SNPL within primary and secondary habitat would be ***less than significant***. A detailed description of the impacts associated with dust control activities in primary and secondary habitat follows. Note that, as described in section 2.4.2.3, the PMRP, inclusive of the new foredune and additional foredune vegetation, are subject to separate CEQA review.

An approximately 48-acre area located outside the seasonal exclosure just north of Post 6 and within primary habitat for SNPL has been fenced as a preliminary step toward establishing a new foredune that would be permanently closed to vehicles and camping. Impacts on wintering SNPL associated with closing the 48-acre area are discussed in EIR Appendix D. The 48-acre area has not been planted or otherwise treated to develop foredune characteristics, but CDPR has proposed planting the area, subject to separate CEQA review and permitting. Impacts on breeding SNPL from fencing the 48-acre area and all impacts associated with planting the 48-acre foredune are discussed in this section. An additional approximately 4 acres of foredune area are also proposed to be fenced and vegetated as part of the dust control activities. It is assumed that the 4 acres of foredune vegetation would also be outside the seasonal exclosure but within primary habitat for SNPL. The foredune's associated air quality equipment could also be located in primary habitat but would be outside the seasonal exclosure.

Effects of Closing the Foredune Areas to Motorized Recreation and Camping on Breeding SNPL. The 48-acre area is currently open to pedestrians and CDPR staff that need to maintain the area. However, installing the fencing created a 48-acre closed area north of Post 6 that is free from ongoing motor vehicle and camping disturbance. The new 4-acre area would also be closed to

camping and vehicles. As a result, the new foredune areas may be conducive to nesting, especially prior to any vegetation being planted. If a SNPL nest is established outside of the seasonal exclosure in the newly closed areas, the cryptic nature of SNPL nests and chicks makes it possible for a nest/chick to be crushed/killed or injured if a nest has not yet been identified by monitors. Chicks are especially vulnerable as they move from the nest area to the shoreline, where they may encounter pedestrians and vehicles. In addition, vehicle and/or pedestrian activities occurring adjacent to the newly closed areas, and pedestrian and maintenance activities within the areas, could result in disturbance of nesting SNPL, and SNPL could be deterred from incubating eggs or brooding chicks. However, during the SNPL and CLTE breeding season, CDPR will implement the SNPL and CLTE management program within the closed areas. Monitors will conduct daily searches for nests in the closed areas. Any nests that are found will be protected by a single-nest exclosure, if appropriate, and a buffer zone a minimum of 100 feet will be established around all nests to ensure that recreation and maintenance activities do not encroach on SNPL nests. As a result, and given the success of the ongoing conservation program (see HCP section 3.3.1) and the implementation of the HCP, these impacts to SNPL nests and chicks would be ***less than significant***.

If a nest is established within the closed areas, any chicks that leave the nest would be vulnerable to injury or mortality as they move from the nest area to the shoreline where they may encounter vehicles. However, CDPR would implement SNPL AMMs, as appropriate, including SNPL AMMs 1 through 30 to reduce the risk of crushing/killing or injuring a nest/chick. These AMMs include monitors observing known nests prior to hatching and posting signs or symbolic fencing to provide safe passage. As a result, these impacts would be ***less than significant***.

SNPL nesting near the fenceline of the 6 Exclosure may be disturbed by vehicles traveling between the 6 Exclosure and southern edge of the new 48-acre area. Although this disturbance can occur under existing conditions, the narrow corridor (potentially between 300 and 400 feet wide) between the northern edge of the 6 Exclosure and the southern edge of the closed area may cause more vehicles to pass closer to the edge of the 6 Exclosure. Chronic disturbance of breeding adults from recreation activities could directly or indirectly affect chicks or eggs. Chicks or nests could be abandoned, left unattended for prolonged periods of time, or exposed to predation. In addition, chicks could be orphaned or inadequately nourished, and eggs could be buried by sand or not properly incubated. To reduce these impacts, CDPR will continue to implement the SNPL and CLTE management program in the HCP area. Specifically, CDPR will continue to conduct daily monitoring to enable better identification of potential threats. If broods are observed to be in harm's way, vehicle traffic flow will be diverted or regulated to allow the safe movement of the brood. In addition, a nest avoidance buffer of a minimum of 100 feet will be used to protect SNPL nests near the fenceline of the 6 Exclosure. The buffer will be increased, as necessary, until monitors observe that SNPL adults are no longer disturbed. As a result, and given the success of the ongoing conservation program (see HCP section 3.3.1) and the implementation of the HCP, these impacts to SNPL would be ***less than significant***.

The multi-strand metal fencing used to close the 48-acre area and that will be used to close the 4-acre area is similar to fences placed at other vegetation islands. Fences placed in otherwise open habitat can be hazardous to flying birds. Only SNPL nesting within these areas are expected to be at risk of striking the foredune fencing if they fly into the multi-strand fence when leaving a nest for another location. SNPL have not been documented striking other vegetation island fencing, however, and although they have been documented striking the symbolic fence at Oso

Flaco, this event has been rare and was documented only a few times from 2002 to 2018. As a result, SNPL are very unlikely to strike the foredune fencing, and this impact would be ***less than significant***.

SNPL chicks and adults/juveniles have been observed leaving the protection of the seasonal exclosure and entering the open riding area where they are at risk of being struck by a vehicle. Closing areas open to motorized recreation may exacerbate this issue since it limits the open sand areas for motorized recreation to occur and likely results in more vehicles traveling along the shoreline where SNPL chicks are brooded and/or adults and chicks are foraging. Vehicle alleys and other movement pathways in the foredune areas may allow vehicles to travel through this area without impacting SNPL; however, SNPL may also utilize the pathways for travel to the shoreline. As a result, SNPL could be vulnerable to vehicle strike due to the increased presence of vehicles on the shoreline. Chicks would be most vulnerable since they are unable to fly out of harm's way. This could be especially exacerbated in conjunction with the exclosure reduction, which is predicted to result in some adult aggression/density issues and push additional chicks and adults out of the protection of the exclosure into the open riding area. In addition, nests established in the closed areas would be at risk if they hatch and chicks leave the foredune and travel along trails used by motorized recreation in order to reach the shoreline to forage. To minimize the risk of vehicle strike along the shoreline, CDPR will implement SNPL AMMs 1 through 30. These AMMs include implementing SNPL AMM 22, which is a new AMM that establishes a maximum number for egg and chick capture associated with covered activities that are not associated with covered species management (i.e., up to 12 eggs/4 nests and 12 chicks/4 broods). Even with these AMMs, there is likely an increased risk of take associated with closing the 48-acre and 4-acre areas. However, this increased risk of take may be addressed all or in part via implementation of AMM 22, existing AMMs, and the HCP. Capturing eggs or chicks for captive rearing is a form of take, but one that avoids injury, death, or other immediate harm. With these measures, the risk of take from PMRP dust control activities are reduced, and the impact would be ***less than significant***.

Effects of Planting the Foredune Vegetation. Given the need to plant vegetation during the rainy season, vegetation is expected to be installed prior to March 1 (i.e., prior to the start of the SNPL breeding season) or after the season concludes in September, which would not impact nesting SNPL. Should any planting need to occur within the SNPL breeding season (after February 28/29), nest searches would occur before any equipment or personnel moved into the foredune area for planting. Any nests that are found would be protected by a single-nest exclosure, if appropriate, and a buffer zone a minimum of 100 feet would be implemented around the nest. As a result, vegetated foredune construction and planting would have ***less than significant*** impacts on nesting SNPL.

Foredune vegetation installed within SNPL primary habitat may impact breeding SNPL by providing habitat for predators to hide and stalk nesting, foraging, and/or roosting SNPL. At this time, these indirect impacts from dust control activities are not known. CDPR would implement all SNPL AMMs (HCP Table 5-2), as appropriate, to reduce impacts to from dust control activities. These measures will include erecting single-nest exclosures as needed around any SNPL that occur within the new foredune vegetation areas. In addition, CDPR implements a predator management program to control avian and/or mammalian predators that are observed targeting or disturbing SNPL adults, chicks, or eggs. With these measures, predation impacts to SNPL from foredune implementation are expected to be ***less than significant***.

Foredune vegetation installed within SNPL primary habitat would reduce available suitable SNPL breeding and/or wintering habitat by decreasing the amount of open, wide beaches. Any additional vegetation associated with dust control activities within SNPL secondary habitat would further reduce the quality of such habitat and ultimately potentially convert it into tertiary habitat (e.g., vegetated dune). Previous studies have found that SNPL select habitats that are open (or wide) and have less vegetative cover in order to facilitate early detection of predators and reduce predation risk [(Muir & Colwell, 2010); (Brindock & Colwell, 2011)]. Reducing SNPL habitat by planting vegetation in suitable primary and secondary habitat for this species could lead to less open (or wide), sparsely vegetated beaches and could potentially increase predation on adults, chicks, and/or eggs if SNPL are not able to detect predators moving towards the nest location. However, all vegetation installation has been designed to avoid the active nest area, and randomly spaced native foredune vegetation should avoid creating areas of heavy vegetation. CDPR would also implement all AMMs (HCP Table 5-2), as appropriate, to reduce impacts from dust control activities. In addition, CDPR implements a predator management program to control avian and/or mammalian predators that are observed targeting or disturbing SNPL adults, chicks, or eggs. As a result, and given the implementation of the HCP, these impacts to SNPL would be ***less than significant***.

Activities associated with developing the foredune, such as surface treatment and planting, could disturb foraging and/or roosting wintering SNPL by displacing them from suitable foraging and/or roosting habitat during the disturbance and deterring them from foraging and/or roosting during the disturbance. CDPR would conduct pre-construction surveys for SNPL prior to starting work and delay activity until SNPL are no longer present (SNPL AMM 101). As a result, potential disturbance impacts to foraging and/or roosting SNPL from foredune development would be ***less than significant***.

SNPL are present and vulnerable to vehicle strike or disturbance during the non-breeding season. Foraging and roosting wintering SNPL frequently concentrate on the relatively narrow beach between Grand Avenue and Pier Avenue and north of Post 2, where OHV use is prohibited but street-legal vehicles are allowed. Although not as common, some SNPL may roost or forage along the shoreline in the vicinity of where the new foredune would be located. Installation of vegetation in the new foredune would remove some shoreline area that can be utilized for both driving and foraging. As a result, SNPL could be more vulnerable to vehicle strike due to the reduced area along the shoreline. To reduce this impact, CDPR would implement the SNPL and CLTE management program along the shoreline open to vehicles in the foredune vicinity, which includes weekly monitoring for wintering SNPL in the HCP area to locate foraging and/or roosting birds, enforcement of the posted speed limits, placing additional speed limit signs near foraging and/or roosting flocks, and implementing public education methods (e.g., handing out brochures, posting signs). Implementation of the SNPL and CLTE management program would reduce the impacts to wintering SNPL from motorized recreation to a ***less-than-significant*** level.

SNPL Critical Habitat: Approximately 52 acres of foredune vegetation associated with dust control activities would be established in SNPL critical habitat. This foredune vegetation could make the critical habitat permanently less suitable for SNPL nesting and wintering by decreasing the amount of open, wide beaches. However, SNPL typically nest within the seasonal exclosure and often avoid nesting in habitat north of Post 6 due to the heavy recreation use occurring in this area. In addition, the foredune vegetation would be set back from the shoreline, and plantings would be randomly spaced and avoid creating areas of heavy vegetation; therefore, the area

would retain most of the physical and biological features essential to the conservation of SNPL. Overall, vegetation planting in 52 acres of critical habitat would only modify approximately 7 percent of the total critical habitat in the HCP area, approximately 3 percent of total critical habitat in Unit CA 31, and approximately 0.2 percent of the total critical habitat range-wide. Additionally, some air quality monitoring equipment may be installed within SNPL critical habitat, making such areas unsuitable for nesting, but the impact would cease once the equipment is removed. As a result, critical habitat would not be adversely impacted, and this impact would be ***less than significant***.

Oso Flaco Lake Boardwalk Replacement (CA-48). Oso Flaco boardwalk replacement would occur over Oso Flaco Lake and would not occur within SNPL nesting, foraging, or roosting habitat. As a result, ***no impact*** would occur. Impacts from maintenance of the portion of Oso Flaco boardwalk in upland habitat are described in Boardwalk/Other Pedestrian Maintenance (CA-31) in EIR Appendix D.

Special Projects (CA-49). Special projects entail the construction of new facilities that may occur in Pismo State Beach or in Oceano Dunes SVRA. Special projects are precluded from occurring in SNPL nesting habitat south of Post 6, where SNPL are currently known to nest. Special projects in tertiary habitat are not expected to affect SNPL. If SNPL nest in new areas within primary and secondary habitat, special projects could result in disturbance of nesting SNPL and SNPL could be deterred from incubating eggs or brooding chicks. These activities could also result in disturbance of SNPL during foraging or roosting. Specifically, SNPL could be displaced from foraging or roosting habitat during the period of disturbance and/or could be deterred from foraging or roosting during the period of disturbance. Special project plans, including AMMs (e.g., conducting surveys prior to special project activities and delaying construction until SNPL are no longer in the area), would be submitted to the USFWS for review and approval prior to constructing a special project that could impact SNPL. As a result, the impacts of special projects to SNPL would be ***less than significant***.

Placing special projects within SNPL primary and secondary breeding habitat reduces the amount of habitat available to SNPL for breeding by precluding them from nesting within the footprint of the structures. However, many special projects would not be placed within primary and/or secondary habitat. In addition, special projects are small (i.e., not to exceed 35 acres over the permit term), and they are placed in areas where SNPL do not typically nest (e.g., outside the seasonal exclosure). In addition, special project plans within areas that could impact SNPL would be submitted to the USFWS for review and approval prior to construction. As a result, the impacts of special projects to SNPL habitat would be ***less than significant***.

Increased SNPL Take from HCP Potential Future Activities

Take numbers identified in the HCP (Table 6-8.) include take for existing, proposed new, and potential future covered activities. Take numbers in the HCP are defined as mortality, injury, capture, abandonment, or chicks in the open riding area at risk of being struck by a vehicle.

As stated in EIR section 6.3.2.1, most of the take numbers for SNPL reflect worst-case conditions based on past observations of mortality and injury, as well as observations of events that could cause mortality or injury, such as chicks entering the open riding area or nests being abandoned after an adult has been observed being disturbed by recreation. Although the worst-case scenario of take has been observed or is thought to have occurred in the past, this level of take is not expected to occur within the HCP area in most years (if at all). Take for most years is

lower than the worst-case scenario for take as documented in the monitoring data collected by CDPR since 2002 (Table 6-8.).

Of the ten future covered activities, including SNPL adult banding (CA-12b), listed plant management – propagation and outplanting (CA-15), cable fence maintenance – replacement (CA-28), Grover Beach Lodge and Conference Center (CA-38), Pismo Beach estuary seasonal (floating) bridge (CA-41), riding in 40 Acres (CA-42), replacement of the safety and education center (CA-43), dust control activities – new PMRP (CA-44), Oso Flaco Lake boardwalk replacement (CA-48), and special projects (CA-49), only SNPL adult banding (CA-12b) and dust control activities (CA-44 – New PMRP) are expected to result in take beyond baseline conditions. Specifically, SNPL adult banding (CA-12b) would result in additional temporary capture of SNPL adults and/or juveniles. Additional injuries and/or mortalities from SNPL adult banding are not expected with the implementation of AMMs. In addition, dust control activities (CA-44 – New PMRP) could potentially contribute to take, as defined above, of SNPL chicks and eggs above existing worst-case take potential. No increase in take of SNPL adults and juveniles is expected to occur from CA-44 above worst-case baseline conditions.

Up to 35 adults are expected to be captured each year due to SNPL adult banding in the future; however, no mortality or injuries are expected from these activities and any take would be temporary and last only during the time adults are being banded. As a result, no loss of SNPL adults, juveniles, eggs, or chicks would occur from SNPL adult banding (CA-12b).

As stated in EIR section 6.3.2.1, CDPR has included AMM 22 as a new measure to reduce potential injury/mortality impacts to SNPL from covered activities not associated with covered species management, such as CA-1 – Motorized Recreation, CA-44 – New PMRP, and CA-50 – Reduction of 6 Exclosure. The purpose of AMM 22 is to address an existing need[38] for CDPR to capture chicks or eggs for captive rearing if it is determined to be necessary to prevent injury and/or mortality. As a result, AMM 22 would allow up to 12 chicks and 12 eggs to be captured for captive rearing each year. Handling chicks and eggs for relocation is a form of take (see discussion of CA-12b above) but is less impactful than the injury or death that may otherwise occur if the chicks and eggs are left in harm's way.

As described in EIR section 6.3.2.1, it is difficult to forecast precisely which ongoing, new, and future covered activities may trigger implementation of SNPL AMM 22 from year to year. For purposes of this analysis, this EIR assumes that the new proposed and future covered activities CA-12b – Egg and Chick Capture for Captive Rearing if Threatened by Recreational Activities and Other Non-Covered Species Management Activities, CA-50 – Reduction of 6 Exclosure, and CA-44 – New PMRP could create an increase in take of SNPL eggs and chicks of 12 eggs and 12 chicks above baseline conditions and then apportions that take among the three activities. As a result, take of four eggs and four chicks is attributed to foredune construction dust control activity (CA-44 – New PMRP).

The potential for increased loss of up to four eggs and four chicks annually is significant to a federally-listed threatened species; however, this loss must be considered in context of the

[38] Currently, CDPR attempts to protect nests and/or move chicks back into the safety of the seasonal exclosure; however, chicks and eggs are often still at risk of being injured or killed by covered activities not associated with covered species management (e.g., motorized recreation). As a result, injury or mortality may occur if eggs or chicks are not observed by monitors and/or if chicks move back into areas where covered activities occur.

overall conservation program implemented by CDPR in the HCP area. While implementation of SNPL AMMs have not eliminated take of SNPL from visitor use or park operations, SNPL breeding success within the protected nesting areas has substantially increased the SNPL breeding population in the HCP area from 32 breeding adults in 2002 to 201 breeding adults in 2018 (HCP Table 3-8). SNPL continue to breed and forage and increase in numbers where active conservation management provides habitat enhancement and protection (HCP section 3.3.1). This side-by-side existence of visitor recreation and successful SNPL conservation is expected to continue in the future. The potential loss of four eggs and four chicks is not expected to diminish the enlarged SNPL population sustained by the CDPR's conservation program or hinder species recovery efforts. As a result, the SNPL take impact associated with the future covered activities is ***less than significant***.

CDPR Public Works Plan Projects

CDPR PWP projects (Projects B through G) would occur outside of SNPL primary and secondary habitat and would have ***no impact*** on breeding or wintering SNPL or result in critical habitat modification. Oso Flaco Campground and Day Use Project (Project A) could include construction of a pedestrian trail and lifeguard tower that could impact breeding and/or wintering SNPL. In addition, the Pismo Beach Boardwalk (Project H) would include construction of a boardwalk within SNPL secondary habitat. Boardwalk construction and pedestrians accessing the boardwalk could disrupt SNPL during the non-breeding season if SNPL roost or forage nearby. As part of the project planning process, the PWP projects would be subject to a separate CEQA review, under which the impacts of each project on breeding and non-breeding SNPL would be evaluated and mitigated as needed. CDPR would also seek an amendment to the HCP if SNPL take coverage is needed for a PWP project. As a result, the cumulative impact of these projects on SNPL would be ***less than significant***.

Guadalupe-Nipomo Dunes National Wildlife Refuge Final Comprehensive Conservation Plan

Impacts to SNPL were analyzed as part of the Guadalupe-Nipomo Dunes NWR Final Comprehensive Conservation Plan (CCP) Environmental Assessment (USFWS, 2016). The Guadalupe-Nipomo Dunes NWR Final CCP could result in some minor daytime disturbances and flushing of SNPL. However, the NWR CCP would benefit SNPL overall by monitoring for SNPL, controlling for feral swine, conducting avian and mammalian predator management, installing nest exclosure to minimize the loss of eggs to predation and accidental trampling by humans, restricting public access on the NWR during the SNPL nesting season and controlling invasive plant species. As a result, the cumulative impact of this project on SNPL would be ***less than significant***.

Arroyo Grande Creek Channel Waterway Management Plan

SNPL's potential to occur was evaluated as part of the Arroyo Grande Creek Channel Waterway Management Plan (WMP) EIR (SWCA Environmental Consultants, 2010). It was determined that suitable SNPL habitat is not present within the project area. As a result, no impact from this activity would occur.

Conclusion

As described above, none of the future projects, including potential future HCP covered activities when taking into account the AMMs included in the HCP, would have a significant, adverse impact on SNPL. Furthermore, given the implementation of AMMs, impacts on SNPL

from the proposed new HCP activities, even when combined with future HCP covered activities, would remain less than significant. As a result, the new proposed activities would not have a significant cumulative impact on SNPL.

6.4.1.2 California Least Tern

HCP Potential Future Covered Activities

SNPL and CLTE Management – SNPL Adult Banding (CA-12b). Adult CLTE would not be banded in the HCP area. As a result, no direct impacts would occur. SNPL adult banding would occur within the seasonal exclosure. Since the majority of CLTE nest within the exclosure, CLTE could be flushed from the nest or chicks could be separated from adults. However, SNPL adult banding activities would be conducted by a USFWS-approved or 10 (a)(1)(A) permitted biologist that would implement appropriate CLTE AMMs to ensure any disturbance to CLTE is minimized. As a result, this impact is ***less than significant***.

Listed Plant Management – Propagation and Outplanting (CA-15). Most listed plants do not occur in areas where CLTE would nest, forage, or roost. In addition, listed plant propagation and outplanting would occur outside the CLTE breeding season, if feasible. Beach spectaclepod and surf thistle occur in North and South Oso Flaco. Because of the timing of their blooming and growth periods, both plant species can only be accurately identified by doing surveys during the CLTE breeding season. CLTE is not known to nest within North and South Oso Flaco; therefore, impacts from propagation and outplanting of beach spectaclepod and surf thistle are not expected. In addition, any propagation or outplanting of beach spectaclepod or surf thistle would be conducted by or under the direction of a 10(a)(1)(A) SNPL- and CLTE-permitted (or a USFWS-approved) biologist. As a result, no injury or mortality impacts would be expected to occur even if CLTE did nest in the area. However, propagation and outplanting of these species could disturb nesting CLTE if they nest within North or South Oso Flaco in the future and could deter them from incubating eggs or attending chicks during the period of disturbance. CDPR staff would implement AMMs, including, but not limited to, CLTE AMMs 81 through 86 to minimize any potential impacts to CLTE. As a result, this impact would be ***less than significant***.

Cable Fence Maintenance – Replacement (CA-28). Cable fence replacement would not occur within CLTE breeding season. As a result, ***no impact*** from this activity would occur.

Grover Beach Lodge and Conference Center (CA-38). CLTE's potential to occur was evaluated as part of the Grover Beach Lodge EIR (SWCA Environmental Consultants, 2012). It was determined that suitable CLTE habitat is not present within the project area. As a result, ***no impact*** from this activity would occur.

Pismo Creek Estuary Seasonal (Floating) Bridge (CA-41). The bridge is located outside of CLTE breeding habitat and would have ***no impact*** on nesting CLTE. CLTE could use the Pismo Creek bridge handrails for roosting, including after chicks have fledged and adults are teaching fledglings to fish; therefore, installation, use, and removal of the bridge could disturb roosting CLTE. However, CLTE AMM 101 would close the bridge to public use until the birds have left the area if visitor activities are significantly disrupting CLTE foraging and/or roosting behavior. With implementation of this measure, the impact to CLTE would be ***less than significant***.

Riding in 40 Acres (CA-42). Riding in 40 Acres would be located outside the seasonal exclosure and within tertiary CLTE breeding and roosting habitat. In addition, no CLTE foraging habitat is present in the 40 Acres area. Therefore, impacts to nesting, roosting, and foraging CLTE are not

expected. CLTE have been observed flying through the 40 Acres area to reach suitable lake foraging habitat nearby. At times, CLTE have been observed flying as low as 15 feet above ground. At this height, although unlikely, they could be struck by a vehicle travelling through the 40 Acres area. Although the potential for vehicle strike is low, it does exist. However, CLTE AMMs 1 through 23 would be implemented, as appropriate, to reduce this impact. As a result, this impact would be ***less than significant***.

Replacement of the Safety and Education Center (CA-43). The safety and education center is located between Post 4 and Post 5, just south of Pavilion Hill. The kiosk comprises a simple metal frame structure supporting informational panels. Replacement of this structure would involve minimal ground disturbance. The kiosk is outside of the CLTE typical nesting area, which is south of Post 6. Any nests that may occur outside the typical CLTE nesting area in or near the safety and education center area would be identified by park staff through routine monitoring occurring as part of the CLTE management program and would be protected (CLTE AMMs 7 through 16). As a result, impacts to nesting CLTE are not expected and potential impacts to CLTE from kiosk maintenance or replacement would be ***less than significant***.

Dust Control Activities – New PMRP (CA-44). Impacts to CLTE from dust control activities are described in HCP section 4.4.1.5.5. Most new dust control activities would occur within the backdunes, which is considered tertiary habitat for CLTE. Impacts in tertiary habitat would not impact CLTE.

The implementation of the HCP would ensure that all impacts on CLTE within primary and secondary habitat would be ***less than significant***. A detailed description of the impacts to CLTE associated with dust control activities in primary and secondary habitat follows.

A 48-acre area located outside the seasonal exclosure just north of Post 6 and within primary habitat for CLTE has been fenced as a preliminary step toward establishing a new foredune that would be permanently closed to vehicles and camping. The 48-acre area has not been planted or otherwise treated to develop foredune characteristics, but CDPR has proposed planting the area subject to separate CEQA review and permitting. Impacts associated with planting of 48-acre foredune are discussed in this section. An additional approximately 4 acres of foredune area are also proposed to be fenced and vegetated as part of the dust control activities. It is assumed that the 4 acres of foredune vegetation would also be outside the seasonal exclosure but within primary habitat for CLTE. The foredune's associated air quality equipment could also be located in primary habitat but would be outside the seasonal exclosure.

Effects of Closing the Foredune Areas to Motorized Recreation and Camping on Breeding CLTE. The 48-acre area is currently open to pedestrians and CDPR staff that need to maintain the area. However, installing the fencing created a 48-acre closed area north of Post 6 that is free from ongoing motor vehicle and camping disturbance. CDPR anticipates fencing off and planting approximately 4 additional acres of foredune area, also in primary CLTE habitat, which would create an additional area free from motor vehicle and camping disturbances. CLTE almost exclusively nest in the Southern Exclosure, but the new closed areas may be conducive to nesting, especially prior to any vegetation being planted. If a CLTE nest is established outside the seasonal exclosure in the closed areas, the cryptic nature of CLTE nests and chicks makes it possible for a nest/chick to be crushed/killed or injured if a nest has not yet been identified by monitors. In addition, vehicle and/or pedestrian activities adjacent to the foredune vegetation, and pedestrian and maintenance activities within the foredune vegetation itself, could result in

disturbance of nesting CLTE, and CLTE could be deterred from incubating eggs or brooding chicks. However, CDPR would implement CLTE AMMs, as appropriate, including CLTE AMMs 1 through 23 to reduce the risk of crushing/killing or injuring a nest/chick. These AMMs include conducting daily searches for nests in the foredune area, protecting any nests found with a single-nest exclosure, and ensuring a minimum 330-foot nest avoidance buffer around any CLTE nests. As a result, and given the success of the ongoing conservation program (see HCP section 3.3.1) and the implementation of the HCP, these impacts to CLTE nests and chicks would be ***less than significant***.

The vegetated foredune area may increase recreation and motorized activity directly adjacent to the 6 Exclosure as vehicles travel in the narrow corridor (potentially between 300 and 400 feet wide) between the 6 Exclosure and southern edge of the foredune. Recreation and motorized activity adjacent to the 6 Exclosure could result in disturbance to nesting CLTE if they were to nest near the fenceline of the 6 Exclosure. However, for at least the last 8 years, CLTE have not been observed nesting within 500 feet of the northern 6 Exclosure fenceline (HCP Map 13c). In addition, CDPR would continue to implement the CLTE and SNPL management program, which includes ensuring that a minimum 330-foot no disturbance buffer is implemented around any CLTE nest and increasing this buffer, as necessary, to ensure nesting CLTE are not disturbed by recreation activities. As a result, and given the success of the ongoing conservation program (see HCP section 3.3.1) and the implementation of the HCP, these impacts to CLTE would be ***less than significant***.

The multi-strand metal fencing used to close the 48-acre area and that would be used to close off the 4-acre area is similar to fences placed at other vegetation islands. Fences placed in otherwise open habitat can be hazardous to flying birds. Although there are no direct observations of CLTE striking the seasonal exclosure fencing or South Oso Flaco symbolic fence, dead or injured adult/juvenile CLTE have been found within the Southern Exclosure or nearby shoreline; therefore, these birds might have been injured or killed due to striking the fence (CDPR 2014).

Nesting CLTE and/or CLTE within a night roost are expected to be most susceptible to fence strike. Based on previous nesting patterns from 2002 to 2018, CLTE are not expected to nest or form a night roost within the closed area since they are almost exclusively found nesting or forming their night roost within the Southern Exclosure. As a result, CLTE are unlikely to be impacted by fencing placed around the closed area. However, if a CLTE did nest or roost within the area, it could collide with the multi-strand metal fence when flying from or to the nest from another location. In 2015, CDPR placed brightly colored strips of fencing along sections of the Southern Exclosure to increase the visibility of the exclosure fence. The strip of fencing was attempted as an experiment in 2015 and was placed on the western and northern Southern Exclosure fence in 2016 with favorable results. As a result, if CLTE are observed to be at risk of fence collision in the area by a CDPR Environmental Scientist and it is determined necessary to protect CLTE from the risk of fence collision, CDPR would implement this program in the foredune areas by lining the top of the foredune fence with a strip of thicker plastic fencing (orange silt construction fencing cut into approximately 1-foot sections) in March of each year. It is anticipated the visible fencing will reduce or eliminate the likelihood of a CLTE striking a fence in areas where it is installed. As a result, and given the implementation of the HCP, this impact would be ***less than significant***.

In recent years, CLTE have selected an area within the 6 Exclosure for a night roost. Ultimately, fencing off 52 acres creates a closed area that at least initially—prior to vegetation

establishment—may be suitable for a CLTE night roost. Should CLTE change the location of their night roost to the new closed area, pedestrian and vehicle activities adjacent to the area could disrupt night roosting CLTE. To reduce the disturbance impacts, CDPR would implement the SNPL and CLTE management program in the HCP area. Environmental Scientists will closely monitor the CLTE night roost and will be able to identify most changes in roosting behavior. Over the past 10 years, the night roost has been located in the seasonal exclosure. If the location of the night roost changes, CDPR has a protocol in place to protect the CLTE in the night roost from disturbance by recreation activities, including, but not limited to, implementing an appropriate no-disturbance buffer of 330 feet around the night roost. As a result, impacts to CLTE in the night roost would be ***less than significant***.

Effects of Planting Foredune Vegetation. Some of the dust control vegetation may be planted within and/or adjacent to CLTE secondary habitat, but CLTE has not nested in this secondary habitat and would thus not be directly affected by the new vegetation.

Activities associated with dust control (e.g., vegetation planting, placement, and maintenance of artificial dust control measures, and maintenance of a temporary monitoring site) would not occur within the Southern Exclosure where CLTE almost exclusively nest. In addition, the foredune vegetation must be installed during the rainy season, which concludes prior to CLTE arriving on site for breeding. Activities would also not be conducted within aquatic habitat. As a result, impacts to nesting, roosting, and foraging CLTE from dust control installation are not expected.

Vegetation planted for dust control, especially vegetation planted within primary or secondary habitat, may impact breeding CLTE by providing habitat for mammalian predators to hide and stalk nesting and/or roosting CLTE. At this time, these indirect impacts from dust control activities are not known. CDPR would implement all CLTE AMMs (HCP Table 5-2) for dust control activities, as appropriate. These measures could include erecting single-nest exclosures as needed around any CLTE nests that occur within the foredune. In addition, CDPR implements a predator management program to control avian and/or mammalian predators that are observed targeting or disturbing CLTE adults, chicks, or eggs. With these measures, impacts are expected to be ***less than significant***.

The foredune vegetation proposed to be planted for dust control activities within the 48-acre fenced area and the additional 4-acre foredune area would be established in CLTE primary habitat. Ultimately, approximately 52 acres of primary habitat would be planted with foredune vegetation that could make it less suitable for CLTE nesting. Additional vegetation may also be planted within and/or adjacent to secondary habitat. However, CLTE currently nest almost exclusively within the Southern Exclosure and have avoided nesting in habitat north of Post 6 due to the heavy recreation use occurring in this area. In addition, randomly spacing the native foredune vegetation should avoid creating areas of heavy vegetation; therefore, the area would still retain some suitable CLTE nesting habitat. As a result, and given the implementation of the HCP, these impacts to CLTE would be ***less than significant***.

Oso Flaco Lake Boardwalk Replacement (CA-48). CLTE could use the Oso Flaco Lake boardwalk handrails for roosting, including after chicks have fledged and adults are teaching fledglings to fish. Oso Flaco Lake is also used by CLTE for foraging for fish. Therefore, Oso Flaco Lake boardwalk replacement could disturb foraging and/or roosting CLTE if work is conducted when CLTE are likely to be present in the HCP area (generally April 15 to September

15). To reduce impacts to foraging and/or roosting CLTE at Oso Flaco Lake, CLTE AMMs 102 and 103 would be implemented, which includes conducting surveys prior to any boardwalk construction in order to assess whether CLTE are present in the area, and if so, determining whether CLTE may be disturbed and delaying construction activities within 250 feet of the CLTE until it leaves of its own accord. Additionally, the Oso Flaco boardwalk is a long structure that will be replaced in sections, leaving many sections of the boardwalk and surrounding lake undisturbed at any given time. Given the surveys for CLTE, establishment of a buffer if needed, and the remaining undisturbed aquatic habitat, impacts of replacing the boardwalk on CLTE would be ***less than significant***. Impacts from maintenance of the portion of Oso Flaco boardwalk in upland habitat are described in Boardwalk/Other Pedestrian Maintenance (CA-31) in EIR Appendix D.

Special Projects (CA-49). Special projects entail the construction of new facilities that may occur in Pismo State Beach or in Oceano Dunes SVRA. Special projects are precluded from occurring in CLTE nesting habitat south of Post 6, where CLTE are currently known to nest. Special projects in tertiary habitat are not expected to affect CLTE and special projects would not be conducted within aquatic habitat; therefore, they would not impact foraging CLTE. Impacts to nesting and roosting CLTE, as well as CLTE breeding habitat, from special projects would be similar to those described for SNPL above. Special project plans, including AMMs (e.g., conducting surveys prior to special project activities and delaying construction until CLTE are no longer in the area), would be submitted to the USFWS for review and approval prior to constructing a special project that could impact CLTE. As a result, the impacts of special projects to CLTE would be ***less than significant.***

Increased CLTE Take from HCP Potential Future Activities

Take numbers identified in the HCP include take for existing covered activities. Take numbers in the HCP are defined as mortality, injury, capture, abandonment, or chicks in the open riding area at risk or being struck by a vehicle.

As stated in EIR Section 6.3.2.2, the take numbers reflect the worst-case conditions based on past observations of mortality and injury, as well as observations of events that could cause mortality or injury, such as chicks entering the open riding area or nests being abandoned after an adult has been observed being disturbed by recreation. The worst-case numbers were estimated with the recognition that historical data may undercount mortality; not every egg or individual CLTE may be detected (Table 6-9.). Although the worst-case scenario of take has been observed or is thought to have occurred in the past, this level of take is not expected to occur within the HCP area in most years (if at all). Take for most years is lower than the worst-case scenario for take as documented in the monitoring data collected by CDPR since 2002 (Table 6-9.).

The ten future covered activities, including SNPL adult banding (CA-12b), listed plant management – propagation and outplanting (CA-15), cable fence maintenance – replacement (CA-28), Grover Beach Lodge and Conference Center (CA-38), Pismo Beach estuary seasonal (floating) bridge (CA-41), riding in 40 Acres (CA-42), replacement of the safety and education center (CA-43), dust control activities – new PMRP (CA-44), Oso Flaco Lake boardwalk replacement (CA-48), and special projects (CA-49), would not contribute CLTE take numbers above baseline conditions. As a result, future covered activities would have ***no impact*** on CLTE take.

CDPR Public Works Plan Projects

CDPR PWP projects (B–G) would occur outside of CLTE primary and secondary habitat and would have ***no impact*** on breeding CLTE. The Oso Flaco Campground and Day Use Project (Project A) could include constructing a pedestrian trail and vegetation buffer around Oso Flaco Lake. Construction and pedestrian use of the trail during the breeding season could disrupt foraging CLTE, including fledglings learning to feed, when present. As part of the project planning process, the PWP projects would be subject to a separate CEQA review, under which the impacts of each project on CLTE would be evaluated and mitigated as needed. CDPR would also seek an amendment to the HCP if CLTE take coverage is needed for a PWP project. As a result, the cumulative impact of these projects on CLTE would be ***less than significant***.

Guadalupe-Nipomo Dunes National Wildlife Refuge Final Comprehensive Conservation Plan

Impacts to CLTE were analyzed as part of the Guadalupe-Nipomo Dunes NWR Final CCP Environmental Assessment (USFWS, 2016). The Guadalupe-Nipomo Dunes NWR Final CCP could result in some minor daytime disturbances and flushing of CLTE. However, the NWR CCP would benefit CLTE overall by documenting incidental sightings of CLTE, controlling for feral swine, conducting avian and mammalian predator management, restricting public access on the NWR during the CLTE nesting season and controlling invasive plant species. As a result, the cumulative impact of this project on CLTE would be ***less than significant***.

Arroyo Grande Creek Channel Waterway Management Plan

CLTE's potential to occur was evaluated as part of the Arroyo Grande Creek Channel WMP EIR (SWCA Environmental Consultants, 2010). It was determined that suitable CLTE habitat is not present within the project area. As a result, ***no impact*** from this activity would occur.

Conclusion

As described above, none of the future projects, including potential future HCP covered activities when taking into account the AMMs included in the HCP, would have a significant, adverse impact on CLTE. Furthermore, given the implementation of AMMs, impacts on CLTE from the proposed new HCP activities, even when combined with future HCP covered activities, would remain less than significant. As a result, the new proposed activities would not have a significant cumulative impact on CLTE.

6.4.1.3 California Red-Legged Frog

HCP Potential Future Covered Activities

SNPL Adult Banding (CA-12b). SNPL adult banding would have ***no impact*** on CRLF.

Listed Plant Management – Propagation and Outplanting (CA-15). Any propagation or outplanting of marsh sandwort and Gambel's watercress at Oso Flaco Lake could temporarily affect all life stages of CRLF (i.e., eggs, tadpoles, juveniles, and adults) by disturbing CRLF, if present. CDPR would implement CRLF AMMs 18, 19, and 20 to minimize the impact due to disturbance, including conducting surveys for CRLF and egg masses within 100 feet of activities to verify that no CRLF are present. Activities would be delayed until any individuals have moved from the area or appropriate AMMs (e.g., relocation or biological monitoring) are in place. As a result, impacts would be ***less than significant***.

Cable Fence Maintenance – Replacement (CA-28). This activity would not occur within CRLF aquatic habitat and CRLF are not expected to disperse through this area. As a result, ***no impact*** would occur.

Grover Beach Lodge and Conference Center (CA-38). Impacts to CRLF were analyzed as part of the Grover Beach Lodge EIR (SWCA Environmental Consultants, 2012). According to the EIR, construction of the Grover Beach Lodge would not impact CRLF. As a result, ***no impact*** to CRLF would occur from the Grover Beach Lodge.

Pismo Creek Estuary Seasonal (Floating) Bridge (CA-41). The floating bridge would be installed in aquatic habitat. CRLF are not known to occur in Pismo Creek within the HCP area and the Pismo Creek Estuary is considered low-quality suitable habitat for CRLF due to the intrusion of saltwater. Therefore, there is low potential for CRLF to be present in the area where the floating bridge would be installed. As a result, this activity is unlikely to impact CRLF and would have a ***less-than-significant*** impact.

Riding in 40 Acres (CA-42) and Replacement of the Safety and Education Center (CA-43). These activities would not occur within CRLF aquatic habitat and CRLF are unlikely to disperse through this area. As a result, potential impacts would be ***less than significant***.

Dust Control Activities – New PMRP (CA-44). Dust control activities would not result in impacts to CRLF aquatic habitat. Dust control activities could temporarily disturb aestivating or dispersing CRLF during activities. It is unlikely, but possible that CRLF could disperse through or be found in open sand areas prior to dust control measures being installed. Individuals in a dust control work area could be injured or crushed. AMMs for CRLF would be applied as appropriate, including conducting pre-activity surveys, as necessary, and delaying activities until the individual moves from the work area or appropriate AMMs are in place (e.g., relocation, exclusion fencing, biological monitoring). As a result, impacts to dispersing CRLF are ***less than significant***.

Dust control activities could permanently alter up to 420 acres of upland dispersal habitat for CRLF through planting of vegetation and placement of dust control devices and monitoring equipment. This impact is ***less than significant*** since few CRLF have been found in the HCP area, and additional dispersal habitat continues to be available in the HCP area. In addition, vegetation planted for dust control activities and some dust control devices provide necessary cover for CRLF if they are dispersing through the area and may ***benefit*** CRLF.

Oso Flaco Lake Boardwalk Replacement (CA-48). CRLF is known to occur in aquatic habitat of Oso Flaco Lake and Little Oso Flaco Lake. The Oso Flaco Boardwalk spans approximately 940 linear feet of aquatic habitat including wetlands and open water. The layout and/or location of the new boardwalk might need to shift slightly to accommodate conditions at the time of replacement, such as changes in codes or other operational or design considerations. Thus, although it is anticipated the replacement boardwalk would be located in roughly the same location, the HCP includes the loss of up to 1.5 acres of CRLF aquatic habitat (less than 1 percent of modeled HCP area aquatic habitat). Replacing the boardwalk would also cause temporary disturbance of CRLF aquatic habitat. Additionally, construction activities to replace boardwalk segments could also potentially impact individual CRLF by injury or mortality if they are present in the work area. CRLF adults, juveniles, or tadpoles could also be temporarily disturbed by activities.

The HCP identifies AMMs (CRLF AMMs 38 through 41) to reduce the potential impact on CRLF. Timing of the construction would be limited to when CRLF egg masses are less likely to be present. Surveys would be conducted prior to start of work to determine presence of CRLF. Any found individuals would be relocated by a qualified biologist. Construction personnel would be trained for CRLF identification. With these measures in place, the direct impacts to CRLF and the small loss of aquatic habitat would be ***less than significant***. Impacts from maintenance of the portion of Oso Flaco boardwalk in upland habitat are described in Boardwalk/Other Pedestrian Maintenance (CA-31) in EIR Appendix D.

Special Projects (CA-49). Special projects covered by the HCP would not be located in aquatic habitat. Projects could be located in upland dispersal habitat. Construction of a special project could result mortality or injury of a dispersing adult/sub-adult/juvenile if they dispersed through the construction area. Pre-activity surveys would be conducted prior to commencing activities that could disturb CRLF dispersal habitat. Therefore, this impact on CRLF would be ***less than significant***.

Special projects could remove up to 35 acres of dispersal habitat, but this habitat impact would be ***less than significant*** since suitable dispersal habitat would still be present throughout the HCP area.

Increased CRLF Take from HCP Potential Future Activities

Take numbers identified in the HCP include take for existing (EIR Table 6-10.) and future covered activities. Take numbers in the HCP are defined as mortality, injury, capture, and habitat loss. As stated in EIR section 6.3.2.3, the take numbers for CRLF reflect worst-case conditions based on past observations of events that could cause mortality or injury.

The HCP is not requesting additional take in the form of mortality, injury, or capture for CRLF from future covered activities including SNPL adult banding (CA-12b), listed plant management – propagation and outplanting (CA-15), cable fence maintenance – replacement (CA-28), Grover Beach Lodge and Conference Center (CA-38), Pismo Beach estuary seasonal (floating) bridge (CA-41), riding in 40 Acres (CA-42), replacement of the safety and education center (CA-43), dust control activities – new PMRP (CA-44), Oso Flaco Lake boardwalk replacement (CA-48), and special projects (CA-49), beyond baseline conditions.

The HCP is requesting an additional 1.5 acres of CRLF aquatic habitat loss from Oso Flaco Lake boardwalk replacement (CA-48). A loss of 1.5 acres of aquatic habitat out of the 178 acres of aquatic habitat within the HCP area would be ***less than significant***.

Table 6-13. Summary of Estimated Loss of CRLF Habitat

	Activity	Total Estimated *Permanent* Loss of Habitat
CRLF aquatic habitat	Oso Flaco Lake Boardwalk Replacement (CA-48)	1.5 acres

Table 6-13. Summary of Estimated Loss of CRLF Habitat

	Activity	Total Estimated *Permanent* Loss of Habitat
CRLF upland habitat	Dust Control Activities (CA-44 – New PMRP)	3 acres
	Special Projects (CA-49)	35 acres

[1] Although the location of some meteorological monitoring stations may not be permanent, this HCP assumes that up to 3 acres of dispersal habitat could be occupied by monitoring stations at any given time. Vegetation planting associated with dust control activities is not considered a permanent loss of habitat since CRLF can use this habitat for cover and dispersal.

CDPR Public Works Plan Projects

CDPR PWP projects (B, C, E, and G) would occur outside of CRLF aquatic and upland habitat and would have ***no impact*** on CRLF. Oceano Campground Infrastructure Improvement Project (Project D) and North Beach Campground Facility Improvements (Project F) are located adjacent to Meadow Creek, Carpenter Creek, and Oceano Lagoon. CRLF have been observed in Oceano Lagoon, Arroyo Grande Creek and Estuary, and Oso Flaco Lake. In addition, in 2019, a tadpole observed in Carpenter Creek is presumed to have been a CRLF based upon its characteristics. As a result, improvements at the North Beach Campground or Oceano Campground could result in mortality or injury of dispersing adult and juvenile CRLF. Pismo State Beach Boardwalk (Project H) would occur within suitable upland habitat for CRLF and could cause direct mortality or injury of dispersing adult and juvenile CRLF during construction of the boardwalk. The Oso Flaco Campground and Day Use Project (Project A) could include constructing a pedestrian trail and vegetation buffer around Oso Flaco Lake and a trail across aquatic habitat at Oso Flaco Lake. Oso Flaco Lake is suitable habitat for CRLF; therefore, CRLF individuals, tadpoles, and egg masses in aquatic habitat could be impacted, and construction of the Oso Flaco Campground and Day Use Project could also result in mortality of injury of dispersing adult and juvenile CRLF. As part of the project planning process, the PWP projects would be subject to a separate CEQA review, under which the impacts of each project on CRLF would be evaluated and mitigated as needed. CDPR would also seek an amendment to the HCP if CRLF take coverage is needed for a PWP project. As a result, the cumulative impact of these projects on CRLF would be ***less than significant***.

Guadalupe-Nipomo Dunes National Wildlife Refuge Final Comprehensive Conservation Plan

Impacts to CRLF were analyzed as part of the Guadalupe-Nipomo Dunes NWR Final CCP Environmental Assessment (USFWS, 2016). CRLF are known to occur and breed at six marshes and ponds in the NWR. The Guadalupe-Nipomo Dunes NWR Final CCP could result in some impacts to CRLF. However, the NWR CCP would benefit CRLF overall by documenting incidental sightings of CRLF, controlling for feral swine, and controlling invasive plant species. As a result, the cumulative impact of this project on CRLF would be ***less than significant***.

Arroyo Grande Creek Channel Waterway Management Plan

Impacts to CRLF were analyzed as part of the Arroyo Grande Creek Channel WMP EIR (SWCA Environmental Consultants, 2010). The Arroyo Grande Creek Channel WMP project area is considered suitable habitat for CRLF and project activities were determined to have the potential

to directly or indirectly impact CRLF. Pre-construction surveys and relocation, if necessary, were required prior to dewatering associated with the project. In addition, permanent habitat loss was required to be mitigated through development of a Mitigation and Monitoring Plan (MMP). As a result, the cumulative impact to CRLF from the Arroyo Grande Creek Channel WMP would be ***less than significant***.

Conclusion

As described above, none of the future projects, including potential future HCP covered activities when taking into account the AMMs included in the HCP, would have a significant, adverse impact on CRLF. Furthermore, given the implementation of AMMs, impacts on CRLF from the proposed new HCP activities, even when combined with future HCP covered activities, would remain less than significant. As a result, the new proposed activities would not have a significant cumulative impact on CRLF.

6.4.1.4 Coast (California) Horned Lizard and Silvery Legless Lizard

HCP Potential Future Covered Activities

SNPL Adult Banding (CA-12b). Coast horned lizards and silvery legless lizards are not expected to occur where SNPL adults, juveniles, chicks, and eggs are present. Therefore, SNPL adult banding would have ***no impact*** on coast horned lizard and silvery legless lizard.

Listed Plant Management – Propagation and Outplanting (CA-15). Propagation and outplanting activities for surf thistle, beach spectaclepod, Nipomo lupine, and La Graciosa thistle could result in injury or mortality of coast horned lizard and silvery legless lizard if they are present within the work area. The potential to encounter these species would be highest in already vegetated or moist areas (e.g., vegetation islands); however, these species can also be found in open sand areas as they travel and disperse between more suitable habitat areas. As part of CDPR's standard practices in the HCP area, pre-construction surveys are required, if determined necessary by a CDPR Environmental Scientist, prior to conducting listed plant management activities in the vegetation islands or other suitable habitat for coast horned lizard and silvery legless lizard to avoid harm and injury to individual lizards. If an individual were observed, activities would be delayed until the individual has moved from the area or a qualified biologist moves the individual from the area. Overall, these activities could create additional vegetated and/or cover habitats for both silvery legless lizard and coast horned lizard; the activities could remove potential non-native predators and, therefore, are beneficial to this species. As a result, impacts on coast horned lizard and silvery legless lizard would be ***less than significant***.

Cable Fence Maintenance – Replacement (CA-28). Cable fencing occurs outside of vegetated areas (i.e., typical coast horned lizard and silvery legless lizard habitat). Although open sand areas are considered suitable upland habitat for coast horned lizard and silvery legless lizard and these species could disperse through and be injured or killed by equipment associated with these activities, this habitat is thought to be infrequently used by these species for dispersal over other more suitable habitats since these areas provide minimal cover. As a result, the impact of this activity on coast horned lizard or silvery legless lizard would be ***less than significant***.

Grover Beach Lodge and Conference Center (CA-38). Impacts to silvery legless lizard and coast horned lizard were analyzed as part of the Grover Beach Lodge EIR (SWCA Environmental Consultants, 2012). Central dune scrub habitat in the Grover Beach Lodge project area was determined to have potential to support coast horned lizard and silvery legless lizard and impacts

to these species, including vehicle strike, entrapment in trenches or stockpiled materials, or trampling, could occur during construction. Pre-construction surveys were required to be conducted for silvery legless lizard and coast horned lizard. If an individual is observed during the survey, the EIR requires removal of the individual to suitable habitat outside the construction area. As a result, impact to silvery legless lizard and coast horned lizard from the Grover Beach Lodge would be ***less than significant***.

Pismo Creek Estuary Seasonal (Floating) Bridge (CA-41). Pismo Creek Estuary seasonal floating bridge would not occur within coast horned lizard or silvery legless lizard habitat. As a result, ***no impact*** would occur.

Riding in 40 Acres (CA-42). The 40 Acres site comprises vegetated dunes near in the Oso Flaco Lake area. Coast horned lizard and silvery legless lizard could be present in the 40 Acres site during trail construction or visitor use. Construction of the trail could result in injury or mortality of these species if they are present within the work area. As part of CDPR's standard practices in the HCP area, the work area would be clearly defined using fencing or flagging, as appropriate, to ensure impacts do not occur outside the work area. In addition, pre-construction surveys would be conducted prior to trail construction, as determined to be necessary by a CDPR Environmental Scientist, to avoid harm and injury to individual lizards. If an individual is observed during the construction of the 40 Acres trail, activities would be delayed until the individual has moved from the area or the species would be relocated out of harm's way by a qualified biologist. With implementation of these measures, impact on coast horned lizard and silvery legless lizard would be ***less than significant***.

Vegetation within the 40 Acres site would be removed along up to 2 miles of trail alignment at a maximum width of 20 feet. This would result in a loss of up to 4.8 acres of suitable coastal dune habitat for coast horned lizard and silvery legless lizard. The HCP area contains approximately 1,079 acres of suitable vegetated dune habitat (e.g., silver dune lupine - mock heather scrub) for coast horned lizard and silvery legless lizard. The potential loss of 4.8 acres of this vegetation for trail construction in the southern riding area would not result in a substantial habitat loss for the California horned lizard and silvery legless lizard. As a result, this impact would be ***less than significant***.

Replacement of the Safety and Education Center (CA-43). The safety and education center is located between Post 4 and Post 5 in open beach habitat. Replacement of the safety and education center could kill or injure coast horned lizard and/or silvery legless lizard if they dispersed through the area while construction was occurring. Although the safety and education center location is considered suitable upland habitat for coast horned lizard and silvery legless lizard, and these species could disperse through and be injured or killed by beach construction equipment. However, this habitat is likely infrequently used by these species for dispersal over other more suitable habitats since these areas provide minimal cover. As a result, the risk this activity injuring or killing a coast horned lizard or silvery legless lizard is expected to be low. Therefore, the impact of this activity on coast horned lizard or silvery legless lizard would be ***less than significant***.

Dust Control Activities – New PMRP (CA-44). Dust control activities could result in injury or mortality of these coast horned lizard and silvery legless lizard if they are present within the work area. The potential to encounter these species would be highest in already vegetated or moist areas, which would be unlikely to require dust control measures; however, these species can be found in open sand areas as they travel and disperse between more suitable habitat areas.

These species could also be attracted to areas where dust control measures are implemented (e.g., straw bales, wind fencing, and vegetation); therefore, maintenance of these areas could result in injury or mortality of these species. However, as part of their standard practices, CDPR would conduct pre-construction surveys, as determined to be necessary by a CDPR Environmental Scientist, prior to installing dust control measures to avoid harm and injury to individual lizards. If an individual is observed during the pre-construction survey or during the dust control activities, activities would be delayed until the lizard moves out of harm's way on its own accord and/or a qualified biologist relocates the individual. With implementation of these measures, mortality impacts on California horned lizard and silvery legless lizard would be ***less than significant***.

Dust control activities would permanently alter approximately 400 acres of upland dispersal habitat for coast horned lizard and silvery legless lizard through planting of vegetation and placement of dust control devices and monitoring equipment. Dust control measures would ultimately create additional vegetated and/or cover habitats for both silvery legless lizard and California horned lizard and would, therefore, be beneficial to this species. As a result, this impact would be ***less than significant***.

Oso Flaco Lake Boardwalk Replacement (CA-48). The Oso Flaco Lake boardwalk spans aquatic and beach habitat. Oso Flaco Lake boardwalk replacement in aquatic habitat would have ***no impact*** on coast horned lizard or silvery legless lizard. Boardwalk maintenance in upland habitat is discussed under Boardwalk/Other Pedestrian Access (CA-31) in EIR Appendix D.

Special Projects (CA-49). Special projects covered by the HCP would not be located in vegetation islands or directly adjacent to aquatic habitat where coast horned lizard and silvery legless lizard are most likely to occur. Special projects could be located in bare sand areas where these species could disperse. Construction of a special project could result mortality or injury of a dispersing individual if they dispersed through the construction area. As part of CDPR's standard practices in the HCP area, the work area would be clearly defined using fencing or flagging, as appropriate, to ensure impacts do not occur outside the work area. In addition, pre-construction surveys would be conducted prior to construction, as determined to be necessary by a CDPR Environmental Scientist, in order to avoid harm and injury to individual lizards. If an individual is observed during the pre-construction survey or during construction, activities would be delayed until the individual has moved from the area or the species would be relocated out of harm's way by a qualified biologist. With implementation of these measures, impact on coast horned lizard and silvery legless lizard would be ***less than significant***.

Special projects could remove up to 35 acres of bare sand habitat that could be used for dispersal, but this impact would be ***less than significant*** since suitable dispersal habitat will still be present throughout the HCP area.

CDPR Public Works Plan Projects

CDPR PWP projects (B, E, and G) would not occur within suitable coast horned lizard or silvery legless lizard habitat. Therefore, ***no impacts*** to these species from PWP Projects B, E, and G would occur. Silvery legless lizards have been observed in the designated campgrounds, and silvery legless lizard and coast horned lizard could occur in the dune scrub or other vegetated habitats throughout the HCP area. As a result, silvery legless lizard and coast horned lizard could be injured or killed during construction of the Oso Flaco Lake Campground and Day Use Project (Project A), Oceano Campground Infrastructure Improvement Project (Project D), North Beach

Campground Facility Improvement Project (Project F), and Pismo State Beach Boardwalk Project (Project H). As part of the project planning process, the PWP projects would be subject to a separate CEQA review, which would analyze and mitigate as appropriate the impacts of each project on silvery legless lizard and coast horned lizard. As a result, the cumulative impact of these projects on these species would be ***less than significant***.

Guadalupe-Nipomo Dunes National Wildlife Refuge Final Comprehensive Conservation Plan

Coast horned lizards are not known to occur in the Guadalupe-Nipomo Dunes NWR (USFWS, 2016). Silvery legless lizards are known to occur in the NWR (USFWS, 2016). The Guadalupe-Nipomo Dunes NWR Final CCP could result in some impacts to silvery legless lizard. However, the NWR CCP would benefit silvery legless lizard overall by controlling for feral swine and controlling invasive plant species. As a result, the cumulative impact of this project on silvery legless lizard would be ***less than significant***.

Arroyo Grande Creek Channel Waterway Management Plan

Silvery legless lizard's potential to occur was evaluated as part of the Arroyo Grande Creek Channel WMP EIR (SWCA Environmental Consultants, 2010). It was determined that suitable habitat for silvery legless lizard is not present within the project area. As a result, ***no impact*** to silvery legless lizard from this activity would occur.

Impacts to coast horned lizard were analyzed as part of the Arroyo Grande Creek Channel WMP EIR (SWCA Environmental Consultants, 2010). The Arroyo Grande Creek Channel WMP project was determined to have limited suitable habitat for coast horned lizard, and project activities were determined to have the potential to directly or indirectly impact coast horned lizard within suitable habitat. Biological monitoring and relocation, if necessary, were required prior to construction activities. As a result, the cumulative impact to coast horned lizard from the Arroyo Grande Creek Channel WMP would be ***less than significant***.

Conclusion

As described above, none of the future projects, including potential future HCP covered activities when taking into account the CDPR's standard practices, would have a significant, adverse impact on coast horned lizard and silvery legless lizard. Furthermore, given the implementation of CDPR's standard practices, impacts on coast horned lizard and silvery legless lizard from the proposed new HCP activities, even when combined with future HCP covered activities, would remain less than significant. As a result, the new proposed activities would not have a significant cumulative impact on coast horned lizard and silvery legless lizard.

6.4.1.5 Western Spadefoot Toad

HCP Potential Future Covered Activities

The impacts to western spadefoot toad from future activities, including SNPL adult banding (CA-12b), listed plant management – propagation and outplanting (CA-15), cable fence maintenance – replacement (CA-28), Grover Beach Lodge and Conference Center (CA-38), Pismo Creek Estuary seasonal (floating) bridge (CA-41), riding in 40 Acres (CA-42), replacement of the safety and education center (CA-43), dust control activities – new PMRP (CA-44), Oso Flaco Lake boardwalk replacement (CA-48), and special projects (CA-49) are expected to be similar to CRLF above. However, western spadefoot toad is thought to be very uncommon in the HCP area; therefore, this species is less likely to be impacted by covered

activities than CRLF. As a result, these projects would have ***no impact*** on western spadefoot toad.

CDPR Public Works Plan Projects

CDPR PWP projects (B–G) would occur outside of western spadefoot aquatic and upland habitat and would have ***no impact*** on western spadefoot. Pismo State Beach Boardwalk (Project H) would occur within suitable upland habitat for western spadefoot and could cause direct mortality or injury of dispersing or burrowing adult and juvenile western spadefoot during construction of the boardwalk. The Oso Flaco Campground and Day Use Project (Project A) could include constructing a pedestrian trail and vegetation buffer around Oso Flaco Lake. Oso Flaco Lake is not considered suitable breeding habitat for western spadefoot; therefore, Oso Flaco Campground and Day Use Project would not directly impact western spadefoot tadpoles and egg masses. Construction of the Oso Flaco Campground and Day Use Project could result in mortality of injury of dispersing or burrowing adult and juvenile western spadefoot. As part of the project planning process, the PWP projects would be subject to a separate CEQA review, which would analyze and mitigate as appropriate the impacts of each project on western spadefoot. As a result, the cumulative impact of these projects on western spadefoot would be ***less than significant***.

Guadalupe-Nipomo Dunes National Wildlife Refuge Final Comprehensive Conservation Plan

Western spadefoot is not known to occur within the NWR (USFWS, 2016). As a result, the Guadalupe-Nipomo Dunes NWR Final CCP would have ***no impact*** on western spadefoot.

Arroyo Grande Creek Channel Waterway Management Plan

Western spadefoot's potential to occur was evaluated as part of the Arroyo Grande Creek Channel WMP EIR (SWCA Environmental Consultants, 2010). It was determined that suitable western spadefoot habitat is not present within the project area. As a result, ***no impact*** from this activity would occur.

Conclusion

As described above, none of the future projects, including potential future HCP covered activities when taking into account the CDPR's standard practices, would have a significant, adverse impact on western spadefoot. Furthermore, given the implementation of CDPR's standard practices, impacts on western spadefoot from the proposed new HCP activities, even when combined with future HCP covered activities, would remain less than significant. As a result, the new proposed activities would not have a significant cumulative impact on western spadefoot.

6.4.1.6 Western Burrowing Owl

HCP Potential Future Covered Activities

SNPL Adult Banding (CA-12b). SNPL adult banding would occur during the avian breeding season; therefore, activities would have ***no impact*** on western burrowing owl which only occur in the HCP area in the winter.

Listed plant management – Propagation and Outplanting (CA-15). Listed plant propagation and outplanting activities within the vicinity of a burrowing or foraging burrowing owl could temporarily displace individuals from their winter habitat or from foraging, altering their normal

behavior patterns. Activities could also flush individuals from optimal habitat to less suitable habitat where they could be exposed to inclement weather or predation. However, the risk of these impacts occurring is low since western burrowing owl is uncommon with the HCP area. In addition, any listed plant outplanting and propagation activities would be expected to be temporary and short in duration. Finally, pre-construction surveys are conducted, as determined to be necessary by CDPR Environmental Scientist staff, prior to listed plant management activities. If a wintering burrowing owl is observed, activities would be delayed until the individual has moved from the area or until appropriate AMMs (e.g., biological monitoring) are in place. As a result, impacts to western burrowing owl would be ***less than significant***.

Cable Fence Maintenance – Replacement (CA-28). Cable fence replacement would not occur within areas where western burrowing owl individuals or sign (e.g., feathers, pellets, tracks) have been observed. As a result, ***no impact*** would occur.

Grover Beach Lodge and Conference Center (CA-38). The potential for western burrowing owl to occur in the project area was analyzed as part of the Grover Beach Lodge EIR (SWCA Environmental Consultants, 2012). Suitable habitat for western burrowing owl was determined to be absent from the project area. As a result, ***no impact*** to western burrowing owl from the Grover Beach Lodge would occur.

Pismo Creek Estuary Seasonal (Floating) Bridge (CA-41) and Oso Flaco Lake Boardwalk Replacement (CA-48). Pismo Creek Estuary floating bridge and Oso Flaco boardwalk replacement would not occur within western burrowing owl habitat or areas where western burrowing owl individuals or sign (e.g., feathers, pellets, tracks) have been observed. As a result, ***no impact*** would occur. Impacts from maintenance of the portion of Oso Flaco boardwalk in upland habitat are described in Boardwalk/Other Pedestrian Maintenance (CA-31) in EIR Appendix D.

Riding in 40 Acres (CA-42). If a burrowing owl is present within the vicinity of 40 Acres trail construction and riding, it could be temporarily displaced, and normal behavior patterns could be altered. However, the risk of these impacts occurring is low since western burrowing owl is uncommon with the HCP area. In addition, as part of CDPR's standard practices in the HCP area, pre-construction surveys would be conducted prior to construction, as determined to be necessary by a CDPR Environmental Scientist, to avoid harm and injury to individual burrowing owls. If an individual is observed during the pre-construction survey, activities would be delayed until the individual has moved from the area or until appropriate AMMs are in place (e.g., a no-disturbance buffer). As a result, the impacts to western burrowing owl from riding in 40 Acres would be ***less than significant***.

Replacement of the Safety and Education Center (CA-43). If a burrowing owl is present within the vicinity of the safety and education center, it could be temporarily displaced, and normal behavior patterns could be altered. However, the risk of these impacts occurring is low since western burrowing owl is uncommon with the HCP area and has rarely been observed within the open riding area. In addition, as part of CDPR's standard practices in the HCP area, pre-construction surveys would be conducted prior to construction, as determined to be necessary by a CDPR Environmental Scientist, to avoid harm and injury to individual burrowing owls. If an individual is observed during the pre-construction survey, activities would be delayed until the individual has moved from the area or until appropriate AMMs are in place (e.g., a no-disturbance buffer). As a result, the impacts to western burrowing owl from replacement of the safety and education center would be ***less than significant***.

Dust Control Activities – New PMRP (CA-44). Dust control activities could temporarily displace foraging individuals or individuals using woody debris or dune vegetation for cover, altering their normal behavior patterns. It is also possible for dust control activities to displace birds from safe resting locations and move them into areas where they are vulnerable to predation and recreation disturbance. However, dust control activities would be temporary and short in duration, and foraging individuals would be expected to move from the area to forage elsewhere. In addition, as part of their standard practices, CDPR would conduct pre-construction surveys for burrowing owl, if determined to be necessary by a CDPR Environmental Scientist, to avoid disturbing wintering burrowing owl. If an individual is observed, activities would be delayed or appropriate AMMs (e.g., no-disturbance buffer) would be implemented. As a result, impacts would be ***less than significant***.

Little is known about the burrowing owl habitat in the HCP area during the winter. Planting vegetation associated with dust control activities within the HCP area could reduce available suitable wintering habitat for burrowing owl, including reducing areas with woody debris or reducing open areas with suitable small mammal burrows. However, burrowing owls may also use dune vegetation for cover during the winter, and dust control activities would increase the amount of vegetative cover. Overall, the habitat impacts are expected to be ***less than significant***.

Special Projects (CA-49). Special project activities could result in destruction of burrows or removal of other wintering habitat (e.g., woody debris or vegetation) if they occur within suitable burrowing owl habitat. In addition, if a burrowing owl is present within the vicinity of special project activities, it could be temporarily displaced, and normal behavior patterns could be altered. As part of CDPR's standard practices in the HCP area, the work area would be clearly defined using fencing or flagging, as appropriate, to ensure impacts do not occur outside of the work area. In addition, pre-construction surveys would be conducted prior to construction, as determined to be necessary by a CDPR Environmental Scientist, to avoid harm and injury to individual burrowing owls. If an individual is observed during the pre-construction survey, activities would be delayed until the individual has moved from the area or until appropriate AMMs are in place (e.g., a no-disturbance buffer). With implementation of these measures, impact on burrowing owl would be ***less than significant***.

Special projects could alter suitable wintering habitat by changing the microtopography or removing organic material (e.g., woody debris); however, these activities would be implemented in areas of high visitation where burrowing owl are less likely to occur due to the ongoing level of disturbance. Therefore, the risk of this impact is low and any impacts from special projects to habitat would be ***less than significant***.

CDPR Public Works Plan Projects

CDPR PWP projects (B–D and F–G) would occur outside of suitable burrowing owl wintering habitat and would have ***no impact*** on wintering burrowing owl. Burrowing owls have been found near the Grand Avenue ramp and Oso Flaco Lake, as a result Oso Flaco Campground and Day Use Project (Project A), Pismo State Beach Boardwalk (Project H), and Grand Avenue and Pier Avenue Kiosks (Project E) could disturb wintering burrowing owl and ultimately cause them to move from wintering cover. As part of the project planning process, the PWP projects would be subject to a separate CEQA review, which would analyze the impacts of each project on burrowing owl. As a result, the cumulative impact of these projects on burrowing owl would be ***less than significant***.

Guadalupe-Nipomo Dunes National Wildlife Refuge Final Comprehensive Conservation Plan

Burrowing owls have been observed in the NWR (USFWS, 2016). The Guadalupe-Nipomo Dunes NWR Final CCP could result in some impacts to burrowing owl, including disturbance and flushing. However, the NWR CCP would benefit burrowing owl overall by controlling for feral swine and controlling invasive plant species. As a result, the cumulative impact of this project on western burrowing owl would be ***less than significant***.

Arroyo Grande Creek Channel Waterway Management Plan

Burrowing owl's potential to occur was evaluated as part of the Arroyo Grande Creek Channel WMP EIR (SWCA Environmental Consultants, 2010). It was determined that suitable burrowing owl habitat is not present within the project area. As a result, ***no impact*** from this activity would occur.

Conclusion

As described above, none of the future projects, including potential future HCP covered activities when taking into account CDPR's standard practices, would have a significant, adverse impact on western burrowing owl. Furthermore, given the implementation of CDPR's standard practices, impacts on western burrowing owl from the proposed new HCP activities, even when combined with future HCP covered activities, would remain less than significant. As a result, the new proposed activities would not have a significant cumulative impact on western burrowing owl.

6.4.1.7 Nesting Birds

HCP Potential Future Covered Activities

SNPL Adult Banding (CA-12b). SNPL adult banding would occur on the open sand beaches where SNPL nests occur. The only birds known to nest on the open sand beaches are ground nesting birds, such as California horned lark and killdeer. If a nest was located within or near an adult being captured for banding, this activity could result in destruction of the nest or disturbance of the chicks/incubating adults. However, this activity would be conducted by a 10 (a)(1)(A) permitting biologist (or a biologist approved by the USFWS) that would ensure any disturbance to other nesting birds was minimized. In addition, as part of CDPR's standard practices, nesting bird surveys would be conducted, as determined to be necessary by a CDPR Environmental Scientist, prior to conducting activities. If a nest is observed, activities would be delayed until appropriate AMMs are in place. AMMs would include a no-disturbance buffer, as determined by CDPR Environmental Scientist staff, and/or biological monitoring. As a result, this impact would be ***less than significant***.

Listed Plant Management – Propagation and Outplanting (CA-15). Propagation and outplanting activities, if they occur in suitable habitat for nesting birds, could result in disturbance impacts to nesting birds. Specifically, activities during the breeding season could disturb nesting birds and deter them from incubating eggs or chicks during the period of disturbance. These activities could also disturb foraging birds by displacing them from foraging habitat during the period of disturbance and/or deterring them from foraging, which could ultimately result in starvation of the attending adult or chicks. As part of their standard practice, CDPR would conduct a nesting bird survey prior to conducting the activity if any activities are determined by a CDPR Environmental Scientist to have potential to impact nesting birds. If a nest is observed, activities

would be delayed until appropriate AMMs are in place. AMMs include establishing a no-disturbance buffer, as determined by a qualified biologist, and/or conducting biological monitoring. As a result, the impact from this activity on nesting birds would be ***less than significant***.

Cable Fence Maintenance – Replacement (CA-28). Cable fence replacement would not occur within nesting bird season. As a result, ***no impact*** from this activity would occur.

Grover Beach Lodge and Conference Center (CA-38). Impacts to nesting birds were analyzed as part of the Grover Beach Lodge EIR (SWCA Environmental Consultants, 2012). Suitable habitat for numerous nesting bird species was determined to be present in the Grover Beach Lodge project area and nesting bird surveys were required to be conducted between March and September as part of the mitigation measures in the EIR. Buffers were required if an active nest was located. As a result, impact to nesting birds from the Grover Beach Lodge would be ***less than significant***.

Pismo Creek Estuary Seasonal (Floating) Bridge (CA-41). Birds would not nest in the location of the Pismo Creek Estuary floating bridge since it would be built within aquatic habitat. Some birds (e.g., shorebirds) could nest within the vicinity of the Pismo Creek Estuary floating bridge; however, very limited suitable nesting habitat is available within the vicinity of the bridge location and construction activities would be temporary and relatively short in duration. In addition, all pedestrian activities would be temporary and relatively short-term in nature. As a result, impacts from the Pismo Creek Estuary floating bridge on nesting birds would be ***less than significant***.

Riding in 40 Acres (CA-42). The 40 Acres site comprises vegetated dunes in the direction of the Oso Flaco Lake area. Nesting birds could be present in the 40 Acres site during trail construction. If construction occurs during the nesting bird season, construction of the trail could result in destruction of a nest if it is present within the work area and/or disturbance of nesting birds if they are present within or near the work area. However, if activities occur during the breeding season, as part of CDPR's standard practices, nesting bird surveys would be conducted prior to conducting trail construction activities. If a nest is observed, activities would be delayed until appropriate AMMs are in place. AMMs would include a no-disturbance buffer, as determined by CDPR Environmental Scientist staff, and/or biological monitoring. With implementation of these measures, impact on nesting birds would be ***less than significant***.

Visitor use of the 40 Acres trail would be expected to have similar impacts on nesting birds as other recreation activities, including motorized vehicle recreation and pedestrian recreation, as appropriate, as described in EIR Appendix D.

Replacement of the Safety and Education Center (CA-43). The safety and education center is located between Post 4 and Post 5 in open beach habitat. Most nesting birds, including raptors, would not be expected to nest in or near the safety and education center because suitable habitat is not present (e.g., trees, shrubs). Replacement of this structure would involve minimal ground disturbance. Suitable nesting habitat is present for ground-nesting birds (e.g., California horned lark, shorebirds) near the safety and education center. However, the safety and education center is located within an area open to recreation that is subject to frequent disturbance; therefore, it is unlikely that birds would nest there. In addition, as part of CDPR's standard practices, construction activities would be conducted outside the avian nesting season, if feasible. If activities occur during the nesting season and if determined to be necessary by a CDPR

Environmental Scientist, nesting bird surveys would be conducted prior to replacing the safety and education center. If a nest is observed, activities would be delayed until appropriate AMMs are in place. AMMs would include a no-disturbance buffer, as determined by CDPR Environmental Scientist staff, and/or biological monitoring. Therefore, the impact of this activity on nesting birds would be ***less than significant***.

Dust Control Activities – New PMRP (CA-44). Dust control activities would not impact aquatic or riparian nesting birds, since these activities do not occur in aquatic or riparian habitat. Dust control activities could result in destruction of a bird nest if they are present within the work area. Dust control activities could also disturb nearby nesting birds and drive adult birds from the nest and, ultimately, lead to neglect or abandonment of eggs or chicks. However, dust control activities would be conducted outside the avian nesting season (September 16 to February 28/29) to the extent feasible. If dust control activities occur in the avian nesting season (generally March 1 to September 15), pre-construction surveys for nesting birds would be conducted, as appropriate. If a nesting bird is found, a buffer zone would be established around the nest until the young have fledged or the nest is no longer active. With implementation of these measures, impact on nesting birds is ***less than significant***.

Planting vegetation associated with dust control activities within the HCP area can reduce available suitable nesting habitat for some ground nesting birds, including California horned lark, by decreasing the amount of bare ground. However, California horned lark is thought to be an uncommon nester in the HCP area. In addition, installing dune vegetation and monitoring equipment could provide nesting habitat for some birds, including raptors. As a result, the habitat impacts are ***less than significant***.

Oso Flaco Lake Boardwalk Replacement (CA-48). The Oso Flaco Lake boardwalk spans both aquatic, dune scrub, and beach habitat. Impacts from maintenance of the portion of Oso Flaco boardwalk in upland habitat are described in Boardwalk/Other Pedestrian Maintenance (CA-31) in EIR Appendix D. The Oso Flaco boardwalk in aquatic habitat would be replaced in the same location where possible but may need to be replaced adjacent to the current location. If boardwalk replacement activities occurred during the breeding season, nesting birds could be present within or directly adjacent to the work area in aquatic habitat. If bird nests are present, replacement activities could result in destruction of a nest. In addition, nesting birds could be disturbed by boardwalk replacement construction activities adjacent to a nest, which could drive adult birds from the nest and, ultimately, lead to neglect or abandonment of eggs or chicks. However, as part of CDPR's standard practices, construction activities would be conducted outside the avian nesting season, if feasible. If activities occur during the nesting season and if determined to be necessary by a CDPR Environmental Scientist, nesting bird surveys would be conducted prior to replacing the boardwalk. If a nest is observed, activities would be delayed until appropriate AMMs are in place. AMMs would include a no-disturbance buffer, as determined by CDPR Environmental Scientist staff, and/or biological monitoring. With implementation of these measures, impact on nesting birds would be ***less than significant***.

Special Projects (CA-49). Special projects entail the construction of new facilities may occur in terrestrial habitats in Pismo State Beach or in Oceano Dunes SVRA. Special projects could result in destruction of a bird nest if they were constructed during the breeding season and a nest was located within the work area. Special project in the breeding season could also result in disturbance of nesting birds adjacent to the work area. Specifically, adults could leave the nest exposing eggs or chicks to predation and/or inclement weather during the period of disturbance.

Foraging adults could also be disturbed from foraging during the activities, which could lead to delays in the adults returning to the nest to provide food or incubate the eggs or chicks. As part of CDPR's standard practices, construction activities would be conducted outside the avian nesting season, if feasible. If activities occur during the nesting season and if determined to be necessary by a CDPR Environmental Scientist, nesting bird surveys would be conducted prior to special project activities. If a nest is observed, activities would be delayed until appropriate AMMs are in place. AMMs would include a no-disturbance buffer, as determined by CDPR Environmental Scientist staff, and/or biological monitoring. With implementation of these measures, the impact on nesting birds would be ***less than significant***.

Special projects would reduce the amount of nesting habitat available to ground nesting birds by precluding them from the areas within the footprint of the structures. Special projects are small and only up to 35 acres of habitat would be lost during the permit term. As a result, habitat impacts would be ***less than significant***.

CDPR Public Works Plan Projects

Nesting birds could occur anywhere in the HCP area. As a result, CDPR PWP projects (A–H) could impact nesting birds if they are constructed during the nesting bird season (generally March 1 through September 15). If trees or shrubs are removed as part of the project, the project could result in destruction of a bird nest. In addition, any construction or pedestrian activity near a bird nest during the breeding season could result in disturbance of nesting birds. Ultimately, adults could leave the nest exposing eggs or chicks to predation and/or inclement weather during the period of disturbance. As part of the project planning process, the PWP projects would be subject to a separate CEQA review, which would analyze and mitigate as appropriate the impacts of each project on nesting birds. As a result, the cumulative impact of these projects on nesting birds would be ***less than significant***.

Guadalupe-Nipomo Dunes National Wildlife Refuge Final Comprehensive Conservation Plan

Impacts to wildlife, including nesting birds, were analyzed as part of the Guadalupe-Nipomo Dunes NWR Final CCP Environmental Assessment (USFWS, 2016). The Guadalupe-Nipomo Dunes NWR Final CCP could result in some minor daytime disturbances and flushing of nesting birds; however, many birds are anticipated to be habituated to some level of human disturbance on the NWR. In addition, the NWR CCP would ultimately benefit nesting birds by controlling for feral swine, conducting avian and mammalian predator management, restricting public access on the NWR during the CLTE and SNPL nesting season (which also coincides with many other birds nesting season), and controlling invasive plant species. As a result, the cumulative impact of this project on nesting birds would be ***less than significant***.

Arroyo Grande Creek Channel Waterway Management Plan

Impacts to nesting birds were analyzed as part of the Arroyo Grande Creek Channel WMP EIR (SWCA Environmental Consultants, 2010). Nesting birds were determined to have potential to occur throughout the project area and project activities were determined to have the potential to directly or indirectly impact nesting birds. Pre-construction surveys were required prior to construction activities in the nesting bird season (March 1 to September 15). If an active nest is found, a no-disturbance buffer is required to be implemented. In addition, biological monitoring of vegetation removal was required year-round. As a result, the cumulative impact to nesting birds from the Arroyo Grande Creek Channel WMP would be ***less than significant***.

Conclusion

As described above, none of the future projects, including potential future HCP covered activities when taking into account the CDPR's standard practices, would have a significant, adverse impact on nesting birds. Furthermore, given the implementation of CDPR's standard practices, impacts on nesting birds from the proposed new HCP activities, even when combined with future HCP covered activities, would remain less than significant. As a result, the new proposed activities would not have a significant cumulative impact on nesting birds.

6.4.1.8 American Badger

HCP Potential Future Covered Activities

SNPL Adult Banding (CA-12b) and Replacement of the Safety and Education Center (CA-43). American badgers and/or badger dens have never been observed within the areas open to motorized recreation. American badger tracks were observed in April 2019 in the open riding area within and near BBQ flats and adjacent vegetation islands. This is the first time badger tracks or any other sign have been observed in this area, and the tracks indicate the badger was using the vegetation islands, which are closed to motorized recreation. Overall, American badgers are unlikely to occur in areas open to motorized recreation. As a result, this activity would have ***no impact*** on American badger.

Listed Plant Management – Propagation and Outplanting (CA-15). Propagation and outplanting activities in the Phillips 66 Leasehold or vegetation islands could result in disturbance to American badger and ultimately result in burrow abandonment and relocation if badgers are present within or near the work area. As part of CDPR's standard practice, pre-construction surveys would be conducted, as determined to be necessary by CDPR Environmental Scientist staff, prior to conducting listed plant management activities in suitable habitat (e.g., areas where American badger or badger dens have been observed previously) to avoid disturbance to American badger. If an individual is observed during the pre-construction survey, activities would be delayed until the individual has moved from the area or until appropriate AMMs are in place (e.g., a no-disturbance buffer). With implementation of this measure, impact on American badger would be ***less than significant***.

Cable Fence Maintenance – Replacement (CA-28). Suitable American badger habitat is not present within the cable fence area. As a result, ***no impact*** from cable fence replacement would occur.

Grover Beach Lodge and Conference Center (CA-38). The potential for American badger to occur in the project area was analyzed as part of the Grover Beach Lodge EIR (SWCA Environmental Consultants, 2012). Suitable habitat for American badger was determined to be absent from the project area. As a result, ***no impact*** to American badger from the Grover Beach Lodge would occur.

Pismo Creek Estuary Seasonal (Floating) Bridge (CA-41) and Oso Flaco Lake Boardwalk Replacement (CA-48). Pismo Creek Estuary (floating) bridge and Oso Flaco boardwalk replacement would not occur within American badger habitat or areas where American badger or badger sign (e.g., dens) have been observed. As a result, ***no impact*** would occur.

Riding in 40 Acres (CA-42). Riding in 40 Acres would not occur within an area where American badger or badger sign (e.g., dens) have been observed. As a result, ***no impact*** would occur.

Dust Control Activities – New PMRP (CA-44). Although unlikely because American badgers are uncommon in the HCP area, dust control activities could crush an American badger den or result in disturbance to American badger if they are present within or near the work area and could ultimately result in burrow abandonment and relocation. However, as part of their standard practices, CDPR would conduct pre-construction surveys for special-status species (e.g., American badger), as determined to be necessary by a CDPR Environmental Scientist, to reduce impacts to American badgers. As a result, impacts would be ***less than significant***.

Planting vegetation associated with dust control activities within the HCP area, especially within the backdune areas, most likely has a ***beneficial*** impact on American badger by increasing the amount of suitable vegetated dune habitat in the HCP area.

Special Projects (CA-49). Special projects entail the construction of new facilities that may occur in Pismo State Beach or in Oceano Dunes SVRA. Special projects are not expected to result in injury or harm to American badger or badger dens because they are not expected to occur in areas where American badger have been observed and are expected to occur within areas subject to a high level of recreation where American badgers would not occur. However, special project activities could result in removal of dens or disturbance to American badger and ultimately result in burrow abandonment and relocation if special projects occur near vegetated areas and American badger are present within or in the vicinity of the work area. As part of CDPR's standard practices, pre-construction surveys would be conducted prior to conducting special projects, as determined to be necessary by a CDPR Environmental Scientist, in order to avoid impacts to American badger. If an individual is observed during the pre-construction survey, activities would be delayed until the individual has moved from the area or until appropriate AMMs are in place (e.g., a no-disturbance buffer). With implementation of this measure, impact on American badger would be ***less than significant***.

CDPR Public Works Plan Projects

CDPR PWP projects (B–G) would not be expected to impact American badger since limited suitable habitat exists within these locations. American badgers and/or badger dens have never been observed within the areas open to motorized recreation. American badger tracks were observed in April 2019 in the open riding area within and near BBQ flats and adjacent vegetation islands. As a result, American badger could be impacted during construction and use of the Oso Flaco Campground and Day Use Project (Project A) and Pismo State Beach boardwalk (Project H). Specifically, these projects could result in disturbance to American badger and ultimately result in burrow abandonment and relocation. However, this is unlikely, since the track observation in 2019 is the first time badger tracks or any other sign have been observed in the open riding area and/or vegetation islands, and American badgers are expected to avoid areas where a high level of recreation activity occurs. As part of the project planning process, the PWP projects would be subject to a separate CEQA review, which would analyze and mitigate as appropriate the impacts of each project on American badger. As a result, the cumulative impact of these projects on American badger would be ***less than significant***.

Guadalupe-Nipomo Dunes National Wildlife Refuge Final Comprehensive Conservation Plan

American badger is not known to occur within the NWR (USFWS, 2016). As a result, the Guadalupe-Nipomo Dunes NWR Final CCP would have ***no impact*** on American badger.

Arroyo Grande Creek Channel Waterway Management Plan

American badger's potential to occur was evaluated as part of the Arroyo Grande Creek Channel WMP EIR (SWCA Environmental Consultants, 2010). It was determined that suitable American badger habitat is not present within the project area. As a result, ***no impact*** from this activity would occur.

Conclusion

As described above, none of the future projects, including potential future HCP covered activities when taking into account the CDPR's standard practices, would have a significant, adverse impact on American badger. Furthermore, given the implementation of CDPR's standard practices, impacts on American badger from the proposed new HCP activities, even when combined with future HCP covered activities, would remain less than significant. As a result, the new proposed activities would not have a significant cumulative impact on American badger.

6.4.1.9 Plants

HCP Potential Future Covered Activities

SNPL Adult Banding (CA-12b). SNPL adult banding would occur on foot in open sand areas and would ***not impact*** special-status plant species.

Listed Plant Monitoring – Propagation and Outplanting (CA-15). Propagating listed species, including marsh sandwort, Nipomo Mesa lupine, Gambel's watercress, La Graciosa thistle, surf thistle, and beach spectaclepod, requires collecting seed or plant materials and cultivating the species in the greenhouse to ultimately transplant individuals into suitable habitat. These activities provide a net benefit for the listed plant species; however, some listed plant individuals or other special-status species growing within the same habitat could be affected during these activities. Specifically, a plant could be inadvertently missed during monitoring and pre-restoration surveys and could be stepped on by field survey crews or work crew. Gathering materials for propagation also poses a similar risk of damaging specimens during field collection since propagated individuals could be damaged or destroyed in the greenhouse or during transplanting. To reduce these impacts, CDPR conducts regular surveys for the listed plant species as part of HMS implementation. In addition, CDPR staff conducting propagation activities would be staff who are familiar with the special-status plants in the HCP area and would limit the amount of time they spend in known occupied habitat to reduce the risk of trampling a special-status plant species. As a result, effects from these activities are ***less than significant***.

Cable Fence Maintenance – Replacement (CA-28). The cable fence would be replaced in the same area where it is currently located. No special-status plant species are known to occur at this location. As a result, ***no impact*** to special-status plants would occur.

Grover Beach Lodge and Conference Center (CA-38). An EIR has been prepared for the Grover Beach Lodge and Conference Center (SWCA Environmental Consultants, 2012) project area. Of the species considered in this EIR (Table 6-12), Blochman's groundsel and Blochman's leafy daisy were found within the project area. These special-status plants could be crushed or removed during construction of the lodge and conference center. The current Grover Beach Lodge and Conference Center EIR includes measures to protect special-status plants, including avoiding areas with potential to support special-status plants (as feasible), conducting rare plant

surveys in suitable habitat within the appropriate blooming period prior to construction, and propagating and/or mitigating for rare plants as necessary. As a result, impacts to special-status plants from the construction of the Grover Beach Lodge and Conference Center would be ***less than significant***.

Pismo Creek Estuary and Seasonal (Floating) Bridge (CA-41). The Pismo Creek bridge would be a seasonal, floating pedestrian bridge across Pismo Creek estuary Installing the bridge should reduce the pedestrian impact on Pismo Creek by reducing erosion and providing an alternative to walking through the mouth of the creek for pedestrians wishing to walk up the coast. As a result, overall impacts to special-status plants in the area and their habitat would be ***beneficial*** since the bridge would prevent existing trampling of bank vegetation by pedestrians.

Although unlikely, La Graciosa thistle and red sand verbena have the potential to occur along Pismo Creek estuary. Equipment use and worker foot traffic during construction of the bridge could result in the injury or mortality of individual special-status plants if they are present in the work area. Construction activities could also result in mechanical or physical removal of vegetation and modification of the seed bank due to grading and/or excavation. Construction activities and/or pedestrian traffic across the bridge—once it is operational—could introduce invasive weeds to the area, which could outcompete special-status plant species. However, as part of its standard practices, CDPR would conduct a survey for special-status plant species prior to the start of construction during the appropriate phenological period, if determined to be necessary by a CDPR Environmental Scientist. Any special-status plant species found would be flagged and/or fenced off and avoided during construction. In addition, CDPR will also continue to provide educational content to workers and pedestrians in the area, which includes information on what they can do to prevent introducing invasive species. With implementation of these measures, impacts on special-status plants would be ***less than significant***.

Riding in 40 Acres (CA-42). Potentially suitable habitat for special-status plant species considered in this EIR, including coastal goosefoot, Blochman's leafy daisy, suffrutescent wallflower, fuzzy prickly phlox, crisp monardella, San Luis Obispo monardella, California spineflower, and Blochman’s groundsel, could occur in the 40 Acres site. Equipment use and worker foot traffic during construction of the trail could result in the injury or mortality of individual special-status plants. Construction activities could also result in mechanical or physical removal of vegetation and modification of the seed bank due to grading and/or excavation. Finally, construction activities and/or motorized vehicle traffic on the trail once it’s operational could introduce invasive weeds to the area, which could outcompete special-status plant species. However, if CDPR pursues the option of opening the 40 Acres site, planning will include surveys for special-status plant species within all areas under consideration for vehicular recreation to ensure impacts to special-status plants are minimized. In addition, trails open to vehicles will be sited with adequate buffers from any known occurrences of special-status plants. Known special-status plant occurrences found in the 40 Acres site could also be fenced to protect populations from trampling by park visitors. With implementation of these measures, impacts on special-status plants would be ***less than significant***.

An increase in use of the 40 Acres site could increase wind-blown sand that eventually covers special-status plant populations adjacent to the trail. The amount of wind-blown sand that will result from opening the 40 Acres site is unknown at this point and will depend on how much scrub is removed. The 40 Acres site is subject to additional environmental review, which would

include measures to reduce or mitigate impacts to special-status plant species. Therefore, effects on special-status plants would be ***less than significant***.

Replacement of the Safety and Education Center (CA-43). The safety and education center would be constructed in the same area where it is currently located. No special-status plant species are known to occur at this location. As a result, ***no impact*** to special-status plants would occur.

Dust Control Activities – New PMRP (CA-44). Dust control activities have the potential to directly and indirectly impact special-status plants impacted by the HCP proposed new activities (Table 6-12), including by altering habitat (e.g., changing species composition as a result of altered wind, sand transport, or moisture content). The potential magnitude of impacts on special-status plants varies depending on where activities take place. The specific location of future dust control measures is not known at this time but would occur within both the foredunes and backdunes, with the majority of activity occurring in what is currently open sand habitat. In general, the potential magnitude of impacts on special-status plants are lowest when dust control activities take place in open sand habitat because these areas support little to no dune vegetation. As program activities approach the edge of vegetation islands and other vegetated areas, the potential to impact special-status plants increases. However, as part of its standard practices, CDPR would conduct a pre-activity survey for special-status plants, if determined to be necessary by a CDPR Environmental Scientist. Any plants observed would be flagged and avoided. Overall, planting of native dune vegetation for dust control activities may benefit special-status plants by providing additional native vegetation areas, which are suitable habitat for many special-status plant species. Therefore, effects on special-status plants would be ***less than significant***.

Oso Flaco Lake Boardwalk Replacement (CA-48). The Oso Flaco boardwalk would be replaced both on land and within aquatic habitat. Impacts from maintenance of the portion of Oso Flaco boardwalk in upland habitat are described in Boardwalk/Other Pedestrian Maintenance (CA-31) in EIR Appendix D. Special-status plant species impacted by the HCP proposed new activities would not be impacted by Oso Flaco boardwalk replacement; therefore, there would be ***no impacts*** on special-status plants.

Special Projects (CA-49). Given that there is no defined project being considered by special projects, potential impacts are not known at this time. New facilities have potential to directly (e.g., trampling or crushing) or indirectly affect special-status plant species impacted by the HCP proposed new activities (Table 6-12). Facilities could be installed on open sand, adjacent to vegetation islands, and/or in backdunes; therefore, special-status plants throughout the HCP area could be impacted, including, but not limited to red sand verbena, coastal goosefoot, Blochman's leaf daisy, suffrutescent wallflower, fuzzy prickly phlox, dunedelion, crisp monardella, California spineflower, and Blochman's groundsel. Equipment use and worker foot traffic during construction of the special project could result in the injury or mortality of individual special-status plants. Construction activities could also result in mechanical or physical removal of vegetation and modification of the seed bank due to grading and/or excavation. Finally, construction activities could introduce invasive weeds to the area, which could out compete special-status plant species. CDPR, however, has the flexibility to install special project facilities in locations and in a manner that avoids negatively impacting native vegetation communities and/or special-status plant habitat. In addition, as part of CDPR's standard practices, to minimize the potential impacts to special-status plants, prior to the start of any special project installation

in suitable habitat for special-status plant species as determined by a CDPR Environmental Scientist, a biologist with experience in identifying the plants will conduct surveys for special-status plant species throughout the proposed special project area. Any special-status plants encountered will be marked on a map, flagged, or fenced, and avoided. Therefore, effects on special-status plant species would be ***less than significant***.

Special projects may also result in the permanent loss of up to 35 acres of potential La Graciosa thistle habitat. CDPR, however, has the flexibility to install special project facilities in locations and in a manner that avoids negatively impacting native vegetation communities and/or special-status plant habitat. Therefore, effects on special-status plant species habitat would be ***less than significant***. Specific impacts to La Graciosa thistle critical habitat are discussed below in section 6.4.2.

CDPR Public Works Plan Projects

CDPR PWP projects (Projects B, and D–G) would not occur within suitable special-status plant habitat. Oso Flaco Campground and Day Use Project (Project A) and Pismo State Beach Boardwalk Project (Project H) could occur in areas where rare plants, including red sand verbena, La Graciosa thistle, Blochman's leafy daisy, suffrutescent wallflower, fuzzy prickly phlox, crisp monardella, San Luis Obispo monardella, and/or California spineflower have been found. Special-status plants could be crushed or removed during construction of these projects. As part of the project planning process, the PWP projects would be subject to a separate CEQA review, which would analyze and mitigate as appropriate the impacts of each project on special-status plants. AMMs would be proposed to reduce any potential impacts, as necessary. As a result, the cumulative impact of these projects on special-status plants would be ***less than significant***.

Guadalupe-Nipomo Dunes National Wildlife Refuge Final Comprehensive Conservation Plan

Impacts to special-status plants were analyzed as part of the Guadalupe-Nipomo Dunes NWR Final CCP Environmental Assessment (USFWS, 2016). The Guadalupe-Nipomo Dunes NWR Final CCP could result in some trampling of vegetation, but these impacts would be limited and temporary. However, the NWR CCP would benefit listed plants and other special-status species overall by monitoring for listed plants and recording opportunistic sightings of other native plants, controlling for feral swine, fencing Myrtle and Colorada ponds, and controlling invasive plant species. In addition, seed collection and outplanting of La Graciosa thistle would be conducted intermittently when staff time permits. As a result, the cumulative impact of this project on special-status plants would be ***less than significant***.

Arroyo Grande Creek Channel Waterway Management Plan

Impacts to special-status plants were analyzed as part of the Arroyo Grande Creek Channel WMP EIR (SWCA Environmental Consultants, 2010). Special-status plants were not observed during floristic survey and are were not expected to occur within the project area; however, some suitable habitat for special-status plant species is present in the project area. As a result, project activities were determined to have potential to impact special-status plants. Updated floristic surveys were required prior to construction, and all special-status plants observed were required to be fenced or flagged for avoidance. As a result, the cumulative impact to special-status plants from the Arroyo Grande Creek Channel WMP would be ***less than significant***.

Conclusion

As described above, none of the future projects, including potential future HCP covered activities when taking into account the AMMs included in the HCP and CDPR's standard practices, would have a significant, adverse impact on special-status plants. Furthermore, given the implementation of AMMs and CDPR's standard practices, impacts on special-status plants from the proposed new HCP activities, even when combined with future HCP covered activities, would remain less than significant. As a result, the new proposed activities would not have a significant cumulative impact on special-status plants.

6.4.2 Sensitive Habitats

HCP Potential Future Covered Activities

SNPL Adult Banding (CA-12b). SNPL adult banding would occur on foot in open sand areas and would ***not impact*** sensitive habitats.

Listed Plant Management – Propagation and Outplanting (CA-15). Any propagation and outplanting would benefit sensitive natural communities by decreasing the number of non-native plants and increasing the number of native and rare plant populations in in the HCP area. As a result, impacts to upland sensitive natural vegetation communities would be ***less than significant***.

Cable Fence Maintenance – Replacement (CA-28). Replacement of the cable fence would occur within open sand areas within SNPL critical habitat. This covered activity area may also be considered ESHA by the CCC. Replacement of the cable fence would occur in approximately the same location; therefore, there would be no new permanent impacts from this activity, and impacts to sensitive natural communities/ESHAs would be ***less than significant***.

Grover Beach Lodge and Conference Center (CA-38). An EIR has been prepared for the Grover Beach Lodge and Conference Center (Project C) project area. The EIR identifies sensitive natural communities/ESHAs, including central coast willow riparian scrub, central dune scrub, northern coastal salt marsh, and wetlands, within the project area. Construction and use of the lodge and conference center could directly and indirectly affect sensitive natural communities/ESHAs in the project area by removing vegetation within these communities, creating erosion, and/or introducing non-native, invasive species. The current Grover Beach Lodge and Conference Center EIR includes numerous measures and/or mitigation to reduce the impacts to sensitive natural communities/ESHAs. As a result, impacts to sensitive natural communities/ESHAs from the construction of the Grover Beach Lodge and Conference Center would be ***less than significant***.

Pismo Creek Estuary Seasonal (Floating) Bridge (CA-41). Pismo Creek Estuary seasonal floating bridge would have ***no impact*** on sensitive natural communities/ESHAs beyond impacts to jurisdictional waters, which are not affected by proposed new covered activities and are thus not considered in this analysis.

Riding in 40 Acres (CA-42). The 40 Acres is an area that was planted with native vegetation for dune stabilization and is currently closed to motorized recreation. The 40 Acres trail system is still in the concept stage, and no specific design has been selected for implementation. For analysis purposes, the HCP and this EIR assumes the design may include up to 2 miles of trail with basic amenities installed along the trail such as a picnic table or interpretive features. This

development in 40 Acres could remove up to 5 acres of vegetation in the silver bush lupine – mock heather dune scrub vegetation alliance, which occurs in Central Coast Dune Scrub, a CDFW listed sensitive natural community and may be considered an ESHA by CCC due to the potential presence of special-status plants.

Use of equipment, vehicle traffic, and worker foot traffic during construction of the 40 Acres trail may directly or indirectly affect vegetation outside of the trail footprint, including activities that could result in altered growth or reduced seed set of vegetation, damage to underground root structures, or direct disturbance or modification of vegetation. Disturbance by project activities may cause an increase in invasive weed cover. Invasive plants degrade habitat quality for native plants by altering vegetative structure and often outcompeting native plants. As part of their standard practices, CDPR would implement best management practices (BMPs) during construction activities, as necessary, to reduce impacts. These BMPs could include fencing off adjacent areas, erosion control, and/or biological monitoring. As a result, impacts on sensitive natural communities would be ***less than significant***.

Establishing a trail in the 40 Acres site could increase wind-blown sand that eventually covers native vegetation adjacent to the trail. The amount of wind-blown sand that would result from opening the 40 Acres site is unknown at this point and would depend on how much scrub is removed. The 40 Acres site is subject to additional environmental review, which would include measures to reduce or mitigate impacts to sensitive natural vegetation communities. Therefore, effects on sensitive natural communities would be ***less than significant***.

Proposed trail development in 40 Acres could remove up to 5 acres of vegetation in the silver bush lupine – mock heather dune scrub vegetation alliance. Therefore, a limited amount of permanent effects on sensitive natural communities would occur. The 40 Acres site is subject to additional environmental review, which will include measures to reduce or mitigate impacts to sensitive natural vegetation communities. As a result, impacts would be ***less than significant***.

Replacement of the Safety and Education Center (CA-43). Replacement of the safety and education center would occur within open sand areas within SNPL critical habitat and directly adjacent to Pavilion Hill which is critical habitat for La Graciosa thistle. This covered activity area may also be considered an ESHA by the CCC. Replacement of the safety and education center would occur in the same location; therefore, new permanent impacts from this activity would not occur. In addition, CDPR Environmental Scientist staff would ensure no permanent impacts occur to native vegetation in Pavilion Hill by flagging/fencing the area, if necessary. As a result, permanent impacts to sensitive vegetation communities would be ***less than significant***.

Construction vehicles and workers associated with the replacement of the Safety and Education Center may inadvertently spread invasive plants (e.g., on tires or equipment) by moving seeds or plant segments if they move from one place with invasive species to a less impacted area. To reduce these impacts, as part of their standard practices, CDPR would implement BMPs to avoid introducing invasive species during construction activities if activities could impact vegetation, including at Pavilion Hill. As a result, impacts to sensitive vegetation communities would be ***less than significant***.

Dust Control Activities – New PMRP (CA-44). Dust control activities have the potential to directly and indirectly impact sensitive natural vegetation communities, including by altering habitat (e.g., changing species composition as a result of altered wind, sand transport, or moisture content). The potential magnitude of impacts on sensitive vegetation communities

varies depending on where activities take place. The specific location of all future dust control measures is not known at this time, but would occur in the foredunes and backdunes, including with ESHA and critical habitat for La Graciosa thistle and SNPL. In general, the potential magnitude of impacts on sensitive vegetation communities are lowest when dust control activities take place in open sand habitat because these areas support little to no dune vegetation, and any impacts to this habitat would not be significant. As program activities approach the edge of vegetation islands and other vegetated areas, the potential to impact sensitive plant communities increases. Some dust control activities (e.g., deployment of temporary monitoring sites) would also require a minor amount (e.g., less than 0.5 acre) of native vegetation removal. However, as part of their standard practices, CDPR would implement BMPs during construction activities, as necessary, to reduce impacts. These BMPs could include fencing off adjacent areas, erosion control, and/or biological monitoring. In addition, new dust control activities identified in the Draft PRMP (CDPR, 2019) are subject to environmental review, which could include measures to reduce or mitigate impacts to sensitive natural vegetation communities. As a result, impacts to sensitive vegetation communities would be ***less than significant***.

Oso Flaco Lake Boardwalk Replacement (CA-48). Impacts from maintenance of the portion of Oso Flaco boardwalk in upland habitat are described in Boardwalk/Other Pedestrian Maintenance (CA-31) in EIR Appendix D. Replacing the Oso Flaco Lake boardwalk would have ***no impact*** on sensitive natural communities/ESHAs beyond impacts to jurisdictional waters, which are not affected by proposed new covered activities and are thus not considered in this analysis.

Special Projects (CA-49). Given that there is no defined project considered by CA-49, potential impacts cannot be specifically described or classified. Special projects are most likely to be required in areas where recreation use is high and, therefore, sensitive vegetation communities are already degraded. Any special projects proposed would be evaluated during the project design phase by a CDPR Environmental Scientist to ensure that impacts to native vegetation are minimized. In addition, no more than 35 acres of habitat within the HCP area would be impacted during the permit term. As a result, direct impacts to sensitive natural communities are expected to be minor.

Use of equipment, vehicle traffic, and worker foot traffic during construction of a special project may directly or indirectly affect vegetation outside of project footprint, including activities that could result in altered growth or reduced seed set of vegetation, damage to underground root structures, or direct disturbance or modification of vegetation. Disturbance by project activities may cause an increase in invasive weed cover. Invasive plants degrade habitat quality for native plants by altering vegetative structure and often outcompeting native plants. As part of their standard practices, CDPR would implement BMPs during construction activities, as necessary, to reduce impacts. These BMPs could include fencing off adjacent areas, erosion control, and/or biological monitoring. As a result, effects on sensitive natural communities would be ***less than significant***.

CDPR Public Works Plan Projects

CDPR PWP projects (B and D–G) do not occur within a sensitive natural community. Therefore, ***no impact*** to sensitive natural communities would occur from these PWP projects. Oso Flaco Campground and Day Use Project (Project A) and Pismo State Beach Boardwalk (Project H) contain sensitive natural communities, including, but not limited to central dune scrub, central foredunes, wetlands, and riparian woodland habitat. ESHAs, including riparian woodland,

freshwater lakes, sand dunes, and wetlands are also present within or adjacent to the project areas. Construction and use of these projects could directly and indirectly affect sensitive natural communities/ESHAs in the project area by removing vegetation within these communities, creating erosion, and/or introducing non-native, invasive species. As part of the project planning process, the PWP projects would be subject to a separate CEQA review, which would analyze and mitigate as appropriate the impacts of each project on sensitive natural communities/ESHAs. As a result, the cumulative impact of these projects on sensitive natural communities/ESHAs would be ***less than significant***.

Guadalupe-Nipomo Dunes National Wildlife Refuge Final Comprehensive Conservation Plan

Impacts to habitats, including sensitive natural communities/ESHAs, were analyzed as part of the Guadalupe-Nipomo Dunes NWR Final CCP Environmental Assessment (USFWS, 2016). The Guadalupe-Nipomo Dunes NWR Final CCP could result in some trampling of vegetation and or introduction of non-native species, but these impacts would be limited and/or temporary. Overall, the NWR CCP would benefit native habitats by controlling for feral swine, restoring native habitat, fencing Myrtle and Colorada ponds, and controlling invasive plant species. In addition, some platforms have been installed in wetlands areas to direct visitation in these areas. As a result, the cumulative impact of this project on sensitive natural communities/ESHAs would be ***less than significant***.

Arroyo Grande Creek Channel Waterway Management Plan

Sensitive natural communities/ESHAs in the Arroyo Grande Creek Channel WMP project area consist of jurisdictional waters. Therefore, impacts to sensitive natural communities and ESHAs in the project area are discussed in below in EIR section 6.4.3.

Conclusion

As described above, none of the future projects, including potential future HCP covered activities when taking into account CDPR's standard practices, would have a significant, adverse impact on sensitive natural communities. Furthermore, given the implementation of CDPR's standard practices, impacts on sensitive natural communities from the proposed new HCP activities, even when combined with future HCP covered activities, would remain less than significant. As a result, the new proposed activities would not have a significant cumulative impact on sensitive natural communities.

6.4.3 Wildlife Movement

HCP Potential Future Covered Activities

SNPL Adult Banding (CA-12b). SNPL adult banding would occur on foot in open sand areas. This activity could deter wildlife from moving through the area during the period of disturbance; however, it would not create an impediment to wildlife movement. As a result, the impact is ***less than significant***.

Listed Plant Management – Propagation and Outplanting (CA-15). Propagation and outplanting activities would 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. As a result, impacts would be ***less than significant***.

Cable Fence Maintenance – Replacement (CA-28). The cable fence does not block wildlife movement and is not located in a nursery site. Replacement of the cable fence would have a temporary impact on wildlife since they may be deterred from moving through the area during activities. However, no barriers or impediments to wildlife movement would occur. As a result, the impact on wildlife movement or nursery sites is ***less than significant***.

Grover Beach Lodge and Conference Center (CA-38). The Grover Beach Lodge and Conference Center is not located in a nursery site. Construction of the Grover Beach Lodge would have a temporary impact on wildlife since they may be deterred from moving through the area during activities. In addition, the Grover Beach Lodge itself could block some common wildlife species from crossing through the area. However, the project area is already in an urban area and surrounded by other development. As a result, the impact on wildlife movement or nursery sites would be ***less than significant***.

Pismo Creek Estuary Seasonal (Floating) Bridge (CA-41). The bridge could inhibit fish movement, especially during low flows when water levels in the estuary are low. However, the bridge would be designed to allow movement of all fish species, as well as an exchange of fresh and saltwater by construction the interlocking pieces of the bridge with wide openings. In addition, if water levels are so low that the bridge is not allowing the free movement of fish, the bridge would be removed until there is sufficient water to allow the bridge to float. As a result, wildlife movement impacts associated with the floating bridge would be ***less than significant***.

Riding in 40 Acres (CA-42). Trail development would enable riding in this area of the HCP that is presently closed. Recreational use of the trail would create temporary human presence. As a result, wildlife could be deterred from moving through the area at times when recreation is high or during trail development. However, no barriers or impediment to wildlife movement would occur. As a result, the impacts would be ***less than significant***.

Replacement of the Safety and Education Center (CA-43). The kiosk structure is open frame and does not block wildlife movement. It is not located in a nursery site. Maintenance, repairs, and replacement would have a temporary impact on wildlife since they may be deterred from moving through the area during activities. However, no barriers or impediments to wildlife movement would occur. As a result, the impact on wildlife movement or nursery sites is ***less than significant***.

Dust Control Activities – New PMRP (CA-44). Dust control activities would 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 activities such as installing vegetation and temporary monitoring equipment would not represent a substantial barrier to wildlife migration or movement. As a result, impacts would be ***less than significant***.

Oso Flaco Lake Boardwalk Replacement (CA-48). Wildlife could be deterred from moving through the area during boardwalk replacement. Boardwalk replacement would be an in-kind replacement of the current structure. The new structure would be located in the same alignment at its current location; therefore, no new wildlife barriers would be constructed. As a result, the impact is ***less than significant***.

Special Projects (CA-49). Special projects could result in temporary disruption of wildlife movement during project construction by deterring them from migrating through the area. Special projects are anticipated to be small and would not create a permanent barrier to migration. As a result, impacts would be ***less than significant***.

CDPR Public Works Plan Projects

CDPR PWP projects (B–F) are located in already developed areas and would have ***no impact*** wildlife movement. PWP projects (A, G, and H) could result in temporary disruption of wildlife movement during project construction by deterring them from migrating through the area. However, these projects would not be expected to result in a new permanent wildlife barrier. As part of the project planning process, the PWP projects would be subject to a separate CEQA review, which would analyze and mitigate as appropriate the impacts of each project on wildlife movement. As a result, the cumulative impact of these projects on wildlife movement would be ***less-than-significant***.

Guadalupe-Nipomo Dunes National Wildlife Refuge Final Comprehensive Conservation Plan

Guadalupe-Nipomo Dunes NWR Final CCP actions could result in temporary disruption of wildlife movement by deterring them from migrating through the area. However, the NWR would continue to protect and create native habitat and would not create a permanent barrier to migration. As a result, impacts would be ***less than significant***.

Arroyo Grande Creek Channel Waterway Management Plan

Arroyo Grande Creek Channel WMP actions could result in temporary disruption of wildlife movement by deterring them from migrating through the area. However, the WMP would be implemented to improve habitat in Arroyo Grande Creek and would not create a permanent barrier to migration. As a result, impacts would be ***less than significant***.

Conclusion

As described above, none of the future projects, including potential future HCP covered activities, would have a significant, adverse impact on wildlife movement. Furthermore, given the implementation of AMMs included in the HCP and CDPR's standard practices, impacts on wildlife movement from the proposed new HCP activities, even when combined with future HCP covered activities, would remain less than significant. As a result, the new proposed activities would not have a significant cumulative impact on wildlife movement.

6.4.4 Wintering/Migratory Birds

HCP Potential Future Covered Activities

SNPL Adult Banding (CA-12b). SNPL adult banding would occur during the avian breeding season; therefore, activities would have ***no impact*** on wintering/migratory birds.

Listed Plant Management – Propagation and Outplanting (CA-15), Cable Fence Maintenance – Replacement (CA-28), Grover Beach Lodge and Conference Center (CA-38), Pismo Creek Estuary Seasonal (Floating) Bridge (CA-41), Riding in 40 Acres (CA-42), Replacement of the Safety and Education Center (CA-43), and Oso Flaco Lake Boardwalk Replacement (CA-48). Activities could temporarily displace foraging or wintering birds, altering their normal behavior patterns. It is also possible for activities to flush wintering or foraging birds from optimal habitat to less suitable habitat. However, any disturbances would be temporary and additional foraging

and roosting habitat would be present away from activities. As a result, impacts would be ***less than significant***.

Dust Control Activities – New PMRP (CA-44). Dust control activities could temporarily displace foraging or wintering birds, altering their normal behavior patterns. Dust control activities could also displace birds from safe roosting locations and move them into areas where they are vulnerable to vehicle strike. Most birds fly out of harm's way to another safe location; therefore, this vehicle strike impact would not occur frequently. In addition, most dust control activities would be localized and short in duration. As a result, impacts would be ***less than significant***.

Closing off and planting approximately 4 acres of foredune vegetation could constrict the available area for wintering/migratory bird roosting/foraging. However, vehicles speed limits would be enforced in the HCP area and most flocks and/or individual birds would be expected to fly out of harm's way. As a result, this impact would be ***less than significant***.

Special Projects (CA-49). Special projects entail the construction of new facilities that may occur in Pismo State Beach or in Oceano Dunes SVRA. Special projects are not anticipated to result in injury or harm to foraging/migratory birds since individuals and/or flocks would be expected to move from the construction area to another location and/or special projects would not be constructed in a manner that would injure or kill a foraging or roosting individual or flock. Special project activities could result in disturbance of foraging or roosting wintering/migratory birds. Specifically, individuals or flocks could be displaced from foraging or roosting habitat during the period of disturbance and/or could be deterred from foraging or roosting during the period of disturbance. However, most activities would be temporary and short in duration and suitable foraging and roosting habitat would be present away from the activities. As a result, impacts would be ***less than significant***.

Special projects would reduce the amount of foraging/roosting habitat available to wintering/migratory birds for foraging and roosting by precluding them from the areas within the footprint of the structures. Most special projects are expected to be placed in open sand habitat where shorebirds and/or some waterbirds are expected to forage and/or roost and are not expected to impact every type of wintering/migratory bird, such as songbirds. However, special projects are small and wintering/migratory birds would only lose up to 35 acres of foraging or roosting habitat during the permit term. As a result, habitat impacts would be ***less than significant***.

CDPR Public Works Plan Projects

CDPR PWP projects (A–H) would not result in injury or mortality of foraging/migratory birds. PWP projects (A–H) could result in disturbance of foraging or roosting wintering/migratory birds. Specifically, individuals or flocks could be displaced from foraging or roosting habitat during the period of disturbance and/or could be deterred from foraging or roosting during the period of disturbance. However, most activities would be temporary and short in duration, and suitable foraging and roosting habitat would be present away from the activities. As a result, impacts to foraging/migratory birds would be ***less than significant***.

Guadalupe-Nipomo Dunes National Wildlife Refuge Final Comprehensive Conservation Plan

Guadalupe-Nipomo Dunes NWR Final CCP could result in disturbance of foraging or roosting wintering/migratory birds. However, most activities would be temporary and short in duration

and suitable foraging and roosting habitat would be present away from the activities. As a result, the cumulative impacts to foraging/migratory birds would be ***less than significant***.

Arroyo Grande Creek Channel Waterway Management Plan

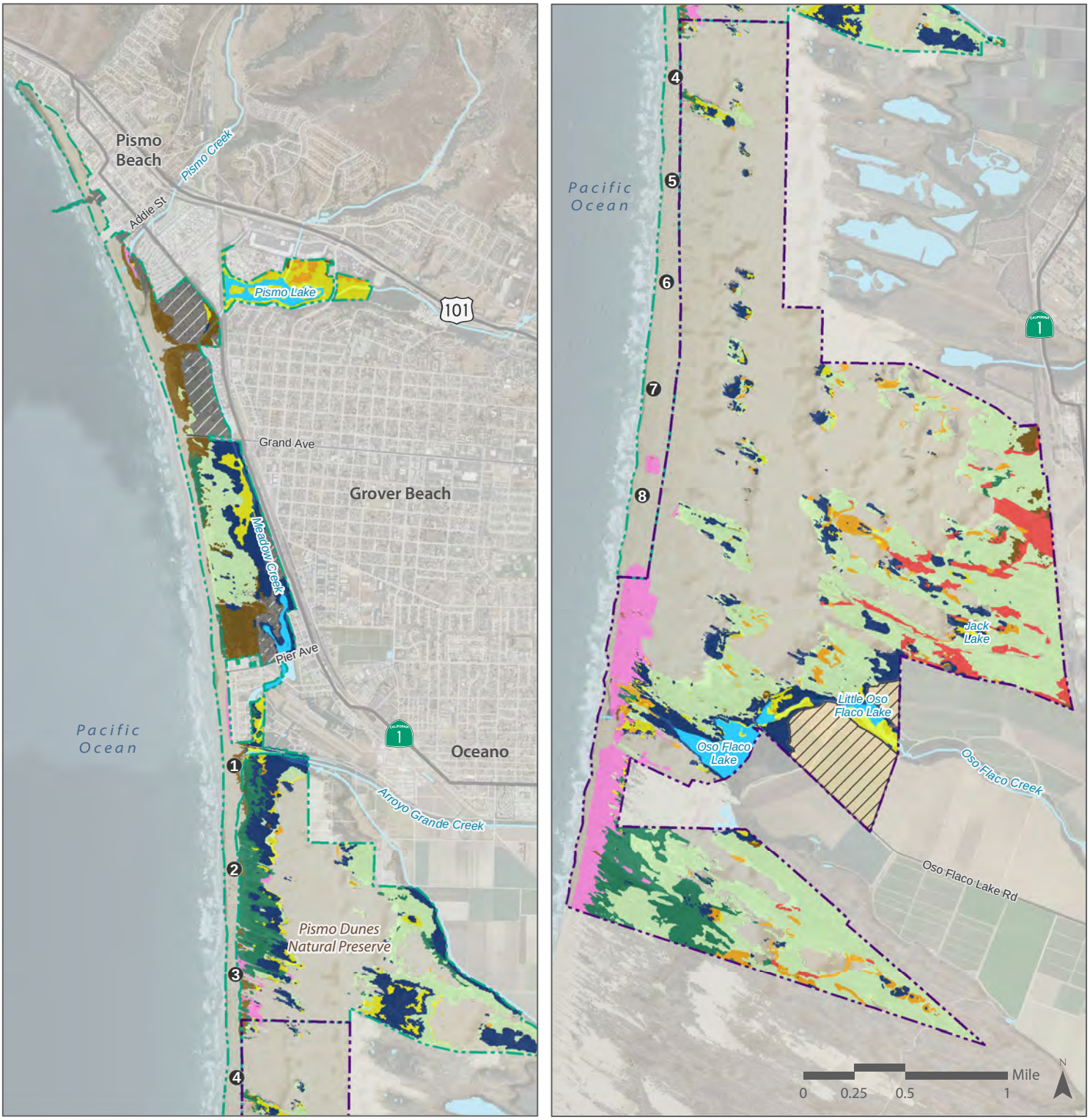
The Arroyo Grande Creek Channel WMP could result in disturbance of foraging or roosting wintering/migratory birds. However, most activities would be temporary and short in duration, and suitable foraging and roosting habitat would be present away from the activities. As a result, the cumulative impacts to foraging/migratory birds would be ***less than significant***.

Conclusion

As described above, none of the future projects, including potential future HCP covered activities when taking into account the CDPR's standard practices, would have a significant, adverse impact on wintering/migratory birds. Furthermore, given the implementation of CDPR's standard practices, impacts on wintering/migratory birds from the proposed new HCP activities, even when combined with future HCP covered activities, would remain less than significant. As a result, the new proposed activities would not have a significant cumulative impact on wintering/migratory birds.

6.5 MITIGATION MEASURES

No significant impacts have been identified for the project based on the analysis contained in EIR sections 6.3 and 6.3.5 above, which includes the OHMVR Division's implementation of the AMMs described in EIR section 6.3.2. Overall, the AMMs have been successful at offsetting the impacts on all covered species from existing covered activities and allowing CDPR to contribute to covered species recoveries locally and range-wide. For example, the seasonal exclosure that is erected each breeding season to protect SNPL and CLTE has been successful at protecting breeding habitat for SNPL and CLTE and increasing reproductive success for these species. The ongoing predator management program is expected to be successful at offsetting impacts associated with a potential increase in predators in the HCP area. In addition, the habitat restoration efforts and fencing of the vegetation islands appears to be successful at offsetting impacts to listed plant species. The effectiveness of these existing AMMs in reducing impacts on special-status species has been demonstrated. The existing AMMs along with new proposed AMMs would mitigate the effects of new proposed covered activities. As a result, additional mitigation measures are not necessary, and no mitigation is required.



Vegetation Types

- Agriculture
- Arroyo willow thicket
- Dune mat
- European beach grass sward
- Native upland alliance
- Native wetland alliance
- Non-native alliance
- Open water
- Perennial veldt grass stand
- Silver dune lupine-mock heather scrub
- Disturbed/developed

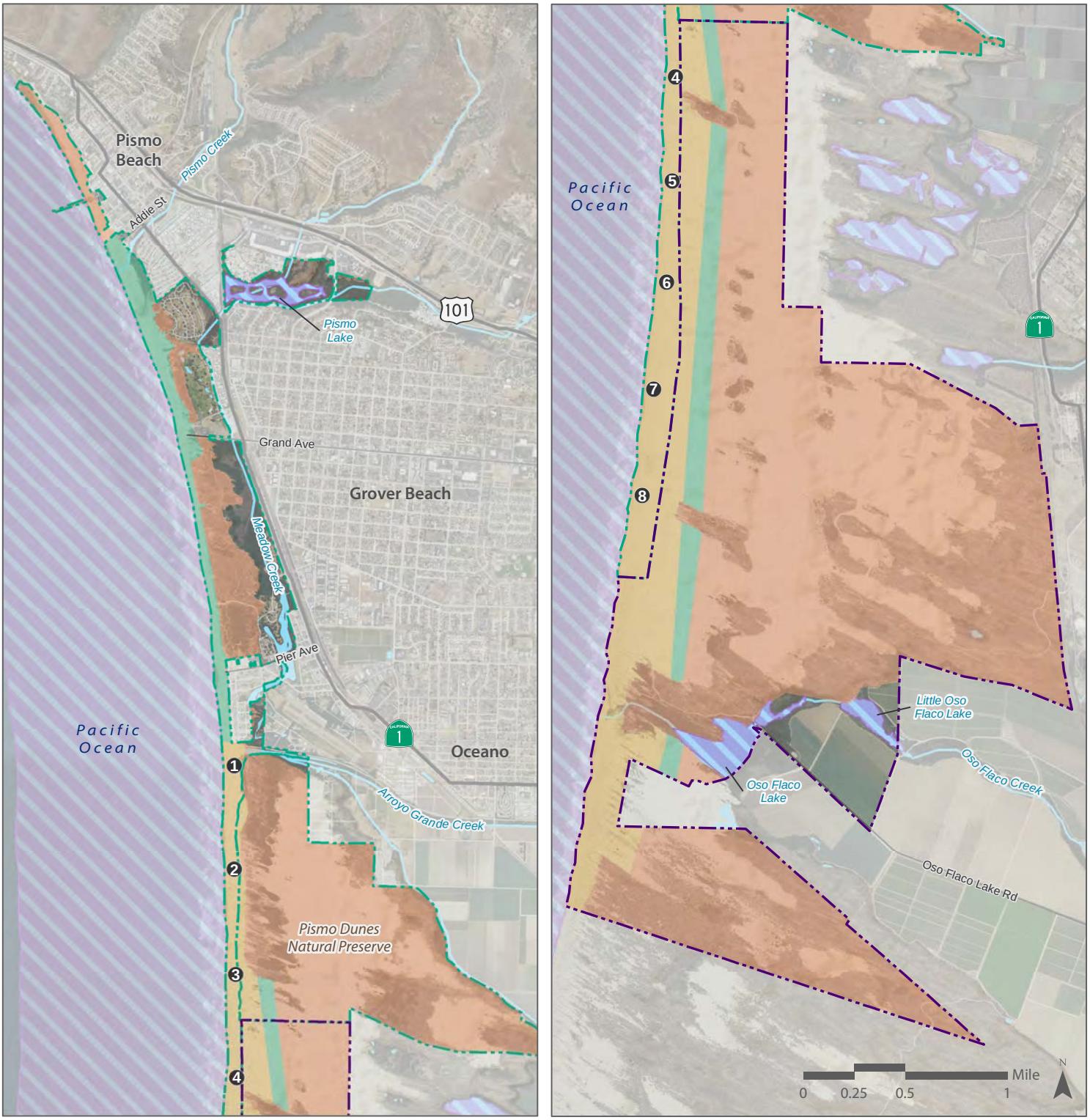
Base Map Features

- Oceano Dunes SVRA
- Pismo State Beach
- Marker post
- Waterbody
- Stream
- Highway
- Access road

February 2020
Source: CDPR, 2020; MIG, 2020

Figure 6-1 Vegetation Types

CDPR, Oceano Dunes District Habitat Conservation Plan EIR



CLTE Habitat

- Primary habitat
- Secondary habitat
- Tertiary habitat
- Foraging habitat

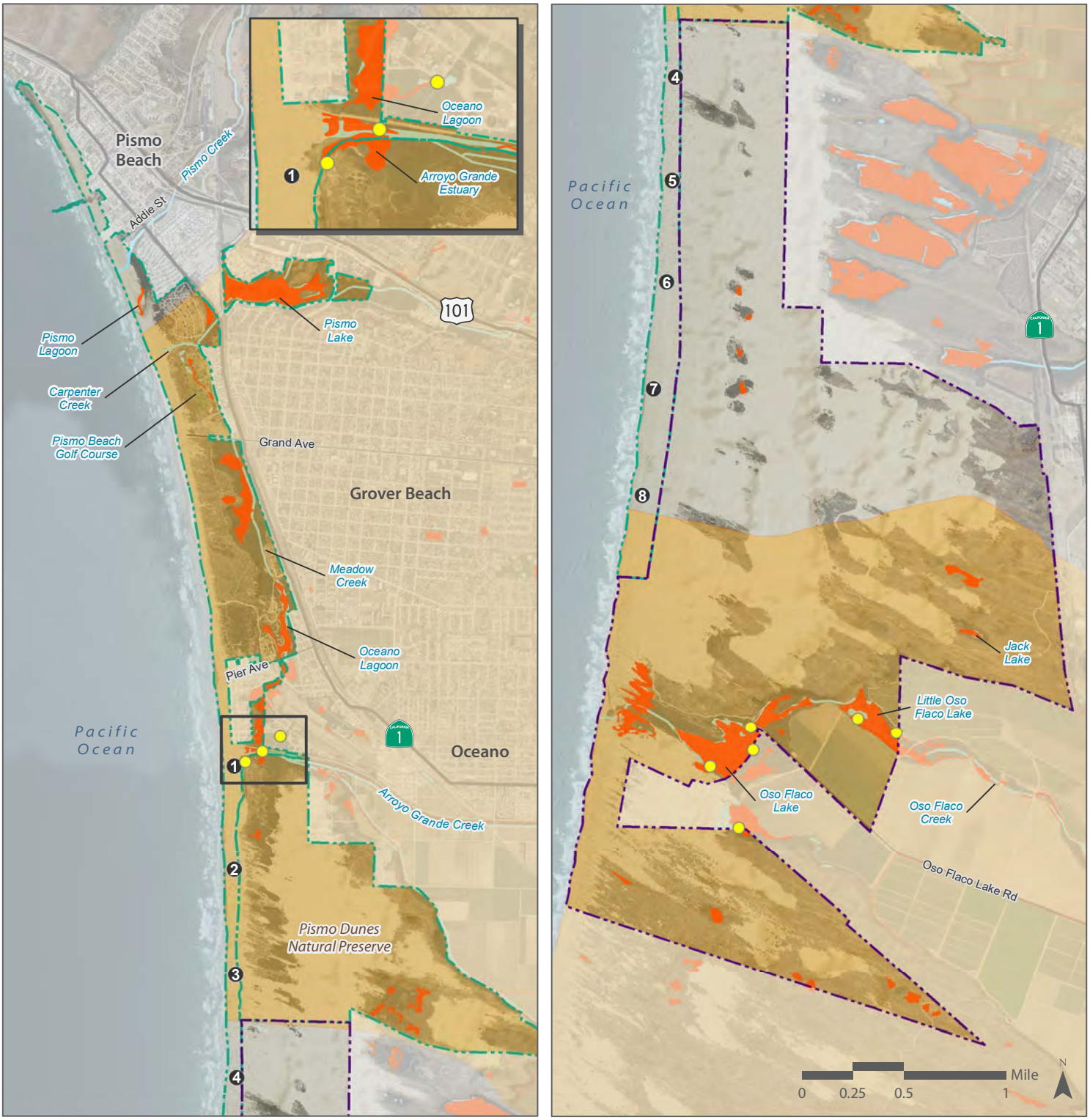
Base Map Features

- Oceano Dunes SVRA
- Pismo State Beach
- Marker post
- Waterbody
- Stream
- Highway
- Access road

February 2020
Source: CDPR, 2020; MIG, 2020

Figure 6-2 Western Snowy Plover and California Least Tern Breeding and Foraging Habitat

CDPR, Oceano Dunes District Habitat Conservation Plan EIR



CRLF Habitat

- CRLF occurrence - survey data
- Potential CRLF breeding habitat - USFWS National Wetland Inventory
- CRLF recovery plan unit - core area 23

Base Map Features

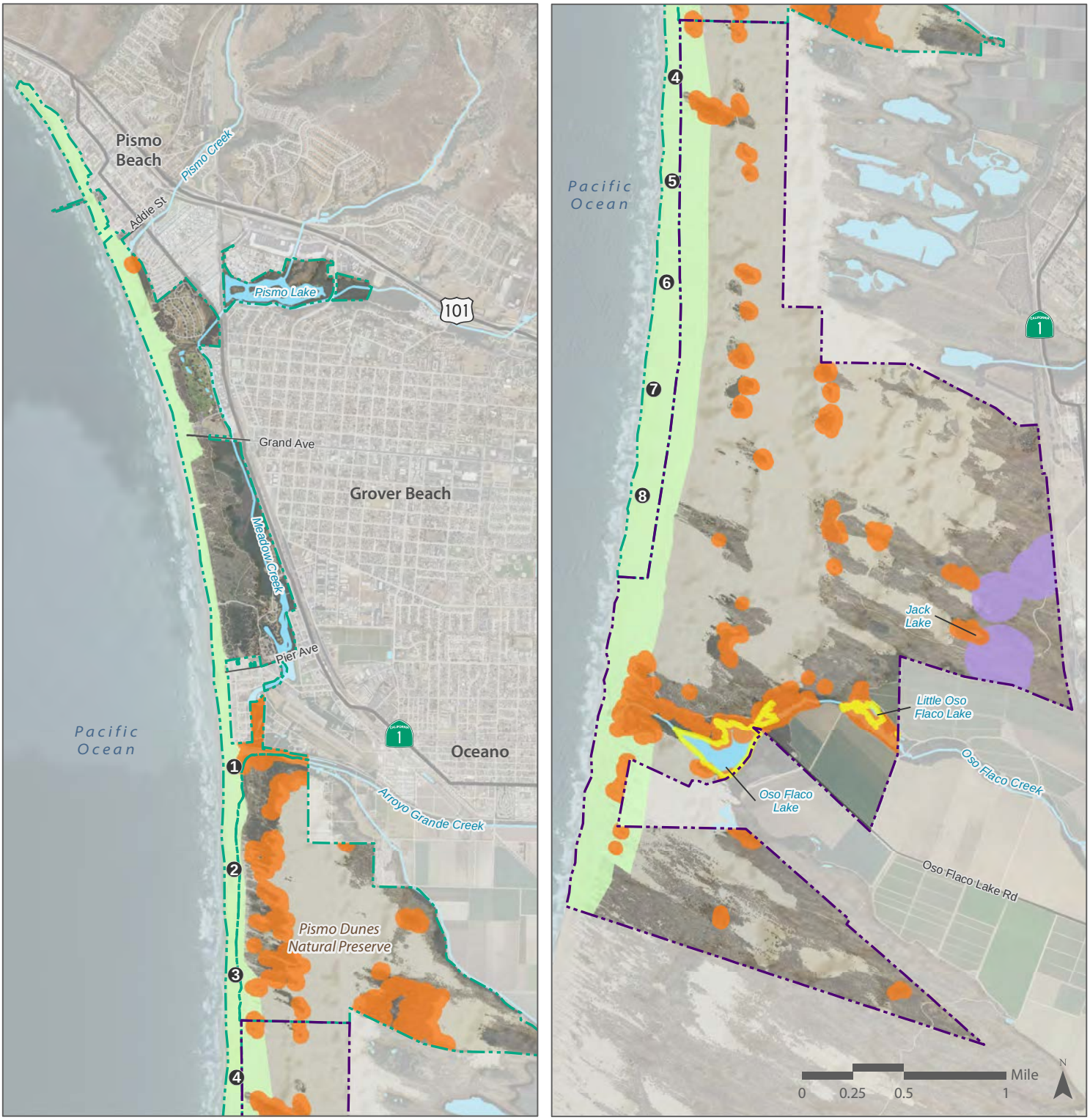
- Oceano Dunes SVRA
- Pismo State Beach
- Marker post
- Waterbody
- Stream
- Highway
- Access road

Note: CRLF upland habitat is located throughout the HCP area wherever wetlands are absent. Wetland habitat includes: riverine, lake, freshwater pond, freshwater emergent, and estuarine wetlands.

MIG

February 2020
Source: USFWS, 2016 CDPR, 2020; MIG, 2020

Figure 6-3 California Red-legged Frog Occurrences, Potential Habitat, and Recovery Plan Unit



Sensitive Plant Habitat

- Marsh sandwort / Gambel's watercress: 11 acres
- La Graciosa thistle: 559 acres
- Surf thistle / Beach spectaclepod: 896 acres
- Nipomo Mesa lupine: 117 acres

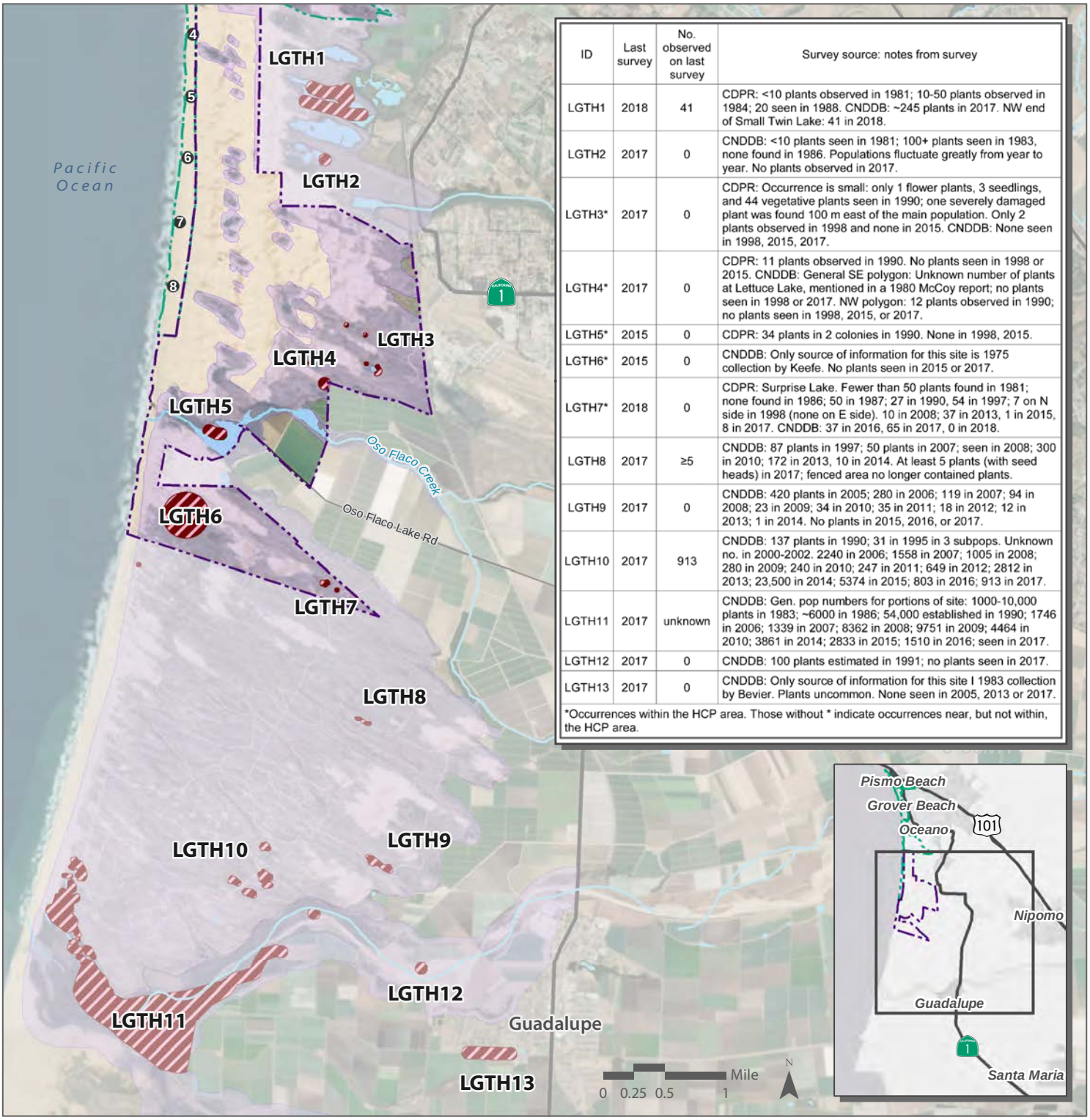
Base Map Features

- Oceano Dunes SVRA
- Pismo State Beach
- Marker post
- Waterbody
- Stream
- Highway
- Access road

February 2020
Source: CDPR, 2020; MIG, 2020

Figure 6-4 Modeled Plant Habitat in the HCP Area

CDPR, Oceano Dunes District Habitat Conservation Plan EIR



ID	Last survey	No. observed on last survey	Survey source: notes from survey
LGTH1	2018	41	CDPR: <10 plants observed in 1981; 10-50 plants observed in 1984; 20 seen in 1988. CNDDB: ~245 plants in 2017. NW end of Small Twin Lake: 41 in 2018.
LGTH2	2017	0	CNDDB: <10 plants seen in 1981; 100+ plants seen in 1983, none found in 1986. Populations fluctuate greatly from year to year. No plants observed in 2017.
LGTH3*	2017	0	CDPR: Occurrence is small: only 1 flower plants, 3 seedlings, and 44 vegetative plants seen in 1990; one severely damaged plant was found 100 m east of the main population. Only 2 plants observed in 1998 and none in 2015. CNDDB: None seen in 1998, 2015, 2017.
LGTH4*	2017	0	CDPR: 11 plants observed in 1990. No plants seen in 1998 or 2015. CNDDB: General SE polygon: Unknown number of plants at Lettuce Lake, mentioned in a 1980 McCoy report; no plants seen in 1998 or 2017. NW polygon: 12 plants observed in 1990; no plants seen in 1998, 2015, or 2017.
LGTH5*	2015	0	CDPR: 34 plants in 2 colonies in 1990. None in 1998, 2015.
LGTH6*	2015	0	CNDDB: Only source of information for this site is 1975 collection by Keefe. No plants seen in 2015 or 2017.
LGTH7*	2018	0	CDPR: Surprise Lake. Fewer than 50 plants found in 1981; none found in 1986; 50 in 1987; 27 in 1990, 54 in 1997; 7 on N side in 1998 (none on E side). 10 in 2008; 37 in 2013, 1 in 2015, 8 in 2017. CNDDB: 37 in 2016, 65 in 2017, 0 in 2018.
LGTH8	2017	≥5	CNDDB: 87 plants in 1997; 50 plants in 2007; seen in 2008; 300 in 2010; 172 in 2013, 10 in 2014. At least 5 plants (with seed heads) in 2017; fenced area no longer contained plants.
LGTH9	2017	0	CNDDB: 420 plants in 2005; 280 in 2006; 119 in 2007; 94 in 2008; 23 in 2009; 34 in 2010; 35 in 2011; 18 in 2012; 12 in 2013; 1 in 2014. No plants in 2015, 2016, or 2017.
LGTH10	2017	913	CNDDB: 137 plants in 1990; 31 in 1995 in 3 subpops. Unknown no. in 2000-2002. 2240 in 2006; 1558 in 2007; 1005 in 2008; 280 in 2009; 240 in 2010; 247 in 2011; 649 in 2012; 2812 in 2013; 23,500 in 2014; 5374 in 2015; 803 in 2016; 913 in 2017.
LGTH11	2017	unknown	CNDDB: Gen. pop numbers for portions of site: 1000-10,000 plants in 1983; ~6000 in 1986; 54,000 established in 1990; 1746 in 2006; 1339 in 2007; 8362 in 2008; 9751 in 2009; 4464 in 2010; 3861 in 2014; 2833 in 2015; 1510 in 2016; seen in 2017.
LGTH12	2017	0	CNDDB: 100 plants estimated in 1991; no plants seen in 2017.
LGTH13	2017	0	CNDDB: Only source of information for this site I 1983 collection by Bevier. Plants uncommon. None seen in 2005, 2013 or 2017.

*Occurrences within the HCP area. Those without * indicate occurrences near, but not within, the HCP area.

La Graciosa Thistle

- La Graciosa thistle critical habitat
- La Graciosa thistle occurrence

Base Map Features

- Oceano Dunes SVRA
- Pismo State Beach
- Marker post
- Waterbody
- Stream
- Highway
- Access road

February 2020
Source: USFWS, 2009; CDPR 2020; CNDDB, 2019; MIG, 2020

Figure 6-5 La Graciosa Thistle Occurrences and Critical Habitat in and near the HCP Area

CDPR, Oceano Dunes District Habitat Conservation Plan EIR

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Chapter 7 CULTURAL AND TRIBAL RESOURCES

7.1 REGULATORY SETTING

Federal, state, and local laws and regulations governing cultural resources exist to protect cultural, historic, and paleontological resources from damage and destruction. Violation of these laws and regulations would constitute a significant impact to cultural and paleontological resources. The laws and policies that pertain to the cultural resources potentially present on the project site or affected by the project are discussed below.

7.1.1 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. A project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment (PRC § 21084.1).

CEQA Guidelines (§ 15064.5(b)(2)) state that the significance of a historical resource is materially impaired when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historic Resources (CRHR).

7.1.1.1 Historical Resources

Pursuant to CEQA Guidelines section 15064.5 (a), the term "historical resources" includes the following:

- A resource listed or determined to be eligible by the State Historical Resources Commission (SHRC) for listing, in the CRHR (PRC § 5024.1, 14 CCR § 4850 *et seq.*).
- A resource included in a local register of historical resources, as defined in PRC section 5020.1 (k) or identified as significant in a historical resource survey meeting the requirements of PRC 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.
- Any object, building, structure, site, area, place, record, or manuscript that 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 one of the criteria for listing on the CRHR (PRC § 5024.1, 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.

- 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 PRC section 5020.1(j) or 5024.1.

7.1.1.2 Unique Archaeological Resources

Pursuant to CEQA (PRC § 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:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

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 an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment, and it shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR (14 CCR § 15064.5(c)(4)).

7.1.1.3 Assembly Bill 52 / Cultural Tribal Resources

AB52 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 the above criteria.

AB52 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. AB52 states: "To expedite the requirements of this section, the [Native American Heritage Commission (NAHC)] shall assist the lead agency in identifying the California Native American tribes that are traditionally and culturally affiliated with the project area."

7.1.2 National Register of Historic Places Criteria

The criteria for determining whether a property is eligible for listing in the NRHP are found in Title 36 of CFR 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
>
> - That are associated with events that have made a significant contribution to the broad patterns of our history; or
> - That are associated with the lives of persons significant in our past; or
> - 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
> - 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.

7.1.3 California Register of Historical Resources

The Office of Historic Preservation administers the CRHR, which was established in 1992 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 cultural 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 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." 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)).

7.1.4 California Public Resources Code (PRC)

7.1.4.1 Public Resources Code Sections 5024 and 5024.5

PRC 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 State Historic Preservation Officer (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 PRC 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. PRC section 5024.5 sets limits on and establishes a protocol for any state agency action that may adversely affect historical resources identified pursuant to section 5024.

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. To comply with PRC section 5024, state agencies can establish a Cultural Resource Management Program. CDPR's program includes Cultural Resource Management Guidelines that ensure that all cultural resources under CDPR jurisdiction are inventoried, evaluated, monitored, and protected.

7.1.4.2 Public Resources Code Section 5090

PRC section 5090.35(f) requires the OHMVR Division to protect cultural and archaeological resources within SVRAs.

7.1.4.3 Public Resources Code Section 5097.5

PRC 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 1 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.

7.1.5 California Health and Safety Code

Health and Safety Code section 7050.5 regulates procedures in the event of human remains discovery. Pursuant to PRC 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.

7.1.6 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 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 CDPR is required:

- Acquisition of properties where cultural sites are present
- During the General Plan process and/or development of Management Plans
- Planning, design, and implementation of capital outlay projects
- Issues of concern identified by the tribes
- Plant and mineral gathering by Native people
- Access to Native California Indian ceremonial sites
- Archaeological permitting
- Mitigation of vandalism and development of protective measures at Native American sites
- When using the Native voice in presenting the story of California native Indian people in park units

7.1.7 Executive Order B-10-11

Executive Order B-10-11 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 the Governor's control shall encourage communication and consultation with California Indian Tribes.

7.1.8 California Coastal Act

As described in greater detail in Chapter 7, 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 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)

7.1.8.1 Coastal Development Permit (CDP) 4-82-300

Oceano Dunes SVRA operates subject to CDP 4-82-300, issued in 1982 by the CCC, and last amended in 2001. Since CDP 4-82-300 predates the County 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.

7.2 ENVIRONMENTAL SETTING

7.2.1 Ethnographic

The HCP area is located within the Northern Chumash or Obispeño and Purisimeño language territory. 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) (Greenwood, 1972) (Greenwood, 1978). They exploited a variety of fish, and shellfish (Pismo clam, mussel, and abalone, etc.) and hunted small and big game. (Fitzgerald, Farquhar, & Farrell, 2003) (Greenwood, 1978). (Fitzgerald, Farquhar, & Farrell, 2003). Their diet also included gathered acorns, seeds (acorn, chia), and plants (roots, tubers, greens) (Hoover, 1990) (Moratto, 1984).

In 1770, the 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). Villages were not occupied year-round and likely disbanded into smaller social groups and dispersed to other areas for seasonal hunting or gathering (Fitzgerald, Farquhar, & Farrell, 2003).

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, p. 556).

The first of several Spanish encounters with the Obispeño near the HCP area occurred between 1769 and 1770 during Don Gaspar de Portolá's sojourn in the area (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, p. 505). The mission period ended in 1834 with the passage of the Secularization Act. During this period, disease was wide-spread, killing many Chumash; alcoholism also contributed to Indian fatality [(Wallace P. , 1971) as cited in (Grant, 1978, p. 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, land near the Santa Ynez Mission became the permanent settlement for 109 Chumash. This reserve, known as Zanja de Cota, was at one point 75 acres in size and was the smallest official Indian reserve in the state (Grant, 1978, p. 507). The reserve has since grown to over 1,000 acres with a large land purchase in 2010 (Khan, 2018)).

7.2.2 Prehistoric

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, Stevens, Jones, Fitzgerald, & Hylkema, 2007, p. 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 & Taylor, 1958). Based on several temporally diagnostic projectile points, these sites are associated with the Hunting Culture (3000 cal B.C. to cal A.D. 1250). A number of additional excavations were conducted on sites following Wallace and Taylor's 1958 study within and adjacent to the HCP area. Together, these excavation studies conclude the archaeology located within and adjacent to the HCP area dates between the Early/Middle Hunting Culture, cal. 3000 B.P. and the Late Period, cal A.D. 1250 to 1769.

7.2.3 Historic

A large portion of the Portolá exploration occurred in present-day San Luis Obispo County and represents the earliest recorded Spanish expedition for the County. Many of San Luis Obispo County's place names as well as those in the HCP area 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, p. 10).

The first Mission to be established near the HCP area was Mission San Luis Obispo de Tolosa on September 1, 1772 (Robinson, 1957, p. 6). California Indians remained property of California's missions until 1834, when the Mexican Congress decreed secularization to be the new law for land in California (Robinson, 1957, pp. 10-11). The establishment of San Luis Obispo and Santa Barbara Counties shortly followed the 1848 Treaty of Guadalupe Hidalgo, at which point California became a territory of the United States. The Treaty put an end to a 3-year-long war between the United States and Mexico (Hoover, 1990) (Robinson, 1957, pp. 15, 17).

Between 1886 and 1894 the Southern Pacific Railroad was extended southward, starting at San Miguel and ending in San Luis Obispo. The coming of the Southern Pacific Railroad to San Luis Obispo County in 1895 led to the founding of the town of Oceano (Hammond, 1992, pp. 10-11). Establishment of the railroad triggered 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 known today as Oceano (Hammond, 1992, p. 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 dunes beginning in the early 20th century to the mid-1970s. The Dunites sought isolation, solitude, and solace amongst the dunes, either living alone or in small communities in make-shift homes erected from driftwood and additional locally found resources.

The events of World War II greatly impacted the Dunites. Following the attack on Pearl Harbor, the government determined 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, p. 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)]. 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).

7.2.4 Cultural Resources

There are at least 48 existing cultural resources within the HCP area. Documentation for 45 of the resources is provided by a Cultural Resource Inventory (CRI) prepared in 2011 for the OHMVR Division (Perez, 2011). The CRI covered both Oceano Dunes SVRA and Pismo State Beach. The other three resources have since been discovered within the HCP area due to natural erosion. Details regarding the three resources have been provided by CDPR (Baker, 2018).

Of the known resources, 43 are prehistoric, 4 are historic, and 1 is multi-component (i.e., contains elements of both prehistoric and historic periods). Twenty-five of the prehistoric sites are considered eligible for inclusion on either the CRHR or NRHP or both. One prehistoric site is considered ineligible for any register. The remaining prehistoric sites require further archaeological investigation before a determination of eligibility can be made.

Additionally, there were 29 archaeological sites previously discovered prior to the 2011 CRI, which were not included in the CRI as they were unable to be relocated due to the highly mobile dune environment. Because of the shifting sands, there is potential for some or all of the sites to still be present beneath the surface. Although there have been a number of cultural surveys in the HCP area, the shifting environment may mean that cultural resources in the area are present that have not yet been discovered. The HCP area, therefore, has a high degree of sensitivity in terms of archaeological cultural resources.

7.2.4.1 Research and Study

Previous research and study have been carried out in the HCP area for prior CDPR projects. This EIR uses research that was gathered for the 2011 Cultural Resource Inventory (CRI) of Oceano Dunes SVRA, Pismo State Beach, Dunes Preserve, and Pismo Lake (Perez, 2011). Findings and background information was also utilized from the 2016 Oceano Dunes SVRA Dust Control Program EIR (MIG|TRA, 2016).

No additional research was carried out for the Oceano Dunes HCP EIR because of the CRI and ongoing documentation that occurs as new resources are identified.

7.2.4.2 Fieldwork

Fieldwork was not conducted specifically for this EIR; however, the OHMVR Division has performed two recent surveys within the HCP area. The first survey is the 2011 Oceano Dunes District CRI. The areas that were archaeologically surveyed during the 2011 Oceano Dunes District CRI were chosen based on a predictive model adapted from previous archaeological surveys of areas within the project boundary.

The second survey occurred in April 2013, when archaeological and Native American monitoring was conducted during installation of dust control equipment. The survey 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. The results of the project monitoring were recorded in an archaeological monitor report (Perez, 2013). CDPR provided copies of the archaeological survey and archaeological monitor reports to representatives of the Northern Chumash Tribal Council, Santa Ynez Tribal Elders Council, yak tityu tityu – Northern Chumash Tribe, and the Odom family. The project concluded in October 2013.

Prior research and field studies show areas of archaeological sensitivity, where there is a higher chance of discovery of archaeological finds. GIS data has been created by CDPR using information from previous studies to show areas of archaeological sensitivity. Figure 7-1 Sensitive Cultural Resource Areas shows areas that have been mapped for archaeological sensitivity within the HCP boundary. To ensure protection of sensitive cultural resources, the specific resource locations are not shown.

7.2.4.3 Archaeological Discoveries

Due to the nature of the sand dunes within the HCP area, archaeological discovery often happens by accident, when sands shift and reveal cultural resources that were previously subsurface. When these are discovered, State Parks archaeologists record and catalog the discoveries and provide the Northwest Information Center with their findings for recordation within the California Historical Resources Information System (CHRIS) database. Consistent with PRC section 5090.35(f), CDPR resource staff ensure any newly discovered cultural resources are protected, including by erecting fencing or other barriers if needed. Since the last archaeological field survey in 2013, some new cultural sites have been discovered within the HCP area, all of which CDPR archeologists have cataloged and recorded and forwarded to the Northwest Information Center. These new resources are included in the cultural resources summary above.

7.2.4.4 Native American Scoping

A search of the NAHC Sacred Lands File (EIR Appendix E) indicated the presence of Native American cultural sites within portions of the HCP area. A Native American contact list of tribes who may have additional knowledge of the area was provided by the NAHC. CDPR initiated additional communication to request information that may not have been known at the time of previous communication. CDPR sent letters to the following tribes:

- Santa Ynez Band of Chumash Indians
- Barbareno/Ventureno Band of Mission Indians (3 representatives)
- Salinan Tribe of Monterey (2 representatives)
- Xolon-Salinan Tribe

- Coastal Band of the Chumash Nation
- Northern Chumash Tribe
- Northern Chumash Tribal Council

None of the tribes contacted responded to the request for information.

7.2.4.5 Assembly Bill 52 (AB52) Consultation

One tribe has formally requested consultation under AB52: the Northern Chumash Tribe. CDPR contacted the tribe on April 12, 2017 with information regarding the project and to initiate the AB52 consultation process. The tribe did not respond to the formal notification, and no AB52 consultation took place. Correspondence to the Northern Chumash Tribe is included in EIR Appendix E.

7.2.4.6 CDPR Native American Consultation

One tribal representative, Fred Collins of the Northern Chumash Tribal Council, attended a public scoping meeting for the HCP EIR on February 7, 2018 and requested consultation under AB52 (EIR Appendix A, Attachment 4). As no formal request for AB52 consultation was filed by the Northern Chumash Tribal Council, CDPR did not conduct an AB52 consultation for the HCP EIR. However, internal CDPR regulations require that Native American consultation takes place whenever a project may impact native resources. No additional communication from Mr. Collins has been received.

7.2.5 Reviews of Site Conditions

Sand dune systems are mobile and susceptible to movement. Thus, the process of relocating previously recorded sites and locating new cultural resources within the HCP area 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 has made it difficult for previous archaeological studies to adequately walk in methodically measured transects as is the standard for an archaeological pedestrian field survey of an entire HCP boundary.

7.3 PROJECT IMPACTS

7.3.1 Thresholds of Significance

Consistent with CEQA Guidelines Appendix G, the project would have a significant impact 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;
- Disturb any human remains, including those interred outside of formal cemeteries;
- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC section 21074 as either a site, feature, place, cultural landscape that is

geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- Listed or eligible for listing in the CRHR or in a local register of historical resources as defined in PRC section 5020.1(k); or
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC section 5024.1. In applying the criteria set forth in subdivision (c) of PRC section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

7.3.2 Historical, Archaeological, and Tribal Resources

Pursuant to CEQA Guidelines section 5064.5(b), a substantial adverse change in the significance of a historical resource 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 PRC section 5020.1(k), or its identification in a historical resources survey meeting the requirements of PRC section 5024.1(g).

Within the HCP area there are 48 known cultural resources: 43 are prehistoric sites, 4 are historic period sites, and 1 is a multi-component site. Forty-four sites contain prehistoric elements, which could be considered Tribal Cultural Resources. It is considered likely that there are additional cultural resources as yet undiscovered within the HCP area, existing below the surface.

In general terms, implementation of the HCP would not impact existing cultural resources. The four new covered activities proposed by the HCP are discussed below.

SNPL Chick and Egg Capture for Captive Rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b). This activity would occur in the open riding area outside of the seasonal exclosure north of Post 6. This area has a low sensitivity to cultural resources. SNPL chick and egg capture would not result in ground disturbance and therefore would have ***no impact*** on cultural resources.

General Facilities Maintenance – Mechanical Trash Removal (CA-21). Mechanical trash removal would only occur in areas that are already disturbed by recreation and would not be allowed in any areas with known, covered or uncovered, cultural sites. A cultural monitor would review all proposed trash removal areas to confirm all known cultural sites, including sites currently buried, are avoided. Mechanical trash removal would thus not significantly increase the potential for disturbance of cultural resources. As described in EIR section 7.2.4.3, should an unknown cultural resource site be discovered, it would be recorded, assessed and protected from further disturbance. As a result, the proposed mechanical trash removal would have a ***less-than-significant impact*** on cultural resources.

Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50). 6 Exclosure is not within an area of medium or high cultural sensitivity (Figure 7-1). The edges of the East Boneyard area overlap areas of medium and high cultural sensitivity (Figure 7-1) There are two sites partially within the East Boneyard boundary, CA-SLO-864 (lithic scatter) and CA-SLO-2851 (habitation debris).

Both sites are covered by the mobile dune environment and were not relocated during the 2011 CRI and are not fenced off. Recreational access already occurs in the East Boneyard Exclosure and 6 Exclosure areas 5 months out of the year during the non-breeding season for CLTE and SNPL. Allowing year-round access to the East Boneyard Exclosure and 6 Exclosure areas would not introduce new impacts to cultural resources in these areas. As a result, the proposed change in exclosure fencing would have a ***less-than-significant impact*** on cultural resources.

CDPR UAS Use for Park Activities (CA-52). CDPR's use of drones for data collection does not involve ground disturbance in culturally sensitive areas. As a result, drone use would have ***no impact*** on cultural resources.

7.3.3 Human Remains

One burial site is known within the HCP area containing at least one human burial. There is potential for undiscovered human remains to exist within the HCP area. However, as discussed above in EIR section 7.3.2, activities currently proposed by the HCP would not significantly impact subsurface or surface archaeological resources. Mechanical trash removal would sift through surface sand, albeit in areas already disturbed by vehicles. Should human remains be discovered CDPR will follow the procedure as outlined in California Health and Safety Code section 7050.5 to determine the appropriate course of action for dealing with the find. The HCP activities would not significantly increase the potential of discovery of human remains within the HCP area.

Future activities proposed by the HCP identified in EIR section 2.4.2.3 have the potential to unearth human remains, but those future activities are subject to further environmental review, and potential impacts to human remains would be considered under separate CEQA documents (see EIR section 2.5).

Implementation of the HCP would therefore have a ***less-than-significant impact*** on human remains.

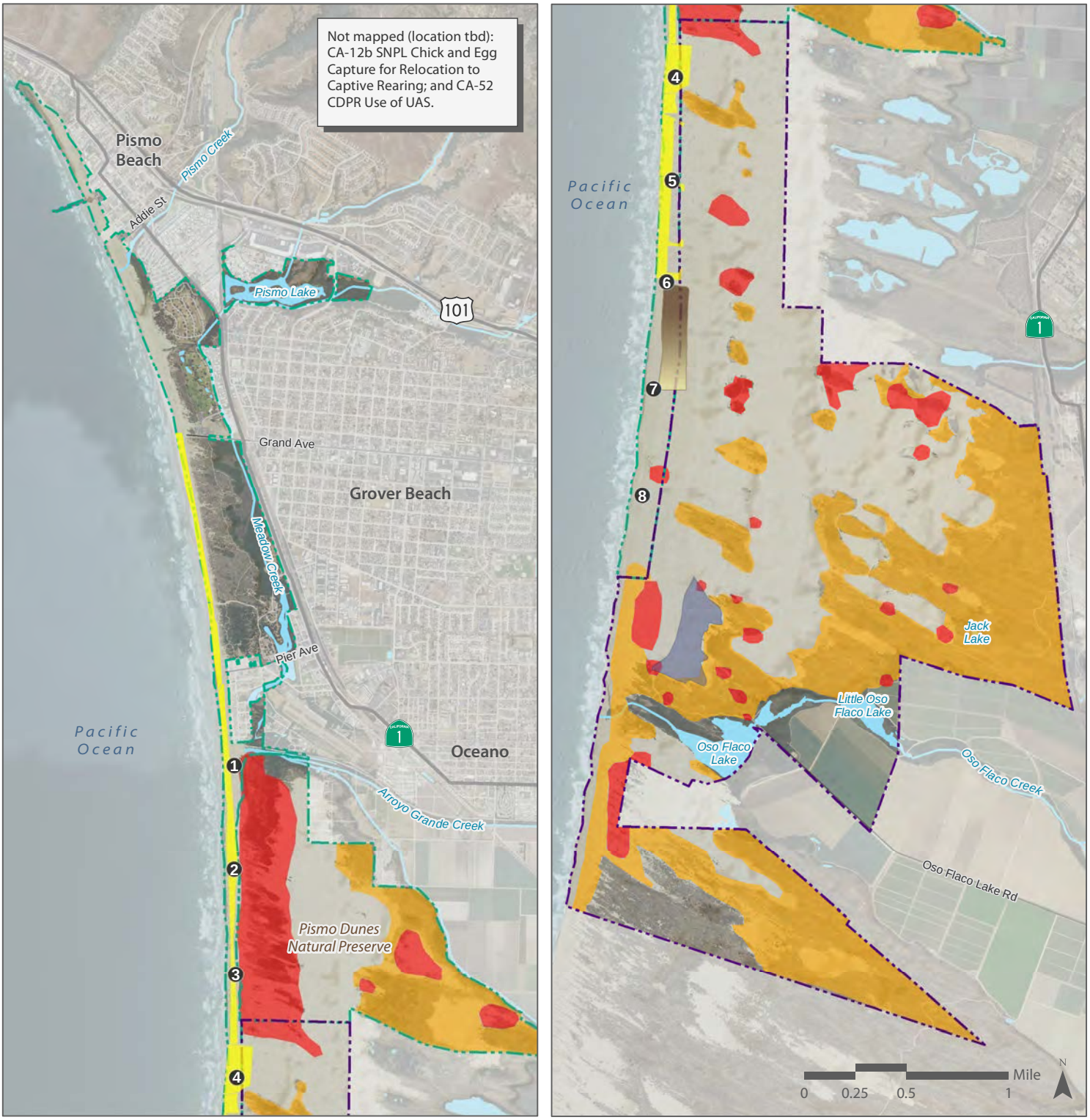
7.4 CUMULATIVE IMPACTS

The HCP-proposed new activities would not adversely impact cultural resources and therefore would not combine with impacts from other past, present, or foreseeable future projects to incrementally increase the impact on cultural resources. For these reasons, the HCP would have ***no cumulative impact*** on cultural resources.

Future potential activities covered by the HCP (EIR section 2.4.2.3) have the potential to impact cultural resources, but those future activities are subject to further environmental review, and potential impacts to cultural resources would be considered under separate CEQA documents (see EIR section 2.5).

7.5 MITIGATION MEASURES

No potentially significant impacts to cultural resources have been identified for the project based on the analysis contained in EIR sections 7.3 and 7.4. No mitigation is required.



Senstitive Cultural Resource Areas

- Medium Cultural Resource Sensitivity
- High Cultural Resource Sensitivity

Proposed New Covered Activities

- CA-21 Mechanical trash removal*
- CA-50 6 Exclosure reduction*
- CA-50 Boneyard Exclosure reduction*

*Approximate location

Base Map Features

- Oceano Dunes SVRA
- Pismo State Beach
- Marker post
- Waterbody
- Stream
- Highway
- Access road

February 2020
Source: CDPR, 2020; MIG, 2020

Figure 7-1 Sensitive Cultural Resource Areas

CDPR, Oceano Dunes District Habitat Conservation Plan EIR

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Chapter 8 RECREATION AND PUBLIC ACCESS

8.1 REGULATORY SETTING

8.1.1 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 (CDPR, 2005c). 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.

8.1.2 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. Consistent with its mission statement (see EIR section 2.2.1), 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.

PRC 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. PRC 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 supports 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, PRC section 5090.35(a) provides that protection of public safety, the appropriate utilization of lands, and the conservation of natural and cultural resources are of the highest priority in the management of SVRAs, and the OHMVR Division shall promptly repair and continuously maintain areas and trails and anticipate and prevent accelerated and unnatural

erosion and other OHV impacts to the extent possible. The OHMVR Division shall also take steps necessary to prevent damage to significant natural and cultural resources within SVRAs.

SVRAs consist of areas selected, developed, and operated to provide OHV recreation opportunities. Areas must be developed, managed, and operated for the purpose of providing the fullest appropriate public use of the vehicular recreational opportunities present in accordance with the OHMVR Act, while providing for the conservation of cultural resources and the conservation and improvement of natural resource values over time (PRC § 5090.43 (a)). To protect natural and cultural resource values, CDPR may establish sensitive areas within SVRAs. If OHV use results in damage to any natural or cultural resources or damage within sensitive areas, appropriate measures must be taken to protect these lands from any further damage. These measures may include erecting physical barriers and must include restoring natural resources and repairing damage to cultural resources (PRC § 5090.43).

8.1.3 State Beaches and Seashores

PRC 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 PRC establishes the San Luis Obispo State Seashore, which comprises lands extending from Cayucos to Lion's Head, 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 SVRA, and Point Sal State Beach.

The PRC 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 PRC 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)).

8.1.4 California Coastal Act

As described in greater detail in Chapter 4, 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" (PRC § 30001.5).

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 are identified in Land Use and Planning, Table 4-1.

8.2 ENVIRONMENTAL SETTING

8.2.1 Regional Recreation Overview

Pismo State Beach and Oceano Dunes SVRA are two units of the California State Parks system, which consists of 280 classified park units and major unclassified properties (CDPR). 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 8-1. Pismo State Beach has 185 designated campsites (Table 8-2.), and Oceano Dunes SVRA provides 1,000 camping units (i.e., up to 1,000 camping vehicles are allowed per night anywhere within the open riding area; EIR section 8.2.3.2). The HCP area accounts for less than 1 percent of the land area in the state parks system, while accounting for 8 percent of the total available camping units (1,185 out of 14,131).

Table 8-1. Summary of State Parks System Units (Fiscal Year 2016/17)[A]

Classification[B]	No. Units	Total Acreage[C]	Camp-sites[D]	Day Use Visitors[E]	Camping Visitors[F]	Total Attendance
State Park	88	1,186,949	5,626	27,483,749	3,058,600	30,542,349
State Beach	62	23,163	2,655	25,690,065	3,271,440	28,961,505
State Historic Park	52	32,345	92	8,263,542	14,257	8,277,799
State Recreation Area	33	185,711	4,190	6,070,559	374,268	6,444,827
State Natural Reserve	16	67,673	0	3,351,255	198	3,351,453
Unclassified[G]	16	12,340	0	662,760	0	662,760
SVRA	9	140,622	1,568	1,527,011	546,762	2,073,773
State Historical Monument	1	209	0	764,122	0	764,122
State Marine Park[H]	1	--	--	--	--	--
State Seashore[I]	1	1,860	0	0	0	0
Wayside Campground	1	66	0	35,719	0	35,719
TOTAL[J]	280	1,650,938	14,131	73,848,782	7,265,525	81,114,307

Source: CDPR n.d.

(A) The fiscal year ran from July 1, 2016 to June 30, 2017.

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

(C) Includes CDPR-owned lands and lands owned by others but operated by CDPR in the classification listed.

(D) Campsite refers to individual family campsites and does not include group campsites. According to the CDPR Statistical Report for 2016/17, 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.

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

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

(G) This line item reflects major unclassified units of the state parks system (14) plus two state marine reserves.

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

(I) Data includes information for both state marine reserve (2 units) and state seashore (1 unit).

(J) Totals may not add due to rounding.

Oceano Dunes SVRA is unique from a recreational standpoint because it is only one of two CDPR units that provides OHV recreation within the Central Coast Region, which generally comprises Santa Cruz, San Benito, Monterey, SLO, Santa Barbara, and Ventura Counties. The other unit is Hollister Hills SVRA in San Benito County, which is more than 18 miles east of the Pacific Ocean. 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 counties where OHV recreation is permitted.

The HCP area is also 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 is 18,000 acres (USFWS, 2016b) in size and Table 8-2. These existing parks accommodate a wide range of recreation activities including hiking, camping, wildlife viewing, horseback riding, and motorized recreation.

Table 8-2. Public Recreation Lands at and Near the HCP Area

Park	Managing Agency	Recreation Activities Available	Size
Guadalupe-Nipomo Dunes Wildlife Refuge	USFWS	Hiking, fishing, wildlife viewing	2,553 acres
Pismo State Beach	CDPR	Camping, clam digging, fishing, hiking, horseback riding, shoreline vehicular access and recreation, swimming, wildlife viewing	1,515 acres 185 campsites
Oceano Dunes SVRA	CDPR	Camping, horseback riding, fishing, hiking, OHV recreation, surfing, swimming, wildlife viewing	3,490 acres 1,000[1] 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	612 acres

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

[1]Administratively reduced to 500 camping units due to closures for dust control. Separate CEQA review underway.

8.2.2 Oceano Dunes District Visitor Attendance Data

Approximately two million people visit the Oceano Dunes District every year, engaging in pedestrian, camping, and motorized vehicle activities. In general, daily visitation to Oceano Dunes SVRA is lowest Monday through 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. In Fiscal Year 2016/2017, Pismo Beach had 600,000 visitors and Oceano Dunes SVRA had 1.4 million visitors. This level of visitation has been fairly constant over the last decade. A review of annual statistic reports from 2006 to 2015 show that during the 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 to 2007 and 2013 to 2014), whereas visitation to the other SVRAs dropped approximately 40 percent.

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%), San Luis Obispo 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 4 nights.
- Camping at Oceano Dunes SVRA occurred in four main forms, including trailers/fifth 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%).

In 2016, 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, 2018). As part of this study, SMG conducted an after-trip email survey of visitors to the Oceano Dunes District. As shown in Figure 8-1, the top three activities that survey respondents participated in were ATV riding (62%), enjoying a beach bonfire (57%) and enjoying the sunsets (56%). When survey respondents were asked if they would still visit SLO County if Oceano Dunes SVRA was not in existence, 62% 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. 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.

8.2.3 Pismo State Beach and Oceano Dunes SVRA Recreational Opportunities

The California Coastal Act defines "coastal-dependent development or use" to mean any development or use that requires a site on, or adjacent to, the sea to be able to function at all (PRC § 30101). CDPR considers beach- and dune-oriented recreational opportunities to be coastal-dependent recreation activities.[39] For the purposes of this EIR, coastal-dependent recreation activities at Pismo State Beach and Oceano Dunes SVRA include:

- Non-vehicular recreational activities such as sand play, sunbathing, 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

As shown in Table 8-3., the HCP area comprises 5,005 acres of managed lands, the majority of which is managed for public recreation purposes. There are 844 acres located in the eastern portion of Oceano Dunes SVRA that are closed to all public access and recreation (see Figure 2-3); this area 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 1,515 acres of managed recreation lands, nearly all of which is open to the public. As described in more detail in EIR section 2.1, the parks provide both vehicular and non-vehicular recreation opportunities.

Table 8-3. HCP Area – Public Recreation Opportunity and Access

Park	Total Size (Acres)	Pedestrian		Equestrian		Street-legal Vehicles		OHV	
		Open (Acres)	Closed (Acres)	Open (Acres)	Closed (Acres)	Open (Acres)	Closed (Acres)	Open (Acres)	Closed (Acres)
Pismo State Beach	1,515	1,444	70(A)	1,413	101B)	273	1,241(C)	208	1,306(D)
Oceano Dunes SVRA	3,490	2,621	869(E)	1,389	2,102(F)	1,097	2,393(G)	1,097	2,393(G)
TOTAL(H)	5,005	4,065	939	2,802	2,203	1,370	3,634	1,305	3,669

Source: OHMVR Division / MIG 2020

(A) Pismo Lake (open, but public visitation is not encouraged due to lack of access points)

(B) Pismo Lake, Golf Course, and Ranger Station

(C) Pismo Lake, Pismo Dunes Natural Preserve, Pismo State Beach north of Grand Avenue

(D) Pismo Dunes Natural Preserve and all areas north of Post 2

(E) Phillips 66 leasehold and agricultural lease area

[39] The CCC is the sole agency with primary jurisdiction over the Coastal Act and as such may or may not find these activities to be coastal-dependent uses.

(F) Phillips 66 leasehold, agricultural lease area, and Oso Flaco area

(G) Phillips 66 leasehold, agricultural lease area, Oso Flaco area, vegetated islands, and northern portion of SVRA contiguous with Pismo Dunes Natural Preserve

(H) Totals may not add due to rounding.

8.2.3.1 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 (4,091 acres) and include, but are not limited to, camping, pedestrian beach uses, dog walking and horseback riding, kite flying, sail sports, hiking, surfing/boating, and occasional bicycle riding. The acreages open to these uses are shown in Table 8-3. (also see Table 2-1). Non-vehicular recreation is particularly popular along the shoreline north of Grand Avenue and between Grand Avenue and Post 2. Non-vehicular recreation is also popular in the Oso Flaco Lake area in the southern portion of Oceano Dunes SVRA, which includes a parking lot, boardwalk, and other small visitor-serving facilities.

Pismo Dunes Natural Preserve (see Figure 2-3), a 695-acre subunit of Pismo State Beach, provides opportunities for non-vehicular recreation, except swimming and other water-related activities because the Pismo Dunes Natural Preserve does not adjoin the beach. Walking trails traverse the preserve, but otherwise there are no visitor-serving facilities in the preserve.

Pismo State Beach contains a variety of visitor-serving facilities and infrastructure, including a visitor center, education center, golf course, campgrounds, RV facilities, and parking areas.

Each year, Pismo State Beach and Oceano Dunes SVRA host numerous organized non-vehicular events, including beach clean-ups, weddings, family reunions, corporate dinners, bonfires, surfing and other sporting contests, media events, video commercials, and commercial still photography. Examples of non-motorized special events that occur are briefly described below and listed in HCP section 2.2.1.11.

- *Concerts*. Events may include amplified music, vendors, and camping. Music and other activities may occur around the clock. These events are typically weekend events.
- *Group Campfires and Receptions.* Group campfires and receptions are frequently set up on the beach near the Grand Avenue entrance.
- *Sports.* Running and/or walking racecourses may traverse the beach and dunes. Other non-motorized sporting events include soccer, baseball, and kiteboarding tournaments and exhibitions. These events may include food vendors, music, and other entertainment. These events usually take place in Pismo State Beach and are generally single-day or weekend events.
- *Weddings.* Approximately 25 weddings are held at Pismo State Beach each year. Most weddings occur either in the foredunes and cypress grove near the golf course or near the Grand Avenue entrance within the non-motorized portion of the park. Weddings planned with bonfires or other fire sources are set up within the motorized portion of the park.
- *Video Production and Still Photography.* Video production and still photography "shoots" require permits and may occur anywhere in the HCP area, with approximately 35 to 40 shoots occurring every year. Filmed activities are almost always only those activities already allowed in the area used for the production. Filming by UAS is allowed on a case-by-case basis.

8.2.3.2 Beach and Coastal Dune Camping

Pismo State Beach has two traditional campgrounds (North Beach and Oceano) with a total of 185 designated campsites. Camping within Oceano Dunes SVRA and the portion of Pismo State Beach open to OHVs 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. This beach camping is limited by CDP 4-82-300-A5 to 1,000 registered campers[40] ("campers" are based on each registered vehicle). There are no designated campsites; however, on a typical day most camping activity occurs near the beach, between Posts 2 and 6. During busy periods (holidays, weekends, and special events) camping activity can extend farther south and inland.

Importantly, many visitors engaging in non-OHV recreation, such as camping and beachcombing, also participate in OHV recreation (see HCP section 1.1.3.4).

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). Besides vehicle recreation, the ability to camp on the beach and dunes at Oceano Dunes SVRA is the significant recreational attraction. This primitive beach and dune camping also represents a very low-cost camping and recreation opportunity. The $10 fee is the lowest camping fee available within the Oceano Dunes District (North Beach and Oceano Campground fees range from $35 to $50).

8.2.3.3 Beach and Coastal Dune Vehicular Recreation

The Guadalupe-Nipomo Dunes Complex in general, and the HCP area specifically, has 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). 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. Present day, the area open to vehicular recreation and camping is a little over 1,300 acres (see Table 8-4.).

Table 8-4. Vehicular Recreation Lands in the HCP Area

Season	Street-Legal Vehicles Only(A)	Street-Legal and OHV Use + Camping	Total Vehicular Recreation Area
October to February	65 Acres	1,305 Acres(B)	1,370 Acres
March to September	65 Acres	1,005 Acres(C)	1,070 Acres

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

(B) Area represents vehicle recreation lands south of Post 2. This area generally is reported as the size of Oceano Dunes SVRA open riding and camping area.

[40] CDPR has administratively reduced the number of allowable campers to 500 due to closures for dust control.

(C) The seasonal reduction in vehicle recreation lands is due to the installation of fencing to protect SNPL and CLTE. This nesting exclosure reduces the amount of land open to vehicular recreation by approximately 300 acres from March 1 through September 30 each year.

Oceano Dunes SVRA operates under daily vehicle limits established by CDP 4-82-300-A5, which was approved in 2001. The permit establishes the following daily limits on vehicles within Oceano Dunes SVRA: up to 2,580 street-legal vehicles, 1,000 street-legal vehicles for camping, and 1,720 OHVs (CDP 4-82-300-A5). On summer and holiday weekends, street-legal vehicle use approaches these daily limits (HCP Table 2-2). Off-season and weekday use levels are typically less than half of summer weekend levels. Due to recent installation of fencing for dust control that closes off over 48 acres of prime camping area, CDPR has administratively reduced camping permits to 500 vehicles. The impacts of this recreation closure and other effects of dust control measures under CA-44 New PMRP are being assessed in a separate CEQA document.

The Oceano Dunes District controls and records vehicular attendance via entrance kiosks at Grand and Pier avenues. In the summer, the kiosks are open from 8 a.m. to 11 p.m. or midnight. During the off-season, the kiosks are open from 9 a.m. to 6 p.m. (or sunset if staff is available). Hours are extended during all holidays, with the Pier Avenue kiosk staying open 24 hours. Once the Grand Avenue kiosk is closed, visitors can only enter the park via Pier Avenue. Entrance is allowed even when both kiosks are unattended. Motorized use is allowed in the designated areas 24 hours a day. Except for emergency responders, all vehicles must obey a 15-mph speed limit at all times while on the shoreline and in camping and developed areas; no formal speed limit is in place in the dunes when away from occupied campsites.

Street-legal vehicles can operate on all designated roads within North Beach Campground, Oceano Campground, and in day use parking areas (HCP Map 3; Pismo State Beach, monarch butterfly grove, Oso Flaco). Motorized vehicles, other than those used by park personnel, are allowed off road only in designated areas (Figure 2-3). Street-legal vehicles can operate from Grand Avenue south for 6 miles down the coast to the southern boundary of the Oceano Dunes SVRA open riding and camping area. From Grand Avenue to Post 2, vehicle recreation is limited to street-legal vehicles only (see Figure 2-3). 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.

OHVs can only operate within the open riding area. OHVs must be transported to Post 2 or farther south before off-loading. The designated staging area at Post 2 is primarily used for parking for concessionaires and concessions activities. Camping is allowed throughout the open riding area since formal campsites are not designated. Motorhomes, vehicles towing trailers, and other camping vehicles thus move throughout the open riding area to access camping areas.

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. Motorized vehicle use is prohibited year-round within the fenced vegetation islands occurring within the riding area and seasonally prohibited (March 1 through September 30) within SNPL and CLTE nesting areas (Figure 2-7).

A well-traveled route known as the sand highway runs from south of Post 4 into the backdunes all the way to the southern boundary of the open riding area. The sand highway is marked with numbered signs for navigation (Figure 2-3). Within the dune area, OHV riders frequently gather

at various locations including near Independence Hill, Boy Scout Camp, Maidenform Flats, and Competition Hill (Figure 2-3). Typically, these informal gatherings are comprised of 15 to 20 street-legal vehicles and 25 OHVs. A high of 75 to 100 vehicles has been observed informally gathered at Competition Hill. A small OHV training area is also located in the northern portion of the open riding and camping area.

Organized events with a focus on motorized recreation occur within the HCP area that is open to vehicles. Events may be formal competitions, organized non-competitive gatherings, or other events requiring the use of vehicles on the beach or dunes. Examples of motorized special events anticipated during the permit term are listed in HCP section 2.2.1.11. This list is not comprehensive.

- *Poker Runs.* Poker runs are non-timed, non-race, self-guided activities during which participants drive to checkpoints along a course within the open riding area. Such events may include a vending/registration/staging area, typically less than an acre, which is also located within the open riding area. These events are typically single-day events.
- *Hucking.* Competitive truck jumping or "hucking" involves an exhibition of trucks jumping off a gradual incline sand dune ramp with a flat landing area. Hucking events have been held at the Competition Hill portion of the open riding area. Other motorized exhibitions may also be included in hucking events. Such exhibitions will be expected to include space for vendors, camping, a stage, and other temporary event facilities closer to the beach. To date, these exhibition areas have been less than 10 acres. From initial setup to final cleanup, the overall event lasts less than a week; however, the exhibition itself lasts no more than 2 days.
- *Vintage Car Races.* Such events may include car displays, races of pre-World War II-era motorcycles and cars on the hard sand, a beach party, bonfire, and vendors. The race itself comprises two vehicles racing on a short (less than 1,000 feet) stretch of beach. Cars and motorcycles cross the finish line with an average maximum speed of 35 mph. These events are typically weekend events.

8.2.3.4 Special Event Permits

Organized special events hosted by outside agencies, businesses, and organizations may require a CDPR Special Event Permit, which must be approved by the Oceano Dunes District Superintendent. Special Event Permits describe the activity or event that is to occur, the estimated number of participants, the entry fee schedule, the items to be sold, the insurance requirements, and any special conditions placed on the activity or event by the District Superintendent.

The permit conditions include AMMs required to protect resources during the event. Specific AMM recommendations are based on past experience and dependent on the event location, timing, and potential to impact covered species. Permit conditions also ensure that events are planned to avoid sensitive resources, including by adjusting the timing and location of the event. For larger events, the Oceano Dunes District resource staff surveys the special event area prior to the event to verify that no CLTE or SNPL are present. There is an internal protocol for smaller Special Event Permits (weddings, bonfires, family reunions, corporate dinners near Grand Avenue, etc.), requiring the resource staff survey and report any conflicts prior to the event. The

Oceano Dunes District also ensures that none of these events result in exceeding vehicle limits established by the CDP (section III.3.a. and d. of CDP 4-82-300-A5).

The specific events that occur during the ITP term will vary. The examples included above illustrate the nature of permitted special events potentially occurring in the HCP area. All of these events could occur in any month of the year. These and other similar events are expected to continue during the permit term. The Oceano Dunes District does not issue Special Event Permits for events on the City-operated portion of Pismo State Beach.

8.2.4 Pismo State Beach and Oceano Dunes SVRA Access

Regionally, access to coastal southwestern SLO County is primarily provided via State Route 1 and US 101. From San Luis Obispo to just north of Arroyo Grande, State Route 1 (Cabrillo Highway) and US 101 are a combined, four-lane highway (two lanes in each direction). Just north of Arroyo Grande, State Route 1 splits from US 101, running more westerly through Grover Beach and Oceano (see Figure 2-3). This segment of State Route 1 is a two-lane highway (one lane in each direction). Visitors coming to Pismo State Beach and Oceano Dunes SVRA from the north via the City of San Luis Obispo primarily exit US 101 at Hinds Avenue and travel along State Route 1 to Grand or Pier avenues. State Route 1 runs perpendicular to Grand and Pier avenues. Visitors coming from the south through Santa Barbara County exit US 101 at Grand Avenue or use State Route 1 through Oceano.

Pedestrian. North of Pismo Creek, visitors may walk in to Pismo State Beach via a network of roads and stairways off Price Street (via Ocean Way, Wilmar Avenue, and Kon Tiki Inn) and from State Route 1 (via Cypress and Main) and the Pismo Beach Boardwalk along the beach between Main Street and Addie Street. South of Pismo Creek, visitors can access the beach from the Pismo State Beach North Beach Campground and Le Sage Drive. Visitors may also walk into Pismo State Beach and Oceano Dunes SVRA via Grand Avenue, Pier Avenue, points along Strand Avenue, and South Oso Flaco Lake Road. Grand Avenue has a large parking area that provides easy access to the beach and is therefore the most convenient access point for “walk-in” visitors.

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 adjoins Oceano Dunes SVRA. These access points are not close to the beach or open riding and camping area and are less popular than Grand and Pier Avenue access.

The Oso Flaco area located at the southern end of Oceano Dunes SVRA can be accessed from Oso Flaco Lake Road off of State Route 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.

Visitors access Pismo Lake via “informal” access points, as CDPR has not designated access points to the lake.

Equestrian. Equestrian users primarily access the ODD through the Grand Avenue entrance at Grover Beach (due to the presence of an informal staging area) or from the Pacific Dunes Ranch and RV Resort, which offers horseback riding and is located off Silver Spur Place just to the east

of the Pismo Dunes Natural Preserve. Equestrian access in the Oso Flaco area was eliminated in 1991 for resource protection.

Vehicle. Public vehicle access to Pismo State Beach and Oceano Dunes SVRA is only via Grand Avenue in the City of Grover Beach or Pier Avenue in Oceano. These two entrances provide sand ramps that lead vehicles down onto the beach. Visitor data indicate that the Grand Avenue ramp provides access for approximately 51 percent of the visitors entering Pismo State Beach and Oceano Dunes SVRA. The portion of Grand Avenue west of State Route 1 is mostly undeveloped, although a restaurant is located at its western terminus, and the planned and approved Grover Beach Lodge and Conference Center site is located near the intersection with State Route 1. The ramp located at the foot of Pier Avenue in Oceano lies approximately 1 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.

8.3 PROJECT IMPACTS

8.3.1 Thresholds of Significance

Based on CEQA Guidelines Appendix G, the HCP 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, or
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse effect on the environment.

In addition, CDPR 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 or public access.

The proposed HCP new activities (i.e., SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities [CA-12b]; mechanical trash removal [CA-21]; reduction of the Boneyard Exclosure and 6 Exclosure [CA-50]; and CDPR's use of UAS [CA-52]) would not increase use of existing neighborhood and regional parks or other recreational facilities. These activities would not result in changes to visitor use levels at the park or surrounding area nor would they change camping or visitor use limits established by CDP 4-82-300. The proposed HCP does not provide housing or otherwise contribute to population growth in the area by providing a significant amount of new jobs, and therefore, it does not create an indirect demand for recreation at local parks. Therefore, this impact is not further discussed.

The proposed HCP new activities do not propose or entitle the construction of new or expanded recreational facilities. The new activities do not directly or indirectly increase population (by providing housing) or recreational users (by increasing camping or visitor limits established by CDP 4-82-300); therefore, the HCP does not require the construction of new recreational facilities or indirectly require the expansion of any existing recreational facility. Therefore, this impact is not further discussed.

8.3.2 Established Coastal Recreational Opportunities and Public Access

Under the proposed HCP, the OHMVR Division would largely continue existing operations and maintenance activities at Pismo State Beach and Oceano Dunes SVRA. The HCP proposes take coverage for four new activities: SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b), mechanical trash removal (CA-21), reduction in the size of the seasonal exclosure (6 Exclosure and East Boneyard Exclosure; CA-50), and CDPR's use of UAS (CA-52). These activities neither involve any changes to the established camping or visitor limits established by CDP 4-82-300, nor do they reduce areas available for recreational use. For these reasons, the project would not substantially limit, reduce, or interfere with established coastal recreation opportunities in Pismo State Beach and Oceano Dunes SVRA.

SNPL Chick and Egg Capture for Captive Rearing if Observed to be Threatened by Recreational Activity and Other Non-Covered Species Management Activities (CA-12b). CDPR monitors would capture SNPL chicks or eggs if they are threatened by covered activity and relocate the chicks and/or eggs to a captive-rearing facility. This activity does not impact recreational uses occurring in the HCP area and does not change or diminish access to coastal recreational opportunity. SNPL chick and egg capture for captive rearing would have ***no impact*** on coastal recreation opportunity and access.

Mechanical Trash Removal (CA-21). Mechanical trash removal is a temporary and transient maintenance activity to clean beach sand of debris. The mechanical trash removal would temporarily restrict portions of the beach during equipment activities. Mechanical trash removal would occur during the early morning hours (e.g., 6 a.m. to10 a.m.) prior to arrival of most visitors. The equipment is highly maneuverable and would move at a speed of 5 to 10 mph. Equipment operation would not create a public safety concern and would not cause a prolonged restriction in public access. Any restriction that does occur would be removed once the equipment operation is complete. One acre can be cleaned every 10 minutes. Two hours of work could cover roughly 12 acres. CDPR estimates that treatment of the Pismo State Beach day use and SVRA camping project area (Grand avenue south to Post 6) would take about 22 hours. Some areas could be treated several times in a month during a busy season, whereas others only once or twice a year, if at all. Therefore, mechanical trash removal would not adversely affect existing recreational activities or opportunities. Nor would it impede access to the beach or ocean. Mechanical trash removal would have ***a less-than-significant temporary impact*** on coastal recreation opportunity and access and should ultimately benefit recreation through debris removal.

Reduction of the Boneyard Exclosure and 6 Exclosure (CA-50). The HCP proposes elimination of the East Boneyard Exclosure (49 acres) and incremental reduction of the 6 Exclosure (60 acres) subject to meeting SNPL and CLTE biological performance requirements for breeding and fledge numbers and in consideration of additional factors (HCP section 5.2.3; EIR section 6.3.2). Exclosure reduction increments would also be subject to air quality performance standards specified in Mitigation Measures AIR-1A, AIR-1B, and AIR-1C (EIR section 5.50). This exclosure reduction does not change the overall size of either Pismo State Beach or Oceano Dunes SVRA. Under existing conditions, approximately 300 acres within the open riding area of Oceano Dunes SVRA are subject to seasonal exclosure during the 7 months of March through September. The HCP proposed elimination of the 6 Exclosure and East Boneyard Exclosure would open up to 109 of the 300 acres to year-round recreation. Access to 109 acres would be

changed from seasonally available for 5 months (October through February) to being available year-round. This acreage expansion increases the coastal recreational opportunity for camping and vehicle recreation during spring and summer months when park visitation is at its highest levels. The elimination of the East Boneyard Exclosure would expand the area used for open sand dune riding area by 49 acres. The reduced 6 Exclosure would expand the flat beach area along the shoreline used for camping and OHV recreation by up to 60 acres. The increase in available shoreline during the summer season would reduce congestion in a heavily used area. Increasing the acreage available for year-round recreational use is a recreational benefit of the proposed HCP. The HCP would have a ***beneficial impact*** on coastal recreational opportunity and public access**.**

CDPR UAS Use for Park Activities (CA-52). CDPR's use of UAS (e.g. drones) is proposed for data collection purposes such as monitoring of habitat conditions. Use of this aerial equipment would not interfere with recreation uses and would have ***no impact*** on coastal recreation opportunity or public access.

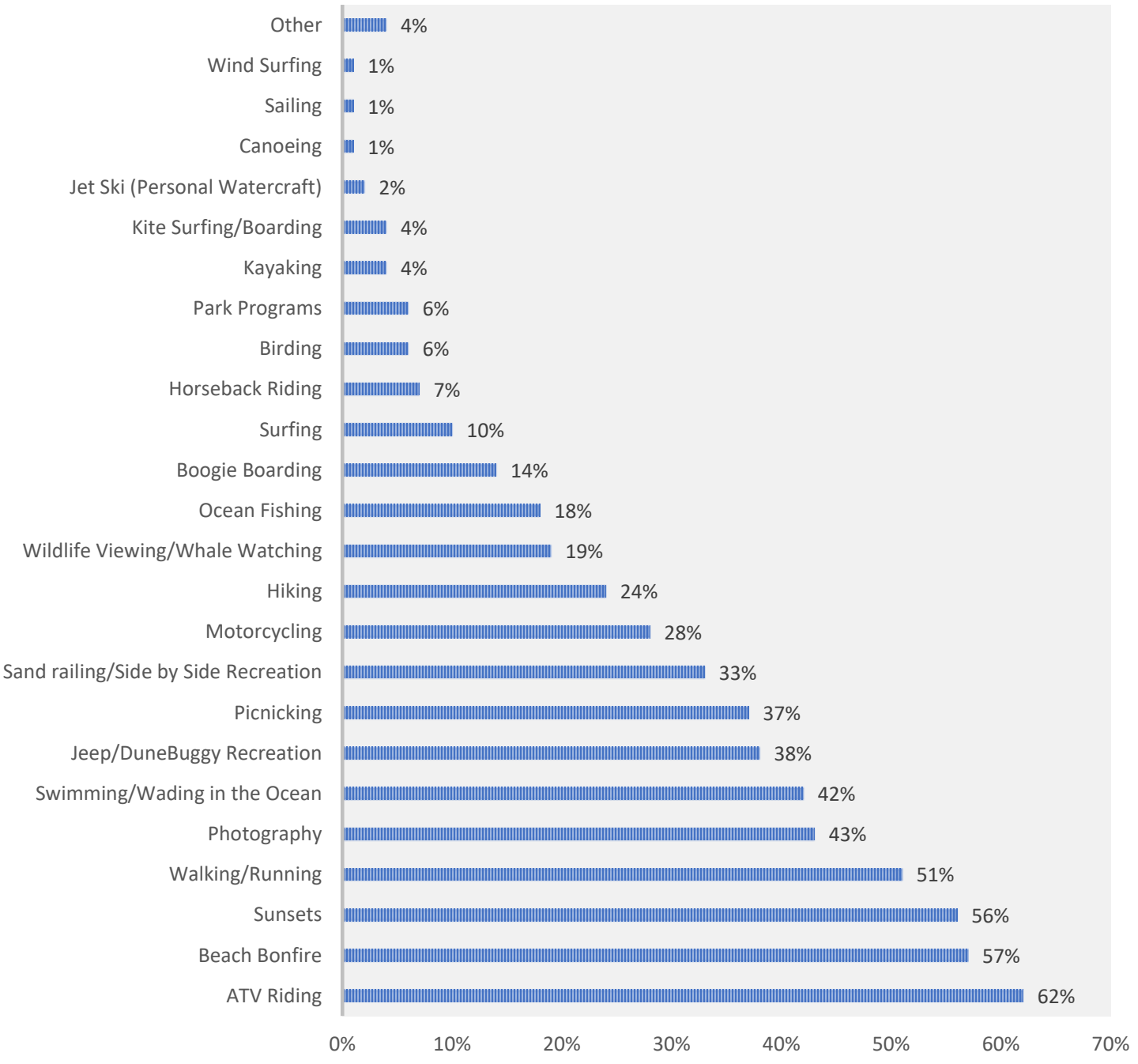
8.4 CUMULATIVE IMPACTS

The HCP proposed new activities of SNPL chick and egg capture for captive rearing (CA-12b); mechanical trash removal (CA-21), seasonal exclosure boundary changes (6 Exclosure and East Boneyard Exclosure; CA-50), and CDPR's use of UAS (CA-52) would not adversely impact recreation facilities, coastal recreation opportunity, or public access to recreation. As such, these activities would not contribute to impacts from other foreseeable projects listed in EIR section 3.3.3, including CA-44 Dust Control Activities – New PMRP and other future potential activities covered by the HCP (EIR section 2.4.2.3), to incrementally increase recreational impacts. Those future activities, including the new PMRP, are subject to separate CEQA review, and potential impacts to recreation would be considered under separate CEQA documents (see EIR section 2.5).

In addition, the HCP does not have the potential for significant adverse effects due to new or expanded recreational facilities, nor does the HCP have the potential to restrict coastal public access or coastal recreation. The HCP new proposed covered activities have the potential to increase recreational opportunities by providing opportunity to increase year-round recreation on up to 109 acres of open riding area that is presently closed to recreation for 7 months of the year. Therefore, the HCP proposed new covered activities would have no contribution to a cumulative adverse effect on coastal recreational opportunity or public access. The HCP would have ***no cumulative impact*** on coastal recreational opportunity and public access.

8.5 MITIGATION MEASURES

No significant impacts to recreation and public access have been identified for the project based on the analysis contained in EIR sections 8.3 and 8.4 above. No mitigation is required



February 2020
Source: SMG 2018

Figure 8-1 Visitor Survey Responses: Recreational Activity Participation (2016-2017)

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Chapter 9 ALTERNATIVES

CEQA Guidelines section 15126.6(f) states that an EIR shall describe a range of reasonable alternatives to a project or location of the project that would feasibly attain most of the basic project objectives but would avoid or substantially lessen any of the significant effects of the project. An EIR's discussion of alternatives 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 the attainment of the project objectives. Section 2.3.2 lists the following objectives for the proposed Oceano Dunes District HCP:

- Avoid, minimize, and mitigate the effects of take of the covered species.
- Implement biological goals and objectives for covered species (HCP section 5.5) to promote species and habitat conservation.
- Obtain a permit from the USFWS to authorize incidental take of covered species and ensure FESA compliance.
- Operate the covered park units in a manner that provides for public use and enjoyment while conserving park resources, consistent with the overall mandate of CDPR and the specific unit classifications, as prescribed by the Public Resources Code.
- Preserve, manage, and expand, as appropriate, motorized and non-motorized recreational opportunities.
- Manage, maintain, and maximize, as appropriate, access to the unique coastal camping and recreational amenities in the HCP area.
- Facilitate implementation of permit, legal settlement, and judicial or quasi-judicial order conditions and obligations applicable to one or both covered units.

An EIR is not required to consider alternatives that are infeasible (CEQA Guidelines § 15126.6(f)). A lead agency is responsible for selecting the range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. Factors that may be taken into account when considering feasibility include site suitability, economic viability, availability of infrastructure, 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.

9.1 CONSIDERED AND REJECTED ALTERNATIVES

An EIR should identify any alternatives that were considered by the lead agency but were not compared to the proposed HCP in the EIR and briefly explain the reasons underlying the lead agency's determination. Among the factors that may be used to eliminate alternatives from detailed consideration in the EIR are: 1) failure to meet most of the basic project objectives (see above); 2) infeasibility; and 3) inability to avoid significant impacts. Below is a discussion of alternatives considered and rejected by CDPR based upon one or more of these factors.

9.1.1 No Take Park Operations

Oceano Dunes District manages 5,005 acres of state beach and SVRA land receiving approximately 2 million visitors annually. Four federally- and/or state-listed animal species and six federally- and/or state-listed plant species occur or have the potential to occur within the HCP area. Although plants are not subject to the FESA take prohibition, loss of listed plants is considered for the purposes of evaluating this No Take Alternative. Of these 10 species, CLTE, SNPL, and listed plants are most likely to be impacted by existing visitor uses or park operations. The greatest risk of impact (moderate to high) to SNPL and CLTE is from motorized recreation (CA-1), camping (CA-2), concentrated visitor use during holidays (CA-10) and special events (CA-11), and conservation activities (CA-12) and to certain listed plants from routine riparian maintenance (marsh sandwort and Gambel's watercress; CA-26) and special projects (potential loss of La Graciosa thistle, beach spectaclepod, and/or surf thistle habitat; CA-49). The proposed HCP would not alter the management of these covered activities and would not add to the existing risk of impact or take caused by these covered activities. The proposed HCP would introduce new but minimal risk of impact or take to CLTE and SNPL from mechanical trash removal (CA-21) and a moderate to high risk of impact or take to CLTE and SNPL from reduction of the 6 Exclosure (CA-50). These new covered activities would not increase risk of impact to listed plants.

The purpose of the No Take Alternative would be to modify park operations in order to substantially eliminate activities that have moderate to high potential for risk of take in the areas where the species occur. During the nesting season, CLTE and SNPL mostly congregate along the shoreline in primary habitat south of Post 6 but could be reasonably expected to occur in any of the 727 acres of primary habitat in the park south of Post 1. SNPL is more widely dispersed during the winter season (CLTE does not winter in the HCP area). Documented incidents of CLTE and SNPL take (mortality, injury, harassment) have occurred from vehicle strike, visitor disturbance, and from conservation activity (see Table 6-8. and Table 6-9.). SNPL take can occur year-round and is not limited to the protected nesting habitat after fencing is removed. There have been no documented incidents of CRLF take. Up to three tidewater goby individuals are known to have been harmed during permitted fisheries surveys (CA-13); none are known to have been taken from other covered activities. For all species, it is assumed that some level of unseen take could occur from park operations (see, e.g., HCP Table 4-1).

Closure of all primary and secondary habitat to vehicle use south of Grand Avenue would likely be required in order to avoid habitat disturbance and the potential for take of CLTE and SNPL from vehicle strike (HCP Maps 11 and Map 13). This closure would eliminate access to the entire open riding area, resulting in a severe modification of park operations and complete loss of motorized coastal access, and it would not eliminate the potential for take from non-motorized uses or from any CDPR vehicles needed to enter the area for park operations. Under this alternative, the loss of shoreline access for visitor use, vehicle recreation, and camping would be permanent as would the loss of motorized access to non-motorized recreation. Such closure is incompatible with the recreational purpose of the SVRA and CDPR's mandate to develop, manage, and operate the SVRA for the purpose of providing the fullest appropriate public use of the vehicular recreational opportunities present, while providing for the conservation of cultural resources and the conservation and improvement of natural resource values over time (PRC § 5090.43 (a)). This alternative would also fail to meet project objectives of providing for public use and enjoyment and preserving, managing, and expanding recreational opportunities as

appropriate and while conserving park resources. The conservation program laid out in the HCP has successfully and substantially increased the breeding population of SNPL and CLTE, demonstrating CDPR's ability to conserve park resources and improve natural resource values while providing motorized coastal access and recreation.

If a new access to the southern portion of the park is developed, it is possible that vehicle recreation in approximately 950 acres of sand dunes (non-primary CLTE and SNPL habitat) in the SVRA could be preserved for vehicle recreation in an area where take is unlikely to occur. As discussed in EIR section 9.1.3.2, southern access was previously studied and determined to have greater impacts than the current vehicle shoreline access from the north, but future studies may identify improved access options.

In addition to take from park operations, recreation, etc., the conservation program described in the HCP, which is designed to protect, monitor, and enhance the species and their habitat, also carries inadvertent risk of take associated with some of these activities that can be minimized but not completely avoided. A "no take" alternative could reduce or eliminate conservation activities such as habitat fencing, chick-banding, dipnet surveys, etc., as it is unknown whether CDPR would continue to fund such an intensive conservation program in a non-motorized recreation area. The value of these activities to species conservation far outweigh the take risk. Discontinuing conservation program activities in order to avoid take associated with those activities is incompatible with park conservation goals and protection of natural resources.

Short of park closure or substantial reduction in visitor access and discontinuation of many of the conservation program activities, the potential for unauthorized take would still exist. To the extent CDPR continued all or part of the conservation program, it is assumed that CDPR would seek a 10 (a)(1)(A) recovery permit, which would not eliminate take but would ensure management take was consistent with FESA requirements. Even with continuation of all or part of the conservation program, the severity of reduction in recreation opportunity that would be required in order to eliminate the possibility of the remaining incidental take makes this alternative infeasible, and therefore it is rejected from further consideration.

9.1.2 Off-site Mitigation in lieu of Nesting Exclosures

Off-site mitigation in lieu of nesting exclosures is a management strategy that redirects all or part of the species conservation effort in the HCP area to off-site locations where protected species habitat and recreation uses are not in conflict. Potential locations appropriate for consideration would include areas known to contain primary species habitat and capable of supporting populations in levels that would offset the loss of nesting habitat acreage and take impacts from less restricted park recreation. This strategy is an alternate approach to the park's existing conservation program, which seasonally closes off 300 acres of highly productive on-site primary SNPL and CLTE nesting habitat within the open riding area.

An off-site conservation approach does not reduce the potential for take within the HCP area associated with the covered activities. Complete elimination of seasonal nesting exclosures would remove fencing currently protecting nesting SNPL and CLTE from visitors and predators and likely result in a substantial take increase, reduced nesting attempts, and significantly lower breeding productivity and on-site populations. Loss of a robust population of CLTE and SNPL at this location could reduce its contribution to species regional recovery units. The proposed HCP does include some reduction in the size of seasonal nesting exclosures (CA-50), but only to the

extent such reduction does not damage the effectiveness of the conservation program, which is designed to maintain the success of on-site breeding.

To create an off-site mitigation area in lieu of all or part of the existing nesting exclosures, an unknown number—but presumably hundreds of acres—of suitable and equally productive off-site habitat would have to be located and targeted for in-kind replacement of nesting habitat no longer seasonally protected in the HCP area. The habitat would need to be within SNPL Recovery Unit 5 and preferably within CA-83. Off-site mitigation in lieu of the existing nesting exclosures would eliminate a successful conservation program that CDPR has slowly built over the last 2 decades in favor of an unproven program at a new location. It is possible that CDPR could attempt to expand or improve success of an established off-site breeding colony. Even if suitable property could be located and all agreements negotiated, there is no guarantee that breeding success of CLTE and SNPL occurring in the HCP area can be replicated off site. The risk is especially true for CLTE, which exhibit a high degree of site fidelity. As described in HCP section 3.3.2.5, the HCP-area CLTE breeding colony has become an important component of CLTE recovery.

An off-site conservation location would introduce new risk to species conservation and also new investment costs to CDPR for property search, technical studies, and property management or partnership with the landowner or resource agencies. Such costs could be reduced if suitable mitigation land could be found on existing CDPR property. Although this alternative better meets CDPR's objective to preserve, manage, and expand, as appropriate, motorized and non-motorized recreational opportunities, it likely would not succeed in conserving park resources consistent with the PRC. Specifically, by transferring all or part of the SNPL and CLTE breeding value off site, CDPR may not be providing for the conservation and improvement of natural resource values within the HCP area (see PRC § 5090.43 (a)). Given the uncertainty of success, new costs, increased risk of impact to on-site CLTE and SNPL populations, and the remaining need for a take authorization, this alternative is rejected from further consideration.

In conjunction with, or in lieu of, off-site mitigation, CDPR could attempt to manipulate habitat within South Oso Flaco to create additional SNPL and CLTE breeding habitat within the HCP area. Any SNPL and CLTE nesting in this new habitat would be farther away from areas heavily used for recreation and completely away from motorized use areas. Based upon habitat management work already done within the HCP area, including restoring approximately 180 acres in South Oso Flaco degraded by European beach grass, CDPR has determined that efforts short of major habitat modification would be unlikely to attract substantial numbers of breeding SNPL or CLTE to fully replace the breeding population in the current conservation area. Even with major modification, such as leveling the foredune complex, SNPL and/or CLTE may remain in current nesting habitat or may expand into the new area without abandoning the existing habitat. Given the extensive modification of sensitive dune habitat that would be involved and the uncertainty of any meaningful reduction in take potential, this alternative is also rejected from further consideration.

9.1.3 Changes in Oceano Dunes SVRA Access

9.1.3.1 Install Bridge Over Arroyo Grande Creek

Motorized vehicle creek crossing is a covered activity (CA-40) presently occurring at the park. Under this alternative park operation, a temporary vehicle crossing structure would be erected

over Arroyo Grande Creek at times when the creek flows connect to the ocean. There is a small possibility that vehicles crossing Arroyo Grande Creek could kill or injure tidewater gobies if the vehicles were to cross the creek during a high-flow, winter flood event, which is when tidewater goby may be migrating through the creek mouth. Tidewater goby wash out in high flows and come back during lower flow, but this is a rare event. Vehicles attempting to cross heavy creek flows can become stuck or washed toward the ocean. These vehicles could also leak fluids into the creek. Under current and proposed operations, however, vehicular crossing of Arroyo Grande Creek is prohibited or severely limited during high flows. As a result, vehicles are not anticipated to kill or injure tidewater goby. Furthermore, the alternative would not reduce the potential for take of SNPL and CLTE associated with park visitor use and operations or otherwise reduce impacts of the proposed HCP. The bridge would enable continued access south of the creek when creek flows have become unsafe for crossing, thereby allowing access to the SVRA at a time it would otherwise be closed. This alternative has been previously studied by CDPR (Condor, Environmental Planning Services Inc., 2006), however, and was determined not to be viable. It is rejected from further consideration as an access alternative in the HCP.

9.1.3.2 Alternate Access Route

CDPR previously evaluated developing alternative vehicle access at the southern end of the park in 1991 (CDGS, 1991) and again in 2006 (Condor, Environmental Planning Services Inc., 2006). The 1991 study investigated five alternative access points, of which one was chosen as the least environmentally damaging corridor and the preferred alternative. This alternative is the Grand Avenue corridor; it had less-than-significant impacts on all resources considered in the study and required no mitigation measures. The expansion of the Pier Avenue entrance was the second least damaging, and it also had less-than-significant impacts on all resources considered in the study. Other alternatives considered were located at Railroad Road, Silver Spur Place, and Callender Road.

The 2006 analysis presented a comprehensive analysis of six alternative routes in addition to the two existing access corridors at Grand Avenue and at Pier Avenue. The options included three access corridors at the north end of the beach (Ocean Street, Creek Road, or Silver Spur Place) and three at the south end of the park (ConocoPhillips, Little Oso Flaco Lake, or Oso Flaco Lake). Extensive environmental impacts were associated with the construction of new alternative access roads, such as impacts on wildlife and plant life, traffic, cultural resources, and the visual character of the area. Therefore, the report recommended against constructing any new roads based on the conclusion that the existing two access corridors at Grand Avenue and Pier Avenue were the best means for providing vehicular access to the beach.

Both the 1991 and 2006 studies determined access was feasible, but the optional routes would have involved greater impacts than the current impact of using the existing northern access route. For this reason, an alternate access route to Oceano Dunes SVRA was rejected from further consideration as an access alternative in the HCP. Based on the available information, this alternative was eliminated from further consideration as it would not facilitate project objectives or reduce impacts of the proposed HCP. Future studies evaluating alternative access approaches may identify a less impactful southern access route, determine impacts can be avoided, or conclude that conditions otherwise warrant a southern access route. CDPR is preparing a PWP that may consider alternate southern access to the park (see EIR section 3.3). If alternate access becomes feasible and is proposed, it could be included in the HCP through an amendment.

9.1.4 Restricted Riding Times

9.1.4.1 Night Riding Closure

Motorized vehicle use at Oceano Dunes SVRA may occur at any time of day or night without riding hour restrictions. Oceano Dunes SVRA is a camping area and providing access to the park obligates allowing vehicles to move around 24 hours a day. The public has a legal right to leave their campsites at any time. Enforcement of night riding restrictions on OHVs or street-legal vehicles would be infeasible without overnight patrols, which are outside the current ability of CDPR. The impacts of nighttime riding on the environmental are impacts of the existing park operations. The proposed new covered activities do not change night riding impacts above environmental baseline conditions.

Nighttime riding has been previously evaluated by CDPR for potential effects on SNPL (Mad River Biologists, 2005). The study found there is a higher degree of reaction to an approaching vehicle at night than day probably equating to a lower risk of collision. Birds were more likely to respond to an approaching vehicle with flight during the night than during the day. Birds reacted to a spotlight from vehicles before reacting to the vehicle itself. The study was inconclusive regarding an elevated risk of take from nighttime riding, and it is unknown how many, if any, shorebirds are struck by vehicles at night. Even if feasible, prohibiting nighttime riding would not eliminate potential take of CLTE and SNPL from motor vehicle recreation and would not resolve CDPR's need for authorized take pursuant to an ITP. AMMs are in place to reduce potential effects related to night riding such as protection of night roosting, seasonal exclosure protection of nighttime foraging, and distribution of educational pamphlets to park visitors. Vehicles traveling at night could impact dispersing CRLF but this very unlikely due to low CRLF populations and the poor quality of the open riding area as CRLF habitat. Nighttime vehicle use would not impact tidewater goby. As a result, restricting nighttime vehicle use would not likely reduce any potential take impacts of the HCP covered species. Additionally, because nighttime riding is less prevalent than daytime riding and occurs within the same areas disturbed by daytime riding, eliminating night riding is unlikely to affect particulate emissions.

Given that prohibiting nighttime vehicle use is not operationally feasible, is unlikely to substantially reduce environmental effects of the new covered activities (e.g., air quality emissivity levels and increased risk of take of SNPL and CLTE), and does not meet several project objectives (e.g., avoid, minimize, and mitigate effects of take of the covered species; preserve, manage, and expand, as appropriate, motorized and non-motorized recreation; manage, maintain, and maximize, as appropriate, access to the unique coastal camping and recreational amenities in the HCP area), the nighttime riding restriction is rejected from further consideration.

9.1.4.2 Seasonal Closure to Motorized Recreation

The Seasonal Closure to Motorized Recreation Alternative is a variation of the No Take Alternative. Rather than permanently closing areas of the SVRA, this alternative would close large portions or all of the SVRA to motorized recreation either during the March 1 through September 30 breeding season or the October 1 to February 28 non-breeding season (when the majority of SNPL take occurs). The purpose of this alternative would be to reduce the activity generating the highest risk of take to covered species.

Approximately 300 acres of the open riding area are already seasonally closed for 7 months out of the year to provide protected nesting habitat for CLTE and SNPL. The Southern Exclosure

protects the most valuable and productive habitat within the HCP area. Temporal closure of the entire open riding area to motorized recreation and camping would unnecessarily prohibit public access on over 900 acres of non-primary nesting and foraging habitat where take is less likely to occur.

Given the year-round presence of SNPL and their wide dispersal during non-breeding months, seasonal closure of the park to motorized recreation would have a limited effect on reducing SNPL or CLTE take beyond the protection afforded by the proposed HCP and would not resolve the need for a take permit. The non-breeding season closure would not address CLTE take at all since CLTE does not winter in the HCP area. Similar to the No Take Alternative, the impact of the Seasonal Closure to Motorized Recreation Alternative upon recreation access would be substantial and would not meet CDPR's mandate to develop, manage, and operate the SVRA for the purpose of providing the fullest appropriate public use of the vehicular recreational opportunities present, while providing for the conservation of cultural resources and the conservation and improvement of natural resource values over time (PRC § 5090.43 (a)).

This alternative would also fail to meet project objectives of providing for public use and enjoyment and preserving, managing, and expanding recreational opportunities as appropriate and while conserving park resources. Given the documented stability of the CLTE and SNPL population levels existing in proximity to motorized recreation in the HCP area, seasonal closure of the SVRA whether in greater measure or in its entirety is unwarranted due to recreation access impacts and is rejected from further consideration.

9.1.5 Increased Vehicle Use Limits

In 2001, the CCC amended CDP #4-82-300 establishing daily limits on vehicles within Oceano Dunes SVRA: up to 2,580 street-legal vehicles, 1,000 street-legal vehicles for camping, and 1,720 OHVs, which is consistent with a carrying capacity study completed in 1998 (CCC, 2001). The CDP limits were intended to be interim, but given that the limits have been in place for almost 2 decades, CDPR has considered them to be permanent (CCC, 2001). More recently, in response to closures for dust control, CDPR administratively reduced the number of available camping units to 500. An increase in daily vehicle limits or camping limits without a corresponding increase in recreation acreage would compress vehicle recreation and camping into a smaller space at a higher concentration. The increase in vehicle use numbers could increase the risk of take of SNPL and CLTE and could necessitate an increase in the proposed HCP take limit of these species, although an increase in take may be avoidable given the HCP's extensive conservation program. Increased vehicle use limits could cause increased emissivity of PM_{10} in the open riding area resulting in increased air quality impacts.

This alternative is consistent with the project objective to preserve, maintain, and expand, as appropriate, motorized and non-motorized recreational opportunities. However, an increase in OHV limits would not serve the HCP conservation goals of species protection and population enhancement. Increasing camping limits would also not be consistent with the recent reduction in allowable camping vehicles due to dust control closures. At some point in the future, CDPR could seek to adjust vehicle use limits, but no change is proposed by the HCP, and no change has been identified that would achieve project objectives better than the proposed HCP. A formal carrying capacity study and any resulting changes to vehicle, camping, or other visitation numbers is beyond the scope of the HCP and this EIR. Given that this alternative does not avoid

or substantially reduce environmental impacts (e.g., potentially significant air quality impacts or the risk of take of covered species), this alternative is rejected from further consideration.

9.2 ALTERNATIVES CONSIDERED

Pursuant to CEQA Guidelines section 15126.6, the rationale for selecting the alternatives presented in this EIR is to attempt to feasibly attain most of the basic project objectives while avoiding or substantially lessening the significant effects of the project. As summarized in Table S-1 and described in corresponding EIR section 5.3, the proposed new HCP covered activities (CA-21 and CA-50) would have potentially significant impacts on air quality that require mitigation. The alternatives presented below focus on substantially reducing or eliminating the impacts of these covered activities.

9.2.1 Alternative 1: No Project Alternative

9.2.1.1 Alternative Description

CEQA Guidelines (§ 15126.6(e)) require evaluation of a "no project" alternative along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. When the project is the revision of an existing land use or regulatory plan, policy, or ongoing operation, the "no project" alternative is the continuation of the existing plan, policy, or operation into the future. In this situation, the projected impacts of the proposed plan or alternative plans are compared to the impacts that would occur under the existing plan (§ 15126.6(e)(3)(A)). The impact of the no project alternative is analyzed by projecting what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.

Under this alternative, the USFWS would not issue an ITP for the ODD parklands. Incidental take of SNPL, CLTE, CRLF, and tidewater goby that may occur from visitor uses and park operations, whether occurring presently or in the future, would be unauthorized, leaving the violation of FESA unresolved. CDPR would maintain its current park operations and continue implementation of its current conservation program including its annual strategy to avoid take. Changes proposed by the HCP, including SNPL chick and egg capture for captive rearing when eggs and chicks are observed to be threatened by non-covered species management activities (CA-12b), mechanical trash removal (CA-21), reduction of the East Boneyard Exclosure and 6 Exclosure (CA-50), and CDPR's use of UAS (CA-52) would not occur. The existing adaptive management process employed by CDPR would be kept in place. CDPR would continue to enforce regulations and voluntarily implement AMMs identified in the HCP section 5.2.3 (see AMM list in EIR Appendix B) to prevent take of SNPL, CLTE, CRLF, and tidewater goby and impacts to listed plants during covered activities; CDPR's commitment to funding and implementing the conservation program absent the ITP would be non-binding.

Future activities that may be proposed by CDPR, such as those identified in the HCP and in Table 2-4., that may require take authorization would require individual review and permitting by USFWS rather than occurring in one comprehensive review under the proposed HCP. CDPR would submit individual permit applications to USFWS as projects are proposed.

9.2.1.2 Environmental Analysis

Land Use. The No Project Alternative would have no impact on land use. The HCP does not propose a change in land use of the park property or conflict with land use policy. The current land uses of the park would remain unchanged similar to the proposed HCP.

Air Quality. Under the No Project Alternative, no changes would occur to the seasonal exclosure boundary. As a result, the potential increase in dust emissivity associated with increased vehicle recreation in the East Boneyard Exclosure and 6 Exclosure (CA-50) or Mechanical Trash Removal (CA-21) proposed by the project as described in EIR section 5.3 would not occur. There would be no potential increase in contribution to exceedance of PM_{10} ambient air quality standards downwind of Oceano Dunes SVRA. Project Mitigation Measures AIR-1A-D would not be required or implemented.

Biological Resources. Under the No Project Alternative, SNPL chicks and eggs observed threatened by covered activities not related to covered species management would not be captured for captive rearing (CA-12b; AMM 22). These chicks and eggs would be protected with single-nest exclosures and monitored but would otherwise remain vulnerable to take if chicks or eggs have been abandoned or are located in an area where travel to the shoreline for foraging exposes them to vehicle strike. Mechanical trash removal (CA-21) and its potential impacts upon the invertebrate population prey source for foraging shorebirds would not occur. No change to the seasonal exclosure (CA-50) would be implemented. Potential project decreases in nesting productivity associated with the incremental loss of protected prime CLTE and SNPL nesting habitat in the 6 Exclosure would be avoided. Conservation program activities that disturb federal species either directly (e.g., surveys, dip-netting surveys, etc.) or indirectly (predation of nests/chicks in exclosures, fence strikes, etc.) would continue and could result in authorized take similar to the proposed HCP, assuming CDPR retains 10(a)(1)(A) recovery permit authorization. Chick banding of SNPL occurs under an existing recovery permit and would presumably continue under the No Project Alternative as an authorized activity. Similarly, any ongoing impacts to covered or special-status species as described in this EIR caused by existing park visitor activities, natural resources management, park maintenance, visitor services, and other previously approved covered activities would continue. To the extent ongoing activities require periodic permit approval, such as tidewater goby and salmonid surveys, those activities and any resulting effects would only occur so long as the activity has permit authorization. The No Project Alternative would not cause new adverse impacts to either the covered or special-status species.

Under a No Project Alternative, CDPR might expand its protection of covered species (e.g., increasing monitoring) as funding and resources allowed. Without the CDPR funding commitments mandated by the ITP, however, some of the funding currently used to implement the rigorous monitoring and predator control programs could be redirected to other operations and needs within the Oceano Dunes District. This could interfere with CDPR's ability to successfully implement AMMs and could reduce overall breeding success and/or leave covered species vulnerable to injury or mortality in the HCP area.

Cultural Resources. The proposed new HCP covered activities (CA-21 and CA-50) would not impact cultural resources. Likewise, the No Project Alternative would not impact cultural resources.

Recreation and Public Access. Under the No Project Alternative, CDPR would continue to operate the park using existing visitor use boundaries and restrictions. No changes would occur to the present boundaries of the East Boneyard Exclosure (approximately 49 acres) and 6 Exclosure (60 acres), including restrictions on camping and parking within 100 feet of the exclosure fence. Recreation on 109 acres within these two exclosures would continue to be restricted for 7 months during the CLTE and SNPL nesting season. While the effect would be no change from existing conditions, this alternative prolongs the restricted access along roughly 0.5 miles of shoreline that has been seasonally closed in response to the Consent Decree. The loss at the time was considered temporal until an HCP could be prepared and the acreage or some portion of it could be regained for year-round recreational purposes. The proposed HCP represents an effort to reclaim recreational acreage while providing a robust natural resource conservation program in order to provide public use, motorized and non-motorized recreational opportunities while conserving park resources and minimizing take.

9.2.1.3 CDPR Consideration of Alternative

The No Project Alternative conflicts with CDPR's responsibility of managing state parkland in a manner consistent with governing laws while promoting accessible recreation. The No Project Alternative does not resolve the unavoidable, unauthorized take of federally-listed species by visitor use and park operations, and thus does not bring park operations into compliance with FESA. Eliminating AMM 22 as a management option would complicate implementation of dust control measures such as the new foredune closure. The No Project Alternative represents an unacceptable risk to CDPR for FESA violation and does not address conservation of species through formalized adoption and funding commitment of the conservation program. This alternative also would not avoid, minimize, and mitigate take or provide for public use and enjoyment while conserving park resources as effectively as the proposed HCP, and it would neither expand motorized and non-motorized recreational opportunities nor facilitate other conditions and obligations (e.g., the 2005 Consent Decree).

CDPR evaluated the possibility of obtaining take permits for individual maintenance and/or recreation activities, but rejected this alternative because of cost, staffing, and effectiveness considerations. Project-by-project permitting would require multiple permit applications, including possibly multiple HCPs resulting in a significant amount of USFWS and CDPR administrative effort. This alternative would also likely be less effective at protecting covered species than a single, comprehensive conservation program.

Given the failure of the alternative to meet project objectives, the No Project Alternative is not a viable option and is rejected by CDPR in favor of the proposed HCP project.

9.2.2 Alternative 2: Reduced Disturbance in High PM_{10} Emissivity Areas

9.2.2.1 Description

Under the Reduced Disturbance in High PM_{10} Emissivity Areas Alternative, the proposed change to the northern boundary of the seasonal exclosure (CA-50) would be eliminated from the HCP, and mechanical trash removal (CA-21) would be prohibited south of Post 4. The northern limit of the seasonal exclosure would remain in its current location at Post 6 rather than being incrementally shifted to Post 7. SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-

12b) and CDPR's use of UAS (CA-52) would remain as proposed. The purpose of this alternative would be to avoid activities with the potential to increase particulate emissions from the HCP area. CDPR would still propose eliminating the approximately 49-acre East Boneyard Exclosure. The Southern Exclosure would thus be approximately 251 acres. Section 5.2.3 of the HCP would be removed; however, all objectives and success criteria of HCP Table 5-7 (SNPL) and Table 5-8 (CLTE) would remain. All other features of the HCP would be implemented as described in Alternative 1.

9.2.2.2 Environmental Analysis

Land Use. The Reduced Disturbance in High PM_{10} Emissivity Areas Alternative would keep the northern boundary of the Southern Exclosure unchanged from its current location but would eliminate the East Boneyard Exclosure. The alternative would not conflict with land use policy, and other than allowing year-round recreation in the East Boneyard area, would not cause a change in land use of the park property. Mechanical trash removal does not affect land use policy or change land use of the park property.

Air Quality. Under the Reduced Disturbance in High PM_{10} Emissivity Areas Alternative, the 60 acres of the 6 Exclosure proposed in CA-50 would not be opened to year-round riding but would remain seasonally closed 7 months out of the year. Furthermore, surface disturbance and reduction of surface organic matter caused by mechanical trash removal (CA-21) would not occur south of Post 4 in the areas identified as highest emissions potential by recent air quality monitoring (CDPR, 2019).

The 6 Exclosure area has the greatest potential for increasing the park's contribution to exceedance of PM_{10} ambient air quality standards downwind of Oceano Dunes SVRA due to its direct upwind location, sand composition, and emissivity characteristics. Under this alternative, the potential dust emissivity levels associated with vehicle recreation in this area would remain unchanged from current baseline conditions. The potentially significant impacts of increased vehicle recreation in the 6 Exclosure described in EIR section 5.3 would not occur. The potential increase in emissivity from removing material from the top layer of sand would also not occur south of Post 4. The air quality impacts associated with the elimination of East Boneyard and allowing year-round riding in this area would be the same as the proposed HCP.

Biological Resources. Under the Reduced Disturbance in High PM_{10} Emissivity Areas Alternative, impacts associated with SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b) and CDPR's use of UAS (CA-52) would occur as proposed under the HCP. No change to the northern boundary of the seasonal exclosure at Post 6 would be implemented. This alternative avoids the uncertainty of the SNPL and CLTE response to the incremental reduction of the 6 Exclosure (CA-50). Maintaining the 6 Exclosure does not guarantee a continuation of current breeding successes and population growth trends into the future. Potential decreases in nesting productivity and potential increases in take due to nest establishment in formerly closed areas and territorial aggression causing increased chick movement into the open riding area associated with the incremental loss of primary SNPL and CLTE nesting habitat in the 6 Exclosure would be avoided. This alternative would also avoid some of the potential adverse effects of mechanical trash removal (CA-21) on SNPL nesting and wintering habitat by remaining north of Post 4. All other biological impacts of this alternative, including from elimination of East Boneyard, would be the same as the proposed HCP.

The 6 Exclosure provides 60 acres of primary habitat for both SNPL and CLTE nesting (HCP Maps 11 and 13) and is consistently the most productive nesting area of all the seasonal exclosure locations in the park. In recognition of the biological value of the 6 Exclosure for SNPL and CLTE breeding, the proposed HCP includes specific criteria that must be met for both SNPL and CLTE prior to and during implementation of a reduced 6 Exclosure (HCP section 5.2.3). These criteria have been established to ensure the HCP area continues to contribute to species recovery while cautiously reopening some or all of the 6 Exclosure shoreline to year-round recreation. Regardless, retaining the 6 Exclosure in its current configuration would avoid the potential impacts to breeding SNPL and CLTE described in sections 6.3.2.1 and 6.3.2.2, including possible increased territorial aggression and increased movement of breeding and rearing activity in the open riding area.

Cultural Resources. The Reduced Disturbance in High PM_{10} Emissivity Areas Alternative would not impact cultural resources. Neither the HCP proposed reduction of the 6 Exclosure nor mechanical trash removal would impact cultural resources (EIR section 7.3), so this alternative would have the same no impact on cultural resources as the proposed HCP.

Recreation and Public Access. Recreation opportunity has declined over the years in response to various factors (e.g., Consent Decree, Dust Control Program, natural and cultural resource management). Key changes in riding area restrictions are listed below in Table 9-1. Keeping the northern boundary of the seasonal exclosure at Post 6 would continue the existing access restriction on 60 acres of beach shoreline during the nesting season from March 1 through September 30. This closure coincides with the busy summer season when the demand for recreation space peaks and visitor use in the HCP area routinely reaches vehicle daily limits and camping limits. The 6 Exclosure covers one-half mile of shoreline and 60 acres in a prime camping area location. The camping area north of 6 Exclosure is densely packed during summer months. Under the Reduced Disturbance in High PM_{10} Emissivity Areas Alternative, this existing condition would continue unchanged.

Under the proposed HCP, recreational access would be increased by 109 acres through exclosure reductions (6 Exclosure and East Boneyard). Under the Reduced Disturbance in High PM_{10} Emissivity Areas Alternative, recreational access would be increased by approximately 49 acres – 60 acres less than the proposed HCP. This alternative reduces the Southern Exclosure from approximately 300 acres to approximately 251 acres rather than to 191 acres. This alternative reduces the recreational benefit of the proposed HCP. The alternative also eliminates the health and safety benefits mechanical trash removal would provide recreationists by removing broken glass, nails, and other debris from camping and other recreation sites south of Post 4.

9.2.2.3 CDPR Consideration of Alternative

The Consent Decree signed by Sierra Club and CDPR (discussed in EIR section 2.4.2.2 and HCP section 2.2.5.11) stipulates that the CDPR HCP application to the USFWS would support a northern boundary of the seasonal exclosure at Post 7. This alternative conflicts with the Consent Decree by maintaining the northern boundary of the seasonal exclosure at Post 6 and thus does not achieve the project objective of facilitating implementation of legal settlement conditions and obligations. CDPR rejected this alternative when preparing the HCP (HCP section 8.3). CDPR determined the conservation program proposed under the HCP provides adequate AMMs, and the biological criteria and other factors that are required to reduce the 6 Exclosure (HCP section 5.2.3) ensure that take of SNPL and CLTE as a result of reducing the exclosure size would be

minimized. Further, this alternative eliminates the incremental restoration of recreation opportunity on 60 acres at this location from 5 months per year to year-round and eliminates the benefits of debris removal in some recreation areas. This alternative conflicts with project objectives to preserve, manage, and expand motorized and non-motorized recreation opportunities and to manage, maintain, and maximize access to the unique coastal camping and recreational amenities as appropriate. The alternative preserves existing but not historic recreation opportunity. Likewise, the alternative maintains but does not maximize a unique coastal camping opportunity. The proposed HCP thus fully achieves project objectives of promoting species and habitat conservation, ensuring FESA compliance, and avoiding, minimizing, and mitigating take effects. The proposed HCP better meets project objectives of operating the covered park units in a manner that provides for public use and enjoyment while conserving park resources and preserving, managing, and expanding motorized and non-motorized recreational access. Given these considerations, the Reduced Disturbance in High PM_{10} Emissivity Areas Alternative is rejected in favor of the proposed HCP.

9.2.3 Alternative 3: Permanent Year-Round Exclosures

9.2.3.1 Description

Under the Permanent Year-Round Exclosures Alternative, the open riding area boundary would be permanently modified to exclude the seasonal exclosure from recreational access. Proposed reduction of the East Boneyard Exclosure and 6 Exclosure (CA-50) would not occur. Other proposed new covered activities (i.e., SNPL chick and egg capture for captive rearing [CA-12]; mechanical trash removal [CA-21]; and CDPR's use of UAS [CA-52]) would remain as proposed. The permanent exclosure would not be actively managed by CDPR. The purpose of the alternative would be to provide wintering shorebird protection (including SNPL) and to improve SNPL and CLTE nesting habitat quality by limiting recreation disturbance. The Scientific Subcommittee formed in compliance with CDP 4-82-300, as amended, has long recommended that CDPR evaluate benefits of year-round exclosures. Such areas may become less productive over time as vegetation becomes established and reduces the open habitat favored by nesting SNPL and CLTE, but this possibility has not been analyzed in the HCP area. The perfect combination of open sand, microtopography, and scattered vegetation and debris is not fully known.

9.2.3.2 Environmental Analysis

Land Use. The Permanent Year-Round Exclosures Alternative would redefine the boundaries of the open riding area to permanently exclude all or part of the seasonally protected CLTE and SNPL nesting habitat. This alternative would not cause an overall change in land use of the park property or conflict with land use policy, but it would permanently decrease acreage open to recreation and access to the ocean and thus may be subject to Coastal Act permitting.

Air Quality. The seasonal exclosure is an area of relatively lower emissivity. Eliminating riding in this area would not increase PM emissions and may decrease emissions as vegetation becomes established. In general, the air quality impacts of this alternative would be similar to existing baseline conditions of park operations if the open riding area size remains the same. The air quality impact of this alternative would depend upon the location of the shifted riding area boundary. If the riding area is shifted from the north toward the south, there may be potential to reduce or avoid riding in areas of the park that have higher emissivity levels. This could

potentially reduce park contributions to exceedances of ambient air quality standards described in existing conditions (EIR section 4.2).

Biological Resources. Observations in the HCP area indicate that once a foredune system creates significant topographic relief and dense vegetation, it is less productive for nesting, although the exact reasons are unknown (HCP section 2.2.2.1.2). CDPR has analyzed nesting density and productivity in areas within the HCP that have a developed foredune system and found it does not support nests at the same density and with the same success as in the seasonal exclosure. Over the years, North Oso Flaco and South Oso Flaco (year-round exclosures) have become less productive than 6 Exclosure and 7 Exclosure (seasonal exclosures). Under the Permanent Year-Round Exclosures Alternative, habitat would not be managed and over time would likely become less productive. Under the proposed HCP, CDPR may consider implementing small rotating closures, which would allow for some development of habitat features that would benefit breeding SNPL and CLTE but avoid the eventual long-term decline of habitat values that would be expected from a year-round closure (see HCP section 2.2.2.1.2).

Establishing a year-round exclosure may benefit SNPL and CLTE, at least temporarily, by providing protected wintering habitat and allowing development of microtopography and retain wrack and other debris that can enhance breeding success, including by increasing invertebrate food resources. The majority of SNPL take at Oceano Dunes SVRA has occurred after seasonal exclosure fencing is removed. Retention of exclosure fencing year-round does not guarantee that SNPL and CLTE would stay within the protective fencing during the breeding season, and SNPL disperse more widely throughout the SVRA during the wintering season. This alternative may reduce but not eliminate the potential risk for take. Additionally, at some point vegetation may become too dense, topography may become too steep due to foredune development, or predation may increase, but the exact point at which this outcome might occur is not known. It is assumed, however, that there would be an eventual incremental loss of productivity in the 6, 7, and 8 exclosures because of development of features that do not support density of nests compared to current conditions. The reduced productivity within the Oso Flaco area and movement of the majority of CLTE nesting toward the 6 Exclosure is indicative of this potential productivity decline. Native plants would benefit from the elimination of vehicles, which prevent pioneering vegetation from establishment.

Cultural Resources. Retaining the seasonal exclosure as a year-round exclosure would have no impact on cultural resources. Shifting the open riding area to the south toward Oso Flaco could expose new shoreline areas to motorized recreation. This area has medium to high cultural sensitivity (Figure 7-1). Shifting recreation to this area could introduce new impacts to cultural resources.

Recreation and Public Access. The Permanent Year-Round Exclosures Alternative would eliminate recreation access to 300 acres (seasonal exclosure) that are seasonally available 5 months per year during fall and winter months. Replacing lost access for coastal recreation and camping would likely require a shift of the open riding area away from the shoreline between Post 6 and Post 8 toward Oso Flaco, which is currently outside of the riding area. Assuming replacement acreage could be located, it is possible there would be no net loss in riding and camping area size, but providing this additional acreage would be subject to additional permitting processes that are beyond the scope of the HCP and may not be feasible. Dependent upon the location of replacement acreage, there could be a loss in shoreline access. Finding replacement acreage would also be more difficult in light of the PMRP, which includes closing

off additional recreation acreage for vegetation planting and other dust control measures. This alternative would increase the loss of recreation opportunity by 5 months each year (from 7 months to year-round).

The area available (open) to OHV riders has decreased by one-third since 1975 when the Pismo Dunes General Plan was first published. The 1975 General Plan identifies 2,000 acres of sand dunes available for OHV recreation. Since 1975, the acreage available for year-round motorized recreation in Oceano Dunes SVRA has been gradually reduced to protect sensitive natural and cultural resources Table 9-1.. Seasonal restrictions have also been implemented to protect CLTE and SNPL nesting habitat and to reduce dust emissions. Currently, the open riding area open to OHV use is 1,305 acres, which includes approximately 300 acres that are seasonally closed for nesting habitat (Table 8-4.).

Table 9-1. History of Riding Area Restrictions

Year	Change in Recreation Area
1975	State Beach and SVRA General Development Plan approved with goal of providing 2,000 acres for motorized recreation. The open riding area was unfenced and included much of Pismo State Beach.
1982	CCC issues CDP #4-82-300 authorizing 35,000 linear feet of fencing to establish riding area boundaries that exclude sensitive dune vegetation and wetland areas.
1997–1999	Exclosures located along the small foredune hummocks at the south end of the OHV open riding area (Post 8) and behind the foredunes at the south-western edge of the OHV open riding area (Boneyard Flats). Exclosures expand from 26 acres in 1997 to 37 acres in 1998–1999.
2001	Exclosure was extended from the 7.5 revegetation area north to Post 7. The 7-8 Exclosure is 80 acres. Boneyard Exclosure is connected to the 7–8 Exclosure and is 75 acres.
2003–2005	Consent Decree between CDPR and Sierra Club extends seasonal exclosure north to Post Marker 6 and south to Oso Flaco [Boneyard extension]. Roughly 1.5 miles of shoreline is closed to visitor use annually from March through September. Southern Exclosure is 261 acres (6–8 Exclosures: 185 acres; Boneyard Exclosure: 76 acres).
2016–2018	CDPR expands width of seasonal exclosures using bumpout fencing as needed in response to CLTE and SNPL annual monitoring (HCP Maps 11c and 13c). Bumpouts range in size annually from 11 to 14 acres.
2017	CDPR approves Dust Control Program removing 100 acres of riding area in SVRA for permanent revegetation and 40 acres for seasonal measures such as wind fencing.
2018	Total riding area identified in Oceano Dunes District HCP is 1,353 acres with 300 acres closed seasonally by exclosures.
2019	Draft PMRP with amended SOA expand proposed dust control activity on up to 371 acres of riding and camping area, plus approximately 3 acres closed for monitoring equipment and 3 additional acres closed to camping in foredune alleys. CCC issues Emergency Permit (CDP# G-3-19-0053) authorizing fencing of a 48-acre area north of Post 6 to prohibit vehicle access (starting in December) reducing riding area to 1,305 acres.

Cumulative projects listed in Table 3-1. have potential to affect recreation opportunity. With the exception of the new PMRP (CA-44), CDPR's potential future HCP projects and PWP projects would support or expand recreational opportunity by either improving existing park facilities or developing new park facilities. The draft PMRP prepared by CDPR, as described in HCP section 2.2.5.5 as amended by the November 2019 SOA, would potentially eliminate up to 374 acres of open riding area in the SVRA (52 acres of foredune planting, 319 acres of back dune area converted to vegetation, and 3 acres of monitoring equipment) plus 3 acres of foredune alleys (travel corridors) closed to camping.

The 48-acre foredune area has been fenced but not planted along 1.5 miles of beach shoreline from south of Post 4 to north of Post 6 (Figure 3-1) in a location heavily used for shoreline camping. The 48-acre foredune plus the associated 3 acres of alleys, which are closed to camping to ensure the areas stay open for vehicular movement, remove approximately 51 acres from use as camping space. CDPR would also plant 4 acres of additional foredune vegetation. The location of this 4-acre foredune planting site is not yet determined, but it would be closed to camping. Based on observed camping patterns and vehicle distribution, the loss of 55 acres in this shoreline area could eliminate space for up to 500 overnight camping vehicles. A small portion of these lost camping spaces could be recovered through visitor education on higher density space allocation. Given the reduction in camping area, CDPR has administratively reduced the number of allowable camping vehicle by 500, a 50-percent reduction in the park's daily camping vehicle use limit of 1,000 street-legal vehicles. During the peak camping season (May through September) and holidays when daily vehicle use is at capacity limits, the loss of 55 acres of shoreline camping space and lower camping limits would result in unmet demand for camping access. Some of the displaced campers could be satisfied by rescheduling their visits to non-peak periods, but for other campers, the demand for summer month and holiday camping access would go unmet.

The southern edge of the new foredune extends to roughly 330 feet north of the 6 Exclosure northern fenceline. Vehicles traveling between the backdune riding areas and the shoreline camping area may use this Post 6 location or two narrow (approximately 100-foot wide) alleys through the foredune as an east-west travel route. SNPL and CLTE nest in the 6 Exclosure and have the potential to nest near the 6 Exclosure northern fencing, within the foredune, or within the vehicle travel corridor between the 6 Exclosure and new foredune. This is less likely to occur for CLTE than for SNPL. If it occurs, bumpout fencing or a single nest exclosure would be established around the nesting SNPL or CLTE to create a buffer from vehicle disturbance per SNPL and CLTE AMMs (see SNPL AMM11 and AMM13 and CLTE AMM10, AMM12, and CLTE14). The required buffer distances (up to 500 feet) could result in closure of the vehicle travel corridor at Post 6 for extended periods during the nesting season. This would result in interrupted travel patterns, creating access, traffic circulation, and especially safety impacts by restricting emergency responder (e.g., ambulance, EMT) access potential.

While the closure of recreational acreage associated with the PMRP is reflected in the HCP, the PMRP is an independent, separately proposed planning project subject to separate CEQA review and CDPR approval. The loss of recreation acreage and corresponding loss of camping vehicles allowed at the SVRA could be considered a significant reduction in coastal recreation opportunity and public access. This loss of recreation opportunity under the Permanent Year-Round Exclosure Alternative would combine with the PMRP camping reduction to potentially create a significant and unavoidable cumulative loss of recreation opportunity.

9.2.3.3 CDPR Consideration of Alternative

The Permanent Year-Round Exclosures Alternative would retain seasonal exclosure fencing year-round to provide protection of wintering SNPL and improved SNPL and CLTE nesting habitat. Given the success of the current conservation program using the existing seasonal exclosure size, establishing permanent year-round exclosures is unnecessary to achieve project objectives. The alternative could possibly be designed to avoid a net loss of recreation area; however, even if finding additional acreage for recreation proves feasible, doing so would likely shift the open riding area away from the shoreline, which is primary nesting habitat, and reduce beach access for OHV recreation and camping. This loss of shoreline access conflicts with project objectives to balance conservation and recreation demands, particularly to preserve, manage, and expand recreational opportunities and to manage, maintain, and maximize unique coastal camping and recreational amenities.

The Consent Decree signed by Sierra Club and CDPR (discussed in EIR section 2.4.2.2 and HCP section 2.2.5.11) stipulates that the CDPR HCP application to the USFWS would support a northern boundary of the seasonal exclosure at Post 7. This alternative conflicts with the Consent Decree by maintaining the northern boundary of the seasonal exclosure at Post 6 and thus does not achieve the project objective of facilitating implementation of legal settlement conditions and obligations. The conservation program proposed under the HCP provides adequate AMMs, and the criteria that are required to reduce the 6 Exclosure (HCP section 5.2.3) ensure that take of SNPL and CLTE as a result of reducing the exclosure size would be minimized. Further, the proposed incremental reduction of 60 acres of 6 Exclosure would restore recreation opportunity at that location from 5 months per year to year-round, which would provide additional recreation opportunity. In contrast, the Permanent Year-Round Exclosures Alternative would, in a best-case scenario, create no net loss of recreation, but if CDPR could not identify replacement riding and camping acreage, could combine with the PMRP recreation reduction to create a significant and unavoidable cumulative loss of recreation opportunity.

The proposed HCP thus fully achieves project objectives of promoting species and habitat conservation, ensuring FESA compliance, and avoiding, minimizing, and mitigating take effects. The proposed HCP better meets project objectives of operating the covered park units in a manner that provides for public use and enjoyment while conserving park resources and preserving, managing, and expanding, as appropriate, motorized and non-motorized recreational access. The Permanent Year-Round Exclosures Alternative is rejected in favor of the proposed HCP.

9.2.4 Alternative 4: Reduced Vehicle Use Limits

9.2.4.1 Description

Under the Reduced Vehicle Use Limits Alternative, CDPR would consider reducing day use vehicle and OHV use numbers for the purpose of reducing environmental impacts associated with motorized recreation. The reduction of vehicle numbers would not be limited to camping vehicles as proposed under the PMRP, and already implemented administratively, but would include street-legal and OHV day use vehicles. All new proposed covered activities (i.e., SNPL chick and egg capture for captive rearing [CA-12]; mechanical trash removal [CA-21]; reduction of the seasonal exclosure [CA-50]; and CDPR’s use of UAS [CA-52]) would remain as proposed under the HCP.

9.2.4.2 Environmental Analysis

Land Use. The Reduced Vehicle Use Limits Alternative would reduce day use and camping vehicle access to the HCP area. This alternative would not cause an overall change in the type of land use of the park property or conflict with land use policy. It would reduce motorized recreation in the HCP area, which is generally considered ESHA, but it would also reduce access to coastal recreation opportunity and thus may be subject to Coastal Act permitting.

Air Quality. The Reduced Vehicle Use Limits Alternative would not change the open riding area boundary, so the acreage of sand surface disturbed under this alternative would not change. The relationship between number of vehicles and emission levels is not well understood. It is unknown whether a decrease in vehicle activity could help reduce PM_{10} emissivity levels and help offset the potential increase in PM_{10} emissions caused by the proposed reduction in Boneyard Exclosure and 6 Exclosure. It is assumed in the EIR that the project's potential air quality impacts would not be avoided, and mitigation measures AIR-1A through AIR-1D would still be required.

Biological Resources. It is possible that reducing the number of vehicles in the HCP area could lower the risk of take of SNPL and CLTE caused by proposed new covered activities (i.e., reduction of Boneyard Exclosure and 6 Exclosure; CA-50) and potential future covered activities (dust control activities – new PMRP; CA-44); however, the reduction in risk is difficult to assess and may not result in actual reduced take. Risk of take from proposed new and potential future covered activities would not be eliminated since motorized recreation would still occur in areas where SNPL and CLTE exist.

Cultural Resources. The Reduced Vehicle Use Limits Alternative would not introduce new impacts to cultural resources. The alternative would not change the open riding area boundaries or exposure of culturally sensitive areas to motorized recreation. The effects would remain the same as baseline conditions. The new covered activities of the HCP would not impact cultural resources (EIR section 7.3), so the Reduced Vehicle Use Limits Alternative would have the same no impact on cultural resources as the proposed HCP.

Recreation and Public Access. Historically, recreation acreage opportunity in the HCP area has decreased over the years due to various factors (e.g., CDP, Consent Decree, Dust Control Program, natural and cultural resource management) as shown in Table 9-1. The open riding area is currently 1,305 acres of which 300 acres are seasonally closed to motorized recreation. This existing reduction of recreational acreage by seasonal fencing coincides with summer months when recreation demand is at its highest. Under the Reduced Vehicle Use Limits Alternative, the potential reduction of the seasonal exclosure (CA-50) would still occur opening up approximately 49 acres of dunes (East Boneyard) and up to 60 acres of shoreline (6 Exclosure). The reduced number of day use vehicles and OHVs, in addition to the recent camping vehicle reduction, combined with the potential opening of up to 60 acres of shoreline access suitable for shoreline recreation and camping would ease congestion, especially for camping, that occurs during the peak summer visitation months. As a result, the Reduced Vehicle Use Limits Alternative would reduce the density of motorized recreation beyond the density reduction achieved by the proposed project CA-50 alone and beyond that anticipated by the PMRP, which solely proposes reducing camping numbers.

Although the acreage of the riding and camping area available to the public would be increased, the Reduced Vehicle Use Limits Alternative would reduce the number of park visitors able to

access the HCP area via motorized vehicles, including visitors such as surfers, anglers, and disabled individuals, and others who currently use vehicles to access the shoreline. The impact of reduced vehicle use numbers on public recreation would be most keenly felt during the summer season when day use and camping vehicles regularly reach permitted limits. Reduced vehicle limits would increase the unmet demand for coastal OHV recreation and camping, which has been exacerbated by past reductions in recreation access. The lost recreation opportunity would combine with the PMRP's reductions in camping numbers and recreation area to potentially create a significant and unavoidable cumulative loss of recreation opportunity.

9.2.4.3 CDPR Consideration of Alternative

Under the Reduced Vehicle Use Limits Alternative, the HCP as proposed would be implemented with the addition of reduced vehicle use limits. The potential for SNPL and CLTE take during the breeding season could be reduced somewhat but not eliminated, and the potential for SNPL take during the non-breeding season would not be eliminated. Reducing vehicle use numbers, whether year-round or solely in the non-breeding season, would not provide a clear and substantial reduction in take and could have substantial adverse impacts to motorized recreation and vehicular access to non-motorized recreation. The combination of reduced vehicle numbers and expanded recreational acreage from the proposed reduction of the Boneyard Exclosure and 6 Exclosure would reduce the density of vehicles and camping on the beach. Less congestion is a recreational benefit; however, reduced vehicle limits represents a loss of public access and an increase in unmet demand for coastal recreation opportunity. The alternative does not substantially reduce environmental impacts of increased risk of take of SNPL and CLTE or increases in emissivity of PM_{10} and could combine with the PMRP recreation reduction to create a significant and unavoidable cumulative loss of recreation opportunity. The proposed HCP better meets project objectives of operating the covered park units in a manner that provides for public use and enjoyment while conserving park resources; preserving, managing, and expanding motorized and non-motorized recreational opportunities; and managing, maintaining, and maximizing access to unique coastal camping and recreational amenities. Given these considerations, the Reduced Vehicle Use Limits Alternative is rejected in favor of the proposed HCP.

9.3 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The purpose of the alternatives analysis is to identify project alternatives that "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[.]" (CEQA Guidelines § 15126.6(a)). The discussion above presents alternatives to the proposed HCP based on the identified potentially significant impacts. The environmental impacts of the alternatives are compared in Table 9-2.

Alternative 2: Reduced Disturbance in High PM_{10} Emissivity Areas Alternative is considered the environmentally superior alternative. This alternative would allow CDPR to obtain most of the project objectives and avoid the potential impacts on air quality (dust emissions) and biology (CLTE and SNPL nesting habitat) associated with opening the 6 Exclosure to year-round riding and initiating mechanical trash removal south of Post 4. The alternative would not achieve the project objective of facilitating implementation of legal settlement conditions and obligations. The proposed HCP better meets the project objectives of operating the covered park units in a manner that provides for public use and enjoyment while conserving park resources and

preserving, managing, and expanding, as appropriate, motorized and non-motorized recreational access. Since project mitigation is available to reduce the proposed HCP's potential impacts on nesting habitat and air quality to a less-than-significant level, and because this alternative would not meet all project objectives, Alternative 2, the Reduced Disturbance in High PM_{10} Emissivity Areas Alternative was not selected.

Table 9-2. Comparison of Proposed HCP Program Impacts Against HCP Program Alternatives

Resource	Proposed HCP	Alternative 1: No Project	Alternative 2: Reduced Disturbance in High PM_{10} Emissivity Areas	Alternative 3: Year-Round Exclosure	Alternative 4: Reduced Vehicle Use Limits
Land Use Plans and Policies	Does not conflict with existing plans and policies.	Does not conflict with existing plans and policies.	Does not conflict with existing plans and policies.	Does not conflict with existing plans and policies.	Does not conflict with existing plans and policies.
Air Quality	Mechanical trash removal (CA-21) and reduction of the Boneyard Exclosure and 6 Exclosure (CA-50) could increase PM_{10} emissions and contribute to existing or projected exceedances of NAAQS and/or CAAQS. Mitigation Measures AIR-1A through AIR-1D reduce the effect to less than significant. No impacts from SNPL chick and egg capture for captive rearing if observed to be threatened by non-covered species management activities (CA-12b) or CDPR's use of UAS (CA-52) would occur.	PM_{10} emissions from mechanical trash removal (CA-21) and reduction of the Boneyard Exclosure and 6 Exclosure (CA-50) would not occur. PM_{10} emissions from existing OHV recreation would continue to occur. No change from existing condition. No impacts from SNPL chick and egg capture for captive rearing if observed to be threatened by non-covered species management activities (CA-12b) or CDPR's use of UAS (CA-52) would occur.	Mechanical trash removal (CA-21) would not occur in high PM10 emissive areas and is unlikely to contribute to air quality impacts. Mitigation Measure AIR-1D would not be required. Reduction of the 6 Exclosure would not occur and no increase in PM_{10} emissions from year-round OHV recreation would occur. Mitigation Measure AIR-1B would not be required. Reduction of the Boneyard Exclosure CA-50) could increase PM_{10} emissions and contribute to existing or projected exceedances of NAAQS and/or CAAQS. Mitigation Measures AIR-1A and AIR-1C would still be required to reduce the	Mechanical trash removal (CA-21) could increase PM_{10} emissions and contribute to existing or projected exceedances of NAAQS and/or CAAQS. Mitigation Measures AIR-1A and AIR-1D would still be required to reduce the effect to less than significant. Permanent closure of 300 acres of riding area acreage seasonally open to OHV disturbance would reduce PM_{10} emissions generated from that area. Mitigation Measures AIR-1B and AIR-1C would not be required. No impacts from SNPL chick and egg capture for captive rearing if observed to be threatened by non-covered species management activities (CA-12b) or CDPR's use of UAS (CA-52) would occur.	Mechanical trash removal (CA-21) and reduction of the Boneyard Exclosure and 6 Exclosure CA-50) could increase PM_{10} emissions and contribute to existing or projected exceedances of NAAQS and/or CAAQS. Mitigation Measures AIR-1A through AIR-1D reduce the effect to less than significant. Reduced number of vehicles permitted would have unknown impact on PM_{10} emissivity and is unlikely to offset the project's potential air quality impacts. Mitigation measures AIR-1A through AIR-1D would still be required. No impacts from SNPL chick and egg capture for captive rearing if observed to be threatened by non-

Table 9-2. Comparison of Proposed HCP Program Impacts Against HCP Program Alternatives

Resource	Proposed HCP	Alternative 1: No Project	Alternative 2: Reduced Disturbance in High PM_{10} Emissivity Areas	Alternative 3: Year-Round Exclosure	Alternative 4: Reduced Vehicle Use Limits
			effect to less than significant. No impacts from SNPL chick and egg capture for captive rearing if observed to be threatened by non-covered species management activities (CA-12b) or CDPR's use of UAS (CA-52) would occur.		covered species management activities (CA-12b) or CDPR's use of UAS (CA-52) would occur.
Biology Resources	SNPL chick and egg capture for captive rearing if observed to be threatened by non-covered species management activities (CA-121b) would reduce mortality of individual SNPL at risk for take. Mechanical trash removal (CA-21) could reduce the invertebrate prey population supporting foraging wintering shorebirds. Exclosure reductions (CA-50) would remove seasonally protected	No change to existing conditions.	SNPL chick and egg capture for captive rearing if observed to be threatened by non-covered species management activities (CA-12b) would reduce mortality of individual SNPL at risk for take. Mechanical trash removal (CA-21) could reduce the invertebrate prey population supporting foraging wintering shorebirds. Exclosure reductions (CA-50) would remove seasonally protected breeding habitat for SNPL and CLTE on approximately 49 acres of mostly non-	SNPL chick and egg capture for captive rearing if observed to be threatened by non-covered species management activities (CA-12b) would reduce mortality of individual SNPL at risk for take. Mechanical trash removal (CA-21) could reduce the invertebrate prey population supporting foraging wintering shorebirds. Exclosure reductions (CA-50) would not occur as proposed. Permanent closure of 300 acres of seasonal riding area would provide protected wintering habitat. Incremental	SNPL chick and egg capture for captive rearing if observed to be threatened by non-covered species management activities (CA-12b) would reduce mortality of individual SNPL at risk for take. Mechanical trash removal (CA-21) could reduce the invertebrate prey population supporting foraging wintering shorebirds. Exclosure reductions (CA-50) would remove seasonally protected breeding habitat for SNPL and CLTE on up to 60

Table 9-2. Comparison of Proposed HCP Program Impacts Against HCP Program Alternatives

Resource	Proposed HCP	Alternative 1: No Project	Alternative 2: Reduced Disturbance in High PM_{10} Emissivity Areas	Alternative 3: Year-Round Exclosure	Alternative 4: Reduced Vehicle Use Limits
	breeding habitat for SNPL and CLTE on up to 60 acres of primary habitat (6 Exclosure) and approximately 49 acres of mostly non-primary habitat (East Boneyard). CDPR's use of UAS (CA-52) could disrupt shorebirds including special-status species. Effects would be reduced by implementation of AMMs incorporated into the HCP.		primary habitat (East Boneyard). CDPR's use of UAS (CA-52) could disrupt shorebirds including special-status species. Effects would be reduced by implementation of AMMs incorporated into the HCP.	loss of productivity in the 6, 7, and 8 exclosures may occur due to development of the foredune and topography that is less likely to support density of nests compared to current conditions. CDPR's use of UAS (CA-52) could disrupt shorebirds including special-status-species. Effects would be reduced by implementation of AMMs incorporated into the HCP.	acres of primary habitat (6 Exclosure) and approximately 49 acres of mostly non-primary habitat (East Boneyard). Effects on SNPL and CLTE would be reduced by implementation of AMMs incorporated into the HCP. Reduced vehicle numbers could generally reduce risk of existing impacts to biological resources from motorized recreation; however, risk for take of SNPL and CLTE would not be eliminated. CDPR's use of UAS (CA-52) could disrupt shorebirds including special-status species. Effects would be reduced by implementation of AMMs incorporated into the HCP.
Cultural Resources	Does not impact existing cultural resources.	No change to existing conditions.	Does not impact existing cultural resources.	Does not impact existing cultural resources.	Does not impact existing cultural resources.

Table 9-2. Comparison of Proposed HCP Program Impacts Against HCP Program Alternatives

Resource	Proposed HCP	Alternative 1: No Project	Alternative 2: Reduced Disturbance in High PM_{10} Emissivity Areas	Alternative 3: Year-Round Exclosure	Alternative 4: Reduced Vehicle Use Limits
Recreation	Mechanical trash removal (CA-21) would reduce trash and debris in beach areas open to recreation. Exclosure reductions (CA-50) would expand existing recreational opportunities from seasonal access (Oct–Feb) to year-round access in 6 Exclosure (up to 60 acres) and East Boneyard (47 acres). No impacts from SNPL chick and egg capture for captive rearing if observed to be threatened by non-covered species management activities (CA-12b) or CDPR's use of UAS (CA-52) would occur.	No change to existing conditions.	Mechanical trash removal (CA-21) would reduce trash and debris in beach areas open to recreation north of Post 4. Exclosure reduction (CA-50) would occur in Boneyard Exclosure only. Existing recreational opportunities would be expanded from seasonal access (Oct–Feb) to year-round access in East Boneyard (47 acres). Some areas north of Post 4 would have reduced trash/debris. No impacts from SNPL chick and egg capture for captive rearing if observed to be threatened by non-covered species management activities (CA-12b) or CDPR's use of UAS (CA-52) would occur.	Mechanical trash removal (CA-21) would reduce trash and debris in beach areas open to recreation. Exclosure reductions (CA-50) would not occur. Existing recreational opportunities would be permanently removed from access year-round on 300 acres in riding area. No impacts from SNPL chick and egg capture for captive rearing if observed to be threatened by non-covered species management activities (CA-12b) or CDPR's use of UAS (CA-52) would occur.	Mechanical trash removal (CA-21) would reduce trash and debris in beach areas open to recreation. Exclosure reductions (CA-50) would expand existing recreational opportunities from seasonal access (Oct–Feb) to year-round access in 6 Exclosure (up to 60 acres) and East Boneyard (47 acres). Reduced vehicle numbers combined with opening the 6 Exclosure (CA-50) could reduce camping congestion and density experienced during summer months. Reduced vehicle numbers would reduce the number of visitors that can access the SVRA and increase the existing unmet demand for coastal OHV recreation and camping. No impacts from SNPL chick and egg capture for captive rearing if observed to be threatened by non-

Table 9-2. Comparison of Proposed HCP Program Impacts Against HCP Program Alternatives					
Resource	**Proposed HCP**	**Alternative 1: No Project**	**Alternative 2: Reduced Disturbance in High PM_{10} Emissivity Areas**	**Alternative 3: Year-Round Exclosure**	**Alternative 4: Reduced Vehicle Use Limits**
					covered species management activities (CA-12b) or CDPR's use of UAS (CA-52) would occur.
Meet Project Objectives?	Yes	No	Partial	Partial	Partial

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Chapter 10 OTHER CEQA CONSIDERATIONS

10.1 POTENTIALLY UNAVOIDABLE SIGNIFICANT IMPACTS

There are no significant unavoidable impacts associated with the Oceano Dunes HCP. Potentially significant impacts of the HCP are identified in this EIR for Air Quality along with mitigation measures that would reduce or avoid these impacts. All proposed HCP new activity impacts can be reduced to a less-than-significant level with mitigation.

10.2 GROWTH INDUCEMENT

The proposed Oceano Dunes HCP would implement a conservation program for park operations at Pismo State Beach and Oceano Dunes SVRA in support of an application to the USFWS for an ITP as described in EIR section 2.4. The HCP covered activities largely consist of existing operations. New operations proposed by the HCP include SNPL chick and egg capture for captive rearing if observed to be threatened by non-covered species management activities (CA-12b), mechanical trash removal (CA-21), changes to the East Boneyard Exclosure and 6 Exclosure (CA-50), and CDPR's use of UAS (CA-52). Future covered activities identified in the HCP include propagation and outplanting of listed plants (CA-15), cable fence replacement (CA-28), Pismo Creek Estuary seasonal (floating) bridge (CA-41), riding in 40 Acres (CA-42), replacement of the safety and education center CA-43), dust control activities – new PMRP (CA-44), Oso Flaco Lake boardwalk replacement (CA-48), and special projects (CA-49).

The HCP approval and subsequent issuance of the federal ITP would satisfy the federal permit requirement for future covered activities and therefore remove the federal biological permit from the regulatory approval process of these future projects. The HCP and ITP do not grant any other entitlements to future projects and do not obviate the need for future permits and approvals.

The HCP does not build capacity for future park improvements and does not involve infrastructure changes that would promote development of urban growth or conversion of land from existing park uses. The HCP would not induce growth of park visitation. Park visitor vehicle limits are set by the CDP, and current limits would remain in effect unchanged by the HCP. As such, the proposed HCP is not growth inducing.

10.3 IMPACTS FOUND TO BE NOT SIGNIFICANT

Using the CEQA Guidelines Appendix G checklist, CDPR has determined the proposed HCP new activities would clearly result in no impact or a less-than-significant impact to the resources described below.

10.3.1 Aesthetics

The HCP area is located within the San Luis Obispo County Coastal Zone. Visibility of the HCP area is restricted to views from within Pismo State Beach and Oceano Dunes SVRA and views from the adjacent stretch of State Route 1. None of the highway segments that are located near the HCP area (State Route 1 and U.S. 101) are officially designated as State Scenic Highways (Caltrans, 2017). State Route 1 becomes a State Scenic Highway north of the city of San Luis Obispo, about 14 miles north of the HCP area. Proposed HCP new activities (i.e., SNPL chick

and egg capture for captive rearing if observed to be threatened by non-covered species management activities [CA-12b]; mechanical trash removal [CA-21]; reduction of the Boneyard Exclosure and 6 Exclosure [CA-50]; and CDPR's use of UAS [CA-52]) do not involve construction or any visual changes in the HCP area.

The general area contains scenic resources such as trees; however, none are within view of a state scenic highway. HCP activities would not result in the removal of any trees, rock outcroppings, or historic buildings within view of a state scenic highway. The work proposed would not significantly alter the existing visual character in HCP area. The proposed HCP new activities would not create a new source of substantial light or glare affecting day or nighttime views in the area as no exterior lighting is proposed. The HCP would have ***no impact*** on aesthetics.

10.3.2 Agricultural and Forest Resources

The HCP area is predominantly a beach dune system with few trees that does not generally contain agricultural or forestry land. However, the Oceano Dunes District leases two parcels comprising 136 acres of land east of Oso Flaco Lake to an agricultural operator (Figure 2-3). These lands have been actively farmed for more than 30 years and are listed as Prime Farmland and Farmland of Statewide Importance (Farmland) according to the Farmland Mapping and Monitoring Program (CDC, 2016). These parcels are zoned for agricultural use (County of San Luis Obispo, 2017). The remainder of the 5,005-acre HCP area does not contain Farmland and is not zoned for agriculture or forestry (County of San Luis Obispo, 2017). None of the HCP area parcels are under a Williamson Act Contract.

The proposed HCP new activities involve SNPL chick and egg capture for captive rearing (CA12b), mechanical trash removal (CA-21), changes to the seasonal exclosure boundaries (CA-50), and CDPR's use of UAS (CA-52). These activities would not occur on agricultural land or affect agricultural uses. HCP covered activities involving maintenance of two ditches that flow from the agricultural lands into Oso Flaco Lake (CA-46) and maintenance of a bioreactor on agricultural lands to remove nitrates and improve water quality (CA-47) are existing park operations that would remain unchanged. The HCP would not prevent the continued agricultural use of the two parcels leased to an agricultural operator. The proposed HCP new activities would not take place near these two parcels and would not adversely impact the agricultural uses. The HCP would have ***no impact*** on agricultural or forest resources.

10.3.3 Geology and Soils

The proposed Oceano Dunes District HCP area is situated in 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). 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, 2012). 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 Natural Resources Conservation Service, 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. Management of OHV facilities is further governed by PRC sections 5090.2 and 5090.35, 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.

The HCP area and vicinity are subject to substantial, natural erosion forces that are independent of the proposed HCP new activities. Active dunes 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. The HCP proposed new activities (i.e., SNPL chick and egg capture for captive rearing if observed to be threatened by non-covered species management activities [CA-12b]; mechanical trash removal [CA-21]; reduction of the Boneyard Exclosure and 6 Exclosure [CA-50]; and CDPR's use of UAS [CA-52]) do not involve grading, excavation, or soil hauling that could result in soil loss or erosion. Mechanical trash removal (CA-21) would disturb the surface layer of sand (top 6 to10 inches) in raked areas; however, since mechanical trash removal would only occur in high use areas where people congregate, the mechanical trash removal would not create new areas of sand disturbance. Mechanical trash removal and exclosure reductions would occur in a sand sheet that does not contain an organic soil horizon (e.g., topsoil). These activities would not occur within a vegetated area and therefore would have no impact on soil erosion or loss of topsoil. The proposed HCP new activities would have a ***less-than-significant impact*** on soil erosion or loss of topsoil.

The site is not within an Alquist-Priolo zone,[41] there are no known faults that cross the site, and no signs of a fault surface have been observed at the site. The proposed new activities do not involve construction or earthwork activity; therefore, the proposed HCP new activities would not create or exacerbate fault rupture conditions. The proposed HCP new activities would have ***no impact*** related to surface rupture.

The HCP area is located in a seismically active region and is subject to occasional seismic ground shaking. The closest active faults to the HCP area include the Los Osos Fault, located approximately 5.5 miles to the northeast and the Hosgri Fault located approximately 11.5 miles to the west (County of San Luis Obispo, 2014). However, the proposed HCP new activities would not attract additional people to the area, and the risks related to seismic ground shaking after HCP adoption would be the same as existing conditions. The proposed HCP new activities would have ***no impact*** on seismic shaking risks.

[41] California Geological Survey Alquist-Priolo zoning maps June 15, 2017; http://www.conservation.ca.gov/cgs/rghm/ap/Pages/official_release.aspx

Soil liquefaction results from loss of strength during cyclic loading, such as imposed by earthquakes. Soils most susceptible to liquefaction include loose to medium dense, saturated sands, silty sands, sandy silts, non-plastic silts, and gravels with poor drainage or those capped by or containing seams of impermeable sediment. According to the San Luis Obispo County General Plan Safety Element, Map 3, Liquefaction Hazards, the HCP area has a moderate potential for liquefaction (County of San Luis Obispo, 2014). The proposed HCP new activities would not exacerbate liquefaction conditions or increase exposure of park visitors to liquefaction risks. Therefore, the proposed HCP new activities would have ***no impact*** related to seismic-related ground failure.

Other than the dunes themselves, there are no hills or other steep slopes near the HCP area; therefore, the HCP area is not subject to impact from off-site landslides. The proposed HCP new activities would occur in relatively flat areas with no risk from landslides. The proposed HCP new activities would have ***no impact*** on landslide conditions or associated risks of landslides.

The HCP area is located on beach soils, which are unstable and subject to movement. The sands have moderate potential for liquefaction; therefore, the potential for liquefaction-induced lateral spreading is also moderate. The proposed HCP new activities would not alter existing geologic conditions of the site or increase risks associated with unstable geologic units. Therefore, the proposed HCP new activities would have ***no impact*** on geologic unit stability.

Expansion and contraction of volume can occur when expansive soils undergo alternating cycles of wetting (swelling) and drying (shrinking). During these cycles, the volume of the soil changes markedly. Expansive soils are common throughout California and can cause damage to foundations and slabs unless properly treated during construction. However, expansive soils typically have high clay content; the sandy soils in the HCP area are not expected to be expansive. Furthermore, proposed HCP new activities do not include any construction or development. The proposed new activities would have ***no impact*** on risks to life or property.

The proposed new activities do not involve the use of septic tanks or other alternative wastewater disposal systems. For these reasons, the proposed HCP new activities would have ***no impact*** on geology and soils from septic or wastewater disposal systems.

No paleontological resources have previously been discovered within the area, and the potential for discovery of paleontological resources within the project area is considered low.

Under CEQA, a definition for a “unique geologic feature” there does not exist, nor is there state-wide codification regarding “unique geologic features.” Various counties have established guidelines for determining significance regarding unique geologic features. Using, for example, the San Diego County’s guidelines for determining significance, it states that: “A geologic feature is unique if it meets one of the following criteria:

a. Is the best example of its kind locally or regionally;

b. Embodies the distinctive characteristics of a geologic principle that is exclusive locally or regionally;

c. Provides a key piece of geologic information important in geology or geologic history;

d. Is a “type locality” of a formation;

e. Is a geologic formation that is exclusive locally or regionally;

f. Contains a mineral that is not known to occur elsewhere in the County; or

g. Is used repeatedly as a teaching tool."

Within the HCP area is a portion of the Guadalupe- Nipomo Dunes Complex, which extends across 18,000 acres along the Pacific Ocean. Much of the dune complex was first created during the Flandrian Transgression, a period of sea level rise approximately 2,000 to 6,000 years ago, although parts may date to pre-Flandrian. The dune complex has the highest dunes in the western coastline of the USA (USFWS, 2016b).

The dune creation process starts with sediment carried from rivers and creeks to the ocean, where waves breaks the sediment down to fine-grained sand. The sand is then redeposited on the shoreline, and the windblown sand starts to accrete around vegetation and detritus. As the wind builds up the sand more on the windward side, the dunes destabilize, and the process of saltation begins. Saltation is the wind moving small grains to the leeward sides of the dunes, followed by larger ones, creating alternating layers of fine- and coarse-grained sands. The ability to form dunes requires both a sediment source and a prevailing wind source, and both conditions occur in the HCP and surrounding areas, thus allowing dunes to form.

The Pismo State Beach and Pismo Dunes SVRA General Development plan states that the dunes are: "recognized by scientists, conservationists, government agencies, and the public as being the finest most extensive coastal dunes remaining in California." Given this recognition, in combination with their distinction as the highest dunes on the Pacific Coast of the US, means that they would fulfil criterion "a" of the San Diego County's guidelines above. Using these criteria as a basis, the dunes can be considered as a "unique geologic feature."

Mechanical trash removal (CA-21) and Boneyard Exclosure and 6 Exclosure reduction (CA-50) could increase emissivity of windblown particulate matter in the affected areas as discussed in Air Quality (EIR section 5.3). The potential increase in particulate emissions is a potential air quality impact but not one that would significantly change the overall dynamics of the dune sheet or dune complex. The proposed HCP new activities would not interfere with the coastal sediment transport process; deposition and sand transport would continue to occur in the HCP area, and dune formation would not be altered. As such, the impact of HCP new activities on paleontological resources and unique geologic features is considered ***less than significant.***

10.3.4 Greenhouse Gas Emissions 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 1800s to 411 parts per million in March 2019 (NOAA,

2019). 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. GHGs 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 25, which means that one molecule of CH_4 has 25 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, 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.

With the exception of mechanical trash removal (CA-21), proposed new covered activities in the HCP would not change GHG emissions. SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b), seasonal exclosure reductions (CA-50), and CDPR's use of UAS (CA-52) do not involve new vehicle emission sources above baseline park operations. Under CA-21, CDPR proposes to use a tractor-towed rake to collect nails, broken glass, and other debris from open sand areas that may pose a hazard to visitors or wildlife. The tractor would meet the newest CARB emissions requirements and would be maintained and upgraded to meet strict air quality guidelines. The GHG emissions resulting from the piece of equipment's operation would be substantially below the SLOAPCD's annual GHG threshold of significance for land use projects (1,150 metric tons of carbon dioxide equivalents). Other existing park operations associated with the HCP (e.g., nesting bird surveys, fence installation for exclosures, etc.) would not change after adoption of the HCP. Although the East Boneyard Exclosure and 6 Exclosure areas would be available to motorized recreation year-round, the limits on the number of vehicles allowed within the HCP area would not change. Additionally, the changes to the exclosure boundaries would not be enough to change use patterns significantly, such as by attracting additional motorized recreationists or causing motorized recreationists to spend more time operating their vehicles. As a result, the proposed HCP would not generate a substantial increase in GHG from new covered activities, nor would it conflict with a plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions. The impact is ***less than significant***.

Implementation of the HCP proposed new activities would not result in a substantial increase in energy demand or the wasteful use of fuel or energy. The proposed HCP new activities would not change or result in new land use, and no new buildings for human habitation are proposed. SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities (CA-12b) and seasonal exclosure reductions (CA-50) do not involve new energy uses. Mechanical trash removal (CA-21) is anticipated to use a minor, additional amount of diesel and/or gasoline, but this usage would not be considered wasteful or inefficient because this activity supports public safety and environmental protection needs. Similarly, the CDPR's use of UAS (CA-52) would require the use of electricity to power the equipment. The UAS would not be considered or wasteful or inefficient. UAS could reduce the number of gasoline-powered vehicle trips that may be required for biological survey purposes and it would only be in operation when needed. In addition, no

state or local plans targeting renewable energy or energy efficiency are applicable to new covered activities proposed in the HCP. Accordingly, the proposed HCP would not use energy in a wasteful, inefficient, or unnecessary way, nor would it conflict with or obstruct implementation of a state or local plan adopted for the purposes of increasing energy efficiency and renewable energy generation. ***No impact*** on energy resources would occur.

10.3.5 Hazards and Hazardous Materials

The HCP area is managed primarily for recreation and resource protection. Other than the fuel tank in the vehicle towing the mechanical trash removal equipment, proposed HCP new activities would not involve the routine transport, use, or disposal of hazardous materials and are unlikely to release that fuel into the environment. Potential hazardous materials used in park operations such as gasoline, oil, and diesel are stored at the park maintenance facility off of State Route 1. 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.

The HCP area is not within 0.25 mile of an existing or proposed school; the closest school is approximately 0.75 mile to the northeast. The HCP area also is not included on a list of hazardous materials sites pursuant to Government Code section 65962.5. Although the HCP area is within the Oceano County ALUP area and is within 0.5 mile of that airport (SLOALUC, 2007), proposed HCP new activities would have no effect on the airport or create hazards to people within the HCP area. The proposed HCP new activities would not interfere with an adopted emergency response plan or emergency evacuation plan. According to fire hazard safety zone maps for SLO County, the HCP area has moderate fire susceptibility (CDF, 2007), and proposed HCP new activities involve no changes in park operations that would expose people or structures to a risk of loss, injury, or death involving wildland fires. The proposed HCP new activities would have ***no impact*** related to hazards or hazardous materials.

10.3.6 Hydrology and Water Quality

The proposed HCP new activities do not involve the discharge of wastewater or use of groundwater and would not interfere with water quality standards, groundwater supplies, or groundwater recharge. Proposed mechanical trash removal and changes to the seasonal exclosure boundary, all implemented on the sandy substrate, would not modify drainage patterns or the course of a stream or river. Project activities would not increase impervious surfaces or surface runoff or otherwise degrade water quality, nor would they increase the risk of flooding or exposure to seiche, tsunami, or mudflow. Mechanical trash removal would have a beneficial effect on water quality by removing litter that could be washed into drainages or the ocean. The proposed HCP new activities would have ***no impact*** on water quality and hydrology.

10.3.7 Mineral Resources

The California Department of Conservation has classified most lands in and around the HCP 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) (CDC, 1989b). Operated by the Oceano Sand Company, this active mine produces specialty sand (CDC, 2018). Implementation of the proposed HCP would not interfere with this mining operation, would not result in the loss of availability of a known mineral resource or one 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, proposed HCP new activities would have ***no impact*** on mineral resources.

10.3.8 Noise

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. The existing noise environment within the HCP area is characterized by natural and human-made sources, including waves, wildlife (e.g., birds), wind, vehicular operation (e.g., trucks, OHV, etc.), and aircraft overhead.

Under CA-21, General Maintenance CDPR would use a tractor-towed rake to collect nails, broken glass, and other debris from open sand areas that may pose a hazard to visitors or wildlife. While this activity may be a new source of noise in the SVRA, it would be of a nature similar to the existing ambient environment: that is, vehicular operation. In addition, this source of noise would be mobile, and situated well away from permanent receptors. Transient receptors (e.g., campers or OHV riders) would not be exposed to noise generated for a prolonged amount of time, since the equipment is mobile.

Under CA-50, Reduction of the Boneyard Exclosure and 6 Exclosure, CDPR would reduce the size of some seasonal exclosures, reintroducing year-round motorized recreation into the East Boneyard Exclosure and 6 Exclosure. This additional access would result in additional noise generated in these portions of the HCP area year-round. The East Boneyard Exclosure and 6 Exclosure are located along the HCP area's western and southern boundaries, respectively. Any shift in noise from one area of the SVRA to these locations would likely be indistinguishable at permanent receptor locations. Daily vehicle limits specified by CDP 4-82-300-A5 would remain in effect. As a result, overall noise generated by OHV activity at the SVRA would remain substantially unchanged.

Implementation of the proposed HCP would not result in generation of excessive noise, nor would it expose persons to excessive noise. The proposed HCP new activities do not involve the siting of new receptors in an area where they may be exposed to excessive, airport-related noise, and those activities would not have the potential to generate groundborne vibration. For these reasons, the proposed HCP new activities would have ***no impact*** related to noise.

10.3.9 Population and Housing

The HCP area is adjacent to populated areas, including Pismo Beach, Grover Beach, and Oceano. The HCP area is a beach dune system used for recreation and natural resources management. There are four park residences within the HCP area. No other existing housing or permanent businesses (concessions only) occur in the HCP area. The proposed HCP new activities comprise mechanical trash removal (CA-21) and changes to the seasonal exclosure boundaries (CA-50). These activities would not induce 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). The HCP implementation would not displace existing housing, necessitating construction of replacement housing elsewhere, and would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. The HCP does not include the extension of roads or other infrastructure. Therefore, the HCP would have ***no impact*** on population or housing.

10.3.10 Public Services

Law enforcement and emergency response in the HCP area are performed mostly by CDPR rangers, park aides, and lifeguards, although non-CDPR staff from federal, state, and local agencies also provide law enforcement or emergency services in certain instances. For example, the U.S. Coast Guard performs search-and-rescue operations for lost watercraft in the ocean, and CDFW wardens enforce California Fish and Game Code regulations for fishing and other resources activities in the HCP area. The California Department of Forestry and Fire Protection (Cal Fire) provides fire protection to the HCP area. San Luis Obispo County or municipal law enforcement officers and emergency responders may also occasionally access the HCP area to enforce local laws or respond to incidents.

Most of the HCP covered activities are ongoing and would not change from existing conditions under the proposed HCP. The proposed HCP new activities (i.e., SNPL chick and egg capture for captive rearing if observed to be threatened by recreational activity and other non-covered species management activities [CA-12b]; mechanical trash removal [CA-21]; reduction of the Boneyard Exclosure and 6 Exclosure [CA-50]; and CDPR's use of UAS [CA-52]) would not increase visitor use of the HCP area or increase demand for fire or police protection, emergency services, or other public services. The proposed HCP would have ***no impact*** to public services.

10.3.11 Transportation

Regional access to the HCP area is primarily provided via State Route 1 and U.S. 101. Just north of Arroyo Grande, State Route 1 splits from U.S. 101, running more westerly through Grover Beach and Oceano. Annual average daily traffic volumes on this portion of State Route 1 range from approximately 4,400 to 10,300 vehicles (MIG|TRA, 2016). Pismo State Beach can be accessed from State Route 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 the 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. Farther south, Oso Flaco Lake Road off of State Route 1 provides access to the Oso Flaco parking lot and boardwalk.

The proposed HCP new activities would not increase employee-related trips to and from Oceano Dunes SVRA or Pismo State Beach; however, mechanical trash removal (CA-21) would result in new sporadic vehicle use on the beach. This activity would not result in new employee or visitor trips to the park and would not result in increased congestion on, or reduce the effectiveness of, the local and regional transportation system used to access the HCP area.

The proposed HCP new activities are not expected to attract additional people to the area and thus would not increase vehicle, bicycle, or pedestrian traffic or use of mass transit systems in the region, nor would they impact air traffic patterns. Therefore, the proposed HCP new activities would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, or conflict with an applicable

congestion management program. The proposed HCP new activities do not include any roads, driveways, or intersections and would not increase hazards due to a design feature nor would they affect emergency access. Therefore, the proposed HCP would have ***no impact*** related to transportation.

10.3.12 Utilities and Service Systems

The HCP 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 HCP area, including Grand Avenue and Pier Avenue.

Changes to seasonal exclosure boundaries (CA-50) and mechanical trash removal (CA-21) would not increase park staffing or visitation. HCP new activities would neither involve wastewater treatment nor require construction of new or expanded water or wastewater treatment facilities. The proposed HCP new activities do not involve construction, use of water supplies, or increased park use; thus, they would not require the construction of new stormwater facilities, expansion of existing facilities, or implementation of new or expanded entitlements. Furthermore, the HCP new activities would not conflict with any regulations related to solid waste. The OHMVR Division would continue to comply with all regulations related to solid waste generation and disposal. Therefore, the proposed HCP would have ***no impact*** related to utilities and service systems.

10.3.13 Wildfire

The HCP area is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. As a result, the project would not substantially impair an adopted emergency response plan or emergency evacuation plan. The proposed HCP would not exacerbate wildfire risks, and thereby expose park visitors to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. The proposed HCP would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

Chapter 11 **REFERENCES**

11.1 BIBLIOGRAPHY

AirNav. (2018, August 16). *Oceano County Airport*. Retrieved August 24, 2018, from Airnav, Airports [Oceano County Airports]: <http://www.airnav.com/airport/L52>

Atwood, J. L., & Minsky, D. E. (1983). Least Tern Foraging Ecology at Three Major California Breeding Colonies. *Western Birds, 14*, 57-72.

Baker, J. (2018, August 22). Associate State Archaeologist, OHMVR Division.

Bohlman, D. (2014, April 16). Personal Communication. Conservation Director, San Luis Obispo County Land Conservancy.

Brindock, K. M., & Colwell, M. A. (2011). Habitat Selection by Western Snowy Plovers During the Nonbreeding Season. *The Journal of Wildlife Mangement, 75*(4), 786-793.

Burton, R. K., & Kutilek, M. J. (1991). Inventory of Birds, Amphibians, and Reptiles at Oso Flaco Lake, Pismo Dunes State Vehicular Recreation Area, California. *Project 4-550-0063 Final Report*. California Department of Parks and Recreation Off-Highway Motor Vehicle Recreation Division.

California Department of Fish and Wildlife, N. D. (2018). *Special Animal List.* California Department of Fish and Wildlife.

California Regional Water Quality Control Board, Central Coast. (2016). *Water Quality Control Plan for the Central Coastal Basin* (March 2016 Edition ed.). California Environmental Protection Agency.

Caltrans. (2017, March). List of eligible and officially designated State Scenic Highways. Retrieved August 8, 2018, from http://www.dot.ca.gov/design/lap/livability/scenic-highways/

CARB. (2016, April 4). *San Luis Obispo APCD List of Current Rules.* Retrieved October 5, 2016, from https://www.arb.ca.gov/drdb/slo/cur.htm

CARB. (2020, January). *AQMIS2 PM10 (BAM) Data 2020*. Retrieved January 27, 2020, from https://www.arb.ca.gov/aqmis2/aqdselect.php

CCC. (2001). M9b Staff Report Permit Amendment. Prepared April 21 for May 7 Hearing. Application 4-82-300-A5.

CCC. (2002, May 6). Addendum to Staff Report on Agenda W11, Annual Review of Coastal Development Permit Amendment No. 4-82-300-A5 (Oceano Dunes State Vehicular Recreation Area, San Luis Obispo County).

CCC. (2017). Th23b Staff Report. Prepared September 1, 2017 for September 15, 2017 Hearing.

CCC. (2018). W18a Staff Report. Subject: CDP Number 3-12-050 (ODSVRA Dust Control) Condition Compliance. Prepared January 26, 2018 for February 7, 2018 Hearing.

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.

CDC. (1989b). Generalized Mineral Resource Zone Classification Map of the Southwestern Third of San Luis Obispo County, Southern Part [map].

CDC. (2008, April 30). Letter to Rick LeFlore, State Park Superintendent IV, California State Parks, Off-Highway Motor Vehicle Recreation Division. Subject: Phase 2 Particulate Study, Nipoma Mesa Region, San Luis Obispo County, CA. California Geological Survey.

CDC. (2012). *San Luis Obispo County Williamson Act Map Fiscal Year 2009/2010.* Retrieved May 29, 2018, from ftp://ftp.consrv.ca.gov/pub/dlrp/wa/SanLuisObispo_09_10_WA.pdf

CDC. (2016). *San Luis Obispo County Important Farmland Map.* Retrieved May 29, 2018, from ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2016/slo16.pdf

CDC. (2018, May 29). *Oceano Sand Pit [map]. n.d. Scale undetermined.* Retrieved from http://maps.conservation.ca.gov/mol/

CDF. (2007). *Fire Hazard Severity Zones in SRA – San Luis Obispo County.* California Department of Forestry and Fire Protection, Sacramento.

CDFG. (2005). *The Status of Rare, Threatened, and Endangered Plants and Animals of California 2000-2004.* Retrieved from https://www.dfg.ca.gov/wildlife/nongame/t_e_spp/new_te_rpt.html

CDFG. (2017, August). Oceano and Pismo Beach USGS 7.5 Minute Quadrangles. *California Natural Diversity Database*. California Department of Fish and Game, Biogeographic Data Branch.

CDFW. (2018a). California Natural Diversity Database (CNDDB) - Government version dated June 1, 2018. Biogeographic Data Branch, California Department of Fish and Wildlife. Retrieved 2018, from https://map.dfg.ca.gov/rarefind/view/RareFind.aspx.

CDFW. (2018b). Natural Diversity Database. *Special Animal List.*

CDFW. (2019, March). Natural Diversity Database. Special Vascular Plants, Bryophytes, and Lichens List. 144.

CDGS. (1991, August). *Draft EIR for the CDPR, OHMVD on the Pismo Dunes State Vehicular Recreation Area Access Corridor Project*. Office of Project Development and Management.

CDPR. (n.d.). *California State Parks System Statistical Report 2016/17 Fiscal Year*. California Department of Parks and Recreation, Planning Rercreation and Support Section, Marketing and Business Development Office.

CDPR. (1975). Pismo State Beach and Pismo Dunes State Vehicular Recreation Area General Development Plan and Resource Management Plan.

CDPR. (1982a). *Pismo State Beach and Pismo Dunes State Vehicular Recreation Area Draft Proposed Amendment to General Development Plan.* State of California Department of Parks and Recreation.

CDPR. (1982b). *Resolution 44-82 approving proposed General Plan Amendment for Pismo State Beach.*

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

CDPR. (2001). *Annual Report Habitat Monitoring Oceano Dunes State Vehicular Recreation Area*. OHMVR Division.

CDPR. (2004). *Pismo Dunes State Vehicular Recreation Area Access Corridor Project, Final Environmental Impact Report*. OHMVR Division.

CDPR. (2005a). Department of Operations Manual, Chapter 3 Natural Resources .

CDPR. (2005b, February). *Notice of Preparation of a Joint EIS/EIR for the Habitat Conservation Plan (HCP) for operation of certain California Department of Parks and Recreation San Luis Obispo Coast District Units and Oceano Dunes SVRA.* OHMVR Division.

CDPR. (2005c). *California's Recreation Policy*. California Department of Parks and Recreation.

CDPR. (2007, July). *Oceano Dunes SVRA 40-Acres Woods Study*. Northern Service Center.

CDPR. (2007). Native American Consultation Policy & Implementation Procedure. *Departmental Operations Manual*. California Department of Parks and Recreation, Archaeology, History, and Museums Division, Chapter 4.

CDPR. (2008). Rare Plant Surveys for Covered Species Under the proposed Oceano Dunes Habtiat Conservation Plan (data only, no written report).

CDPR. (2009). *California State Parks Off-Highway Motor Vehicle Recreation Division Strategic Plan 2009*. OHMVR Division.

CDPR. (2011, March). *Habitat Monitoring Report Oceano Dunes State Vehicular Recreation Area 2004-2010*. OHMVR Division.

CDPR. (2017, October). Oceano Dunes State Vehicular Recreation Area Wildlife Habitat Protection Plan (working draft). OHMVR Division.

CDPR. (2017b, October). Oceano Dunes State Vehicular Recreation Area Wildlife Habitat Protection Plan (unpublished). California Department of Parks and Recreation, OHMVR Division.

CDPR. (2018). Notice of Preparation of an EIR. Pismo State Beach and Oceano Dunes SVRA Public Works Plan. California Department of Parks and Recreation.

CDPR. (2019, June). Oceano Dunes State Vehicular Recreation Area, Draft Particulate Matter Reduction Plan. OHMVR Division.

CDPR, & County of San Luis Obispo. (1983, June 20). Operating Agreement for La Grande Beach Tract.

CEMAR. (n.d.). Retrieved August 2018, from http://www.cemar.org/ssrp/pdfs/SSRP_SanLuisObispo.pdf

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

Chapman, R. (2016). Oceano Dunes SVRA Western Snowy Plover and California Least Tern Database. Notes entered from field notebook.

Chestnut, J. (1998). Reconnaissance Survey for Rare Plants on the Oceano Dunes SVRA. Unpublished report prepared for California Department of Parks and Recreation, Off-Highway Motor Vehicle Recreation Division, Oceano Dunes SVRA.

Chestnut, J. (2013, September 25). Personal communication. Gambel's Watercress Observations.

Chestnut, J. (2019). *Gambel's Watercress and Marsh Sandwort Observations; pers. comm.* email.

Chestnut, J. (2019, August). Personal Communication.

City of Grover Beach. (n.d.). *City of Grover Beach Parks and Recreation Element Update*. Retrieved August 23, 2018, from http://www.grover.org/DocumentCenter/View/4135

City of Grover Beach. (2000). *City of Grover Beach Safety Element*. Adopted October 16, 2000.

City of Grover Beach. (2010). *City of Grover Beach General Plan.* Adopted February 16. 2010. Effective March 18, 2010.

City of Grover Beach. (2012). *City of Grover Beach Land Use Element.* Adopted February 16, 2010. Amended August 6, 2012.

City of Grover Beach. (2014). *City of Grover Beach Local Coastal Program*. Amended August 15. Retrieved June 29, 2018, from https://www.grover.org/DocumentCenter/Home/View/1808

City of Grover Beach. (2014). *City of Grover Beach Development Code. Article IX of the Grover Beach Municipal Code.* Adopted October 15, 2012. Revised July 21, 2014. Effective August 20, 2014.

City of Grover Beach. (2014). *Zoning Map. Adopted October 15, 2012. Revised July 21, 2014.*

City of Grover Beach. (n.d.). City of Grover Beach Land Use Element Map. Amended August 2012. Retrieved June 29, 2018, from http://www.grover.org/DocumentCenter/Home/View/2751

City of Pismo Beach. (1983). *City of Pismo Beach Zoning Map*. Retrieved July 29, 2018, from http://www.pismobeach.org/DocumentCenter/View/99/1983-Zoning-Map-South?bidId

City of Pismo Beach. (1983, December 12). *City of Pismo Beach Open Space Overlay*. Retrieved July 29, 2018, from http://www.pismobeach.org/DocumentCenter/View/8409/Open-Space-Overlay?bidId

City of Pismo Beach. (1983, December 12). *City of Pismo Beach Noise Overlay*. Retrieved July 29, 2018, from http://www.pismobeach.org/DocumentCenter/View/8410/Noise-Overlay?bidId

City of Pismo Beach. (2014, April). *City of Pismo Beach General Plan and Local Coastal Program*. Retrieved June 29, 2018, from http://www.pismobeach.org/DocumentCenter/View/247/01-General-Plan-?bidId=

City of Pismo Beach. (n.d.). *Zoning Code and Overlay Maps*. Retrieved July 29, 2018, from http://www.pismobeach.org/338/Zoning-Code-Overlay-Zone-Maps

Claasen, M. K. (2012). *Geologic Formation of the Nipomo-Guadalupe Dunes and Historic Background of the Preserve*. Retrieved October 10, 2018, from https://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1011&context=nrmsp

CNPS. (2017). Online CNPS Inventory of Rare and Endangered Plants. *8*. Sacramento, CA.

CNPS, R. (2019). *Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39)*. Retrieved June 14, 2019, from http://www.rareplants.cnps.org

Colwell, M. A., Millett, C. B., Meyer, J. J., Hall, J. N., Hurley, S. J., McAllister, S. E., . . . LeValley, R. R. (2005). Snowy Plover Reproductive Success in Beach and River Habitats. *Journal of Field Ornithology, 76*, 373-382.

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

County of San Luis Obispo. (1972, December). *County of San Luis Obispo General Plan. A Summary Report. Master Water and Sewerage Plan*.

County of San Luis Obispo. (1989). *The Land Use Element and Local Coastal Plan of the San Luis Obispo County General Plan. South County Coastal*. Adopted by the San Luis Obispo County Board of Supervisors March 1, 1988 – Resolution 88-115. Certified by The California Coastal Commission February 25, 1988. Amended March 14, 1989.

County of San Luis Obispo. (1992). *Noise Ordinance*.

County of San Luis Obispo. (1992). *County of San Luis Obispo General Plan. Noise Element, Part I. Policy Document.* Adopted May 5, 1992 – Resolution 92-227.

County of San Luis Obispo. (2006). *County of San Luis Obispo General Plan. Parks and Recreation Element*. Adopted December 19, 2006 – Resolution 2006-478.

County of San Luis Obispo. (2007). *County of San Luis Obispo General Plan. Coastal Plan Policies*. Adopted by the San Luis Obispo County Board of Supervisors March 1, 1988 – Resolution 88-115. Certified by the California Coast Commission February 25, 1988. Revised April 2007.

County of San Luis Obispo. (2008). *The Land Use Element and Local Coastal Plan of the San Luis Obispo County General Plan. San Luis Bay Area Plan Coastal*. Adopted by the San Luis Obispo County Board of Supervisors March 1, 1988 – Resolution 88-115. Certified by The California Coastal Commission February 25, 1988. Revised August 2009.

County of San Luis Obispo. (2008). *Oceano Specific Plan*. Adopted by the San Luis Obispo County Board of Supervisors April 2, 2002. Certified by the California Coast Commission April 14, 2004. Amended 2008.

County of San Luis Obispo. (2008). *The Woodlands Specific Plan*. Adopted by the San Luis Obispo County Board of Supervisors December 15, 1998 – Resolution 98-494.

County of San Luis Obispo. (2009). *The Land Use Element and Local Coastal Plan of the San Luis Obispo County General Plan. Estero Area Plan*. Adopted by the San Luis Obispo County Board of Supervisors March 1, 1988 – Resolution 88-115. Cayucos and Rural Portions Updated January 7, 2009 – Resolution 2008-359. Revised January 2009.

County of San Luis Obispo. (2010). *County of San Luis Obispo General Plan. Agriculture Element*. Adopted by the San Luis Obispo County Board of Supervisors December 15, 1998. Amended by approval of Dalidio Ranch Initiative Measure November 2006. Revised May 2010.

County of San Luis Obispo. (2010). *County of San Luis Obispo General Plan. Conservation and Open Space Element*. Department of Planning and Building. Retrieved August 21, 2018, from https://www.slocounty.ca.gov/getattachment/ba01754b-50ac-4c13-ba16-1a9eb9d56a01/Conservation-and-Open-Space-Element.aspx

County of San Luis Obispo. (2011, November). *County of San Luis Obispo EnergyWise Plan. Designing Energy and Climate Solutions for the Future*. Adopted by the San Luis Obispo County Board of Supervisors November 22, 2011 – Resolution 2011-381.

County of San Luis Obispo. (2011). *County of San Luis Obispo General Plan. Coastal Zone Framework for Planning – Land Use Element*. Adopted by the San Luis Obispo County Board of Supervisors March 1, 1988. Certified by the California Coast Commission February 25, 1988. Revised November 2011.

County of San Luis Obispo. (2012). *County of San Luis Obispo General Plan. Economic Element*. Originally adopted October 19, 1999. Amended by approval of Dalidio Ranch Initiative Measure November 2006. Repealed and replaced October 23, 2012. Resolution No. 2012-266.

County of San Luis Obispo. (2014). *County of San Luis Obispo General Plan. Safety Element*. Adopted by the San Luis Obispo County Board of Supervisors December 14, 1999 – Resolution 99-559. Amended December 3, 2013 – Resolution 2014-296. Effective January 2, 2014.

County of San Luis Obispo. (2014). *County of San Luis Obispo General Plan. Housing Element*. Originally adopted October 12, 1982. Resolution 82-391. Amended June 17, 2014, Resolution 2014-154.

County of San Luis Obispo. (2014). *County of San Luis Obispo Land Use and Circulation Elements (Part II). The Area Plans*. Adopted February 4, 2014 – Ordinance 3256. Amended March 24, 2015 – Resolution 2015-75.

County of San Luis Obispo. (2015). *County of San Luis Obispo General Plan. Framework for Planning (Inland)*. Adopted September 22, 1980 – Resolution 80-350. Revised April 2015.

County of San Luis Obispo. (2017). *San Luis Obispo County Land Use Maps*. Retrieved May 29, 2018, from http://www.slocounty.ca.gov/Departments/Planning-Building/Forms-Documents/Maps/Land-Use-Maps.aspx

Dart, L. C. (1978). *Vignettes of History in San Luis Obispo County.* San Luis Obispo.

Dawson, M. N., Stanton, J. L., & Jacobs, D. K. (2001). Phylogeography of the tidewater goby, Eucyclogobius newberryi (Teleostei, Gobiidae), in coastal California. *Evolution, 55*, 1167-1179.

Ditmer, M. A., Vincent, J. B., Werden, L. K., Tanner, J. C., Laske, T. G., Iaizzo, P. A., . . . Fieberg, J. R. (2015, August 31). Bears Show a Physiological but Limited Behavioral Response to Unmanned Aerial Vehicles. *Current Biology, 25*(17), 2278-2283.

DRI. (2017, June 14). 2016 Aerosol Particle Profiler (APP) Monitoring Network: Summary of findings. Las Vegas, Nevada: Desert Research Institute.

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

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

DRI, D. (2015a, July 20). 2013 Intensive Wind Erodibiliy Measurements at and Near the Oceano Dunes SVRA: Report of Findings. Las Vegas, Nevada.

DRI, D. (2015b, July). 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, D. (2015c). Analyses and Summary of Key Findings, 2015 Dust Control, ODSVRA. Las Vegas, Nevada.

DRI, D. (2016, March 30). Updated Wind Erodibility Measurements at and Near the Oceano Dunes State Vehicular Recreation Area: Draft Overview of Findings. Las Vegas, Nevada.

Dugan, J., & David, H. (2010). Loss of Coastal Strand Habitat in Southern California: The Role of Beach Grooming. *Estuaries and Coasts(33),* 67-77. doi:1.1007/s12237-009-9239-8

Dunk, J. R. (1995). White-tailed kite (Elanus leucurus). *The Birds of North America, No. 178.* (A. Poole, & F. Gill, Eds.) The Academy of Natural Sciences, Philadelphia, and The American Ornithologists' Union, Washington, D.C.

eBird. (2017). eBird: An online database of bird distribution and abundance [web application]. Ithaca, NY. Retrieved Feburary 2017, from http://www.ebird.org

Etyemezian, V. (2019, April 15). Personal Communication. Email and phone call between Vic Etyemezian, DRI, and Chris Dugan, MIG. RE: Oceano Dunes Help.

Fisher, R. N., & Shaffer, H. B. (1996). The decline of amphibians in California's Great Central Valley. *Conservation Biology, 10*, 1387-1397.

Fitzgerald, R. T., Farquhar, J. M., & Farrell, N. L. (2003). *Archaeological Data Recovery at CA-SLO-809, Nipomo, San Luis Obispo County, California. .* Cultural Resource Management Services.

Gardner, L. (2001, August). *Oceano Dunes State Vehicular Recreation Area Wildlife Habitat Protection Plan*. Prepared for CDPR, OHMVR Division, Oceano Dunes District.

George, D. (2019, March 8). RE: Oceano Dunes HCP and NEPA Environmental Analysis. Personal Communication.

Gibson, R. O. (2002). *A Preliminary Review of Chumash Ethnohistoric Data for the Oceano Dunes Recreation Area Cultural Resource Assessment San Luis Obispo County, CA.*

Grant, C. (1978). Chumash: Introduction. (R. F. Heizer, Ed.) *California Handbook of North American Indians, 8*, 505-508.

Greenwood, R. S. (1972). 9000 Years of Prehistory at Diablo Canyon, San Luis Obispo County, California. *San Luis Obispo County Archaeological Society Occasional Papers, 2*. San Luis Obispo.

Greenwood, R. S. (1978). Obispeno and Purisimeno Chumash. *California Handbook of North American Indians*, 520-523. (R. F. Heizer, Ed.) Washington, D.C.: Smithsonian Institution.

Grinnel, J. (1928). A Distributional Summation of the Ornithology of Lower California. *University of California Publications in Zoology, 32*, 1-300.

Grinnell, J., Dixon, J. S., & Linsdale, J. M. (1937). *Fur-bearing mammals of California, 2*, 777. Berkeley, California: University of California Press.

Hammond, N. (1992). *The Dunites.* Arroyo Grande: South County Historical Society.

Hayes, M. P., & Jennings, M. R. (1988). Habitat Correlates of Distribution of the California Red-legged Frog (Rana aurora draytonii) and the Foothill Yellow-legged Frog (Rana boylii): Implications for Management. *Proceedings of the symposium on the management of amphibians, reptiles, and small mammals in North America*, 144-158. United States Department of Agriculture, Forest Service.

Holland, D. C. (1994). The Western Pond Turtle: Habitat and History. Final Report, DOE/BP-62137-1. Bonneville Power Administration, U.S. Department of Energy and Wildlife Diversity Program. Oregon Department of Fish and Wildlife, Portland.

Hoover, R. L. (1975). Notes on Northern Chumash Ecology and Settlement Patterns. In R. E. Schenk (Ed.), *Archives of California Archaeology* (p. 75). Society for California Archaeology, Anthropology Museum, San Francisco State Colle.

Hoover, R. L. (1977). *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, R. L. (1990). 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.

Jennings, M. R., & Hayes, M. P. (1994). Amphibian and reptile species of special concern in California. California Department of Fish and Game, Rancho Cordova, CA.

Jones, T. L., Stevens, N. E., Jones, D. A., Fitzgerald, R. T., & Hylkema, M. G. (2007). The Central Coast: A Midlatitude Milieu. (T. L. Jones, & K. A. Klar, Eds.) *California Prehistory*, 125-145.

Khan, K. (2018). Comments on Potential Revisions to the Trust Acquisition Reculations at 25 CFR Part 151. Retrieved October 10, 2018, from https://www.indianaffairs.gov/sites/bia.gov/files/assets/as-ia/raca/pdf/110-Santa_Ynez_Band_of_Chumash_Indians.pdf

Krauss, N. C., Militello, A., & Todoroff, G. (2002). Barrier Breaching Process and Barrier Spit Breach, Stone Lagoon, California. *Shore and Beach, 70*, 21-28.

Kroeber, A. (1925). Handbook of the Indians of California. *Bureau of American Ethnology Bulletin 78, 1978*. Washington, D.C.: Dover Press.

Kutilek, M., Shellhammer, H., & Bros, W. (1991, January). *Inventory, Wildlife Habitat Protection Program and Monitoring Program for Pismo Dunes State Vehicular Recreation Area California.* San Jose State University, Department of Biological Sciences, San Jose.

Lafferty, K. D., Swift, C. C., & Ambrose, R. F. (1999). Extirpation and Recolonization in a Metapopulation of an Endangered Fish, the Tidewater Goby. *Conservation Biology, 13*, 1447-1453.

Lafferty, K., Goodman, D., & Sandoval, C. P. (2006). Restoration of Breeding by Snowy Plovers Following Protection from Disturbance. *Biodiversity and Conservation, 15*, 2217-2230.

LCSLO. (2015). Endangered Nipomo Lupine on the Rise: 2015 Monitoring Update. *Landlines, 29, 3*, 7.

Long, C. A. (1983). Taxidea taxus. *Mammalian Species, 26*, 1-4.

Lowther, P. E., Celada, C., Klein, N. K., Rimmer, C. C., & Spector, D. A. (1999). Yellow Warbler (Dendroica petechia). *The Birds of North America, 454*. (A. Poole, & F. Gill, Eds.) Philadelphia: Birds of North America.

MacDonald, B., Longcore, T., & Dark, S. (2010). *Habitat Suitability Modeling for Western Snowy Plover in Central California*, 129. Los Angeles, California: The Urban Wildlands Group.

Mad River Biologists. (2005, September 19). *Oceano Dunse State Vehicular Recreation Area, Nighttime Riding Study Final Report*. Prepared for California Department of Parks and Recreation, Off-Highway Motor Vehicle Recreation Division.

Massey, B. W. (1988). California Least Tern Field Study 1988 Breeding Season. CDFW.

McCraney, W., Goldsmith, G., Jacobs, D. K., & Kinziger, A. P. (2010). Rampant Drift in Artificially Fragmented Populations of the Endangered Tidewater Goby (Eucyclogobius newberryi). *Molecular Ecology, 19*, 3315-3327.

McLeod, M. (2001). *Dune Mother's Wildflower Guide: Dunes of Coastal San Luis Obispo and Santa Barbara Counties, California.*

McWhirter, R. B., & Bildstein, K. L. (1996). Northern Harrier (Circus cyaneus). *The Birds of North America, 210*. (A. Poole, & F. Gill, Eds.) Philadelphia: Academy of Natural Sciences.

MIG|TRA. (2015, February 3). *Pismo State Beach and Oceano Dunes State Vehicular Recreation Area Vegetation Mapping Report*. Prepared for CDPR, OHMVR, Oceano Dunes District.

MIG|TRA. (2016, October). *Oceano Dunes SVRA Dust Control Program, Draft Program Environmental Impact Report*. Prepared for CDPR, OHMVR Division.

MIG|TRA. (2017, March). *Oceano Dunes SVRA Dust Control Program Final Program Environmental Impact Report*. Prepared for CDPR, OHMVR Division.

Moratto, M. J. (1984). *California Archaeology.* Orlando: Academic Press.

Moyle, P., Yoshiyama, R. M., Williams, J. E., & Wikramanayake, E. D. (1995). *Fish Species of Special Concern in California.* . Rancho Cordova, California: Department of Fish adn Game, Inland Fisheries Division.

Muir, J. J., & Colwell, M. A. (2010). Snowy Plover Select Open Habitats for Courtship Scrapes and Nests. *The Condor, 112*, 507-510.

Nature Conservancy. (2013). Where We Work, North America, United States, California, Places We Protect: California Guadalupe Nipomo Dunes. Retrieved November 11, 2013, from http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/california/placesweprotect/guadalupe-nipomo-dunes.xml

Neuman, K., Page, G. W., & George, D. (2005). *Effects of Recreational Disturbance to Waterbirds on Sandy Beaches at Oceano Dunes State Vehicular Recreation Area and Adjacent Areas. Prepared for the California Department of Parks and Recreation*. PRBO Conservation Science.

Neuman, K., Stenzel, L., Warriner, J., Page, G., Erbes, J., Eyster, C., . . . Henkel, L. (2013). Success of captive-rearing for a threatened shorebird. *22*, 85-94. Endangered Species Research.

NOAA. (2019, April 12). *Global Greenhouse Gas Reference Network*. (E. S. Division, Producer) Retrieved April 16, 2019, from Trends in Atmospheric Carbon Dioxide - Mauna Loa, Hawaii CO2 Monthly Mean Data: http://www.esrl.noaa.gov/gmd/ccgg/trends/

NOAA Fisheries. (2008, December 23). Letter to Andrew Zilke, California Department of Parks and Recreation regarding steelhead take avoidance.

NPS. (2012, June 28). Nipomo Dunes-Point Sal Coastal Area. *National Natural Landmarks Directory*. Retrieved November 11, 2013, from http://www.nature.nps.gov/nnl/site.cfm?Site=NIDU-CA

OHMVR Commission. (2014, January). *Off-Highway Motor Vehicle Recreation Commission Program Report*. CDPR, OHMVR Division.

OHMVRD, O.-H. M. (2019, March 28). Oceano Dunes State Vehicular Recreation Area Draft Particulate Matter Reduction Plan.

Page, G. W., Stenzel, L. E., & Ribic, C. A. (1985). Nest Site Selection and Clutch Predation in the Snowy Plover. *The Auk, 102*, 347-353.

Page, G. W., Warriner, J. S., Warriner, J. C., & Paton, P. C. (1995). Snowy Plover (Charadrius alexandrinus). *The Birds of North America, 154*, 1-24. (A. Poole, & F. Gill, Eds.) The Academy of Natural Sciences, Philadelphia, Pennsylvania and The American Ornithologists' Union, Washington, D. C.

Patrick, A. M., & Colwell, M. A. (2014). Snowy Plovers Select Wide Beaches for Nesting. *Wader Study Group Bulletin, 121(2)*, 17-20.

Perez, A. C. (2011). A Cultural Resource Inventory of Oceano Dunes SVRA, San Luis Obispo County, California. CDPR, OHMVR Division.

Perez, A. C. (2013). Dust Control Temporary Monitoring Program, Archaeological Survey Report. CDPR, OHMVR Division.

Peterson, R. T. (1990). *Peterson Field Guide to Western Birds, Third Edition*. New York: Houghton Mifflin Company.

Powell, A. N. (2001). Habitat Characteristics and Nest Success of Snowy Plovers Associated with California Least Tern Colonies. *Condor, 103*, 785-792.

Powell, A. N., & Collier, C. L. (2000). Habitat Use and Reproductive Success of Western Snowy Plovers at New Nesting Areas Created for California Least Terns. *Journal of Wildlife Management, 64*, 24-33.

Powell, A. N., & Cuthbert, F. J. (1993). Augmenting Small Populations of Plovers: An Assessment of Cross-Fostering and Captive-Rearing. *Conservation Biology, 7*, 160-168.

Powell, A. N., Cuthbert, F. J., Wemmer, L. C., Doolittle, A. W., & Feirer, S. T. (1997). Captive-rearing Piping Plovers: Developing Techniques to Augment Wild Populations. *Zoo Biology, 16*, 461-477.

Reese, D. (1996). *Comparative Demography and Habitat Use of Western Pond Turtles in Northern California: The Effects of Damming and Related Alterations.* Unpublished Ph.D. Dissertation, University of California, Berkeley.

Rischbieter, D. (2004, December). *Lower Arroyo Grande Creek and Lagoon Fishery and Aquatic Resources, Summary Monitoring Report*. Oceano Dunes State Vehicular Recreation Area. Pismo Dunes Natural Preserve.

Rischbieter, D. (2006, January). *Lower Arroyo Grande Creek and Lagoon Fishery and Aquatic Resources, Summary 2005 Monitoring Report*. Oceano Dunes State Vehicular Recreation Area. Pismo Dunes Natural Preserve.

Rischbieter, D. (2017, March 10). Email with Doug Rischbeiter, Environmental Scientist, California State Parks. Personal Communication.

Robinson, W. W. (1957). *The Story of San Luis Obispo County.* San Luis Obispo: Title Insurance and Trust Company.

Roche, E., Cuthbert, F., & Arnold, T. (2008). Relative Fitness of Wild and Captive-reared Piping Plovers: Does Egg Salvage Contribute to Recovery of the Endangered Great Lakes Population? *141*, 3079-3088. Biological Conservation.

Ruibal, R., Tevis, Jr., L., & Roig, V. (1969). The Terrestrial Ecology of the Spadefoot Toad Scaphiopus hammondii. *Copeia*, 571-584.

RWQCB. (2013). *Regular Meeting of May 30-31.* Central Coast Region.

RWQCB, Central Coast Region. (2001). Central Coast Ambient Monitoring Program. San Luis Obispo, CA: Unpublished Data.

San Luis Obispo County. (n.d.). *San Luis Bay Coastal Planning Area and South County Coastal Planning Area maps*. Retrieved June 29, 2018, from

https://www.slocounty.ca.gov/Departments/Planning-Building/Forms-Documents/Maps/Land-Use-Maps/Coastal-Zone-Maps.aspx

Sawyer, J. O., Keeler-Wolf, T., & Evens, J. (2009). *A Manual of California Vegetation, Second Edition.* Sacramento: California Native Plant Society in collaboration with California Department of Fish and Game.

Schaefer, A. (2019, April 26). Badger at Oceano Dunes. Personal Communication.

Schneider, J. (2000). Oso Flaco Lake Boardwalk Project: California Red-Legged Frog Survey Report.

Scientific Subcommittee Oceano Dunes SVRA. (2002, February 4). Meeting Summary and Discussion Follow-up. Friday, January 18, 2002.

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

Skinner, M. (2017). Personal communication. Rare Plant Surveys at Oceano Dunes SVRA.

SLOALUC. (2007). *Airport Land Use Plan for the Oceano County Airport; Adopted 1976; Amended 2007.* County of San Luis Obispo, Airport Land Use Commission.

SLOAPCD. (2001, December). *2001 Clean Air Plan San Luis Obispo County*.

SLOAPCD. (2001, December). 2001 Clean Air Plan San Luis Obispo County. SLOAPCD.

SLOAPCD. (2007, March). Nipomo Mesa Particulate Study 2007. San Luis Obispo, CA.

SLOAPCD. (2010, February). South County Phase 2 Particulate Study. San Luis Obispo, CA.

SLOAPCD. (2010, February). South County Phase 2 Particulate Study. San Luis Obispo, CA.

SLOAPCD. (2011, November 16). Rule 1001. Adopted by Resolution 2011-12.

SLOAPCD. (2012, April). *CEQA Air Quality Handbook*. Updated September 2015.

SLOAPCD. (2013, January). *South County Community Monitoring Project*. San Luis Obispo, CA.

SLOAPCD. (2014, September). *2013 Annual Air Quality Report*. San Luis Obispo, CA.

SLOAPCD. (2016a, January). 2014 Annual Air Quality Report. San Luis Obispo, CA.

SLOAPCD. (2016b, September). 2015 Annual Air Quality Report. San Luis Obispo, CA.

SLOAPCD. (2017a, Revised February 22). San Luis Obispo County Attainment Status. San Luis Obispo, CA.

SLOAPCD. (2017b, November). 2016 Annual Air Quality Report. San Luis Obispo, CA.

SLOAPCD. (2018, May 4). *Stipulated Order of Abatement Case No. 17-01*. San Luis Obispo: San Luis Obispo County.

SLOAPCD. (2018a, November). 2017 Annual Air Quality Report. San Luis Obispo, CA.

SLOAPCD. (2018b, May 4). *Stipulated Order of Abatement, Case No. 17-01. Hearing Board San Luis Obispo County Air Pollution Control District*. San Luis Obispo County, CA.

SLOAPCD. (2019). *2018 Annual Air Quality Report.* San Luis Obispo, CA.

SLOCOG. (2015, April). *SLOCOG 2014 Regional Transportation Plan*. San Luis Obispo Council of Governments .

Small, A. (1994). *California Birds: Their Status and Distribution.* Vista, CA: Ibis Publishing Company.

SMG. (2011). *Oceano Dunes SVRA Economic Impact Analysis Report 2010-2011, Final Report.*

SMG. (2018, March 5). *Oceano Dunes District-California State Parks Economics Impact Analysis Report 2016/2017.*

Smith, K. G. (2011, September 30). *Hen/Northern Harrier (Circus cyaneus/hudsoniuis)*, 2.0. (A. F. Poole, Editor) Retrieved from Birds of North America: https//doi.org/10.2173/bna.210

State of California Court of Appeal. (2014, March 26). Consent Decree, Dismissal of Appeals, and Remand to the Trial Court to enforce the Consent Decree through Continuing Jurisdiction pursuant to CCP §664.6. *Friends of Oceano Dunes, Inc. v. San Luis Obispo Air Pollution Control District, et. al.* . Second Appellate District. Division Six. Case Number B248814.

State Water Resource Control Board. (2014). Approving an Amendment to the Water Quality Control Plan for the Central Coastal Basin to Adopt Total Maximum Daily Loads for Nitrogen Compounds and Orthophosphate in the Lower Santa Maria River Watershed and Tributaries to Oso Flaco Lake. *Amendment Approval*.

Stebbins, R. (1954). *Amphibians and Reptiles of Western North America*. New York, U.S.A.: McGraw-Hill Book Company, Inc.

Stebbins, R. (2003). *A Field Guide to Western Reptiles and Amphibians* (Third Edition, Revised ed.). Boston, MA: Houghton Mifflin Co.

Stenzel, L., Peaslee, S., & Page, G. (1981). The Breeding Status of the Snowy Plover in California. *II(12)*, 6-16. Mainland Coast.

SWCA Environmental Consultants. (2010). *Arroyo Grande Creek Channel Waterway Management Program Final Environmental Impact Report.* County of San Luis Obispo, Department of Public Works.

SWCA Environmental Consultants. (2012). *Final Revised Grover Beach Lodge and Conference Center Environmental Impact Report. SCH2010051002.* Prepared for the City of Grover Beach.

Swift, C., Nelson, J., Maslow, C., & Stein, T. (1989). Biology and Distribution of the Tidewater Goby, Eucyclogobius newberryi (Pisces: Gobiidae) of California. *Contibutions in Science, Natural History Museum of Los Angeles County*, pp. 1-19.

Thompson, B., Jackson, J., Burger, J., Hill, L., Kirsch, E., & Atwood, J. (1997). Least Tern (Sternula antillarum), version 2.0. https://doi.org/10.2173/bna.290. (A. Poole, & F. Gill, Eds.) Ithaca, NY, USA: Cornell Lab of Ornithology. Retrieved from The Birds of North America.

TRA Environmental Sciences, Inc. (2012, October).

TRA Environmental Sciences, Inc. (2013). *Oceano Dunes District Pismo Creek Estuary Seasonal Bridge Project Initial Study/Mitigated Negative Declaration.*

TRT, O. D. (2002, January). Adopted Charter.

U.S. District Court. (2005, April 13). *Sierra Club v. Rusty Areias etc. et al. Consent Decree*. Central District of California. Case No. CV 01-10598-GHK.

US EPA, U. S. (2016a, September 8). Basic Information About NO2. *U.S. EPA, Environmental Topics [Air], Nitrogen Dioxide (NO2), What is NO2, and how does it get into the air?* Retrieved June 22, 2018, from https://www.epa.gov/no2-pollution/basic-information-about-no2#What%20is%20NO2

US EPA, U. S. (2016b, September 12). Particulate Matter (PM) Basics. *U.S. EPA, Environmental Topics [Air], Particulate Matter (PM), What is PM, and how does it get into the air?* Retrieved June 22, 2018, from https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#PM

US EPA, U. S. (2018, June 15). Ozone Basics. *U.S. EPA, Environmental Topics [Air], Ground Level Ozone, What is "good"" versus "bad" ozone*. Retrieved June 22, 2018, from https://www.epa.gov/ozone-pollution/ozone-basics#what%20where%20how

USDA, U. (n.d.). Wind Erosion Simulation Models. Retrieved Aptil 16, 2019, from https://infosys.ars.usda.gov/WindErosion/simmodels/simmodels.shtml

USFWS. (1993). Endangered and Threatened Wildlife and Plants; Determination for Two Plants, Arenaria Paludicola (Marsh Sandwort) and Rorippa Gambellii (Gambel's Watercress). *50 Federal Register 147, 58(149),* 41378-41384.

USFWS. (1993). Endangered and Threatened Wildlife and Plants; Determination for Two Plants, Arenaria Paludicola (Marsh Sandwort) and Rorippa Gambellii (Gambel's Watercress). *58 Federal Register 147*, 41378-41384.

USFWS. (1993, March 5). Endangered and Threatened wildlife and Plants; Determination of Threatened Status for the Pacific Coast Population of the Western Snowy Plover. *58 Federal Register 12864*.

USFWS. (1994, February 4). Endangered and Threatened Wildlife and Plants; Determination of endangered status for the tidewater goby. *59 Federal Register 7958, 49(24)*. Federal Register 59.

USFWS. (1996). Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the California Red-Legged Frog. *61 Federal Register 101, 61(101),* 25813-25833.

USFWS. (1997). Guidance on Site Assessment and Field Surveys for California Red-legged Frogs.

USFWS. (1998). Recovery Plan for Marsh Sandwort (Arenaria paludicola) and Gambel's Watercress (Rorippa gambelii). 50 pp + Appendices. Portland, Oregon.

USFWS. (2000). Endangered and Threatened Wildlife and Plants; Final Rule for Endangered Status for Four Plants from South Central Coastal California; Final Rule. *65 Federal Register 14888*.

USFWS. (2001, February 16). Notice of Intent for Preparation of an Environmental Impact Statement for Issuance of an Incidental Take Permit Associated With a Habitat

Conservation Plan for the CDPR's Operation of Certain San Luis Obispo Coast District Parks and the Oceano Dunes SVRA. *70 Federal Register 7958*.

USFWS. (2001a). Endangered and Threatened Wildlife and Plants; Final Determinations of Critical Habitat for the California Red-legged Frog; Final Rule. *65 Federal Register 14626*.

USFWS. (2001b). Endangered and Threatened Wildlife and Plants; Proposed Designation of Critical Habitat for Cirsium loncholepis (La Graciosa Thistle), Eriodictyon capitatum (Lompoc Yerba Santa), and Deinandra increscens ssp. villosa (Gaviota Tarplant). *66 Federal Register 221*, 57560-57600.

USFWS. (2002). Recovery Plan for the California Red-legged Frog (Rana aurora draytonii). viii+173 pp. Portland, OR.

USFWS. (2004a, December 17). Endangered and Threatened Wildlife and Plants; Proposed Designation of Critical Habitat for the Pacific Coast Population of the Western snowy plover. *69 Federal Register*, 75608-75771.

USFWS. (2005). Notice of Intent Preparation of an EIS for Issuance of an Incidential Take Permit Associated with a Habitat Conservation Plan for the California Department of Parks and Recreation's Operation of Certain San Luis Obispo Coast District Parks and the Ocean. *70 Federal Register 7958*.

USFWS. (2005a). Recovery Plan for the Tidewater Goby (Eucyclogobius newberryi). vi + 199 pp. Portland, OR.

USFWS. (2006a, September). California least tern (Sternula antillarum browni) 5-Year Review Summary and Evaluation. *USFWS Carlsbad Fish and Wildlife Office*. Carlsbad, CA.

USFWS. (2006b). 2006 Pacific Coast Breeding Window Survey for Snowy Plover.

USFWS. (2007b). Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (Charadrius nivosus nivosus). *I & II*, xiv + 751 pp. Sacramento, CA.

USFWS. (2008). Arenaria paludicola (Marsh Sandwort) 5-Year Review: Summary and Evaluation. *USFWS Ventura Fish and Wildlife Office*. Ventura, California.

USFWS. (2008). Birds of Conservation Concern. USFWS, Division of MIgratory Bird Management.

USFWS. (2009a). Revised Designation of Critical Habitat for Cirsium loncholepis (La Crociosa Thistle). *Endangered and Threatened Wildlife and Plants(74 Fed. Reg. 56978)*.

USFWS. (2009a). U.S. Fish and Wildlife Service - Spotlight Species Action Plan 2010-2014. California Least Tern. *USFWS Carlsbad Fish and Wildlife Office*. Carlsbad, CA.

USFWS. (2009b). Lupinus nipomensis (Nipomo Lupine) 5-Year Review: Summary and Evaluation. Ventura Fish and Wildlife Office, Ventura CA.

USFWS. (2009c). Spotlight Species Action Plan 2010-2014. Gambel's Watercress.

USFWS. (2011a). Cirsium loncholepis [Cirsium scariosum var. loncholepis] (La Graciosa thistle) 5-Year Review: Summary and Evaluation. Ventura, California: Ventura Fish and wildlife Office.

USFWS. (2011b). Rorippa gambellii [Nasturtium gambelii] (Gambel's watercress) 5-Year Review: Summary and Evaluation.

USFWS. (2012). *Draft Environmental Assessment for the Wildlife Ponds Project Guadalupe-Nipomo Dunes National Wildlife Refuge San Luis Obispo County, California.* Ventura, CA.

USFWS. (2016, August). *Guadalupe-Nipomo Dunes National Wildlife Refuge Final comprehensive Conservation Plan and Environmental Assessment.* Retrieved September 5, 2018, from https://www.fws.gov/uploadedFiles/Region_8/NWRS/Zone_1/Hopper_Mountain_Complex/Guadalupe-Nipomo_Dunes/Sections/What_We_Do/Conservation/GNDNWR_FINAL_CCP.pdf

USFWS. (2016). *Final Comprehensive Conservation Plan and Environmental Assessment for the Guadalupe Dunes National Wildlife Refuge. .*

USFWS. (2016a, March 29). Letter to Brent Marshall, District Superintendent, California Department of Parks and Recreation, Oceano Dunes State Vehicular Recreation Area. Subject: Oceano Dunes State Vehicular Recreation Area Endangered Species Act. Ventura Fish and Wildlife Office.

USFWS. (2016b, August). *U.S. Fish and Wildlife Service, Guadalupe-Nipomo Dunes National Wildlife Refuge Draft Comprehensive Conservation Plan and Environmental Assessment*. Retrieved October 10, 2018, from https://www.fws.gov/uploadedFiles/Region_8/NWRS/Zone_1/Hopper_Mountain_Complex/Guadalupe-Nipomo_Dunes/Sections/What_We_Do/Conservation/PDFs/GND_CCP%20with%20Appendix%20A.pdf

USFWS. (2016c, December 22). Letter to Brent Marshall, District Superintendent, CDPR, Oceano Dunes State Vehicular Recreation Area. Subject: Oceano Dunes State Vehicular Recreation Area, Second Notice of Additional Endangered Species Act Violations.

USFWS. (2017). IPaC Official Species List. List generated August 29, 2017. Retrieved from https://ecos.fws.gov/ipac/publicDocument/VU27V52SPNBXJKHBCT2J7TYWX4

USFWS and NOAA Fisheries. (2016). Habitat Conservation Planning and Incidental Take Permit Processing Handbook.

Vas, E., Lescroel, A., Duriez, O., Boguszewski, G., & Gremillet, D. (2015). Approaching Birds with Drones: First Experiments and Ethical Guidelines. *Biological Letters 11*.

Wallace, P. (1971). *A Short History of the Chumash from 1834-1900*.

Wallace, W. J., & Taylor, E. S. (1958). *Archaeological Investigations in the Arroyo Grande Creek Watershed, San Luis Obispo County, California.* Los Angeles, California: Department of Anthropology of the University of Southern California,.

Walters, D., & Walters, B. (1988). Taxonomy, Demography, and Ecology of Lupinus nipomensis. *Eastwood*.

Warriner, J., Warriner, J., Page, G., & Stenzel, L. (1986). Mating System and Reproductive Success of a Small Population of Polygamous Snowy Plovers. *Wilson Bulletin*(98), 15-37.

Webber, A., Heath, J., & Fischer, R. (2013). Human Disturbance and Stage-specific Habitat Requirements Influence Snowy Plover Site Occupancy During the Breeding Season. *Ecology and Evolution*(3), 853-863.

Yosef, R. (1996). Loggerhead Shrike (Lanius ludovicianus). *(231)*. (A. Poole, & F. Gill, Eds.) Philadelphia: Academy of Natural Sciences.

Zeiner, D., Laudenslayer, Jr., W., Mayer, K., & White, M. (1990). *California's Wildlife* (1988-1990 ed., Vols. I-III). Sacramento, CA: California Department of Fish and Game.

11.2 REPORT PREPARERS

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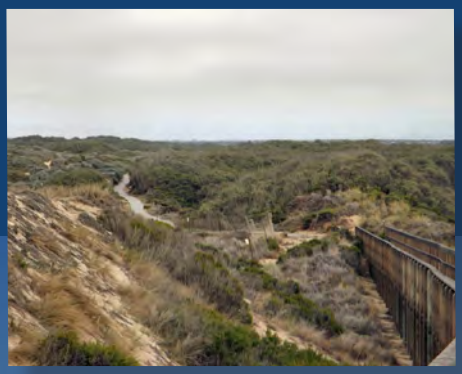

EIR Technical Appendices

Habitat Conservation Plan for the Oceano Dunes District

February 2020

California Department of Parks and Recreation
Oceano Dunes District
Habitat Conservation Plan

Draft EIR
Technical Appendices

SCH No. 2018011012

February 2020

Prepared for:
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INTRODUCTION

This document is the Technical Appendices volume of the Draft Environmental Impact Report (EIR) for the Oceano Dunes District Habitat Conservation Plan.

This volume presents the following appendices:

Appendix A. Scoping Report

Appendix B. HCP Avoidance and Minimization Measures

Appendix C. Special-Status Species in HCP Area

Appendix D. Biological Effects of Existing Covered Activities

Appendix E. Native American Communications

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Oceano Dunes District
Habitat Conservation Plan EIR

Appendix A: Scoping Report

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Oceano Dunes District Habitat Conservation Plan EIR

Scoping Report

August 2018

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Oceano Dunes District Habitat Conservation Plan EIR Scoping Report

INTRODUCTION

This scoping report summarizes the public scoping meeting and comments received for the environmental document being prepared in connection with California Department of Parks and Recreation's (CDPR) application for an incidental take permit, for Pismo State Beach and Oceano Dunes State Vehicular Recreation Area (SVRA), (ITP) authorized under Sections 10(a)(1)(A) and 10(a)(1)(B) of the federal Endangered Species Act (FESA). The environmental document will consider potential impacts of implementing CDPR's Habitat Conservation Plan (HCP) and issuance of an incidental take permit by the U.S. Fish and Wildlife Service (USFWS). The report is organized in the following sections:

- Introduction
- Background
- Action and Environmental Document
- Scoping Process
- Comments Received
- Summary of Scoping Comments
- Attachment 1: Notices and Meeting Advertisements
    - Notice of Preparation and Public Scoping Meeting
    - USFWS News Release seeking public input on HCP
    - Notice of Intent
- Attachment 2: Scoping Meeting Presentation
- Attachment 3: Scoping Meeting Attendance Record
- Attachment 4: Scoping Meeting Oral Comments and Questions
- Attachment 5: Scoping Letters
    - Hardcopy Letters
    - Emails
    - Form emails

BACKGROUND

CDPR is in the process of developing a conservation strategy for various species located at Pismo State Beach and Oceano Dunes State Vehicular Recreation Area (SVRA), for which the California Department of Parks and Recreation (CDPR) has responsibility and authority. Management and operation of the two areas may negatively affect western snowy plover (*Charadrius nivosus nivosus*), California least tern (*Sternula antillarum browni*), California red-legged frog (*Rana draytonii*), and tidewater goby (*Eucyclogobius newberryi*), as well as six listed plant species. Therefore, CDPR has prepared a Habitat Conservation Plan (HCP) as part of its application for an incidental take permit (ITP) authorized under Sections 10(a)(1)(A) and 10(a)(1)(B) of the federal Endangered Species Act (FESA). The HCP to be prepared by CDPR in support of the permit applications will describe the impacts of take on proposed covered species, and it will propose a conservation strategy to minimize and mitigate those impacts on each covered species to the maximum extent practicable.

ACTION AND THE ENVIRONMENTAL DOCUMENT

CDPR has prepared a Draft Environmental Impact Report (EIR) for the Oceano Dunes District HCP pursuant to the California Environmental Quality Act (CEQA). USFWS is preparing an environmental review of the Draft HCP pursuant to the National Environmental Policy Act (NEPA) in a separate document. Both the Draft EIR and the USFWS NEPA document will have distinct public review periods and opportunities to provide comment on the respective environmental review document and the Draft HCP.

SCOPING PROCESS

CDPR published a Notice of Preparation (NOP) for the EIR on January 11, 2018 to invite comment on the scope and content of the environmental review of the Oceano Dunes District HCP; the comment period closed on March 12, 2018. Simultaneously, the USFWS published a Notice of Intent in the Federal Register and a News Release to announce preparation of a NEPA environmental review of the HCP and to invite public comment. Both notices announced a joint public scoping meeting on February 7, 2018 for the purpose of inviting public comments on the project.

Public notice of the scoping period and public meeting was distributed to state agencies through the State Clearinghouse, County Clerk offices of adjacent counties, local community agencies, adjacent property residents, homeowner and neighborhood associations, and interested organizations and individuals who have requested notices from CDPR (Attachment 1). Notice was also published in a newspaper of local circulation. The objective of the scoping meeting was to solicit comments to assist the preparation of the environmental document and scope of the Habitat Conservation Plan. Commentors were asked to identify important issues and alternatives related to the proposed action to ensure the full range of issues related to the permit requests is identified.

Members of the public were greeted on arrival and asked to sign the attendance record form listing their name, address, and affiliation. The meeting was held with an open house format beginning with introductions, followed by a slide show presentation by Ronnie Glick, Senior Environmental Scientist, California State Parks (Attachment 2) and was followed by a general question and answer period. The public was then invited to submit verbal comments. Comment cards and mailing information were also provided for written comments. The notice and presentation stated that written comments would be accepted through March 12, 2018.

Representatives from the Oceano Dunes District of CDPR, USFWS, and MIG consultants attended and conducted the scoping meeting. Twenty members of the public signed the attendance list (Attachment 3) for the meeting.

COMMENTS RECEIVED

A total of 20 oral comments were received at the scoping meeting (Attachment 4). Twelve distinct comment letters, emails or comment cards were received in response to the NOP and NOI and one form letter email was submitted by 2,053 individuals. Some of the form letters contained additional unique comments as recorded with the form letter. Scoping comments were submitted by private individuals, public agencies, and private conservation groups (Attachment 5).

SUMMARY OF SCOPING COMMENTS

Some of the comments related to the HCP rather than the environmental document, and some comments expressed support or opposition to certain aspects of the proposed HCP. Some comments pertained only to the federal agency environmental review under NEPA. Only those comments relating to the scope of the environmental analysis are presented below. The comments focused on air quality, biological resources, cultural resources, water quality/hydrology, recreation opportunity, the alternatives analysis, and cumulative impacts.

- **Document Type & Review Process.** Specify whether EIR will be used as programmatic "tiering" document or provide project-level review, prepare a full EIS not an EA, and that a NCCP is needed for CLTE since it is a Fully Protected Species.
- **General Comments Applying to Entire Document.** Base environmental review on best available science and survey data following established protocols. (see methodology section for each impact analysis chapter)
- **Project Description- Proposed Action.** Identify purpose and need and rationale for proposed action. HCP and CEQA/NEPA documents must clearly identify enforcement provisions.
- **Air Quality.** Address general impacts of motorized recreation on air quality, dust, and particulates. For air quality analysis, quantify emissions, identify emissions sources, and include construction emissions mitigation including fugitive dust source controls, stationary equipment source controls, and administrative controls. Demonstrate project emissions of air basin pollutants in nonattainment or maintenance status are accounted for in the State Implementation Plan.
- **Greenhouse Gas (GHG).** Address general impacts of motorized recreation on GHG emissions.
- **Biological Resources.** Address general impacts of motorized recreation on loss of surface soils and vegetation and trash. Include direct, indirect, and cumulative impacts to all wildlife and habitat, and measures to avoid impacts. Discuss HCP's consistency with other HCPs or recovery plans in the area. Address invasive species impacts and impacts to steelhead and leatherback sea turtle. Address other protected species not covered in the HCP. Take into account the impacts of climate change and dogs off leash on covered species. Incorporate findings of USFWS 2017 report to improve protections for SNPL and CLTE. Address impacts from dust control mitigation on increased vegetation that attracts predators, threatening endangered species. Address sand density in preferred nesting habitat assessment. Take into account injured birds in take totals. Apply a correction factor for detection of juvenile and adult SNPL mortality caused by vehicle strikes. Express losses to take of SNPL eggs, chicks, and juveniles as adult equivalents to better identify cumulative impacts. Address nighttime vehicle threat to juvenile and adult SNPL. Consider rates of sea level rise in impact analysis for SNPL habitat. Address impacts of fertilizer used for revegetation projects.
- **Cultural Resources.** Describe tribal consultation process, address Indian sacred sites that exist in the project area, consult with California Native American tribes affiliated with the

geographic area per SB 18 and AB 52, particularly in regard to dust mitigation projects and planning.

- **Hydrology and Water Quality.** Address general impacts of motorized recreation from oil and gas spills. Describe the drainage patterns in the area, including the 50- and 100-year flood plains. Address water quality and flow rates of Oso Flaco Lake and Arroyo Grande Creek.
- **Land Use and Planning.** Discuss project consistency with objectives of federal, state, tribal, or local land use plans, policies, and controls in the plan area.
- **Environmental Justice**. The environmental document should include an evaluation of environmental justice populations within the geographic scope of the plan area.
- **Recreation.** Consider a range of recreation opportunity including no loss in recreation opportunity and more restriction to vehicle use. Evaluate night riding impacts.
- **Alternatives.** Evaluate all reasonable alternatives that fulfill project's purpose and need in detail and protect imperiled wildlife and health of nearby communities. Include a clear discussion of reasons for elimination of any alternatives not discussed in detail. Include alternatives with expanded SNPL and CLTE exclosures and permanent exclosures. Consider an alternative area for permanent fences, alternative access during wet season, alternative areas for off-highway vehicle (OHV) use in non-sensitive areas, riding closure during breeding season, staggering use of OHV days and hours, and off-site mitigation for CLTE/SNPL as alternatives. Establish visitor capacity limits and consider as an alternative. Address return of the seasonal exclosure boundary to post marker (Post) 7 in compliance with 2003 Settlement Agreement. NEPA analysis must provide a co-equal evaluation of alternatives with the proposed action.
- **Cumulative Impacts.** Evaluate the effects of other past, present, and reasonably foreseeable actions and consider those impacts on a cumulative level. Discuss future changes that may affect covered species and their habitats. Evaluate all potential Oceano Dunes SVRA operations and configurations and consider future uncertainties due to temporary Coastal Development Permit and Public Works Plan being developed.

ATTACHMENT 1: NOTICES AND MEETING ADVERTISEMENTS

- Notice of Completion and Environmental Document Transmittal
- Notice of Preparation and Public Scoping Meeting

Print Form

Appendix C

Notice of Completion & Environmental Document Transmittal

2018011012

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: Oceano Dunes District Habitat Conservation Plan EA/EIR or EIS/EIR

Lead Agency: CDPR, OHMVR Division, Oceano Dunes District | Contact Person: Ronnie Glick
Mailing Address: 340 James Way, Ste. 270 | Phone: 805-773-7170
City: Pismo Beach | Zip: 93449 | County: San Luis Obispo

Project Location: County: San Luis Obispo | City/Nearest Community: Oceano, Grover Beach, Pismo Beach
Cross Streets: Grand Ave, Pier Ave, Oso Flaco Road | Zip Code: 93445
Longitude/Latitude (degrees, minutes and seconds): 35 ° 03 ′ 21 ″ N / 120 ° 37 ′ 3 ″ W Total Acres: Approx. 5,005
Assessor's Parcel No.: Project covers many parcels | Section: | Twp.: | Range: | Base:
Within 2 Miles: State Hwy #: SR 1; US Highway 101 | Waterways: Pismo/Meadow/Oso Flaco/Arroyo Grande Creeks
Airports: Oceano County Airport | Railways: Amtrak | Schools: various

Document Type:

CEQA: ☒ NOP ☐ Draft EIR | NEPA: ☐ NOI | Other: ☒ Joint Document
☐ Early Cons ☐ Supplement/Subsequent EIR ☐ EA ☐ Final Document
☐ Neg Dec (Prior SCH No.) ☐ Draft EIS ☐ Other:
☐ Mit Neg Dec Other: ☐ FONSI

Local Action Type:

Governor's Office of Planning & Research
JAN 09 2018
STATE CLEARINGHOUSE

☐ General Plan Update ☐ Specific Plan ☐ Rezone ☐ Annexation
☐ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☐ Land Division (Subdivision, etc.) ☒ Other: Habitat Conserva

Development Type:

☐ Residential: Units Acres
☐ Office: Sq.ft. Acres Employees ☐ Transportation: Type
☐ Commercial: Sq.ft. Acres Employees ☐ Mining: Mineral
☐ Industrial: Sq.ft. Acres Employees ☐ Power: Type MW
☐ Educational: ☐ Waste Treatment: Type MGD
☐ Recreational: ☐ Hazardous Waste: Type
☐ Water Facilities: Type MGD ☒ Other: Resource Management

Project Issues Discussed in Document:

☐ Aesthetic/Visual ☐ Fiscal ☒ Recreation/Parks ☒ Vegetation
☐ Agricultural Land ☐ Flood Plain/Flooding ☐ Schools/Universities ☒ Water Quality
☒ Air Quality ☐ Forest Land/Fire Hazard ☐ Septic Systems ☐ Water Supply/Groundwater
☒ Archeological/Historical ☒ Geologic/Seismic ☐ Sewer Capacity ☒ Wetland/Riparian
☒ Biological Resources ☐ Minerals ☐ Soil Erosion/Compaction/Grading ☐ Growth Inducement
☒ Coastal Zone ☐ Noise ☐ Solid Waste ☐ Land Use
☐ Drainage/Absorption ☐ Population/Housing Balance ☐ Toxic/Hazardous ☐ Cumulative Effects
☐ Economic/Jobs ☐ Public Services/Facilities ☐ Traffic/Circulation ☐ Other:

Present Land Use/Zoning/General Plan Designation:

Various including Agriculture, Recreation, and Open Space/Resource Conservation

Project Description: *(please use a separate page if necessary)*

The California Department of Parks and Recreation (CDPR) proposes to prepare an HCP to support its application for a 25-year incidental take permit (ITP) under the federal Endangered Species Act for park units managed by the Oceano Dunes District. The HCP area covers 5,005 acres of largely undeveloped public lands. The ITP would cover all lawful activities for which CDPR has responsibility within the HCP area that could result in take of covered species, including public use, recreation management, natural and cultural resources management, and park/beach management. The HCP addresses the following: species: western snowy plover, California least tern, California red-legged frog, tidewater goby, marsh sandwort, La Graciosa thistle, Nipomo Mesa lupine, Gambel's watercress, surf thistle, and beach spectaclepod.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Revised 2010

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

X	Air Resources Board		Office of Historic Preservation
	Boating & Waterways, Department of		Office of Public School Construction
	California Emergency Management Agency		Parks & Recreation, Department of
	California Highway Patrol		Pesticide Regulation, Department of
X	Caltrans District # 5		Public Utilities Commission
	Caltrans Division of Aeronautics	X	Regional WQCB # 3
	Caltrans Planning		Resources Agency
	Central Valley Flood Protection Board		Resources Recycling and Recovery, Department of
	Coachella Valley Mtns. Conservancy		S.F. Bay Conservation & Development Comm.
X	Coastal Commission		San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
	Colorado River Board		San Joaquin River Conservancy
	Conservation, Department of		Santa Monica Mtns. Conservancy
	Corrections, Department of	X	State Lands Commission
	Delta Protection Commission		SWRCB: Clean Water Grants
	Education, Department of	X	SWRCB: Water Quality
	Energy Commission		SWRCB: Water Rights
X	Fish & Game Region #4		Tahoe Regional Planning Agency
	Food & Agriculture, Department of		Toxic Substances Control, Department of
	Forestry and Fire Protection, Department of		Water Resources, Department of
	General Services, Department of		
	Health Services, Department of	S	Other: U.S. Fish and Wildlife Service
	Housing & Community Development		Other:
X	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date January 11, 2018 Ending Date March 12, 2018

Lead Agency (Complete if applicable):

Consulting Firm: MIG | TRA Environmental Sciences
Address: 545 Middlefield Road, Suite 200
City/State/Zip: Menlo Park, CA 94025
Contact: Kate Werner
Phone: 831-601-4700

Applicant: OHMVR Division, Oceano Dunes District
Address: 340 James Way, Ste. 270
City/State/Zip: Pismo Beach, CA 93449
Phone: 805-773-7170

Signature of Lead Agency Representative: _____ **Date:** 1-9-2018

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

Revised 2010

NOTICE OF PREPARATION AND PUBLIC SCOPING MEETING

Date: January 9, 2018

To: California State Clearinghouse, state Responsible and Trustee Agencies, federal agencies, County Clerks, local jurisdictions, and interested individuals and organizations

Subject: **Notice of Preparation and Public Scoping Meeting for the California Department of Parks and Recreation, Oceano Dunes District Habitat Conservation Plan Joint EA/EIR or Joint EIS/EIR**

Lead Agency: U.S. Fish and Wildlife Service (Service) is Lead Agency under the National Environmental Policy Act (NEPA) for the EA or EIS; California Department of Parks and Recreation (CDPR) is Lead Agency under the California Environmental Quality Act (CEQA) for the EIR.

Applicant: CDPR, Oceano Dunes District, 340 James Way, Ste. 270, Pismo Beach, CA 93449

Project Location: Pismo State Beach, Oceano Dunes State Vehicular Recreation Area, and Pismo Lake in San Luis Obispo County, California

Project Description: CDPR proposes to prepare a Habitat Conservation Plan and submit an application for an incidental take permit under the federal Endangered Species Act. A brief description of the project, including its location and probable environmental effects, is attached. An Initial Study was not prepared for the project because CDPR has determined that an EIR will be prepared for the project.

The purpose of this Notice of Preparation (NOP) and Public Scoping Meeting is to 1) describe the proposed project (the Project) and possible alternatives; 2) advise other federal and State agencies and the public of CDPR's and the Service's intent to prepare a joint EA/EIR or EIS/EIR; 3) announce the initiation of a 60-day public scoping period; and 4) obtain suggestions and information on the scope of issues and alternatives to be included in the EA/EIR or EIS/EIR. Comment is requested from state Responsible and Trustee Agencies, federal agencies, and any other local agency, person, or organization concerned with the environmental effects of the project.

Corresponding with the NOP, a Notice of Intent (NOI) is being issued by the Service for publication in the Federal Register in compliance with Section 1501.7 of NEPA. As provided for under CEQA Guideline 15170, "a lead agency may work with a federal agency to prepare a joint environmental document." The NOI and NOP are being released simultaneously for a 60-day public review period, which commences on January 11, 2018 and ends on March 12, 2018. The NOI and NOP provide parallel opportunities for early agency and public input and comment.

Responses may be to one Notice or the other, but need not be to both. All information and comments received in response to the NOP and NOI must be considered in preparation of the EIS/EA or EIS/EIR as a whole.

Please send your written response by the earliest possible date, but no later than 5 PM on March 12, 2018 to Mr. Ronnie Glick, Senior Environmental Scientist, California Department of Parks and Recreation, Oceano Dunes District, 340 James Way, Ste. 270, Pismo Beach, CA 93449 or to Ronnie.Glick@parks.ca.gov (enter "Oceano Dunes District HCP NOP" in the 'Subject' line). Agency responses should include the name of a contact person at the agency. The Service and CDPR encourage all interested agency representatives, organizations, and individuals to attend the public scoping meeting for the Project's Draft EA/EIR or EIS/EIR:

Wednesday, February 7, 2018
Ramona Garden Park Center
993 Ramona Avenue
Grover Beach, CA 93433
6 PM – 8 PM

Signature: _____ Date: __January 9, 2018_____

Title: ___Environmental Compliance Manager____

CALIFORNIA DEPARTMENT OF PARKS AND RECREATION

OCEANO DUNES DISTRICT HABITAT CONSERVATION PLAN (HCP)

PROJECT DESCRIPTION

The California Department of Parks and Recreation (CDPR), Oceano Dunes District manages Pismo State Beach, Pismo Lake, and Oceano Dunes State Vehicular Recreation Area (SVRA). These state park units provide coastal recreation to an estimated two million visitors annually. The parklands are home to multiple wildlife and plant species, some of which are protected under the federal Endangered Species Act (FESA). CDPR implements an ongoing conservation program to manage these special-status species and their habitats. CDPR is preparing an HCP, which is required under the federal Endangered Species Act (ESA) for issuance of an incidental take permit (ITP).

Project Location and Site Description

The Oceano Dunes District HCP area includes Pismo State Beach, Oceano Dunes SVRA, and Pismo Lake located in San Luis Obispo County, California (Map 1, HCP Area). The HCP area comprises 5,005 acres bounded by the City of Pismo Beach to the north, the Guadalupe-Nipomo Dunes National Wildlife Refuge to the south, urban and agricultural land to the east, and the Pacific Ocean to the west. Primary access to the area is via U.S. Highway 101 and State Route 1.

Pismo State Beach and Oceano Dunes SVRA comprise approximately 25 percent of the 18-mile linear shoreline of the Guadalupe-Nipomo Dunes complex, which extends from Pismo Beach south to Point Sal in Santa Barbara County. The Guadalupe-Nipomo Dunes complex is a relatively intact coastal dune and dune scrub ecosystem varying in width from two to five miles.

Visitors come to enjoy wide-ranging pursuits including off-highway vehicle (OHV) (e.g., 4x4, all-terrain vehicle [ATV], motorcycle, and sandrail) recreation, camping, pedestrian activities, dog-walking, horseback riding, bicycling, golfing, fishing, boating/surfing, and aerial/wind driven activity. To support this high level and diversity of visitation, the Oceano Dunes District has an extensive operational program (Map 2, Land Use Facilities).

Proposed Project

CDPR management and operation of Pismo State Beach, Pismo Lake, and Oceano Dunes SVRA may negatively affect the federally-threatened western snowy plover (*Charadrius nivosus nivosus*) and California red-legged frog (*Rana draytonii*), and the federally-endangered California least tern (*Sternula antillarum browni*), tidewater goby (*Eucyclogobius newberryi*), marsh sandwort (*Arenaria paludicola*), La Graciosa thistle (*Cirsium scariosum* var. *loncholepis*), Nipomo Mesa lupine (*Lupinus nipomensis*), and Gambel's watercress (*Nasturtium* [*Rorippa*] *gambelii*), as well as two plant species solely listed under the California Endangered Species Act (surf thistle [*Cirsium rhothophilum*] and beach spectaclepod [*Dithyrea maritima*]).

CDPR proposes the Oceano Dunes District HCP to support its application for a 25-year federal ITP under FESA Section 10(a)(1)(B). Covered activities under this HCP include all lawful activities for which CDPR has responsibility within the covered lands that could result in take of covered species. These activities include, but are not limited to, public use/recreation management,

natural resources management, and park/beach management. The HCP is designed to accommodate recreational use within the covered parks while protecting and benefiting numerous populations of threatened and endangered species occurring within those parks.

CDPR would manage the HCP area for covered species largely in the same manner it has been for over a decade. The management actions include utilizing protective fencing, monitoring, habitat restoration, invasive plant and animal control, habitat monitoring, and water quality monitoring and improvements. The proposed conservation program includes conservation measures (i.e., actions taken to avoid or minimize take, compensate for loss of habitat, or provide for the conservation of covered species) to achieve the biological goals and objectives set forth in the HCP. The measures include avoidance and minimization measures (AMMs), habitat enhancement, habitat restoration, habitat creation, and population enhancement.

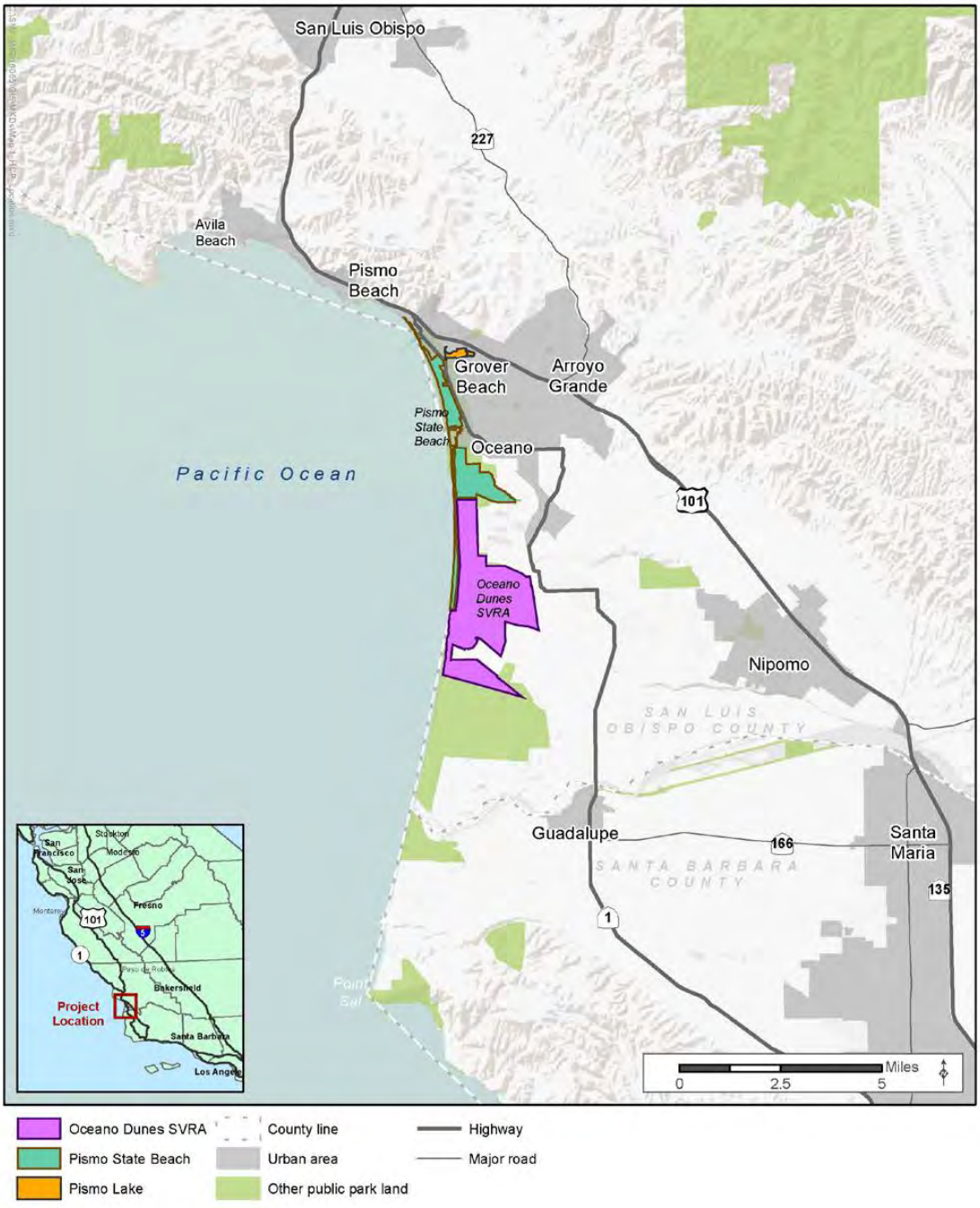
Alternatives

The EA/EIS or EIS/EIR will examine a reasonable range of alternatives to the proposed project. The alternatives will be defined based on the EA/EIR or EIS/EIR analysis, public scoping meeting, and comments received on the NOP and NOI. A detailed description of the impacts of the proposed action and each alternative will be included in the EA/EIR or EIS/EIR. Several alternatives will be considered and analyzed, representing varying levels of conservation and impacts. A No Action alternative will be included in the analysis of the alternatives considered.

Probable Environmental Effects

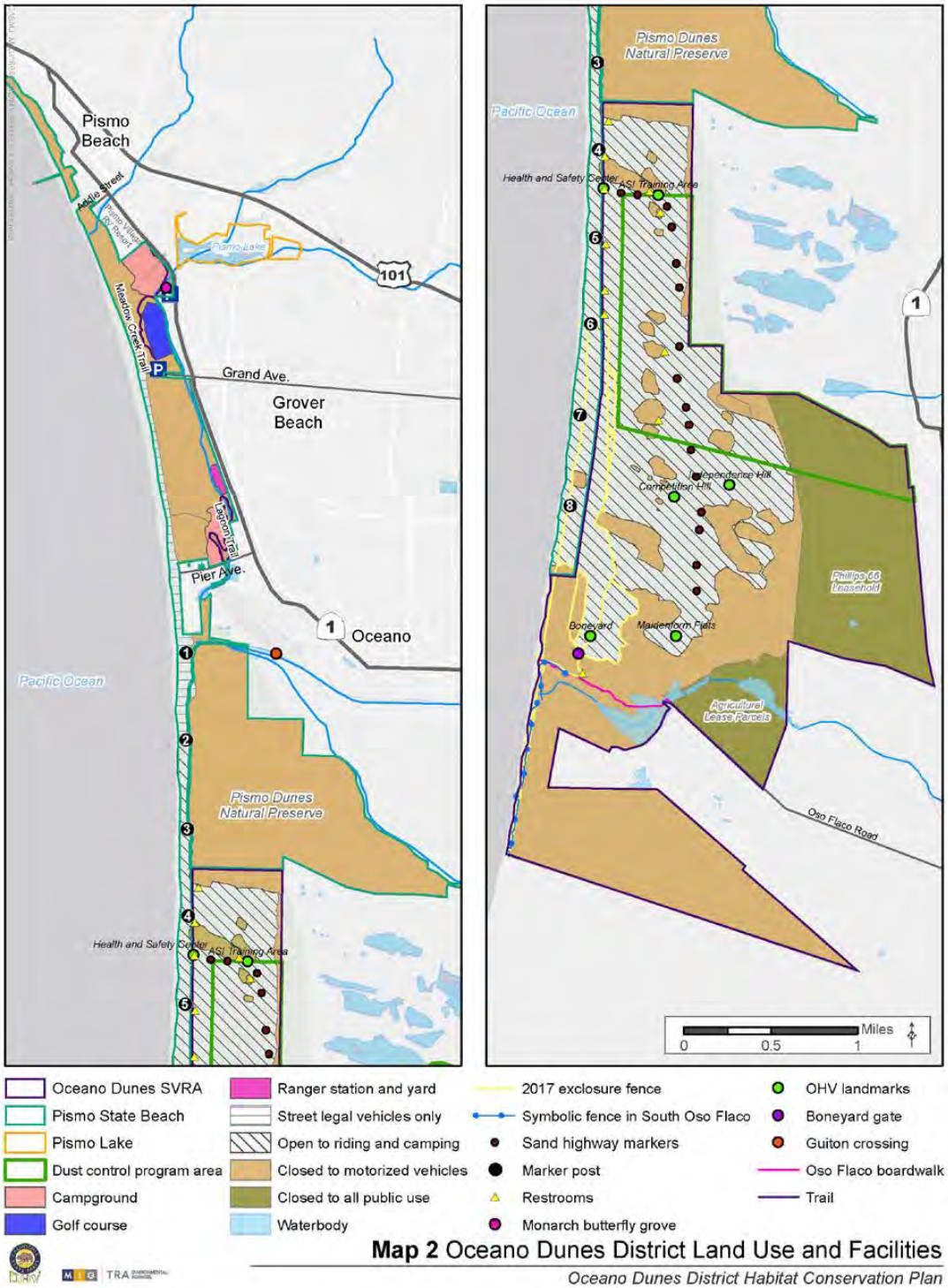
The proposed HCP is intended to benefit covered species in the HCP area by protecting and, where appropriate, enhancing their populations. There is potential for the HCP covered activities to result in unintentional take (e.g., harm, harassment, injury, or death, etc.) of covered species, which would be a significant impact. Park management under the HCP may modify the seasonal exclosure fencing to expand recreational access to beach areas currently closed during the western snowy plover and California least tern breeding season. The HCP does not propose changes to daily limits on the number of street legal and OHV vehicles at Pismo State Beach and Oceano Dunes SVRA as established by an existing Coastal Development Permit.

The proposed HCP may have indirect impacts on air quality, greenhouse gas emissions, cultural and tribal resources, and hydrology/water quality. Several areas of potential concern are likely to be found less than significant given the non-developmental nature of the proposed project and minimal change in visitor use and park operations from baseline operations (e.g., aesthetics, hazards, public services, recreation, traffic, and utilities). Other environmental issues may not apply due to the absence of a resource or the nature of the project site (e.g., agricultural/ forestry, mineral resources, and population/housing). The final scope of impact analyses conducted for the EA/EIR or EIS/EIR will be dependent upon the outcomes of the NOP public review process.



Map 1 HCP Area and Vicinity

Oceano Dunes District Habitat Conservation Plan

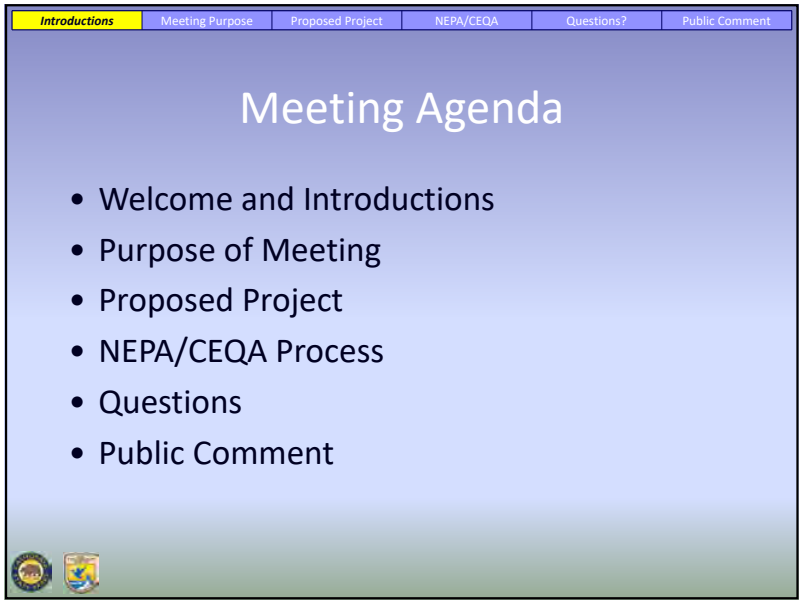


Map 2 Oceano Dunes District Land Use and Facilities

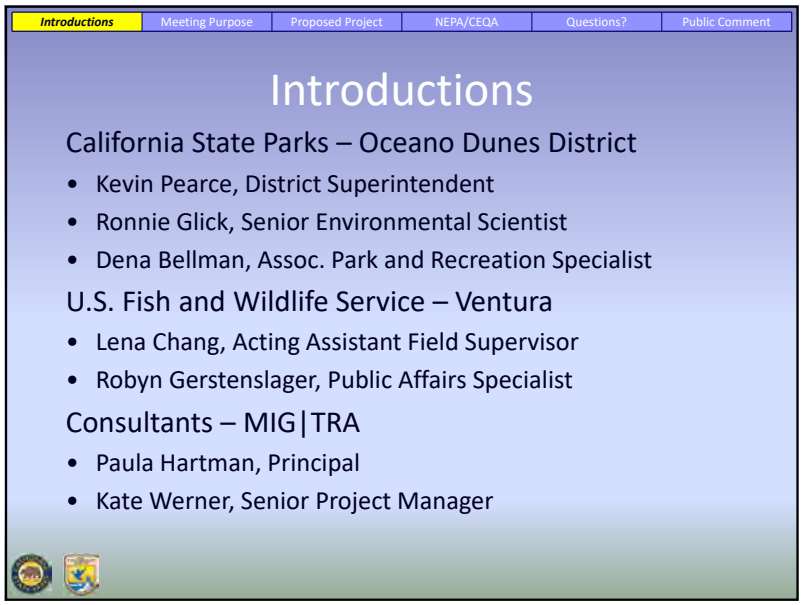
Oceano Dunes District Habitat Conservation Plan

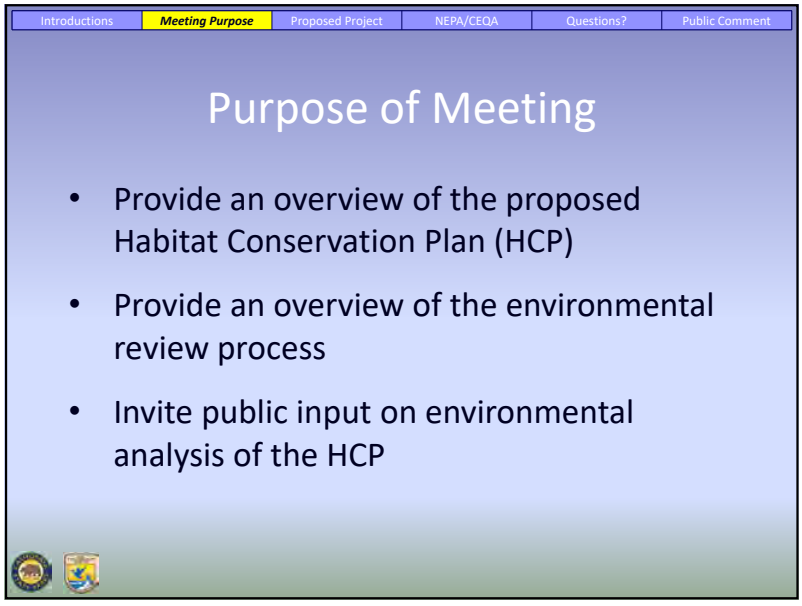
ATTACHMENT 2: SCOPING MEETING PRESENTATION


Oceano Dunes District
Habitat Conservation Plan NEPA/CEQA
Public Scoping and Open House
Welcome!
February 7, 2018
California State Parks
U.S. Fish and Wildlife Service

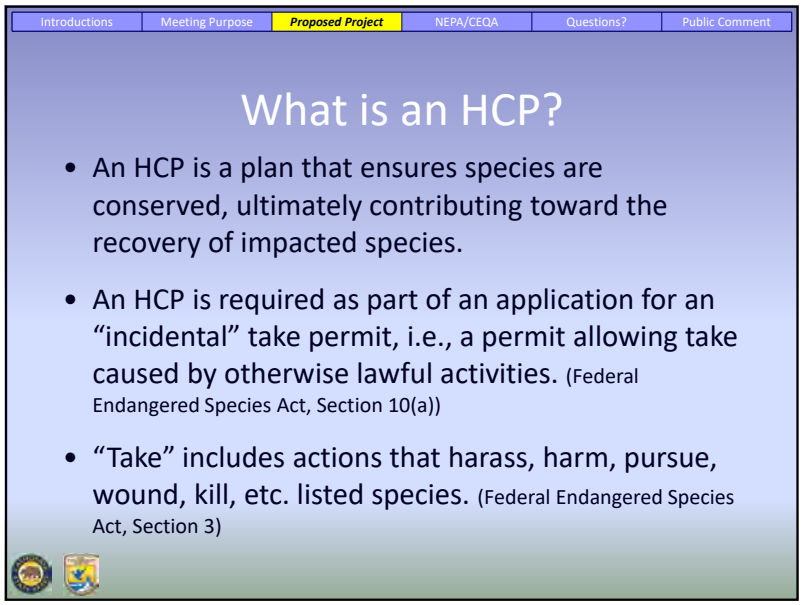

Introductions
Meeting Purpose
Proposed Project
NEPA/CEQA
Questions?
Public Comment
Meeting Agenda
• Welcome and Introductions
• Purpose of Meeting
• Proposed Project
• NEPA/CEQA Process
• Questions
• Public Comment

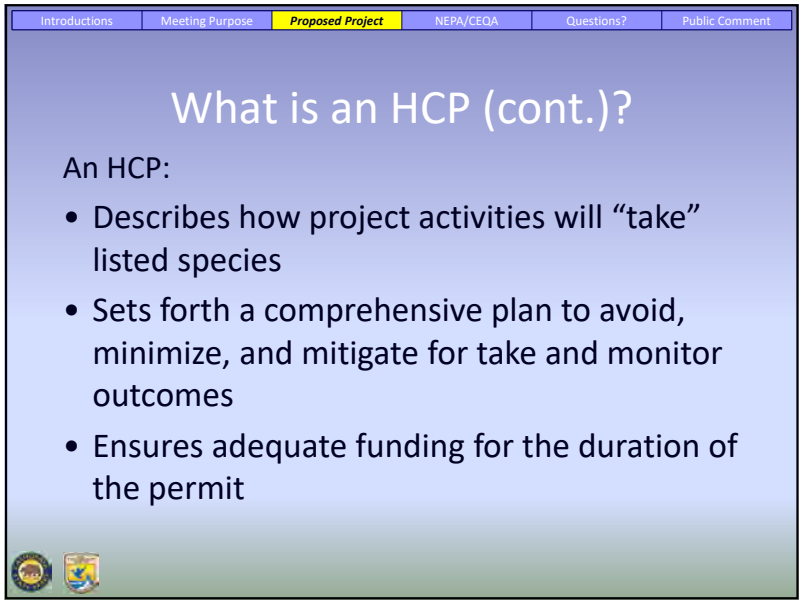
1


Introductions
Meeting Purpose
Proposed Project
NEPA/CEQA
Questions?
Public Comment
Introductions
California State Parks – Oceano Dunes District
• Kevin Pearce, District Superintendent
• Ronnie Glick, Senior Environmental Scientist
• Dena Bellman, Assoc. Park and Recreation Specialist
U.S. Fish and Wildlife Service – Ventura
• Lena Chang, Acting Assistant Field Supervisor
• Robyn Gerstenslager, Public Affairs Specialist
Consultants – MIG|TRA
• Paula Hartman, Principal
• Kate Werner, Senior Project Manager


Introductions
Meeting Purpose
Proposed Project
NEPA/CEQA
Questions?
Public Comment
Purpose of Meeting
• Provide an overview of the proposed Habitat Conservation Plan (HCP)
• Provide an overview of the environmental review process
• Invite public input on environmental analysis of the HCP

2


Introductions
Meeting Purpose
Proposed Project
NEPA/CEQA
Questions?
Public Comment
What is an HCP?
• An HCP is a plan that ensures species are conserved, ultimately contributing toward the recovery of impacted species.
• An HCP is required as part of an application for an "incidental" take permit, i.e., a permit allowing take caused by otherwise lawful activities. (Federal Endangered Species Act, Section 10(a))
• "Take" includes actions that harass, harm, pursue, wound, kill, etc. listed species. (Federal Endangered Species Act, Section 3)


Introductions
Meeting Purpose
Proposed Project
NEPA/CEQA
Questions?
Public Comment
What is an HCP (cont.)?
An HCP:
• Describes how project activities will "take" listed species
• Sets forth a comprehensive plan to avoid, minimize, and mitigate for take and monitor outcomes
• Ensures adequate funding for the duration of the permit

Introductions | Meeting Purpose | **Proposed Project** | NEPA/CEQA | Questions? | Public Comment

What is *this* HCP?

A collaborative and comprehensive strategy to balance recreational opportunities with conservation of rare wildlife, plants, and their habitats in the Oceano Dunes District, which includes:

- Pismo State Beach
- Pismo Lake
- Ocean Dunes SVRA

Permit term is 25 years

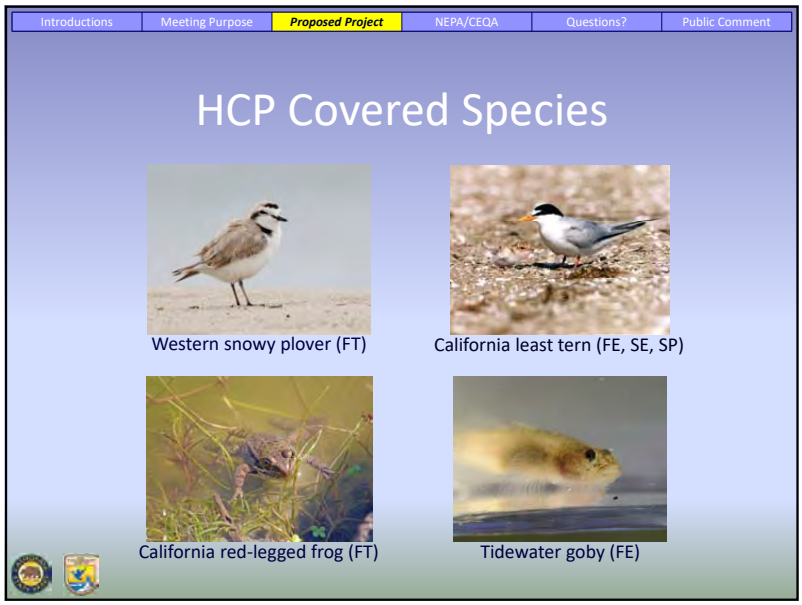
Introductions | Meeting Purpose | **Proposed Project** | NEPA/CEQA | Questions? | Public Comment

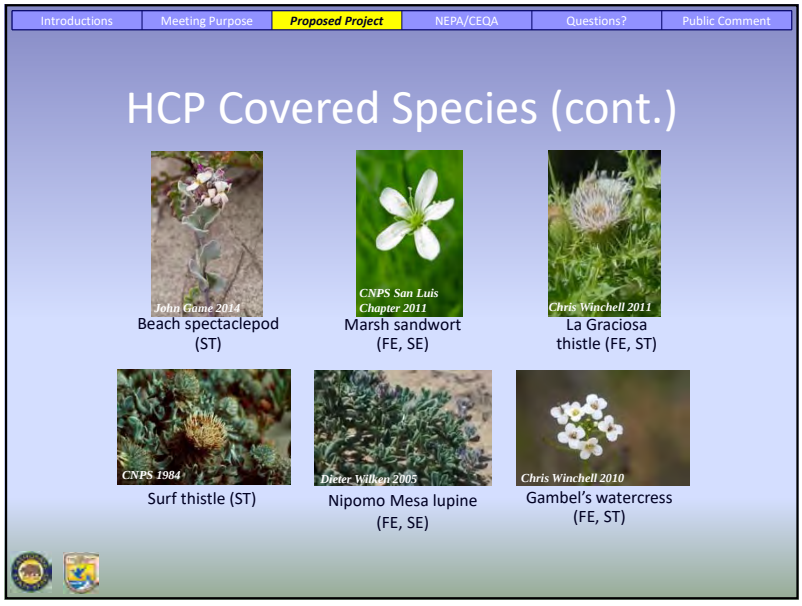
HCP Covered Park Units

Total area covered 5,005 acres

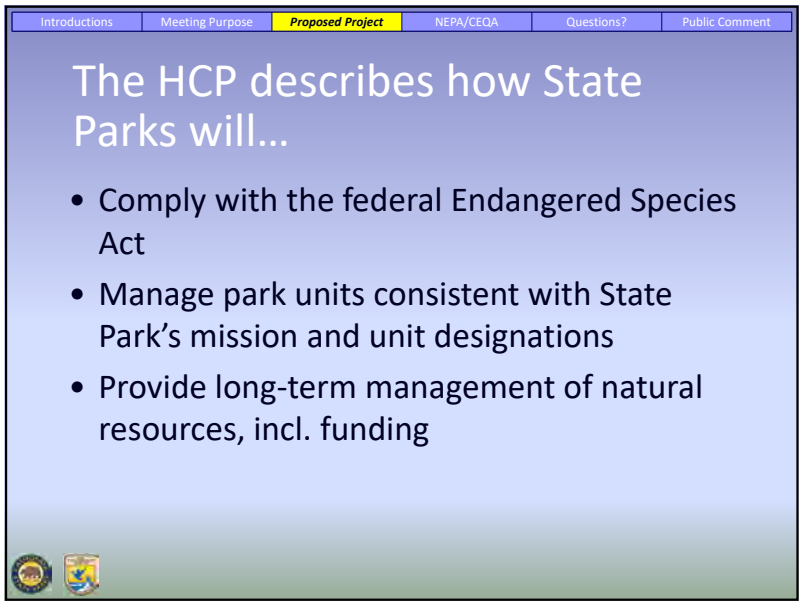
- Pismo State Beach
  - 1,445 acres natural and developed
  - Pismo Dunes Natural Preserve 694-acre sub-unit
- Oceano Dunes SVRA
  - 3,490 acres
- Pismo Lake
  - 70 acres non-classified

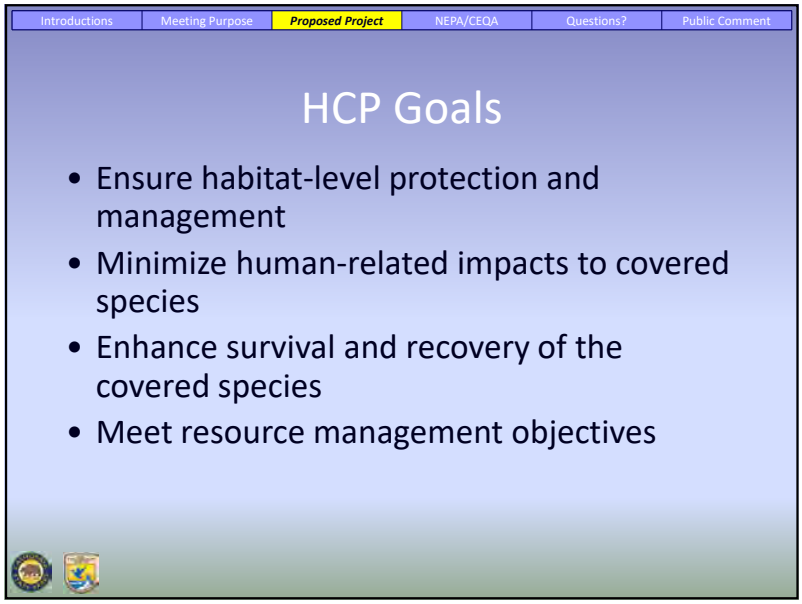
4


Introductions
Meeting Purpose
Proposed Project
NEPA/CEQA
Questions?
Public Comment
HCP Covered Species
Western snowy plover (FT)
California least tern (FE, SE, SP)
California red-legged frog (FT)
Tidewater goby (FE)


Introductions
Meeting Purpose
Proposed Project
NEPA/CEQA
Questions?
Public Comment
HCP Covered Species (cont.)
John Game 2014
Beach spectaclepod (ST)
CNPS San Luis Chapter 2011
Marsh sandwort (FE, SE)
Chris Winchell 2011
La Graciosa thistle (FE, ST)
CNPS 1984
Surf thistle (ST)
Dieter Wilken 2005
Nipomo Mesa lupine (FE, SE)
Chris Winchell 2010
Gambel's watercress (FE, ST)

5


Introductions
Meeting Purpose
Proposed Project
NEPA/CEQA
Questions?
Public Comment
The HCP describes how State Parks will…
• Comply with the federal Endangered Species Act
• Manage park units consistent with State Park's mission and unit designations
• Provide long-term management of natural resources, incl. funding


Introductions
Meeting Purpose
Proposed Project
NEPA/CEQA
Questions?
Public Comment
HCP Goals
• Ensure habitat-level protection and management
• Minimize human-related impacts to covered species
• Enhance survival and recovery of the covered species
• Meet resource management objectives

6

Introductions | Meeting Purpose | **Proposed Project** | NEPA/CEQA | Questions? | Public Comment

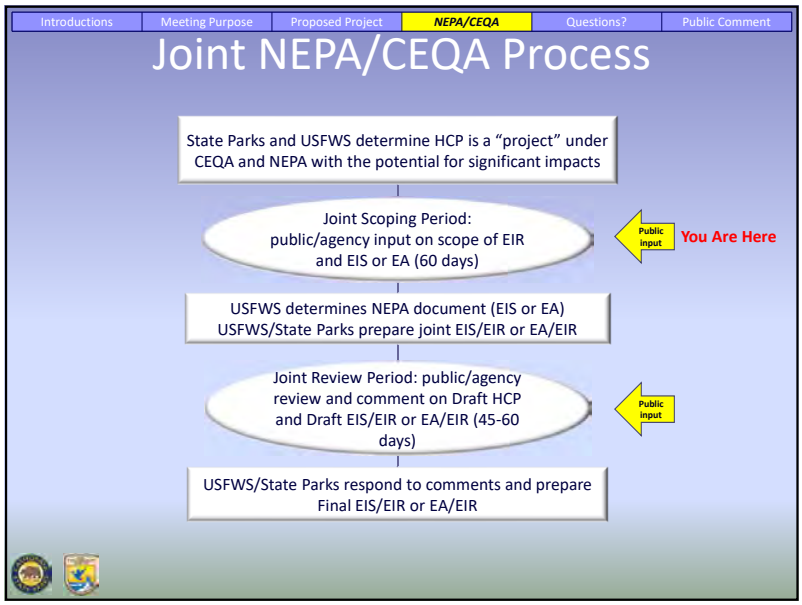
HCP Covered Activities

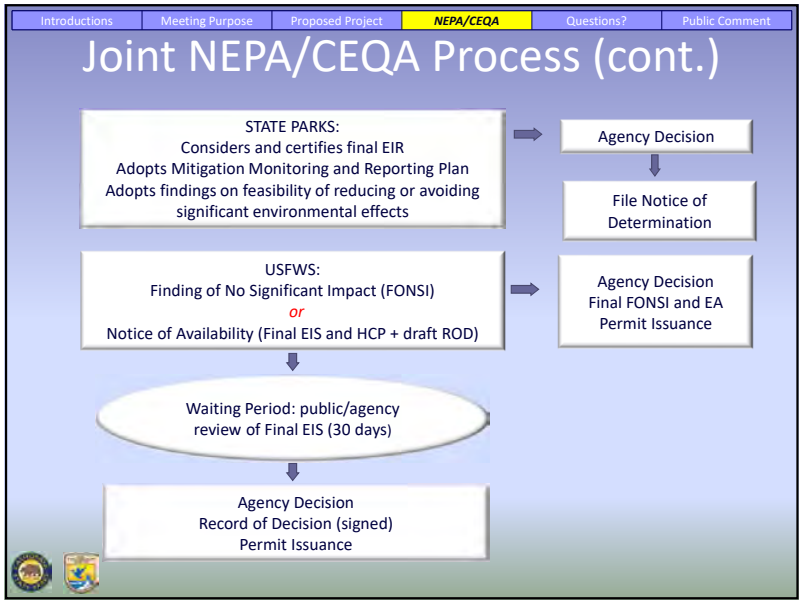
- Visitor activities
- Resource management
- Maintenance
- Visitor services
- Other activities, e.g., creek crossings, exclosure adjustments, dust control, and special projects

Introductions | Meeting Purpose | **Proposed Project** | NEPA/CEQA | Questions? | Public Comment

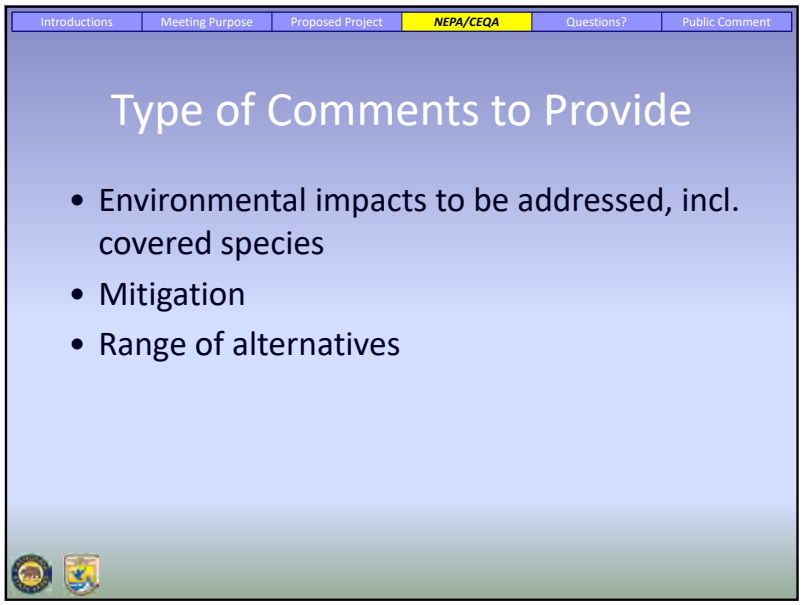
HCP Area Land Uses and Facilities

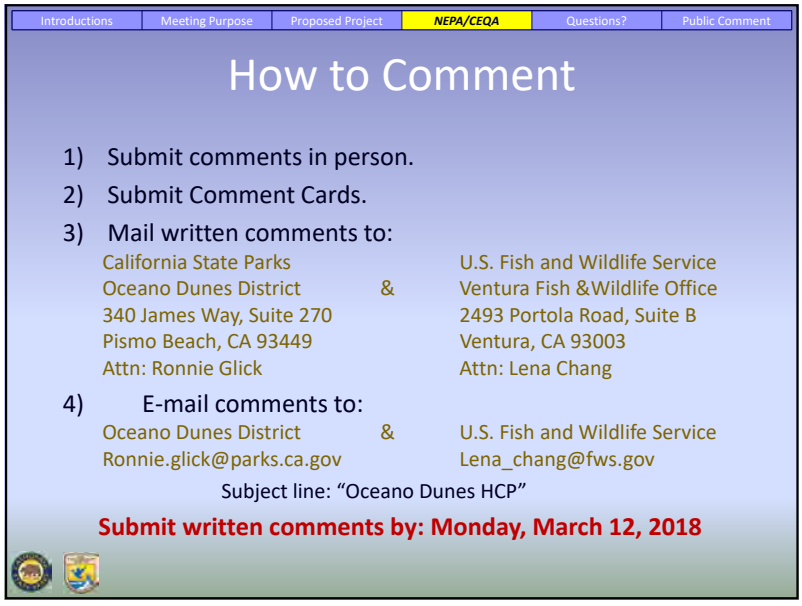
7

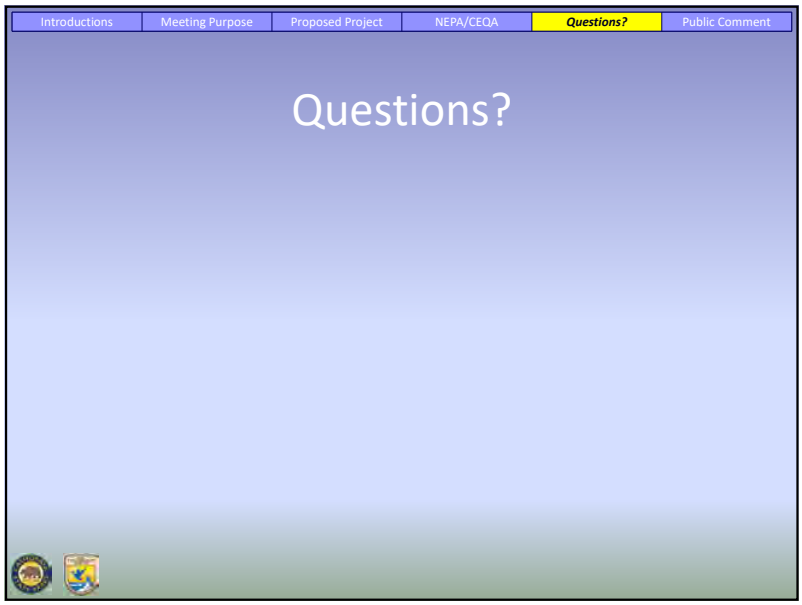

Introductions
Meeting Purpose
Proposed Project
NEPA/CEQA
Questions?
Public Comment
Joint NEPA/CEQA Process
State Parks and USFWS determine HCP is a "project" under CEQA and NEPA with the potential for significant impacts
Joint Scoping Period: public/agency input on scope of EIR and EIS or EA (60 days)
Public input
You Are Here
USFWS determines NEPA document (EIS or EA) USFWS/State Parks prepare joint EIS/EIR or EA/EIR
Joint Review Period: public/agency review and comment on Draft HCP and Draft EIS/EIR or EA/EIR (45-60 days)
Public input
USFWS/State Parks respond to comments and prepare Final EIS/EIR or EA/EIR

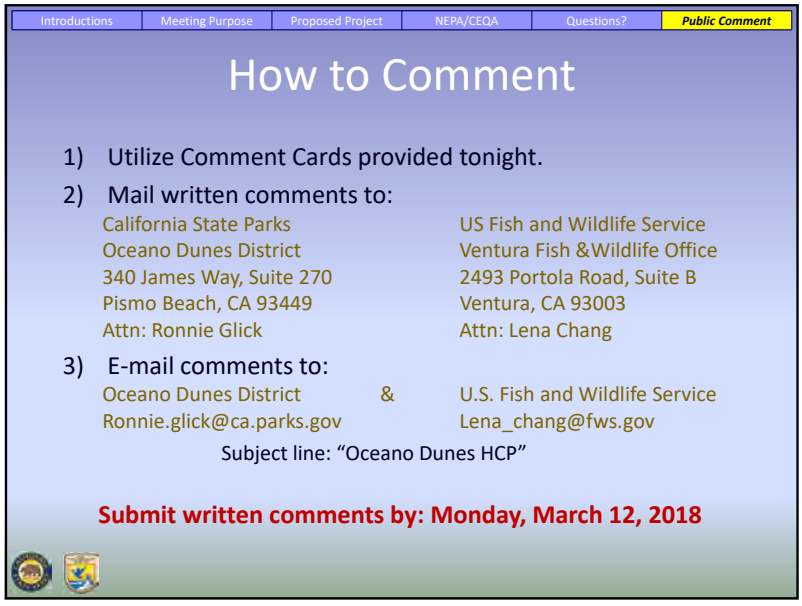

Introductions
Meeting Purpose
Proposed Project
NEPA/CEQA
Questions?
Public Comment
Joint NEPA/CEQA Process (cont.)
STATE PARKS:
Considers and certifies final EIR
Adopts Mitigation Monitoring and Reporting Plan
Adopts findings on feasibility of reducing or avoiding significant environmental effects
Agency Decision
File Notice of Determination
USFWS:
Finding of No Significant Impact (FONSI)
or
Notice of Availability (Final EIS and HCP + draft ROD)
Agency Decision
Final FONSI and EA
Permit Issuance
Waiting Period: public/agency review of Final EIS (30 days)
Agency Decision
Record of Decision (signed)
Permit Issuance

8


Introductions
Meeting Purpose
Proposed Project
NEPA/CEQA
Questions?
Public Comment
Type of Comments to Provide
• Environmental impacts to be addressed, incl. covered species
• Mitigation
• Range of alternatives


Introductions
Meeting Purpose
Proposed Project
NEPA/CEQA
Questions?
Public Comment
How to Comment
1) Submit comments in person.
2) Submit Comment Cards.
3) Mail written comments to:
California State Parks
Oceano Dunes District
340 James Way, Suite 270
Pismo Beach, CA 93449
Attn: Ronnie Glick
&
U.S. Fish and Wildlife Service
Ventura Fish &Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003
Attn: Lena Chang
4) E-mail comments to:
Oceano Dunes District
Ronnie.glick@parks.ca.gov
&
U.S. Fish and Wildlife Service
Lena_chang@fws.gov
Subject line: "Oceano Dunes HCP"
Submit written comments by: Monday, March 12, 2018


Introductions
Meeting Purpose
Proposed Project
NEPA/CEQA
Questions?
Public Comment
Questions?


Introductions
Meeting Purpose
Proposed Project
NEPA/CEQA
Questions?
Public Comment
How to Comment
1) Utilize Comment Cards provided tonight.
2) Mail written comments to:
California State Parks
Oceano Dunes District
340 James Way, Suite 270
Pismo Beach, CA 93449
Attn: Ronnie Glick
US Fish and Wildlife Service
Ventura Fish &Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003
Attn: Lena Chang
3) E-mail comments to:
Oceano Dunes District
Ronnie.glick@ca.parks.gov
&
U.S. Fish and Wildlife Service
Lena_chang@fws.gov
Subject line: "Oceano Dunes HCP"
Submit written comments by: Monday, March 12, 2018

ATTACHMENT 3: SCOPING MEETING ATTENDANCE RECORD

2/7/18 OD HCP Scoping Meeting

NAME	ADDRESS	PHONE	EMAIL
Amber Clark	435 Coach Rd AG	805·710·4414	alclark81@gmail.com
NANCY C LA GRILLE			b52Lagrille@gmail.com
RON RAYBORNE	P.O. Box 1242 Pismo Beach		DREADNOT@GMAIL.COM
DEBORAH FIALKOWSKA	1364 TRAIL VIEW PL NIPOMO, CA 93444	805 343-1545	dafesq@aol.com
STACY NORMAN	539 Shadow Cove Arc CA 93420	235-1562	
Zette Harbour	785 Quintana #126 Morro Bay 93442	805/441-6688	zetteharbour@gmail.com
Greg Haas	1411 Marsh St, Ste 205 SLO 93401	805 546-8348	greg haas@mail.house.gov
Nick Calanne	1329 Atlantic City Ave Grover Beach CA	559 786 8286	PismoDuneRiders@Gmail.com

2/7/18 OD HCP Scoping Meeting

NAME	ADDRESS	PHONE	EMAIL
Rachelle Toti			
Fred Collis			fcollis

2/7/18 OD HCP Scoping Meeting

NAME	ADDRESS	PHONE	EMAIL
Ginjer Schenk	1302 Poplar St Arroyo Grande CA 93420	805 489.3805	ginjerschenk@sbcglobal.NET
Jerry Stanley	580 Pinecone Way AG 93420	805 489 9924	jerry_stanley@sbcglobal.net
Tamar Carmona + Rocko O Rienecke	1340 21st St Oceano, CA 93445	818 667 0989	Tamar.carmona@gmail.com
Doug GEORGE		831-332-3759	dgeorge77@gmail.com
Travis Johnson	1815 [illegible] DR. OCEANO, CA. 93445	[illegible]-2096	
Aruna Prabhala	1212 Broadway Suite 800 Oakland, CA [illegible]		aprabhala@biologicaldiversity.org
Dorothy Correa	PO Box 64 Arroyo Grande, CA 93421	(805)458-3585	[illegible]@gmail.com
Kimberly Perez	170 Del Norte Way San Luis Obispo, CA 93405	(805) 748-1425	president@pacificwildlifecare.org

2/7/18 OD HCP Scoping Meeting

NAME	ADDRESS	PHONE	EMAIL
Lyndi Love-Haning			lovehaning@yahoo.com
Sean Hayes			SeanHayes7Home@yahoo.com

ATTACHMENT 4: SCOPING MEETING ORAL COMMENTS AND QUESTIONS

California State Parks OHMVR Division and U.S. Fish and Wildlife Service
Oceano Dunes HCP Joint NEPA/CEQA Scoping Meeting
February 7, 2018
6:00 - 8:00 PM

Meeting opened with a powerpoint presentation by Ronnie Glick, Senior Environmental Scientist, California State Park and was followed by a general question and answer period. The following are questions and comments made by those in attendance.

Q: What is the reason for take if trying to save species? Is there a way to couple education with this process?

Response: Education is a component of existing park operations. Oceano Dunes has a successful program for managing species. HCP sets in stone the conservation effort and mitigation.

Comment #1: Need to increase education effort. Consistent distribution of brochures.

Q: Is this the same process for steelhead? Should steelhead be included in HCP?

Response: NOAA did not feel it necessary Oceano Dunes HCP to cover steelhead due to the low likelihood for take.

Q: Are there other species that need to be addressed?

Response: The HCP is addressing the federal species only. State species will be addressed in a separate process.

Comment #2: Need updated education kiosks. Can't read information.

Q: What recommendations has USFWS made to reduce impacts of take?

Response: fencing, monitoring, speed limits, etc.

Q: What about nighttime riding?

Comment #3: Need restrictions on nighttime riding

Response: At nighttime birds stay on nests within exclosure. Nighttime impact is primarily from predation not from riding.

Q: Is predation a take?

Response: No. Take impact is defined as a human activity. Man's actions can increase predator presence such as gulls attracted to trash. Park does implement a predator control program.

Comment #4: South Oso Flaco has bare sand and no OHV use. Birds like OHV better for nesting for lack of predators. No grass area for predators to hide. Vegetation established for dust control creates area for predators to hide and can increase number of predators in area.

Response: If predators increased the park management measures would cover it.

Q: Would [injury from] a dog be considered a take?

Response: Yes, because it is associated with human use.

Comment #5: Dogs off leash is a concern. Oso Flaco docent noted dogs running off leash stating it's a problem.

Q: Does HCP cover activities of County [County land?] OHV vendors.

Response: Yes. Activities of OHV vendors would be covered by HCP.

Q: For vegetation to grow, is chemical fertilizer used? Could chemicals leach into the water?

Response: Sterile straw is used. Chemicals not used at the scale that would leach into water. Not high enough quantity used.

Comment #6: Concern about amount of fertilizer used for revegetation projects.

Q: Could money be better spent in other areas where species are thriving for off-site mitigation?

Response: That is a question that can be considered.

Comment #7: Snowy plover and least tern thriving from Lompoc and Santa Barbara coastline. Species management effort could be put into locations where species are thriving.

Q: This [USFWS Incidental Take Permit] is a federal process. Will there be a future state [Natural Community Conservation Plan] process?

Response: Yes. The hope was to do the state process at the same time. The state process is coming behind the federal process and will be subject to CEQA. The state process isn't as far along as the federal process and there is a desire not to hold up the federal process since it was well advanced.

Q: Is study done on carcasses of snowy plover or other birds?

Response: when birds are found the nature of death is recorded. Circumstances often indicate nature of death such as blunt trauma from a vehicle strike or predation. Further study is not done.

Comment #8: Dust control activity is in area of tribal resources. AB52 government to government consultation is requested because of fertilizer for dust program in cultural resource area.

Comment #9: Would like no vehicles on the beach. Consider on and off days for vehicles. Staggered days hours for vehicles. Can't walk on beach if dodging cars.

Comment #10: Have alternative areas for OHV use not in sensitive areas.

Comment #11: Seasonal exclosure for snowy plover is successful. Make exclosure permanent. Open up new areas for OHV offsetting area closed.

Q: With less than 10 snowy plover take last year, could that be enough information for USFWS to determine whether to use an EA versus an EIS?

Response: Good question. USFWS will have to consider it. USFWS have to consider the numbers range-wide not just local. Depends on species and what the numbers are. One take in area where there is only one bird is obviously significant. Is 10 take in an area of 1,000 birds significant? It has to be looked at in context over the entire range.

Q: Does the 10 take include snowy plover that went to Pacific Wildlife Care?

Response. No. Raises the question of how do we handle birds sent to captive rearing.

Comment #12: CDFW keeps statistics on birds going to Pacific Wildlife Care and has aggregate totals after birds brought in and what happens to them. Need to account for injured birds in take totals.

Q: Isn't wound a take?

Response: It depends on how injury happens. Not all injuries are human caused. Not all injury is from a covered activity. Otherwise take is underestimated. Also, not all take is seen. May have found 3 take but some not seen. What is the trigger [take limit] used to re-evaluate impacts? USFWS recognizes that a take of 10 represents more. Take numbers in permit represents a higher unseen number of take.

Q: How are dead animals found?

Response: Park staff find during daily monitoring. In some cases public brings them to staff.

Q: Recovery unit is long. Lompoc - Vandenburg numbers are good due to limited access. Are numbers tracked for recovery?

Response: USFWS has recovery program for species. State Parks is in Recovery Unit 5, which goes across multiple counties. Our site is one big site. Multiple sites are within the Recovery Unit. USFWS is keeping track of what's going on up and down the coast.

Comment #13: Oso Flaco is a transfer point of water between lakes. Water comes up over the top of the causeway. Road needs upgrading.

Comment #14: Dual [alternative] access needed through the dunes through Oso Flaco to take impact off Arroyo Grande Creek [vehicles crossing through creek].

Comment #15: Consider months on, months off [vehicle riding closure] alternative and closure during plover nesting period.

Q: How does drought years affect species?

Response: Arroyo Creek is an estuary and species are impacted [extirpated] when creek dries out. State Parks monitors but has not control over water flow entering creek. State Parks is at end of creek flow.

Comment #16: Tribal community injecting water into ground which could have a beneficial impact to creek flows.

Q: What is the body of water on the beach? It is sewer?

Response: Pismo Creek and Carpenter Creek have a shared outfall. It is not sewer.

Comment #17: Educational signage should be in Spanish and English. By having signage in English only you are losing a large percentage of the population.

Response: State Parks recognizes bilingual signage is needed.

Comment #18: See large pictures at entrance to beach. Have educational signage on mile markers where people are hanging out. People learn by pictures.

Q: Has sand density of preferred nesting habitat been evaluated?

Response: Sand density is only one factor. Contouring and vegetation are also factors.

Comment #19: Consider evaluating sand density to assess preferred nesting habitat.

Comment #20: Need to look at all animals in park.

Response: CEQA side has to look at how HCP covers all other species. State Parks has active program for all plants and animals not just state and federal species. State Parks now sharing information on common species. New legislation requires public process for these common species.

ATTACHMENT 5: SCOPING LETTERS

- List of Hardcopy Letters and Individual Emails
- Letters and Individual Emails
- List of Form Letter Emails
- Form Email with Unique Comments

The list of individuals or organizations providing unique written letters and individuals submitting the form letter or variations of the form letter is presented below:

- U.S. Environmental Protection Agency
- California Coastal Commission
- Native American Heritage Commission
- CAL 4-Wheel Drive Association
- Center for Biological Diversity
- Law Offices of Babak Naficy for Sierra Club
- Law Offices of Thomas D. Roth for Friends of Oceano Dunes
- June Skadden
- Point Blue Conservation Science
- Zette Harbour
- Rachelle Toti
- June Gill

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

February 13, 2018

Mr. Stephen P. Henry
Field Supervisor
Ventura Fish and Wildlife Office
U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, California 93003

Subject: Scoping Comments for the Draft Habitat Conservation Plan for the California Department of Parks and Recreation Oceano Dunes District, San Luis Obispo County, California

Dear Mr. Henry:

The U.S. Environmental Protection Agency (EPA) has reviewed the Notice of Intent (NOI) to prepare a draft environmental analysis for the proposed habitat conservation plan for the California Department of Parks and Recreation Oceano Dunes District. Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

We recommend the Service consider a number of issues when preparing the DEIS, including: the range of alternatives to be evaluated; the regulatory framework surrounding the proposed action; biological resources; air quality; and consultation with tribal governments. These and other issues are discussed further in the attached detailed comments.

We appreciate the opportunity to review this scoping notice and are available to discuss the recommendations provided. When the DEIS prepared for this proposed action is released for public review, please send one hard copy and one CD to the address above (mail code: ENF-4-2). If you have any questions, please contact me at (415) 947-4221 or gerdes.jason@epa.gov.

Sincerely,

Jason Gerdes
Environmental Review Section

Enclosure: EPA's Detailed Scoping Comments

U.S. EPA DETAILED SCOPING COMMENTS FOR THE CALIFORNIA DEPARTMENT OF PARKS AND RECREATION OCEANO DUNES DISTRICT HABITAT CONSERVATION PLAN, CALIFORNIA – FEBRUARY 13, 2018

Purpose and Need and Alternatives Analysis

EPA recommends that the Draft Environmental Impact Statement (DEIS) prepared for the California Department of Parks and Recreation Oceano Dunes District Habitat Conservation Plan (HCP) clearly identify the purpose and need to which the U.S. Fish and Wildlife Service (Service) is responding in proposing the alternatives (40 CFR 1502.13), as well as the rationale for the proposed action. EPA further recommends that all reasonable alternatives that fulfill the proposed action's purpose and need be evaluated in detail, including alternatives outside the legal jurisdiction of the Service (40 CFR 1502.14(c)). Describe specific actions that would be taken to protect critical wildlife habitats from potential adverse effects of the proposed alternatives and options for avoiding significant environmental impacts. We suggest that habitat conservation measures include provisions to safeguard high-value habitats and create or maintain habitat corridors.

EPA recommends that the DEIS provide a complete description and evaluation of the available data used to inform the HCP alternatives to be analyzed. Quantify the potential direct, indirect, and cumulative environmental impacts of each alternative to the greatest extent possible (e.g., acres of critical habitat impacted, changes in population size) and present the benefits and adverse impacts in comparative form to assist the decision-maker and public in understanding how the alternatives differ (40 CFR 1502.14). We suggest including a clear discussion of the reasons for the elimination of any alternatives which are not evaluated in detail, as well as any available and relevant impact analyses conducted to satisfy environmental review procedures for the covered activities, in the DEIS. To promote long term success with the proposed conservation goals, we suggest that the Service consider developing, if not already in place, a scientific advisory committee to help design a scientifically robust HCP.

Scope of Analysis and Integration with Permitting and Other Projects

Clearly explain whether the EIS is intended to serve as a programmatic "tiering" document for subsequent project-specific NEPA analysis or whether it will be directly relied upon for project-level decision-making. If it is intended as a programmatic document, identify the factors that will be used to determine when a subsequent EIS will be required, and explain which covered activities and conservation measures will be evaluated under separate environmental review. EPA also recommends providing a description of any permits and/or modifications to those permits that the covered activities would require (e.g., National Pollution Discharge Elimination System permits for discharges to waters of the United States) and a description of how the permitting efforts can be synchronized.

Biological Resources, Habitat, and Wildlife

Provide a clear description of direct, indirect, and cumulative impacts to wildlife and habitat, as well as measures to avoid and reduce impacts to affected species. Emphasis should be placed on the protection and recovery of the covered species due to their status under the Endangered Species Act (ESA). EPA recommends that this impact analysis include:

- Baseline conditions for habitats and populations of the covered species sufficient for estimates of take.

- A clear description of how avoidance, mitigation, and conservation measures would protect and aid in the recovery of the covered species and their habitats in the protected area.
- The projected impacts of proposed avoidance, mitigation, and conservation measures.

We recommend that the DEIS include monitoring, reporting, and adaptive management efforts to ensure compliance with the HCP and measure its effectiveness. Additionally, we suggest including a description of the HCP's consistency, or disclosure of any potential inconsistency, with other habitat conservation plans and species recovery plans in the surrounding area.

Invasive Species

Executive Order 13112 "Invasive Species" (February 3, 1999) mandates that federal agencies take actions to prevent the introduction of invasive species, provide for their control, and minimize the economic, ecological, and human health impacts that invasive species cause. Executive Order 13112 also calls for the restoration of native plants and tree species. In the DEIS, include an invasive plant management plan to monitor and control detrimental vegetation. If the proposed project would entail new landscaping, describe how the project would meet requirements of Executive Order 13112.

Water Resources

Provide a description of the natural drainage patterns within the plan area, including the 50-or 100-year floodplain. Characterize the general functions of the main aquatic features within the plan area and examine the ways in which these resources could be affected by the proposed alternatives.

Clean Water Act Section 404

The proposed HCP covers species that utilize habitat that may also be regulated under Clean Water Act (CWA) Sections 404 and 401. To integrate the goal of conserving species and protecting the nation's waters, we recommend that the Service engage with the U.S. Army Corps of Engineers (Corps), EPA, and the state or tribal governments that may have water quality certification responsibilities under CWA Section 401 in the planning and development of this HCP. Cooperation among the ESA and CWA agencies under an HCP can result in better resource protection and enhanced services to the regulated public.

Given that activities authorized for take under the HCP may be required to obtain CWA permits, it is important to seek alignment or integration between the conservation strategy and avoidance, minimization, and compensatory mitigation under the CWA, including monitoring strategies that work for both the HCP and CWA purposes. To minimize conflicts and promote coordination among agencies, EPA recommends including CWA agencies early in the HCP development process.

The 2008 EPA/Corps Compensatory Mitigation Rule sets forth requirements for mitigation and monitoring required for CWA Section 404 permits (33 CFR 325; 33 CFR 332; 40 CFR 230). It also establishes procedures for creating and implementing in-lieu fee (ILF) programs, which some HCP permittees may seek to use for meeting their CWA mitigation obligations. If the HCP sponsor wishes to set up an ILF program, EPA recommends close coordination with our agency and the Corps regarding any take authorized under the HCP.

Air Quality

Provide a detailed discussion of ambient air conditions, National Ambient Air Quality Standards (NAAQS), criteria pollutant nonattainment zones in the plan area, and potential air quality impacts of the covered activities, including indirect and cumulative impacts. Such an evaluation is helpful in demonstrating compliance with state and federal air quality regulations, and disclosing the potential impacts from temporary or cumulative degradation of air quality.

EPA recommends an evaluation of the following measures to reduce emissions of criteria air pollutants and hazardous air pollutants:

- *Quantify Emissions* – Estimate emissions of criteria pollutants from the covered activities and discuss the timeframe for release of these emissions over the lifespan of the HCP. Describe and estimate emissions from potential construction activities, as well as proposed mitigation measures to minimize these emissions.
- *Specify Emissions Sources* – Specify the emission sources by pollutant from mobile sources, stationary sources, and ground disturbance. Use this source-specific information to identify appropriate mitigation measures and areas in need of the greatest attention.
- *Construction Emissions Mitigation Plan* – EPA recommends including commitments to aggressive air quality mitigation measures during future project-specific construction activities. In addition to measures necessary to meet all applicable local, state, and federal requirements, EPA recommends that the following measures be included:

  Fugitive Dust Source Controls
  - Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
  - Install wind fencing and phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.
  - When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour. Limit speed of earth-moving equipment to 10 miles per hour.

  Mobile and Stationary Source Controls
  - Minimize use, trips, and unnecessary idling of heavy equipment.
  - Maintain and tune engines per manufacturer's specifications to perform at EPA certification levels, where applicable, and to perform at verified standards applicable to retrofit technologies.
  - Limit unnecessary idling and ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications.
  - Prohibit any tampering with engines and require continuing adherence to manufacturer's recommendations.

  Administrative Controls
  - Specify how impacts to sensitive receptors, such as children, the elderly, and the ill would be avoided. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners.

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- Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emissions controls for each piece of equipment before groundbreaking.
- Develop a construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow.
  Identify where implementation of mitigation measures is rejected based on economic infeasibility.

General Conformity

EPA's General Conformity Rule, established under Section 176(c)(4) of the Clean Air Act, provides a specific process for ensuring federal actions will conform with State Implementation Plans (SIPs) to achieve NAAQS. Describe how the Service will ensure that the proposed alternatives will comply with federal conformity requirements. The DEIS should demonstrate conformity for all pollutants for which relevant air basins are in nonattainment or maintenance status, and whose construction or operational emissions would exceed the applicable *de minimis* levels. Conformity may be demonstrated by showing that the total direct and indirect emissions from the action are specifically identified and accounted for in the SIP.

Adaptive Management

The proposed period of incidental take coverage will likely be a time of considerable change in the plan area. We recommend that the description of the affected environment in the DEIS include a discussion of projected future changes that may affect the covered species and the habitats on which they depend. Issues to consider include the projected change's impact on the status of covered species, distribution of species throughout the plan area, the success of restoration efforts, and a potential need for new or expanded conservation lands.

EPA recommends that the DEIS consider reasonable alternatives that include adaptive management objectives to account for future projected changes. In line with the principles of adaptive management, we recommend that the Service clearly define the following in the HCP evaluation: monitoring objectives; the level of impact that would trigger action (including mitigation measures that would be implemented should a threshold be exceeded); how long-term mitigation and monitoring for the life of the permit will be funded; and the mechanisms for public disclosure of the monitoring results and the adaptive management decisions.

Cumulative Impacts

The cumulative impacts section of the DEIS should evaluate the effects of other past, present, and reasonably foreseeable actions and consider those impacts on a cumulative level (CEQ's *Forty Questions*, #18). This analysis will help provide a context for understanding the magnitude of the effects of the proposed alternatives. In this section, clearly identify the resources that may be cumulatively impacted, the time over which the impacts would occur, and the geographic area(s) that would be affected by the proposed action. Identify which resources were analyzed, which resources were excluded from analysis, and describe the rationale used to guide this selection process.

Additionally, we suggest that the cumulative impacts analysis:

- Describe the current condition of the resource as a measure of past impacts (e.g., the percentage of species habitat lost to date).

- Identify trends in the condition of the resource as a measure of present impacts (e.g., whether the condition of the resource is improving, declining, or in stasis).
- Identify all on-going, planned, and reasonably foreseeable projects in the study area that may contribute to cumulative impacts.
- Describe the future condition of the resource based on an analysis of impacts from reasonably foreseeable projects or actions added to existing conditions and current trends.
- Assess the contribution of the proposed alternatives to the long-term health of the resource, and provide a specific measure for the projected impact from the proposed alternatives.
- Disclose the parties that would be responsible for avoiding, minimizing, and mitigating those adverse impacts.
- Identify opportunities to avoid and minimize impacts, including working with other entities.

Consultation with Tribal Governments

Executive Order 13175 "Consultation and Coordination with Indian Tribal Governments" (November 6, 2000) was issued to establish regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, and to strengthen the United States government-to-government relationships with Indian Tribes.

In the DEIS, describe the process and outcome of government-to-government consultation between the Service and each of the tribal governments within the plan area, issues that were raised (if any), and how those issues were addressed in the selection of the proposed alternative. As a general resource, EPA recommends the document *Tribal Consultation: Best Practices in Historic Preservation*, published by the National Association of Tribal Historic Preservation Officers.[1]

National Historic Preservation Act and Executive Order 13007

Consultation for tribal cultural resources is required under Section 103 of the National Historic Preservation Act (NHPA). Historic properties under the NHPA are properties that are included in the National Register of Historic Places (NRHP) or that meet the criteria for the National Register. Section 106 of the NHPA requires a federal agency, upon determining that activities under its control could affect historic properties, to consult with the appropriate State Historic Preservation Office/Tribal Historic Preservation Office (SHPO/THPO). Under NEPA, any impacts to tribal, cultural, or other treaty resources must be discussed. Section 106 of the NHPA requires that Federal agencies consider the effects of their actions on cultural resources, following regulation in 36 CFR 800.

Executive Order 13007 "Indian Sacred Sites" (May 24, 1996) requires federal land managing agencies to accommodate access to, and ceremonial use of, Indian sacred sites by Indian religious practitioners, and to avoid adversely affecting the physical integrity, accessibility, or use of sacred sites. It is important to note that a sacred site may not meet the National Register criteria for a historic property and that, conversely, a historic property may not meet the criteria for a sacred site. It is also important to note that sacred sites may not be identified solely in consulting with tribes located within geographic proximity of the project. Tribes located outside of the plan area may also have religiously significant ties to lands within the plan area and should, therefore, be included in the consultation process.

[1] *See* http://www.nathpo.org/PDF/Tribal_Consultation.pdf

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EPA recommends that the DEIS address the existence of Indian sacred sites in the project areas. Explain how the proposed action would address Executive Order 13007, distinguish it from Section 106 of the NHPA, and discuss how the Service would ensure that the proposed action would avoid adversely affecting the physical integrity, accessibility, or use of sacred sites. Provide a summary of all coordination with Tribes and with the SHPO/THPO, including identification of NRHP eligible sites and development of a Cultural Resource Management Plan.

Environmental Justice

Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (February 11, 1994) and the "Memorandum of Understanding on Environmental Justice and Executive Order 12898," released on August 4, 2011, direct federal agencies to identify and address disproportionately high and adverse human health or environmental effects on minority and low-income populations, allowing those populations a meaningful opportunity to participate in the decision-making process. CEQ guidance[2] clarifies the terms low-income and minority population, which includes Native Americans, and describes the factors to consider when evaluating disproportionately high and adverse human health effects.

EPA recommends that the DEIS include an evaluation of environmental justice populations within the geographic scope of the plan area. If such populations exist, describe how the proposed action would address the potential for disproportionate adverse impacts to minority and low-income populations, and the approaches used to foster public participation and coordination with these populations.

Coordination with Land Use Planning Activities

EPA recommends that the DEIS discuss how the proposed action would support or conflict with the objectives of federal, state, tribal, or local land use plans, policies, and controls in the plan area. The term "land use plans" includes all types of formally adopted documents for land use planning, conservation, zoning, and related regulatory requirements, as well as plans not yet developed that have been proposed by the appropriate government body in a written form.[3]

[2] *See* Environmental Justice Guidance under the National Environmental Policy Act, Appendix A (Guidance for Federal Agencies on Key Terms in Executive Order 12898), CEQ, December 10, 1997. https://ceq.doe.gov/docs/ceq-regulations-and-guidance/regs/ej/justice.pdf

[3] *See* "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," #23b. https://energy.gov/sites/prod/files/G-CEQ-40Questions.pdf

STATE OF CALIFORNIA—NATURAL RESOURCES AGENCY EDMUND G. BROWN JR., *GOVERNOR*

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March 12, 2018

Ronnie Glick, Senior Environmental Scientist
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Re: United States Fish and Wildlife Service (USFWS) and California Department of Parks and Recreation (State Parks) Proposed Oceano Dunes District Habitat Conservation Plan (HCP) Notice of Preparation (NOP) and Notice of Intent (NOI)

Dear Mr. Glick and Ms. Chang:

Thank you for the opportunity to provide some initial comments and preliminary suggestions regarding the NOP (for purposes of CEQA) and NOI (for purposes of NEPA) for State Parks' proposed HCP covering the Oceano Dunes District (ODD), which is comprised of Pismo State Beach, Pismo Lake, and Oceano Dunes State Vehicular Recreation Area (ODSVRA). HCPs are required under the federal Endangered Species Act (ESA) for USFWS issuance of an Incidental Take Permit (ITP), and the CEQA/NEPA process is being undertaken by State Parks and USFWS, respectively, in support of a potential HCP/ITP for State Parks in relation to the ODD. We have the following comments.

According to the NOP/NOI, the proposed HCP and corresponding ITP will outline a 25-year plan to address ESA issues and requirements in the ODD, including identifying measures designed to avoid, and where unavoidable to minimize and mitigate, the effects of "covered activities" to ensure the conservation, protection, and contributions to the recovery of "covered species" (namely, the federally threatened Western snowy plover (WSP) and California red-legged frog, and the federally endangered California least tern (CLT), tidewater goby, Gambel's watercress, La Graciosa thistle, marsh sandwort, and Nipomo Mesa lupine). As proposed in the NOP/NOI, covered activities would include all lawful activities for which State Parks has responsibility that could result in take of the aforementioned covered species, including public use/recreation management, natural resources management, and park/beach management. On this point the NOP/NOI states that State Parks would manage impacts to these covered species due to covered activities largely in the same manner it currently operates, including by installing protective fencing and by undertaking certain activities associated with habitat protection and restoration, invasive plant and animal control, habitat monitoring, and water quality

improvements. In addition to the "no action" alternative (i.e., where State Parks continues to operate as it has without an HCP/ITP), the NOP/NOI indicates that USFWS and State Parks will also evaluate implementation of a proposed HCP where State Parks modifies its current operation by allowing for the seasonal exclosure fencing for WSP and CLT breeding protection to be modified to expand vehicular access and use. In all cases, the NOP/NOI indicates it would evaluate current lawfully established activities, and it will not evaluate potential changes to current daily limits on the number of street legal and off-highway vehicles (OHV) at ODSVRA.

As a preliminary matter, the NOP/NOI purports to solicit comments for an environmental analysis regarding the implementation of a proposed HCP, but it does not provide the actual proposed HCP that is going to be evaluated in that regard. In that sense, it is difficult to provide detailed comments on what, specifically, the CEQA/NEPA process should address. It may be that USFWS/State Parks is responding to certain uncertainties associated with current ODSVRA operations, or it could be for some other reason, but the lack of a proposed HCP makes it difficult to provide as directive of comments as might be possible if a proposed HCP were also to be provided with the NOP/NOI. As such, we may have more substantive and detailed comments when we see the proposed HCP and/or the draft EIR/EIS documents.

With respect to current operational uncertainties and the Commission's role, State Parks operates ODSVRA under a coastal development permit (CDP) issued by the Coastal Commission in 1982 (CDP 4-82-300, as amended). That CDP identifies the basic parameters for ODSVRA operation under the Coastal Act, including for Park access locations, OHV riding and camping parameters, overall use limits, and habitat and sensitive species protection requirements. Importantly, many of the key operational parameters, most notably in terms of access into the Park and overall use limits,[1] have never been finalized through the required CDP amendment and Local Coastal Program (LCP) amendment processes, and thus they are currently authorized through the CDP on a temporary basis. In addition, the Commission retains the authority to review State Parks' operations on a yearly basis and to identify necessary changes, particularly related to addressing potential habitat impacts due to vehicular use. It is not clear from the NOP/NOI how the proposed HCP and/or ITP intends to address the temporary nature of the CDP authorization and the potential for State Parks' operations to change over time, including in relation to yearly Commission reviews. Critically, in proposing to evaluate State Parks' current operations, it is not clear how USFWS/State Parks intends to address the issues associated with the need for State Parks to finalize certain critical aspects of its operation that are only temporarily authorized under the CDP, including Park access and overall use limits. These current interim parameters are some of those most clearly tied into potential ESA species issues, and thus the lack of finality

[1] The two interim entrance points into the Park are at West Grand Avenue and Pier Avenue, and the interim staging area is currently located just south of the two-mile post (i.e., only street legal vehicles are allowed to be operated north of the two-mile post, and OHVs (and street legal vehicles) can be operated south of the two-mile post), and thus OHVs must be transferred via trailers to the interim staging area from the interim West Grand and Pier Avenue entrances. Current use limits that are subject to adjustment allow for a maximum of 2,580 street legal vehicles per day, a total of up to 1,720 OHVs at any given time, and up to 1,000 camping units per day.

through the CDP and the LCP processes must somehow be addressed in any proposed HCP and CEQA/NEPA documents, as well as any eventual ITP.

In addition, State Parks is also currently proposing to undertake a more holistic analysis of ODSVRA operations and its potential permanent configuration via a Public Works Plan (PWP),[2] which effort is currently in the beginning and formative stages now. According to State Parks, the goal of their proposed PWP is to take a fresh look at ODSVRA management and operations, including identifying permanent access and staging areas, identifying where OHV riding and camping are and are not allowed (including to reduce particulate matter emissions on downwind communities in conjunction with efforts of the San Luis Obispo County Air Pollution Control District and the California Air Resources Board), and other resource protection requirements. In other words, the PWP process currently being undertaken by State Parks, which will ultimately be submitted for Coastal Commission review and certification, may materially affect the way in which ODSVRA is used, managed, and operated, including with respect to areas where recreational use and other covered activities are located. In addition, if the PWP is to replace the underlying base operational CDP, then it will need to resolve issues still outstanding there, including in relation to the interim nature of certain key ODSVRA provisions.

Therefore, at a broad level, it is unclear how the proposed HCP will be structured in relation to the fluid nature of ODSVRA at this time, including how the HCP's resource protection requirements will be able to address different Park configurations, operations, and use levels than the current status quo. And it is even less clear to us how the CEQA/NEPA document would evaluate the range of potential outcomes at this time given the uncertainties identified above. It appears that the HCP and any CEQA/NEPA documents based on evaluating it will need to reflect ODSVRA's transitory reality at this juncture, including that the current configuration is interim and potentially subject to significant change. The ultimate location and delineation of the final ODSVRA entrance and staging areas, and its overall use parameters, under the CDP and the LCP would affect covered species differently, and thus the measures needed to protect such species from take would also be different. For example, if ODSVRA access and staging are moved from their current locations to a more southerly point, how would this affect covered species and their protection needs? If OHV riding and camping were located in a different area to account for relocated access and staging locations, or to respond to air quality considerations or otherwise, how would these alternative locations similarly affect covered species? Similarly, while the NOP/NOI states that vehicle and camping use limits are not proposed for amendment, including because they are approved by CDP 4-82-300, as discussed above, those limits too are interim and subject to modification, including through the CDP-required yearly evaluation, based on resource protection and public recreation needs. And State Parks has more recently been

[2] A PWP is a vehicle for planning and regulation under the Coastal Act that allows certain public agencies to propose a certain set of projects and other types of development that can be identified in a PWP that the Commission certifies as consistent with the Coastal Act. Following such certification, the public agency, in this case State Parks, can then perform the identified PWP development subject to reporting it to the Commission and without a CDP, provided it is PWP consistent. In other words, the PWP can serve to replace the need for case by case CDP evaluation, and can significantly streamline certain public agency activities.

looking at a 'no net loss' of riding area concept whereby any reductions in OHV riding areas, for whatever reason, are offset by creating new riding areas, presumably in adjacent dune habitat areas, and this too needs to be evaluated in the HCP/ITP and CEQA/NEPA processes.

In sum, the proposed HCP and its associated CEQA/NEPA reviews need to evaluate all potential ODSVRA configurations and operations, particularly in response to the current interim nature of critical components and the potential for upcoming Park changes, whether through the CDP, LCP, or PWP process or all three. As such, and as much as we recognize and agree that the need for an HCP is especially acute, particularly given past documented episodes of ESA species take at ODSVRA, it is not clear how such a PWP can or will be structured to address all of the above. And given that, it is even less clear to us how the CEQA/NEPA document will evaluate environmental impacts due to proposed HCP implementation, including because it is not clear what proposed HCP would be evaluated. At a minimum, the proposed HCP needs to be provided as part of any CEQA/NEPA scoping. Thus, if the CEQA/NEPA process is to move forward, we would strongly recommend that the proposed HCP be drafted in a manner that reflects the above uncertainties, and that provides for appropriate adaptive changes to occur in response to identified benchmarks, including related to potential changes associated with the CDP, the LCP, and the potential PWP, and to associated finalized access, staging, and use parameters. Once that proposed draft HCP is available for public review, we recommend that the associated environmental documents then evaluate the potential impacts and mitigation measures necessary for a series of different ODSVRA configurations and assumptions coming out of the HCP, which by necessity are likely to be required to be iterative and adaptive in order to account for the range of potential future Park changes at this juncture.

In addition to the above described overarching concerns/suggestions, we have the following specific issues that both the HCP and its EIR/EIS should evaluate.

In terms of alternatives, it is clear given the above discussion that the range of currently proposed alternatives to be evaluated in the CEQA/NEPA documents is simply not adequate to identify the potential environmental impacts and mitigations. In addition, and even bracketing the level of uncertainty, the NOP/NOI identifies only two alternatives to be evaluated: one a 'no action' alternative where State Parks would continue to operate as it has without an HCP/ITP, and a second where State Parks modifies its current operation by allowing for the seasonal exclosure fencing for WSP and CLT breeding protection to be modified to allow for expanded vehicular access and use. It appears clear to us that such a limited set of alternatives will not provide decision makers with the appropriate level of information and tools to be able to make informed decisions. In fact, the first alternative is to maintain the status quo, and the second contemplates actually *reducing* ESA species protections. At a minimum, the CEQA/NEPA documents need to evaluate a full range of alternatives with the best chance of meeting project objectives (presumably ESA species protection) with the least amount of coastal resource impacts, both in terms of recreation and habitat. Toward that end, it seems imperative that alternatives be shaped based on data (for example, avoiding use in areas identified as the most acute in terms of species impacts), and that each offer a co-equal evaluation of the costs and benefits environmentally of

each alternative. We do not see how evaluating only 'do nothing' and 'reduce ESA-species protections' alternatives fulfills those needs, and would strongly suggest additional alternatives be identified, including those based on avoiding use in areas identified as the most problematic in terms of species impacts, including so decision makers are properly equipped with a full understanding of the potential options for addressing ESA species needs in Oceano Dunes. The evaluation of alternatives is a fundamental component of CDP, LCP, and PWP conformance processes, and we would expect that the CEQA/NEPA documents range of alternatives are able to provide a co-equal evaluation of the various ways project objectives can be achieved, and that they provide a full spectrum of possibilities for consideration taking into account Coastal Act requirements and objectives. We are available for consultation on this point as the CEQA/NEPA process progresses, should that prove useful to you.

With respect to Western snowy plover (WSP) in particular, take of the WSP in ODSVRA is well documented, with an increase in take documented in recent years. The HCP should develop specific and enforceable strategies that will eliminate (or at least reduce) the take associated with these and other state and federally listed species. In particular regarding WSP, we believe that there should be an emphasis on policies that address bird deaths during both the breeding season and the overwintering season. Specifically, the policies should address the size, configuration, and seasonal duration of potential WSP exclosures, as well as management practices associated with wrack availability, vegetation density, and predator management. In addition, impacts to WSP associated with recreation, particularly the unique impacts OHV recreation and special events engender, should be addressed, including location restrictions (both permanent and seasonal), appropriate speed limits, signage and other means of public education for OHV riders, as well as appropriate mechanisms of enforcement. Ultimately, the CEQA/NEPA documents must then evaluate these provisions, including providing an assessment of potential impacts and mitigations and the associated evaluation of alternatives discussed above.

Similarly, in terms of California least tern (CLT), take of CLT at ODSVRA is both well documented and has increased, as you are aware, in recent years. Thus, we believe that the HCP process is also an opportune time to update CLT protections at ODSVRA, including ensuring policies are reflective of where birds congregate. Protective policies must be flexible enough to be responsive to any changes in CLT behavior or favored habitat, and large enough to accommodate any population growth should this occur. Moreover, enforced nest buffer distances and fencing configurations and materials must be determined from the most up-to-date scientific information, and empirically verified. The general approach to WSP and CLT management should be focused not just on protection of current populations of these species, but designed to provide optimal conditions for these species over time. All management measures should be deferential to expert recommendations and should be adaptive. And again, the CEQA/NEPA documents must also address these same issues in similar ways as for WSP.

With respect to aquatic resources, the HCP will need to carefully consider recommendations and restrictions necessary to safeguard ODSVRA's fish and aquatic-affiliated species. Policies concerning the integrity of the ephemeral Arroyo Grande Creek, an area which supports the

federally listed tidewater goby, steelhead, and the California red-legged frog, require particular attention, particularly from vehicular creek crossings. Currently, vehicles are allowed to cross the creek at water depths capable of supporting fish passage when the creek is connected to the ocean, and additional protective measures appear acutely warranted here. In addition, in winter, before natural lagoon breaching occurs, policies need to address OHV use in the vicinity of the lagoon mouth; otherwise, accidental breaching and associated take could also occur. In addition to addressing policies of OHV use in the vicinity of Arroyo Grande Creek, as discussed earlier, the HCP needs to also evaluate the impacts and protective measures associated with alternative Park access and staging areas, particularly those that would bypass Arroyo Grande Creek and lagoon altogether. Finally, we also strongly encourage an analysis of OHV impacts on annual grunion runs, which are known to occur in the ODSVRA. And again, any CEQA/NEPA documents must also address these same issues, including in terms of alternatives evaluation.

Lastly, any proposed HCP and supporting CEQA/NEPA documents must clearly specify enforcement provisions to ensure that final HCP policies and requirements are fully carried out. For example, any HCP needs to fully evaluate success and non-compliance criteria, including how State Parks will mitigate for any take or other adverse impacts to covered species not authorized by a final HCP/ITP. To ensure accountability, the HCP must have a strong monitoring and reporting function. Public education, including by informing visitors of habitat protection requirements, is a key part of this enforcement strategy, and the HCP should identify these public education parameters as well.

Again, thank you for the opportunity to provide these initial comments on the proposed HCP and the NOP/NOI. As you know, the Commission has been deeply involved for many years with the ongoing issues associated with the balancing of active public recreational and access opportunities for all with the protection and enhancement of sensitive species and their habitats in the Oceano Dunes District, both through the underlying CDP as well as the LCP, and potentially through an upcoming PWP. The Commission's program and involvement necessarily and directly intersects with that of USFWS under the ESA, and we are hopeful that an HCP/ITP and any associated CEQA/NEPA supporting documents can bridge the above-described analytic and substantive gaps to best allow for robust decision-making and good public policy. We look forward to continued collaboration on these important coastal resource issues of shared concern, and are available for consultation as you proceed forward. Please do not hesitate to contact me if you have any questions or would like to further discuss these matters.

Sincerely,

Kevin Kahn
District Supervisor
Central Coast District Office
California Coastal Commission

cc: Mat Fuzie and Kevin Pearce, State Parks
Julie Vance, CDFW
Matt Janssen, San Luis Obispo County

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Edmund G. Brown Jr., Governor

January 31, 2018

Ronie Glick
California Department of Parks and Recreation
Oceano Dunes District
340 James Way, Suite 270
Pismo Beach, CA 93449

RE: SCH#2018011012 Oceano Dunes District Habitat Conservation Plan, San Luis Obispo County

Dear Mr.Glick,

The Native American Heritage Commission has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that 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. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws**.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
   a. A brief description of the project.
   b. The lead agency contact information.
   c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).
   d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
   a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
   a. Alternatives to the project.
   b. Recommended mitigation measures.
   c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
   a. Type of environmental review necessary.
   b. Significance of the tribal cultural resources.
   c. Significance of the project's impacts on tribal cultural resources.
   d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
   a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
   b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).

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7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
   a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
   b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    a. Avoidance and preservation of the resources in place, including, but not limited to:
       i. Planning and construction to avoid the resources and protect the cultural and natural context.
       ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
    b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
       i. Protecting the cultural character and integrity of the resource.
       ii. Protecting the traditional use of the resource.
       iii. Protecting the confidentiality of the resource.
    c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
    d. Protecting the resource. (Pub. Resource Code § 21084.3 (b)).
    e. Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).
    f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code § 65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have been already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.

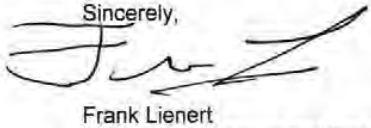
b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
- **a.** A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
- **b.** A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
- **a.** Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
- **b.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
- **c.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions, please contact me at my email address: frank.lienert@nahc.ca.gov

Sincerely,



Frank Lienert
Associate Governmental Program Analyst

cc: State Clearinghouse

5

Mr. Ronnie Glick, Senior Environmental Scientist
California Department of State Parks and Recreation
Oceano Dunes District
340 James Way Ste. 270
Pismo Beach Ca. 93449
Ronnie.glick@parks.ca.gov

The California 4 Wheel Drive Association (C4WDA) was founded in 1959 and we are a non-profit organization that has actively promoted the advancement of vehicle oriented outdoor recreation.

C4WDA is a volunteer-based organization of enthusiasts who promote responsible family recreation and exercise environmental conservation for the purpose of protecting access to public lands.

C4WDA represents over 8,000 members and 160-member clubs. We are the largest organization of this type in California and represent owners of all makes and models of 4WD vehicles, as well as non-owners who support responsible vehicle-oriented recreation.

C4WDA's mission is to work with the land managers for responsible OHV access and recreation opportunities. We support the concept of managed recreation and strategies for the building and maintenance of sustainable and quality OHV trails systems.

C4WDA has many members that are recreational visitors to the Oceano Dunes SVRA and they are very interested and concerned about actions that deal with the OHV recreational opportunity at Oceano Dunes SVRA.

As OHV recreation opportunities at the Oceano Dunes SVRA are reduced, the demand for OHV recreational opportunities by California citizen's increases. We are very concerned with systematic reduction in the size of the Oceano Dunes SVRA.

We feel that there should be no net loss in OHV opportunity.

The Oceano Dunes SVRA is a very unique recreation area. Nowhere in California can you camp and enjoy OHV recreational activities on the beach.

I personally have been recreating at the Oceano Dunes SVRA for over 30 years. My 3 kids that are now 30,28 and 17 have wonderful memories of their times at Oceano Dunes SVRA and I would hate for their kids not to have the same opportunity to enjoy the dunes the way we did.

OHV recreation is a substantial economic force in California, supporting jobs, local communities and tax revenues.

C4WDA appreciates this opportunity to be involved in the public planning process on behalf of its members who enjoy recreation in the Oceano Dunes SVRA.

Please contact me if you have questions or wish to discuss any aspect of these comments.

Jeff Blewett
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Via Electronic Mail

March 12, 2018

Mr. Ronnie Glick
Senior Environmental Scientist
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Oceano Dunes District
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Field Supervisor,
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U.S. Fish and Wildlife Service
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Re: Oceano Dunes District HCP NOP

Dear Mr. Glick and Ms. Chang:

These comments are timely submitted on behalf of the Center for Biological Diversity (the "Center") regarding the Notice of Preparation and Public Scoping Meeting for the California Department of Parks and Recreation ("CDPR" or "State Parks"), Oceano Dunes District Habitat Conservation Plan Joint EA/EIR or Joint EIS/EIR for a (ODD HCP) issued by the CDPR on January 9, 2018, and the notice published by the U.S. Fish and Wildlife Service (FWS), "Draft Habitat Conservation Plan for the California Department of Parks and Recreation Oceano Dunes District, San Luis Obispo County, California; Notice of Intent To Prepare Environmental Assessment or Environmental Impact Statement; Initiation of Public Scoping Process," 83 Fed. Reg. 1380-1382 (January 11, 2018).

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 1.6 million members and online activists throughout California and the United States. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people and wildlife in San Luis Obispo County.

I. The ODD HCP Must Ensure The Recovery Of All Covered Species.

The ODD HCP must ensure not merely the continued survival of covered species, but also the recovery of these species. 'Conserve" as defined in the Federal Endangered Species Act (ESA) includes both survival and recovery: "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary." (16 U.S.C. § 1532(3).)

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Thus, the HCP must contain specific measures to "conserve," or provide for the recovery of, the species. (*Sw. Ctr. for Biological Diversity v. Bartel*, 470 F. Supp. 2d 1118, 1128 (S.D. Cal 2006); *Sierra Club. v. Babbitt*, 15 F. Supp. 2d 1274, 1278 n.3 (S.D. Ala. 1998).) At a minimum, the ESA and implementing regulations require all HCPs to include the following: (1) a complete description of the activity sought to be authorized; (2) names of the species sought to be covered by the permit, including the number, age and sex of the species, if known; (3) the impact which will likely result from such taking; (4) what steps the applicant will take to monitor, minimize, and mitigate those impacts; (5) the funding that will be available to implement such monitoring, minimization, and mitigation activities; (6) the procedures to be used to deal with unforeseen circumstances; and (7) what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized. (16 U.S.C. § 1539(a)(2)(A)(i)-(iv); 50 C.F.R. §§ 17.22, 17.32.) FWS cannot issue an ITP if the HCP does not contain this information. (16 U.S.C. § 1539(a)(2)(A).)

Upon reviewing a HCP and before permit issuance, the FWS must find that (i) the taking will be incidental; (ii) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; (iii) the applicant will ensure that adequate funding for the plan will be provided; (iv) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and (v) any other measures FWS requires will be met. (16 U.S.C. § 1539(a)(2)(B); 50 C.F.R. §§ 17.22, 17.32.)

In addition, the project area at Oceano Dunes includes designated critical habitat for the western snowy plover, tidewater goby, La Graciosa thistle, leatherback sea turtle, and south-central California Coast steelhead. The Ninth Circuit Court of Appeals explained that the purpose of critical habitat designations is not merely to ensure the species' *survival,* but also to "carve out territory" that is "essential for the species' *recovery*." (*Gifford Pinchot Task Force v. United States Fish & Wildlife Serv.* (9th Cir. 2004) 378 F.3d 1059, 1070; emphasis added.) *Gifford Pinchot* concluded that the Endangered Species Act (the "ESA") views "conservation and survival as distinct, though complementary, goals, and the requirement to preserve critical habitat is designed to promote both conservation and survival." (*Id.*) Applying *Gifford* here, the ODD HCP must protect critical habitat and other habitat currently used by the covered species, and also protect habitat that could be used by the covered species in the future as these populations recover. By the same token, the ODD HCP must minimize and mitigate the impacts to and taking of covered species to the maximum extent practicable, as required by 16 U.S.C. § 1539.

II. The ODD HCP and the Environmental Review Must Be Based Upon The Best Available Science.

The ODD HCP and the EIS/EIR or EA/EIR must be based upon the best available science. In particular, multiple years of surveys are critical in order to capture changes in time of the resources under different climatic/recreational pressures. Single surveys of plants and wildlife are just snapshots in time and do not include sufficient survey data to evaluate potential impacts on covered species or ensure their continued survival and eventual recovery. The

environmental review should also rely upon multiple years of surveys to ensure that current "baseline" conditions are properly considered for the entire HCP area and surrounding natural areas. The Notice states that "HCP area includes Pismo State Beach, Oceano Dunes SVRA, and Pismo Lake located in San Luis Obispo County, California" which includes the Oso Flaco lake in the south. In addition, the activities in the HCP area may also affect other park lands and protected habitats, including but not limited to Nipomo Dunes National Wildlife Refuge to the south, and data must be obtained regarding resources in these areas as well. While we recognize that State Parks has conducted surveys, erected temporary closures to benefit beach nesting birds and managed other sensitive resources for protection in the past, the basis for the HCP should include up-to-date, comprehensive surveys conducted by qualified biologists using established FWS and CDFW protocols. Moreover, stakeholders in the environmental community should be notified prior to when such surveys occur and biologists from environmental organizations should be invited to attend and/or participate in such surveys.

At the same time, the ODD HCP and environmental review should be clear that any surveys conducted in preparation of the ODD HCP do not excuse or substitute for ongoing monitoring obligations or other issues falling under the California Environmental Quality Act ("CEQA"), the National Environmental Policy Act ("NEPA"), or the ESA.

III. The ODDHCP and Environmental Review Must Take Into Account The Impacts Of Climate Change On Covered Species.

The ODDHCP and environmental review must consider the impacts of global climate change, sea level rise, and local climatic changes on each of the covered species, including the need for climate change mitigation strategies (e.g., reducing greenhouse gas emissions from the recreational activities) and the need for climate change adaptation strategies for each of the covered species (e.g., conserving intact wild lands and nesting habitat and the corridors that connect them). Given the long-range planning associated with the ODD HCP, the ODD HCP and environmental review must consider potential impacts to covered species and their habitats arising from climate change on at least at 50 year horizon.

IV. The ODD HCP and Environmental Review Must Address Protection and Recovery of All Covered Species

The ODD HCP and environmental review must identify the impacts from habitat destruction and fragmentation on all of the covered species and include meaningful proposals for protection and recovery of these vulnerable species. Species include but need not be limited to:

- federally threatened western snowy plover (*Charadrius nivosus nivosus*),
- federally & State endangered, & State fully protected California least tern (*Sternula antillarum browni*),
- federally endangered tidewater goby (*Eucyclogobius newberryi*),
- federally threatened California red-legged frog (*Rana draytonii*),
- federally endangered & State threatened Gambel's watercress (*Nasturtium (Rorippa)*

gambelii),
- federally endangered & State threatened La Graciosa thistle (*Cirsium scariosum* var. *loncholepis*),
- federally and State endangered marsh sandwort (*Arenaria paludicola*),
- federally and State endangered Nipomo Mesa lupine (*Lupinus nipomensis*)

In addition, the threatened south-central California Coast steelhead occur in the HCP area and area affected by the covered activities. Indeed, Arroyo Grande Creek within the Oceano Dunes SVRA is part of the designated critical habitat for south-central California Coast steelhead. The leatherback sea turtle (*Dermochelys coriacea*) also has federally designated critical habitat within the area affected by covered activities. While these species are not managed by the USFWS, but rather by NMFS/NOAA, they are listed species and take is prohibited without a permit. The impact to critical habitat must be analyzed, avoided, minimized and/or mitigated to meet the requirements of the ESA, NEPA and CEQA. The HCP should be revised to either ensure that all impacts to steelhead and its critical habitat and leatherback sea turtle and its critical habitat are avoided or to include the steelhead and leatherback sea turtle as a covered species. Currently, when the creek is flowing across the beach seasonally in winter and spring, vehicles crossing the creek and driving in the creek-bed may adversely affect steelhead habitat. Leatherback sea turtle critical habitat is located all along the coastal strand of the SVRA and could contribute to the recovery of the species. State Parks and USFWS must address ways to protect steelhead and leatherback and their critical habitats from the impacts of covered activities, and fully consider impacts and alternatives to avoid such impacts in the HCP and environmental review.

The Oceano Dunes area is crucial to maintain populations of these listed species, some of which have been under the ESA protections for decades, and yet their populations still show signs of decline. The ODD HCP and environmental review should ensure there are no further declines in breeding, nesting, feeding, loafing and recovery habitat and should also protect habitat used outside of the breeding season.

We oppose the proposal to reduce nesting and breeding habitat, in particular the snowy plover and least terns breeding habitat, as stated in the Federal Register notice which includes as part of the "proposed action" a "reduction of the Boneyard and 6 exclosures." (83 Fed. Reg. at 1381.) We urge State Parks to withdraw this proposal which is an inappropriate consideration for an HCP. Instead the ODD HCP and environmental review should focus on a proposed action that will enhance, rather than diminish conservation for covered species. The review should also include consideration of alternatives that include expanding the protected nesting area exclosures for the plovers and terns, as well as the inclusion of permanently protected areas for resident plover loafing and feeding areas, in order to reduce the potential for impact from vehicles. While we are appreciative of the efforts that State Parks has put in place for the plovers/terns, we were concerned to see plovers loafing in fresh tire tracks on our most recent visit to the Oceano Dunes. (*See, e.g.*, photo attached as Attachment A.) We request that the ODD HCP and environmental

review incorporate, at a minimum, the findings from the 2017 USFWS report[1] including the recommendations (starting at pg. 49) for improving the protections for nesting/brooding snowy plovers/least terns. We note that there were numerous "bumpouts" and "single nest exclosures" implemented in 2017 to protect nests in the open riding areas. While we appreciate that State Parks was pro-active about protecting these nests, the need for these additional exclosures indicates that *more* contiguous area, not less is needed to protect nesting terns and plovers during the breeding/brooding season.

V. The ODD HCP and Environmental Review Must Appropriately Address Habitat Needs of Resident Snowy Plovers

Currently State Parks is implementing only temporary exclosures for breeding/brooding snowy plovers. However, some snowy plovers are now year-round residents of Oceano Dunes. Mortalities have been documented during the non-breeding season with birds being driven over and killed. Therefore, the ODD HCP must address safeguards for the non-breeding season above and beyond what is currently being implemented (currently consisting of some education efforts & signs). While the current activities are helpful, clearly they are inadequate to prevent mortalities, and additional measures need to be put in place to further avoid mortalities such as placing more of the near-shore areas off limits to motorized vehicles, lowering speed limits and enhancing enforcement efforts.

VI. The ODD HCP and Environmental Review Must Appropriately Address Least Tern as a Fully Protected Species

The scoping notice indicates that the least tern will be a covered species under the ODD HCP. The least tern is also a fully protected species under California law, and therefore any take of this species is unlawful under the fully protected statute except, as relevant here, as part of a Natural Communities Conservation Plan (NCCP). Therefore in order for the State Parks to avoid illegal take under California law, this process should either ensure complete avoidance of impacts to least tern or include development of an NCCP as well as the HCP in order to assure that conservation is fully addressed for the least tern.

VII. The ODD HCP and Environmental Review Should Consider Addressing Additional Unlisted Species In Order to Preclude Future Listings.

The ODD HCP and environmental review need to provide a science-based path for protection and recovery for other sensitive species that are known from the ODD. Such species have been documented in the ODD[2] and include:

- Vaux's Swift (*Chaetura vauxi*)
- Brant *(Branta bernicla)*

[1] https://www.fws.gov/arcata/es/birds/wsp/documents/siteReports/California/2017%20Oceano%20Dunes%20SVRA%20California%20Least%20Tern%20and%20Western%20Snowy%20Plover%20an....pdf
[2] https://ebird.org/hotspot/L4870985 and https://ebird.org/hotspot/L2757130 and https://ebird.org/hotspot/L208487

- Northern Harrier (*Circus cyaneus*)
- Least Bittern *(Ixobrychus exilis*)
- Tricolored blackbird (*Agelaius tricolor*), also a candidate species under CESA
- Willow flycatcher (*Empidonax traillii*), State listed endangered
- Purple martin (*Progne subis*)

We request that a full list of sensitive species be considered to be included in the ODD HCP and certainly all of these species must be considered in the environmental review even if they are not considered as covered species under the HCP. If such species are ultimately not included in the ODD HCP, the environmental review must clearly discuss the reasons for their non-inclusion.

VIII. The ODD HCP Needs To Include An Adequate Funding and Enforcement Plan.

In order for the ODD HCP to be valid and effective, it must include a long-term plan to fund the ODD HCP compliance activities. (*See* 16 USC § 1539(a)(2)(B)(iii).) ODD HCP funding should not be tied to general funding mechanisms for the State Parks, but should instead operate independently or receive specially designated funds. This is particularly important because agency budgets can fluctuate due to general economic conditions – funding of ODD HCP compliance should remain constant regardless of economic conditions.

While enforcement of the ODD HCP and protective measures will be the responsibility of State Parks, with oversight from the USFWS and CDFW, monitoring data and reporting should be made public on the State Parks website to encourage public oversight as well. Agency staff tasked with enforcing the ODD HCP must also have sufficient experience, expertise, and resources to ensure compliance with ODD HCP. Enforcement and implementation activities should be conducted in consultation with the public and the environmental community, including the Center and other stakeholders.

Finally, the ODD HCP must ensure that stakeholders and the public have ample opportunity to comment on activities involving the implementation of the ODD HCP. In short, it is only through implementation, enforcement, and public participation that actual conservation outcomes can be successfully achieved.

IX. The ODD HCP Must Address Water Quality and Water Flow Associated with the Oso Flaco Lake and Creek and Arroyo Grande Creek.

The ODD HCP area includes Oso Flaco Lake and Creek and Arroyo Grande Creek and their associated wetlands and riparian areas. These areas are home to rare and endangered plants and wildlife which depend upon the freshwater habitats for their continued survival. Accordingly, the ODD HCP and environmental review must ensure that water quality and flow rates are considered and any impacts that may significantly impact flow rates or water quality have remedies and are applied in the ODD area in order to prevent water quality/quantity degradation.

X. The ODDHCP Should Clearly Define "Covered" Activities, Account for All Impacts, and Avoid, Minimize and Mitigate Those Impacts.

The ODD HCP should clearly define the "covered" activities. Impacts of motorized recreational activities in the HCP area must be fully addressed including air quality impacts from combustion emissions (including GHG emissions), gas and oil spills, and dust and particulates in the air from riding activities. In addition, the loss of intact soil surfaces and plant cover from riding must be addressed and remediated.

Trash created by recreational use and camping must also be addressed in the environmental review. Trash bins must be covered at all times to reduce attraction of predators to the HCP area which in turn impact breeding and nesting birds. If necessary, trash pick-up and hauling must be increased to reduce trash on site during busy weekends.[3] Additional educational efforts to inform visitors about the need to properly stow trash and keep it covered should be required as part of the HCP.[4] These efforts should be in addition to other needed educational efforts to reduce impacts of motorized vehicle use on the beach to covered species including plovers and terns, and to reduce impacts to steelhead habitat from motorized vehicles crossing Arroyo Grande Creek when water is flowing.

Any additional development and infrastructure that could increase riding in this area or the size and frequency of and so-called special events in the area, and thereby increase the impacts to the covered species, should not constitute "covered activities". The HCP and environmental review should consider capacity limits for the HCP area to ensure that busy weekends do not decimate species habitat and undo efforts at conservation by State Parks and others.

To the extent that the ODD HCP does allow for future motorized recreation in the HCP area to be included as "covered" activities, the environmental review must comprehensively analyze the impacts on covered species of these "covered" activities. In addition, the ODD HCP environmental review must include proper analysis and assessment of the environmental baseline and impacts from these activities as well as alternatives that could reduce impacts such as limits to covered species, air and water quality, and other impacts. The ODD HCP should explicitly provide that protocol level surveys for appropriate covered species will still be required in connection with all additional special events and projects in connection with that project's individual environmental review. This is necessary because on-the-ground conditions will vary

[3] At other parks, State Parks uses animal proof trash bins and has added more frequent trash pick-ups, including on weekends, to protect listed species from predators attracted to trash. Specifically, State Parks committed to increase animal proof food lockers and continue to use animal proof trash bins and to increase trash pick-ups at Big Basin Redwood State Park, Portola Redwoods State Park, and Butano State Park to protect marbled murrelet populations (*See* Stipulated Judgement and Settlement Agreement (attached as Attachment B).)

[4] (*Id.*) State Parks also added additional educational efforts including an educational video linked to the reservation system for these parks to help visitors understand the need to reduce trash to protect species and habitats.

over the life of the ODD HCP, and covered species could occur in areas that were not originally noted in the ODD HCP or evaluated in the environmental review.

Lastly the ODD HCP needs to include an alternative that would limit the number of vehicles allowed to ride on the beach at any given time that would be compatible with management of the covered species.

XI. Conclusion

Thank you for the opportunity to submit scoping comments on the ODD HCP and the environmental review. We look forward to working with both State Parks and USFWS to assure that the ODD HCP and environmental review conform to the requirements of state and federal law and to assure that the HCP provides for robust conservation of the covered species and other special status species in the HCP area. We hope and expect that all significant impacts to the environment from the covered activities are fully analyzed, avoided, minimized or if necessary mitigated. Please do not hesitate to contact me at the Center with any questions at the number listed below. We look forward to reviewing the ODD HCP and the environmental review document once they are made available for public review.

Sincerely,

Lisa T. Belenky, Senior Attorney
CENTER for BIOLOGICAL DIVERSITY
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Oakland, CA 94612
lbelenky@biologicaldiversity.org

cc: David Hacker CDFW David.Hacker@wildlife.ca.gov

Attachments:

Attachment A: Photo of plovers loafing in tire tracks on Oceano Dunes SVRA beach.

Attachment B: Settlement Agreement

Attachment A

Photo: I. Anderson, Nov. 27, 2017

Attachment B

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FILED
MAR 18 2014
ALEX CALVO, CLERK
BY JUSTINE KHOURY
DEPUTY, SANTA CRUZ COUNTY

FILED BY FACSIMILE

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF SANTA CRUZ

CENTER FOR BIOLOGICAL DIVERSITY, Petitioner and Plaintiff, **v.** **CALIFORNIA DEPARTMENT OF PARKS AND RECREATION, an agency of the State of California; and CALIFORNIA STATE PARK AND RECREATION COMMISSION,** Respondents and Defendants.	Case No. CV177159 **STIPULATION FOR ENTRY OF JUDGMENT AND PROPOSED JUDGMENT** Judge: Hon. Paul M. Marigonda Dept.: 5 Action Filed: June 19, 2013

The parties to this action, Petitioner and Plaintiff Center for Biological Diversity and Respondents and Defendants California Department of Parks and Recreation and California State Park and Recreation Commission, by and through their counsel of record, agree and stipulate to entry of judgment in this action as follows:

1. Judgment will be entered in this action pursuant to the terms and provisions of the Settlement and Release attached hereto as Exhibit 1 and incorporated herein by reference.

2. The parties waive all rights of appeal from the judgment.

3. The court shall retain jurisdiction to enforce the provisions of the judgment as indicated in the attached Settlement and Release Agreement.

IT IS SO STIPULATED.

Date: 1.28.2014

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Attorney General of California
CHRISTIANA TIEDEMANN
Supervising Deputy Attorney General

Susan A. Austin

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Attorneys for Respondents and Defendants Department of Parks and Recreation and California State Park and Recreation Commission

Date: 1/24/14

CENTER FOR BIOLOGICAL DIVERSITY

Lisa T. Belenky

LISA T. BELENKY
Attorney for Petitioner and Plaintiff Center for Biological Diversity

JUDGMENT

IT IS HEREBY ORDERED that judgment is entered pursuant to the terms of the parties' Stipulation for Entry of Judgment as set forth above.

Date: MAR 13 2014

PAUL M. MARIGONDA

HON. PAUL M. MARIGONDA
JUDGE OF THE SUPERIOR COURT

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Exhibit 1

SETTLEMENT AND RELEASE AGREEMENT

This Settlement and Release Agreement ("Agreement") is made and entered into by and among, the California State Park and Recreation Commission ("Commission") and the California Department of Parks and Recreation ("Department") (collectively "State Parks"), on the one hand, and the Center for Biological Diversity ("the Center"), a nonprofit public interest corporation. State Parks and the Center are individually referred to in this Agreement as a "Party" and collectively as the "Parties." The Parties make this Agreement in light of the following recited facts (each a "Recital").

RECITALS

A. On May 17, 2013, the Commission approved the Department's Big Basin Redwoods State Park General Plan ("Project" or "General Plan"), certified a final environmental impact report ("EIR"), and adopted a Statement of Overriding Considerations for the Project. The Department filed the Notice of Determination on May 20, 2013, which was received by the State Clearing House on May 21, 2013, and was assigned State Clearing House Number 2001112104.

B. Challenging the EIR and General Plan approval under the California Environmental Quality Act ("CEQA") and the California Endangered Species Act ("CESA"), the Center timely filed a Petition for Writ of Mandate and Complaint for Declaratory Relief in the Superior Court of the State of California, Santa Cruz County, *Center for Biological Diversity v. California Department of Parks and Recreation, et al.*, Case No. CV 177159 ("CEQA Lawsuit").

C. State Parks disputes the allegations and contentions raised in the Center's CEQA Lawsuit.

D. The Parties recognize that continuing their dispute over the General Plan and the CEQA Lawsuit will result in significant costs to each Party, with an uncertain outcome to each Party. Through this Agreement, the Parties now wish to resolve their disputes over the General Plan and the Center's CEQA Lawsuit.

E. This Agreement's language binding principals, directors, officers, and agents is effective only to the extent that such entities or people can be legally bound by such agreements.

In consideration of the above recitals, which are incorporated herein, and the promises set further herein, the Parties agree as follows:

AGREEMENT

1. Marbled Murrelet Protection. The marbled murrelet is a federally threatened Pacific seabird that nests in the upper branches of old growth redwood and Douglas Fir trees in the Santa Cruz Mountains region, including in the following three state parks: (1) Big Basin Redwoods State Park ("Big Basin") (composed of the main part of the park ["Big Basin proper"] and a recently-acquired part of the park ["Little Basin"]). (2) Portola Redwoods State Park

("Portola"), and (3) Butano State Park ("Butano"). (See map attached as Exhibit A.) To further efforts to protect the marbled murrelet, Parks agrees to do the following:

A. Trash management program

Implement the following trash management measures by the specified dates in Big Basin Redwoods, Portola, and Butano State Parks, to improve upon existing measures:

(A1) Contract with a waste management provider to empty all of the dumpsters in Big Basin proper (not including Little Basin) on a frequent, regular schedule that will prevent trash overflow, particularly during peak visitation times. This would require emptying dumpsters on the weekends and holidays. Amend the contract with the waste management provider at Little Basin to address the issue of full dumpsters during peak use in the summer. New trash pick-up measures must be implemented by April 2014.

(A2) By April 2014, ensure sufficient permanent and seasonal maintenance staff to monitor and empty the animal-proof trash bins throughout the Parks to prevent trash overflow. Provide a mechanism for park visitors to notify staff if trash bins or dumpsters are overflowing and a plan for park staff to clean up any overflow within two hours of being notified.

(A3) Animal proof trash containers are already installed in human-use areas of Big Basin proper and at Portola and Butano State Parks. By April 2014, install a sufficient number of animal-proof, user-friendly trash bins and dumpsters in all human-use areas in Little Basin, making sure that bins are large enough and numerous enough to prevent spill-over during peak visitation.

(A4) By April 2014, install animal-proof food lockers in all campsites and cabin sites in the Parks, including the Little Basin campground.

(A5) By April 2014, post "no dishwashing" signs at all spigots. Several studies are underway in other parks to test the efficacy of different types of drain grates to prevent birds and other animals from eating food scraps left under the spigots. When the data are available and if drain grates are effective, Parks will install grates under the spigots in the campgrounds. In addition, Parks will retrofit the existing campground restroom buildings with dishwashing facilities as follows.

(a) There are fourteen restroom buildings with running water and flush toilets in Big Basin campgrounds. By May 31, 2015, Parks will install a dishwashing station at seven or more of these restroom buildings, distributed across the campgrounds to reflect visitor use to the extent possible.

(b) There are two restroom buildings with running water and flush toilets at the main Portola campground. By May 31, 2015, Parks will install a dishwashing station at one or both of these restroom buildings.

(c) Sky Meadows campground in Big Basin has running water and vault toilets. By June 30, 2016, Parks will install at least one dishwashing station.

(d) Unlike the restroom buildings in (a), (b), and (c), the following have not yet been retrofitted to be compliant with the Americans with Disabilities Act ("ADA"): (1) the restroom building in Butano and (2) the restroom building at the Portola group campground. When these restroom facilities are retrofitted to be ADA compliant, Parks will install a dishwashing station at each.

(A6) Parks, together with other local, state, and federal agencies, has created highly visible, user-friendly, and durable weather-resistant signs to educate visitors to discard trash in animal-proof bins, to clean up crumbs, and to refrain from feeding birds and other wildlife. New signs to educate visitors with the message "Keep it crumb clean: never leave food unattended, use food lockers where available, never feed wildlife, your crumbs attract jays and ravens who eat eggs and babies of endangered marbled murrelets", have already been posted in some areas. By April 2014, these or similar signs should be posted at all visitor facilities in the Parks including all campsites, campground information kiosks, food storage lockers at campsites and cabin sites, visitor centers, nature centers, stores, picnic areas, picnic tables, bathrooms, dumpsters, trailheads, and at the parking lot information kiosks for Berry Creek Falls and Sunset Trail Camp. The same or similar signs should be posted in Spanish in at least one-third of the locations.

B. Public education measures

(B1) Make the marbled murrelet a focal point of a comprehensive, sustained public education campaign within Big Basin Redwoods State Park to encourage park visitors to participate in saving the Santa Cruz Mountains marbled murrelet by not feeding wildlife and by properly storing and throwing away all trash.

(B2) By April 2014, at Big Basin, Portola, and Butano State Parks, incorporate into publications including park event schedules, natural history literature, and a brochure to be made available in the Sempervirens room (or similar location), information that: (i) identifies the marbled murrelet as a focal point of the Park, (ii) highlights its precarious status in the Santa Cruz Mountains and provides natural history highlights about the marbled murrelet, (iii) discusses the threat that visitor trash poses to the marbled murrelet by attracting jays and ravens, (iv) discusses the importance of not feeding jays, ravens, and other wildlife, and keeping areas free of trash and crumbs and (v) educates Park visitors regarding appropriate dish-washing techniques.

(B3) As soon as feasible and at the latest at the time a new reservation contract is in place, Parks will arrange for campers to receive with their reservation a digital link to a short, educational video about the marbled murrelet. The link will be sent to campers with all correspondence regarding their reservation. The video will include information that: (i) identifies the marbled murrelet as a focal point of the Park, (ii) highlights its precarious status in the Santa Cruz Mountains and provides interesting natural history highlights about the marbled murrelet, (iii)

discusses the threat that visitor trash poses to the marbled murrelet by attracting jays and ravens, (iv) discusses the importance of not feeding jays, ravens, and other wildlife, and keeping areas free of trash and crumbs and (v) educates Park visitors regarding appropriate dish-washing techniques and the new dishwashing stations. The video should be provided in English and Spanish.

(B4) By April 2014, create marbled murrelet displays in high use areas of the Park. Display areas will include but are not limited to the Sempervirens Room (or similar location) in the Headquarters Building, the Nature Lodge, and the future visitor contact center at Saddle Mountain. At the Nature Lodge, the existing marbled murrelet video should be made visible by creating an accompanying sign alerting the visitor to the video; the Spanish language option for the video should be operational.

(B5) By April 2014, approach Audubon or another potentially interested partner with citizen science experience to create and run a citizen science program focused on the marbled murrelet, nest predation, and trash. For example, this program and a website could allow visitors to record (a) sightings of marbled murrelets; (b) sightings of Steller's jays, common ravens, and other wildlife; (c) where animals are seen eating human food; (d) overflowing trash bins and dumpsters; (e) where they see trash on the ground. If Parks, after making a good faith effort, is unsuccessful in finding an interested partner to create and run a citizen science program, Parks shall have no obligation to initiate a citizen science program of its own.

(B6) By April 2014, complete an education session for all Park staff in Big Basin, Portola, and Butano State Parks on the new marbled murrelet conservation measures with guidance on how to talk with Park visitors and enforce the measures.

(B7) Continue the interpretive program on the marbled murrelet that is presented by Parks staff at interpretive and educational programs at the Campfire Center. The program will include information that: (i) identifies the marbled murrelet as a focal point of the Park, (ii) highlights its precarious status in the Santa Cruz Mountains and provides natural history highlights about the marbled murrelet, (iii) discusses the threat that visitor trash poses to the marbled murrelet by attracting jays and ravens, (iv) discusses the importance of not feeding jays, ravens, and other wildlife, and keeping areas free of trash and crumbs, and (v) educates Park visitors regarding appropriate dish-washing techniques and the new dishwashing stations.

(B8) Continue to incorporate information on marbled murrelet conservation on guided hikes in the Park. For example, the Redwood Loop Trail passes by a giant tree where marbled murrelets have nested, providing an opportunity for visitor education.

(B9) During the peak camping season (from April to September), continue to hire staff dedicated to talking to visitors in the Headquarters area and all campgrounds about not feeding wildlife, proper disposal and storage of food, and marbled murrelet conservation. It is especially important to talk to campers at mealtimes (breakfast, lunch, dinner).

C. Monitoring and Adaptive Management

To implement Parks' commitment to undertaking adaptive management activities on State Park properties as part of a larger regional effort to conserve and protect the marbled murrelet, Parks will take the following steps:

(C1) On or before January 31, 2017, Parks will compile and analyze all survey data collected as a result of activities described in (D2) and other relevant information from the 2014, 2015, and 2016 seasons, including the analysis of long-term trends through and including the 2016 season using the long-term survey data, and make this data, analysis, and information available to the public on its website. Parks will take steps to seek input from U.S. Fish and Wildlife Service, California Department of Fish & Game, and other experts on marbled murrelets and seabirds in evaluating the data and information.

(C2) Based on the evaluation of the data and information and input from members of the public, agencies, and experts (if any), Parks will make a determination on or before March 31, 2017, whether adaptive management measures need to be implemented in the Parks to provide additional protection for the marbled murrelet in Big Basin, Portola, and Butano State Parks. Additional measures considered will include potential closures of human-use areas. Parks' determination of whether or not any adaptive management measures are needed, and the basis for the determination, will be memorialized in writing and made available to the public on its website within 5 business days.

(C3) Parks will undertake the same compilation and analysis of data and information, public notice, outreach to wildlife agencies and experts, and a determination regarding any needed adaptive management every 3 years (January 31/March 31, 2020, January 31/March 31, 2023) until and unless a new general plan is adopted for Big Basin Redwood State Park.

D. Coordination and Funding

(D1) A number of the actions to protect the marbled murrelet will require funding, and these commitments are made subject to availability of funding. Parks commits to apply for funding these activities through available sources such as state funding, federal funding including the Fish and Wildlife Service's Section 6 funds, Oil Spill Natural Resource Damage Assessment (NRDA) Restoration Funding when applicable, California Coastal Conservancy, and others.

(D2) Funding is already established though the year 2020 for (1) at-sea surveys to determine overall regional marbled murrelet numbers and locations; and (2) corvid studies to determine predator numbers. Funding will also be sought for other types of studies. State Parks will apply for funding to continue (1) annual audio-visual studies to evaluate marbled murrelet nesting activity in Big Basin, Portola, and Butano State Parks, and will seek funding for (2) radar surveys at the mouth of Waddell, Butano, and Pescadero Creek several times a year to provide another index of inland marbled murrelet activity.

(D3) Working towards the recovery of the marbled murrelet will require a regional effort that includes State Parks was well as other agencies and organizations and dedicated funding. Parks will take an active role to support a regional effort to protect the marbled murrelet. Parks will continue to support regional and Park specific monitoring and research efforts by providing access, complimentary camping, and assistance with permits.

E. Corvid management measures

(E1) Beginning in 2014, contingent on approval and funding from the Luckenbach Oil Spill Trustee Council, implement conditioned taste aversion experimental treatments in Big Basin Redwoods State Park. Implementation is planned to occur within 1.5 kilometers of facilities including the campgrounds. The treatments should have well-defined measures to evaluate effectiveness. If the taste aversion treatments in Big Basin, Portola, and Butano, State Parks prove successful in reducing nest depredation, State Parks will continue to seek funding for these measures and implement these measures (contingent on funding being secured).

(E2) Continue with raven depredation efforts utilizing park staff. Evaluate the current program in fall 2014. Following that evaluation, alternative approaches may be deployed as needed, including but not limited to hiring outside experts to remove ravens from the Park for two seasons. If an alternative approach is undertaken, it will be evaluated in fall 2016 to determine whether to continue or whether a different program for raven management is needed.

(E3) Steller's jay adults in Park campgrounds produce large numbers of juveniles, many of which remain in the Park or disperse back into the Park. By April 2014, the Park should draft a plan that considers options for the humane removal of Steller's jay juveniles from the campground areas of the Park at the end of each jay breeding season. Scientists are currently conducting research on jays. This research will assist Parks in making decisions regarding the removal of jays.

F. Other

(F1) Parks currently has a staff position dedicated to overseeing and implementing marbled murrelet mitigation measures. In the next fiscal year, Parks will seek to make that position permanent.

(F2) Park Rangers have full peace officer powers to enforce laws within the parks, including laws pertaining food storage (14 CCR § 4323), feeding wildlife (14 CCR § 4305; 36 CFR § 2.2) and littering (California Penal Code § 374.4; 14 CCR § 4310). Officer discretion is an important part of their authority and they use their discretion to warn, cite, or arrest violators as the situation requires. Park Rangers will continue to talk with visitors one-on-one when issuing warning tickets or citations to explain the importance of following the rules to protect marbled murrelets.

(F3) Parks will comply with the CEQA before proceeding with any site-specific proposals to build new infrastructure in and adjacent to old-growth habitat in Big Basin Redwoods State Park.

2. ADA Compliance. In carrying out the activities described in 1.B5 (above), State Parks shall comply with the Americans with Disabilities Act to the extent such compliance is required by law.

3. Effective Date. The effective date of this Agreement ("Effective Date") shall be the date the Agreement becomes signed by all of the Parties. Accordingly, each Party shall include the date it executes the Agreement next to its respective signature, and the Effective Date shall be the latest of these dates. The Agreement may be executed in counterparts.

4. Free and Voluntary Agreement. Each Party represents and warrants that its execution of this agreement and release is free and voluntary and acknowledges its independent right, absent this agreement, to litigate the CEQA Lawsuit.

5. Attorneys' Fees and Costs. Parks agrees to pay the Center's attorneys' fees and costs in connection with the CEQA Lawsuit and the negotiation of this Agreement in the amount of $33,795.57. Payment shall be made in the form of a check made payable to the Center for Biological Diversity and shall be sent to Lisa Belenky, Senior Attorney, Center for Biological Diversity, 351 California Street, Suite 600, San Francisco, CA 94104.

6. Continuing Jurisdiction. The Parties agree that consistent with California Code of Civil Procedure Section 664.6, the Santa Cruz County Superior Court shall retain continuing jurisdiction over the Parties to enforce the terms of this Agreement for ten years after the Effective Date.

7. Stipulated Judgment. It is hereby stipulated by and between the parties that Santa Cruz Superior Court action number CV 177159 is settled and judgment shall be entered pursuant to the terms and conditions of this Agreement, which are and shall be binding on the parties hereto.

8. Notice. All notices under this Agreement shall be in writing. All notices shall be effective when personally delivered, or e-mailed, or 48 hours after deposit in the United States mail, as registered or certified mail, postage prepaid, return receipt requested, to the following representatives of the parties at the addresses indicated below:

If to California Department of Parks and Recreation:

Kathryn J. Tobias
Senior Staff Counsel
California State Parks
1416 9th Street, P.O. Box 942896
Sacramento, CA 94296-0001
kathryn.tobias@parks.ca.gov

With a copy to:

Susan A. Austin
Deputy Attorney General
California Attorney General's Office
1515 Clay Street, 20th Floor
Oakland, CA 94612
susan.austin@doj.ca.gov

If to the Center for Biological Diversity:

Lisa T. Belenky, Senior Attorney
Center for Biological Diversity
351 California St., Suite 600
San Francisco, CA 94104
(415) 632-5307
lbelenky@biologicaldiversity.org

With a copy to:

Shaye Wolf, Climate Science Director
Center for Biological Diversity
351 California St., Suite 600
San Francisco, CA 94104
(415) 632-5301
swolf@biologicaldiversity.org

9. Modification. This Agreement may not be altered, amended, modified or otherwise changed except by writing duly executed by authorized representatives of the Parties. A Party seeking to modify the Agreement shall make a request for modification according to the

notice provisions of paragraph 8. The other Party shall respond to the request within 15 calendar days, and acceptance of the request shall not be unreasonably withheld.

10. Informal Negotiations. In the event a Party believes that the other Party is in default of any provision or provisions of this Agreement, that Party shall provide the other Party with written notice of the alleged default pursuant to the notice procedures identified in paragraph 8.

10.1. Notice of Default or Notice of Claim. The written notice shall identify the provision of the Agreement that the Party believes has been breached and/or circumstances have arisen that require immediate injunctive relief, a general summary of the facts supporting the alleged default or circumstances and, where appropriate, the manner in which the default or circumstances may be satisfactorily cured. Failure or delay in giving notice of any default shall not constitute a waiver of any default, nor shall it change the time to cure the default.

10.2. Informal Dispute Resolution. After notice of default is given, the Parties shall commence good faith negotiations to resolve the dispute no later than 15 days from the date of the written notice.

10.3. Cure Period. The Party who is alleged to be in default shall have 30 days from the date of the written notice to cure the alleged default, or, if the default cannot be fully cured in the 30-day period, make reasonable efforts to commence to cure the default within the period and, thereafter, diligently prosecute such cure to completion.

10.4. Judicial Action. The Parties agree that in the event of any dispute over the terms of this Agreement, including any default issues, they will first undertake the Informal Dispute Resolution process outlined above in paragraph 10.2. Any dispute not resolved through such informal dispute resolution may be submitted to the Superior Court of Santa Cruz. The Parties further agree that in any such proceeding they will not reinstate any claims otherwise compromised by this Agreement. Nothing in this provision, however, relinquishes or waives the right of any party to seek immediate injunctive relief.

10.5. Timing. The Parties agree that they have a strong, mutual interest in having any judicial dispute resolved as quickly as possible. Accordingly, within ten days of the filing of any judicial action pursuant to paragraph 10.4, the Parties agree to meet and confer in good faith to discuss and attempt to agree upon procedural methods for achieving an early resolution of the claim through motions or other procedures.

11. Waiver of Right to Enforce. The failure of any Party to enforce any term, covenant, or condition of this Agreement on the date it is to be performed shall not be construed as a waiver of that Party's right to enforce such term, covenant or condition, or any other term, covenant, or condition of this Agreement. A waiver of any Party's right to enforce any provision of this Agreement shall not be effective unless such a waiver is made expressly in writing. An express waiver of any one breach shall not be deemed a waiver of any other breach of the same or any other provision of this Agreement.

12. Headings. The paragraph headings herein are for the convenience of the Parties and are not intended to be used as an aid to interpretation of the terms of this Agreement.

Date 2/26/2014

CALIFORNIA STATE PARK AND RECREATION COMMISSION; CALIFORNIA DEPARTMENT OF PARKS AND RECREATION

By: Anthony L. Jackson

Major General Anthony L. Jackson, USMC (Ret.)
Director, California Department of Parks and Recreation

Date 1/24/14

CENTER FOR BIOLOGICAL DIVERSITY

By: Lisa T. Belenky

Lisa T. Belenky, Senior Attorney

Approved as to form:

Date 1/24/14

CALIFORNIA STATE PARK AND RECREATION COMMISSION; CALIFORNIA DEPARTMENT OF PARKS AND RECREATION

By: Kathryn J. Tobias

Kathryn J. Tobias, Senior Staff Counsel

Date 1.28.2014

ATTORNEY GENERAL OF THE STATE OF CALIFORNIA

By: Susan A. Austin

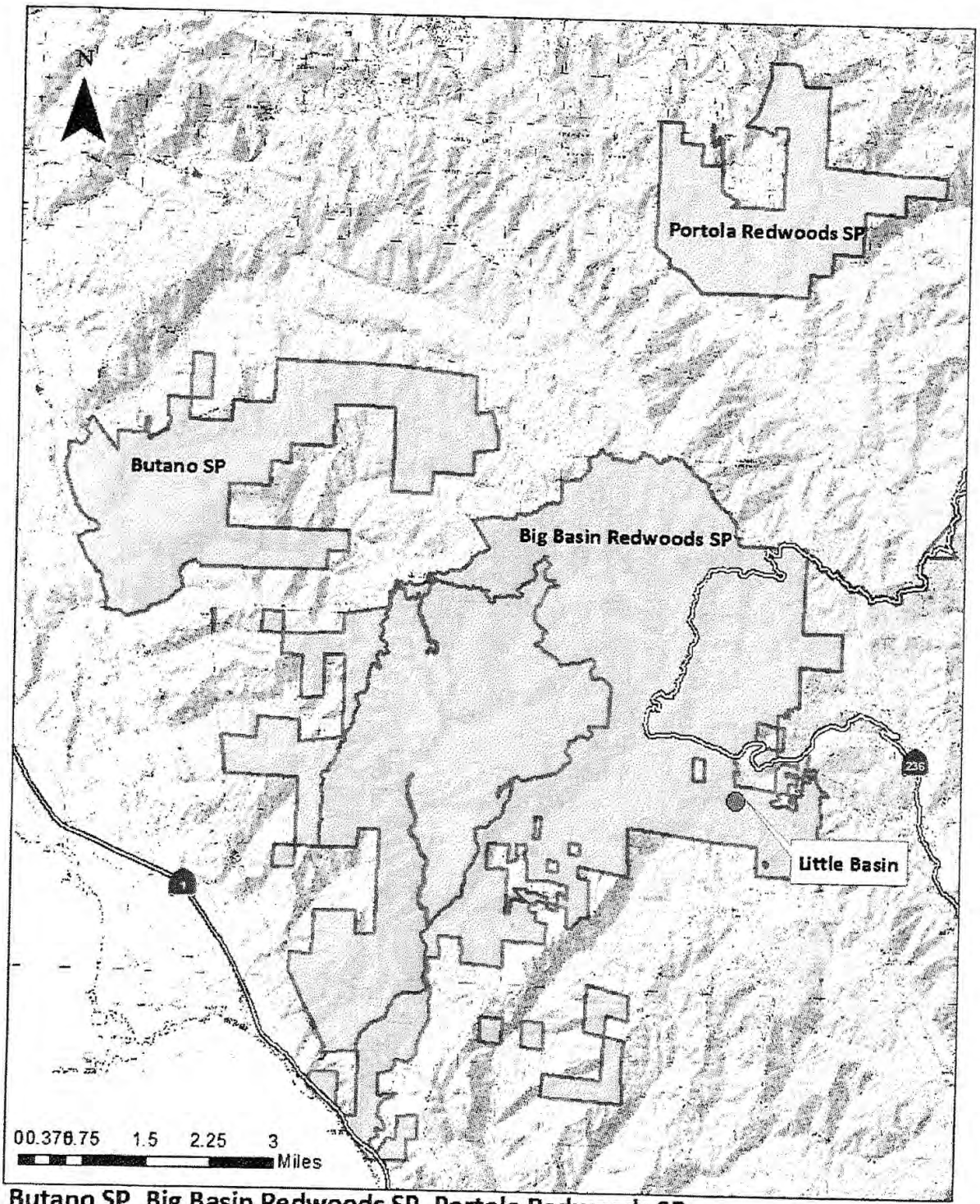
Susan A. Austin, Deputy Attorney General
Attorneys for the California State Park and Recreation Commission and the California Department of Parks and Recreation

Date: January 23, 2014 CHATTEN-BROWN & CARSTENS

By: _____

Jan Chattan-Brown
Michelle Black
Attorneys for the Center for Biological Diversity

EXHIBIT A



Butano SP_Big Basin Redwoods SP_Portola Redwoods SP

DECLARATION OF SERVICE BY U.S. MAIL

Case Name: *Center for Biological Diversity v. CA Dept of Parks & Rec., et al.*
No.: Santa Cruz Superior Court Case No.: CV177159

I declare:

I am employed in the Office of the Attorney General, which is the office of a member of the California State Bar, at which member's direction this service is made. I am 18 years of age or older and not a party to this matter. I am familiar with the business practice at the Office of the Attorney General for collection and processing of correspondence for mailing with the United States Postal Service. In accordance with that practice, correspondence placed in the internal mail collection system at the Office of the Attorney General is deposited with the United States Postal Service with postage thereon fully prepaid that same day in the ordinary course of business.

On March 12, 2014, I served the attached **STIPULATION FOR ENTRY OF JUDGMENT AND PROPOSED JUDGMENT** by placing a true copy thereof enclosed in a sealed envelope in the internal mail collection system at the Office of the Attorney General at 1515 Clay Street, 20th Floor, Oakland, CA 94612-0550, addressed as follows:

Jan Chatten-Brown
Douglas P. Carstens
Michelle Black
Chatten-Brown & Carstens
2200 Pacific Coast Highway, Ste. 318
Hermosa Beach, CA 90254

Lisa T. Belenky
Senior Attorney
Center for Biological Diversity
351 California Street, Suite 600
San Francisco, CA 94104

I declare under penalty of perjury under the laws of the State of California the foregoing is true and correct and that this declaration was executed on March 12, 2014, at Oakland, California.

Christine Soo
Declarant

Signature

OK2013309732
90382183.doc

Law Offices of **Babak Naficy**

1540 Marsh Street
Suite 110
San Luis Obispo California
93401 ph: 805-593-0926
fax: 805-593-0946

babaknaficy@sbcglobal.net

March 12, 2018

Via US Mail and email

Mr. Ronnie Glick
Senior Environmental Scientist
California Department of Parks and Recreation
Oceano Dunes District
340 James Way, Ste. 270
Pismo Beach, CA 93449
Ronnie.Glick@parks.ca.gov

Field Supervisor
Ventura Fish and Wildlife Office
U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, CA 93003
lena_chang@fws.gov

Re: Oceano Dunes District HCP NOP

Dear Mr. Glick and Ms. Chang:

Sierra Club submits these comments regarding the Notice of Preparation and Public Scoping Meeting for the California Department of Parks and Recreation ("CDPR" or "State Parks"), Oceano Dunes District Habitat Conservation Plan Joint EA/EIR or Joint EIS/EIR for a (ODD HCP) issued by the CDPR on January 9, 2018, and the notice published by the U.S. Fish and Wildlife Service (FWS), "Draft Habitat Conservation Plan for the California Department of Parks and Recreation Oceano Dunes District, San Luis Obispo County, California; Notice of Intent To Prepare Environmental Assessment or Environmental Impact Statement; Initiation of Public Scoping Process", 83 Fed. Reg. 1380-1382 (January 11, 2018). The CDPR is proposing the HCP for issuance of an incidental take permit (ITP).

Sierra Club is a well-known California non-profit membership organization that is concerned with protection of the environment and government compliance with environmental laws. The Sierra Club has tens of thousands of members throughout the United States and California including in the vicinity of the Oceano Dunes.

A. The HCP must ensure both the survival and recovery of covered species.

Under prevailing law, the HCP cannot merely focus on the continued survival of covered species; it must also ensure the *recovery* of these species. Federal Endangered Species Act (ESA) defines "conserve" as including both survival and recovery of species: "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary." (16 U.S.C. § 1532(3)). Accordingly, the HCP must contain specific measures to "conserve," or provide for the recovery of, the species. (Sw. Ctr. for Biological Diversity v. Bartel, 470 F. Supp. 2d 1118, 1128 (S.D. Cal 2006); Sierra Club. v. Babbitt, 15 F.Supp.2d 1274, 1278 n.3 (S.D. Ala. 1998)).

The project area at Oceano Dunes also includes designated critical habitat for the western snowy plover, tidewater goby, La Graciosa thistle, and south-central California Coast steelhead. The purpose of critical habitat designations is to ensure enough territory is set aside to safeguard the species' recovery. Gifford Pinchot Task Force v. United States Fish & Wildlife Serv. (9th Cir. 2004) 378 F.3d 1059, 1070. According to Gifford Pinchot, the ESA views "conservation and survival as distinct, though complementary, goals, and the requirement to preserve critical habitat is designed to promote both conservation and survival." Id. Accordingly, under Gifford, the ODD HCP must protect and preserve in perpetuity critical habitat and other currently occupied habitat used by the covered species, and also protect habitat that would be essential for the future recovery of covered species. The ODD HCP must also avoid, or otherwise minimize and mitigate the impacts to and the taking of covered species to the **maximum extent practicable**, as required by 16 U.S.C. § 1539.

To be lawful, the HCP must include (1) a complete description of the activity sought to be authorized; (2) name of the species sought to be covered by the permit, including the number, age and sex of the species, if known; (3) the impact that will likely result from such taking; (4) the specific steps the applicant will take to monitor, minimize, and mitigate those impacts; (5) the funding that will be available to implement such monitoring, minimization, and mitigation activities; (6) the procedures to be used to deal with unforeseen circumstances; and (7) what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized. (16 U.S.C. § 1539(a)(2)(A)(i)-(iv); 50 C.F.R. §§ 17.22, 17.32.) FWS cannot issue an ITP if the HCP does not contain this information. (16 U.S.C. § 1539(a)(2)(A)).

Before issuing an Incidental Take authorization, the FWS must find that (i) the taking will be incidental; (ii) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; (iii) the applicant will ensure that the plan is adequately funded; (iv) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and (v) any other measures FWS requires will be met. (16 U.S.C. §

1539(a)(2)(B); 50 C.F.R. §§ 17.22, 17.32.)

B. The ODD HCP and environmental review must address recovery of all covered species, including the threatened south-central California Coast steelhead.

As stated immediately above, ODD HCP must include specific measures to ensure the recovery of the covered species. As such, the ODD HCP and the relevant environmental review must identify and describe the overall conditions affecting covered species, including the impacts from habitat destruction and fragmentation. The ODD HCO must also include meaningful measures and proposals for both the protection and recovery of the covered species.

The covered Species include but need not be limited to:

- the federally threatened western snowy plover (*Charadrius nivosus nivosus*),
- the federally and State endangered and State fully protected California least tern (*Sternula antillarum browni*),
- the federally endangered tidewater goby (*Eucyclogobius newberryi*),
- the federally threatened California red-legged frog (*Rana draytonii*),
- the federally endangered and State threatened Gambel's watercress (*Nasturtium(Rorippa) gambelii*),
- the federally endangered and State threatened La Graciosa thistle (*Cirsium scariosum* var. *loncholepis*),
- the federally and State endangered marsh sandwort (*Arenaria paludicola*),
- the federally and State endangered Nipomo Mesa lupine (*Lupinus nipomensis*)

The threatened south-central California Coast steelhead is also a covered species as it is affected by covered activities. Indeed, Arroyo Grande Creek, which runs through a portion of the Oceano Dunes SVRA ("ODSVRA") is part of the designated critical habitat for south-central California Coast steelhead. In fact, all vehicles accessing the camping and off-road recreation areas of the ODSVRA must cross the Arroyo Grande Creek. During storm events in the fall and spring, when steelhead or juvenile trout migrate to or from the Pacific Ocean, heavy flows in the Arroyo Grande Creek often makes it difficult, if not impossible, for vehicles in the ODSVRA to cross the creek as it flows across the beach. During these events, vehicles attempting to cross the Creek often become disabled and/or stuck in the Creek's heavy flows and require assistance. The HCP must therefore specifically address the impacts associated with vehicular crossing of the Arroyo Grande Creek.

While this species is not managed by the USFWS, but rather by NMFS/NOAA, it is a listed species whose unlawful take is prohibited. The HCP must, therefore, be revised to ensure the steelhead is a covered species. The HCP must address ways to protect steelhead and its critical habitat from the impacts of covered activities, and fully consider impacts and alternatives to avoid such impacts in the HCP and environmental review.

C. The proposed alternative that would reduce current nesting and breeding snowy plover and least tern habitat must be eliminated from further consideration and, instead, the Service should consider expanding the protected area and making the protection year-round.

CDPR's proposed alternative which would reduce nesting and breeding habitat for the snowy plover and least terns breeding habitat exclosures must be rejected. 83 Fed. Reg. at 1381. This proposal would cause take of both species and be severely damaging to the species' conservation.

It is well-settled that least terns have a high rate of return to sites where they had nested during the preceding year and have a significant tendency toward nesting at their natal colony site. Jonathan, JL, Massey, BW, 1988, Site Fidelity of Least Terns in California, The Condor 90:389-394[i]. Likewise, Western snowy plovers have a high rate of return to sites they had nested during the preceding nesting season. See, Colwell, et al., Final Report: 2014 Snowy Plover Breeding in Coastal Northern California, Recovery Unit 22. As the CDPR is aware, the creation of the seasonal exclosure for the least tern and snowy plover, which came about as a result of a settlement with the Sierra Club, has resulted in a successful breeding program at ODSVRA. Accordingly, any reduction in the size of the seasonal exclosure would significantly harm these species and likely result in unlawful take by interfering with the species nesting and breeding.

The ESA defines the term "take" to mean: "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 U.S.C. § 1532(19). "Harass" has been defined by regulation as "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, **breeding**, feeding or sheltering." *See* 50 C.F.R. § 17.3 (emphasis added). "Harm" has been defined by regulation as "an act which actually kills or injures wildlife. Such 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." *Id.*

Rather than reducing the size of the plover and terns protected nesting area, the Service should consider expanding the area and/or protecting it year-round in order to reduce the potential for impact from vehicles. As the Service is aware, in addition to the plovers that come to ODSVRA only during the breeding season, a distinct population of plovers reside in this area year-round. Each year a number of plovers are killed at the ODSVRA as a result of vehicular activities; many of these incidents occur outside the breeding season. Accordingly, expansion of the protected areas and making these areas protected year-round is vital to reduce the take of plovers at the ODSVRA.

D. The ODD HCP and Environmental Review Must Appropriately Address Least Tern as a Fully Protected Species.

The scoping notice indicates that the least tern will be a covered species under the ODD HCP. The least tern is also a fully protected species under California law, and, therefore, any take of this species is unlawful under the fully protected statute except as part of a Natural Communities Conservation Plan (NCCP). Therefore, in order for State Parks to avoid illegal take, this process should include development of an NCCP, as well as the HCP, in order to assure that conservation is fully addressed for the least tern.

E. The ODD HCP Must Address Water Quality and Water Flow Associated with the Oso Flaco Lake and Creek and the Arroyo Grande Creek and Lagoon.

The ODD HCP area includes Oso Flaco Lake and Creek and the Arroyo Grande Creek and Lagoon and their associated wetlands and riparian areas. These areas are home to rare and endangered plants and wildlife which depend upon the freshwater habitats for their continued survival. Accordingly, the ODD HCP and environmental review must ensure that water quality and flow rates are considered and any impacts that may significantly impact flow rates or water quality have remedies and are applied in the ODD area in order to prevent water quality/quantity degradation. In addition, the ODD HCP must also address San Luis Obispo County's ongoing flood control activities in and along Arroyo Grande Creek and Lagoon. In fact, the County has a practice of artificially breaching the sand bar at the Arroyo Grande Lagoon every time high water levels in the Lagoon threaten to flood the nearby residents. While the County has a practice of describing these artificial breaches as "emergency" actions, in fact, the seasonal need for such action is entirely predictable. Because the Lagoon and the sandbar are both located on ODSVRA and the County's flood control actions are conducted with the consent of the CDPR, these activities must be addressed by ODD HCP as the County's flood-control activities are capable of causing take of the federally-covered tidewater goby.

F. The ODD HCP Should Analyze CDPR's Currently Proposed and Foreseeable Dust Mitigation Activities.

The off-highway activities at the ODSVRA is responsible for significant particulate matter (PM 10 and 2.5) pollution downwind of the park on the Nipomo Mesa. The CDPR is currently engaged in some limited mitigation activities that include revegetation of certain parcels, as well as other dust mitigation, including placement of straw bales and wind fencing. Some off-roading special interest groups have suggested that some of these activities may cause take of some of the covered species. The ODD HCP should therefore cover these activities.

G. Conclusion

We thank you for the opportunity to submit scoping comments on the ODD HCP and the environmental review. We look forward to reviewing the ODD HCP and environmental review document once it is available for public review.

Sincerely,

Babak Naficy
Babak Naficy

References

1. https://sora.unm.edu/sites/default/files/journals/condor/v090n02/p0389-p0394.pdf
2. https://www.fws.gov/arcata/es/birds/WSP/documents/siteReports/California/RU2_Final_Report_2014.pdf

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ONE MARKET, SPEAR TOWER, SUITE 3600
SAN FRANCISCO, CALIFORNIA 94105
(415) 293-7684
Rothlaw1@comcast.net

By Email

March 12, 2018

Lena Chang
US Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, CA 93003

Re: Friends of Oceano Dunes' Comments
on Oceano Dunes HCP

Dear Ms. Chang:

These comments are filed on behalf of Friends of Oceano Dunes, Inc. ("Friends"), which is a California not-for-profit corporation, representing approximately 28,000 members and users of the Oceano Dunes State Vehicular Recreation Area ("SVRA") located near Pismo Beach, California. Friends is a public watchdog organization created in 2001 expressly to preserve and expand recreational uses at Oceano Dunes SVRA.

Friends contends that the scope of the Oceano Dunes HCP here requires a full Environmental Impact Statement (EIS) analysis in order to comply with the National Environmental Policy Act. This is a complex and controversial HCP, and the resource agencies have been working on it for at least 10 years. The resource agencies have largely shielded their discussions from the public to date, and it is now time to fully reveal the issues underlying this HCP to the public by preparing a full EIS.

FWS is required to prepare an EIS for "major Federal actions significantly affecting the quality of the human environment." The HCP and any incidental take permit here would be a major federal action requiring an EIS.

Within the last year or so, FWS has undertaken an EIS, rather than an EA, for less controversial projects of similar scope and size to the Oceano Dunes HCP (or smaller). For instance, FWS announced the availability of a draft environmental impact statement and draft environmental impact report (EIS/EIR) for the proposed South Sacramento Habitat Conservation Plan (SSHCP). FWS also recently has elected to prepare an EIS for the Yolo Habitat

Conservation Plan and Natural Community Conservation Plan, the Orange County Transportation Authority (OCTA) M2 Natural Community Conservation Plan/Habitat Conservation Plan, and the Bakersfield HCP. Similarly, a full EIS must be prepared for the Oceano Dunes HCP. There is no meaningful basis to distinguish the Oceano Dunes HCP from the above HCPs in terms of the significance of the impacts that should be studied.

Friends also alerts FWS that the Oceano Dunes HCP must comply with the lawsuit settlement dated April 2003. That settlement required State Parks to return the plover exclosure boundary from Post 6 to Post 7.

Friends is particularly concerned about impacts of dust control measures at Oceano Dunes SVRA. In an EIR under CEQA, the California Department of Parks and Recreation recently determined that the public works project would have significant environmental impacts on the western snowy plover. The California Coastal Commission ignored and dismissed these findings, and authorized the placement of dust control measures within and adjacent to critical habitat for the western snowy plover, which will result in the take of the plover in violation of section 9 of the ESA, and in adverse modification of critical habitat. To remedy this error, FWS has an obligation to fully study this issue under NEPA.

Thank you.

Sincerely,

/s/

Tom Roth

Cc: Jim Suty, President, Friends of Oceano Dunes

Dear Sir,

People in Blacklake, Drilogy + all The way to Main St. Santa Maria are against The contaminated air we have to breathe because a few idiots + Their children have to drive vehicular dune buggies on our NIPOMO Beaches, + cause our air to be polluted. It has been proven to exist in the town of Santa Maria -. It could result in a law suit.

Get RID OF THE DUNE BUGGIES 30 yrs of pollution is enough!

Irene Skadden
1250 Black Sage Circle
NIPOMO. CA 93444

Ph. 343-5561

for Blacklake
Greg Lomse

March 8, 2018

Lena Chang
Senior Biologist
Ventura Fish and Wildlife Office
U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, California 93003

Re: Oceano Dunes HCP and NEPA Environmental Analysis

Dear Lena Chang,

The following comments are in response to the U.S. Fish and Wildlife Service's (USFWS) request for public input to identify potential issues for environmental analysis in the proposed Habitat Conservation Plan (HCP) for Oceano Dunes State Vehicular Recreation Area (ODSVRA) in San Luis Obispo County. A draft HCP and an accompanying draft National Environmental Policy Act (NEPA) document will be first available for public review when released together at a future time. Comments are limited to the federally listed Pacific coast population of the western snowy plover (plover, plovers) and several make note of take, in the form of direct mortality, due to vehicle strikes. Such mortality is expected to periodically occur at a busy Off-Highway Vehicle (OHV) park, and is an additional take threat either absent or present at a much lower level at other sites in the U.S. range of the plover. As described in the population viability analysis included in the USFWS Recovery Plan[1] for the plover small increases in adult mortality can have substantial impacts on a population over time.

Correction factor for detection of juvenile and adult plover mortality caused by vehicle strikes

Within the vehicle use area the actual number of plover carcasses found that are likely a result of vehicle strikes will certainly underestimate the total number. The vehicle use area of the park is very large and such carcasses can go unnoticed. In addition, carcasses can be quickly scavenged by gulls and other animals, crushed into the sand by passing vehicles, or

[1] U.S. Fish and Wildlife Service. 2007. Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (Charadrius alexandrinus nivosus). In 2 volumes. Sacramento, California. xiv + 751 pages.

covered by wind-blown sand. To more reasonably reflect actual take impacts there should be a correction factor applied to the number of carcasses actually found and where mortality by vehicle strike is suspected.

Take assessment of plover eggs, chicks, and juveniles and conversion to adult equivalents

Losses to take of plover eggs, chicks, and juveniles should also be expressed as adult equivalents to better identify cumulative impacts for the overall production and number of adults that are available for the subsequent breeding season (available adults are the most critical life stage to reach and sustain recovery). Because the plover is well studied at multiple sites within the U.S. range information on average survival rates of the different life stages is available for this analysis. This is the approach taken in the Oregon coast plover HCP[2] to better assess take impacts.

Threat analysis for juvenile and adult plovers during vehicle activity at night

There can be a wide range of vehicle activity at night at the park, including number of vehicles, speed, abrupt changes in direction of travel, and intensity of headlights and overhead light bars. It is likely this threat remains poorly understood and a review of the best information and professional judgement available would be beneficial. Any gaps of information on this issue pertinent for the park can be identified. I am aware of one study[3] conducted at the park in late 2004 and early 2005 involving shorebird (including the plover) response to vehicles at night. I have not seen a final and released report but it will be important to take into consideration limitations identified in the report in drawing any conclusions about this issue.

Information collected during a five-year study at ODSVRA on seasonal exclosure wrack zone and wrack-dependent invertebrates

The ODSVRA 2017 season report[4] on the plover and California least tern breeding season notes in its Recommendations section that a five-year (2007-11) study on select ecological components of the seasonal exclosure shoreline was conducted by researchers from the Marine Science Institute at the University of California Santa Barbara. The study looked at the substantial negative impacts to the wrack zone and presence of wrack-dependent

[2] ICF International. 2010. Habitat Conservation Plan for the Western Snowy Plover. August. (ICF 06537.06.) Portland, OR. Prepared for Oregon Parks and Recreation Department.
[3] Study conducted by Mad River Biologists, located at time of study in Arcata, California.
[4] Nesting of the California Least Tern and Western Snowy Plover at Oceano Dunes State Vehicular Recreation Area, San Luis Obispo County, California, 2017 Season. December 2017. Report prepared by California Department of Parks and Recreation, Off-Highway Motor Vehicle Division, Oceano Dunes District.

invertebrates (an important food resource for both adult plovers and broods) that occurred in this habitat during the time the shore is open to public use, including vehicles. The study also looked at ways to improve these resources during the breeding season. My understanding is a report detailing the findings has not yet been provided to the park. It would be valuable for both the HCP and environmental analysis to have access to the findings of this site-specific study. Information on the availability of food resources for broods and any competition for what may be a limiting resource would be valuable, especially in view of any considered reductions in the size of the seasonal exclosure shoreline that would further increase brood density and competition for invertebrate prey.

Climate Change and Sea Level Rise

ODSVRA has been designated as critical habit[5] by the USFWS, in part due to consideration for climate change and sea level rise. ODSVRA currently contains space that can accommodate inland retreat and continue to provide habitat for plovers. As the HCP may be for 25 years, ongoing management at the park should maintain space for this response to provide resiliency for plover and tern habitat. Analysis could provide information on current models for rates of sea level rise.

Thank you for the opportunity to provide comments and I look forward to reviewing the draft HCP and draft NEPA environmental analysis documents when they become available.

Sincerely,

Doug George

Doug George
Coastal Program Biologist

cc: Ellie Cohen, President and CEO
Point Blue Conservation Science

[5] Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Pacific Coast Population of the Western Snowy Plover; Final Rule. Department of the Interior, U.S. Fish and Wildlife Service. June 19, 2012.

California State Parks/U.S. Fish and Wildlife Service

Oceano Dunes Habitat Conservation Plan
February 7th, 2018 Scoping Meeting

Comment Card

Zette Harbour
NAME

785 Quintana Rd #126
ADDRESS
Morro Bay, CA 93442

ORGANIZATION /AFFILIATION

zetteharbour@gmail.com
E-MAIL ADDRESS

Comment: I appreciate that State Parks is finally moving forward with this Habitat Conservation Plan. The HCP must provide for robust conservation that ensures recovery, not just survival of all imperiled species.
The HCP should not reduce protections for nesting birds. A proposal that includes reducing protective exclosures for nesting birds to make room for recreation is unacceptable.
Increased recreation will harm nesting and breeding birds and has no place in a conservation plan.
In its environmental review, State Parks needs to address air quality impacts from increased off-road vehicle use and include a State Natural Communities Conservation Plan for fully protected species.

(Continue on back if necessary)

Thank You

From: **rachelle toti** <rachelletoti@gmail.com>
Date: Mon, Mar 12, 2018 at 12:19 PM
Subject: Comments for Draft Habitat Conservation Plan - Oceano Dunes
To: "Chang, Lena" <lena_chang@fws.gov>

I am submitting the following comments for your consideration.

I feel the following provisions should be included in the draft Habitat Conservation Plan.

1. Eliminate truck jumping events and large events of all kinds.
2. Provide a bridge over the Arroyo Grande creek when it is connected to the ocean to protect the tidewater goby, steelhead trout and other aquatic animals.
3. Eliminate night riding as this further disturbs wildlife and birds trying to rest or which hunt at night.
4. Decrease the intensity of use at the park as it is over crowded much of the time.
5. Enforce the protection of all wildlife, especially the shore birds which are driven through and frightened by vehicles.
6. Keep the Western Snowy Plover /Calif. Least Tern exclosure up year around to protect the birds which winter in this area. Currently, the fencing comes down from Oct thru Feb. This would also protect the vegetation which is run over by vehicles as soon as the fencing comes down.
7. Give citations to persons intentionally running over vegetation.

Thank you for the opportunity to provide input.

Rachelle Toti

San Luis Obispo County resident

From: June Gill [mailto:junegill21@msn.com]
Sent: Tuesday, February 6, 2018 12:15 AM
To: Glick, Ronnie@Parks <Ronnie.Glick@parks.ca.gov>
Subject: Oceano Dunes HCP

Mr. Ronnie Glick, Senior Environmental Scientist,
California Department of Parks and Recreation,
Oceano Dunes District,
340 James Way, Ste. 270,
Pismo Beach, CA 93449
Ronnie.Glick@parks.ca.gov

Attn: Oceano Dunes HCP.
Field Supervisor
Ventura Fish and Wildlife Office,
U.S. Fish and Wildlife Service
2493 Portola Road, Suite B,
Ventura, CA 93003
lena_chang@fws.gov

Dear Sir,
While I appreciate that State Parks is finally moving forward with this Habitat Conservation Plan for Oceano Dunes State recreational vehicle area, I think The HCP must guarantee real conservation that ensures recovery , not just survival, of all imperiled species. Therefore it should not reduce protections for nesting birds. A proposal that includes reducing protective exclosures for nesting birds to make room for recreation is not a move we should make since more dunebuggies will only harm nesting and breeding birds and does not belong in a conservation plan that aims to protect endangered species like the Snowy Plover.

Sincerely,

Dr. June Gill
Santa Barbara

Sent from my Verizon, Samsung Galaxy smartphone

Scoping Comments Page 1

First Middle	Last	City	State	First Middle	Last	City	State
Andrew	Abate	Ventura	CA	Judith S	Anderson	Long Beach	CA
Amir	Abdi	Los Angeles	CA	Melody	Anderson	San Diego	CA
June	Abner	San Diego	CA	Beth	Anderson	Arroyo Grande	CA
Jesse	Abrams	Irvine	CA	Sandra	Anderson	Valley Village	CA
Alberto	Acosta	Burbank	CA	Susan	Anderson	Escondido	CA
Mike	Acosta	Riverside	CA	Joan	Andersson	Topanga	CA
Margaret	Adachi	Glendale	CA	Michelle	Angelini	Los Angeles	CA
Margaret	Adams	North Hollywood	CA	Ruth Ann	Angus	Morro Bay	CA
Spencer	Adams	Los Angeles	CA	Gina	Anson	Orange	CA
Willy	Aenlle	Altadena	CA	Martha	Ansorge	Azusa	CA
Alan Frank	Aeschliman	Long Beach	CA	Marcella	Anthony	Valencia	CA
Paul	Agosti	Rancho Cucamonga	CA	mary	anthony	Fontana	CA
Dina	Aguilar	Long Beach	CA	Judith	Antin	Sherman Oaks	CA
Rhiannon	Aguilar	Los Angeles	CA	Susaan	Aram	Dana Point	CA
Colleen	Aguirre	Castaic	CA	Christopher	Argyros	Sacramento	CA
Amy	Agzarian	Culver City	CA	Elvira	Arias	Harbor City	CA
Natalie	Aharonian	North Hollywood	CA	Behnoosh	Armani	Brea	CA
Achilles	Aiken	Whittier	CA	Elisabeth	Armendarez	Santa Ana	CA
Leslie	Aisenman	Sylmar	CA	Carlos	Arnold	Santa Maria	CA
Kim	Akeman	Pacific Grove	CA	Fernando	Arrangoiz	Beverly Hills	CA
Kathi	Aker	Tujunga	CA	Susan	Ashlock	Santa Barbara	CA
Jackee Van	Akin	Covina	CA	Kristine	Ashton	Van Nuys	CA
Tamadhur	Al-Aqeel	Los Angeles	CA	Florence	Assalit	Monterey	CA
Paul	Albright	Ojai	CA	Alexandra	Athens	Oceanside	CA
Cheryl	Alden	Solana Beach	CA	Kathryn	Atkins	San Luis Obispo	CA
Charles	Alexander	Rialto	CA	Melissa	Atkinson	Los Angeles	CA
Natalie	Alexander	Lake Forest	CA	Tupefaavae	Auelua	Victorville	CA
Judy	Alexandre	Ventura	CA	Ella	Auger	Venice	CA
Alice	Alford	Blythe	CA	Sylvie	Auger		G8Y6S9
Dennis	Allen	Santa Barbara	CA	jane	august	Topanga	CA
Lisa	Allen	Ojai	CA	Helen	Auzins		90513
susan	Allen	Lake Forest	CA	Marilyn	Avila	Whittier	CA
Tracee	Allen	Mission Viejo	CA	Rachel	Axelrod	Burbank	CA
Colby	Allerton	Venice	CA	Zoe	Azuremare	Pasadena	CA
Charles	Almack	Coronado	CA	Charles	B.	Tarzana	CA
Rawan	Almomani	Monterey Park	CA	Veronica	B.	Placerville	CA
Marge	Almond	Riverside	CA	Janet	Baas	Tarzana	CA
Gregory	Alper	Pacific Palisades	CA	Christina	Babst	West Hollywood	CA
Salma	Alquza	Bell Gardens	CA	Martin	Baclija	Riverside	CA
Steve-Rachael	Alvarezjett	Torrance	CA	Shawnee	Badger	Valencia	CA
Gloriamarie	Amalfitano	San Diego	CA	Marion Taylor	Baer	Los Angeles	CA
Gabriel	Amaro	Lake Forest	CA	Rosa	Baeza	Reseda	CA
Les	Amer	North Hollywood	CA	Carol	Baier	San Diego	CA
Krista	Amigone	Los Angeles	CA	Mary	Baker	North Hollywood	CA
Eric	Amundsen	Encinitas	CA	Barbara	Baldock	Monterey	CA
Rose	An	Arcadia	CA	Dale	Ball	La Canada Flintridge	CA
Celeste	Anacker	Santa Barbara	CA	George	Ball	Inglewood	CA
Janis	Andersen	San Diego	CA	Gloria	Bando	Santa Monica	CA
Elaine	Anderson	Chino Hills	CA	Marcia	Banks	Coronado	CA
Anabelle	Anderson	La Verne	CA	Denise	Barger	Bishop	CA
Connie	Anderson	Camarillo	CA	Rebecca	Barker	Glendora	CA
Frank B.	Anderson	San Pedro	CA	Gary	Barnett	Phelan	CA

First Middle	Last	City	State	First Middle	Last	City	State
Roberleigh	Barnhart	Grover Beach	CA	Janek	Bielski	Sunland	CA
D. R.	Baron	Sherman Oaks	CA	Elaine	Bierman	San Diego	CA
John	Barone	Santa Monica	CA	Shelley	Billik	Encino	CA
Laurie	Barre	Altadena	CA	Greg	Bishop	Los Alamitos	CA
Elaine	Barrett	San Diego	CA	Inge	Bjorkman	Placerville	CA
Debra	Barringer	Santa Barbara	CA	C	Black	Costa Mesa	CA
Janice	Bartlett	San Diego	CA	Glenn	Black	Ontario	CA
Kiku	Bartschi	Santa Barbara	CA	Hillary	Black	Los Angeles	CA
N. J.	Bast	Morro Bay	CA	Josephine	Black	Carpinteria	CA
Rosanne	Basu	Hermosa Beach	CA	Jeri	Black	Irvine	CA
Elizabeth	Bauman	Los Angeles	CA	Gina	Blades	Santa Clarita	CA
Judith	Bayer	San Diego	CA	Richard	Blain	Temecula	CA
Jackie	Bear	Los Angeles	CA	Elissa	Blair	Eureka	CA
Janet	Beatty	San Luis Obispo	CA	Gary	Blair	Costa Mesa	CA
Laura	Bebault	Huntington Beach	CA	Sheila	Blake	Pismo Beach	CA
Corinna	Bechko	Los Angeles	CA	Russell	Blandino	Burbank	CA
David	Beck	San Juan Capistrano	CA	Elisabeth	Blaney	San Gabriel	CA
Connie	Beck	El Cajon	CA	Carol	Blaney	Redlands	CA
Carol	Becker	Sherman Oaks	CA	Sabrina	Blash	San Juan Capistrano	CA
Shari	Becker	West Hills	CA	Patricia	Bleha	Carlsbad	CA
Mary	Becker	Encino	CA	Ralph	Bocchetti	Fontana	CA
Gary	Beckerman	Santa Ynez	CA	MaRia	Bodmann	Granada Hills	CA
Brice	Beckham	Los Angeles	CA	Susan	Bohannan	Santa Ana	CA
Dan	Beeman	San Diego	CA	Julie Du	Bois	Canoga Park	CA
Victoria	Behar	Thousand Oaks	CA	Richard	Bold	Vista	CA
Ann	Bein	Los Angeles	CA	Randall	Boltz	San Diego	CA
Michmicharlael	Bellinger	Canoga Park	CA	Steve	Bond	Los Angeles	CA
Mercedes	Benet	Carlsbad	CA	Mary	Bonhote	Santa Ana	CA
Nancy	Beningo	Los Angeles	CA	Joseph	Boone	San Luis Obispo	CA
Elaine	Benjamin	Alpine	CA	Carolyn	Boor	Rancho Cucamonga	CA
maureen	benjelloun		ts69aj	Michael	Bordenave	Fresno	CA
Travis	Benneian	Lake Elsinore	CA	Sylvia	Boris	Culver City	CA
John	Bennett	Chino	CA	Robert	Bortolin	El Segundo	CA
Allison	Benoit	Gonzales	CA	Deborah	Bortot	Fontana	CA
Richard	Benson	Lawndale	CA	Lynn	Bossone	Culver City	CA
Zinka	Benton	Santa Barbara	CA	Marty	Bostic	Los Angeles	CA
Myra	Berario	Castaic	CA	Vic	Bostock	Altadena	CA
Marie-Ange	Berchem	Garden Grove	CA	Joy	Bosworth		FY1
Elaine	Berg	Simi Valley	CA	Lesley	Bosworth		FY1
Melissa	Bergemann	Venice	CA	Eleni	Bountalis	Los Angeles	CA
Brad	Berger	Pioneertown	CA	Sandi	Bowen	Menifee	CA
Karen	Berger	Montrose	CA	Olga	Bowles	Fresno	CA
Colleen	Bergh	Santa Ana	CA	Ann	Bowman	Santa Monica	CA
Debi	Bergsma	Fontana	CA	Jennifer	Bradley	Santa Monica	CA
Rachel	Berks	Los Angeles	CA	Jacqui	Bradshaw	Tehachapi	CA
Jennifer	Berman	Los Angeles	CA	Tim	Brady	Aliso Viejo	CA
Daniel	Berns	Desert Hot Springs	CA	Tim	Brady	Aliso Viejo	CA
Lorik	Bernstein	Huntington Beach	CA	Dennis	Brand	Santa Barbara	CA
David	Berry	Los Angeles	CA	Victoria	Brandon	Northridge	CA
Hans	Bertsch	Imperial Beach	CA	Julia	Brandreth	Los Angeles	CA
Elizabeth	Bettenhausen	Cambria	CA	Kelly	Brannigan	Oceanside	CA
Terry	Bezner	Torrance	CA	Teresa	Bransfield	Arroyo Grande	CA

First Middle	Last	City	State	First Middle	Last	City	State
Tom	Brasseur	Palm Springs	CA	Connie	Call	Los Angeles	CA
Joseph	Braus	Burbank	CA	Rich	Camp	San Bernardino	CA
Gayle	Brennan	Woodland Hills	CA	Joyce	Campbell	Torrance	CA
Carol	Brenner	Moorpark	CA	Gilbert	Canary	Upland	CA
Jeff	Brent	Fontana	CA	Elaina	Caner	Mission Viejo	CA
Rachel	Bretado	San Diego	CA	Shari	Canete	San Diego	CA
Marianna	Breton	Diamond Bar	CA	Rl	Cannon	Thousand Oaks	CA
Mastaneh	Brett	Carmel	CA	Ina	Cantrell	La Mesa	CA
Ann	Breuer	Centralia	IL	Diane	Cantwell	Tujunga	CA
Tamara	Briggs	Rancho Cucamonga	CA	Raymond	Capezzuto	Encinitas	CA
Lisabette	Brinkman	Santa Barbara	CA	Junko	Card	Exeter	CA
Joanne	Britton	San Diego	CA	David	Carlson	West Hollywood	CA
David	Broadwater	Atascadero	CA	David	Carlson	Carlsbad	CA
Blaise	Brockman	Arcadia	CA	Judith	Carlson	Newport Beach	CA
Allison	Brooker	Los Angeles	CA	Patricia	Carlson	Los Angeles	CA
Elena	Brookes	Ventura	CA	Ravin	Carlson	San Clemente	CA
Mary	Brooks	Frazier Park	CA	Gina	Carollo	San Diego	CA
Linda	Brophy	Santa Barbara	CA	Anjanette	Caron	Alhambra	CA
Ron	Broschart	Ventura	CA	Cathy	Carpenter	Adelanto	CA
Carol	Broughton	Hemet	CA	Rhonda	Carr		40740
James R	Brown	Los Angeles	CA	Seth	Carr	Long Beach	CA
Shelley	Brown	Los Angeles	CA	Ken	Carrell	Lake Forest	CA
Damon	Brown	Los Angeles	CA	Nancy	Carter	Westlake Village	CA
Dace	Brown	San Diego	CA	Jennifer	Cartwright	Mission Viejo	CA
Emma	Brown	Santa Monica	CA	Veronica	Casale	San Diego	CA
Roderick	Brown	San Diego	CA	Mary Casares	Casares	Long Beach	CA
Rosalie	Brown	Fresno	CA	Stewart	Casey	Garden Grove	CA
Lisi	Brown	Burbank	CA	Lisa	Cash	Sherman Oaks	CA
Justine	Bruhanski	Lancaster	CA	Tiffany	Casler	Laguna Beach	CA
Stephen	Bryne	Ventura	CA	Virginia	Castellanos	Coronado	CA
George	Budd	Los Angeles	CA	Suzie	Castle	Morro Bay	CA
Heidi	Buech	Los Angeles	CA	Kari	Castro	Santa Ana	CA
tammy	bullock	El Cajon	CA	Joseph	Catania	Fresno	CA
Kat	Burgess	Santa Monica	CA	Michael	Cavanaugh	Redondo Beach	CA
Holly	Burgin	Van Nuys	CA	Kim	Central	La Crescenta	CA
Bonnie	Burke	San Diego	CA	Rosie	Cerda	La Mesa	CA
Bentley	Burn	Santa Monica	CA	Veronica	Cerpa	South El Monte	CA
Shawn	Burn	San Luis Obispo	CA	Kay	Cessna	Los Angeles	CA
Lou	Burrola	Hawaiian Gardens	CA	Patricia	Chamberlain	San Diego	CA
Jasmeen	Burton	Reseda	CA	B.	Chan	San Diego	CA
JESSICA	BURTON	Riverside	CA	Gabriel	Chang	Bellflower	CA
Ricki	Bush	Van Nuys	CA	Cherie	Chantal	Moorpark	CA
Connie	Butler	San Clemente	CA	Marcy	Chapin	San Luis Obispo	CA
Sam	Butler	Los Angeles	CA	John	Charbonneau	Spring Valley	CA
Kimberly	Buzdygon	Claremont	CA	Carol	Chargualaf	La Mirada	CA
Barbara	Byer	Pasadena	CA	Michelle	Charime	Tarzana	CA
Sharon	Byers	Downey	CA	Connie	Charles	El Cajon	CA
F	C	Venice	CA	Lindsay	Charlton	Goleta	CA
Carlos	Cabezud	San Ysidro	CA	Danielle	Charney	Santa Monica	CA
L	Cadman	San Diego	CA	Phyllis	Chavez	Santa Monica	CA
Maxine	Cain	Altadena	CA	Aimee L.	Cheek	San Diego	CA
Ursula	Calef	Laguna Beach	CA	Mark	Chenevey	Long Beach	CA

First Middle	Last	City	State
Carole	Chen-Garson	Santa Clarita	CA
Ruth	Cherico	Santa Monica	CA
Tom	Chester	Fallbrook	CA
Animae	Chi	Beverly Hills	CA
Antonia	Chianis	Blue Jay	CA
Benny	Chien	La Jolla	CA
Robert	Chirpin	Northridge	CA
Emilia	Chiuzzi	Los Angeles	CA
Mlou	Christ	Santa Ana	CA
Gail	Christensen	Burbank	CA
Karen	Christensen	Laguna Niguel	CA
Sandra	Christopher	Burbank	CA
Barbara	Chudilowsky	Pacific Grove	CA
Eva	Cicoria	Rancho Palos Verdes	CA
John	Clapper	Rancho Cucamonga	CA
Frances	Clark	Needles	CA
Rebecca	Clark	West Hills	CA
Lucy	Clark	Bakersfield	CA
Matthew	Clark	Tarzana	CA
Jeffrey	Clark	Rancho Santa Margarita	CA
W.	Clark	Lynchburg	VA
Audrey	Clark	Carlsbad	CA
Cher	Clarke	Beverly Hills	CA
Brady	Clay	Escondido	CA
Curt	Clay	San Diego	CA
Robert	Clay	San Diego	CA
Michael	Clayton	Los Angeles	CA
Regina	Clemente	Los Angeles	CA
Jim	Clough	Glendale	CA
H.	Coetzee	La Canada Flintridge	CA
Jonathan	Coffin	Inglewood	CA
Bea	Cohen	Desert Hot Springs	CA
Joanne	Cohen	San Diego	CA
Myrna	Cohen	Laguna Beach	CA
Roslyn	Cohn	Van Nuys	CA
Bradley	Colden	Whittier	CA
Flynn	Coleman	Los Angeles	CA
James	Collier	Burbank	CA
Geoffrey	Collins	Garden Grove	CA
Deborah	Collodel	Malibu	CA
Stephanie	Colshan	Santa Ana	CA
Joan	Combes	Huntington Beach	CA
Barbara	Combs	San Diego	CA
Martin	Comerford	Thousand Oaks	CA
Carmen	Compagno	Seaside	CA
JANINE	COMRACK	Ojai	CA
Julia	Conklin	Pasadena	CA
Suzanne J	Conlon	San Diego	CA
Jean O	Connell	Santa Barbara	CA
Thomas	Conroy	Manhattan Beach	CA
Susan	Considine	Los Angeles	CA
Steven	Cook	Big Bear Lake	CA
Gordon	Cook	Bakersfield	CA
Anita	Coolidge	Cardiff By The Sea	CA
Sandra	Cope	Irvine	CA
Roberta	Cordero	Santa Barbara	CA
Jeff	Cordes	Squaw Valley	CA
Stacy	Cornelius	Laguna Beach	CA
Hana	Correa	La Quinta	CA
Jennifer	Corrigan	Newbury Park	CA
Sean	Corrigan	Bellflower	CA
Ronit	Corry	Santa Barbara	CA
M. C.	Corvalan	Redondo Beach	CA
Diana	Cosand	Rancho Cucamonga	CA
Renee	Cossutta	Sierra Madre	CA
Suzanne	Costello	Santa Barbara	CA
Donna	Cottrell	Long Beach	CA
Marc	Couacaud	San Luis Obispo	CA
Penny	Coulthard	Bakersfield	CA
David	Councilman	Minneapolis	MN
Cathy	Cousins	North Hollywood	CA
Richard	Cox	Venice	CA
Stacie	Cox	Santa Monica	CA
Nora	Coyle	Anaheim	CA
Laura	Craun	Bakersfield	CA
Katherine	Crawford	Los Osos	CA
Holly	Crawford	Orange	CA
Phillip	Cripps	Cathedral City	CA
Kurt	Cruger	Long Beach	CA
Tina da	Cruz		HP14
Bernadette	Cuellar		11200
Susan	Cullen	Anaheim	CA
Lauren	Cummins	Placentia	CA
Sherrell	Cuneo	Los Angeles	CA
Alan	Cunningham	Carmel Valley	CA
Bob	Cunningham	Santa Barbara	CA
Grace	Cunningham	Camarillo	CA
Debra	Cunningham	Carlsbad	CA
Heather	Curle	Lake Elsinore	CA
Clyde	Curtis	Los Angeles	CA
Robert	Curtis	Ventura	CA
Michael	Curtis	San Diego	CA
Joe	Cuviello	Solana Beach	CA
Romona	Czichos	Hollister	CA
Donna	Daane	San Diego	CA
Joseph	Dadgari	Los Angeles	CA
Casey	Dake	Thousand Oaks	CA
Laurie	Dalke	Laguna Beach	CA
Amanda	Dalonzo	South Gate	CA
Rhea	Damon	Calabasas	CA
William	Dane	Rancho Cucamonga	CA
Erin	Daniels	Carson	CA

First Middle	Last	City	State	First Middle	Last	City	State
Eileen	Daniels	Canyon Country	CA	Barbara	Dincau	Ventura	CA
Avron	Daniller	Tarzana	CA	Kandace	Dingle	Taft	CA
Mac	Danzig	Los Angeles	CA	Mary	Dixon	Watsonville	CA
Jessica	Dardarian	Winnetka	CA	Joanne	Doherty	Simi Valley	CA
Michael	Darling	Frazier Park	CA	Ronna	Dolin	Studio City	CA
Lisa	Darner	San Diego	CA	Cody	Dolnick	Joshua Tree	CA
Aimee	Darrow	Venice	CA	Bonnie	Dombrowski	Pasadena	CA
Eka	Darville	Los Angeles	CA	Sharon	Domenigoni	Hemet	CA
Jeanne	Davenport	Long Beach	CA	Jennifer	Donaldson	Glendale	CA
Rita	Davenport	Lake Elsinore	CA	Audrey	Doocy	Pacific Grove	CA
Bob	Davey	Laguna Beach	CA	Michelle	Dorado	Brea	CA
Elizabeth	Davidson	Calimesa	CA	Dawna	Dorcas-Werner	Fontana	CA
Judith	Davies	Santa Monica	CA	Rob	Doucette	Playa Del Rey	CA
Carol	Davis	Los Angeles	CA	Paulette	Doulatshahi	Los Angeles	CA
Adrianne	Davis	Los Angeles	CA	Deanna	Doull	Riverside	CA
Madeline	Davis	Claremont	CA	Rick	Dow	Camarillo	CA
Patti	Davis	Santa Monica	CA	Steve	Downing	Santa Barbara	CA
Timothy	Davis	Garden Grove	CA	Wena	Dows	Culver City	CA
Jonathan	Day	Laguna Beach	CA	Mia	Dravis	Rancho Cucamonga	CA
Andres	Daza	San Pedro	CA	Tim	Dressel	San Diego	CA
Stephanie	De Los Rios	Del Mar	CA	Nancy	Dubuc	Pasadena	CA
Rayline	Dean	Ridgecrest	CA	Robert	Duckson	Hemet	CA
Lynnedeaton	Deaton	Upland	CA	Anne	Dugaw	Costa Mesa	CA
Therese	DeBing	Pacific Grove	CA	Steve	Duggan	Littlerock	CA
Katherine	Dekker	Castroville	CA	Alexander	Dunaev	Sherman Oaks	CA
Cheryl	Delvecchio	Paso Robles	CA	Terre	Dunivant	San Luis Obispo	CA
Towa	Demorst	Perris	CA	Terre	Dunivant	San Luis Obispo	CA
Angela	Dench	Glendale	CA	Julianne	Dunkley	Cambria	CA
Andrew	Deniger	Castroville	CA	Kelly	Dunn	Aliso Viejo	CA
Jack and Margarita	Denman	Fullerton	CA	Dayna	Dunne	Los Angeles	CA
Brett	Dennison	Garden Grove	CA	Nic	Duon	Santa Ana	CA
Carolyn	Dennison	Garden Grove	CA	Sarah	Dupree	Carlsbad	CA
Sean	Denny	Santa Barbara	CA	Donna	Duran	Northridge	CA
Sherry	Denton-Noonan	San Pedro	CA	Eve	Duran	Lemon Grove	CA
Wendy	Derbort	Redlands	CA	kira	durbin	Van Nuys	CA
Lauren	Derby	Santa Monica	CA	John	Dutton	Santa Barbara	CA
Richard	Desantis	Palm Desert	CA	Laura	Dutton	Los Angeles	CA
Antonio	Dettori	San Diego	CA	Jackie	Duval	Laguna Hills	CA
Vivian	Deutsch	Calabasas	CA	Douglas	Dyakon	West Hollywood	CA
Karla	Devine	Manhattan Beach	CA	Tonya	Dysart	San Diego	CA
Scott	Devries	San Pedro	CA	Bonnie	Earls-Solari	Port Hueneme	CA
Dolores	DeVries	Vista	CA	Jerry	Eckel	Granada Hills	CA
Charles	Deweese	Monterey	CA	Janet	Eckholm	Los Angeles	CA
Mary Ann	Di Flaviano	Clovis	CA	Elaine	Edell	Thousand Oaks	CA
Leigh Ann	DiCarlo	Winchester	CA	Elizabeth	Edinger	North Hollywood	CA
Lori	Dick	Claremont	CA	Teresa	Edmonds	Carmel Valley	CA
Claudia	Dikinis	Santa Monica	CA	Lorrie	Edmonson	South Pasadena	CA
Tamara	Dilley	Lake Elsinore	CA	Jane	Edwards	La Palma	CA
Patrick	Dillon	Van Nuys	CA	Carole	Ehrhardt	Pebble Beach	CA
Sheila	Dillon	Willmar	MN	Frank	Eichenberg	South Lake Tahoe	CA
Richard	DiMatteo	San Diego	CA	J	Eiser	Long Beach	CA
				Gregg	Eisman	Valley Center	CA

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Anaunda	Elijah	San Luis Obispo	CA	Kim	Ferlazzo	Northridge	CA
Michael	Elkins	Oceanside	CA	Aixa	Fielder	Los Angeles	CA
Virginia	Ellenson	Huntington Beach	CA	Demarcus	Fierro	Los Angeles	CA
Norm	Ellis	Laguna Hills	CA	Daphne	Figueroa	San Diego	CA
Bonnie	Elsten	Long Beach	CA	Donald	Fischer	Running Springs	CA
Maria	Emmetti	Manhattan Beach	CA	Juels	Fisher	Chino Hills	CA
Scott	Emsley	Carmel	CA	Melanie	Fisher	Calabasas	CA
Jane	Engelman	San Diego	CA	Stephen	Fitch Ph.D.	Thousand Oaks	CA
Richard	Engle	Winnetka	CA	Lissette	Fitter	San Pedro	CA
William	Engs	Highland	CA	Doug	Flack	New York	NY
Mary	Eninger	Torrance	CA	Dylan	Flather	Long Beach	CA
Walter	Erhorn	Spring Valley	CA	Daniel	Fleischman	Torrance	CA
Eric	Ericson	Pacific Palisades	CA	Tina	Florell		10000
Mack	Errea	Laguna Niguel	CA	Brian	Florian	Beverly Hills	CA
Kelle	Erwin	Long Beach	CA	Kim	Floyd	Palm Desert	CA
Vanessa	Escamilla	Los Angeles	CA	Sara	Fogan	Valencia	CA
Lucy	Escobar	Colton	CA	Joanna	Fong	Rosemead	CA
Karen	Espanol	Culver City	CA	Sibyl	Forsberg	West Hollywood	CA
Linda Aurora	Espino	San Diego	CA	Aimie	Foster	Salinas	CA
Dan	Esposito	Manhattan Beach	CA	Linda	Foster-Brooks	La Palma	CA
Nicholas	Esser	Simi Valley	CA	Ashley	Foulk	Long Beach	CA
Michael	Esten	San Diego	CA	Kathleen	Fox	Grover Beach	CA
Ruth	Estrada	National City	CA	Anne	Fragasso	Encinitas	CA
Albert	Eurs	Cypress	CA	Caroline	Fraissinet	Los Angeles	CA
Michael	Evans	Altadena	CA	Barbara	Frances	Aromas	CA
Ramona	Evans	Long Beach	CA	Suzanne	Francis	Van Nuys	CA
Susan	Evans	Sherman Oaks	CA	Rodrigo	Franco	San Diego	CA
Nancy	Everett	San Diego	CA	Karla	Frandson	San Diego	CA
Kai	Ewert	Oak View	CA	Peter	Frank	Santa Monica	CA
John	Faber	Ontario	CA	Laurie	Franklin	North Hills	CA
D.	Fachko	Buena Park	CA	Amy	Franz	La Habra	CA
Eric	Faibish	San Diego	CA	Antoinette	Franz	Huntington Beach	CA
Judith	Falck-Madsen	Carpinteria	CA	Angela	Freberg	San Luis Obispo	CA
Roberta	Falke	Los Angeles	CA	Nancy	Freedland	Big Bear City	CA
Susan	Falkenbach	Torrance	CA	Clint	Freeland	Santa Maria	CA
Erin	Farber	Valley Village	CA	Lionel	Friedberg	Woodland Hills	CA
Fran	Farina	Carmel	CA	Sarah	Friedenberg	San Diego	CA
Gail	Farina	Los Angeles	CA	Bernard	Friedrich	Westlake Village	CA
Quinn	Farrand	Pinedale	WY	Rochelle La	Frinere	San Diego	CA
Fran	Farrell	Moreno Valley	CA	Carissa	Fritts	Pacific Grove	CA
Darius	Fattahipour	San Diego	CA	Jeff	Fromberg	Los Angeles	CA
Regina	Favarote	Pasadena	CA	Amanda	Frost	Santa Barbara	CA
Deborah	Favila	Kerman	CA	Earl	Frounfelter	Santa Maria	CA
Elissa	Faye	North Hollywood	CA	Julie	Frumkin	Bishop	CA
Joy	Fedele	Ojai	CA	Joyce	Frye	La Quinta	CA
Marla	Feierabend	Santa Barbara	CA	Luis	Fuentes	Palm Springs	CA
Dana	Feldman	Marina Del Rey	CA	Jed	Fuhrman	Topanga	CA
Drew	Feldmann	San Bernardino	CA	Kristina	Fukuda	Los Angeles	CA
Grace	Feldmann	Santa Barbara	CA	Judy	Fukunaga	Arroyo Grande	CA
Paul	Felice	Long Beach	CA	C	G	San Diego	CA
Ashley	Felix	Riverside	CA	J	G	La Mesa	CA
Virginia	Ferguson	San Diego	CA	Tamara	G	Carlsbad	CA

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W.	G.	Glendale	CA
Marnie	Gaede	La Canada Flintridge	CA
Gary	Gall	Cambria	CA
Lourdes	Gallegos	Hemet	CA
Juanita	Gama	Palm Desert	CA
Greg	Garavani	Fresno	CA
Marcia	Garceau	San Diego	CA
Erin	Garcia	Tarzana	CA
Bas	Garcia	Altadena	CA
Evette	Garcia	Hawaiian Gardens	CA
John	Garcia	Carlsbad	CA
Isabel	Garcia	Long Beach	CA
Wayne	Garcia	San Diego	CA
Sam	Garcia	Culver City	CA
Olivia	Garcia	Long Beach	CA
Steven	Garcia	Los Angeles	CA
Angela	Gardner	Whittier	CA
Jan	Garen		12345
Gary	Gargantos	Long Beach	CA
Aida	Garralda	Rancho Santa Margarita	CA
Lisa	Garvey	Venice	CA
Kris	Gata	Redondo Beach	CA
Genevieve	Gates	Culver City	CA
Remi	Gauchet	Lake Forest	CA
Angelica			
Danielle	Gavino	Bakersfield	CA
Cecile	Geary	Laguna Niguel	CA
Terri	Gedo	Los Angeles	CA
elaine	genasci	San Luis Obispo	CA
Jeremiah	George	Manhattan Beach	CA
Mark	Geraghty	Santa Monica	CA
Janice	Gero	Glendale	CA
Dani	Gerz	Marina Del Rey	CA
Sandra	Geyer	Fallbrook	CA
Janine	Giaime	Valley Village	CA
Christina	Gibson	San Diego	CA
Ron	Giddings	Los Osos	CA
Camille	Gilbert	Santa Barbara	CA
Tracy	Gilbert	Rialto	CA
Anthony	Gilchriest	Los Angeles	CA
Amber	Gill	Fullerton	CA
Thomas	Gillespie	La Mirada	CA
Cheryl	Gillette	Carmel	CA
Ken	Gilliland	Tujunga	CA
Matt	Gilsdorf	Escondido	CA
Anthony	Giordano	Ventura	CA
Perri	Glass	Los Angeles	CA
Joe	Glaston	Desert Hot Springs	CA
Sandra	Gleason	Hemet	CA
Paula	Glez	Van Nuys	CA
Amanda	Goad	Los Angeles	CA
Gary	Goetz	Pacific Grove	CA
Frances	Goff	Pasadena	CA
Ruth	Gold	San Diego	CA
Susan	Goldberg	Glendale	CA
g	goldfarb	Malibu	CA
Celia	Goldman	Los Angeles	CA
Jill	Goldman	Toluca Lake	CA
Kathleen	Gonnoud	Los Angeles	CA
Daniel	Gonzales	Lancaster	CA
Tara	Gonzales	Atascadero	CA
Bernie	Gonzales	Caruthers	CA
Aida	Gonzalez	Costa Mesa	CA
Charysma	Gonzalez	Sierra Madre	CA
Yazmin	Gonzalez	Bellflower	CA
Cecilia	Gonzalez	Los Angeles	CA
Beth	Goode	Topanga	CA
Veronica	Goode	Porter Ranch	CA
Sarah	Gooderham	Los Angeles	CA
Luna	Gooding	Los Angeles	CA
Janet	Goodwin	Los Angeles	CA
Susan	Goran	Tarzana	CA
Gail	Gordon	Westminster	CA
Kathleen	Gordon	Vista	CA
Stanley	Gordon	Canoga Park	CA
Carol	Gordon	Los Angeles	CA
Dara	Gorelick	Van Nuys	CA
Laurie	Gorman	Visalia	CA
Lois	Gorrell	Santa Ana	CA
Dan	Gotch	Pacific Grove	CA
Nancy	Gowani	Woodland Hills	CA
Kay	Graetz	Huntington Beach	CA
Barbara	Graham	San Diego	CA
Susan	Graham	Glendale	CA
Kyra	Graham	Costa Mesa	CA
Elizabeth	Grainger	Claremont	CA
Donna	Grampp	Fullerton	CA
Fred	Granlund	North Hollywood	CA
Susan	Grant	Los Angeles	CA
Marc	Grawunder		49492
Lisa	Gray	Anaheim	CA
Sara	Graybill	New Providence	PA
Bronwen	Grebe	Castaic	CA
Jamie	Green	Ventura	CA
Stuart	Greenburg	Stevenson Ranch	CA
Anne	Greene	Carmel	CA
Bill	Greene	Pismo Beach	CA
Evelyn	Greenwald	San Luis Obispo	CA
Marie	Grenu		61100
Don	Grierson	Los Angeles	CA
Melody	Grigg	Santa Maria	CA
David	Griggs	Carpinteria	CA
Malcolm	Groome	Topanga	CA

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William	Grosh	El Centro	CA	Laurie L	Hatch	Lone Pine	CA
Ellen	Grossman	Chicago	IL	Patty	Hatcher	Buena Park	CA
Tanya	Guchi	Sherman Oaks	CA	Artineh	Havan	Burbank	CA
Mike	Guerreiro	Carlsbad	CA	Gary	Haven	Agoura Hills	CA
Paul	Gullam	Bakersfield	CA	Paula	Hawkins	San Diego	CA
Ellen	Gutfleisch	Sussex	WI	Shereen	Hawkins	Huntington Beach	CA
Perry	Gx	Tustin	CA	Suzanne	Hayano	Santa Barbara	CA
Reem	H	La Verne	CA	Sara	Hayes	Long Beach	CA
Eleonora	Haas	Hawthorne	CA	Christine	Hayes	Upland	CA
Alan	Haas		N1R	Felecia	Hays	Carlsbad	CA
Marcia C.	Hackett	Laguna Woods	CA	Julie	Hazard	Burbank	CA
Nadia	Haddad	Monterey Park	CA	Yuriko	Hazlett	Oxnard	CA
Ellen	Haden	Pacific Palisades	CA	Kathleen	Head	Murrieta	CA
Brenda	Haig	Long Beach	CA	Kris	Head	Garden Grove	CA
Barbara	Haire	Mira Loma	CA	Paulette	Heath	Los Angeles	CA
Teni	Hakopian	Glendale	CA	Nancy	Heck	Santa Maria	CA
Madison	Hales	Riverside	CA	Ken	Hedges	Lemon Grove	CA
Chris	Hall	Los Angeles	CA	Christine	Hein	Huntington Beach	CA
Holly	Hall	Temecula	CA	Janet	Heinle	Santa Monica	CA
Stacy	Hall	San Diego	CA	Bridgett	Heinly	San Diego	CA
Maryann	Haller	Escondido	CA	Susan	Heisler	Patton	CA
Cathy	Halley	Oak View	CA	Ciara	Helland	San Luis Obispo	CA
Ellen A	Hamilton	Goleta	CA	Bonnie	Hemauer	Santa Monica	CA
Frederick	Hamilton	Rancho Cucamonga	CA	Carol	Hemingway	Santa Barbara	CA
Denise	Hamilton	Altadena	CA	Marilyn	Hempel	Yucaipa	CA
Khai	Hang	Baldwin Park	CA	Michael	Henderson	Huntington Beach	CA
Susan	Hanger	Topanga	CA	Kelly	Hendricks	Temecula	CA
Steve	Hanlon	Los Angeles	CA	Grace	Hengst	Los Angeles	CA
Caren	Hanson	Sun City	CA	Bryan	Hennes	Simi Valley	CA
Constance	Hanson	South Pasadena	CA	Matthew	Hennes	San Jose	CA
Kathryn	Hanson	Huntington Beach	CA	Debbie	Hennessey	Culver City	CA
Nalani	Ha'o	Long Beach	CA	Kevin	Henry	Carmel	CA
Joseph	Hardin	Santa Monica	CA	Kathlene	Henry-Gorman	Cambria	CA
Jana	Harker	Arcadia	CA	Christina	Heon	Arroyo Grande	CA
Karlen	Harmison	San Clemente	CA	Ian	Heptinstall	Huntington Beach	CA
Lori	Harmon	Van Nuys	CA	Teri	Herbst	Torrance	CA
Kate	Harper	Irvine	CA	Amber	Heredia	Ladera Ranch	CA
Barbara	Harper	Castroville	CA	Micki	Hergenreder	Trabuco Canyon	CA
Beverly	Harris	Beverly Hills	CA	Nicholas	Hermosillo	Highland	CA
Dwain	Harris	Westminster	CA	Crystal	Hernandez	Cypress	CA
Freya	Harris	Atlanta	GA	Chris	Hernandez	Sun Valley	CA
Jennie	Harris	Los Angeles	CA	Thomas	Hernandez	Corona	CA
Lois	Harris	Claremont	CA	Paula	Hernandez	Long Beach	CA
William	Harris	Los Angeles	CA	Joan	Hernandez	Lemon Grove	CA
Mary Elise	Harris	Fallbrook	CA	Steven	Hernandez	Long Beach	CA
Dorothea	Hartley	Oak View	CA	Teddi	Hernandez	Hanford	CA
Lauri	Hartman	Camarillo	CA	Marisa	Herrera	Chula Vista	CA
Randall	Hartman	San Clemente	CA	Magge	Herrera	Valley Center	CA
Gayle	Harvey	Morro Bay	CA	Sandra	Herrera	Parlier	CA
Anne	Harvey	San Diego	CA	Tasya	Herskovits	Joshua Tree	CA
Bill	Haskins	Sacramento	CA	Jennifer	Herstein	Altadena	CA
Karen	Hastings	Santa Barbara	CA	Brian	Herzog	Altadena	CA

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Diane	Hesford	Fresno	CA	Robert	Husbands	San Diego	CA
Rilla	Heslin	La Mesa	CA	Steven	Huskey	Los Angeles	CA
William	Heuser	Arcadia	CA	Judi	Hutchinson	Malibu	CA
William	Hewes	Simi Valley	CA	Stephen	Hutchinson	Glendale	CA
John	Hewett	Playa Del Rey	CA	Graciela	Huth	Los Angeles	CA
Carol	Hewitt	Signal Hill	CA	Theresa	Hvassman	Monterey	CA
Percy	Hicks-Severn	Newbury Park	CA	Barbara	Ige	Los Angeles	CA
Richard	Hieber		87700	Maryan	Infield	Los Angeles	CA
Karen	Higgins	Arcadia	CA	LouAnne	Insprucker	La Canada Flintridge	CA
Susi	Higgins	Glendale	CA	Lynne	Irvine	Pacific Palisades	CA
Eleanor	High	Ventura	CA	Freyda	Isaacs		M2M
Andrea	Hilario	La Puente	CA	Jodi	Isaacs	San Luis Obispo	CA
Deborah	Hill	Los Angeles	CA	Elizabeth	Jache	Lemon Grove	CA
Sue	Hill	Valley Center	CA	Maryanne	Jackson	El Cajon	CA
Tangerine	Hill	Lomita	CA	Suzanne	Jacobs	Woodland Hills	CA
Brien	Hindman	Montrose	CA	Lisa	Jaime	Los Angeles	CA
Stephanie	Hines	Dana Point	CA	Kathy	Jakary	Laguna Niguel	CA
Eugene	Hinton	Porterville	CA	Kim	James	Lake Arrowhead	CA
Glenn	Hiramatsu	Santa Maria	CA	Jennifer-Lynn	Jankesh	Santa Monica	CA
Lynn	Hoang	Fullerton	CA	Cynthia	Jansen	Orange	CA
Eva	Hofberg	Anaheim	CA	Audrey	Jansen	Redlands	CA
Colleen	Hoff	Bayfield	CO	Susan Alcott	Jardine	Sherman Oaks	CA
Florence	Hoffert	El Segundo	CA	Bert	Jarnagin	Lone Pine	CA
Maren	Hoflund	Vista	CA	C.K. Nuetzie	Jasiorkowski	Goleta	CA
Michael	Hogan	Del Mar	CA	Lisa	Jasso	Beaumont	CA
Lisa	Hoivik	Monterey	CA	Julien	Jegou	Irvine	CA
Elaine	Holder	San Luis Obispo	CA	Laurie	Jensen	La Jolla	CA
roger	hollander	Tarzana	CA	Sisse	Jensen	Beverly Hills	CA
Paula	Hollie	Laguna Woods	CA	Lee	Jesmain	Twentynine Palms	CA
Corinne	Hollings	Bonita	CA	Darynne	Jessler	Valley Village	CA
Chris Van	Hook	Pacific Palisades	CA	S	Jitreun	Ann Arbor	MI
Melissa	Hoover	San Bernardino	CA	Ann	Johnson	Yorba Linda	CA
Kathy	Hopkins	San Bernardino	CA	Beverly	Johnson	Hesperia	CA
Laura	Horning	Westlake	OH	Chad	Johnson	Los Angeles	CA
Carolyn	Horowitz	West Covina	CA	Erica	Johnson	Gardena	CA
Cleda	Houmes	Salinas	CA	Jane	Johnson	Los Osos	CA
Roseanne	Hovey	San Diego	CA	Matthew	Johnson	Anaheim	CA
Susan	Howe	Oceano	CA	Katherine	Johnson	Santa Barbara	CA
Linda	Howie	Valencia	CA	Christine	Johnson	Indio	CA
Katherine	Hoyt	Chula Vista	CA	Mara	Johnson	Santa Clarita	CA
george	hrouda	Moreno Valley	CA	Reid	Johnson	Los Angeles	CA
Bess	Hsieh	San Diego	CA	Robert	Johnson	El Segundo	CA
Gail	Hubbs	Newbury Park	CA	Shawn	Johnson	Encinitas	CA
Vicki	Hughes	Huntington Beach	CA	Evelyn	Johnson-Todd	Fresno	CA
Tamara	Hulsey	El Cajon	CA	Jessica	Johnston	Los Angeles	CA
Erica	Hummel	Huntington Beach	CA	Michael A.	Johnston	San Diego	CA
Paul	Hunrichs	Santee	CA	Amelia	Jones	Santa Monica	CA
Peggy	Hunsaker	San Marcos	CA	Roslyn	Jones	Riverside	CA
Linda	Hunt	Pasadena	CA	Gary	Jones	San Marino	CA
Star	Hunt	Goleta	CA	Jeffrey	Jones	Sherman Oaks	CA
Catherine	Hunter	La Crescenta	CA	Martha	Jones	Santa Clarita	CA
Laura	Hunter	Escondido	CA	S	Jones	Costa Mesa	CA

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Stanleigh	Jones	Claremont	CA	Brian	Kessler	Sherman Oaks	CA
Truman	Jones	Big Sur	CA	Ted	Key	Cambria	CA
Laura	Jones-Bedel	San Diego	CA	Ruth	Keyser	Ramona	CA
Cea	Jordan	Los Angeles	CA	Mha Atma S	Khalsa	Los Angeles	CA
John	Jordan	Fresno	CA	Simran	Khalsa	Los Angeles	CA
Alena	Jorgensen	Temple City	CA	Maryann	Khan	Oceanside	CA
Anna	Jozefowicz	Santa Ana	CA	Sareepark	Khumurai	Los Angeles	CA
Scott	Jung	South Pasadena	CA	Mary Ann	Kiger	Anza	CA
Philip	Jupp	Little Falls	NY	Jim	Kilby	Escondido	CA
Stacy	K	Bakersfield	CA	Catherine	Kimbrough	Mission Viejo	CA
Rose	Kabir	Mira Loma	CA	Perri	Kimono	Los Angeles	CA
Vinay	Kadambi	Santa Ana	CA	Janis	King	Reno	NV
Holly Ann	Kaiakapu	Seaside	CA	Nancy	Kingston	Mission Viejo	CA
Sarah	Kalinay	Bakersfield	CA	Brian	Kirk	Orange	CA
Cindy	Kamler	Bishop	CA	Sue	Kirk	San Diego	CA
Celine	Kan	Diamond Bar	CA	Tracey	Kirsten	El Segundo	CA
Lindsay	Kanani	Costa Mesa	CA	Zoltan	Kiss	Tarzana	CA
Cat	Kane	San Juan Capistrano	CA	Jo Ann	Kiva	Pasadena	CA
Philip	Kane	Norco	CA	Larry	Klaasen	San Diego	CA
Rose	Kanno	Los Angeles	CA	Joel	Klayman	Huntington Beach	CA
Fredrica	Kanter	Riverside	CA	Daryl	Klein	San Clemente	CA
Steven	Kapchinske	San Diego	CA	Joanne	Klein	Bakersfield	CA
Alexa	Kaplan	San Diego	CA	Linda	Klein	El Segundo	CA
Chono	Kapono	Santa Monica	CA	Leslie	Klein	Los Angeles	CA
Ann-Kristin	Karling	Van Nuys	CA	Shirley	Klein	San Diego	CA
Raquel	Karno	Pala	CA	Diana	Kliche	Long Beach	CA
Chuck	Karp	Palm Desert	CA	George F.	Klipfel II	Cathedral City	CA
Sandy	Kasper	Hemet	CA	Harry	Knapp	Riverside	CA
Lise	Kastigar	Laguna Niguel	CA	Brianna	Knickerbocker	Reseda	CA
Eli	Kat	Rialto	CA	Brooke	Knight	Ventura	CA
Gary	Katona	Los Osos	CA	Tony	Knight	Studio City	CA
Pucznik	Katz	Los Angeles	CA	Pamela	Knoll	Los Angeles	CA
Sara	Katz	Manhattan Beach	CA	Cybele	Knowles	Tucson	AZ
Kathryn	Kawecki	Rancho Cucamonga	CA	Mayumi	Knox	San Marino	CA
Josh	Kaye-Carr	Ventura	CA	Anne	Kobayashi	San Diego	CA
Lori	Kegler	San Pedro	CA	Francisco	Koch	North Hills	CA
Jaemi	Kehoe	Norwalk	CA	Patti	Koger	Cardiff By The Sea	CA
Rachel	Kelley	Santa Monica	CA	Joyce	Kolasa	Springville	CA
Bev	Kelly	Long Beach	CA	Robert	Kolesnik	Upland	CA
Leslie	Kelly	Chula Vista	CA	Raleigh Koritz	Koritz	Minneapolis	MN
Joanna	Kelly	Studio City	CA	Kathy	Kosinski	Goleta	CA
Teri	Kelly	San Marcos	CA	Linda	Kourtis	San Diego	CA
Lisa Ann	Kelly Family	Santa Barbara	CA	Yvonne	Kouza	Bonita	CA
Jennifer	Kelsey	Los Angeles	CA	Betty	Kowall	Penngrove	CA
Angelika	Kempter		72770	Joshua	Krasnoff	Oak View	CA
Eden	Kennan	Van Nuys	CA	Cathy	Kraus	North Hollywood	CA
Joyce Lain	Kennedy	Encinitas	CA	Annica	Kreuter	Joshua Tree	CA
Kate	Kenner	Brattleboro	VT	Ulrich	Krieger	Acton	CA
Jean	Kennerson	Yucaipa	CA	Kathleen	Kuczynski	Lake Forest	CA
John	Kerby	Fontana	CA	Peter	Kuhn	San Diego	CA
Madeleine Fisher	Kern	Los Angeles	CA	Rosemarie Julie	Kuhn Kummel	Fresno Santa Barbara	CA CA

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Giar-Ann	Kung	Alhambra	CA	Clara	Levy	Los Angeles	CA
Jamie	Kurnik	San Clemente	CA	Ellen	Levy	Altadena	CA
Celia	Kutcher	Capistrano Beach	CA	Cynthia	Lewis	Templeton	CA
Delfin	Labao	San Diego	CA	O	Lewis	Los Angeles	CA
Georgia	Labey	Indio	CA	Polly	Lewis	Frazier Park	CA
Ligia	Laffitte	Pismo Beach	CA	Susanna	Liberty	Pasadena	CA
Carly	Lake	Costa Mesa	CA	Debra	Lichstein	Agoura Hills	CA
Caitlin	Lamb	Studio City	CA	Suzanne	Licht	San Pedro	CA
Jerome	Lambert	La Jolla	CA	Kortney	Lillestrand	Laguna Beach	CA
Robin	Lande	Los Angeles	CA	Susan	Lilly	Berkeley	CA
Dennis	Landi	Long Beach	CA	Susan	Lindberg	San Diego	CA
Sarah	Lane	Pebble Beach	CA	Emily	Lindsey	Los Angeles	CA
Kathryn	Lanning	Visalia	CA	Ruth	Litton	South Yarmouth	MA
Gavin	Lantry	Escondido	CA	Elaine	Livesey-Fassel	Los Angeles	CA
Paul	Lapidus	Aromas	CA	Debbie	Llewellyn	San Diego	CA
Kenneth	Lapointe	Los Angeles	CA	Colleen	Lobel	San Diego	CA
Venetia	Large	Altadena	CA	Robert	Loebl	Coronado	CA
Nicole	Larson	San Diego	CA	Frances	Logan	San Diego	CA
Bethany	Lasala	San Diego	CA	Wendy	Lohman	Los Angeles	CA
Clincy	Latimer	Los Angeles	CA	Larisa	Long	Woodstock	IL
Kristin	Laughtin-Dunker	Santa Ana	CA	Mary Lou	Long	Studio City	CA
Janet	Laur	Chatsworth	CA	Ernie	Looney	Santa Clarita	CA
Aaron	Lavine	Los Angeles	CA	Irene	Lopez	San Diego	CA
Timothy	Lawnicki	Long Beach	CA	Andrea	Lopez	Fallbrook	CA
Marisa	Lawson	Yorba Linda	CA	Stacey	Lopez	Yucaipa	CA
Andrea	Lazar	Sherman Oaks	CA	Iliana	Lopez	Glendora	CA
Yolanda	Leaird	Los Angeles	CA	Juan	Lora	Los Angeles	CA
Jan	Leath	Glendale	CA	Judith	Lotz	Burbank	CA
chuck	leavell	Anaheim	CA	Patty	Lotz	Santa Monica	CA
Timothy	Ledford	Fresno	CA	Lawrence	Lovell	South Pasadena	CA
Barbara	Lee	Orange	CA	Patricia	Loverme	South Pasadena	CA
Richard	Lee	Salinas	CA	Jacklyn	Lowe	San Diego	CA
Sheryl	Lee	Topanga	CA	Margot	Lowe	Oceanside	CA
Susie	Lee	La Habra	CA	Donita	Lowrey	Paris	TX
Claudia	Lee	Pasadena	CA	Bettina	Luboff	Los Angeles	CA
Dennis	Lees	Encinitas	CA	John	Lucas	Los Osos	CA
Teresa	Lees	Cambria	CA	Rosa	Lucas	Palm Desert	CA
Sierra	Leffers	Costa Mesa	CA	Marsha	Lucero	Nipomo	CA
Jonathan	Lehrer-Graiwer	Los Angeles	CA	George	Ludwig	Oceanside	CA
Mindy	Leighton-Toth	Los Angeles	CA	Don	Lukenbill	Sherman Oaks	CA
Anne	Lemay	Los Angeles	CA	Rose	Luna	Huntington Beach	CA
Amy	Lentine	Buena Park	CA	Kimberly	Lundy	Thousand Oaks	CA
C	Leonard	San Bernardino	CA	Andy	Lupenko	Lemon Grove	CA
Cody	LePow	Ojai	CA	Judith	Luscalzo	Long Beach	CA
Bob	Leppo	Pismo Beach	CA	Jennifer	Lutje	Spring Valley	CA
Jim	Leske	North Hollywood	CA	Robyn	Lutsky	Tarzana	CA
Michelle	Lesmond		2000	Andrea	Lux	Fullerton	CA
Tamara	Lesser	Agoura Hills	CA	Dennis	Lyday	Los Angeles	CA
Rob	Leverson	Castaic	CA	Heidi	Lynn	Spring Valley	CA
Aaron	Levine	San Diego	CA	Barbara	Lyon	Goleta	CA
Judy	Levitt	Los Angeles	CA	C	M	Arcadia	CA
Lacey	Levitt	San Diego	CA	Jessie	MacLeod	Ventura	CA

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Cecilia	Macy	Long Beach	CA	Lisa	Mazzola	Tampa	FL
Candris	Madison	Los Angeles	CA	Kevin W.	McAlister	Bellmore	NY
Mike	Madrigal	Santa Clarita	CA	Mary	McAuliffe	Los Angeles	CA
Mary Ann	Mahaffie	Torrance	CA	Sheryl	McCabe	Long Beach	CA
David	Maher	Los Angeles	CA	Ellen	McCann	Escondido	CA
David	Maillet	Van Nuys	CA	Wendy	McCarthy	Santa Ana	CA
Dineo	Maine	Chula Vista	CA	Patricia	McCauley	Anaheim	CA
Eugene	Majerowicz	Los Angeles	CA	Karen	McCaw	Los Angeles	CA
Janet	Maker	Los Angeles	CA	Roger And Judy	McClure	Canyon Country	CA
Veronica	Maldonado	Los Angeles	CA	Dorothy	McCollom	Huntington Beach	CA
Ariana	Malik	Playa Del Rey	CA	Debbie	McCormick	Tustin	CA
Arlene	Malkin	Beaumont	CA	Douglas	McCormick	Trabuco Canyon	CA
Sonja	Malmuth	Santa Ynez	CA	Dan	McCoy	Carlsbad	CA
Rose	Maly	Los Angeles	CA	Maria	McCutchan	La Jolla	CA
Patrick	Manalio	Westlake Village	CA	Haley	McDonald	North Hollywood	CA
Lisa	Mandarino	Santa Monica	CA	Maureen	McDonald	Los Angeles	CA
Kathryn	Manis	Riverside	CA	Pamela	McDonald	Riverside	CA
Garrett	Mann	San Diego	CA	Peter	McDonald	Fresno	CA
Judy	Mann	Santa Barbara	CA	Tracy	mcdonald	Glendale	CA
Helen	Manning-Brown	Atascadero	CA	Stacey	McDonald	Westlake Village	CA
Eva	Manus	Laguna Niguel	CA	Taylor	McDonald	North Hollywood	CA
Curtis	Marantz	Riverside	CA	Robert	Mcdonnell	Aliso Viejo	CA
Kirk	Margo	North Hollywood	CA	Doreen	McElvany	Indian Wells	CA
Laura	Marinelli	Los Angeles	CA	Duncan	McFarland	Encinitas	CA
Samantha-Jane	Markevich	Marina Del Rey	CA	Carolita	McGee	Carlsbad	CA
Shawnda	Marmorstein	Los Olivos	CA	Bruce	McGraw	San Diego	CA
Frances	Marsh	Santa Barbara	CA	Jane	McGraw	San Bernardino	CA
Rhys	Marsh	Los Angeles	CA	Colleen	McHugh	San Diego	CA
Sherry	Marsh	Oceanside	CA	Marsha	McIntosh	Stanton	CA
Dorrine	Marshall	Irvine	CA	Brenda	McIntyre	Laguna Niguel	CA
Staci	Martin	Carlsbad	CA	Tawny	McLellan	Ojai	CA
Joanna	Martin	Mission Viejo	CA	Michael	McMahan	Huntington Beach	CA
Julie	Martin	Frederic	WI	Gail	McMullen	Los Angeles	CA
Dick	Martin	Hesperia	CA	Jerry	McMurry	Lakeside	CA
John	Martinez	Lomita	CA	Anita	McMurtrey	Hanford	CA
c.	martinez	San Diego	CA	Nick	McNaughton	Los Angeles	CA
Ray	Martinez	Covina	CA	Susan	McNulty	Downey	CA
Gabriela	Martinez	North Hollywood	CA	Tom	McVay	Ladera Ranch	CA
Ann	Martini	Culver City	CA	Joan	Mead	Los Angeles	CA
Jaime	Marx	Pasadena	CA	Janet	Means	Laguna Woods	CA
Kris	Mashburn	Ojai	CA	Sherry	Meddick	Silverado	CA
Francesco	Masiello	Long Beach	CA	Ulrike	Mehler	Culver City	CA
Mary M.	Mason	Huntington Beach	CA	Adil	Mehta	Chatsworth	CA
Katherine	Massey	San Marcos	CA	Robert	Meier	Los Angeles	CA
Ann Gould	Massoubre	Los Osos	CA	Maeve	Meighan	Studio City	CA
Beth	Mather	San Diego	CA	Lily	Mejia	Hemet	CA
Dan	Matthews	Valley Center	CA	Russell	Melching	Pasadena	CA
Tamara	Matz	Los Angeles	CA	Carlos	Melgar	San Diego	CA
Casee	Maxfield	Los Angeles	CA	Marc	Melinkoff	Woodland Hills	CA
Geraldine	May	Creston	CA	Gilberto	Mello	Los Angeles	CA
Francoisel	May	Palm Springs	CA	Marissa	Mendoza	Hacienda Heights	CA
Joseph	Mayer	San Diego	CA	Jennifer	Mercede	Van Nuys	CA

First Middle	Last	City	State
Beth	Merrill	Newbury Park	CA
Jibralta	Merrill	Valley Village	CA
Lesley	Meyer	Los Angeles	CA
Twyla	Meyer	Pomona	CA
Donna	Meyers	Lancaster	CA
Yolande	Michaels	Topanga	CA
Sue	Michelson	Studio City	CA
Gary	Milano	Bishop	CA
Ljiljana	Milic		11000
Brad	Miller	Santa Barbara	CA
Jerrilyn	Miller	Valley Village	CA
Kellie	Miller	Santa Ana	CA
Kelly	Miller	San Diego	CA
Rachelle	Miller	Fullerton	CA
Gary	Miller	Laguna Niguel	CA
Victoria	Miller	Encino	CA
John	Miller	Newport Beach	CA
Aileen	Milliman	Long Beach	CA
Christina	Mills	Needles	CA
Randy	Mills	Culver City	CA
Janelle	Milner	San Diego	CA
Jill	Miotke	Costa Mesa	CA
Amalia	Miranda	San Juan Capistrano	CA
Deedee	Mirmak	Yorba Linda	CA
Keary	Missler	Monterey	CA
Michal	Mitchell	Ojai	CA
Robert	Mize	Inyokern	CA
Negar	Modgeddi	Los Angeles	CA
Lea	Mohr	Wildomar	CA
Irene	Molina	Seeley	CA
Anneliese	Monnes	Monterey	CA
Myrian	Monnet	Pasadena	CA
Jeanette	Monroe	Aliso Viejo	CA
Dana	Monroe	San Diego	CA
Alida	Montanez-Salas	Norwalk	CA
Peter	Monteforte	Pacific Grove	CA
Thea	Montella	Pebble Beach	CA
Carol	Montgomery	Glendale	CA
Nadia	Moore-MS-UCDavis	San Diego	CA
Karla	Morales	North Hollywood	CA
Rosy	Morales	Rancho Palos Verdes	CA
Jennifer	Moramarco	Temecula	CA
Dan	Morgan	Rosamond	CA
Reyko	Mori	Glendale	CA
Amber	Morris	San Diego	CA
Tiffany-Marie	Morrison	Winnetka	CA
Keir	Morse	Claremont	CA
Jeffery	Morton	Marina	CA
Karen	Morton	Joshua Tree	CA
Lance	Moseley	Marina Del Rey	CA
Jim	Moseman	San Diego	CA
hen ryjj	moser	Laguna Woods	CA
Rich	Moser	Santa Barbara	CA
Jill	Mulato	Dana Point	CA
James	Mulcare	Clarkston	WA
Teresa	Mullins	Santa Barbara	CA
Ken	Mundy	Los Angeles	CA
Erica	Munn	Los Angeles	CA
Amy	Munnelly	Irvine	CA
Brigid	Murphy	Chino	CA
J	Murphy	San Diego	CA
Tim	Murphy	North Hollywood	CA
barbara	Murray	Los Angeles	CA
Joan	Murray	Los Angeles	CA
KATHRYN	MYERS	Paso Robles	CA
Gina	Nanarjain		1078JN
Jerry	Napombhejara	Irvine	CA
Matthew	Nasser	Los Angeles	CA
Loretta	Nathan	Los Angeles	CA
Julie	Naumann	Redondo Beach	CA
Lezlie	Navarro	Wildomar	CA
Matilde	Navarro	Garden Grove	CA
NANCY	NEELY	Rancho Cucamonga	CA
Stephanie	Neira	Ontario	CA
Brad	Nelson	Oxnard	CA
Julie	Nelson	North Hollywood	CA
Pamela	Nelson	Warner Springs	CA
Brennan	Nerhus	Long Beach	CA
Lisa	Neste	High Point	NC
Steven	Netkin	Sun City	CA
Christa	Neuber	West Hollywood	CA
Karen	Neubert	Los Angeles	CA
Alice	Neuhauser	Manhattan Beach	CA
Therese	Neustaedter	Hermosa Beach	CA
Sandra	Neveras	Watsonville	CA
Laura	Newton	Cathedral City	CA
Christine	Ney	Anaheim	CA
Anna	Nichols	Redondo Beach	CA
Kim	Nicholson	Valley Village	CA
Christina	Nillo	West Hollywood	CA
Lena	Nilsson	Laguna Beach	CA
Greg	Nishihira	Oceanside	CA
Stacy	Nisperos	Fullerton	CA
Barbara	Nogal	San Diego	CA
Michale	Noll	Valley Village	CA
David	Nolterieke	Aliso Viejo	CA
James	Noordyk	San Diego	CA
Shaun	Norris	Oxnard	CA
Ellen	North	Laguna Niguel	CA
Deena	Novak	Los Angeles	CA
Jean	Nunamaker	Santee	CA
stephanie	nunez	Van Nuys	CA

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Zero	Nunez	Van Nuys	CA	Dr R	Parkes	Encinitas	CA
Annabelle	Nye	West Hills	CA	Anthony	Parr	Altadena	CA
Tarin	O'Brien	Palm Springs	CA	Caryl	Parrish	Carlsbad	CA
Cynthia	Obyrne	Lompoc	CA	Elizabeth	Parro	Huntington Beach	CA
Melissa	Ochoa	Los Angeles	CA	Ronald	Partridge	Simi Valley	CA
Dan	OConnor	Arroyo Grande	CA	Anne	Parzick	Corona Del Mar	CA
Edward	O'Connor	Kansas City	MO	JOHN	PASQUA	Escondido	CA
Mark	ODell	Sierra Madre	CA	Dixie	Patterson	Morro Bay	CA
Gregg	Oelker	Altadena	CA	Mark	Pattullo	Los Angeles	CA
Edith	Ogella	Santa Barbara	CA	Lori	Paul	Altadena	CA
Alice	Okeefe	Anaheim	CA	Brenna	Pavey	Los Angeles	CA
Sean	O'Keeffe	Los Angeles	CA	Vivian	Peacock	Hollister	CA
Sofia	Okolowicz	Temecula	CA	Evelin	Pekin	San Dimas	CA
Nancy	Oliver	Valencia	CA	Dione	Peniche	Tarzana	CA
Nora	Oliver	La Canada Flintridge	CA	Paula	Pepin	San Clemente	CA
Jeffery	Olson	Vista	CA	Leah	Perales	Wildomar	CA
Allen	Olson	Minneapolis	MN	Giana	Peranio-Paz	Hendersonville	NC
Amanda	Olson	San Diego	CA	Richard	Perez	Torrance	CA
Krister	Olsson	Los Angeles	CA	Cristina	Perez	Playa Vista	CA
Jennifer	Olvera	Aliso Viejo	CA	Leticia	Perez	Chino Hills	CA
Cathy	O'Neill	Santa Monica	CA	Holly	Perez	Chula Vista	CA
Tammy	O'Neill	Los Angeles	CA	Yecenia	Perez	Marina	CA
Frances	Onesti	Lawndale	CA	Greg	Perkins	Long Beach	CA
Deanna	Onozuka	San Luis Obispo	CA	Anne	Perkins	Santa Monica	CA
Lynn	Orabona	Claremont	CA	Susan	Perry	Cambria	CA
Paula	Orbaugh	Carlsbad	CA	Allen And Karen	Perry	Yucca Valley	CA
Gerald	Orcholski	Pasadena	CA	Makiko	Peters	Huntington Beach	CA
Patricia	O'Reilly	La Mesa	CA	Staci	Peters	San Diego	CA
Angel	Orona	Alhambra	CA	Garrine	Petersen	Sun Valley	CA
Rosie	Orozco	Baldwin Park	CA	John	Peterson	Temecula	CA
Gina	Ortiz	Claremont	CA	David	Peterson	San Diego	CA
Kathryn	Osborn	La Mesa	CA	Rachel	Peterson	La Jolla	CA
Rita	Ospelt	Vista	CA	Todd	Peterson	Anaheim	CA
Hillary	Ostrow	Encino	CA	Denis	Petitt	Burbank	CA
Gina	Otos	Torrance	CA	Sue	Petteway	Los Angeles	CA
Annie	P	San Diego	CA	Carolyn	Pettis	Santa Clarita	CA
S	P	Del Mar	CA	Jamaka	Petzak	Glendale	CA
S	P	Chatsworth	CA	Victoria	Peyser	Newark	DE
Michele	Pacheco	Upland	CA	John	Pham	Encinitas	CA
Pat	Padilla	Porterville	CA	Tanya	Phillips	Pasadena	CA
Matthew	Page	Ventura	CA	Andrew	Philpot	Solvang	CA
Trisha	Pahmeier	Vista	CA	Steven	Pickering	Pasadena	CA
John	Palafoutas	Los Angeles	CA	Susan	Pierszalowski	Pacific Grove	CA
Beatriz	Pallanes	Santa Ana	CA	Lisa	Piner	Costa Mesa	CA
allie	palmer	San Clemente	CA	Anna	Pinto	Bakersfield	CA
Heidi	Palmer	Rancho Cucamonga	CA	Tina	Pirazzi	Long Beach	CA
Aydee	Palomino	La Quinta	CA	Danielle	Pirotte		4120
Sandra	Pankow	San Diego	CA	Barbara	Piszczek	Oxnard	CA
Robert	Pann	Los Angeles	CA	Trisha	Pitsch	Van Nuys	CA
Heidi	Paris	Chula Vista	CA	Marcella	Plant	San Diego	CA
Ruth	Park	Palm Desert	CA	Raymond	Plasse	West Hills	CA
Jennifer	Parker	Los Angeles	CA				

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Mary F	Platter-Rieger	San Diego	CA	paulo	reeson	Pasadena	MD
Marie	Pleasant	San Diego	CA	Natasha	Reeves	Monrovia	CA
Pam	Plummer	Long Beach	CA	Sheri	Reeves	North Hollywood	CA
Allen	Pluth	Spring Valley	CA	Geoff	Regalado	Burbank	CA
Barbara	Poland	La Crescenta	CA	Fawn	Regan	Baker	CA
Tony	Policelli	Beverly Hills	CA	Alvaro de	Regil	Moorpark	CA
Docken	Polk	Woodland Hills	CA	Karen	Reibstein	San Diego	CA
Alan	Pollack	Woodland Hills	CA	Carol	Reiche	Santa Barbara	CA
Jeannie	Pollak	Oxnard	CA	Regina	Reinhardt	San Diego	CA
Diana	Polsky	Long Beach	CA	Robin	Reinhart	San Diego	CA
Michaela	Pond	Corona Del Mar	CA	Jennifer	Reinish	Santa Barbara	CA
Donnal	Poppe	Northridge	CA	Stephanie	Reis	Los Angeles	CA
Jessica Jean	Posner	Palmdale	CA	Nicholas	Remelman	Panorama City	CA
Rick	Posten	Los Angeles	CA	Edwyna	Rennie	Alhambra	CA
Janice	Powell	Goleta	CA	Kristen	Renton	Valencia	CA
Linda	Premo	Oceanside	CA	Cynthia	Replogle	Oceano	CA
Louise	Priest	Santa Paula	CA	Lisa	Reutzel	Lompoc	CA
Meredith	Priestley	Solana Beach	CA	James	Reynolds	Sunland	CA
Rosalie	Prieto	Bakersfield	CA	Lloyd	Reynolds	Fountain Valley	CA
Fiona	Priskich	Beverly Hills	CA	Janet	Rhodes	Cathedral City	CA
Penelope	Prochazka	Simi Valley	CA	Robert	Ricewasser	Monrovia	CA
Corey	Prost	Santa Monica	CA	Jacob	Richards	Carlsbad	CA
Mary	Proteau	Los Angeles	CA	Bob	Richardson	Huntington Beach	CA
Felena	Puentes	Bakersfield	CA	Heather	Rider	Los Angeles	CA
Evelina	Pulleva	San Diego	CA	Carol	Rigrod	Encino	CA
Judi	Putnam	Ramona	CA	D.	Rincon	Fresno	CA
Linda	Pydeski	Placentia	CA	James	Ring	Cathedral City	CA
		Rancho Santa		Alisa	Risso	Ladera Ranch	CA
Franklin	Quan	Margarita	CA	Rev. Maria	Riter Wilson	San Dimas	CA
Patricia	Quimby	Los Angeles	CA	Mario	Rivas	Sherman Oaks	CA
Hilary	Quinn	Goleta	CA	Brittany	Rivera	Los Angeles	CA
V	R	Los Angeles	CA	Katrina	Rivers	Lancaster	CA
Kendra	Rachels	Camarillo	CA	Tania	Roa	La Mirada	CA
Andy	Ramirez	Santa Ana	CA	Rob	Roberto	Santee	CA
Jessica	Ramirez	Los Angeles	CA	Les	Roberts	Fresno	CA
Melodie	Rammer	Carmel By The Sea	CA	Gail	Roberts	Tecate	CA
Paul	Ramos	Santa Ynez	CA	Jacquelyn	Roberts	Tehachapi	CA
Phillip	Randall	Woodland Hills	CA	Laura	Robinson	Irvine	CA
LOUISE	RANGEL	Santa Paula	CA	Nancy	Robinson	Ridgecrest	CA
Rosemary	Rannes	Salem	NH	Rima	Robinson	Santa Barbara	CA
Joan	Raphael	San Diego	CA	Jim	Robinson	Morro Bay	CA
Stephen	Rasmussen	Dana Point	CA	Chuck	Rocco	Simi Valley	CA
Elaine	Rathbun	San Luis Obispo	CA	Candace	Rocha	Los Angeles	CA
Robert	Rauh	Hesperia	CA	Katie	Rock	El Cajon	CA
Suzanne	Rawlings	San Diego	CA	Terrell	Rodefer	Van Nuys	CA
Joseph	Razo	Camarillo	CA	John	Rodrigues	Lakeside	CA
Mark	Reback	Los Angeles	CA	Levinson	Rodriguez	Mission Hills	CA
Ronald	Rediger	Newhall	CA	Rachel	Rodriguez	Pasadena	CA
Gordon	Reed	Newport Beach	CA	Erin	Roedeinger	San Diego	CA
Christy	Reed	Fillmore	CA	Pam Rogers	Rogers	Bellflower	CA
Stefany	Reed	La Mesa	CA	jeanne	rogers	Estero	FL
Gary	Reese	San Clemente	CA	stephanie	rohmer	Pasadena	MD

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Tisa	Roland	Salinas	CA	Bruce	Saltzer	Glendale	CA
Sharon	Rollins	Bellflower	CA	Warren	Samuels	Aromas	CA
Marjorie	Roman	Newport Beach	CA	Sue	Sands	Malibu	CA
Mary	Romanek	Santa Monica	CA	Ken	Sanford	Escondido	CA
Gwen	Romani	Castaic	CA	Antonia	Santagati	San Diego	CA
Jessie	Root	Vista	CA	Kathryn	Santana	Duarte	CA
PJ	Rosch	Lake Forest	CA	Benedetta	Santopietro	Escondido	CA
Leah	Roschke	Encinitas	CA	Claudia	Saporiti	Hawthorne	CA
Ken	Rosen	Beverly Hills	CA	David	Sarricks	Running Springs	CA
roy	rosenblatt	Sherman Oaks	CA	Cathi	Sasser	Yorba Linda	CA
Lisa	Rosenfield	Van Nuys	CA	L	Saunders		4122
Steve	Rosin	Pasadena	CA	Leslie	Sayre	Irvine	CA
Kathleen	Ross	Encinitas	CA	Lynne	Schabert	Santa Barbara	CA
Deborah	Ross	Los Osos	CA	Dale	Schafer	Malibu	CA
Kat	Ross	Los Angeles	CA	Ginger	Schedler	Fresno	CA
Sara	Ross	Los Angeles	CA	Doug	Scheel	Los Osos	CA
Ana	Rosvall	Vista	CA	Amy Van	Schijndel	San Diego	CA
Gary	Roswell	Long Beach	CA	Arnold	Schildhaus	Santa Barbara	CA
Michael	Rotcher	Mission Viejo	CA	Denise	Schlatter	Winnetka	CA
Amy	Rouillard	San Diego	CA	Melissa	Schlothan	Huntington Beach	CA
Shea	Rowan	Woodland Hills	CA	Diana	Schmidt	Fallbrook	CA
Shea	Rowan	Woodland Hills	CA	Fran	Schmidt	La Jolla	CA
Lynnette	Royce	Bishop	CA	Richard	Schmitt	Hemet	CA
Gene	Rubin	Ventura	CA	George	Schneider	San Diego	CA
J.	Rubin	El Toro	CA	Jerry	Schneider	Los Angeles	CA
Jessica De	Ruiter	Los Angeles	CA	Judeen	Schneider	Long Beach	CA
Cecilia	Ruiz	Rancho Cucamonga	CA	Anna	Schofield	Los Angeles	CA
Nicholas	Rulli	Los Angeles	CA	Sarah	Scholar	Fresno	CA
Tom	Rummel	San Diego	CA	Heather	Schraeder	Culver City	CA
Angela	Russell	Goleta	CA	David	Schroeder	Los Angeles	CA
Elaine	Russell	Long Beach	CA	James	Schulte	San Luis Obispo	CA
Robin	Russell	Beverly Hills	CA	Caryn	Schultz	San Clemente	CA
Jennifer	Russell	Santa Monica	CA	Jonathon	Schumacher	Los Angeles	CA
Adrienne	Russo	Santa Barbara	CA	Greg And Laurie	Schwaller	Three Rivers	CA
Robert	Russo	Glendora	CA	Alan	Schwartz	Oxnard	CA
Jayson	Ruth	Huntington Beach	CA	Axel	Schwarz	San Diego	CA
Brian	Rutkin	Culver City	CA	Dena	Schwimmer	Los Angeles	CA
John	Ruttner	Redlands	CA	Diane	Scioli	Costa Mesa	CA
Gerald	Ryan	Flemington	NJ	Joan	Scott	Joshua Tree	CA
Tim	Ryan	Capistrano Beach	CA	Laurel	Scott	San Diego	CA
Kimberly	Ryan	Wichita	KS	Alain	Scott	La Mesa	CA
Therese	Ryan	Palmdale	CA	Ann	Scott	Carlsbad	CA
Susan	Ryan	Los Angeles	CA	Anna	Scotti	Burbank	CA
Dominique	Ryba	Vista	CA	Patricia	Seaward	Idyllwild	CA
Gail	Ryland	Pebble Beach	CA	Susan	Sebanc	Marina Del Rey	CA
Laurie	S	Beverly Hills	CA	Ellen	Segal	North Hollywood	CA
Naomi	Sahay	San Diego	CA	Carl	Seibert	Costa Mesa	CA
Maxine	Saine	Bakersfield	CA	Rob	Seltzer	Malibu	CA
Mariana	Salerno	San Diego	CA	Sylvia	Selverston	San Diego	CA
Judith	Salkin	Cathedral City	CA	Rishabh	Sen	Fulton	CA
Claudia	Sall	Pioneertown	CA	Jon	Senour	San Diego	CA
Reece	Salmons	San Diego	CA				

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Barbara	Sentovich	Los Alamitos	CA
Elliott	Sernel	Palm Springs	CA
Robert	Sewekow	Bonita	CA
marcia	sewelson	Studio City	CA
Casey	Seyb	Sierra Madre	CA
Gordon	Seyfarth	Vandalia	MI
Janette	Shablow	Oceano	CA
Linda	Shadle	Anaheim	CA
Brooke	Shaffer	Hesperia	CA
Gerald	Shaia	Sun Valley	CA
Sheila	Shane	Huntington Beach	CA
David	Shannahoff-Khalsa	Del Mar	CA
Michael	Shapiro	Goleta	CA
Virginia	Sharkey	San Diego	CA
June	Sharp	Bakersfield	CA
Donna	Shaw	Simi Valley	CA
Katie	Shaw	Manhattan Beach	CA
Phyllis	Shaw	West Hollywood	CA
Phyllis	Shaw	West Hollywood	CA
A.f.	shayne	Los Angeles	CA
Lenore	Sheffield	Los Angeles	CA
Jason	Shepherd	Newbury Park	CA
Sheila	Sheppard	Carmel By The Sea	CA
Amrit	Shergill	Encinitas	CA
Tawny	Sherrill	Garden Grove	CA
Paul	Shires	Arroyo Grande	CA
Judy	Shively	San Diego	CA
Clare	Shomer	Los Angeles	CA
Ryan	Shopay	Woodland Hills	CA
Tami	Shotts	Highland	CA
Tina	Shull	Costa Mesa	CA
Robin	Shushan	San Diego	CA
Marguerite	Shuster	Sierra Madre	CA
John	Shutt	Marina Del Rey	CA
Amir	Siassi	Los Angeles	CA
Kimberly	Sickel	Cypress	CA
Joleen	Siebert	Reedley	CA
Nancy	Siegrist	Apple Valley	CA
Ceaser	Sigala	El Monte	CA
Jessica	Silva	San Diego	CA
Dan	Silver	Los Angeles	CA
Victoria	Silver	Irvine	CA
Violet	Simmons	Van Nuys	CA
Theresa	Simpson	Santa Ana	CA
Cheryl	Sims	Los Angeles	CA
Christina	Singleton	Pacific Palisades	CA
Joan	Sitnick	Encino	CA
Dita	Skalic	Palm Desert	CA
Ingrid	Skei	Thousand Oaks	CA
John	Skillman	Wrightwood	CA
Pam	Slater-Price	Del Mar	CA
Holly	Sletteland	Templeton	CA
Susan	Sloan	Los Angeles	CA
June	Smith	San Pedro	CA
Diane	Smith	Los Angeles	CA
Gaye	Smith	Los Angeles	CA
Kelly	Smith	San Diego	CA
Yvonne	Smith	Upland	CA
Missie	Smith	Tehachapi	CA
Nancy	Smith	Santa Monica	CA
Philip	Smith	Thousand Oaks	CA
Julie	Smith	Los Osos	CA
Richard	Smith	Kissimmee	FL
Robert	Smith	Fillmore	CA
Wendy	Smith	Anaheim	CA
Irene	Snavely	Covina	CA
Gerald	Sobel	Santa Monica	CA
Isabelle Du	Soleil	Los Angeles	CA
Jessica	Solis	Duarte	CA
Diana	Solomon	Culver City	CA
Lauren	Sopata	La Mesa	CA
C	Sor	San Diego	CA
Scott	Soria	Encinitas	CA
Michael	Sosa	Los Angeles	CA
Edy	Soto	Sylmar	CA
Amanda	Sousa	San Diego	CA
Mary	Sousa	Irvine	CA
Mitzi	Spallas	Los Angeles	CA
Linda	Spanski	Oceanside	CA
Rick	Sparks	North Hollywood	CA
Michelle	Sparks-Gillis	Solvang	CA
Margrit	Spear	Jamul	CA
Mary	Speare	San Diego	CA
Kurt	Speidel	San Clemente	CA
Brent	Spencer	Long Beach	CA
D R	Spencer	San Diego	CA
Constance	Spenger	Big Pine	CA
leslie	spoon	Los Osos	CA
Richard	Spotts	Saint George	UT
Judy	Sprinkle	San Diego	CA
Joan	Squires	Oceanside	CA
Mari	Stachenfeld	Aliso Viejo	CA
Ken	Stack	Los Angeles	CA
Lynn	Stafford	Pine Mountain Club	CA
Gail	Staley	Wildomar	CA
Mark	Standon	San Bernardino	CA
Jerry	Stanley	Arroyo Grande	CA
Russell	Stanley	San Bernardino	CA
Mark	Stannard	Los Angeles	CA
Neil	Stanton	Chula Vista	CA
Diane	Starzak	Oak Park	CA
Nancy	Stassinopoulos	San Diego	CA
Lori	Stayton	Sherman Oaks	CA

First Middle	Last	City	State
Peter	Stearns	Long Beach	CA
Sara	Steck	Bishop	CA
Billy	Steele	San Diego	CA
Mary	Steele	Laguna Niguel	CA
George	Steeves	Van Nuys	CA
Cindy	Stein	Thousand Oaks	CA
Ken	Stein	Thousand Oaks	CA
Neal	Steiner	Los Angeles	CA
Andrea	Steloff	West Hollywood	CA
Kate	Stemig	Hermosa Beach	CA
Sandra	Sterling	Borrego Springs	CA
Herb	Stern	San Diego	CA
Lewis And Diane	Sternfels	Los Angeles	CA
Robin	Steudle	Laguna Woods	CA
Christine	Stewart	Escondido	CA
pat	stewart	Ventura	CA
Bonnie	Stillwater	Los Angeles	CA
Amy	Stinstrom	Irvine	CA
Cristina	Stobaugh	Irvine	CA
Connie	Stomper	Santa Barbara	CA
Peter	Stone	San Diego	CA
Sue	Stone	Fresno	CA
Colleen	Stoyas	San Diego	CA
Ann	Stratten	La Mesa	CA
Rosa	Strayer	Whittier	CA
Liz	Stromath	Manhattan Beach	CA
Jennifer	Strong-Pardus	South Pasadena	CA
Carolyn	Stuart	Beverly Hills	CA
Bruce	Stubbs	Carlsbad	CA
Sandy	Stuhaan	Ridgecrest	CA
Kris	Sullivan	Los Angeles	CA
Mary	Sullivan	Huntington Beach	CA
Joan, Paul, and PJ	Sullivan	Ventura	CA
Kathleen	Sullivan	Camarillo	CA
Mark	Sussek	Van Nuys	CA
Debra	Swartz	Los Angeles	CA
Annika	Swenson	Long Beach	CA
Tyffanie Bell	Sypher	Chatsworth	CA
Sheila	T.	Moreno Valley	CA
Kenneth	Tabachnick	West Hills	CA
Barbara	Tacker	Camarillo	CA
Ann	Tait	Pasadena	CA
Cornelia	Talbott	Brawley	CA
Donna	Tanner	Concord	MA
Carol	Tao	Salinas	CA
Alec	Taratula	Alhambra	CA
Joanne	Tasher	Escondido	CA
Fred	Tashima	Los Angeles	CA
Terance	Tashiro	Los Angeles	CA
Thomas	Tataranowicz	Malibu	CA
Georgia	Tattu	Hermosa Beach	CA
Michele	Taylor	Oceanside	CA
Robert	Taylor	Thousand Oaks	CA
Susannah	Teague	Reseda	CA
Tevet	Tee	Los Angeles	CA
Joanne	Tenney	Escondido	CA
Anne	Terhune	El Cajon	CA
Leslie	Ternullo	Pacific Grove	CA
Michael	Terry	Santa Monica	CA
Lesley	Terwilliger	Ventura	CA
Marlene	Testaguzza	Aromas	CA
Roberta	Teubner	Atascadero	CA
Jeff	Thayer	San Diego	CA
Eric	Thein	Escondido	CA
CHERYL	THOMAS	Mission Viejo	CA
Danielle	Thomas	Santa Monica	CA
Carrie	Thomas	Huntington Beach	CA
Shad	Thomas	Pasadena	CA
Donna	Thomas	Morongo Valley	CA
Shakayla	Thomas	Compton	CA
Brian	Thompson	Santa Barbara	CA
Roberta	Thompson	Sun Valley	CA
Brenda	Thompson	La Mesa	CA
Paula	Thompson	San Diego	CA
Barbara	Thornton	Redondo Beach	CA
Casey	Tibbet	Riverside	CA
Deborah	Tibbetts	San Diego	CA
Gaby	Till	Escondido	CA
Carol	Tinker	El Cajon	CA
Bob	Tintle	Pacific Grove	CA
Elisenda	Toda		17007
Zachary	Todd	Long Beach	CA
Lisa	Toliver	Carlsbad	CA
Thi	Tonolshaskie	Arroyo Grande	CA
Michele	Tornabene	Summerland	CA
Laura	Torres	Los Angeles	CA
Yvette	Torres	Riverside	CA
Sharon	Torrisi	Hermosa Beach	CA
Barbara	Tosh	Seaside	CA
Susan	Tova	Santa Ynez	CA
Arlette	Towner	La Crescenta	CA
Carlos	Townsend	Fountain Valley	CA
Michelle	Trafficante	South Pasadena	CA
Jackie	Tran	Rosemead	CA
Kim	Tran	Santa Ana	CA
Adam	Trauger	Long Beach	CA
Madeleine	Travis	Los Angeles	CA
Teresa	Trebotic	Los Angeles	CA
Ivy	Trent	Altadena	CA
Linda	Trevillian	Alhambra	CA
Fancisco	Trevino	Long Beach	CA
Charles	Tribbey	San Luis Obispo	CA

First Middle	Last	City	State	First Middle	Last	City	State
Edie	Trimmer	Big Pine	CA	Aino	Vimb	Sunland	CA
Irina	Tripolskaya	Arcadia	CA	Bruce	Vincent	Ojai	CA
Martin	Tripp	Santa Clarita	CA	Cynthia	Vinney	Culver City	CA
Olga	Trojakova		90501	Nichelle	Virzi	Jurupa Valley	CA
Beth	Trussell	Burbank	CA	Mikhail	Vizel	Moorpark	CA
Laura	Tryon	Carmel	CA	Janny	Vogel	Oceanside	CA
Haley	Tsarofski	La Crescenta	CA	Alex	Von Dallwitz	Carmel	CA
Marlene	Tucay	Anaheim	CA	A	Vs	San Diego	CA
Nancy	Tucker	Los Angeles	CA	V	W	Lancaster	CA
Timothy	Tucker	Fresno	CA	E	W	Beverly Hills	CA
Gabriella	Turek	Pasadena	CA	Mary	Wade	La Mesa	CA
Joy	Turlo	Redondo Beach	CA	Victoria	Wade	Marina	CA
Jeanne	Turner	Monterey	CA	Gene W	Waggoner II	Pinon Hills	CA
Lana	Turner	Woodland Hills	CA	Inge	Wagner	Los Angeles	CA
Ilya	Turov	Moreno Valley	CA	Marie	Wakefield	Newport	OR
Sherry	Tyler	Ventura	CA			Rancho Santa	
Erica	Tyron	Claremont	CA	Sandra	Walker	Margarita	CA
Kathleen	Tyson	Riverside	CA	Nancy	Walker	Glendale	CA
Holly	Urbanus	Goleta	CA	Verla D.	Walker	West Covina	CA
Jolene	Vadillo	San Marcos	CA	Barry	Wallace	Highland	CA
Aaron	Valdez	Salinas	CA	Jon	Wallace	Ventura	CA
Alexia	Valdora	La Quinta	CA	Simone	Wallace	Trona	CA
K	Valentine	Carson	CA	Karina	Walsh	San Diego	CA
Javier Del	Valle	Monterey Park	CA	Judith	Walter	Palmdale	CA
Danny	van Huizen		5665PT	Nancy	Walter	San Luis Obispo	CA
Maritza	Vance	Canoga Park	CA	Sara	Wan	Malibu	CA
Pamela	Vancortlandt	Los Angeles	CA	Lew	Warden	Big Bear City	CA
Lise	vandal	Schenectady	NY	John	Warner	Goleta	CA
Ron	Vanderford	Burbank	CA	Paula	Warner	Lakewood	CA
John	Varga	Huntington Beach	CA	Katherine	Warner	Ventura	CA
Christopher	Vargas	Anaheim	CA	Vic	Warren	San Diego	CA
Jessica	Varlet	Pasadena	CA	Scott	Warwick	Altadena	CA
Melissa	Vasconcellos	Ventura	CA	Tracy	Watada	Marina Del Rey	CA
Crystal	Vassil	Oceanside	CA	Marsha	Waterbury	Los Angeles	CA
Joe	Vecchi	Garden Grove	CA	Diana	Waters	Torrance	CA
Victoria	Vega	West Covina	CA	Breana	Watkins	Calabasas	CA
Glen	Venezio	San Juan	PR	Danuta	Watola		42660
Lesley	Vennero	Santa Clarita	CA	Mary	Watson	San Pedro	CA
Dirk	Verbeuren	Valley Village	CA	Virginia	Watson	Los Angeles	CA
Shellie	Vermeer	Laguna Hills	CA	Stephanie	Watters	Trabuco Canyon	CA
Geena	Verna	Torrance	CA	Margret	Watts	Glendale	CA
Shirley	Vernale	Los Angeles	CA	Don	Webb	Santa Barbara	CA
Kara	Vesely	Long Beach	CA	Faith	Weedn	Los Olivos	CA
Janice	Vieth	Covina	CA	Annie	Wei		48700
Genny	Villa	Oceanside	CA	Laurie	Weigandt	La Mesa	CA
Juan	Villagomez	Palmdale	CA	Garrett	Weinstein	West Hills	CA
Victoria	Villagran	Temecula	CA	Joe	Weis	Reedley	CA
Gladys	Villagrana	Moreno Valley	CA	Rita	Weisheit	Manhattan Beach	CA
Timothy	Villalobos	Spring Valley	CA	Lynne	Weiske	Los Angeles	CA
Constance	Villalvazo	Los Angeles	CA	Valerie	Weitz	Encino	CA
Mishel De	Ville	Fullerton	CA	Jeff	Wells	San Diego	CA
Saul	Villicana	Long Beach	CA	R	Wells	Los Angeles	CA

First Middle	Last	City	State
Jennifer	Wesson	Fresno	CA
Lori	West	Coronado	CA
Karen	Weston	Palmdale	CA
Amber	Wheat	Redondo Beach	CA
Linda	Whetstine	Poway	CA
Dave	Whipple	Pacific Grove	CA
Mindi	White	Los Angeles	CA
Karina	White	Sierra Madre	CA
Steve	White	Santa Monica	CA
Michael	White	Los Angeles	CA
Frances	Whiteside	Montclair	CA
Erika	Whitton	Irvine	CA
Barbara	Whyman	Ventura	CA
Joan	Wickham	Pasadena	CA
Monica	Wiesener	Calabasas	CA
Kathryn	Wild	San Diego	CA
Laura	Wild	Santa Barbara	CA
Carol	Wiley	Victorville	CA
Gail	Wilke	Sunland	CA
Wendy	Wilke	Fresno	CA
Jere	Wilkerson	Avila Beach	CA
Jennifer	Wilkerson	Pacific Grove	CA
Connie	Wilkinson	Pismo Beach	CA
Bri	Williams	Julian	CA
Christina	Williams	Los Angeles	CA
Cole	Williams	Los Angeles	CA
Cassandra	Williams	Brawley	CA
Sandy	Williams	Covina	CA
John	Williams	Los Angeles	CA
Ted	Williams	Ralls	TX
Judy	Williams	Caliente	CA
Donna	Williams	Los Angeles	CA
James	Wilson	Verona	MS
Tim	Wilson	Poway	CA
Agnew	Wilson	West Hollywood	CA
Marianne	Wilson	Granada Hills	CA
William	Winburn	Rancho Palos Verdes	CA
Betty	Winholtz	Morro Bay	CA
Joie	Winnick	Sherman Oaks	CA
Karen	Winnick	Beverly Hills	CA
Teresa	Winsor	San Diego	CA
Anita	Wisch	Valencia	CA
Melissa	Witt	Van Nuys	CA
Rose Ann	Witt	Thousand Oaks	CA
Wendy	Wittl	Santa Barbara	CA
Amy	Wolfberg	Los Angeles	CA
Charles	Wolfe	Sylmar	CA
Pat	Wolff	Arcadia	CA
Nina	Wong	San Gabriel	CA
Valeree	Woodard	Joshua Tree	CA
Joann	Woodring	San Diego	CA
Jean	Woodrow	San Pedro	CA
Tansy	Woods	San Diego	CA
Scott	Workinger	Yucca Valley	CA
Emily	Worrell	San Luis Obispo	CA
Darcy	Wright	Vista	CA
Madeline	Wright	Los Angeles	CA
Susan	Wright	Bakersfield	CA
Tiffany	Wu	Oak Park	CA
Kristina	Wunder	Santa Monica	CA
Caitlin	Wylde	Los Angeles	CA
June	Yamada	Westminster	CA
Mary	Yang	Solana Beach	CA
Kenneth	Yates	Pacific Palisades	CA
Gail	Yborra	Wilmington	DE
Kathy	Yeomans	Ventura	CA
Julian	Yerena Jr	Parlier	CA
Patricia	Yoder	Oceanside	CA
Jo	Young	Culver City	CA
Noah	Youngelson	Los Angeles	CA
Ethan	Zachadnyk	La Jolla	CA
Ethan	Zachadnyk	La Jolla	CA
Julie	Zack	Fresno	CA
Cindy	Zacks	Joshua Tree	CA
Rena	Zaman-Zade	Escondido	CA
Sandra	Zaninovich	Los Angeles	CA
Patrice	Zboya	Concord	NH
Felicia Chase	Zeff	Woodland Hills	CA
Sandy	Zelasko	Valley Center	CA
Kathy	Zelaya	Los Angeles	CA
Silvana	Zelmanovich		20036
Esther	Zepeda	Los Angeles	CA
Jose	Zermeno	Fontana	CA
Paige	Ziehlermartin	Pasadena	CA
Erika	Ziesmann	Covina	CA
Monika	Zimaniova	Sherman Oaks	CA
Louise	Zimmer	Temecula	CA
Loy	Zimmerman	Long Beach	CA
Nicholas	Zizelis	Palm Springs	CA
Steve	Zmak	Marina	CA
Malgorzata	Zmuda		32332
Teresa	Zollars	Fresno	CA

FORM EMAILS

Comment #	
1 (Form Letter) ~2,050	Dear Oceano Dunes HCP Field Supervisor, I am writing to urge you to/(Please do everything in your power) to protect the imperiled plants and animals that live within the Oceano Dunes State Vehicular Recreation Area. The habitat conservation plan you're working on cannot include any decrease in protections for nesting birds for any reason. And the accompanying environmental review must provide a clear proposed action and a reasonable slate of alternatives to protect imperiled wildlife and the health of nearby communities. I oppose the current proposed action detailed in the federal register notice for several reasons. First, it calls for reducing protective fencing set aside for nesting birds in order to increase areas for off-road vehicles. This is unacceptable. Any increase in areas where vehicles can drive during the nesting season will harm nesting and breeding birds and shouldn't be part of the alternatives for a conservation plan. State Parks also needs to address air-quality issues caused by ORV use that are already harming the local community. Any expansion of recreation areas or use will worsen this problem. And finally, a state natural communities conservation plan is needed to ensure that any impacts to snowy plovers, least terns and other protected species are fully offset. Thank you for addressing these concerns as the planning process moves forward.
ADDED TEXT TO FORM LETTER	
2	STOP MURDERING THESE BIRDS. STOP YOUR CRUELTY. STAND UP TO THE HORROR IN THE WHITEHOUSE.
3	Please stand up to protect our environment against the exhaust, dust, and noise polution from off road vehicles on and around our beaches. In addition to harming the environment, it's destroying the habitat for not just these birds, but sea life in general.
4	As an Oceano resident, I want to ensure our small feathered residents are not put at risk by offroading on the Dunes.
5	The Oceano Dunes State Vehicular Recreation Area and the imperiled animals and plants that inhabit this unique ecosystem need to be protected from further harassment, slaughter and destruction. You must create a Habitat Conservation Plan that increases protections of nesting shorebirds which includes safeguards under state law for all the area's rare animals and plants. It's shameful and unethical that you have not taken action years back to minimize or eliminate the damage to this unique ecosystems and its rare species. You have the duty to do everything in your power to protect habitats and species that are imperiled due to mismanagement and human abuse. Snowy plovers are one of the endangered shorebirds facing assault and death when they are run over by off-road vehicles (ORV). This is unacceptable and must stop immediately. ORV should not even be allowed in fragile habitats inhabited by endangered and/or threatened species. How can these birds breed, nest , feed and rest safely with this harassment and destruction? Your current proposal expands recreational areas and reduces protective fencing designated for nesting shorebirds to allow even more ORV. This is more assault to injury. The impact of more ORV will further increase the noise and air pollution of this fragile community. Furthermore, to ensure any impacts to endangered and/or threatened species are compensated, a State Natural Communities Conservation Plan needs to be implemented. I trust you will act with true leadership, vision conservation ethic to protect rare ecosystems and the plant and animal species that inhabit them.
6	These uncivilized drivers are destroying our beaches. They also take advantage of many streets in our cities. They should be put in a cell where they can use all the energy they have thanks to a country that has food to put on our tables. Or fine them with time serving the communities. It is a shame that in California we have to defend our birds and their ecosystem from these useless individuals!

7	I am writing as a biologist & avid outdoorsperson to urge you to do everything in your power to protect the imperiled plants and animals that live within the Oceano Dunes State Vehicular Recreation Area. The habitat conservation plan you're working on cannot include any decrease in protections for nesting birds for any reason. And the accompanying environmental review must provide a clear proposed action and a reasonable slate of alternatives to protect imperiled wildlife and the health of nearby communities.
8	I do not think that the thrill of driving a vehicle on sand should supercede the needs of the shorebirds or that of the ecology as a whole.
9	I have enjoyed using the vehicle recreation area myself, and do believe it is a valuable thing to have nearby our homes (I am living in San Jose now, but previously lived in San Luis Obispo, and still enjoy visiting the central coast when I can). However, if it is endangering rare plants and animals, then that danger must be mitigated. Surely there are other areas where we can enjoy our vehicles without harming our precious wildlife.
10	By the way, I've ridden OHV's at Oceano Dunes. My son attended Cal Poly and spent plenty of time there. We're sympathetic to the use of the park for OHV use. But, it's the 21st century, we need to protect these species, and I think there's plenty of room for us all to get along.
11	My opinion is that this land is better served by conservation, rather than harmful recreation. I value the snowy plover and other shorebird and consider this finite resource to be of prime importance.
12	Do not turn California beaches into waste dumps! Protect our shores. Texas allows driving on beaches and that has destroyed the beaches.
13	There are at risk plants and animals living within the Oceano Dunes State Vehicular Recreation Area, and I urge you to do all that you can to protect them. Your proposed habitat conservation plan should NOT reduce protections for nesting birds, including the endangered Snowy Plover, for any reason. Also, the accompanying environmental review should present a distinct action plan plus sensible alternatives to safeguard both imperiled wildlife and the health of communities nearby. Thus, I contest the current proposed action specified in the federal register notice for several reasons. First off, it calls for diminishing fencing set aside to protect nesting birds which would increase the area for off-road vehicles. In so doing, vehicles driven during the nesting season would harm nesting and breeding birds, and therefore, should not be part of any alternative conservation plan. Furthermore, any plan needs to confront air-quality problems caused by off-road vehicle use that are already affecting the health of nearby communities. Any enlargement of recreation areas or use will aggravate this problem. Lastly, a state natural communities conservation plan is required to guarantee that any impacts to Snowy Plovers, Least Terns and other protected species are fully mitigated. Thank you for weighing my comments as the planning process proceeds.
14	As an of road enthusiast that also appreciates our delicate ecosystem, I am writing to urge you to do everything in your power to protect the imperiled plants and animals that live within the Oceano Dunes State Vehicular Recreation Area.
15	For better or worse our species has the power to determine the fate of all others. Thus you have the power to end the lives of God's creatures through your actions. I trust such decisions are made with full knowledge of their long term impact. One can't imagine anyone believing the rights of man's temporary pleasures should be held in higher regard than the protection of God's creatures. I sincerely hope your conscious guides your actions in this matter as one can never restore a life which has been destroyed. May your decisions always be thoughtful so you never suffer the miserable affliction of regret.
16	Thank you for addressing these concerns as the planning process moves forward. Momentary "fun" driving on the fragile dunes will never be worth losing these species that are severely impacted by these activities. Again, please help!
17	I drive 3 hours to go to this lovely beach about 3 times a year, and love watching the snow plovers. Please realize you will lose tourism.
18	When will man stop only thinking of themselves and how much money can be made from everything? Humankind destroys everything it touches. We need to wake up and preserve what we have left of our planet. It's the only one we have, but man acts like we have many more them!
19	For four decades and more I continue to bird, even at 88 years of age, Oso Flaco Lake, Oceano Camgrounds and Pismo Beach areas and am appalled at the steady increase of vehicular "recreation" with its pollution, yes, and concomitant destruction of precious fauna and flora.
20	Off road vehicles need to go elsewhere and certainly NOT where birds need habitat. The birds are having a tough time finding safe habitat anywhere with our growing population.

21	EVERY LIVING CREATURE, INCLUDING SNOWY PLOVERS AND ALL SHOREBIRDS ARE VITAL TO LIFE. Why should off-road vehicles have more rights to access on to these beaches than the Snowy Plovers who have nested there longer than the drivers of these vehicles? Maybe you could divert the ORV traffic to another beach or another area of the beach? Would that be possible? Or maybe you could prohibit ORV driving on this beach altogether. Yes, this would piss off the drivers, but the birds would be saved - and their lives are just as important or more than the polluting vehicles and possibly trash from the drivers
22	The bigger question is why are you facilitating destruction of a species, fouling air and land with out of control ORV riders who seem to carelessly disregard the damage they do? U.S. Fish & Wildlife departments are supposed to primarily PROTECT wildlife while restricting activities that will forever damage and/or destroy Oceano Dunes habitats?
23	Why isn't action being taken to prevent endangered nesting shorebirds from being trampled by off road vehicles?
24	Once these birds are killed, they are gone for good. If you do not stop idiots on off-road vehicles from killing them, then no one has the power to protect these birds. The Constitution does not give permission to kill off everything just for "fun." So do your job and protect the environment. Now here is the safe version of the standard letter.
25	Unfortunately, the current proposal reduces the protective fencing that creates a safe haven for nesting shorebirds, which could allow for even more ORV traffic on the beach. More vehicles will mean more dead birds and worse air quality for the local community. Wildlife officials must create this plan to increase protections for nesting shorebirds and include safeguards under state law for all the area's rare plants and animals.
26	Time to get your s&%t in action and stop the killing! We have waited too long for action at Oceano Dunes SVRA. #SavetheSnowyPlovers
27	Please address the killing of snowy plovers by reckless recreational vehicles destroying their habitat immediately. I begin to suspect that mankind will not be satisfied until humans are the only species surviving, which will lead to the extinction of H. sapiens.
28	There is absolutely NO REASON that ORV's should have precedence over nature on our public beaches!
29	PLEASE STOP THE ERADICATION OF SNOWY PLOVERS BY BEING CRUSHED UNDER ORV'S. YOU HAVE THE POWER TO PROTECT AND SAVE THEM, PLEASE DO SO NOW. THANK YOU!
30	As a resident of California's Central Coast, I have borne witness to far too much loss of our natural beach habitats.
31	My family and I care deeply about this issue!
32	Why must flora and fauna and their habitat continue to be sacrificed for the "fun" of an overpopulating species that has countless other ways to experience an adrenalin rush - hardly the way to experience the wonders of this natural landscape. The fact that that they regularly kill/injure each other speaks to the thoughtlessness of their behavior.
33	Protect our wildlife and ban ORV's that kill, destroy, and pollute. Step up and be part of the solution for preserving our natural resources now and for future generations.
34	I would have never thought I'd be writing to a California agency to BEG them to stop this but, there you are...I am shocked because you've done such a good job everywhere else that is still salvageable as habitat for these endangered birds.
35	There is no need for people to be driving on the beach. Vehicles leak oil, polluting the air and water and reduce the peaceful atmosphere most people and wildlife expect to find at the beach.
36	Your lack of interest in saving defenseless birds and their babies is shameful. Please rethink and adjust your so far terrible policies. People can off-road in plenty of other places.
37	We don't need dune buggies and people swarming this area! I know, I have been there, I have ridden dune buggies.
38	Your plan to reduce harm to the snowy plover's doesn't look very good. Surely you can do a better job! I have been to many beaches where there are warning signs and regulations to protect these birds. Why not you?
39	Allowing 4X4 vehicles run over rare and threatened birds on their nesting areas is insane. The idea of having an off-road area in a known nesting site is also insane. It is your responsibility to protect these birds and plants from the destructive actions of a bunch of testosterone driven idiots. It should be a no brainer that this area be closed during breeding season and protected plants should be cordoned off from these raging vehicles.
40	I have seen how New Jersey takes care of their rare snowy plovers, protects beaches and their habitat, and educates the public to understand the importance of doing so. California should be leading the way.
41	What is happening now is NOT okay. This must stop and the birds must be protected

42	Preservation of our habitat and our wildlife is a primary responsibility for humanity in our age. Allowing off-road vehicles to destroy the habitat of endangered animals is absolutely unacceptable. I
43	I oppose the increasing use of the dunes by selfish and short sighted off road vehicles on valuable coastal resources. I ride my dirt bike only on private race tracks that do not endanger our wildlife.
44	Here in Cambria the Western Snowy Plover is showing up by the dozens this winter for the first time in decades on Santa Rosa Creek Beach. Protecting them here is crucial. Protecting them at Oceano Dunes should show us how!
45	As you may know, this same thing happened in North Carolina/Cape Hatteras concerning endangered nesting plovers and OHV's. The Park Service put an end to it during plover's nesting season, which was not popular with the righteous ORV owners. However, the people wouldn't stay off the dunes so it had to be done. Dunes need to be protected anyway not only as habitat, but as first line of coastal protection in super-high tides. With so many entities competing for their "rights", it's time for a "rights hierarchy". Protecting wildlife and preventing flooding has a higher purpose than allowing a frequently drunken "yee-haa" good time to those who would tear through the dunes. Natural areas such as these should be off limits to these destructive, land-scarring, air-fouling, noise-polluting recreational vehicles anyway. Permit access for surf-fishing, but reconsider these recreational 4wd uses. With so little natural quiet space available to our densely populated coasts, it is assaulting to encounter more noise and pollution along our pristine coastline. Besides, there are so few dunescapes left in Coastal California. Relegate this activity to another (contained) location, please.
46	If anything there should be an INCREASE in protective fencing to protect the wildlife and prevent damage to this valuable resource. This would be more inline with the mandate of USFWS, 'to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people.'
47	My husband and I have visited the wonderful beaches in this area. I was very impressed with Santa Barbara County rangers who care deeply about the Snowy Plover in their regional park. I believe you should follow their example. I urge you commit as they have to protect the imperiled plants and animals that live within the Oceano Dunes State Vehicular Recreation Area.
48	MORE wildlife protections, not Less. Actions & Alternatives required.
49	As a California wildlife biologist and former zoo keeper at the Los Angeles Zoo who has traveled extensively along California's beautiful central coast, I am appalled by the existence of the Oceano Dunes State Vehicular Recreation Area and further dismayed by plans to increase access of vehicles to fragile coastal dunes. Off-road vehicles are consumptive, destructive users of the coast. As climate change and an increase in coastal populations has put such environments at risk, we can no longer afford to let off-road vehicles tear up the dunes and kill wildlife merely for "fun." We now know that coastal dunes are fragile and home to snowy plovers and other endangered and declining species. We also recognize that there is demonstrable need for more pastoral, non-consumptive and non-destructive access to California's beautiful coast, particularly its unique dunes. The US Fish & Wildlife Service needs to implement stronger protections for nesting shorebirds, especially the snowy plovers, as well as declining coastal plant species. Catering to the loud complaints of ORV enthusiasts does not serve the larger public nor preserve the environment for future generations. The time has come to fully protect the imperiled plants and animals that live within the Oceano Dunes State Vehicular Recreation Area.
50	Protecting these birds is the right thing to do, letting the orv's to continue killing these birds all for the fun of off roading is negligent. Killing for the sake of entertainment is ridiculous!
51	Some of us are VERY tired of our amazing area being used as an amusement park for sand jockeys from other parts of the state who don't care about OUR environment.
52	MUST We ALLOW this?? Man is ever encroaching on our animal's territory. We need to have some boundries and strong protections in this 21st century. We are taking away their forests, the waterways, the oceans, now the beaches. PLEASE do the honorable thing and leave a legacy of beauty not one of noise and destruction. Have integrity and do the right thing and help keep man away from these important nesting areas. We don't need vehicles running up and down our beaches anyway.
53	It is really stupid to allow vehicles to drive on the beaches. These areas are for our use, and not vehicular.
54	My letter is to call in you to respect what came here first, and just wishes to survive, not destroy, pollute, or run over another living thing for fun & profit.

	In my growing up & education (mostly public), I thought that was what government; group of representatives, was supposed to do for us...look out for living things.
55	As the former Chair of the California Coastal Commission, I oppose the current proposed action detailed in the federal register notice for several reasons. First, it calls for reducing protective fencing set aside for nesting birds in order to increase areas for off-road vehicles. This is unacceptable. The cages are too small as it is. The birds are precocious and therefore the young fledglings get killed by the vehicles as the birds leave the caged in areas. The areas where the nests are should be completely off limits to ORVs during nesting and fledging season. This is the only way to prevent death of the birds before they can fly. Your statistics show that the birds nest and fledge but few live to make it past that point, proving the need for limits on the ORV areas.
56	I have been going to Oceano all my long life. Surely we can find a way to protect the birds and plants and let the dune buggies have some space too? The dunes aren't popular only with the ORVers - Safe habitat is a life or death issue for the birds and plants.
57	I've watched as pristine desert lands are stripped of life for the sake of a small group of people wanting to drive their off road vehicles up and down ravines and hillsides. While fragile life forms are eliminated from the area. It's profoundly sad and disturbing. Fortunately, the protected areas are respected and patrolled for violations, with the approval of the vast majority of mature and sane people. Sometimes there just are not any do-overs and once these fragile areas are violated, they may never rebound and become essentially lifeless areas.
58	If there ever was a canary in a cage scenario, it's the disappearance of the plover. Death of the plover means death of our beaches. We simply must protect them from destruction by developers trying to make a buck at the expense of Nature.
59	I object to people with off-road vehicles inflicting harm and getting preferential consideration! I am worried about adequate protections for the imperiled plants and animals that live within the Oceano Dunes State Vehicular Recreation Area.
60	I say people can ride vehicles everywhere and need to be kept OUT OF HABITATS. TOO MANY ANIMALS are disappearing and they are priceless and irreplaceable
61	The Northern Rhino in Africa is going extinct. While you don't erect fences or drag you feet in regard to the Snowy plovers, they too are moving towards extinction while ORV traffic is allowed to pollute the air and kill the plovers. This issue is very important and must be addressed ASAP.
62	When will we put the needs of other species before our recreational activities.
63	Although I used to enjoy the dunes myself, I never knew that protections for wildlife were not in place.
64	Protect and preserve. Whether you are impacted or not, these birds are and it is our job to save them as well as their habitat. Losing one species can upset an entire eco system. Every one of us, animals, birds, reptiles, humans, play a part and the damage already done by humans is severe. Keep the earth balanced by helping those who cannot help themselves.
Other	Other comments: Commenters emphasize they are Californian, taxpayers, love plovers, former resident of Pismo, current residents, listing their background as biologists, or Audubon/SNPL/CLTE volunteers; stop the murder/carnage, love State Parks, this matter is of personal concern, , in disbelief ORVs are allowed on the beach; too many of our State's species are in peril of extinction; abbreviated expletives, do the right thing; these wildlife and plants need our protection

Appendix B: HCP Avoidance and Minimization Measures

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Oceano Dunes District HCP EIR
Appendix B: HCP Avoidance and Minimization Measures

Table B-1: Avoidance and Minimization Measures (AMMs) for SNPL	
Park Visitor Activities: Motorized recreation (CA-1)	
Potential Effects: Adults/juveniles/chicks struck by vehicles; Breeding/foraging/roosting disturbance; Chicks separated from adult(s) and inadequately attended or exposed to predation/inclement weather; Eggs buried by sand, exposed to predation, or not properly incubated when adults are disturbed; Chicks/eggs abandoned when adults are disturbed, killed, or injured; Eggs crushed	
Avoidance Minimization Measures:	
AMM 1	CDPR will continue to create educational content on the Oceano Dunes SVRA and Pismo State Beach websites that includes life history information and measures being taken to protect all HCP covered species found at the parks. Information can be updated as needed and visitors can find out what the parks are doing and what they can do to protect the covered species. Covered species information will continue to be included as part of ongoing interpretative programs as well.
AMM 2	Signs explaining SNPL natural history and protection measures in place in the HCP area will continue to be posted for information and education of visitors in the HCP area. Interpretive panels at beach access points (e.g., Sand Highway, Oso Flaco Lake, Pier Avenue, and Grand Avenue) and signs identifying closed areas will continue to be erected to increase public awareness of threats to nesting SNPL and to inform the public of the park's management efforts to protect special-status species. CDPR will also continue to provide a low wattage radio station with a repeated recording of park information, including information about protection of sensitive species. The radio station plays 7 days a week, 24 hours a day and provides updated information on measures taken to protect SNPL. Information on SNPL will also continue to be posted on the Oceano Dunes SVRA and Pismo State Beach websites.
AMM 3	CDPR will continue to enforce resource protection regulations. All exclosed and symbolically fenced areas will continue to be posted with signs in English and Spanish. State Park rangers will continue to have the responsibility to enforce park regulations enacted to protect SNPL, including issuing citations for incidents of trespass into the area closed for nesting. In addition, resource staff monitors will continue to contact visitors who violate park regulations and, where appropriate, contact rangers who will issue a citation.
AMM 4	Posted speed limits will continue to be enforced throughout the HCP area.
AMM 5	CDPR will continue to fence off the Southern Exclosure and North Oso Flaco during the breeding season (March 1 to September 30) to limit vehicle and human disturbance to SNPL nesting areas (and to protect SNPL from terrestrial predators).
AMM 6	A buffer zone a minimum of 100 feet that prohibits camping or parking vehicles will continue to be established outside and around nest exclosures.
AMM 7	Habitat enhancement will continue to be avoided within 100 feet of the fence that borders the open riding area to discourage recreation near nesting that may cause disturbance to breeding birds.
AMM 8	Daily monitoring will continue to take place during and immediately after the SNPL breeding season (when exclosure fencing is removed) to enable better identification of potential human use-related threats to SNPL and to summon law enforcement assistance, if needed, to prevent or eliminate any human use related threats to the species.
AMM 9	If a SNPL is found injured or dead, USFWS will continue to be contacted within 3 working days of finding the bird.
AMM 10	Any SNPL breeding activity in the riding area (e.g., tracks, scrapes, or pairs observed) will continue to be monitored closely. These areas will continue to be marked and rechecked during the day and one person will continue to be assigned each morning to recheck any potential breeding areas. All SNPL tracks outside the seasonal exclosures will continue to be followed to check for potential nests. Any nest found will continue to be protected with a large single-nest (i.e., 100-foot radius) exclosure to protect nests from people and predators, as determined to be necessary. If feasible and necessary, a westerly travel corridor will be erected to provide safe foraging for chicks.
AMM 11	If a SNPL nest is established within the open riding area, but within 500 feet of the existing seasonal exclosure, fencing will continue to be erected to enlarge the exclosure to encompass the nest site (if topography allows and if safe public traffic patterns are available). Fencing will continue to be placed a minimum of 100 feet from the nest site.
AMM 12	When two or more nests in the open riding area are located within 500 feet of each other and are 500 feet or more away from the seasonal exclosure, they will continue to be encompassed into a new large seasonal exclosure if topography allows. Seasonal exclosures so erected include fencing that extends to the surf line, if chick travel corridors establish that need, so as to provide a secure travel corridor for foraging activity for SNPL chicks. Fencing for such new seasonal exclosures will continue to be maintained a minimum distance of 100 feet from the nest site.
AMM 13	If an SNPL nest is initiated inside the Southern Exclosure and close to the exclosure fence bordering the riding area, CDPR staff will continue to install additional fencing (i.e., "bumpout") to maintain a perimeter of a minimum of 100 feet from the open riding and camping area to the nest. These bumpouts will continue to be monitored regularly. If an incubating bird is disturbed by normal recreational activity, the bumpout will be increased in size, as needed. All nests are monitored for disturbance, and any nest that is disturbed by regular recreation activity may receive a bumpout. This additional fencing will continue to remain in place during the period when nests are active or chicks are found in this area. Once chicks move out of the area or reach fledge age, the bumpouts will be removed.

Table B-1: Avoidance and Minimization Measures (AMMs) for SNPL	
AMM 14	Circular and/or 10-foot-by-10-foot nest exclosures will continue to be used, if deemed necessary by staff, for SNPL nest protection. These exclosures are constructed using 2-inch by 4-inch wire no-climb fence, and 0.5-inch by 0.5-inch mesh netting is placed on top. The exclosures are secured with metal posts. When appropriate, they are buried 8 inches deep.
AMM 15	Mini exclosures measuring approximately 3 feet by 3 feet by 3 feet will continue to be used in the HCP area. These are constructed with 2-inch by 4-inch wire non-climb fence with a top of the same material. When appropriate, they are buried 4–8 inches deep. CDPR may use additional mini-exclosures, experimenting with different size, orientation, and/or material as new information becomes available on mini-exclosures from other sites.
AMM 16	At least one CDPR vehicle or trailer will continue to be available throughout the SNPL breeding season to carry all tools and equipment necessary to immediately construct a single-nest exclosure or bumpout.
AMM 17	Prior to a known nest hatching outside a seasonal exclosure and within an area open to motor vehicles (e.g., open riding area), monitors will continue to oversee the erection of signs and/or symbolic fencing to provide a safe passage until the brood reaches a non-vehicle use area of Oceano Dunes SVRA. Qualified monitors will continue to attempt to follow the broods if a brood is observed leaving the single-nest or smaller exclosures, to identify threats to brood movement or safety, and to obtain assistance as necessary from Oceano Dunes SVRA patrol staff.
AMM 18	Should broods engage in foraging activity in the wrack line outside the seasonal exclosures, vehicle traffic flow will continue to be diverted or regulated to allow safe movement of the brood.
AMM 19	Monitors will continue to search for SNPL chicks in the riding area daily. During the chick-rearing period, one person will be assigned each morning to survey the area surrounding exclosures in the open riding area for chicks that have wandered out of protected fenced areas during the night. Monitors will continue to take appropriate action to direct chicks back inside the fenced areas, as described in section Error! Reference source not found..
AMM 20	CDPR will continue to place temporary signs in areas where SNPL are known to congregate to alert drivers of their presence and to emphasize a 15-mph speed limit. If possible, increased enforcement of speed limits will occur in areas where large numbers of SNPL are roosting.
AMM 21	Weekly monitoring for the location of SNPL within the HCP area will continue to occur during the non-breeding season (October 1 through February 29), as staff levels and weather conditions allow. Monitoring will be increased if necessary (e.g., during storm events).
AMM 22	When, despite CDPR's efforts[1] to protect nests and/or move chicks back into the safety of the seasonal exclosure, chicks and eggs are still at risk of being injured or killed by covered activities not related to covered species management (e.g., motorized recreation or new proposed activities), CDPR may capture up to 12 eggs (i.e., 4 nests) and/or 12 chicks (i.e., 4 broods) for captive rearing each year. In all cases, the need for captive care is determined by a qualified Environmental Scientist and is used selectively. It is also dependent on an approved facility having the capacity to accept the eggs and/or chicks. If CDPR has captured 8 eggs or 8 chicks for captive rearing during one breeding season pursuant to this AMM, CDPR will contact the USFWS and discuss whether modified or additional AMMs (e.g., expanding the exclosure along the shoreline to provide additional protected foraging habitat, increasing monitoring, and/or increasing signage) are appropriate to minimize risk of additional injury or mortality and ensure no more than 12 eggs and 12 chicks are captured for captive rearing[2]. Because this measure involves capture, which is considered take under FESA, it is included within CA-12b
AMM 23	During the non-breeding season, if determined to be necessary to protect wintering SNPL, CDPR staff will temporarily close the beach within the HCP area, including the Arroyo Grande Creek crossing and the Grand Avenue park entrance, to motor vehicles during storm events with anticipated high tides and/or large surf until such conditions or hazards no longer exist. Beach conditions will be regularly monitored, and vehicle use will be allowed again only after CDPR staff has determined that it can occur without causing harm to SNPL, public safety is no longer an issue, and resource protection measures are no longer necessary.
AMM 24	CDPR peace officers will continue to provide focused enforcement of HCP area regulations (e.g., 15-mph speed limits). CDPR peace officers will continue to respond to requests by monitors for assistance with SNPL protection and security. Enforcement of laws affecting safety of SNPL will continue to be the highest non-emergency Law Enforcement priority.
AMM 25	During anticipated high visitor-use periods, such as Memorial Day Weekend, Labor Day Weekend, July 4 Weekend (or as determined by historic visitor attendance records), monitoring staff will continue to be on site for extended hours to monitor within the open riding area and identify threats to all life stages of SNPL from public recreational activity.
AMM 26	During non-holiday weekends (i.e., Friday and Saturday), a minimum of two CDPR peace officers will continue to be on duty and available from 0600 through 2400 each day to enforce regulations (e.g., 15-mph speed limit, dog leash laws, litter). During non-holiday weekdays (i.e., Sunday through Thursday), a minimum of two CDPR peace officers will continue to be on duty from 0700 through 2000 each day to enforce regulations.

[1] At times, based on Senior Environmental Scientist professional discretion, CDPR may determine that SNPL eggs and/or chicks should be collected and transferred to an approved wildlife facility without an attempt to protect them on-site because protecting eggs and/or directing chicks back to the exclosure will not eliminate the threat of covered activities.

[2] Capture associated with this AMM is a new covered activity proposed under the HCP, which is different than ongoing capture associated with natural resources management activities. This AMM addresses capture when eggs or chicks are threatened by non-covered species management activities, such as motorized recreation.

Table B-1: Avoidance and Minimization Measures (AMMs) for SNPL	
AMM 27	During holiday periods, one monitor will continue to be assigned to ensure that no unauthorized entry is made into the north end of the Southern Exclosure during both daylight and evening hours.
AMM 28	During major holiday periods, CDPR peace officers will continue to be on duty 24 hour/day. From 0700 to 2000, a minimum of three ranger/peace officers will continue to be on duty. From 2000 to 0200, a minimum of two ranger/peace officers will continue to be on duty. During mid-day periods, when visitor attendance is highest, as many as four ranger/peace officers will continue to be on duty. Rangers/peace officers will enforce all regulations (e.g., 15-mph speed limit, dog leash laws, litter) in the HCP area.
AMM 29	CDPR will continue to use an adaptive management approach, where information and experience from previous breeding seasons is used to develop additional appropriate AMMs in subsequent seasons to minimize or eliminate impacts to SNPL from covered activities.
AMM 30	CDPR will continue to implement management measures and modify protocols in accordance with ongoing adaptive management and based on recommendations in annual monitoring reports.
AMM 31	Oceano Dunes SVRA will continue to participate in the Region 5 working group for SNPL recovery.
Potential Effects: Chicks, eggs, adults, juveniles potentially exposed to predation by increased trash associated with recreational activity	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 32	Trash dumpsters will continue to be provided near the OHV staging area near Post 2. The location of the trash dumpsters will be changed, as necessary, to avoid disturbance to any nearby active SNPL nests.
AMM 33	CDPR will continue to use trash dumpsters/receptacles designed to prevent access by predators such as gulls. CDPR will continue to explore options to reduce the movement of trash from the dumpsters and reduce predator presence at the dumpster sites.
AMM 34	CDPR will continue to remove or modify signs, fence posts, and other man-made features to eliminate perches for predators in areas where they could impact SNPL.
AMM 35	As appropriate and dictated by field conditions, CDPR will continue to have the option to install single-nest exclosures on SNPL nests in South Oso Flaco or in other areas where they are deemed vulnerable to predators.
AMM 36	Fencing will continue to be buried, as feasible, to limit terrestrial predators from undermining the fence.
AMM 37	In coordination with USFWS, the predator management plan will continue to be reviewed and updated annually, if necessary, to identify appropriate responses to predators.
AMM 38	When additional options for managing predators are needed, selective live-trapping and relocation of avian predators will continue to be conducted by authorized staff or subcontractor, and selective live-trapping and relocation or lethal removal of mammalian and avian predators will be conducted by USDA Wildlife Services (or other authorized subcontractor).
AMM 39	CDPR staff will continue to remove animal carcasses in or adjacent to nesting and brood-rearing habitat.
AMM 40	Where feasible, CDPR staff will continue to harass predators to flush them from sensitive areas. Hazing techniques used include firing a bird whistler and approaching predators where appropriate. CDPR will continue to coordinate closely with predator specialists regarding the location of known or potential nests and brood activity, prior to the specialists conducting work.
AMM 41	All visitors will continue to be informed that they are to deposit their trash in dumpsters/receptacles provided. All campers will continue to be offered plastic garbage bags. All park staff will continue to carry trash bags in each vehicle and make them available to visitors for removing trash and litter from visitor use areas.
AMM 42	CDPR will continue to manually remove litter and garbage from beaches within existing budget and staff limitations.
Potential Effects: Breeding/foraging/roosting habitat quality reduced; Chicks, eggs, adults, juveniles potentially exposed to predation and/or inclement weather by altered habitat	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 43	CDPR will continue to place woodchips, large woody material, beach wrack, and native plants throughout the seasonal exclosures to serve as natural shelter. Woodchips will continue to be spread in patches in the 6, 7, and 8 exclosures in areas of barren sand and over thinning woodchip patches remaining from the previous year(s).
AMM 44	CDPR staff will continue to collect wrack in the open riding area and disperse it in the Southern Exclosure. In addition to providing cover, wrack on the shoreline provides a food resource supporting invertebrates, which in turn are prey for SNPL chicks, juveniles, and adults.
AMM 45	Talitrids (beach hoppers) will continue to be collected from outside the vehicle use area north of Grand Avenue or from South Oso Flaco. Staff will continue to inoculate the wrack addition areas of the Southern Exclosure shoreline with talitrids in order to establish a breeding population and increase SNPL food resources.
AMM 46	The Superintendent may consider implementing additional habitat enhancement measures if Environmental Scientists determine such measures may aid in meeting the criteria laid out in biological objectives for SNPL (section Error! Reference source not found.). If implemented, the value of any additional habitat enhancement measure to nesting SNPL and CLTE will be studied to evaluate the measure's effectiveness at improving reproductive success and to determine whether and how the measure should be implemented in future seasons.
Park Visitor Activities: Camping (CA-2)	
Potential Effects: Similar to motorized recreation activities	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	

Table B-1: Avoidance and Minimization Measures (AMMs) for SNPL
Park Visitor Activities: Pedestrian activities (CA-3)
Potential Effects: Breeding/foraging/roosting disturbance; Chicks and eggs picked up by visitors; Chicks/eggs abandoned when adults are disturbed, injured, or killed; Chicks separated from adult(s) and inadequately fed or exposed to predation/inclement weather; Eggs buried by sand, exposed to predation, or not properly incubated when adults are disturbed
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 47 If an SNPL nest is established within 150 feet of a restroom facility, permanent restrooms buildings will continue to be closed to public use and exclosure fencing will continue to surround and isolate the restroom to prevent public use. In addition, chemical toilets will continue to be relocated to a minimum distance of 330 feet from any SNPL nest site. AMM 48 CDPR will continue to use symbolic fencing, consisting of a single strand of rope strung between posts with signage, at South Oso Flaco to protect upper beach and dune habitat for nesting. AMM 49 In instances where pedestrian activity is observed disturbing SNPL, CDPR will continue to ask visitors to relocate farther away from nests or broods, and symbolic fencing at South Oso Flaco will continue to be adjusted as needed. AMM 50 Symbolic fencing will continue to be erected at the terminus end of the boardwalk trail at the beach to direct visitors to the wet sand area of the beach and away from potential SNPL nesting and chick-rearing areas. AMM 51 During daylight hours on major holiday periods, one CDPR peace officer will continue to be assigned to patrol the beach. Duties include patrolling outside the nesting exclosure areas to ensure that no entry is made into the exclosures.
Potential Effects: Chicks, eggs, adults, juveniles potentially exposed to predation by increased trash associated with pedestrian activities
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Visitor Activities: Bicycling and golfing (CA-4)
Potential Effects: Similar to pedestrian activities
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Visitor Activities: Fishing (CA-5)
Potential Effects: Similar to pedestrian activities
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Potential Effects: Adults/juveniles/chicks potentially entangled in discarded fishing line/hooks; Chicks, eggs, adults, juveniles potentially exposed to predation by discarded bait
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 52 Public outreach to fisherman in the Oso Flaco Lake area will continue to be conducted by CDPR staff regarding SNPL life history and AMMs. AMM 53 Anglers will continue to be encouraged to properly dispose of fishing lines, hooks, and bait at various locations within the park where trash receptacles are located.
Park Visitor Activities: Dog walking (CA-6)
Potential Effects: Similar to pedestrian activities
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 54 Dogs within the HCP area will continue to be required to be on a leash no longer than 6 feet at all times and within the owner's complete control. AMM 55 Dogs, other than service dogs, will continue to be banned in the Oso Flaco Area. AMM 56 Waste bag locations will continue to be provided in the HCP area. AMM 57 CDPR will continue to enforce dog leash and dog waste regulations, especially in areas where SNPL could be impacted. Resource staff monitors and/or park rangers will continue to contact visitors violating park regulations and, where appropriate, rangers will continue to issue a citation.
Park Visitor Activities: Equestrian recreation (CA-7)
Potential Effects: Similar to pedestrian activities
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 58 Horses will continue to be banned in the Oso Flaco Area.
Park Visitor Activities: Boating/surfing (CA-8)
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Visitor Activities: Aerial/wind driven activities (CA-9)
Potential Effects: Foraging/breeding/roosting disturbance
Avoidance Minimization Measures:

Table B-1: Avoidance and Minimization Measures (AMMs) for SNPL	
AMM 59	Pursuant to Superintendent's Order (section Error! Reference source not found.), CDPR will continue to prohibit kite flying and kiteboard launching and landing south of the Pier Avenue ramp during the SNPL breeding season (March 1 through September 30).
AMM 60	Open water kite surfing, as well as launching and landing, will continue to be prohibited south of Post 6 during the SNPL breeding season (March 1 through September 30).
Park Visitor Activities: Holidays (CA-10)	
Potential Effects: Effects for all covered activities on holidays are not expected to be different from those on non-holidays	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 61	Fireworks will continue to be prohibited in the HCP area.
AMM 62	On July 4, CDPR Visitor Service Staff or CDPR Volunteers will continue to be assigned to the large Southern Exclosure to help stop the use of fireworks over the area.
Park Visitor Activities: Special events (CA-11)	
Potential Effects: Effects based on the specific event activity(ies) permitted (see section 2.2.1.11)	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 63	All permits authorizing special events will continue to include AMMs to reduce disturbance to SNPL. Specific AMM recommendations will be based on past experience and dependent on the event location, timing, and potential to impact covered species.
AMM 64	CDPR will continue to monitor special events to ensure participants follow SNPL protective measures.
AMM 65	All UAS operators will follow the current CDPR policies regarding UAS use.
AMM 66	Specific AMMs for UAS use will be included in the permit that all UAS operators must obtain from CDPR. For example, UAS will not be allowed south of Post 5 during the breeding season and will be limited year-round along the shoreline. In addition, a USFWS-approved monitor will accompany non-CDPR UAS operators at any time of year if it is determined there is potential to impact covered species. Stable flight paths are preferred to minimize the UAS being perceived as a predator.
Natural Resources Management: SNPL fencing, monitoring, and management (CA-12a and 12b)	
Potential Effects: Chicks crushed by vehicle; Breeding/foraging/roosting disturbance; Chicks separated from adult(s) and inadequately fed or exposed to predation/inclement weather; Eggs buried by sand, exposed to predation, or not properly incubated when adults are disturbed; Chicks/eggs abandoned when adults are disturbed, injured, or killed	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 67	Seasonal exclosure and symbolic fencing will continue to be installed and completed by the March 1 start of the SNPL breeding season.
AMM 68	Monitors will continue to be those individuals approved by the USFWS and/or listed on appropriate permits for the covered activities.
AMM 69	Single-nest or smaller exclosures will continue to be erected when at least two eggs have been laid, for nests in the non-motorized area, to help reduce abandonment threat.
AMM 70	Fence maintenance and bumpout installation will continue to be timed to avoid high wind periods and other periods deemed critical for chick or nest survival, like extreme temperatures.
AMM 71	Monitors will continue to escort maintenance vehicles driving through the closed shoreline, as necessary. All CDPR staff driving within the closed shoreline area will continue to be trained on how to operate a vehicle on the shoreline when SNPL broods are present to avoid collision or other harm, e.g., scanning in front of vehicle, driving where chicks are less likely to occur, avoiding wrack, and keeping speeds at or below 5 mph.
AMM 72	Monitors will continue to conduct surveys prior to conducting fence maintenance activities. If nesting SNPL could be impacted by activities, monitors will postpone maintenance, if appropriate. Monitors will remain on site during fence maintenance/ installation conducted by hand to monitor nearby nests and minimize disruption to SNPL.
AMM 73	If any chicks are flushed out of the exclosure, monitors will continue to follow and protect chicks until they move back inside the exclosure as described in section Error! Reference source not found..
AMM 74	Camera training will continue to be given by staff who are permitted by USFWS to use nest monitoring cameras. Training will continue to occur outside the nesting area using fake nests on which the trainee can practice. Training will continue to include reading the instruction manual of each camera system, practicing efficient camera installation, and proper placement and concealing of cameras. After the initial training, the trainee will continue to accompany the permitted staff during camera installation on two or more active nests, as well as lead the camera installation while under the guidance of the permitted staff. Cameras will continue to only be placed if the wind speed is below 15 mph, the sand temperature is below 83°F, or if it is not raining.
AMM 75	Camera set-up will continue to be delayed if there has been a recent sighting of a predator.
AMM 76	Monitors will continue to evaluate whether a nest is a good candidate for predator monitoring prior to installing still or video cameras. Still or video cameras will not be placed in areas where they are readily visible to the public.
AMM 77	Cameras will continue to be installed when the nest has a complete clutch when possible. In some instances, as determined by the Senior Environmental Scientist, a camera needs to be installed prior to the nest having a complete clutch. In these instances, the camera will continue to be installed with minimal disturbance to SNPL, and a CDPR Environmental Scientist will continue to remain on-site to ensure the adult returns to the nest.

Table B-1: Avoidance and Minimization Measures (AMMs) for SNPL	
AMM 78	Trail cameras will continue to be placed a minimum of 10 feet away from the selected nest. Time spent near the nest and total equipment set-up will continue to be limited to less than fifteen minutes.
AMM 79	Monitors will continue to monitor the nest after cameras are deployed to ensure the bird returns to the nest. If the bird does not return within 20 minutes, monitors will continue to remove the cameras immediately and cameras will not be replaced at that nest.
AMM 80	Monitors will continue to check nests with cameras daily, using binoculars or a spotting scope to ensure the adult is present and not disturbed by the camera. Monitors will continue to remove the cameras immediately if there is evidence that the placement and/or operation of the camera is jeopardizing the safety of individual nests, eggs, and young.Monitors will continue to check nests with cameras daily using binoculars or a spotting scope to ensure the adult is present and not disturbed by the camera. Monitors will continue to remove the cameras immediately if there is evidence that the placement and/or operation of the camera is jeopardizing the safety of individual nests, eggs, and young.
Potential Effects: Adult and chick mortality/injury during banding; Chicks/eggs crushed by vehicle or monitor; Chicks flushed into the open riding area; Chicks injured or killed due to adult aggression from brood movement caused by monitoring activities; Adults killed or injured by striking protective fencing; Adults, juveniles, chicks, eggs depredated at single-nest exclosures	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 81	CDPR will continue to use a master bander for the SNPL breeding season. The master bander will continue to be responsible for the banding of all SNPL chicks, and if determined necessary, banding of SNPL adults. The master bander will continue to work in consultation with and under the direction of the Senior Environmental Scientist. The banding of newly hatched SNPL chicks will continue to follow protocols approved by USFWS. The master bander will continue to report all banding data and records per guidelines established by the USFWS.
AMM 82	To minimize the risk of additional injury or mortality associated with leg bands, monitors will continue to capture birds that show signs of leg injury due to bands as soon as possible and remove the bands.
AMM 83	Monitors will continue to only enter the seasonal exclosures during appropriate weather conditions (e.g., low to no wind, no rain, outside periods of extreme temperatures). Monitors will also continue to survey the area for potential predators prior to entering the seasonal exclosures and will not enter the exclosure until potential predators are absent from the area.
AMM 84	Monitors will continue to be aware of the location of nests, broods, and adults when monitoring within the seasonal exclosures and along the shoreline, and all efforts will continue to be made to minimize disturbance to reduce the likelihood of adults moving off the nest, broods moving into the territory of another nest, and/or chicks being separated from attending adults.
AMM 85	Monitors will continue to visually check the area under and surrounding any vehicle that has been idle near the seasonal exclosure and in the open riding area to ensure SNPL individuals are not present underneath the vehicle.
AMM 86	The top of the Southern Exclosure fencing will continue to be lined with a strip of thicker plastic fencing (orange silt construction fencing cut into approximately 1-foot sections), which will cover most of the western and northern fenced areas to increase the fence visibility to flying birds. If staff resources are available, some of the eastern fenceline and bumpout fencing will also be lined with this strip.
AMM 87	Monitors will continue to inspect the integrity of exclosures regularly.
AMM 88	Single-nest exclosures will continue to be monitored closely to identify if predators are keying in on them.
AMM 89	Monitors will continue to closely survey the east fence of the Southern Exclosure when banding or other monitoring activities are taking place on foot inside the fenced area during the chick-rearing period. They will continue to take appropriate action to coax any SNPL chicks that move out of the exclosure back into the exclosure and will ascertain if they remain there after the monitoring activities in the exclosure have ended.
AMM 90	CDPR will continue to salvage eggs and chicks as part of the ongoing covered species management program, as determined to be necessary by a qualified biologist and in coordination with the USFWS, to be raised in captivity by an approved wildlife facility. Chicks will continue to be raised in a manner that does not imprint on humans and released back into the wild when fledged. Captive care will continue to only be used selectively and not as a substitute for responding to the primary causes of elevated egg or chick abandonment rates.
Natural Resources Management: Tidewater goby and salmonid surveys (CA-13)	
Potential Effects: Chicks/eggs crushed by vehicle or monitor; Breeding/foraging/roosting disturbance	
Avoidance Minimization Measures:	
AMM 91	Daily SNPL monitoring during the SNPL breeding season will continue to include areas where fisheries surveys would occur. Fisheries surveys will continue to be adjusted if daily SNPL monitoring determines that SNPL breeding would be affected, including by postponing surveys within 300 feet of an SNPL nest.
AMM 92	Fisheries survey staff will continue to include personnel experienced with conducting fisheries surveys within SNPL habitat and may include permitted SNPL monitors.
Natural Resources Management: CRLF surveys (CA-14)	
Potential Effects: Chicks/eggs crushed by vehicle or monitor; Breeding/foraging/roosting disturbance	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	

Table B-1: Avoidance and Minimization Measures (AMMs) for SNPL
Natural Resources Management: Listed plant mgmt. activities (CA-15)
Potential Effects: Chicks/eggs crushed by vehicle or monitor; Breeding/foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 93 If surveys are necessary during the breeding season and in a known or potential nesting area, one or two experienced biologists will continue to conduct listed plant surveys. Established protocols for the surveys require that any biologist conducting the work be a skilled botanist with experience in identifying the target plant species or be accompanied by a botanist. The biologist must also be a skilled SNPL monitor included on the List of Authorized Individuals for the HCP area 10(a)(1)(A) Recovery Permit or approved by the USFWS at least 30 days prior to the start of activities or must be accompanied by a biologist with these qualifications. AMM 94 Prior to conducting botanical surveys, the team will continue to review records of all known SNPL nesting sites in the survey area. No surveys are conducted within 150 feet of known nesting sites until the nest fates are determined (i.e., hatch or fail), and the brood and attending adult are known to have left the area. No surveys or walking within sight of nests occurs for nests that are close to hatch or newly hatched. AMM 95 Botanical surveys may be conducted in areas without known nests; however, the team will continue to follow existing nest search protocols to identify new nests, breeding behavior, and the presence of adults tending broods. AMM 96 If new nests, breeding behavior, or adults tending broods are observed in an area during surveys, the team will continue to immediately leave the area until the nest fates are determined or breeding/brooding activity is no longer occurring in the area. AMM 97 Botanical surveys will continue to take the minimum time necessary for data collection to avoid disturbance to breeding birds in the area. Botanical survey will continue to take no longer than 15 minutes at each site within the breeding area. AMM 98 All botanical surveys will continue to be conducted under similar constraints as nest search surveys including during appropriate weather conditions, wind conditions, times when predator activity is not occurring, and other precautions per SNPL monitoring protocol in the HCP area.
Natural Resources Management: Habitat restoration program (CA-16)
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Natural Resources Management: Invasive plant and animal control (CA-17)
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 99 Invasive plant or animal control will continue to be conducted when SNPL are not observed to be present.
Natural Resources Management: Habitat Monitoring System (HMS) implementation (CA-18)
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Natural Resources Management: Water quality monitoring projects (CA-19)
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Maintenance: General Facilities Maintenance (CA-21)
Potential Effects: Breeding/foraging/roosting disturbance; Chicks/eggs abandoned when adults are disturbed, injured, or killed; Eggs buried by sand, exposed to predation, or not properly incubated when adults are disturbed; Adults/juveniles/chicks struck by vehicles; Eggs crushed
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 100 CDPR will continue to train park staff and "visiting rangers" annually, or as needed, to ensure that staff can do their jobs with minimal impact to SNPL. At a minimum, staff will continue to receive information about basic SNPL biology, listing status, and relevant park rules and regulations and how to respond to observed violations of park rules and regulations that protect SNPL. AMM 101 All CDPR staff will continue to observe closures, speed limits, and other restrictions aimed at protecting SNPL and CLTE, unless emergency conditions warrant otherwise. AMM 102 CDPR monitors will continue to conduct surveys to ascertain the presence of SNPL nests, adults, and chicks within and adjacent to potential maintenance areas, if such activities must be carried out during the breeding season (March 1 through September 30) in and adjacent to areas where SNPL are potentially nesting, foraging, or roosting. If CDPR monitors find that the activities may impact, disturb, or result in take of adult birds, chicks, or eggs, the activities will be delayed until the monitor determines SNPL will not be impacted. AMM 103 CDPR monitors will continue to evaluate the potential for maintenance activities that occur during the non-breeding season (October 1 through February 29) to impact or disturb non-breeding SNPL or to modify SNPL breeding habitat. Activities will continue to be modified, as necessary, to minimize disturbance or impacts to breeding habitat. AMM 104 Mechanical trash removal will not occur in areas where any SNPL are present.

Table B-1: Avoidance and Minimization Measures (AMMs) for SNPL
AMM 105 Mechanical trash removal will only occur above the highest high tide, avoid all wrack/surf cast kelp, avoid all live vegetation, and avoid lagoons and flowing creeks. AMM 106 Equipment will observe all speed limits and will not exceed 10 mph. AMM 107 Mechanical trash removal will not be conducted within 500 feet of any known nesting area. AMM 108 Natural resources staff will inspect and approve the area subject to mechanical trash removal prior to each deployment. Natural resources staff will remain on site or be immediately available for monitoring purposes. AMM 109 In conjunction with mechanical trash removal, CDPR will implement a study to establish baseline conditions of invertebrate populations, including talitrids, and to determine the impact of mechanical trash removal on these populations. The study will, at a minimum, compare invertebrate abundance in mechanical trash removal areas to baseline conditions prior to the start of mechanical trash removal to areas where mechanical trash removal is absent. If CDPR finds a significant decline in invertebrate numbers in mechanical trash removal areas, additional measures will be implemented (e.g., habitat enhancement measures, reduction in frequency of mechanical trash removal, and/or reduction in mechanical trash removal locations).
Potential Effects: Limited potential breeding habitat reduced by the footprint of vault toilets
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Maintenance: Trash Control (CA-22)
Potential Effects: Chicks, eggs, adults, juveniles potentially exposed to predation by increased trash
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Maintenance: Wind fencing installation, maintenance, and removal (CA-23)
Potential Effects: Foraging and roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Maintenance: Sand ramp and other vehicular access maintenance (CA-24)
Potential Effects: Foraging and roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 110 During the breeding season, the sand ramps will continue to be inspected a minimum of once per day to identify SNPL individuals and nests. This will continue to occur during the daily survey. During the non-breeding season, the sand ramps will continue to be regularly inspected for roosting activity. No work occurs if birds are roosting within 150 feet of the work area until the birds leave the area on their own accord.
Park Maintenance: Perimeter and vegetation island fence installation, maintenance, and removal (CA-27)
Potential Effects: Foraging and roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Maintenance: Cable fence maintenance and replacement (CA-28)
Potential Effects: Foraging and roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Maintenance: Heavy equipment response in all areas of SVRA of Oceano Dunes District (CA-29)
Potential Effects: Similar to general facilities maintenance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Maintenance: Minor grading (less than 50 cubic yards) (CA-30)[3]
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Maintenance: Boardwalk and other pedestrian access maintenance (CA-31)
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Visitor Services: Ranger, life guard, and park aide patrols (CA-32)
Potential Effects: Similar to general facilities maintenance
Avoidance Minimization Measures: All AMMs apply, as appropriate.

[3] AMMs to reduce the effects of grading to maintain the seasonal exclosure are included in CA-12a: Installation and Maintenance of Western Snowy Plover and California Least Tern Protection Fence. AMMs to reduce the effects of grading to maintain the boundary fence are included in CA-28: Cable Fence Maintenance and Replacement.

Table B-1: Avoidance and Minimization Measures (AMMs) for SNPL
Visitor Services: Emergency response (CA-33)
Potential Effects: Similar to general facilities maintenance
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 111 Emergency responders will continue to be informed of the locations of areas that are sensitive (e.g., seasonal exclosures, shoreline foraging/brooding areas), to the extent feasible. If possible, qualified biologists will continue to escort emergency vehicles into and out of areas that are sensitive. AMM 112 Locations of non-breeding flocks of SNPL will continue to be identified and appropriate signage displayed to advise all visitors and emergency responders of the location of sensitive resource areas.
Visitor Services: Access by non-CDPR vehicles (CA-34)
Potential Effects: Adults/juveniles/chicks struck by vehicles; Foraging/roosting disturbance; Chicks/eggs abandoned when adults are disturbed, killed, or injured; Chicks separated from adult(s) and inadequately fed or exposed to predation/inclement weather; Eggs buried by sand, exposed to predation, or not properly incubated when adults are disturbed; Chicks, eggs, adults, juveniles potentially exposed to predation by increased trash
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Visitor Services: Beach Concessions (CA-36)
Potential Effects: Similar to access by non-CDPR vehicles
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 113 A focused training program will continue to be provided for all concessionaires and OHV rental employees each year. The training program will consist of, at a minimum, a description of SNPL and its life history and park rules and regulations protecting SNPL. Concessionaires and OHV rental employees will continue to be provided with information handouts consisting of photographs and covered species information. These information handouts will continue to be provided to customers and other members of the public to encourage them to recognize and avoid covered species.
Other HCP Covered Activities: Motorized Vehicle Crossing of Creeks (CA-40)
Potential Effects: Adults/juveniles/chicks struck by vehicles; Nesting/foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Other HCP Covered Activities: Pismo Creek estuary seasonal (floating) bridge (CA-41)
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 114 If, in the opinion of the Senior Environmental Scientist or monitors, visitor activities are significantly disrupting SNPL foraging and/or roosting behavior, the bridge will be closed to public use until the birds have left the area.
Other HCP Covered Activities: Replacement of the Safety and Education Center (CA-43)
Potential Effects: Chicks/eggs crushed by vehicle; Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Other HCP Covered Activities: Dust control activities (CA-44)
Potential Effects: Adults/juveniles/chicks struck by vehicles; Breeding/foraging/roosting disturbance; Eggs crushed; Chicks/eggs abandoned when adults are disturbed, killed, or injured; Chicks separated from adult(s) and inadequately fed or exposed to predation/inclement weather; Eggs buried by sand, exposed to predation, or not properly incubated when adults are disturbed; Adults, juveniles, chicks, eggs more susceptible to predation due to increased vegetation; Breeding/foraging/ roosting habitat altered
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Other HCP Covered Activities: Cultural Resources Management (CA-45)
Potential Effects: Breeding/foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Other HCP Covered Activities: Special projects (CA-49)
Potential Effects: Breeding/foraging/roosting disturbance; Breeding habitat reduced by footprint of small project
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Other HCP Covered Activities: Reduction of the Boneyard Exclosure (CA-50)
Potential Effects: Reduction in protected nesting habitat
Avoidance Minimization Measures: All AMMs apply, as appropriate.

Table B-1: Avoidance and Minimization Measures (AMMs) for SNPL
Other HCP Covered Activities: Use of pesticides (CA-51)
Potential Effects: Breeding/foraging/roosting disturbance; Exposure from contact with contaminated prey or vegetation; Exposure from contact with residues, inhalation of vapors
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 115 When pesticide application must occur near SNPL breeding habitat, work will continue to be conducted between October 1 and February 28 to avoid the breeding season. A qualified biologist will continue to conduct a survey for SNPL 24 hours prior to the application and instruct the work crew on their identification and biology. If SNPL is observed, all work will be stopped immediately until the CDPR biologist arrives and assesses the situation to determine if the work can proceed. AMM 116 Pesticides will continue to be applied when wind speed is below 10 mph at the perimeter of the application site as measured by an anemometer on the upwind side. AMM 117 Pesticide application will continue to be postponed if soil moisture is at field capacity and a storm event, forecasted by the National Oceanic and Atmospheric Administration (NOAA) or National Weather Service (NWS), is to occur within 48 hours following application; or a storm event likely to produce runoff from the treated area is forecasted by NOAA/NWS to occur within 48 hours following the application. AMM 118 CDPR will continue to ensure that all workers are trained in the safe and effective use of pesticides in sensitive habitats. AMM 119 CDPR will continue to ensure that trained resource personnel are present at all phases of the work to ensure that pesticide application activities do not result in impacts to covered species. AMM 120 If pesticides are spilled, they will continue to be prevented from entering any water bodies to the extent practicable. CDPR staff and contractors will continue to be trained to contain any spilled material and are familiar with the use of absorbent materials. Spills will continue to be cleaned up according to label instructions, and all equipment used to remove spills will continue to be properly contained and disposed of or decontaminated, as appropriate. Applicators will continue to report spills as required by CDPR policy and in a manner consistent with local, state, and federal requirements. AMM 121 Post-treatment, CDPR will continue to initiate monitoring, which typically consists of mapping, photo documentation, regular inspections, and depending on location and species, some formalized monitoring resulting in several years' worth of data and subsequent reporting. AMM 122 CDPR will continue to take the following steps when using herbicide: • Prior to treatment, CDPR's PCA or qualified staff will continue to evaluate sites within the HCP area for invasive species removal. Weed populations will continue to be targeted based on site and weather conditions, historic weed growth, or other information. • CDPR will continue to determine the appropriate method for treating a target area (e.g., manual removal, aerial application, backpack sprayer, truck mounted sprayer). If the application can be made without negatively impacting water quality or covered species, then an application will continue to be made. • All pesticide applications will continue to be made according to the product label in accordance with regulations of the EPA, California Environmental Protection Agency (CalEPA), California Division of Occupational Safety and Health (Cal OSHA), DPR, and the local Agricultural Commissioner. CDPR's PCA and DPR-licensed Qualified Applicator License (QAL) holders will continue to regularly monitor updates and amendments to the label so that applications are in accordance with label directions.
Other HCP Covered Activities: CDPR UAS use for park activities (CA-52)[4]
Potential Effects: Breeding/foraging/roosting disturbance
Year-Round AMM 123 UAS will be flown with remote control and a built-in screen that shows battery life. The UAS will be equipped with software or other safeguard to ensure it will alert the operator when it reaches a minimum safe amount of battery life required for a return flight. AMM 124 UAS operators will attend a formal training and be certified as a Pilot in Command prior to conducting solo flights. AMM 125 UAS operators will have an established flight plan with a specific purpose determined following all Federal Aviation Administration (FAA) regulations. AMM 126 UAS will be kept in view of the operator at all times. AMM 127 UAS operators will not conduct flights in the HCP area without approval from the Senior Environmental Scientist. *Breeding Season* AMM 128 All flights within 328 feet of SNPL nesting or brood-rearing habitat will require a USFWS-approved monitor to pilot or assist with flight logistics and monitoring, regardless if birds are confirmed in the area prior to flight. AMM 129 Prior to flying the UAS into or near (within 328 feet of) nesting or chick-rearing areas, the permittee will follow all existing monitoring guidelines that have been established with USFWS. AMM 130 UAS will not enter or fly within 328 feet of the SNPL nesting areas if the wind speed is above 15 mph or strong enough to move sand (or will be before or after completion of set up and exit from the exclosure), the sand temperature is 83°F, or if it is raining.

[4] AMMs for UAS use may be modified based on best available science and new information on the impacts of drone use on wildlilfe.

Table B-1: Avoidance and Minimization Measures (AMMs) for SNPL	
AMM 131	UAS flights will be initiated at least 328 feet from the closest known SNPL nest. The take-off and landing area will be clearly marked. If possible, take-off and landing areas will be out of direct sight from known nests.
AMM 132	UAS will only be deployed when a qualified biologist is confident the activity will not jeopardize the safety of SNPL individuals, nests, eggs, and young.
AMM 133	Prior to every UAS flight, a qualified biologist will scan the area for SNPL. If no birds are observed, the UAS flight can commence with monitoring, as appropriate. If a SNPL is observed in the area, it must be monitored by a qualified biologist during the remainder of the flight. If significant disturbance to SNPL is observed, the biologist may recommend increasing the altitude of the drone (but still remaining below 400 feet to follow FAA guidelines) and/or guiding the drone to a safer area.
AMM 134	The UAS will be kept at least 100 feet above the ground at all times to reduce disturbance to nesting birds and below 400 feet to follow FAA guidelines.
AMM 135	The flight plan will not include erratic flight patterns that could be interpreted as an avian predator by SNPL.
Non-breeding Season	
AMM 136	UAS will only be deployed when a qualified biologist is confident that the activity will not jeopardize the safety of SNPL individuals.
AMM 137	Prior to every UAS flight, a qualified biologist will scan the area for SNPL. If no birds are observed, the UAS flight can commence with monitoring, as appropriate. If an SNPL is observed in the area, it must be monitored by a qualified biologist during the remainder of the flight. If significant disturbance to SNPL is observed, the biologist may recommend increasing the altitude of the drone (but still remain below 400 feet to follow FAA guidelines) and/or guiding the drone to a safer area.
AMM 138	Take-off and landing areas will be clearly marked in the field and should be out of sight from known individuals.
AMM 139	If SNPL are present, the UAS will fly at least 100 feet above ground at all times to reduce disturbance to SNPL and will be kept at below 400 feet to follow FAA guidelines.
AMM 140	The flight plan will not include erratic flight patterns that could be interpreted as an avian predator by SNPL.

Table B-2: Avoidance and Minimization Measures for CLTE	
Park Visitor Activities: Motorized recreation (CA-1)	
Potential Effects: Adults/juveniles/chicks struck by vehicles; Breeding/roosting disturbance; Chicks separated from adult(s); Eggs buried by sand, exposed to predation, or not properly incubated when adults are disturbed; Chicks/eggs abandoned when adults are disturbed, killed, or injured; Eggs crushed	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 1	CDPR will continue to create educational content on the Oceano Dunes SVRA and Pismo State Beach websites that includes life history information and measures being taken to protect all HCP covered species found at the parks. Information can be updated as needed and visitors can find out what the parks are doing and what they can do to protect the covered species. Covered species information will continue to be included as part of ongoing interpretative programs as well.
AMM 2	Signs explaining CLTE natural history and protection measures in place in the HCP area will continue to be posted for information and education of visitors in the HCP area. Interpretive panels at beach access points (e.g., Sand Highway, Oso Flaco Lake, Pier Avenue, and Grand Avenue) and signs identifying closed areas will continue to be erected to increase public awareness of threats to nesting CLTE and to inform the public of the park's management efforts to protect special-status species. CDPR will also continue to provide a low wattage radio station with a repeated recording of park information, including information about protection of sensitive species. The radio station will play 7 days a week, 24 hours a day and provides updated information on measures taken to protect CLTE. Information on CLTE will also continue to be posted on the Oceano Dunes SVRA and Pismo State Beach websites.
AMM 3	CDPR will continue to enforce resource protection regulations. All enclosed areas will continue to be posted with signs in English and Spanish. State Park rangers will continue to have the responsibility to enforce park regulations enacted to protect CLTE, including issuing citations for incidents of trespass into the area closed for nesting. In addition, resource staff monitors will continue to contact visitors violating park regulations and, where appropriate, contact rangers who will continue to issue a citation.
AMM 4	Posted speed limits will continue to be enforced throughout the HCP area.
AMM 5	CDPR will continue to fence off the Southern Exclosure and North Oso Flaco during the breeding season (March 1 to September 30) to limit vehicle and human disturbance to CLTE nesting areas (and to protect CLTE from terrestrial predators).
AMM 6	Habitat enhancement will continue to be avoided within 100 feet of the fence that borders the open riding area to discourage recreation near nesting that may cause disturbance to breeding birds.
AMM 7	Daily monitoring will continue to take place during the CLTE breeding season to enable better identification of potential human use related threats to CLTE and to summon law enforcement assistance, if needed, to prevent or eliminate any human use related threats to the species.
AMM 8	If a CLTE is found injured or dead, USFWS and/or CDFW will be contacted within 30 minutes of finding the bird.
AMM 9	The open riding area and other potential habitat outside the seasonal exclosures will continue to be inspected a minimum of once per day to identify CLTE individuals and nests. Any CLTE breeding activity in these areas (e.g., tracks, scrapes, pairs observed, or nesting flight behavior) will continue to be monitored closely. These areas will continue to be marked and rechecked during the day and one person will be assigned each morning to recheck any potential breeding areas. All CLTE tracks outside the seasonal exclosures will continue to be followed to check for potential nests. Any nest found will continue to be immediately protected with a large single-nest (i.e., 330-foot radius) exclosure to protect nests from people and predators. If feasible, a travel corridor will be erected to provide a safe passage for chicks to the existing seasonal exclosure.
AMM 10	If a CLTE nest is established within the open riding area, but within 500 feet of the existing seasonal exclosure, fencing will continue to be erected to enlarge the exclosure so as to encompass the nest site (if topography allows and if safe public traffic patterns are available). Fencing will continue to be placed at a minimum of 330 feet away from the nest site.
AMM 11	When two or more nests in the open riding area are located within 500 feet of each other and are 500 feet or more away from the seasonal exclosure, they will continue to be encompassed into a new large seasonal exclosure if topography allows. Fencing for such new seasonal exclosures will continue to be maintained a minimum distance of 330 feet from the nest site.
AMM 12	If a CLTE nest is initiated inside the Southern Exclosure and close to the exclosure fence bordering the riding area, CDPR staff will continue to install additional fencing (i.e., "bumpout") to maintain a perimeter of a minimum of 330 feet from the open riding and camping area to the nest. The public is excluded from these bumpouts, but permitted monitors still enter the buffer area as needed for monitoring. These bumpouts will continue to be monitored regularly. If an incubating bird is disturbed by normal recreational activity, the bumpout will be increased in size, as needed. All nests are monitored for disturbance, and any nest that is disturbed by regular recreation activity may receive a bumpout. This additional fencing will continue to remain in place during the period when nests are active or chicks are found in this area. Once chicks move out of the area or reach fledge age, the bumpouts will be removed.
AMM 13	At least one CDPR vehicle or trailer will continue to be available throughout the CLTE breeding season to carry all tools and equipment necessary to immediately construct a single-nest exclosure or bumpout.
AMM 14	A 330-foot minimum buffer from recreation activities will continue to be established around all CLTE nests. This distance will be increased if any take (i.e., injury, harassment, or CLTE reacting negatively to normal recreational activities) of CLTE is observed.
AMM 15	If CLTE chicks are observed traveling outside of a single-nest exclosure, CDPR monitors will continue to increase the exclosure in size up to a 600-foot radius. Silt fencing will continue to be used to reduce CLTE travel outside the exclosure. CDPR will continue to coordinate with USFWS regarding the setback distances if the recommended setback distances cannot be achieved.
AMM 16	CDPR monitors will continue to monitor the location of the CLTE night roost each night as viewing conditions allow. CDPR has a protocol in place to protect the night roost if it is found in an area where birds would be vulnerable from recreation activity, including

Table B-2: Avoidance and Minimization Measures for CLTE	
	closing off the area with fencing and implementing a 330-foot buffer around the night roost location. Fencing will continue to be added as deemed necessary by the Senior Environmental Scientist of other qualified biologist and fencing will continue to be removed once the night roost is no longer present. This protocol will continue to be implemented if this situation occurs.
AMM 17	CDPR peace officers will continue to provide focused enforcement of HCP area regulations (e.g., posted speed limits). CDPR peace officers will continue to respond to requests by monitors for assistance with CLTE protection and security. Enforcement of laws affecting safety of CLTE will continue to be the highest non-emergency Law Enforcement priority.
AMM 18	During anticipated high visitor-use periods, such as Memorial Day Weekend, Labor Day Weekend, July 4 Weekend (or as determined by historic visitor attendance records), monitoring staff will continue to be on site for extended hours to monitor within the open riding area and identify threats to all life stages of CLTE from public recreational activity.
AMM 19	During non-holiday weekends (i.e., Friday and Saturday), a minimum of two CDPR peace officers will continue to be on duty and available from 0600 through 2400 each day to enforce regulations (e.g., 15-mph speed limit, dog leash laws, litter). During non-holiday weekdays (i.e., Sunday through Thursday), a minimum of two CDPR peace officers will continue to be on duty from 0700 through 2000 each day to enforce regulations.
AMM 20	During holiday periods, one monitor will continue to be assigned to ensure that no unauthorized entry is made into the north end of the Southern Exclosure during both daylight and evening hours.
AMM 21	During major holiday periods, CDPR peace officers will continue to be on duty 24 hour/day. From 0700 to 2000, a minimum of three ranger/peace officers will be on duty. From 2000 to 0200, a minimum of two ranger/peace officers will continue to be on duty. During mid-day periods, when visitor attendance is highest, as many as four ranger/peace officers will continue to be on duty. Rangers/peace officers will continue to enforce all regulations (e.g., 15-mph speed limit, dog leash laws, litter) in the HCP area.
AMM 22	CDPR will continue to use an adaptive management approach, where information and experience from previous breeding seasons is used to develop appropriate AMMs in subsequent seasons to minimize or eliminate impacts to CLTE from covered activities.
AMM 23	CDPR will continue to implement management measures and modify protocols in accordance with ongoing adaptive management and based on recommendations in annual monitoring reports (section Error! Reference source not found.).
Potential Effects: Chicks, eggs, adults, juveniles potentially exposed to predation by increased trash associated with recreational activity	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 24	Trash dumpsters will continue to be provided near the OHV staging area near Post 2. The location of the trash dumpsters will be changed, as necessary, to avoid disturbance to any nearby active CLTE nests.
AMM 25	CDPR will continue to use trash dumpsters/receptacles designed to prevent access by predators such as gulls. CDPR will continue to explore options to reduce the movement of trash from the dumpsters and reduce predator presence at the dumpster sites.
AMM 26	CDPR will continue to remove or modify signs, fence posts, and other human-made features to eliminate perches for predators in areas where they could impact CLTE.
AMM 27	In coordination with USFWS, the predator management plan will continue to be reviewed and updated annually, if necessary, to identify appropriate responses to predators.
AMM 28	When additional options for managing predators are needed, selective live-trapping and relocation of avian predators will continue to be conducted by authorized staff or subcontractors, and selective live-trapping and relocation or lethal removal of mammalian and avian predators will continue to be conducted by USDA Wildlife Services (or other authorized subcontractor).
AMM 29	CDPR staff will continue to remove animal carcasses in or adjacent to nesting and chick-rearing habitat.
AMM 30	Where feasible, CDPR staff will continue to harass predators to flush them from sensitive areas. Hazing techniques used include firing a bird whistler and approaching predators where appropriate. CDPR will continue to coordinate closely with predator specialists regarding the location of known or potential nests and chick activity, prior to the specialists conducting work.
AMM 31	All visitors will continue to be informed that they must deposit their trash in dumpsters/receptacles provided. All campers will be offered plastic garbage bags. All park staff will continue to carry trash bags in each vehicle and make them available to visitors for removing trash and litter from visitor use areas.
AMM 32	CDPR will continue to manually remove litter and garbage from beaches.
AMM 33	Exclosure fencing will continue to be buried, as feasible, to limit terrestrial predators from undermining the fence.
Potential Effects: Breeding/foraging/roosting habitat quality reduced; Chicks, eggs, adults, juveniles potentially exposed to predation and/or inclement weather by altered habitat	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 34	CDPR will continue to place woodchips, large woody material, beach wrack, and native plants throughout the seasonal exclosures to serve as natural shelter. Woodchips will be spread in patches in the 6, 7, and 8 exclosures in areas of barren sand and over thinning woodchip patches remaining from the previous year(s).
AMM 35	CDPR staff will continue to collect wrack in the open riding area and disperse it in the Southern Exclosure.
AMM 36	Driftwood will continue to be placed throughout the Southern Exclosure to serve as natural shelter for CLTE chicks. Tern shelters are also be used, as necessary and feasible.
AMM 37	The Superintendent may consider implementing additional habitat enhancement measures if Environmental Scientists determine such measures may aid in meeting the criteria laid out in biological objectives for CLTE (section Error! Reference source not found.). If implemented, the value of any additional habitat enhancement measure to nesting SNPL and CLTE will be studied to evaluate the measure's effectiveness at improving reproductive success and to determine whether and how the measure should be implemented in future seasons.

Table B-2: Avoidance and Minimization Measures for CLTE
Park Visitor Activities: Camping (CA-2)
Potential Effects: Similar to motorized recreation activities
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Visitor Activities: Pedestrian activities (CA-3)
Potential Effects: Breeding/foraging/roosting disturbance; Chicks and eggs picked up by visitors; Chicks/eggs abandoned when adults are disturbed, injured, or killed; Chicks separated from adult(s) and inadequately fed; Eggs buried by sand, exposed to predation, or not properly incubated when adults are disturbed
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 38 If a CLTE nest is established within 330 feet of a restroom facility, permanent restrooms buildings will continue to be closed to public use and exclosure fencing will continue to surround and isolate the restroom to prevent public use. In addition, chemical toilets will continue to be relocated to a minimum distance of 330 feet from any CLTE nest site. AMM 39 If, in the opinion of the Senior Environmental Scientist or monitors, visitor activities are significantly disrupting CLTE behavior, the footbridge hand railing at Oso Flaco Lake will continue to be closed to public use, or types or public use on the boardwalk will continue to be temporarily prohibited until CLTE have left the lake area. AMM 40 During daylight hours on major holiday periods, one CDPR peace officer will continue to be assigned to patrol the beach. Duties include patrolling outside the nesting exclosure areas to ensure that no entry is made into the exclosures.
Potential Effects: Chicks, eggs, adults, juveniles potentially exposed to predation by increased trash associated with recreational activity
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Visitor Activities: Bicycling and golfing (CA-4)
Potential Effects: Similar to pedestrian activities
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Visitor Activities: Fishing (CA-5)
Potential Effects: Similar to pedestrian activities, although disturbance can be for extended periods given the stationary nature of fishing
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Potential Effects: Adults/juveniles/chicks potentially entangled in discarded fishing line/hooks; Chicks, eggs, adults, juveniles potentially exposed to predation by discarded bait
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 41 Public outreach to fisherman in the Oso Flaco Lake area will continue to be conducted by CDPR staff regarding CLTE life history and AMMs. AMM 42 Anglers will continue to be encouraged to properly dispose of fishing lines, hooks, and bait at various locations within the park where trash receptacles are located.
Park Visitor Activities: Dog walking (CA-6)
Potential Effects: Similar to pedestrian activities
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 43 Dogs within the HCP area will continue to be required to be on a leash no longer than 6 feet at all times and within the owner's complete control. AMM 44 Dogs, other than service dogs, will continue to be banned in the Oso Flaco area. AMM 45 Waste bag locations will continue to be provided in the HCP area to encourage pet owners to pick up dog waste. AMM 46 CDPR will continue to enforce dog leash and dog waste regulations, especially in areas where they could impact CLTE. Resource staff monitors and/or park rangers will continue to contact visitors violating park regulations and, where appropriate, rangers will continue to issue a citation.
Park Visitor Activities: Equestrian recreation (CA-7)
Potential Effects: Same as pedestrian activities
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 47 Horses will continue to be banned in the Oso Flaco area.
Park Visitor Activities: Boating/surfing (CA-8)
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Visitor Activities: Aerial/wind driven activities (CA-9)
Potential Effects: Foraging/breeding/roosting disturbance
AMM 48 Pursuant to Superintendent's Order (section **Error! Reference source not found.**), CDPR will continue to prohibit kite flying and kiteboard launching and landing south of the Pier Avenue ramp during the SNPL and CLTE breeding season (March 1 through September 30). AMM 49 Open water kite surfing, as well as launching and landing, will continue to be prohibited south of Post 6 during the CLTE breeding season (March 1 through September 30).

Table B-2: Avoidance and Minimization Measures for CLTE	
Park Visitor Activities: Holidays (CA-10)	
Potential Effects: Effects for all covered activities on holidays are not expected to be different from those on non-holidays	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 50	Fireworks will continue to be prohibited in the HCP area.
AMM 51	On July 4, State Park Visitor Service Staff or State Park Volunteers will continue to be assigned to the large Seasonal Exclosure to help prevent the use of fireworks over the area.
Park Visitor Activities: Special events (CA-11)	
Potential Effects: Effects based on the specific event activity(ies) permitted (see section **Error! Reference source not found.**)	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 52	All permits authorizing special events will continue to include AMMs to reduce disturbance to CLTE. Specific AMM recommendations will be based on past experience and dependent on the event location, timing, and potential to impact covered species.
AMM 53	CDPR will continue to monitor special events to ensure participants follow CLTE protective measures.
AMM 54	All UAS operators will follow the current CDPR policies regarding UAS use.
AMM 55	Specific AMMs for UAS use will be included in the permit that all UAS operators must obtain from CDPR. For example, UAS will not be allowed south of Post 5 during the breeding season and will be limited year-round along the shoreline. In addition, a USFWS-approved monitor will accompany non-CDPR UAS operators at any time of year if it is determined there is potential to impact covered species. Stable flight paths are preferred to minimize the UAS being perceived as a predator.
Natural Resources Management: CLTE fencing, monitoring, and management (CA-12a and 12b)	
Potential Effects: Chicks crushed by vehicle; Breeding/foraging/roosting disturbance; Chicks separated from adult(s) and inadequately fed; Eggs buried by sand, exposed to predation, or not properly incubated when adults are disturbed; Chicks/eggs abandoned when adults are disturbed, injured, or killed	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 56	Seasonal exclosures and symbolic fencing will continue to be installed prior to the March 1 start of the CLTE breeding season.
AMM 57	Monitors will continue to be those individuals approved by the USFWS and listed on appropriate permits for the covered activities.
AMM 58	Single-nest exclosures (330-foot radius) will continue to be erected as close to initiation of incubation as possible to help reduce abandonment threat.
AMM 59	Fence maintenance and bumpout installation will continue to be timed to avoid high wind periods and other periods deemed critical for chick or nest survival like extreme temperatures.
AMM 60	Monitors will continue to escort maintenance vehicles driving through the closed shoreline, as necessary.
AMM 61	Monitors will continue to conduct surveys prior to conducting fence maintenance activities. If nesting CLTE could be impacted by activities, monitors will postpone maintenance, if appropriate. Monitors will continue to remain on site during fence maintenance/ installation activities conducted by hand to monitor nearby nests and minimize disruption to CLTE.
AMM 62	Monitors will continue to remain on site during fence installation to attempt to reduce disturbance that will result in chicks leaving the exclosure. If any chicks are flushed toward the exclosure boundary or out of the exclosure, monitors will continue to follow and protect chicks to keep them in the exclosure and/or until they move back inside the exclosure.
AMM 63	Camera training will continue to be given by staff who are permitted by USFWS to use nest monitoring cameras. Training will continue to occur outside the nesting area using fake nests on which the trainee can practice. Training will continue to include reading the instruction manual of each camera system, practicing efficient camera installation, and proper placement and concealing of cameras. After the initial training, the trainee will continue to accompany the permitted staff during camera installation on two or more active nests, as well as lead the camera installation while under the guidance of the permitted staff.
AMM 64	Cameras will continue to only be placed if the wind speed is below 15 mph, the sand temperature is below 83°F, or if it is not raining.
AMM 65	Camera set-up will continue to be delayed if there has been a recent sighting of a predator.
AMM 66	Monitors will continue to evaluate whether a nest is a good candidate for predator monitoring prior to installing still or video cameras. Still or video cameras will not be placed in areas where they are readily visible to the public.
AMM 67	Cameras will continue to be installed when the nest has a complete clutch.
AMM 68	Trail cameras will continue to be placed a minimum of 10 feet away from the selected nest. Time spent near the nest and total equipment set-up will continue to be limited to less than 5 minutes.
AMM 69	Monitors will continue to monitor the nest after cameras are deployed to ensure the bird returns to the nest. If the bird does not return within 20 minutes, monitors will continue to remove the cameras immediately and cameras will not be replaced at that nest.
AMM 70	Monitors will continue to check nests with cameras daily using binoculars or a spotting scope to ensure the adult is present and not disturbed by the camera. Monitors will continue to remove the cameras immediately if there is evidence that the placement and/or operation of the camera is jeopardizing the safety of individual nests, eggs, and young.
Potential Effects: Chick mortality/injury during banding; Chicks/eggs crushed by vehicle or monitor; Chicks flushed into the open riding area; Adults killed or injured by striking protective fencing	
AMM 71	CDPR will continue to use a master bander for the CLTE breeding season. The master bander will continue to be responsible for the banding of all CLTE chicks. The master bander will continue to work in consultation with and under the direction of the Senior Environmental Scientist. The banding of newly hatched CLTE chicks will continue to follow protocols approved by USFWS and CDFW. The master bander will continue to report all banding data and records per guidelines established by the USFWS.

Table B-2: Avoidance and Minimization Measures for CLTE	
AMM 72	Monitors will continue to only enter the seasonal exclosures during appropriate weather conditions (e.g., low to no wind, no rain, outside periods of extreme temperatures). Monitors will also continue to survey the area for potential predators prior to entering the seasonal exclosures and will not enter the exclosure until potential predators are absent from the area.
AMM 73	Monitors will continue to be aware of the location of nests, chicks, and adults when monitoring within the seasonal exclosures and along the shoreline and all efforts will continue to be made to minimize disturbance to reduce the likelihood of adults moving off the nest, chicks moving into the territory of another nest, chicks moving into the open riding area, and/or chicks being separated from attending adults. If any chicks are flushed toward the exclosure boundary or out of the exclosure, monitors will continue to follow and protect chicks to keep them in the exclosure and/or until they move back inside the exclosure.
AMM 74	Monitors will continue to visually check the area under and surrounding any vehicle that has been idle near the seasonal exclosure and in the open riding area to ensure CLTE individuals are not present underneath the vehicle.
AMM 75	The top of the Southern Exclosure fencing will continue to be lined with a strip of thicker plastic fencing (orange silt construction fencing cut into approximately 1-foot sections), which will cover most of the western and northern fenced areas to increase the fence visibility to flying birds. If staff resources are available, some of the eastern fenceline and bumpout fencing will also be lined with this strip.
AMM 76	Monitors will continue to inspect the integrity of the exclosures regularly.
AMM 77	Monitors will continue to closely survey the east fence of the Southern Exclosure when banding or other monitoring activities are taking place on foot inside the fenced area. Any CLTE chicks that move outside of the exclosure fence will continue to be monitored until they are safely within the exclosure fence and no longer subject to disturbance.
Natural Resources Management: Tidewater goby and salmonid surveys (CA-13)	
Potential Effects: Foraging/roosting disturbance	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 78	Daily CLTE monitoring during the CLTE breeding season will continue to include areas where fisheries surveys would occur. Fisheries surveys will continue to be adjusted if daily CLTE monitoring determines CLTE foraging and/or breeding would be affected, including by postponing surveys within 330 feet of a CLTE nest.
AMM 79	Fisheries survey staff will continue to include personnel experienced with conducting fisheries surveys within CLTE habitat and may include permitted CLTE monitors.
Natural Resources Management: CRLF surveys (CA-14)	
Potential Effects: Foraging/roosting disturbance	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 80	A qualified biologist will continue to survey for foraging or roosting CLTE prior to activities. If foraging or roosting CLTE are observed, activities will be delayed until the bird(s) are no longer in the area.
Natural Resources Management: Listed plant mgmt. activities (CA-15)	
Potential Effects: Chicks/eggs crushed by vehicle or monitor; Breeding/foraging/roosting disturbance	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 81	When surveys are necessary during the breeding season and in a known or potential nesting area, one or two experienced biologists will continue to conduct listed plant surveys. Established protocols for the surveys require that any biologist conducting the work be skilled botanist with experience in identifying the target plant species or be accompanied by a botanist. The biologist must also be a skilled CLTE monitor included on the List of Authorized Individuals for the HCP area 10(a)(1)(A) Recovery Permit or approved by the USFWS at least 30 days prior to the start of activities or be accompanied by a biologist with these qualifications.
AMM 82	Prior to conducting botanical surveys, the team will review records of all known CLTE nesting sites in the survey area. No surveys are conducted within 330 feet of known nesting sites until the nest fates are determined (i.e., hatch or fail), and the attending adult is known to have left the area. No surveys or walking within sight of nests occurs for nests that are close to hatch or newly hatched.
AMM 83	Botanical surveys may be conducted in areas without known nests; however, the team will continue to follow existing nest search protocols to identify new nests, breeding behavior, and the presence of adults tending chicks.
AMM 84	If new nests, breeding behavior, or adults tending chicks are observed in an area during surveys, the team will continue to immediately leave the area until the nest fates are determined or breeding/ chick-rearing activity is no longer occurring in the area.
AMM 85	Botanical surveys will continue to take the minimum time necessary for data collection to avoid disturbance to breeding birds in the area. Botanical survey will continue to take no longer than 15 minutes at each site with a known population.
AMM 86	All botanical surveys will continue to be conducted under similar constraints as nest search surveys including during appropriate weather conditions, wind conditions, times when predator activity is not occurring, and other precautions per CLTE monitoring protocol in the HCP area.
Natural Resources Management: Habitat restoration program (CA-16)	
Potential Effects: Roosting disturbance	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	

Table B-2: Avoidance and Minimization Measures for CLTE
Natural Resources Management: Invasive plant and animal control (CA-17)
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: AMM 87 Invasive plant or animal control will continue to be conducted when CLTE are not observed to be present.
Natural Resources Management: Habitat Monitoring System (HMS) implementation (CA-18)
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Natural Resources Management: Water quality monitoring projects (CA-19)
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Maintenance: General facilities maintenance (CA-21)
Potential Effects: Breeding/foraging/roosting disturbance; Chicks/eggs abandoned when adults are disturbed, injured, or killed; Eggs buried by sand, exposed to predation, or not properly incubated when adults are disturbed; Adults/juveniles/chicks struck by vehicles; Eggs crushed
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 88 CDPR will continue to train park staff and "visiting rangers" annually, or as needed, to ensure that staff are able to do their jobs with minimal impact to CLTE. At a minimum, staff will continue to receive information about basic CLTE biology, listing status, and relevant park rules and regulations and how to respond to observed violations of park rules and regulations that protect CLTE. AMM 89 All CDPR staff will continue to observe closures, speed limits, and other restrictions aimed at protecting CLTE, unless emergency conditions warrant otherwise. AMM 90 CDPR staff will continue to conduct surveys to ascertain the presence of CLTE nests, adults, and chicks within and adjacent to potential maintenance areas, if such activities must be carried out during the breeding season (March 1 through September 30) in and adjacent to areas where CLTE are potentially nesting, foraging, or roosting. If CDPR staff finds that the activities may impact, disturb, or result in take of adult birds, chicks, or eggs, the activities will continue to be delayed until CDPR staff determines CLTE will not be impacted. AMM 91 Mechanical trash removal will not occur in areas where any CLTE are present. AMM 92 Mechanical trash removal will only occur above the highest high tide, avoid all wrack/surf cast kelp, avoid all live vegetation, and avoid lagoons and flowing creeks. AMM 93 Equipment will observe all speed limits and will not exceed 10 mph. AMM 94 Mechanical trash removal will not be conducted within 500 feet of any known nesting area. AMM 95 Natural resources staff will inspect and approve the area subject to mechanical trash removal prior to each deployment. Natural resources staff will remain on site or be immediately available for monitoring purposes.
Potential Effects: Limited potential breeding habitat reduced by the footprint of vault toilets
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Maintenance: Trash control (CA-22)
Potential Effects: Chicks, eggs, adults, juveniles potentially exposed to predation by increased trash
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Maintenance: Wind fencing installation, maintenance, and removal (CA-23)
Potential Effects: Roosting/breeding disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Maintenance: Sand ramp and other vehicular access maintenance (CA-24)
Potential Effects: Roosting/breeding disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 96 During the breeding season, the sand ramps will continue to be inspected a minimum of once per day to identify CLTE nests. This will continue to occur during the daily survey.
Park Maintenance: Routine riparian maintenance (CA-26)
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 97 CLTE will continue to be protected from harm during maintenance activities conducted at the Oceano (Meadow Creek) Lagoon, Pismo Lake, and Oso Flaco Lake through monitoring of the treatment activity by qualified biologists. If any activities are scheduled when CLTE are known to be present (generally between April 15 and September 15) qualified biologists will continue to be on site during activities taking place at these locations. If CLTE are not foraging nearby or biologists observing CLTE foraging activity determine that

Table B-2: Avoidance and Minimization Measures for CLTE
CLTE will not be disturbed by the activities, it may proceed as planned. However, if CLTE are present and have the potential to be disturbed, the biologist will continue to direct activities to stop within 250 feet of the bird until it leaves on its own accord.
Park Maintenance: Perimeter and vegetation island fence installation, maintenance, and removal (CA-27)
Potential Effects: Foraging/roosting disturbance; Nest disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Maintenance: Cable fence maintenance and replacement (CA-28)
Potential Effects: Roosting disturbance; Nest disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Maintenance: Heavy equipment response in all areas of SVRA of Oceano Dunes District (CA-29)
Potential Effects: Similar to general facilities maintenance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Maintenance: Minor grading (less than 50 cubic yards) (CA-30)[5]
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Park Maintenance: Boardwalk and other pedestrian access maintenance (CA-31)
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Visitor Services: Ranger, life guard, and park aide patrols (CA-32)
Potential Effects: Similar to general facilities maintenance activities
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Visitor Services: Emergency response (CA-33)
Potential Effects: Similar to general facilities maintenance activities
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 98 Emergency responders will continue to be informed of the locations of areas that are sensitive (e.g., seasonal exclosures, shoreline foraging areas), to the extent feasible. If possible, qualified biologists will escort emergency vehicles into and out of areas that are sensitive.
Visitor Services: Access by non-CDPR vehicles (CA-34)
Potential Effects: Adults/juveniles/chicks struck by vehicles; Foraging/roosting disturbance; Chicks/eggs abandoned when adults are disturbed, killed, or injured; Chicks separated from adult(s) and inadequately fed; Eggs buried by sand, exposed to predation, or not properly incubated when adults are disturbed; Chicks, eggs, adults, juveniles potentially exposed to predation by increased trash
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Visitor Services: Beach concessions (CA-36)
Potential Effects: Similar to access by non-CDPR vehicles
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 99 A focused training program will continue to be provided for all concessionaires and OHV rental employees each year. The training program will consist of, at a minimum, a description of CLTE life history and park rules and regulations protecting CLTE. Concessionaires and OHV rental employees will continue to be provided with information handouts consisting of photographs and covered species information. These information handouts will continue to be provided to customers and other members of the public to encourage them to recognize and avoid covered species.
Visitor Services: Natural history and interpretation programs (CA-39)
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 100 CDPR will continue to hold large group natural history and interpretation programs at Oso Flaco Lake when CLTE are not present or modify the program by observing CLTE behavior to avoid significant disturbance.

[5] AMMs to reduce the effects of grading to maintain the seasonal exclosure are included in CA-12a: Installation and Maintenance of NPL and CLTE Protection Fence. AMMs to reduce the effects of grading to maintain the boundary fence are included in CA-28: Cable Fence Maintenance and Replacement.

Table B-2: Avoidance and Minimization Measures for CLTE
Other HCP Covered Activities: Motorized vehicle crossing of creeks (CA-40)
Potential Effects: Adults/juveniles/chicks struck by vehicles; Roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Other HCP Covered Activities: Pismo Creek estuary seasonal (floating) bridge (CA-41)
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 101 If, in the opinion of the Senior Environmental Scientist or monitors, visitor activities are significantly disrupting CLTE foraging and/or roosting behavior, the bridge will be closed to public use until the birds have left the area.
Other HCP Covered Activities: Dust control activities (CA-44)
Potential Effects: Adults/juveniles/chicks struck by vehicles; Breeding/foraging/roosting disturbance; Eggs crushed; Chicks/eggs abandoned when adults are disturbed, killed, or injured; Chicks separated from adult(s) and inadequately fed; Eggs buried by sand, exposed to predation, or not properly incubated when adults are disturbed; Adults, juveniles, chicks, eggs more susceptible to predation due to increased vegetation; Breeding/foraging/ roosting habitat altered
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Other HCP Covered Activities: Cultural resources management (CA-45)
Potential Effects: Breeding/foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Other HCP Covered Activities: Oso Flaco Lake boardwalk replacement (CA-48)
Potential Effects: Foraging/roosting disturbance
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 102 As feasible, boardwalk construction activities will be scheduled when CLTE are unlikely to be present (generally mid-September to mid-April). AMM 103 If boardwalk replacement activities are scheduled when CLTE are known to be present, qualified biologists will monitor construction activities. If CLTE are not foraging nearby or biologists observing CLTE foraging activity determine that CLTE will not be disturbed by the activities, work may proceed as planned. However, if CLTE is present and has the potential to be disturbed, the biologist will continue to direct activities within 250 feet of the CLTE to stop until it leaves on its own accord.
Other HCP Covered Activities: Special projects (CA-49)
Potential Effects: Breeding/foraging/roosting disturbance; Breeding habitat reduced by footprint of small project
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Other HCP Covered Activities: Reduction of the Boneyard Exclosure (CA-50)
Potential Effects: Reduction in protected nesting habitat
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Other HCP Covered Activities: Use of pesticides (CA-51)
Potential Effects: Breeding/foraging/roosting disturbance; Exposure from contact with contaminated prey or vegetation; Exposure from contact with residues, inhalation of vapors
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 104 When pesticide application must occur near CLTE breeding habitat, work will continue to be conducted between October 1 and February 28 to avoid the breeding season. AMM 105 Pesticides will continue to be applied when wind speeds are below 10 mph at the perimeter of the application site as measured by an anemometer on the upwind side. AMM 106 Pesticide application will continue to be postponed if soil moisture is at field capacity and a storm event, forecasted by the National Oceanic and Atmospheric Administration (NOAA) or National Weather Service (NWS), is to occur within 48 hours following application; or a storm event likely to produce runoff from the treated area is forecasted by NOAA/NWS to occur within 48 hours following the application. AMM 107 CDPR will continue to ensure that all workers are trained in the safe and effective use of pesticides in sensitive habitats. AMM 108 CDPR will continue to ensure that trained resource personnel are present at all phases of the work to ensure that pesticide application activities do not result in impacts to covered species. AMM 109 If pesticides are spilled, they will continue to be prevented from entering any water bodies to the extent practicable. CDPR staff and contractors will continue to be trained to contain any spilled material and are familiar with the use of absorbent materials. Spills will continue to be cleaned up according to label instructions, and all equipment used to remove spills will be properly contained and disposed of or decontaminated, as appropriate. Applicators will continue to report spills as required by CDPR policy and in a manner consistent with local, state, and federal requirements.

Table B-2: Avoidance and Minimization Measures for CLTE	
AMM 110	Post-treatment, CDPR will continue to initiate monitoring, which typically consists of mapping, photo documentation, regular inspections, and depending on location and species, some formalized monitoring resulting in several years' worth of data and subsequent reporting.
AMM 111	CDPR will continue to take the following steps when using herbicide: ● Prior to treatment, CDPR's PCA or qualified staff will continue to evaluate sites within the HCP area for invasive species removal. Weed populations will continue to be targeted based on site and weather conditions, historic weed growth, or other information. ● CDPR will continue to determine the appropriate method for treating a target area (e.g., manual removal, aerial application, backpack sprayer, truck mounted sprayer). If the application can be made without negatively impacting water quality or covered species, then an application will continue to be made. ● All herbicide applications will continue to be made according to the product label in accordance with regulations of the EPA, CalEPA, Cal OSHA, DPR, and the local Agricultural Commissioner. CDPR's PCA and DPR-licensed Qualified Applicator License (QAL) holders will continue to regularly monitor updates and amendments to the label so that applications are in accordance with label directions.
Other HCP Covered Activities: CDPR UAS use for park activities (CA-52)	
Potential Effects: Breeding/foraging/roosting disturbance	
Avoidance Minimization Measures:	
AMM 112	UAS will be flown with remote control and a built-in screen that shows battery life. The UAS will be equipped with software or other safeguard to ensure it will alert the operator when it reaches a minimum safe amount of battery life required for a return flight.
AMM 113	UAS operators will attend a formal training and be certified as a Pilot in Command prior to conducting solo flights.
AMM 114	UAS operators will have an established flight plan with a specific purpose determined following all Federal Aviation Administration (FAA) regulations.
AMM 115	UAS will be kept in view of the operator at all times.
AMM 116	UAS operators will not conduct flights in the HCP area without approval from the Senior Environmental Scientist.
AMM 117	All flights within 328 feet of CLTE nesting or chick-rearing habitat will require a USFWS-approved monitor to pilot or assist with flight logistics and monitoring, regardless if birds are confirmed in the area prior to flight.
AMM 118	Prior to flying the UAS into or near (within 328 feet of) nesting or chick-rearing areas, the permittee will follow all existing monitoring guidelines that have been established with USFWS.
AMM 119	UAS will not enter or fly within 328 feet of the CLTE nesting areas if the wind speed is above 15 mph or strong enough to move sand (or will be before or after completion of set up and exit from the exclosure), the sand temperature is 83°F, or if it is raining.
AMM 120	UAS flights will be initiated at least 328 feet from the closest known CLTE nest. The take-off and landing area will be clearly marked. If possible, take- off and landing areas will be out of direct sight from known nests.
AMM 121	UAS will only be deployed when a qualified biologist is confident the activity will not jeopardize the safety of CLTE individuals, nests, eggs, and young.
AMM 122	Prior to every UAS flight, a qualified biologist will scan the area for CLTE. If no birds are observed, the UAS flight can commence with monitoring, as appropriate. If a CLTE is observed in the area, it must be monitored by a qualified biologist during the remainder of the flight. If significant disturbance to CLTE is observed, the biologist may recommend increasing the altitude of the drone (but still remain below 400 feet to follow FAA guidelines) and/or guiding the drone to a safer area.
AMM 123	When CLTE are present in the area of interest, the UAS will fly at the highest possible altitude to collect the necessary data. If any CLTE show an inclination to mob, the UAS will be directed upward (but still below the FAA ceiling of 400 feet) and quickly away from the incoming CLTE. Until a qualified biologist deems the UAS is not a threat to their colony the flight will be aborted.
AMM 124	The UAS will be kept at least 100 feet above the ground at all times to reduce disturbance to nesting birds and below 400 feet to follow FAA guidelines.
AMM 125	The flight plan will not include erratic flight patterns that could be interpreted as an avian predator by CLTE.

Table B-3: Avoidance and Minimization Measures for CRLF	
Park Visitor Activities: Motorized recreation (CA-1)	
Potential Effects: Dispersing individuals struck by vehicles	
AMM 1	CDPR will continue to provide educational content on the Oceano Dunes SVRA and Pismo State Beach websites which include life history information and measures being taken to protect all HCP covered species found at the parks. Information can be updated as needed and visitors can find out what the parks are doing and what they can do to protect the covered species. Covered species information will be included as part of ongoing interpretative programs as well.
AMM 2	Posted speed limits will continue to be enforced throughout the HCP area.
AMM 3	CDPR will continue to implement management measures and modify protocols in accordance with ongoing adaptive management and based on recommendations in annual monitoring reports (section **Error! Reference source not found.**).
Potential Effects: Dispersing individuals exposed to increased predation due to trash	
Avoidance Minimization Measures:	
AMM 4	Trash dumpsters will continue to be provided throughout the HCP area. Trash receptacles are designed to prevent access by potential predators. CDPR will continue to explore options to reduce the movement of trash from the dumpsters and reduce predator presence at the dumpster sites.
AMM 5	All visitors will continue to be informed they are to deposit their trash in dumpsters/ receptacles provided. All campers are offered plastic garbage bags. Maintenance staff will continue to carry trash bags in each vehicle and make them available to visitors for removing trash and litter from visitor use areas.
AMM 6	As staff levels and funding allow, CDPR will continue to manually remove litter and garbage from aquatic areas that could support CRLF.
AMM 7	Qualified CDPR staff and consultants working under CDPR's tidewater goby 10(a)(1)(A) Recovery Permit (or approved by USFWS) will continue to euthanize invasive species (e.g., mosquitofish, largemouth bass, and crayfish) encountered during surveys for tidewater goby. Removing invasive predators from tidewater goby habitat will also benefit CRLF. Tidewater goby and CRLF habitats overlap in Arroyo Grande Creek.
AMM 8	CDPR will continue to monitor populations of invasive predators during fisheries surveys and CRLF surveys. If removing invasive predators incidentally during fisheries surveys does not sufficiently control these species, then additional removals may be deemed necessary.
AMM 9	If staff biologists encounter invasive predator species during activities, those species will continue to be removed by qualified biologists at that time.
Park Visitor Activities: Pedestrian activities (CA-3)	
Potential Effects: Individuals exposed to increased turbidity	
Avoidance Minimization Measures:	
AMM 10	CDPR will continue to monitor the Carpenter Creek and Pismo Creek pedestrian crossings for CRLF. If CRLF are observed in or near locations where pedestrians are known to cross and deemed vulnerable to pedestrian activity as determined by a CDPR Environmental Scientist, CDPR will continue to post signs closing crossings and/or encourage use of other paths in the HCP area, depending on the intensity of disturbance.
Park Visitor Activities: Equestrian recreation (CA-7)	
Potential Effects: Individuals exposed to increased turbidity	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Park Visitor Activities: Holidays (CA-10)	
Potential Effects: Effects for all covered activities on holidays are not expected to be different from those on non-holidays	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Park Visitor Activities: Special events (CA-11)	
Potential Effects: Effects based on the specific event activity(ies) permitted, but similar to motorized recreation (CA-1), camping (CA-2), and pedestrian activities (CA-3)	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 11	All permits authorizing special events will continue to include AMMs to reduce disturbance to CRLF. Specific AMM recommendations will be based on past experience and dependent on the event location, timing, and potential to impact covered species.
Natural Resources Management: Tidewater goby and salmonid survey (CA-13)	
Potential Effects: Individuals disturbed/injured/captured; Egg masses damaged	
Avoidance Minimization Measures:	

Table B-3: Avoidance and Minimization Measures for CRLF	
AMM 12	A visual survey for CRLF and CRLF egg masses will continue to be conducted prior to sampling in areas where CRLF may be present. If CRLF are present, surveys will continue to be postponed until the CRLF has left the area or appropriate AMMs are in place. If egg masses are present, sampling will continue to be postponed until the eggs have hatched or the survey will continue to be conducted to avoid all egg masses.
AMM 13	If CRLF are incidentally captured during surveys, they will continue to be checked for injury and released immediately at the capture site. This information will continue to be included in the annual report to USFWS. A CNDDB form will also continue to be completed for any CRLF observations.
AMM 14	If CRLF are injured or killed during surveys it will be reported to the USFWS as part of the annual report (section **Error! Reference source not found.**).
Potential Effects: Individuals exposed to increased risk of disease	
Avoidance Minimization Measures:	
AMM 15	Surveyors will continue to follow the USFWS Recommended Equipment Decontamination Procedures, which provides guidance for disinfecting equipment and clothing after entering a pond and before entering an aquatic resource.
Natural Resources Management: CRLF surveys and associated management (CA-14)	
Potential Effects: Individuals disturbed/injured/captured; Egg masses damaged; Individuals exposed to increase risk of spread of disease	
Avoidance Minimization Measures:	
AMM 16	A USFWS-approved biologist will continue to conduct CRLF surveys in accordance with the USFWS Revised Guidance on Site Assessments and Field Surveys for the CRLF.
AMM 17	CDPR will continue to eradicate or reduce the cover, biomass, and distribution of non-native invasive plants to enhance CRLF habitat. Routine vegetation management will continue to occur at Oso Flaco Natural Area, Oceano (Meadow Creek) Lagoon and Lagoon Trail, Meadow Creek, and Pismo Lake spillway. Other areas where vegetation management may occur include Arroyo Grande Creek and Lagoon and dune lakes and wetlands. Vegetation management also includes removal of emergent vegetation and debris, as necessary to improve potential CRLF habitat.
Natural Resources Management: Listed plant management activities (CA-15)	
Potential Effects: Individuals exposed to increased turbidity	
Avoidance Minimization Measures:	
AMM 18	Any time a work activity will need to be conducted on the bed, banks or channel of an aquatic habitat with the potential to support CRLF, appropriate steps will continue to be taken to minimize turbidity from activities. If possible, activities will continue to be conducted from outside the wetted area or from stream banks or other upland areas. If activity is necessary in wetted areas, work will continue to be limited to the maximum necessary to achieve desired outcome and care will be taken to reduce turbidity, especially during critical periods like when egg masses are present or tadpoles are present in the water.
Potential Effects: Individuals and/or egg masses disturbed	
Avoidance Minimization Measures:	
AMM 19	Immediately prior to the start of listed plant management activities near potentially occupied CRLF habitat, a qualified biologist will continue to conduct surveys for CRLF up to 100 feet outside the project boundaries.
AMM 20	If a CRLF is found within 100 feet of plant management activities in CRLF habitat, activities will continue to be delayed until the individual has moved from the area on its own accord or until appropriate AMMs are in place. AMMs can include such measures as relocation, exclusion fencing, and/or biological monitoring during activities.
Natural Resources Management: Invasive plant and animal control (CA-17)	
Potential Effects: Individuals exposed to increased turbidity	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Potential Effects: Individuals and or egg masses disturbed/injured/captured	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Potential Effects: Individuals benefited by decreased predation risk	
Avoidance Minimization Measures:	
AMM 21	CDPR will continue to discourage the release of mosquitofish into any known or potential CRLF breeding habitat.
Natural Resources Management: Water quality monitoring projects (CA-19)	
Potential Effects: Individuals exposed to increased turbidity; Individuals and/or egg masses disturbed	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Park Maintenance: Campground maintenance (CA-20)	
Potential Effects: Dispersing individuals crushed/injured	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	

Table B-3: Avoidance and Minimization Measures for CRLF	
AMM 22	Where appropriate and necessary, before any activities occur, a qualified biologist will continue to conduct a training session for all maintenance personnel. The training, at a minimum, covers CRLF life history and work constraints.
AMM 23	Non-emergency activities with potential to crush CRLF will continue to be suspended during heavy precipitation events (i.e., at least 0.5 inch of precipitation in a 24-hour period) near potentially occupied CRLF habitat.
Park Maintenance: Routine riparian maintenance (CA-26)	
Potential Effects: Individuals and egg masses crushed/injured/disturbed	
Avoidance Minimization Measures:	
AMM 24	Culvert maintenance will continue to be conducted during periods when egg masses or larvae are unlikely to occur in the project area (e.g., low flow period), to the extent feasible.
AMM 25	A USFWS-approved biologist will continue to conduct focused surveys of the work sites 2 weeks before the onset of activities in or near ponded or flowing water. If CRLF adults, tadpoles, or eggs are found, work will not commence until AMMs are in place. If any CRLF are found, a CNDDB report will continue to be submitted
AMM 26	A USFWS-approved CRLF monitor will continue to be on site during maintenance. If CRLF is detected within the project area, work will continue to stop until the animal is no longer present or until appropriate AMMs are in place. AMMS can include such measures as relocation, exclusion fencing with additional monitoring to prevent take along fenceline, and/or biological monitoring during maintenance activities.
AMM 27	CRLF life-stages found in the work area will be relocated upon determination by the USFWS-approved biologist that an appropriate relocation site exists and relocation is the preferred avoidance method. The biologist will be allowed sufficient time to move CRLF from the work site before activities begin. Only USFWS-approved biologists will participate in activities associated with capturing, handling, and monitoring CRLF. The biologists will follow safe-handling practices as outlined in the Declining Amphibians Population Task Force Code of Practice (Error! Reference source not found.).
AMM 28	Heavy equipment will continue to not be placed in the water body during operation of any culvert maintenance. Back-hoe work will continue to be restricted to the roadside or upper bank and only the bucket is placed in the water body.
AMM 29	CDPR staff will continue to limit the amount of disturbance to vegetation, banks, and streambed. Work and entrance into the work area will continue to be restricted to established areas.
AMM 30	All refueling, maintenance, and staging of equipment and vehicles will continue to occur at least 60 feet from riparian habitat or water bodies in a location where a spill will not drain directly toward aquatic habitat.
AMM 31	All vehicles and equipment will continue to be maintained in proper working condition to minimize the potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. Prior to the start of maintenance activities, all equipment will continue to be inspected for leaks.
AMM 32	A spill plan will continue to be in place for prompt and effective response to an accidental spill. The spill plan will continue to include, at a minimum, immediately notifying the biologist of any hazardous spills and immediately cleaning up spills. All Park staff will continue to be informed of the importance of preventing spills and appropriate measures to take when a spill happens.
AMM 33	All equipment and vehicles under-carriages will continue to be inspected periodically. Equipment that has been parked for more than 15 minutes near potentially occupied CRLF habitat will continue to be re-inspected prior to moving.
Potential Effects: Individuals exposed to increased predation	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 34	After removal of emergent vegetation in the stream channel, disturbed areas with the potential to pond water will continue to be smoothed with a rake to avoid creation of potential habitat for CRLF predators, including bull frogs and crayfish.
Potential Effects: Individuals exposed to increased turbidity	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Potential Effects: Individuals exposed to increase risk of spread of disease	
Avoidance Minimization Measures: . All AMMs apply, as appropriate.	
Potential Effects: Temporary disturbance of approximately 0.3 acre of wetlands	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Park Maintenance: Boardwalk and other pedestrian access maintenance (CA-31)	
Potential Effects: Individuals disturbed	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 35	Crews will continue to use hand tools to trim all vegetation.
Visitor Services: Emergency response (CA-33)	
Potential Effects: Individuals struck by vehicles; Breeding and/or dispersal habitat damaged; Individuals exposed to increased turbidity	
Avoidance Minimization Measures: All AMMs apply, as feasible and appropriate.	
Visitor Services: Pismo Beach Golf Course operations (CA-37)	

Table B-3: Avoidance and Minimization Measures for CRLF	
Potential Effects: Dispersing individuals injured/crushed	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Other HCP Covered Activities: Motorized vehicle crossing of Carpenter Creek (CA-40)	
Potential Effects: Individuals struck by vehicles; Individuals disturbed; Individuals exposed to increased turbidity	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 36	During times when there is ponded water at either Pismo Creek or Carpenter Creek estuaries, staff will continue to periodically review conditions and identify any issues that may result from vehicle crossings in this area. If, in the opinion of approved biologists, a vehicle crossing would present a threat to any life stages of CRLF, staff will continue to close this access until conditions have changed.
Other HCP Covered Activities: Dust control activities (CA-44)	
Potential Effects: Aestivating and/or dispersing individuals crushed/injured/disturbed	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Other HCP Covered Activities: Cultural resources management (CA-45)	
Potential Effects: Aestivating and/or dispersing individuals crushed/injured/disturbed	
All AMMs apply, as appropriate.	
AMM 37	Should an aestivating CRLF be found during excavation associated with cultural resource activities, all work will stop and will not begin again until the frog is no longer present. If activities need to proceed, the USFWS will be contacted and consulted on appropriate AMMs. AMMS can include such measures as relocation, exclusion fencing, and/or biological monitoring during activities.
Other HCP Covered Activities: CDPR management of agricultural lands (CA-46)	
Potential Effects: Aestivating and/or dispersing individuals crushed/injured/disturbed	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Other HCP Covered Activities: Oso Flaco Lake boardwalk replacement (CA-48)	
Potential Effects: Same as riparian maintenance activities	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 38	Boardwalk replacement will be constructed during a period when egg masses are unlikely to occur in the project area. A USFWS-approved biologist will survey the work site 2 weeks before the onset of activities. If CRLF adults, tadpoles, or eggs are found, work will not commence until avoidance measures are in place.
AMM 39	Any CRLF life-stages found in the project work area may be relocated upon determination by the USFWS-approved biologist that an appropriate relocation site exists and relocation is the preferred avoidance method. The approved biologist will be allowed sufficient time to move CRLF from the work site before work activities begin. Only USFWS-approved biologists will participate in activities associated with the capture, handling, and monitoring of CRLF.
AMM 40	Before any project activities occur, a USFWS-approved biologist will conduct a training session for all construction personnel. At a minimum, the training will include a description of the CRLF and its habitat, the importance of the CRLF and its habitat, the general measures that are being implemented to conserve the CRLF as they relate to the project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided a qualified person is on hand to answer any questions.
AMM 41	A USFWS-approved biologist will be present at the work site until the removal of all CRLF, instruction of workers, and habitat disturbance have been completed. After this time, the contractor or permittee will designate a person to monitor on-site compliance with all minimization measures. The USFWS-approved biologist will ensure that this individual receives training outlined in AMM 34 and in the identification of CRLF. The monitor and the USFWS-approved biologist will have the authority to halt any action that might result in impacts that exceed the levels anticipated by the USFWS.
Other HCP Covered Activities: Special projects (CA-49)	
Potential Effects: Individuals exposed to increased turbidity; Water quality decreased; Permanent and/or temporary loss of breeding or upland habitat; Individuals crushed/injured	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Other HCP Covered Activities: Use of pesticides (CA-51)	
Potential Effects: Disturbance of habitat; Exposure from contact with contaminated prey or vegetation; Exposure from contact with residues, inhalation of vapors	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 42	When pesticide application must occur near CRLF breeding habitat, a qualified biologist will continue to conduct a survey for CRLF 24 hours prior to the application and will continue to instruct the work crew on their identification and biology. If CRLF is observed, all work will continue to cease immediately until the CDPR biologist arrives and assesses the situation to determine if the work can proceed.

Table B-3: Avoidance and Minimization Measures for CRLF	
AMM 43	Pesticides will continue to be applied at wind speeds below 10 mph at the perimeter of the application site as measured by an anemometer on the upwind side.
AMM 44	Pesticide application will be postponed if soil moisture is at field capacity and a storm event, forecasted by the National Oceanic and Atmospheric Administration (NOAA) or National Weather Service (NWS), is to occur within 48 hours following application; or a storm event likely to produce runoff from the treated area is forecasted by NOAA/NWS to occur within 48 hours following the application.
AMM 45	CDPR will continue to ensure that all workers are trained in the safe and effective use of pesticides in sensitive habitats.
AMM 46	CDPR will continue to ensure that trained resource personnel are present at all phases of the work to ensure that pesticide application activities do not result in impacts to covered species.
AMM 47	If pesticides are spilled, they will continue to be prevented from entering any water bodies to the extent practicable. CDPR staff and contractors will continue to be trained to contain any spilled material and are familiar with the use of absorbent materials. Spills will continue to be cleaned according to label instructions, and all equipment used to remove spills will be properly contained and disposed of or decontaminated, as appropriate. Applicators will continue to report spills as required by CDPR policy and in a manner consistent with local, state, and federal requirements.
AMM 48	Post-treatment, CDPR will continue to initiate monitoring, which typically consists of mapping, photo documentation, regular inspections, and depending on location and species, some formalized monitoring resulting in several years' worth of data and subsequent reporting.
AMM 49	CDPR will continue to take the following steps when using herbicides: • Prior to treatment, CDPR's PCA or qualified staff will continue to evaluate sites within the HCP area for invasive species removal. Weed populations will continue to be targeted based on site and weather conditions, historic weed growth, or other information. • CDPR will continue to determine the appropriate method for treating a target area (e.g., manual removal, aerial application, backpack sprayer, truck mounted sprayer). If the application can be made without negatively impacting water quality or covered species, then an application will continue to be made • All herbicide applications will continue to be made according to the product label in accordance with regulations of the EPA, CalEPA, Cal OSHA, DPR, and the local Agricultural Commissioner. CDPR's PCA and DPR-licensed Qualified Applicator License (QAL) holders will continue to regularly monitor updates and amendments to the label so that applications are in accordance with label directions.

Table B-4: Avoidance and Minimization Measures for Tidewater Goby	
Park Visitor Activities: Motorized recreation (CA-1)	
Potential Effects: Individuals disturbed/crushed/injured	
Avoidance Minimization Measures:	
AMM 1	CDPR will continue to provide educational content on the Oceano Dunes SVRA and Pismo State Beach websites which include life history information and measures being taken to protect all HCP covered species found at the parks. Information is updated as needed and visitors can find out what the parks are doing and what they can do to protect the covered species. Covered species information will continue to be included as part of ongoing interpretative programs as well.
AMM 2	The Arroyo Grande Creek Lagoon and areas west of the lagoon where waters have pooled will continue to be posted closed to motor vehicle access.
AMM 3	Pursuant to Superintendent's Order, visitors will continue to be prohibited from crossing Arroyo Grande Creek in any other manner than by crossing the creek as close to the ocean waterline as possible and parallel to the ocean waterline. Driving upstream or downstream in the creek channel or in any other manner in the creek channel will continue to be prohibited.
AMM 4	Crossing of Arroyo Grande Creek by motor vehicles will continue to be regulated by park Visitor Services and Ranger staff daily during periods of high stream flow and during periods of high stream flow in combination with high tides. Creek crossings may be restricted or closed at any time, depending on these conditions. Rangers will continue to take enforcement action, where appropriate.
AMM 5	Specific guidelines for closure of Arroyo Grande Creek to vehicular crossings by the public will continue to be implemented.
AMM 6	As necessary, after major flows or other natural events that change the physical habitat characteristics of the lagoons, CDPR staff will continue to realign the area closed to motor vehicles to prevent vehicle access into areas that could support tidewater goby.
Park Visitor Activities: Pedestrian activities (CA-3)	
Potential Effects: Individuals disturbed; Burrows collapsed; Individuals exposed to increased turbidity; Individuals exposed to increased predation; Foraging activities and reproductive success reduced	
Avoidance Minimization Measures:	
AMM 7	The ponded areas of Arroyo Grande Creek will continue to be closed to the public.
AMM 8	CDPR will continue to monitor the Carpenter Creek and Pismo Creek crossings for tidewater goby. If tidewater gobies are observed in or near locations where pedestrians are known to cross, CDPR will continue to post signs closing these areas to pedestrians and encourage use of other paths in the HCP area.
AMM 9	CDPR will continue to pursue installing the seasonal floating bridge (CA-41) across the Pismo Creek estuary if it is found to be beneficial and feasible.
Park Visitor Activities: Dog walking (CA-6)	
Potential Effects: Individuals disturbed; Individuals exposed to increased turbidity; Water quality decreased by depositing waste and/or trampling vegetation; Individuals exposed to increased predation; Foraging activities and reproductive success reduced	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 10	Dogs will continue to be required to be on a leash no longer than 6 feet at all times and within complete control of its owner within the HCP area.
AMM 11	Waste bags will continue to be provided in the HCP area to encourage pet owners to pick up dog waste.
AMM 12	CDPR will continue to manually remove litter and garbage from tidewater goby habitat.
Park Visitor Activities: Equestrian recreation (CA-7)	
Potential Effects: Individuals disturbed/injured; Burrows collapsed; Individuals exposed to increased turbidity; Water quality decreased due to depositing waste and/or trampling vegetation; Foraging activities and reproductive success reduced	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Park Visitor Activities: Holidays (CA-10)	
Potential Effects: Effects for all covered activities on holidays are not expected to be different from those on non-holidays	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 13	During anticipated high visitor use periods as determined by historic visitor-attendance records (e.g., Memorial Day Weekend, July 4 Weekend, Labor Day Weekend) monitoring and law enforcement staff will continue to provide frequent observations of the vehicle/pedestrian crossing areas at Arroyo Grande Creek, Carpenter Creek, and Pismo Creek.
Park Visitor Activities: Special events (CA-11)	
Potential Effects: Effects based on the specific event activity(ies) permitted	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 14	All permits authorizing special events will continue to include AMMs to reduce disturbance to tidewater goby. Specific AMM recommendations will be based on past experience and dependent on the event location, timing, and potential to impact covered species.

Table B-4: Avoidance and Minimization Measures for Tidewater Goby	
Natural Resources Management: Tidewater goby and salmonid surveys (CA-13)	
Potential Effects: Individuals exposed to increased turbidity; Individuals and egg burrows disturbed; Individuals captured/injured/killed	
Avoidance Minimization Measures:	
AMM 15	A USFWS- and/or NOAA Fisheries-approved biologist will continue to conduct the surveys.
AMM 16	Surveys will continue to be conducted in accordance with the survey guidelines in Appendix F of the tidewater goby recovery plan for the species (USFWS 2005) or in accordance with any subsequent revisions the USFWS or NOAA may develop during the permit term.
AMM 17	The USFWS- and/or NOAA Fisheries-approved biologist will continue to use minnow traps, dipnets, seine nets, and hoop nests that do not have woven mesh larger than 2 to 4 millimeters in width.
AMM 18	Disturbance and damage to burrows, eggs, and young will continue to be minimized through the use of the smallest seines and lightest seine weights practicable.
AMM 19	Any tidewater gobies exhibiting signs of stress will continue to be immediately released at the capture location.
AMM 20	Dipnetting and seining will continue to be limited to no more than 40 percent of the project area, excluding stream channels, unless the surveys are to be conducted during the breeding season (generally April through mid-June). Seining during the breeding season will continue to be limited to affect no more than 20 percent of the habitat.
AMM 21	Prior to activities that may involve handling tidewater gobies, the surveyor will continue to ensure that hands are free of sunscreens, lotion, nicotine, and insect repellent.
AMM 22	No electrofishing will continue to occur in tidewater goby habitat. If electrofishing is authorized for salmonid surveys, and tidewater gobies are subsequently found in an area they were previously not known to occur, electrofishing will continue to cease immediately.
AMM 23	To prevent the introduction of new invasive animal and plant species, all CDPR staff and/or contractors will continue to be required to ensure that work boots, vehicles, and equipment that will enter the water have been cleaned. See CRLF AMM 11.
AMM 24	CDPR will continue to conduct fishery monitoring surveys to follow, document, and report on the likely future recolonization of restored wetted areas by several aquatic species, including tidewater goby. This information will continue to be provided to resource agencies and used to contribute to the recovery of tidewater goby.
AMM 25	Qualified CDPR staff and consultants working under CDPR's tidewater goby 10(a)(1)(A) Recovery Permit (or approved by USFWS) will continue to euthanize invasive species (e.g., mosquitofish, largemouth bass, and crayfish) encountered during surveys for tidewater goby.
AMM 26	If staff biologists encounter non-native predator species during activities, those species will continue to be removed by qualified biologists at that time.
Natural Resources Management: CRLF surveys (CA-14)	
Potential Effects: Egg burrows disturbed; Individuals captured/injured/killed; Individuals exposed to increased turbidity	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 27	When possible and appropriate, eyeshine surveys for CRLF will continue to be conducted to minimize disturbance to tidewater gobies and tidewater goby habitat.
AMM 28	CRLF dipnet surveys, if conducted in the HCP area, will be conducted in a manner that minimizes disturbance to aquatic habitat that could overlap with tidewater goby habitat.
Natural Resources Management: Invasive plant and animal control (CA-17)	
Potential Effects: Individuals exposed to increased turbidity; Individuals disturbed/injured	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 29	To prevent erosion and sedimentation, vegetation removal and bank disturbance will continue to be kept to the minimum amount necessary to complete the task.
AMM 30	Activities within tidewater goby habitat will continue to be avoided, if possible, or kept to a minimum. If activities require that personnel work in the water, only one person will enter the water while the remaining personnel conduct work from land.
AMM 31	Precautions will continue to be taken to avoid damage to non-target vegetation.
Natural Resources Management: Water quality monitoring projects (CA-19)	
Potential Effects: Individuals exposed to increased turbidity; Individuals disturbed/injured	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 32	CDPR will continue to work with public agencies, landowners, and stakeholders to secure a sustained water inflow into the estuary, focused on sustainable groundwater use and maintenance of instream flows in the lower mile of Arroyo Grande Creek.
AMM 33	CDPR will continue to work with the County on their operations and maintenance of the Sand Canyon Flapgate to minimize impacts to goby from sediment, invasive aquatic species, and other similar threats.
Park Maintenance: Routine riparian maintenance (CA-26)	
Potential Effects: Individuals exposed to increased turbidity; Individuals/egg burrows disturbed	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	

Table B-4: Avoidance and Minimization Measures for Tidewater Goby
AMM 34 Prior to the onset of activities that could affect tidewater goby habitat, qualified biologists will continue to conduct a training session for all personnel. At a minimum, the training will include a description of tidewater goby and its habitat and AMMs that should be implemented. The training session will be repeated for any new personnel at the work site.
AMM 35 If activities are proposed near occupied tidewater goby habitat, as feasible, CDPR staff will continue to limit project activities in the channel and along stream banks to the drier period of the year (generally May 1 to December 1) or when the stream is not actively flowing, or at its lowest flow, and when there is no measurable rain forecasted within 48 hours of work activities.
AMM 36 If work near occupied tidewater goby habitat is proposed, non-erodible filter screens will continue to be placed at the inlet and outflow of the culvert and filter screens and/or wattles will continue to be placed around the work area during activities to minimize sediment from entering the water.
AMM 37 Activities and entrance into the work area will continue to be restricted to established areas.
AMM 38 A USFWS-approved biologist will continue to conduct a pre-activity survey for tidewater goby in occupied tidewater goby habitat prior to commencing activities. If tidewater goby is observed in the work area or water is present in the work area and it cannot be determined if tidewater goby is present, the Environmental Scientist will continue to determine the appropriate measures taken to protect the tidewater goby population. These measures could include, but are not limited to, establishing fencing or otherwise demarcating a barrier between the work site and the tidewater goby population and/or relocation by a USFWS-approved biologist.
AMM 39 Heavy equipment will not be placed in the water body during operation of any culvert maintenance. Back-hoe work will continue to be restricted to the roadside or upper bank and only the bucket will be placed in the water body.
AMM 40 All refueling, maintenance, and staging of equipment and vehicles will continue to occur at least 60 feet from riparian habitat or water bodies in a location where a spill will not drain directly toward aquatic habitat.
AMM 41 Appropriate spill containment and clean-up materials will continue to be stored on site during activities. A spill plan will continue to be in place for prompt and effective response to an accidental spill. All Park staff will continue to be informed of the importance of preventing spills and appropriate measures to take when a spill happens.
Park Maintenance: Minor grading (less than 50 cubic yards) (CA-30)
Potential Effects: Individuals exposed to increased turbidity; Individuals disturbed/crushed/injured
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 42 Heavy equipment will continue to not be placed in the water body during operation of any minor grading.
Visitor Services: Ranger, lifeguard, and park aide patrols (CA-32)
Potential Effects: Individuals disturbed/crushed/injured; Water quality decreased
Avoidance Minimization Measures: All AMMs apply, as appropriate.
Visitor Services: Emergency response (CA-33)
Potential Effects: Habitat damaged; Individuals exposed to increased turbidity
Avoidance Minimization Measures: All AMMs apply, as feasible and applicable.
Visitor Services: Motorized vehicle crossing of Pismo/Carpenter and Arroyo Grande Creeks (CA-40)
Potential Effects: Individuals disturbed/crushed/injured; Water quality decreased
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 43 During times when there is ponded water at either Pismo Creek or Carpenter Creek estuaries, staff will continue to periodically review conditions and identify any issues that may result from vehicle crossings in this area. If, in the opinion of approved biologists, a vehicle crossing would present a threat to any life stages of tidewater goby, staff will continue to close this access until conditions have improved. AMM 44 CDPR staff that may drive through these crossings will continue to receive training regarding tidewater goby. The training will continue to include a description of tidewater goby and its habitat and AMMs that continue to be implemented.
Visitor Services: Pismo Creek estuary seasonal (floating) bridge (CA-41)
Potential Effects: Individuals disturbed
Avoidance Minimization Measures: All AMMs apply, as appropriate. AMM 45 To allow movement of all fish species as well as an exchange of fresh and saltwater, the interlocking pieces of the bridge will be constructed to create wide openings under the bridge. Openings will be designed as wide as possible while maintaining structural integrity to ensure water flow even when the bridge sits on the bed of the estuary during low flows. AMM 46 If water levels are so low that the bridge is not allowing the free movement of fish in the estuary, the bridge will be removed until there is sufficient water to allow the bridge to float.
Visitor Services: Use of pesticides (CA-51)
Potential Effects: Habitat disturbance; Exposure from contact with contaminated prey or vegetation; Exposure from contact with residues, inhalation of vapors
Avoidance Minimization Measures: All AMMs apply, as appropriate.

Table B-4: Avoidance and Minimization Measures for Tidewater Goby	
AMM 47	When pesticide application must occur near tidewater goby habitat, a qualified biologist will continue to conduct a survey for tidewater goby 24 hours prior to the application and will continue to instruct the work crew on their identification and biology. If tidewater goby is observed, all work will continue to cease immediately until the CDPR biologist arrives and assesses the situation to determine if the work can proceed.
AMM 48	Herbicides used in tidewater goby habitat will continue to be limited to those designed for aquatic applications as specified in the APAP, and will continue to be applied directly to Elymus, Ammophila and Arundo on a low or receding tide when water is not present, so residual amounts that may reach the water on the returning tide are small and rapidly diluted.
AMM 49	Pesticides will continue to be applied at wind speeds below 10 mph at the perimeter of the application site as measured by an anemometer on the upwind side.
AMM 50	Pesticide application will continue to be postponed if soil moisture is at field capacity and a storm event, forecasted by the National Oceanic and Atmospheric Administration (NOAA) or National Weather Service (NWS), is to occur within 48 hours following application; or a storm event likely to produce runoff from the treated area is forecasted by NOAA/NWS to occur within 48 hours following the application.
AMM 51	CDPR will continue to ensure that all workers are trained in the safe and effective use of herbicides in sensitive habitats.
AMM 52	CDPR will continue to ensure that trained resource personnel are present at all phases of the work to ensure that herbicide application activities do not result in impacts to covered species.
AMM 53	If pesticides are spilled, they will be prevented from entering any water bodies to the extent practicable. CDPR staff and contractors will continue to be trained to contain any spilled material and will be familiar with the use of absorbent materials. Spills will be cleaned up according to label instructions, and all equipment used to remove spills will be properly contained and disposed of or decontaminated, as appropriate. Applicators will continue to report spills as required by CDPR policy and in a manner consistent with local, state, and federal requirements.
AMM 54	Post-treatment, CDPR will continue to initiate monitoring, which typically consists of mapping, photo documentation, regular inspections, and depending on location and species, some formalized monitoring resulting in several years' worth of data and subsequent reporting.
AMM 55	CDPR will continue to take the following steps when using herbicide: • Prior to treatment, CDPR's PCA or qualified staff will continue to evaluate sites within the HCP area for invasive species removal. Weed populations will continue to be targeted based on site and weather conditions, historic weed growth, or other information. • CDPR will continue to determine the appropriate method for treating a target area (e.g., manual removal, aerial application, backpack sprayer, truck mounted sprayer). If the application can be made without negatively impacting water quality or covered species, then an application will continue to be made. • All herbicide applications will continue to be made according to the product label in accordance with regulations of the EPA, CalEPA, Cal OSHA, DPR, and the local Agricultural Commissioner. CDPR's PCA and DPR-licensed Qualified Applicator License (QAL) holders will continue to regularly monitor updates and amendments to the label so that applications are in accordance with label directions.All herbicide applications will continue to be made according to the product label in accordance with regulations of the EPA, CalEPA, Cal OSHA, DPR, and the local Agricultural Commissioner. CDPR's PCA and DPR-licensed Qualified Applicator License (QAL) holders will continue to regularly monitor updates and amendments to the label so that applications are in accordance with label directions.

Table B-5: Avoidance and Minimization Measures for Plants	
Park Visitor Activities: Pedestrian activities (CA-3)	
Potential Effects: Beach spectaclepod, surf thistle, and La Graciosa thistle trampled	
Avoidance Minimization Measures:	
AMM 1	CDPR will continue to provide educational content on the Oceano Dunes SVRA and Pismo State Beach websites including life history information and measures being taken to protect all HCP covered species found at the parks. Information can be updated as needed and visitors can find out what the parks are doing and what they can do to protect the covered species. Covered species information will continue to be included as part of ongoing interpretative programs as well.
AMM 2	In areas where the public is allowed in occupied habitat, plants will continue to be fenced to deter pedestrians from entering the sensitive areas. If a population is found where there is heavy public activity like the Dune Preserve or Grand Dunes areas, fencing and signage will continue to be installed.
AMM 3	Informal trails in and adjacent to listed plant species habitats will continue to be closed and restored to original conditions.
AMM 4	Habitat restoration will continue to be conducted to benefit beach spectaclepod, surf thistle, and La Graciosa thistle.
AMM 5	A program of selective propagation of specific listed plant species to augment existing populations and adjacent unoccupied habitats will be developed if monitoring shows CDPR or public activities negatively impacting individuals or populations.
AMM 6	CDPR will continue to implement management measures and modify protocols in accordance with ongoing adaptive management and based on recommendations in annual monitoring reports (section Error! Reference source not found.).
Natural Resources Management: Listed plant mgmt. activities (monitoring, propagation, and habitat enhancement) (CA-15)	
Potential Effects: Plants trampled/crushed	
Avoidance Minimization Measures:	
AMM 7	Staff with specific training in the identification of listed plant species will continue to survey areas with known populations. Surveys will continue to be conducted annually or as necessary based on the level of management needed.
AMM 8	Prior to the onset of activities that could affect listed plant habitat, a qualified biologist will continue to conduct a training session for all personnel. At a minimum, the training will continue to include a description of relevant plants and their habitat and AMMs that should be implemented. The training session will continue to be repeated for any new personnel.
AMM 9	Staff will continue to be urged to limit time in occupied habitat to reduce the potential for trampling listed plants. CDPR staff will continue to limit the amount of disturbance to vegetation to the minimum necessary to complete the project. Work and entrance into the work area will continue to be restricted to established areas.
AMM 10	Water quality monitoring and improvement projects will continue to be conducted to benefit marsh sandwort and Gambel's watercress.
Potential Effects: Plants burned during prescribed fire activities for listed species management	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 11	Prior to initiating a prescribed burn, populations of listed plant species will continue to be clearly marked on the ground, and non-native vegetation will be pulled by hand to establish a fire line of mineral soil around all known populations of listed plant species. The fire line will continue to be the minimum necessary to protect known listed plant populations.
AMM 12	Fire personnel, pesticide applicators, and restoration crews will continue to receive training prior to construction activities. The training will continue to include information regarding identification of listed plant species, the life history of listed species, instructions to avoid damage to listed species, and the need to remain out of the restricted areas and within the work areas and access routes.
AMM 13	Heavy equipment, including fire engines and pumper trucks, will continue to be located outside of sensitive habitat. Locations for the placement and staging of heavy equipment are always clearly marked on a map, as well as on the ground.
AMM 14	A trained botanist will continue to be present during fire activities. The monitor will have the authority and responsibility to stop work if unanticipated damage to listed plant species occurs.
Natural Resources Management: Invasive plant and animal control (CA-17)	
Potential Effects: Plants trampled/crushed; Plants burned during prescribed fire activities during non-listed species management; Plants sprayed during herbicide application	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 15	Prior to conducting treatment, the project area will continue to be surveyed by a trained botanist for listed plant species. Every effort will be made to locate populations of listed plant species, identify their location on a map, and clearly mark their locations on the ground before work crews and equipment are allowed in the treatment area.
AMM 16	Only workers with specific training in the identification of listed plant species will continue to work in areas with known populations.
AMM 17	If listed species are found within 100 feet of surface-disturbing activities, they will continue to be avoided by a marked and/or fenced buffer of 25 feet within the project area or other distance as identified by the qualified botanist. Fencing and/or flagging will be removed at the completion of activities.
AMM 18	If plants are found during pre-activity surveys and cannot be avoided, plants will continue to be salvaged and relocated.

Table B-5: Avoidance and Minimization Measures for Plants	
AMM 19	Non-native vegetation will continue to be cleared by hand and/or with herbicide, using experienced herbicide applicators, within and near listed plant populations. Herbicide application will typically be used sparingly and will be done under the close supervision of an experienced botanist.
AMM 20	Attention will be given to access corridors, treatment sites that include on-the-ground activities, and previously known populations of listed plants.
AMM 21	Trained resource personnel will continue to be present at all phases of the work to ensure that activities will not result in damage to listed species.
AMM 22	Records will continue to be kept of all invasive plant and animal control management activities. These records will continue to include an assessment of the target invasive plant population, treatment employed, location of area treated, supervisor of treatment, date of treatment, amount of pesticides used and weather condition during treatment.
Park Maintenance: Routine riparian maintenance (CA-26)	
Potential Effects: La Graciosa thistle, Gambel's watercress, and marsh sandwort damaged	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 23	When necessary and appropriate, a qualified botanist will continue to conduct pre-activity surveys to confirm absence of marsh sandwort, La Graciosa thistle, and Gambel's watercress prior to commencing ground-disturbing activities in potential habitat areas. If the plants are found during pre-activity surveys, including any Gambel's watercress hybrids, the botanist will flag the area inform all workers of the need to stay out of flagged area.
Park Maintenance: Heavy equipment response in all areas of SVRA of Oceano Dunes District (CA-29)	
Potential Effects: Plants trampled/crushed	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Park Maintenance: Minor grading (CA-30)	
Potential Effects: Plants trampled/crushed	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Park Maintenance: Boardwalk and other pedestrian access maintenance (CA-31)	
Potential Effects: Plants trampled/crushed; Plants uprooted/removed; Temporary loss of habitat	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Visitor Services: Emergency response (CA-33)	
Potential Effects: Plants trampled/crushed	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Other HCP Covered Activities: Riding in 40 Acres (CA-42)	
Potential Effects: Loss or degradation of potentially suitable habitat	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 24	All trails and other areas open to vehicles will be sited with adequate buffers from any occurrences of listed plants.
Other HCP Covered Activities: Cultural resources management (CA-45)	
Potential Effects: Plants uprooted/damaged/removed	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 25	Plant populations will continue to be restored if a cultural resource project disturbs or destroys a plant population.
Other HCP Covered Activities: Special projects (CA-49)	
Potential Effects: Permanent and/or temporary loss of potentially suitable habitat	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
Other HCP Covered Activities: Use of pesticides (CA-51)	
Potential Effects: Habitat disturbance; Exposure to contaminated water and residues; Direct exposure to chemicals	
Avoidance Minimization Measures: All AMMs apply, as appropriate.	
AMM 26	CDPR will continue to ensure that formal surveys are conducted for the covered plant species prior to work commencing on the project site. Surveys will continue to be conducted by trained botanists and field assistants. Since population numbers are relatively low, surveys focus on determining the location, distribution, and abundance of covered species. CDPR will continue to ensure that all covered species locations are flagged to alert workers of their presence. Authorized staging areas and access routes will continue to be flagged. All equipment and labor crews will continue to remain in staging areas staging areas or on the designated access routes to reduce the potential for impacts to covered plant species and their habitat.
AMM 27	After treatments are initiated, additional surveys will continue to be conducted to identify new populations of covered plants. Regular monitoring of the treatment area will continue to determine the effects of the treatments on the existing populations and their habitat.

Table B-5: Avoidance and Minimization Measures for Plants	
AMM 28	Pesticides will continue to be applied at wind speeds below 10 mph at the perimeter of the application site as measured by an anemometer on the upwind side.
AMM 29	Pesticide application will continue to be postponed if soil moisture is at field capacity and a storm event, forecasted by the National Oceanic and Atmospheric Administration (NOAA) or National Weather Service (NWS), is to occur within 48 hours following application; or a storm event likely to produce runoff from the treated area is forecasted by NOAA/NWS to occur within 48 hours following the application.
AMM 30	CDPR will continue to avoid occupied covered plant habitat, as feasible. If covered plant habitat must be impacted, CDPR will continue to establish a buffer zone of no less than 15 feet (but typically 25 feet) around individual covered plant species identified during surveys, as feasible. Only hand-weeding will continue to be permitted in these buffer zones. If a buffer cannot be implemented, CDPR will continue to take appropriate precautions, as determined by the Senior Environmental Scientist. Precautions can include timing the herbicide activities so that they occur prior to the covered plant blooming period, using a monocot focused herbicide, and/or having an experienced herbicide applicator conduct the activities under the direction of a qualified botanist.
AMM 31	CDPR will continue to only allow trained, skilled botanists to enter areas where covered plant species occur during treatments.
AMM 32	CDPR will continue to ensure that pesticide applications near known populations of the covered plant species are conducted under the direction of a qualified biological monitor.
AMM 33	CDPR will continue to ensure that all workers are trained to identify covered plant species that may occur at project site prior to work commencing on site. CDPR will continue to instruct workers how to avoid inadvertent adverse impacts to these species.
AMM 34	CDPR will continue to ensure that all workers are trained in the safe and effective use of herbicides in sensitive habitats.
AMM 35	CDPR will continue to ensure that trained resource personnel are present at all phases of the work to ensure that herbicide application activities do not result in impacts to covered species.
AMM 36	If herbicides are spilled, they will be prevented from entering any water bodies to the extent practicable. CDPR staff and contractors will continue to be trained to contain any spilled material and are familiar with the use of absorbent materials. Spills will continue to be cleaned according to label instructions, and all equipment used to remove spills will be properly contained and disposed of or decontaminated, as appropriate. Applicators will continue to report spills as required by CDPR policy and in a manner consistent with local, state, and federal requirements.
AMM 37	Post-treatment, CDPR will continue to initiate monitoring, which typically consists of mapping, photo documentation, regular inspections, and depending on location and species, some formalized monitoring resulting in several years' worth of data and subsequent reporting.
AMM 38	CDPR will continue to take the following steps when using herbicide: • Prior to treatment, CDPR's PCA or qualified staff will continue to evaluate sites within the HCP area for invasive species removal. Weed populations will continue to be targeted based on site and weather conditions, historic weed growth, or other information. • CDPR will continue to determine the appropriate method for treating a target area (e.g., manual removal, aerial application, backpack sprayer, truck mounted sprayer). If the application can be made without negatively impacting water quality or covered species, then an application will continue to be made • All herbicide applications will continue to be made according to the product label in accordance with regulations of the EPA, CalEPA, Cal OSHA, DPR, and the local Agricultural Commissioner. CDPR's PCA and DPR-licensed Qualified Applicator License (QAL) holders will continue to regularly monitor updates and amendments to the label so that applications are in accordance with label directions.

Appendix C: Special-Status Species in HCP Area

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Oceano Dunes District HCP EIR
Appendix C: Special-Status Species in HCP Area

Special-Status Animal Species List

The following table includes special-status animal species, listing status, range in California, habitat, and potential for special-status species occur in the HCP area based on information from U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), California Department of Parks and Recreation (CDPR) survey and monitoring reports, California Natural Diversity Database (CNDDB), and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants. A total of 65 animal species were determined to have some potential to occur within the HCP area. Of these 65 species, 52 species have been recorded within the HCP area and/or have moderate or high potential to occur within the HCP area.

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
Invertebrates					
vernal pool fairy shrimp *Branchinecta lynchi*	FT	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools.	Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	None- No suitable habitat and no records from area.	1, 2, 3
Kern primrose sphinx moth *Euproserpinus euterpe*	FT	Found in the Walker Basin, Kern County, and several other scattered locations (Carrizo Plain in San Luis Obispo County and Cuyama Valley in Santa Barbara County).	Host plant is evening primrose (*Camissonia contorta epilobioides*). Found in valley & foothill grassland.	None- No suitable habitat and no records from area. In San Luis Obispo County, this species is only known to occur within the Carrizo Plain.	1, 3
monarch butterfly *Danaus plexippus*	FC	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico.	Roosts located in wind-protected tree groves (e.g., eucalyptus [*Eucalyptus* sp.], Monterey pine [*Pinus radiata*], Monterey cypress [*Cupressus macrocarpa*]), with nectar and water sources nearby.	Present- Known to overwinter in Pismo State Beach adjacent to the North Beach Campground. May roost elsewhere, within eucalyptus groves and Monterey cypress forest. Other areas containing these trees include the Oceano Campground and the vegetated islands; however, these areas may not provide enough wind	2, 3, 4

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
				cover to provide suitable winter roosts.	
Fish					
steelhead - south/central California coast ESU *Oncorhynchus mykiss irideus*	FT	Coastal river basins from the Russian River south to Soquel and Aptos Creek, and the drainages of San Francisco and San Pablo Bays, including the Napa River.	Hatches in fresh water, lives adult life in the ocean, and returns to natal stream or river to spawn; spawning and rearing habitat consists of perennial streams with clear, cool to cold, fast flowing water with a high dissolved oxygen content and abundant gravels and riffles.	Present- Known to occur in Pismo Creek and Arroyo Grande Creek from CDPR fish surveys and CNDDB records. This species is localized to these creek systems and their confluences with the Pacific Ocean.	1, 2, 3, 4
Arroyo chub *Gila orcuttii*	CSSC	Native to streams from Malibu Creek to San Luis Rey River Basin; introduced into streams in Santa Clara, Ventura and Santa Ynez.	Slow water stream sections with mud or sand bottoms; feeds heavily on aquatic vegetation and associated invertebrates.	Low- The only known occurrences within five miles were introduced into the Santa Maria River. In addition, this species has not been documented in the HCP area during previous CDPR surveys from 2004-2018.	3
tidewater goby[1] *Eucyclogobius newberryi*	FE, CSSC	Occurs in brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River in Del Norte County.	Found in shallow lagoons and lower stream reaches in brackish to fresh water; they need fairly still but not stagnant water and high oxygen levels.	Present- Known to occur in Arroyo Grande Creek, Pismo Creek, Carpenter Creek, Oso Flaco Creek, and Pismo Creek from CDPR surveys and CNDDB records. Suitable habitat in area includes Arroyo Grande Creek and Lagoon, Pismo Creek and Lagoon, Carpenter Creek, Oceano (Meadow Creek) Lagoon, and Oso Flaco Creek.	1, 2, 4

[1] Species listed in bold are Covered Species in the Oceano Dunes District HCP.

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
Amphibians/Reptiles					
California tiger salamander *Ambystoma californianse*	FT, ST, CSSC	Endemic, found in isolated populations the Central Valley and Central Coast ranges.	Requires both breeding and aestivation habitat. Breeding habitat consists of low-elevation (typically below 1,900 feet) vernal pools, vernal pool complexes, and seasonal ponds in grassland, oak savannah, and coastal scrub communities. They spend the dry season in upland habitats within one mile of the breeding ponds in small mammal burrows.	None- No suitable habitat and no records from area.	1, 3
California red-legged frog *Rana draytonii*	FT, CSSC	Historically, this species was found along the coast and Coast Ranges from Mendocino County in northern California south to northern Baja California, and inland east through the northern Sacramento Valley into the foothills of the Sierra Nevada mountains, south to Tulare county, and possibly Kern county. Currently occurs along the northern and southern coast ranges, and in isolated areas in the Sierra Nevada foothills.	Inhabits lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Present- Observed during CDPR surveys in Arroyo Grande Creek and in the Oso Flaco Lake complex, including Oso Flaco Lake and Little Oso Flaco Lake. Potentially observation in Carpenter Creek. Also found nearby in Jack Lake, Finger Lake, Snake Lake, Little Oso Flaco Creek, and Lettuce Lake.	1, 2, 4
coast range newt *Taricha torosa*	CSSC	Coastal drainages from Mendocino County to San Diego County.	Lives in terrestrial habitats and will migrate over one kilometer to breed in ponds, reservoirs and slow-moving streams.	Present- This species has been infrequently observed in the HCP area. Suitable habitat for this species is limited to aquatic habitat and areas near aquatic habitat.	3
blunt-nosed leopard lizard *Gambelia silus*	FE	Resident of sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief.	Seeks cover in mammal burrows, under shrubs or structures such as fence posts; they do not excavate their own burrows.	None- No suitable habitat and no records from area. In San Luis Obispo County, this species is only known to occur within the Carrizo Plain.	1, 3

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
Coast (California) horned lizard *Phrynosoma coronatum*	CSSC	Historically, found along the Pacific coast from the Baja California border west of the deserts and the Sierra Nevada, north to the Bay Area, and inland as far north as Shasta Reservoir, and south into Baja California. Ranges up onto the Kern Plateau east of the crest of the Sierra Nevada. Current range is more fragmented.	Chaparral, grasslands, coniferous forests in fine, loose soils. Prefers friable, rocky, or shallow sandy soils for burial; open areas for sunning; bushes for cover; and an abundant supply of ants and other insects.	Present- Documented in 2006 along the access road to Little Oso Flaco Lake. This species may utilize a variety of habitat locations within the HCP area including the vegetation islands and the western interface of sand and silver dune lupine-mock heather scrub habitat.	2, 3, 4
silvery legless lizard *Anniella pulchra*	CSSC	Occurs from the southern edge of the San Joaquin River in northern Contra Costa County south to northwestern Baja California Del Norte just south of Colonia Guerrero. Five lineages; Lineage D occurs in project area.	Dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and riparian habitats with moist, sandy soils.	Present- Observed in the HCP area in vegetation islands, designated campgrounds, and at Oso Flaco Lake. Also observed nearby at Little Oso Flaco Lake, Jack Lake, and near Lettuce Lake. Similar coastal dune scrub and riparian habitat near freshwater within the HCP area may also be used by this species.	2, 3, 4
two-striped garter snake *Thamnophis hammondii*	CSSC	Coastal California from vicinity of Salinas to northwest Baja California, from sea level to about 7,000 feet.	Highly aquatic, found in or near permanent fresh water, often along streams with rocky beds and riparian growth.	Present- This species has been infrequently observed in the HCP area. Observed at Oso Flaco Lake. Also observed in September 2016 within the Chevron property just south of the HCP area. Suitable habitat present within aquatic habitat in the HCP area.	3, 4
Western spadefoot *Spea hammondii*	CSSC	Ranges from near Redding south throughout the Great Valley and its associated foothills, through the	Prefers open areas with sandy or gravelly soils, in mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy	Present- Documented at Oso Flaco Lake in 2000 and within the Eucalyptus South vegetation island in	3, 4

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
		South Coast Ranges into coastal southern California south of the Transverse mountains and west of the Peninsular mountains, into northwest Baja California.	washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Vernal pools without predators are required for breeding.	2011. Other ephemeral water sources within the HCP area may be used by this species for breeding and vegetation islands and open sand areas may be used during dispersal and winter.	
western pond turtle *Emys marmorata*	CSSC	From Oregon border of Del Norte and Siskiyou Counties south along the coast to San Francisco Bay, inland through the Sacramento Valley and on western slope of Sierra Nevada.	Ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation in woodlands, grasslands, and open forests.	Present- Known to occur in Oso Flaco Lake, Oceano Lagoon, and Arroyo Grande Creek from CDPR surveys and CNDDB records. Other freshwater habitat within the HCP area may be used.	2, 3, 4
Birds					
brant *Branta bernicla*	CSSC (wintering and staging)	Winters along entire California coast.	Requires well-protected, shallow marine waters with inter-tidal eel grass beds, primarily within bays and estuaries; primary food is eel grass. Winters in sheltered bays, behind sand spits, in large embayments and near mouths of estuaries.	Present (Wintering/Migration), None (Nesting)- HCP area is outside the known breeding range. This species has been observed at in the HCP area. Suitable wintering habitat includes Pismo Lagoon, Oceano Lagoon, and other tidal areas.	3, 4
redhead *Aythya americana*	CSSC (nesting)	Year-round resident in central valley, winter resident elsewhere in wetland habitats. Breeds in wetland habitats in northeastern California, the Central Valley, the southern deserts.	Nests on marshy lakes and ponds, winters in large flocks on sheltered bays and lakes.	Present (Wintering/Migration), None (Nesting)- HCP area is outside the known breeding range. This species has been observed within the HCP area at Oso Flaco Lake. Suitable resting and foraging habitat includes large water bodies like Pismo Lagoon, Oso	3, 4

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
				Flaco Lake, and Oceano Lagoon.	
common loon *Gavia immer*	CSSC (nesting)	Migratory in California. In their winter range along ocean coasts. Nesting locations at certain large lakes and reservoirs in interior of state, primarily in northeastern plateau region.	Bodies of water regularly frequented are extensive, fairly deep, and produce quantities of large fish.	Present (Wintering/Migration), None (Nesting)- The HCP area is outside the known breeding range. This species has been observed in the HCP area. Suitable roosting and foraging habitat include Pismo Lagoon, Oso Flaco Lake, and Oceano Lagoon.	3
wood stork *Mycteria americana*	CSSC	Migrant in southern California, vagrant elsewhere. Small breeding population known to nest at the southern end of the Salton Sea in California.	Freshwater and saltwater sloughs, shallow ponds and marshes. Near the Salton Sea, wood storks forage in shallow bays, marshy backwaters, canals, and drains. Along the coast, wood storks are found mainly in coastal estuaries, but also ponds and lakes inland from the ocean.	Present (Wintering/Migration), None (Nesting)- The HCP area is outside the known breeding range. This species has only been observed at Oso Flaco Lake in 2011. Suitable roosting and foraging habitat includes Oso Flaco Lake, Pismo Lake, Pismo Lagoon, and Oceano Lagoon.	3, 4
double-crested cormorant *Phalacrocorax auritus*	SWL (nesting colony)	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state. Year-round resident along the California coast and Central Valley from the San Francisco Bay Area south to the border with Mexico; and a summer resident in the northeast corner of California.	Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins. Occupies diverse aquatic habitats in all seasons. Often perch on exposed sites such as rocks or sandbars, pilings, ship wrecks, high-tension wires, or trees near fishing sites.	Present (Wintering/Migration), Low (Nesting)- This species is not known to nest in the HCP area. This species has been observed in the HCP area. Foraging, roosting, and loafing habitats are located anywhere near water bodies.	3
American white pelican *Pelecanus erythrorhynchos*	CSSC (nesting colony)	Year-round resident along the Coast and Central Valley from the San Francisco Bay Area south to the border with Mexico; and a summer	White pelicans nest on the ground in colonies on earthen, sandy or rocky, islands, peninsulas or tule mats. They forage in shallow inland waters or	Present (Wintering/Migration), None (Nesting)- HCP area is outside the known breeding range. This species has	3, 4

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
		resident in the northeast corner of California. Occurs as migrating or nonbreeding populations throughout California, except for breeding grounds located in the Klamath basin.	shallow coastal marine waters. Sand bars are important for loafing and roosting.	been observed foraging in the HCP area and is frequently observed at Oso Flaco Lake. Suitable foraging and roosting habitat in the HCP area includes the beach, Pismo Creek, Pismo Lake, Meadow Creek, Oceano Lagoon, Arroyo Grande Creek, Oso Flaco Lakes, and Oso Flaco Creek.	
California brown pelican *Pelecanus occidentalis californicus*	CFP (nesting colony and communal roosts)	Year-round nonbreeding resident from central coast down to the Mexico border, with year-round breeding grounds offshore located approximately from Point Conception to Capitan.	Colonial nester on coastal islands just outside the surf line; breeds on rocky or low, brushy slopes of undisturbed islands in the Channel Islands and Mexico. Rests on water or inaccessible rocks (either offshore or on mainland), but also uses sandbars, pilings, jetties, breakwaters, mangrove islets, and offshore rocks and islands.	Present (Wintering/Migration), None (Nesting)- HCP area is outside the known breeding range. This species has been observed in the HCP area, including along the beach and at Oso Flaco Lake. Suitable roosting and loafing habitat includes the beach, Pismo Lake, and Oso Flaco Lake.	3, 4
least bittern *Ixobrychus exilis*	CSSC, BCC (nesting)	Year-round resident in southern California, summer resident in the Central Valley. Breeds in northeastern California, the central coast, the Central Valley, the southern coast, and the southern deserts.	Colonial nester in fresh and brackish marshlands and borders of ponds and reservoirs, with tall, dense emergent vegetation and clumps of woody plants over deep water for ample cover; nests usually placed low in tules, over water.	Present (Nesting/Wintering/Migration)- Has been observed as recently as December 2016 at Oso Flaco Lake and has been confirmed to breed at Oso Flaco Lake as recently as May 2016. Suitable breeding/nesting habitat may include dense emergent vegetation around Oso Flaco Lake and Pismo Lake.	3, 4
California condor *Gymnogyps californianus*	FE	Reintroduced to mountains of southern and central California,	Require vast expanses of open savannah, grasslands, and foothill	Low (Wintering/Migration), None (Nesting)- The	1, 3

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
		Arizona, Utah, and Baja California.	chaparral in mountain ranges of moderate altitude. Deep canyons containing clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roost/nest.	HCP area is outside the known breeding range. Determined to be a rare migrant in the HCP area.	
osprey *Pandion haliaetus*	SWL (nesting)	Breeds in northern California and winters along the central and southern coast.	Occurs at ocean shore, bays, freshwater lakes, and larger streams. Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	Present (Wintering/Migration), None (Nesting)- The HCP area is outside the known breeding range. Ospreys have been observed foraging and perching within the HCP area, including Oso Flaco Lake. Suitable overwintering habitat includes trees around Oso Flaco Lake, Oceano Lagoon, Pismo Lake, Pismo Creek, Arroyo Grande Creek, and Oso Flaco Creek.	2
white-tailed kite *Elanus leucurus*	CFP	Found year-round in lowland areas west of Sierra Nevada from head of Sacramento Valley south, including coastal valleys and foothills, to western San Diego County at Mexico border.	Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging.	Present (Foraging, Wintering), Moderate (Nesting)- Observed in the HCP area, including at Oso Flaco Lake, as recently as November 2016. Suitable nesting and wintering habitat includes North Beach campground, Le Sage Rivera Golf Course, Oceano Campground, and isolated stands of Monterey pine forest, beach pine, and coast live oak woodland located throughout the HCP area.	3, 4
golden eagle *Aquila chrysaetos*	CFP	Found year-round throughout the foothills and mountains of	Occupied habitats include shrublands, grasslands, desert, mixed	Present (Wintering/Migration), Low (Nesting)- Not	3, 4

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
		California, and as nonbreeding populations throughout the Central and Imperial Valleys.	woodlands, and coniferous forests. Usually found in mountainous areas, but may also nest in wetland, riparian, and estuarine habitats at lower elevations. Nests on cliffs and escarpments or in tall trees overlooking open country; forages in annual grasslands, chaparral, and oak woodlands with plentiful medium and large-sized mammals.	known to nest within the HCP area. One golden eagle was observed flying within the HCP area in December 2015 at Oso Flaco Lake. Suitable nesting and perching habitat includes North Beach campground, Le Sage Rivera Golf Course, Oceano Campground, and isolated stands of Monterey pine forest, beach pine, and coast live oak woodland located throughout the HCP area. The open beach and agricultural areas provide suitable foraging habitat.	
Northern harrier *Circus cyaneus*	CSSC	Found year-round throughout lowland/coastal California; has been recorded in fall at high elevations. Nonbreeding elsewhere in California.	Grasslands, meadows, marshes, and seasonal and agricultural wetlands.	Present (Nesting/Wintering)- Regularly observed in HCP area, although only known to be a rare breeder in the Oso Flaco Lake area. Suitable nesting habitat includes Oso Flaco Lake, Oceano Lagoon, and Pismo Lake.	3, 4
sharp-shinned hawk *Accipiter striatus*	SWL (nesting)	Occurs throughout California and beyond: year-round resident in northern California; winter resident in central and southern California.	Breeds in deciduous, coniferous, and mixed pine-hardwood forests and pine plantations During the nonbreeding season they hunt small birds and mammals along forest edges, rural farm sites, and sometimes at backyard bird feeders.	Present (Wintering/Migration), None (Nesting)- The HCP area is outside the known breeding range. This species has been infrequently observed in the HCP area. Suitable foraging habitat may exist throughout the Oso Flaco Lake area due to its proximity to agricultural areas.	3

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
				Monterey pine forest, Torrey pine forest, beach pine forest, and coast live oak woodland near the Oceano Campground may also provide suitable habitat for roosting and foraging.	
Swainson's hawk *Buteo swainsoni*	ST, BCC (nesting)	Breeds in central and eastern California in the summer.	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Low (Migration), None (Nesting/Wintering)- Determined to have a low chance of occurrence because the HCP area is outside this species current known range. This species was recorded on eBird as being observed one time in the HCP area in 2010 at Oceano Campground; therefore, it may occur as a rare migrant in the area.	3
California black rail *Laterallus jamaicensis* ssp. *coturniculus*	ST, CFP, BCC	This endemic subspecies of the black rail (*Laterallus jamaicensis*) occurs in the San Francisco Bay region, parts of the Central Valley and at the southeastern border of the State.	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. It needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Present (Nesting/Wintering)- Historically observed nesting at Oso Flaco Lake in the HCP area; however, they have not been observed in the area since 1991. Suitable foraging and nesting habitat may include Oso Flaco Lake and Pismo Lake.	2, 3, 4
Ridgeway's rail *Rallus longirostris obsoletus*	FE SE, CFP	Found year-round along California coastal saline emergent wetlands.	Coastal wetlands and brackish waters.	None- The HCP area is outside the known range for this species. No suitable habitat and no records from area.	1, 3
Western snowy plover *Charadrius alexandrinus nivosus*	FT, CSSC	Pacific population of western snowy plover occurs along the entire the Pacific Ocean on the	Occurs on sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy,	Present (Nesting/Wintering)- Known to nest and winter in the HCP	1, 2, 4

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
		North American mainland coast, peninsula offshore islands, interior bays, estuaries, and rivers.	gravelly or friable soils for nesting. Nests typically found on flat, open areas of the back beach or backdunes where vegetation is sparse or non-existent.	area. Nesting and foraging habitat are located along the open sandy beach above the high tide line and within the foredunes.	
long-billed curlew *Numenius americanus*	SWL, BCC (nesting)	Breeds in upland shortgrass prairies and wet meadows in northeastern California; winters along the coast.	Habitats on gravelly soils and gently rolling terrain are favored. Overwintering habitat along the coast includes nearly all marine habitats: beaches, rocky coasts, mudflats, coastal estuaries, and river/stream deltas.	Present (Wintering/Migration), None (Nesting)- The HCP area is outside the known breeding range for this species. Suitable foraging and roosting habitat are located throughout HCP area along the beach.	2
marbled murrelet *Brachyramphus marmoratus*	FT, SE	Nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nonbreeding and year-round populations are located offshore from the Oregon border to Point Conception.	Spend majority of life on the ocean but come inland to nest. Nests in old-growth redwood dominated forests, up to six miles inland, often in Douglas fir. In California, nests are typically found in coastal redwood (*Sequoia sempervirens*) and Douglas-fir (*Pseudotsuga menziesii*) forests.	Present (Wintering/Migration), None (Nesting)- The HCP area is outside this species known breeding range. This species has been observed just off shore and in near shore areas as recently as November 2010. Suitable foraging habitat within HCP area is located off-shore in the HCP area.	1, 3, 4
California gull *Larus californicus*	SWL (nesting colony)	Breeds in central eastern California, winters along central coast.	Occurs in littoral waters, sandy beaches, waters and shorelines of bays, tidal mud-flats, marshes, lakes, etc. Colonial nester on islets in large interior lakes, either fresh or strongly alkaline.	Present (Wintering/Migration), None (Nesting)- The HCP area is outside the known breeding range for this species. May use a wide range of habitats within HCP area for foraging and roosting.	2
California least tern *Sternula antillarum browni*	FE, SE, CFP	Nests along the Pacific Coast from San Francisco Bay south to Northern Baja California.	Colonial breeder on bare or sparsely vegetated flat substrates, sandy beaches, alkali flats, landfills or paved areas.	Present (Nesting), None (Wintering)- Known to nest in the HCP area along the open, sandy beach	1, 2, 4

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
			Nesting colonies are typically located on broad dune-backed sandy beaches or small sandspits where vegetation is either sparse or altogether absent.	above the high tide line. Most commonly observed foraging over the ocean, though they are regularly observed foraging at Oso Flaco Lake and Pismo Lake, as well as at the small lagoon that forms at the mouth of Pismo Creek.	
black tern *Chidonias niger*	CSSC (nesting colony)	Breeds in central eastern California, primarily in Modoc Plateau region, with some breeding in the Sacramento and San Joaquin valleys. Winters along central coast.	Freshwater lakes, ponds, marshes and flooded agricultural fields; at coastal lagoons or estuaries during migration. Colonial nester on islets in large interior lakes, either fresh or strongly alkaline.	Present (Wintering/Migration), None (Nesting)- HCP area is outside the known breeding range for this species. This species has been observed in the HCP area at Oso Flaco Lake as recently as 2009. May use a wide range of habitats within the HCP area for foraging and roosting habitat.	3, 4
elegant tern *Thalasseus elegans*	SWL (nesting colony)	Only 3 known breeding colonies: San Diego Bay, Los Angeles Harbor and Bolsa Chica Ecological Reserve.	Nests on open, sandy, undisturbed beaches and on salt-evaporating pond dikes (San Diego) in association with Caspian tern. Prefers coastal waters, bays, harbors, lagoons, and estuaries while roosting on migration routes.	Present (Wintering/Migration), None (Nesting)- HCP area is outside the known breeding range for this species. Migrants may use the ocean shore and the banks of Pismo, Oceano, and Arroyo Grande Lagoons within the HCP area for roosting and/or foraging.	2
black skimmer *Rynchops niger*	CSSC, BCC (nesting colony)	Year-round resident in LA, Orange, and San Diego Counties; winters commonly from coastal Santa Barbara south to San Diego. Breeds in isolated pockets, including: South San	Nests on isolated and/or undisturbed gravel bars, low islets and sandy beaches, in unvegetated sites; colonies usually less than 200 pairs. Wintering birds will utilize beaches above the	Present (Wintering/Migration), None (Nesting)- HCP area is outside the known breeding range. This species has been observed in the HCP area at the Arroyo	3, 4

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
		Francisco Bay, the north and south portions of the Salton Sea, and 4 small known colonies on the coast from Santa Barbara to San Diego.	tide or mudflats within estuaries.	Grande Creek mouth as recently as August 1992. May use the beaches and estuary areas throughout the HCP area as migrating and wintering habitat.	
western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT, SE, BCC (nesting)	Breeds at isolated locations in central and southern California, from the Sacramento Valley south to northern Mexico.	Nests in open woodland with low, dense, scrub cover, often along waterways. Along the broad, lower flood bottoms of large river systems; nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles or wild grape.	Present (Migration), None (Nesting/Wintering)- The HCP area is outside the current known breeding range and wintering range for this species. Observed at Oso Flaco Lake in 1999 and at Oceano Lagoon in 2010. This species is likely only a rare migrant in the HCP area.	2, 3, 4
Western burrowing owl *Athene cunicularia*	CSSC, BCC	Lowlands throughout California, including Central Valley, northeastern plateau, southeastern deserts, and coastal areas; rare along south coast.	Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows.	Present (Wintering/Migration), Low (Nesting)- Known to utilize the HCP area during the winter and migration, but not known to breed within the area. Has been observed at Oso Flaco Lake, Phillips 66 Leasehold, near the chemical toilets on the beach, near the Grand Avenue entrance, and at Oceano Lagoon. May use a variety of habitats within the HCP area but is constricted to areas with low or no vegetation and available small-mammal burrows or organic debris (e.g., driftwood).	2, 3, 4

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
Vaux's swift *Chaetura vauxi*	CSSC (nesting)	A summer (breeding) migrant in northern California and coastal California from the Oregon border to Monterey County, and in the Sierra Nevada from the Oregon border to northern Kern County.	Colonial breeding habitat is tied closely with redwood forests. Nests in snags and hollow trees in redwood and Douglas fir forests. May occasionally use manmade structures for nesting and/or roosting—primarily chimneys (mimicking tree snags/hollows).	Present (Wintering/Migration), None (Nesting)- HCP area is outside the known breeding range. This species has been observed in the HCP area at Oso Flaco Lake as recently as May 2015; however, it is likely a rare migrant in the HCP area.	3, 4
black swift *Cypseloides niger*	CSSC, BCC (nesting)	This species occurs in California as a summer resident and its breeding range is patchily distributed throughout the State excluding the Central Valley and much of the coast.	Nests colonially behind or beside permanent or semi-permanent waterfalls, on perpendicular cliffs near water and in sea caves.	Present (Wintering/Migration), None (Nesting)- HCP area is outside the known breeding range for this species. This species has been observed in the HCP area at Oso Flaco Lake as recently as 2016; however, it is likely a rare migrant in the HCP area.	3, 4
American peregrine falcon *Falco peregrines* ssp. *anatum*	CFP	Year-round resident throughout California.	Nests on cliffs or man-made structures such as buildings and bridges; feeds on birds.	Present (Foraging/Wintering), Low (Nesting)- Regularly observed in flight and hunting in the HCP area. Not known to nest in the area. May use a variety of habitats within the HCP area for foraging and suitable nesting habitat is present within the trees and other tall structures in the HCP area.	3, 4
olive-sided flycatcher *Contopus cooperi*	CSSC, BCC (nesting)	A summer (breeding) migrant in the Cascade Range and Modoc Plataeu in northern California, Sierra Nevada in eastern California, Coast Ranges, and Transverse and	Nests in late-successional coniferous forests with open canopies.	Present (Foraging/Migration/ Wintering), Low (Nesting)- Uncommon breeder in San Luis Obispo County. Observed in the HCP	3, 4

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
		Peninsular Ranges in Southern California.		area at Oso Flaco Lake, Meadow Creek, and Oceano Campground. May use a variety of habitats for foraging and/or roosting. Suitable breeding habitat present in the eucalyptus and willows in the HCP area.	
Southwestern willow flycatcher *Empidonax trailii extimus*	FE, SE (nesting)	Occurs as a summer (breeding) migrant in moist thickets and riparian areas throughout California.	Nests in dense riparian habitats with perennial water.	None- The HCP area is outside the known breeding range. No suitable habitat and no records from area	1, 3
willow flycatcher *Empidonax trailii*	SE, BCC (nesting)	Common resident in most of California, breeds along the western coast of California from Monterey county to the Mexican border, and along a band in the eastern Sierra Nevada southwest through the southern margin of the San Joaquin Valley.	Inhabits extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters; 2,000-8,000 ft elevation. Requires dense willow thickets for nesting/roosting. Low, exposed branches are used for singing posts/hunting perches.	Present (Wintering/Migration), Low (Nesting)- HCP area outside the known breeding range and wintering range for this species. Confirmed in the HCP area at Oso Flaco Lake and at Oceano Lagoon as recently as 2016. May use a variety of the willow thicket habitat within the HCP area for both foraging and resting during migration, especially the thickets on the banks and surrounding wetlands of Pismo, Oceano, and Arroyo Grande Lagoons, and Oso Flaco Lake.	3, 4
loggerhead shrike *Lanius ludovicianus*	CSSC, BCC (nesting)	Resident and winter visitor in lowlands and foothills throughout California; rare on coastal slope north of Mendocino County, occurring only in winter.	Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches.	Present (Nesting/Wintering)- Regularly observed in the HCP area and known to nest and forage in the area.	3, 4
least Bell's vireo	FE, SE	Occurs as a summer (breeding) migrant in the	Nests in riparian habitats, generally in dense	None- The HCP area is outside the known	1, 3

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
Vireo bellii ssp. *pusillus*	(nesting)	far south of California and in northern Baja California.	vegetation near surface water.	range for this species. No suitable habitat and no records from area.	
California horned lark *Eremophila alpestris actia*	SWL	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills.	Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Present (Foraging/Wintering/Nesting)- This species has been observed in the HCP area and the National Wildlife Refuge to the south of the HCP area. Within the HCP area this species has been observed nesting in similar habitat to western snowy plover and California least tern. May nest and forage in a variety of low-grass or bare habitats within the HCP area.	2
bank swallow *Riparia riparia*	ST (nesting)	Occurs primarily around the remaining natural river banks of the Sacramento and Feather Rivers in the Sacramento Valley. A small number of colonies breed in Monterey, San Mateo, Shasta, Siskiyou, Lassen, Plumas, and Modoc Counties.	Colonial nester, nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine textured/sandy soils near streams, rivers, lakes or ocean to dig nesting hole.	Present (Wintering/Migration), None (Nesting) – HCP area is outside the known breeding range for this species. This species has been confirmed foraging in the HCP area as recently as 2016; however, it is likely a rare migrant in the HCP area. Foraging habitat occurs at Arroyo Grande Creek, Oceano Lagoon, Oso Flaco Lake, Oso Flaco Creek, Pismo Lake, Pismo Creek.	3, 4
Lucy's warbler *Oreothlypis luciae*	CSSC, BCC (nesting)	Lower Colorado River, and small localized populations occur west to the Borrego Valley, San Diego County, and north through the Mojave	Prefers thickets of honey mesquite, riparian woodland, and occasionally stands of tamarisk.	Present (Wintering/Migration), None (Nesting) – HCP area is outside the known breeding range for this species. This	3, 4

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
		Desert, Death Valley National Park, and Inyo County.		species has been confirmed foraging in the HCP area at Oso Flaco Lake and Oceano Lagoon as recently as 2015; however, it is likely a rare migrant in the HCP area.	
yellow warbler *Setophaga petechia*	CSSC, BCC (nesting)	Nests throughout California except the Central Valley, Mojave Desert region, and high altitudes in Sierra Nevada; winters along Colorado River and in parts of Imperial and Riverside Counties.	Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral; may also use oaks, conifers, and urban areas near stream courses.	Present (Foraging/Wintering), Moderate (Nesting)- Documented in the HCP area at Arroyo Grande Creek and Oso Flaco Lake. Also found nearby at Jack Lake and Little Oso Flaco Lake. Marginal foraging and nesting habitat are present in riparian areas.	3, 4
yellow-breasted chat *Icteria virens*	CSSC (nesting)	Summer (breeding) migrant in northern California, in portions of the Central Valley and the west slope of the Sierra Nevada, on the Central and Southern coast, and in portions of the southern California deserts.	Occupies early successional riparian habitats with a well-developed shrub layer and an open canopy. Nests in dense riparian and shrub habitats.	Present (Foraging/Wintering), Low (Nesting)- The species range has not been documented to extend to the coast along Arroyo Grande Creek, but has been documented along Arroyo Grande Creek above Lopez Dam. Confirmed in the HCP area at the Oso Flaco Maps Station in 2000 and at Oso Flaco Lake in 2015. Nesting in the area is not confirmed and may not occur, but this species has been observed singing in the HCP area. May use habitats along Arroyo Grande and Oso Flaco Creeks for nesting and foraging.	3, 4
summer tanager *Piranga rubra*	CSSC (nesting)	Summer resident of desert riparian along	Requires cottonwood-willow riparian for	Present (Wintering/Migration),	3, 4

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
		lower Colorado River, and locally elsewhere in California deserts.	nesting and foraging; prefers older, dense stands along streams.	None (Nesting)- HCP area is outside the known breeding range for this species. This species was observed in the HCP area at Oso Flaco Lake as recently as December 2016; however, it is likely a rare migrant in the HCP area. May use a wide variety of habitats within the HCP area during migration.	
tricolored blackbird *Agelaius tricolor*	CSSC, BCC (nesting)	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California.	Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony. Frequently nests in blackberry thickets and other scrub vegetation under riparian canopy.	Present (Foraging/Wintering), Low (Nesting)- Confirmed in the HCP area at Oso Flaco Lake as recently as August 2016. No nesting documented in the area. May use habitat adjacent to Arroyo Grande and Oso Flaco Creeks and Oso Flaco Lake for nesting and/or foraging.	3, 4
yellow-headed blackbird *Xanthocephalus xanthocephalus*	CSSC (nesting)	Winter resident along the central and south coast, summer resident in eastern California, and year-round resident in southern California.	Nests in freshwater emergent wetlands with dense vegetation and deep water, often along the borders of lakes or ponds.	Present (Wintering/Migration), None (Nesting)- HCP area is outside the known breeding range. Confirmed in the HCP area near Oceano Lagoon and at Oso Flaco lake as recently as 2016; however, it is likely a rare migrant in the HCP area. This species may utilize open areas and emergent vegetation within the HCP area for foraging and/or roosting.	3, 4

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
Mammals					
pallid bat *Antrozous pallidus*	CSSC	Throughout California except high Sierra from Shasta to Kern Counties and northwest coast, primarily at lower and mid-elevations.	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open space, forages along river channels. Roost sites include crevices in rocky outcrops and cliffs, caves, mines, trees and various human structures such as bridges, barns, and buildings (including occupied buildings). Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Present- Documented during passive acoustic surveys at Oceano Lagoon on June 2017. May use a variety of habitats within the HCP area, including tree snags and/or hollows and manmade structures.	3, 4
Townsend's big-eared bat *Corynorhinus townsendii*	FC, SC, CSSC	Found throughout California, but details of its distribution are not well known.	Roosts in caves, buildings, hollow trees; forages in many habitats. Most abundant in mesic habitats.	Present- Documented during passive acoustic surveys at Oceano Lagoon on June 2017. May use a variety of habitats within the HCP area, including tree snags and/or hollows and manmade structures.	2, 3, 4
Western red bat (*Lasiurus blossevillii*)	CSSC	Occur from Shasta County to the Mexican border, west of the Sierra Nevada/Cascade Crest and deserts. Their winter range includes western lowlands and coastal regions south of the San Francisco Bay.	Feed over a variety of habitats includes grasslands, shrublands, open woodlands and forests, and croplands. Roost in tree foliage, typically in riparian areas.	Present- Documented during passive acoustic surveys at Oceano Lagoon on June 2017. May use a variety of habitats within the HCP area, including tree snags and/or hollows and manmade structures.	3, 4
giant kangaroo rat *Dipodomys ingens*	FE, SE, FP	Annual grasslands on the western side of the San Joaquin Valley, marginal habitat in alkali scrub.	Needs level terrain and sandy loam soils for burrowing.	None- No suitable habitat and no records from area.	1, 3
San Diego desert woodrat *Neotoma lepida intermedia*	CSSC	Coastal scrub of southern California from San Diego County to SLO County.	Moderate to dense canopies preferred; they are particularly abundant	Low- Limited suitable habitat and no records from area.	2

Table C1. Special-status Animal Species with the Potential to Occur in the ODD HCP Area

Species	Listing Status[1]	Range in California	Habitat	Potential to Occur	Sources
			in rock outcrops and rocky cliffs and slopes.		
Southern sea otter *Enhydra lutris nereis*	FT, CFP	Near shore marine environments from about Ano Nuevo, San Mateo County to Point Sal, SB County.	Needs canopies of giant kelp and bull kelp for rafting and feeding; prefers rocky substrates with abundant invertebrates.	Present (Offshore only)- Southern sea otters are occasionally seen offshore of the HCP area.	1, 3, 4
American badger *Taxidea taxus*	CSSC	Occurs throughout California and the western United States and Canada.	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Requires friable soils and large areas of open, uncultivated ground. Preys on burrowing rodents.	Present- Has been observed in vegetation islands, and nearby Phillips 66 leasehold. American badger tracks have been observed in the open riding area near the vegetation islands. More likely to use the habitat in the southern portion of the HCP area that is further away from urban areas and connected to other open space.	2, 3, 4

[1]Listing Status Key:
FE – Federal Endangered
FT – Federal Threatened
FC – Candidate for Federal listing
BCC – USFWS Birds of Conservation Concern
SE – State Endangered
ST – State Threatened SC – Candidate for State listing
CFP – California Fully Protected
CSSC – California Species of Special Concern
SWL- State Watch List

Sources

1. USFWS. 2017. IPaC Official Species List. List generated August 29, 2017. https://ecos.fws.gov/ipac/publicDocument/VU27V52SPNBXJKHBCT2J7TYWX4
2. California Natural Diversity Database (CNDDB). 2017. Oceano and Pismo Beach USGS 7.5 Minute Quadrangles. California Department of Fish and Game, Biogeographic Data Branch. Last updated August, 2017.
3. California Department of Parks and Recreation, 2017. Oceano Dunes Habitat Conservation Plan: Appendix A. Listed and Other Special-status Species not Included in the HCP.
4. California Department of Parks and Recreation. 2017 (August). Oceano Dunes State Vehicular Recreation Area Wildlife Habitat Protection Plan. Prepared by California Department of Parks and Recreation Off-highway Motor Vehicle Division, Oceano Dunes District.

Special-Status Animal Species Descriptions

Special-status animal species that are potentially impacted by the existing HCP covered activities, proposed new activities, and potential future activities are described below. Complete descriptions of each HCP covered species including taxonomy, habitat associations, population size, and close to 20 years of annual monitoring data are presented in HCP (section 3.3.1 for SNPL, section 3.3.2 for CLTE, section 3.3.3 for CRLF, and section 3.3.4 for tidewater goby).

Fish

Tidewater Goby

Tidewater goby is endemic to California, occurring along the coast from San Diego County to Del Norte County. They inhabit shallow coastal lagoons and lower stream reaches where the water is brackish to fresh. Tidewater goby are absent from areas where the coastline is steep and streams do not form lagoons or estuaries. They prefer water that is slow-moving but not stagnant, and typically avoid fast currents or strong wave action. They can survive salinities from 0 to over 50 parts per thousand and temperatures from at least 8 to 23 Celsius. They prefer water at depths of 9–39 inches with relatively high dissolved oxygen and substrates of sand and mud with abundant vegetation (Moyle, Yoshiyama, Williams, & Wikramanayake, 1995) but can tolerate very low dissolved oxygen. Very few tidewater gobies have ever been captured in the marine environment (Swift, Nelson, Maslow, & Stein, 1989), which suggests this species rarely occurs in the open ocean. Therefore, the tidewater goby occurs within discrete coastal wetlands naturally separated by the presence of sandbars that restrict access to the Pacific Ocean (McCraney, Goldsmith, Jacobs, & Kinziger, 2010). These sandbars generally breach 1–2 times per year during periods of high surf and freshwater input, resulting in rapid draining of the estuary (Krauss, Militello, & Todoroff, 2002). Thus, successful migration between lagoon habitats requires coordination of breaching events typically between geographically proximate habitats, and dispersal is passive (Lafferty, Swift, & Ambrose, 1999) (Dawson, Stanton, & Jacobs, 2001) (McCraney, Goldsmith, Jacobs, & Kinziger, 2010). Migration between lagoons is thus thought to be rare (McCraney, Goldsmith, Jacobs, & Kinziger, 2010) or at least infrequent.

A total of about 45 acres of suitable tidewater goby habitat is present within the HCP area. This can vary from year to year as hydrologic conditions and shoreline dynamics dictate. Tidewater goby is known to occur in Arroyo Grande Creek/Lagoon and Pismo Creek within the HCP area. The mouths of both creeks end at coastal lagoons/estuaries typical of small coastal watersheds that form sandbars in low-flow summer and fall periods. A lagoon is typically present year-round at Pismo and Arroyo Grande creeks; however, under certain circumstances, Arroyo Grande Lagoon has been known to dry up completely. In most winters, there is sufficient runoff after large rain events to breach the sandbar formed at the crest of the beach and allow a continuous streamflow into the ocean. Tidewater goby have also been observed in Carpenter Creek, which can connect to the Pismo Creek Lagoon, and in the Oceano (Meadow Creek) Lagoon, which drains into the Arroyo Grande Creek/Lagoon. The small Carpenter Creek population is an extension of the population in Pismo Creek.

The USFWS has also identified approximately 7.5–10 acres of available potential (unoccupied) tidewater goby critical habitat in what the USFWS calls the “Oso Flaco Lagoon” (USFWS, 2005a). A true lagoon is often not present here, but in some years, it forms behind the beach, hydrologically associated with Oso Flaco Creek. In 2017, two tidewater gobies were found in Oso Flaco Creek for the first time (Rischbieter D. , 2017). Tidewater goby is not known to occur

in Oso Flaco Lake. Oso Flaco Lake is dominated by warmwater sport fish, such as largemouth bass (*Micropterus salmoides*) and other sunfish, and the creek is typically narrow and confined. The creek rarely impounds to form a true lagoon and, as a result, there is a large freshwater influence with no salt-water prism. Consequently, this area appears likely to be poor long-term habitat for tidewater goby.

Amphibians

California Red-legged Frog

CRLF is the largest native frog in California (3.3–5.4 inches) and has been found at elevations from sea level to about 5,000 feet, with most observations occurring below 3,500 feet (USFWS, 2002). Historically, CRLF was common in coastal habitats from Point Reyes National Seashore, Marin County, California, and inland from the vicinity of Redding, Shasta County, California, southward to northwestern Baja California, Mexico (Hayes & Jennings, 1988). CRLF has been extirpated or nearly extirpated from over 70 percent of its former range (Hayes & Jennings, 1988), (USFWS, 1996). This species is still common in the San Francisco Bay Area and along the central coast in Monterey, San Luis Obispo, and Santa Barbara counties (USFWS, 2002). The most secure aggregations of CRLF are found in aquatic sites that support substantial riparian and aquatic vegetation and lack non-native predators such as American bullfrogs (*Lithobates catesbeianus*).

Habitats of CRLF are characterized by dense, shrubby riparian vegetation associated with deep (2 feet), still, or slow-moving water (Jennings & Hayes, 1994). The shrubby vegetation preferred by CRLF is arroyo willow, cattails, and bulrushes found in wetland and riparian habitats. Most important to CRLF is a breeding pond, or slow-flowing stream reach or deep pool within a stream with vegetation or other material to which egg masses may be attached. These areas must hold water long enough for tadpoles to complete their metamorphosis into juvenile frogs that can survive outside of water (Jennings & Hayes, 1994). CRLF eggs are usually attached to emergent vegetation in lagoons, streams, and a variety of natural and human-made ponds. Water with a salinity of less than 4.5 percent is necessary to ensure the survival of embryonic stages. Juvenile CRLF seem to favor open, shallow aquatic habitats with dense, submergent vegetation.

CRLF disperse through uplands, such as grasslands, and typically find cover amongst boulders or rocks and organic debris such as downed trees or logs, industrial debris, and agricultural features such as drains, watering troughs, spring boxes, and abandoned sheds (USFWS, 2001a). CRLF also use small mammal burrows and moist leaf litter for cover (Jennings & Hayes, 1994) (USFWS, 1996). Incised stream channels with portions narrower and deeper than 18 inches may also provide habitat (USFWS, 1996).

Within the HCP area, CRLF are currently known to occur in the Oso Flaco Lake area and in Arroyo Grande Creek (**Error! Reference source not found.**). Suitable breeding habitat encompasses 178 acres within the HCP area, while upland habitat encompasses 4,827 acres. CRLF have been found in the past at Finger Lake and one sub-adult CRLF has been found at Snake Lake just outside the HCP area (Schneider, 2000). CDPR Environmental Scientist staff conducted CRLF presence/absence surveys in the HCP area in accordance with the USFWS protocol (USFWS, 1997) and have found CRLF at Oso Flaco Lake, Little Oso Flaco Lake, Oso Flaco Creek, Oceano (Meadow Creek) Lagoon, Arroyo Grande Creek and estuary, and a presumed CRLF tadpole was observed in Carpenter Creek in 2019. In March 2019, a CRLF egg mass was found in Arroyo Grande Creek. CRLF have also been found in Jack Lake.

Poor water quality and the presence of invasive species in the HCP area might adversely impact CRLF. Oso Flaco Lake is fed primarily from agricultural discharge. Water quality surveys

conducted by the RWQCB identified numerous elements in the water column above regulatory limits (RWQCB, Central Coast Region, 2001). In addition, non-native species, including bluegill (*Lepomis macrochirus*), black bass (*Micropterus salmoides*), goldfish (*Carassius auratus*), and crayfish (*Procambarus clarkii*) that are introduced to water bodies in the HCP area can adversely impact CRLF.

Western Spadefoot Toad

The western spadefoot toad is nearly endemic to California and historically ranged from the vicinity of Redding in Shasta County southward to Mesa de San Carlos in northwestern Baja California (Stebbins R. , 2003). Western spadefoot toad has been extirpated throughout most of the lowlands of southern California (Stebbins R. , 2003) and from many historical locations in the Central Valley (Jennings & Hayes, 1994) (Fisher & Shaffer, 1996).
Western spadefoot toad occurs primarily in grassland habitats but can also be found in valley-foothill hardwood woodlands. Western spadefoot toads are almost completely terrestrial and enter water only to breed. They breed from January to May in temporary pools and drainages that form following winter or spring rains. During dry periods western spadefoot toads construct and occupy burrows that may be up to 3 feet in depth (Ruibal, Tevis, Jr., & Roig, 1969). Individuals may remain in these burrows for 8 to 9 months. The burrows are typically constructed in soils that are relatively sandy and friable as these soils facilitate both digging and water absorption (Ruibal, Tevis, Jr., & Roig, 1969). Western spadefoot toads forage on a variety of insects, worms, and other invertebrates.
The western spadefoot toad is often difficult to detect due to extended periods of its life cycle spent underground. Very little is known about spadefoot toad at the HCP area, and the few HCP area sightings that exist have been incidental. The last incidental sighting was at the Eucalyptus South vegetation island in 2011 while doing pitfall trapping. A western spadefoot toad was also observed at Oso Flaco Lake in February and March of 2000. In addition, suitable habitat for western spadefoot toad is present within the SVRA in wet years.

Reptiles

Coast (California) Horned Lizard

The coast horned lizard occurs in the Sierra Nevada foothills from Butte County to Kern County and throughout the central and southern California coast. It occurs in valley-foothill hardwood, conifer and riparian habitats, as well as in pine-cypress, juniper, and annual grass habitats. This species inhabits open country, especially sandy areas, washes, floodplains and windblown deposits within a wide range of habitats. Horned lizards forage on the ground in open areas, usually between shrubs and often near ant nests. Horned lizards often bask in the early morning on the ground or on elevated objects such as low boulders or rocks. Predators and extreme heat are avoided by horned lizards by burrowing into loose soil. Periods of inactivity and winter hibernation are spent burrowed into the soil under surface objects such as logs or rocks, in mammal burrows, or in crevices. The coast horned lizard was documented on site in 1991 (Burton & Kutilek, 1991). In addition, a coast horned lizard was documented in 2006 along the proposed Little Oso Flaco Lake Access Road alternative. Since that time, anecdotal records of coast horned lizard have been reported for various vegetation islands within the HCP area. A coast horned lizard was observed in January 2017 within the Chevron property just south of the Guadalupe-Nipomo Dunes National Wildlife Refuge (NWR) south of the HCP area. Appropriate habitat and food resources for coast horned lizard are present on many of the vegetation islands within the HCP area.

Silvery Legless Lizard

The silvery legless lizard is a secretive fossorial lizard that is common in California in suitable habitats in the Coast Ranges from the vicinity of Contra Costa County south to the Mexican border. The silvery legless lizard usually forages at the base of shrubs or other vegetation either on the surface or just below it in leaf litter or sandy soil. Legless lizards eat insect larvae, small adult insects, and spiders (Stebbins R. , 1954). Legless lizards sometimes seek cover under surface objects such as flat boards and rocks where they lie barely covered in loose soil. They are often encountered buried in leaf litter and commonly burrow near the surface through loose soil. In the HCP area, the silvery legless lizard was documented on site in 1991 (Burton & Kutilek, 1991). A silvery legless lizard was also documented in 2006 along the proposed Little Oso Flaco Lake Access Road alternative. In addition, silvery legless lizards have been observed in the designated campgrounds in the HCP area and within the vegetation islands as recently as 2016 and near the Oso Flaco boardwalk in 2019. Silvery legless lizards have also been observed nearby the HCP area at Jack Lake and Lettuce Lake. Legless lizards are vulnerable to habitat destruction, including the disturbance of surface soils and the spread of invasive vegetation (Jennings & Hayes, 1994).

Western Pond Turtle

The western pond turtle occurs from northern Baja California into Oregon, Washington, and British Columbia (mostly west of the Sierra Nevada-Cascade crest) (Stebbins R. , 2003). At this time, the western pond turtle may be extinct in western Washington and British Columbia. Western pond turtle is typically found at elevations ranging from sea level to approximately 4,980 feet (Stebbins R. , 2003).

The western pond turtle utilizes a wide variety of permanent and ephemeral aquatic habitats and may spend a significant amount of time in upland terrestrial habitats as well. Western pond turtle aquatic habitats typically include permanent freshwater ponds, lakes, marshes, streams, and rivers. It favors sites with deep pools and with an abundance of basking sites, such as partially submerged logs or rocks, matted emergent vegetation, floating aquatic vegetation or exposed shorelines. Undercut banks, root masses, and boulder piles provide underwater escape cover, especially for small hatchlings and smaller turtles that behave more cryptically and are more susceptible to predation.

Terrestrial habitat requirements are variable throughout the range but must include basking sites and nesting habitat. In most areas, terrestrial overwintering habitat is also required (Reese, 1996). While emergent basking sites are preferred because they offer some protection from terrestrial predators and quick escapes to deep water, terrestrial basking sites are also utilized. Terrestrial basking sites include mud banks, rocks, logs, and root wads on the bank, and are never far from water. Nesting occurs terrestrially, usually in open low-slope areas a few feet to over 300 feet from the watercourse. The nest site typically has good exposure to the sun and compact soil (Holland, 1994) (Reese, 1996). Overwintering can be aquatic or terrestrial (Holland, 1994). Terrestrial overwintering site characteristics are highly variable, but the microsite usually includes a thick duff layer (Holland, 1994).

In the HCP area, western pond turtles are often seen basking along the shoreline of Oso Flaco Lake. In June 2001, during a visual survey for CRLF, five western pond turtles were observed in the lake. Western pond turtles were also observed in Oso Flaco Lake and Arroyo Grande Creek within the HCP area in 2006, as well as in Jack Lake nearby the HCP area. Finally, a western pond turtle was rescued from fishing line at Oceano Lagoon in the HCP area and sent to an

approved rehabilitation clinic in September 2016. The non-native species that have been documented at Oso Flaco Lake and the Oceano Lagoon have the potential to compete with or prey upon the native western pond turtles within the HCP area.

Birds

Western Snowy Plover

SNPL is a resident along the Pacific Coast from British Columbia to Mexico and along the Gulf Coast from Texas to the Florida Panhandle. It also breeds locally in the interior from California and Nevada east to Oklahoma and Texas. The Pacific Coast population of the SNPL is defined as those individuals that nest adjacent to tidal waters of the Pacific Ocean, and includes all nesting birds on the mainland coast, peninsulas, offshore islands, adjacent bays, estuaries, and coastal rivers (USFWS, 2004a). The current known breeding range of this population extends from Damon Point, Washington, to Bahia Magdelena, Baja California, Mexico (USFWS, 2006b).

SNPL winter and breed in the same habitats, consisting of mostly sandy, ocean fronting beaches, dry salt flats, and gravel bars (Page, Warriner, Warriner, & Paton, 1995), (Colwell, et al., 2005), (Brinfock & Colwell, 2011). Many beaches that support SNPL nesting, foraging, and wintering, are bordered to the east by dense stands of European beachgrass, which often form an abrupt boundary that defines unsuitable habitat for SNPL (Patrick & Colwell, 2014). SNPL typically nest, forage, and winter on flat to gently sloping, wide beaches with plentiful food sources and sparse vegetation (Page, Warriner, Warriner, & Paton, 1995), (Colwell, et al., 2005), (MacDonald, Longcore, & Dark, 2010), (Muir & Colwell, 2010), (Brinfock & Colwell, 2011). Selecting habitats that are open (or wide) and have less vegetative cover can facilitate early detection of predators and reduce predation risk (Muir & Colwell, 2010), (Brinfock & Colwell, 2011), (Patrick & Colwell, 2014). SNPL nests have been found adjacent to small clumps of vegetation or other beach debris that likely provides additional cover making it more difficult for predators to spot ((Page, Stenzel, & Ribic, 1985), (Powell, Habitat Characteristics and Nest Success of Snowy Plovers Associated with California Least Tern Colonies, 2001). In addition, SNPL broods have been observed hiding in vegetation clumps in response to adult alarm calls (Webber, Heath, & Fischer, 2013). In general, SNPL nests are most often located within 328 feet of water, or at least within sight of it (Stenzel, Peaslee, & Page, 1981) (USFWS, 2007b). 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.

Along the Pacific Ocean coastline, SNPL forage in a wide variety of habitat types, from the dry sandy regions of the backdunes, to wet sands, beach-cast kelp, and wrack lines along the lower beaches. They may use freshwater edges such as the mouths of creeks as they cross beaches and the edges of lagoons. Their diet can vary considerably but primarily consists of small marine and terrestrial invertebrates. They also pick insects off vegetation, probe sand, and occasionally take small fish (USFWS, 2007b).

SNPL that occupy the HCP area are part of the Pacific Coast population and may be composed of resident breeders that do not migrate, migratory breeders that leave during the winter months (October to February) 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, Warriner, Page, & Stenzel, 1986). SNPL regularly breed in the HCP area along the open-sand beach from Post 6 south from March to mid-September (**Error! Reference source not found.**). Approximately 300 acres of active riding and camping area south of Post 6 are closed during the breeding season for SNPL and CLTE (**Error! Reference source not**

found.). SNPL have also infrequently been observed breeding adjacent to Arroyo Grande Creek. SNPL winters in the HCP area from October to February. A total of 4,513 acres within the HCP area are considered suitable habitat for SNPL, although 3,510 acres are considered tertiary habitat where SNPL are unlikely to nest, roost, or forage (HCP Map 10).

California Least Tern

CLTE is a colonial nesting seabird that nests along the Pacific Coast from Baja California to San Francisco Bay, California (Grinnel, 1928), (Small, 1994) (Thompson, et al., 1997) (USFWS, 2006a). Nesting also occurs sporadically at inland sites in the San Francisco Bay Delta and Central Valley (USFWS, 2009a).

CLTE often nest in habitats similar to those of SNPL, and there is often an overlap with the two species breeding on the same beach (Powell & Collier, 2000). CLTE nesting colonies along the California coast are typically located on broad dune-backed sandy beaches or small sandspits where vegetation is either sparse or altogether absent (Page, Warriner, Warriner, & Paton, 1995). Nests may be found from within several feet of the shore to more than a mile inland. Nests are normally located in open areas where aerial and terrestrial predators can be detected at a distance. When threatened, adult CLTE will leave the nest and aggressively harass an intruder by mobbing, defecating, and vocalizing.

CLTE forage primarily in near-shore ocean waters and in shallow estuaries and lagoons (Massey, 1988). At colonies where feeding activities have been studied, CLTE forage mostly within 2 miles of the breeding area and primarily in near shore ocean waters less than 60 feet deep (Atwood & Minsky, 1983). CLTE feed on fish caught by diving into the surface waters of freshwater lakes, lagoons, and oceans.

CLTE regularly breed in the HCP area along the open sand beach from Post 6 south from April to August. Approximately 300 acres of active riding and camping area south of Post 6 are closed during the breeding season for SNPL and CLTE (**Error! Reference source not found.**). A total of 4,593 acres within the HCP area are considered suitable breeding and roosting habitat for CLTE, although 3,510 acres are considered tertiary habitat where CLTE are unlikely to occur (HCP Map 12). An additional 80 acres of aquatic habitat within the HCP area is considered suitable foraging habitat for CLTE.

Least Bittern

The least bittern (*Ixobrychus exilis*) is primarily a summer resident in California and breeds in northeastern California, the central coast, the Central Valley, the southern coast, and the southern deserts. Least bitterns require freshwater and brackish marshes with tall, dense emergent vegetation and clumps of woody plants over deep water for breeding. This species builds nests on platforms of live and dead stalks, usually 6–30 inches above the water in emergent vegetation. They forage from emergent vegetation by stalking prey near the surface of the water. Within the HCP area, the least bittern has been observed as recently as December 2016 at Oso Flaco Lake and has been confirmed to breed as recently as May 2016 at this location (eBird, 2017).

White-tailed Kite

The white-tailed kite (*Elanus leucurus*) is found in lowland areas of California west of the Sierra Nevada from the head of the Sacramento Valley south, including coastal valleys and foothills to western San Diego County at the Mexico border. They are residents of the central coast of California (Peterson, 1990). White-tailed kites are residents in a variety of open habitats, including agricultural areas, grasslands, scrub and open chaparral habitats, meadows, and

emergent wetlands throughout the lower elevations of California. Nests are constructed mostly of twigs and placed in small to large trees, often at habitat edges or in isolated groves (Dunk, 1995). This species preys upon a variety of small mammals and other vertebrates. White-tailed kites are often observed at the HCP area, including at Oso Flaco Lake.

Northern Harrier

The northern harrier (*Circus cyaneus*) occurs throughout California. This species is predominantly found in grassland and wetland communities; however, it uses various habitats. In California, northern harriers have been found in habitats including freshwater marshes; brackish and saltwater marshes; wet meadows; weedy borders of lakes, rivers, and streams; annual and perennial grasslands (including those with vernal pools); weed fields; ungrazed or lightly grazed pastures; some croplands (especially alfalfa, grain, sugar beets, tomatoes, and melons); sagebrush flats; and desert sinks (Smith, 2011). Northern harriers are ground-nesting birds. The nest is usually placed in a dense clump of vegetation, such as willows, grasses, sedges, reeds, or cattails. Eggs hatch within 36 days and chicks leave the nest within 14 days of hatching. Females incubate eggs and brood chicks, while males provide most of the food for the females and nestlings. In the breeding season, northern harriers eat small mammals, reptiles, amphibians, and birds. During winter, northern harriers feed almost exclusively on voles; they also eat mice, shrews, rabbits, and songbirds (Smith, 2011). Northern harriers are typically observed in the winter months (e.g., October through February) in the HCP area; however, they are a confirmed, but rare breeder at Oso Flaco Lake (Condor, Environmental Planning Services Inc., 2006). They are often seen foraging in the Oso Flaco area, and can be found foraging within the riding area of the SVRA as well.

Western Burrowing Owl

The western burrowing owl (*Athene cunicularia*) occurs throughout the lowlands of California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas. It is a ground-dwelling owl, typically found nesting in arid prairies, fields, and open areas where vegetation is sparse and low to the ground. It is heavily dependent upon the presence of small mammal burrows (e.g., ground squirrel [*Otospermophilus beecheyi*]) in its habitat to provide shelter from predators or inclement weather, as well as to provide a nesting location. Foraging habitat is often present in grassland areas. In California, burrowing owls breed from February 1 to August 31, with some variances by geographic location and climatic conditions. The non-breeding season (i.e., wintering season) for burrowing owl occurs from September 1 to January 31. Burrowing owls prefer short-grass grasslands with burrow networks, and frequently with boulder fields or rock outcrops. Burrows are frequently modified by these owls. Constructed burrows are readily occupied by burrowing owls and have been constructed for habitat enhancement and mitigation in several sites in California. Western burrowing owls have also been observed using sand dune cavities under ice plant, driftwood piles, culverts, concrete rubble piles, rock outcrops, and standpipes for burrows or winter cover. The burrowing owl is known to utilize the HCP area during migration but does not breed within the area. It was observed at Oso Flaco Lake in 1999 and 2012, in the Phillips 66 Leasehold in 2006, near the chemical toilets on the beach in 2005 and 2006, at Oceano Lagoon in 2010, at the Grand Avenue ramp in 2019, and near the Oso Flaco Lake parking lot in 2019. In addition, burrowing owl tracks were observed at Pavilion Hill in 2016 (Chapman, 2016).

American Peregrine Falcon

American peregrine falcons (*Falco peregrinus* ssp. *anatum*) are distributed worldwide. They occur throughout most of California during migration and winter. Their breeding range in California includes the Channel Islands, the southern and central California coast, the inland north coastal mountains, the Klamath Mountains and Cascade Range, and the Sierra Nevada (Zeiner, Laudenslayer, Jr., Mayer, & White, 1990).

Nesting sites are typically near water on cliffs, banks, dunes, or mounds. They will also occasionally nest on buildings, in cavities in trees or snags, or in the abandoned nests of other raptors. They feed on other birds up to and including ducks in size, and may also take mammals, insects, and fish. Their primary feeding mode is to attack other birds in flight. They require protected cliffs and ledges for cover (Zeiner, Laudenslayer, Jr., Mayer, & White, 1990).

American peregrine falcons have been documented breeding and nesting nearby the HCP area in Shell Beach, which is just north of Pismo Beach. Within the HCP area, American peregrine falcons are commonly observed in flight and hunting, but they have not been observed nesting.

Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is a common resident and winter visitor in lowlands and foothills throughout California. Loggerhead shrikes breed mainly in shrublands or open woodlands with a fair amount of grass cover and areas of bare ground. They require tall shrubs or trees (they also use fences or power lines) for hunting perches, territorial advertisement, and pair maintenance. They require short grasses, forbs, or bare ground for hunting, and large shrubs or trees for nest placement. They also need impaling sites for prey manipulation or storage, which can include sharp, thorny, or multi-stemmed plants and barbed-wire fences. Loggerhead shrikes often build their nests in thorny vegetation, which may help keep predators away. In the absence of trees or shrubs, they may sometimes nest in brush piles or tumbleweed. Nests are typically 2.5 to 4 feet above the ground (Yosef, 1996). Eggs hatch within 17 days and chicks leave the nest within 20 days of hatching. Second broods are common. This species primarily feeds on insects (Yosef, 1996). Loggerhead shrikes are resident birds that commonly nest within the HCP area.

California Horned Lark

The California horned lark (*Eremophila alpestris actia*) occurs in a variety of open habitat, usually where large shrubs and trees are absent. This species can be found from the coastal strand and deserts near sea level to alpine dwarf-shrub habitat above the treeline. This species can be found in disturbed habitats, including plowed fields, bayfill, and graded land. Along the coast, California horned larks often share nest sites with SNPL and CLTE, although they are generally uncommon in this habitat and occur in low numbers. California horned lark breeds from March through July, with peak activity in May. Nests are built in a shallow depression on the ground and made of grass lined with feathers and soft materials. Incubation lasts between 10 and 12 days, and the chicks leave the nest within 12 days of hatching. California horned larks are present year-round in the HCP area and likely breed in the area each year. California horned larks have been seen on nests or with young chicks within the seasonal exclosure, including within North Oso Flaco Exclosure, Boneyard Exclosure, and the 6 Exclosure (George, 2019).

Yellow Warbler

The yellow warbler (*Setophaga petechia*) primarily occurs as a migrant and summer resident in California. It is a common to locally abundant breeder throughout California except for most the Mojave Desert and all of the Colorado Desert. The yellow warbler generally occupies riparian

vegetation in close proximity to water along streams and in wet meadows. Throughout their range, they are found in willows and cottonwoods, and in California they are found in numerous other species of riparian shrubs or trees, varying by biogeographic region. Yellow warblers build their nests in the vertical fork of a bush or small tree such as willow or other riparian species. The nest is typically about 10 feet off the ground but occasionally may be up to about 40 feet (Lowther, Celada, Klein, Rimmer, & Spector, 1999). Eggs hatch within 13 days and chicks leave the nest within 12 days of hatching (Lowther, Celada, Klein, Rimmer, & Spector, 1999). This species primarily feeds on insects. The yellow warbler has been observed in and near the HCP area at Arroyo Grande Creek, Jack Lake, Little Oso Flaco Lake, and Oso Flaco Lake.

Nesting Birds

The HCP area hosts numerous nesting birds within its diverse habitats. Ground-nesting birds, such as killdeer (*Charadrius vociferus*), California horned lark, SNPL, and CLTE nest on the wide, open beaches. Waterbirds, such as least bittern, black-crowned night heron (*Nycticorax nycticorax*), mallard (*Anas platyrhynchos*), and green heron (*Butorides virescens*) nest in the lakes, including Oso Flaco Lake and Pismo Lake in the HCP area. Birds such as yellow warbler, marsh wren (*Cistothorus palustris*), Pacific-slope flycatcher (*Empidonax difficilis*), and Allen's hummingbird (*Selasphorus sasin*) nest within riparian habitats surrounding creeks and lakes in the HCP area. Raptors, such as red-tailed hawk (*Buteo jamaicensis*), great horned owl (*Bubo virginianus*), white-tailed kite, northern harrier, and Cooper's hawk (*Accipiter cooperii*) nest within trees in the HCP area. Birds adapted to a higher level of disturbance, such as American crow (*Corvus brachyrhynchos*), Eurasian collared dove (*Streptopelia decaocto*), house finch (*Carpodacus mexicanus*), cliff swallow (*Petrochelidon pyrrhonota*), western scrub jay (*Aphelocoma californica*), and rock pigeon (*Columba livia*) nest within the developed areas of the HCP area.

Wintering/Migratory Birds

Due to its location within the Pacific Flyway, the HCP area hosts numerous wintering and migratory birds each year, including shorebirds, waterbirds, raptors, and songbirds. Special-status species known to winter or migrate through the HCP area include brant (*Branta bernicla*), redhead (*Aythya americana*), common loon (*Gavia immer*), double-crested cormorant (*Phalacrocorax auratus*), American white pelican (*Pelecanus erythrorhynchos*), California brown pelican (*Pelecanus occidentalis californica*), osprey (*Pandion haliaetus*), long-billed curlew (*Numenius americanus*), marbled murrelet (*Brachyramphus marmoratus*), California gull (*Larus californicus*), black tern (*Chidonias niger*), elegent tern (*Thalasseus elegens*), black skimmer (*Rynchops niger*), Vaux's swift (*Chaetura vauxi*), black swift (*Cypseloides niger*), willow flycatcher (*Empidonax trailii*), bank swallow (*Riparia riparia*), Lucy's warbler (*Oreothylpis luciae*), summer tanager (*Piranga rubra*), and yellow-headed blackbird (*Xanthocephalus xanthocephalus*). Wintering/migratory birds are not typically protected unless they are special-status species.

Bats

Pallid Bat

Pallid bats are distributed from southern British Columbia and Montana to central Mexico, and east to Texas, Oklahoma, and Kansas. This species occurs throughout California except in the high Sierra from Shasta to Kern counties and the northwest coast. Pallid bat occurs in a number of habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous

forests. Pallid bats are most abundant in the arid Sonoran life zones below 6,000 feet but have been found up to 10,000 feet in the Sierra Nevada. They often roost in colonies of between 20 and several hundred individuals. Roosts are typically in cliffs, rock crevices, tree hollows, mines, caves, and various structures, such as vacant and occupied buildings, bridges, and bird boxes. Tree roosting has been documented in large conifer snags (e.g., ponderosa pine [*Pinus ponderosa*]), inside basal hollows of giant sequoias (*Sequoiadendron giganteum*) and within bole cavities in oak trees. They have also been reported roosting in stacks of burlap sacks and stone piles. Pallid bats are primarily insectivorous, feeding on large prey that is taken on the ground, or sometimes in flight (Zeiner, Laudenslayer, Jr., Mayer, & White, 1990). Prey items include arthropods such as scorpions, ground crickets, and cicadas (Zeiner, Laudenslayer, Jr., Mayer, & White, 1990). Pallid bats were detected during passive acoustic surveys at Oceano Lagoon nearby in the HCP area in June 2017.

Townsend's Big-eared Bat

Townsend's big-eared bats are found throughout California, except in the highest elevations of the Sierra Nevada. This species is a colonial species. Habitat associations for this species include the inland deserts; cool, moist coastal redwood forests; oak woodlands; and lower- to mid-elevation mixed coniferous-deciduous forests. This species prefers open surfaces of caves or cave-like structures, such as mine adits and shafts, but has also been reported in such structures as buildings, bridges, and water diversion tunnels that offer a cave-like environment. Townsend's big-eared bats forage in edge habitats along streams and areas adjacent to and within a variety of wooded habitats. This species forms maternity colonies between March and June, and these colonies typically begin to disperse in August. Townsend's big-eared bat males are typically solitary during the maternity season. This species is extremely sensitive to disturbance of roosting sites and a single visit may result in abandonment of the roost. Townsend's big-eared bats were detected during passive acoustic surveys at Oceano Lagoon in the HCP area in June 2017.

Western Red Bat

Western red bats are locally common in some areas of California. They occur from Shasta County to the Mexican border, west of the Sierra Nevada/Cascade Crest and deserts. Their winter range includes the western lowlands and coastal regions south of the San Francisco Bay. Western red bats roost in forests and woodlands from sea level up through mixed conifer forests. They feed over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands. This species's breeding season begins in August and September when bats mate, and births occur from late May through early July. Western red bats were detected during passive acoustic surveys at Oceano Lagoon in the HCP area in June 2017.

Terrestrial Mammals

American Badger

The American badger is an uncommon, permanent resident found throughout most of California. The American badger is a semifossorial mammal in the weasel family (*Mustelida*e). Macrohabitat for this species includes dry, open forests and woodlands, open scrub, and grasslands. Microhabitat conditions for this species require loose, friable soils for burrow creation and foraging potential. Badgers are typically solitary and nocturnal, but construct burrows for refuge during daylight hours. Badger burrows are usually elliptical, with only one entrance, and are located in areas with plentiful prey sources. The primary prey for American

badgers is ground squirrels and pocket gophers, which badgers typically pursue by digging into their burrows (Grinnell, Dixon, & Linsdale, 1937). Alternative prey resources for American badgers include mice, rats, reptiles, amphibians, and bird eggs. Young are born in the spring and independent by the end of summer. Badgers have very large home ranges, depending on available habitat. Badger males can forage across a range of approximately 1 square mile to 500 square miles, while females can range from one-half square mile to 50 square miles. However, in general, densities are one badger per square mile in occupied, prime habitat (Long, 1983). The American badger was documented within the HCP area in 1991 (Burton & Kutilek, 1991) and has been observed in the vegetation islands and the Phillips 66 Leasehold as recently as 2006 (Condor, Environmental Planning Services Inc., 2006). Badger tracks were also observed in April 2019 in the open riding area in BBQ flats and two small vegetation islands, as well as in between these vegetation islands (Schaefer, 2019). Inactive badger dens have also been observed in the HCP area, although this species is likely fairly uncommon in the HCP area.

Special-Status Plant Species List

The following table includes special-status plant species, listing status, range in California, habitat, and potential for special-status species to occur in the HCP area based on information from USFWS IPaC, CDPR survey and monitoring reports, CNDDB, and the CNPS Inventory of Rare and Endangered Plants. A total of 77 plant species were determined to have some potential to occur within the HCP area. Of these 77 species, only 33 species have been recorded within the HCP area and/or have moderate or high potential to occur within the HCP area; however, three of these species – Monterey pine (*Pinus radiata*), Monterey cypress (*Cupressus macrocarpa*), and Torrey pine (*Pinus torreyana*) – are not native to the area and are; therefore, not considered special-status within the HCP area. There are also five special-status plant species – California sawgrass (*Cladium californicum*), paniculate tarplant (*Deinandra paniculata*), mesa horkelia (*Horkelia cuneata* ssp. *puberula*), coast woollyheads (*Nemacaulis denudata* var. *denudata*), short-loped broomrape (*Orobanche parishii* ssp. *brachyloba*) – that occur in the HCP area, but are rare and not expected to be encountered during covered activities.

Table C2. Special-status Plant Species with the Potential to Occur in the Oceano Dunes HCP Area

Species	Listing Status[1]	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur	Sources
red sand verbena *Abronia maritima*	CRPR 4.2	Along coast from SLO County to Mexican border.	Coastal dunes, 0-100 m.	Perennial herb in the four o'clock family (Nyctaginaceae), Feb.-Nov.	Present- Known from CDPR surveys to occur in and around the HCP area, including near Strand Way, Pismo Dunes Natural Preserve, and on vegetation islands.	3, 4, 5, 6
Hoover's bent grass *Agrostis hooveri*	CRPR 1B.2	Endemic, coastal SLO and SB Counties.	Closed cone coniferous forest, chaparral, cismontane woodland or valley and foothill grassland usually on sandy soils; 6-610 m.	Perennial herb, Apr.-Jul.	Low- No suitable habitat; records from nearby but not in HCP area.	2, 3, 4
Douglas' fiddleneck *Amsinckia douglasiana*	CRPR 4.2	Endemic, west of the Sierras from Monterey County to Santa Barbara & in Tehachapi Ranges.	Cismontane woodland or valley and foothill grassland on Monterey shale; 0-1950 m.	Annual herb, Mar.-May	None- No suitable habitat and no records from HCP area or nearby.	3
Morro manzanita *Arctostaphylos*	FT, CRPR	Endemic to SLO County.	Chaparral (maritime), cismontane	Perennial evergreen shrub,	None- No suitable habitat and no records from HCP	1, 4

Table C2. Special-status Plant Species with the Potential to Occur in the Oceano Dunes HCP Area

Species	Listing Status[1]	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur	Sources
morroensis	1B.1		woodland, coastal dunes (pre-Flandrian) or coastal scrub on Baywood fine sand; 5-205 m.	Dec.-Mar.	area or nearby.	
Bishop manzanita *Arctostaphylos obispoensis*	CRPR 4.3	Endemic to Monterey and SLO counties.	Closed-cone coniferous forest, chaparral, and cismontane woodland on serpentinite, rocky soils; 50-1,005 m.	Perennial evergreen shrub, Feb.-June	None- No suitable habitat and no records from HCP area or nearby.	3
oso manzanita *Arctostaphylos osoensis*	CRPR 1B.2	Endemic to SLO County.	Chaparral or cismontane woodland on dacite porphyry buttes; 95 to 500 m.	Perennial evergreen shrub in the heath family (Ericaceae), Feb.-Mar.	Low- Suitable habitat for this species in the HCP area is limited, as there is very little coast live oak woodland (0.6 acre) or coyote brush scrub (16 acres).	5
pecho manzanita *Arctostaphylos pechoensis*	CRPR 1B.2	Endemic to SLO and SB Counties.	Closed-cone coniferous forest, chaparral or coastal scrub on siliceous shale; 125-850 m.	Perennial evergreen shrub, Nov.-Mar.	None- No suitable habitat and no records from HCP area or nearby.	2, 3
Santa Margarita manzanita *Arctostaphylos pilosula*	CRPR 1B.2	Endemic, occurs in SLO, SB and Monterey Counties.	Broad-leaved upland forest, closed-cone coniferous forest, chaparral or cismontane woodland sometimes on sandstone; 170-1100 m.	Perennial evergreen shrub in the heath family (Ericaceae), Dec.-May	Low- Suitable habitat for this species in the HCP area is limited as there is very little coast live oak woodland (0.6 acre), coyote brush scrub (16 acres), or closed cone coniferous forest (11.1 acres including Monterey pine forest, Torrey pine stands, Monterey cypress stands, and beach pine forest); the closed	2, 3, 4, 5

Table C2. Special-status Plant Species with the Potential to Occur in the Oceano Dunes HCP Area

Species	Listing Status[1]	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur	Sources
					cone coniferous forest in this location is considered non-native or naturalized.	
sand mesa manzanita *Arctostaphylos rudis*	CRPR 1B.2	Endemic to SLO and SB Counties.	Chaparral (maritime) or coastal scrub on sandy soils; 25-322 m.	Perennial evergreen shrub in the heath family (Ericaceae), Nov.-Feb.	Present- Observed within the Phillips 66 Leasehold by CDPR staff.	2, 3, 4, 5, 6
marsh sandwort[2] *Arenaria paludicola*	FE, SE, CRPR 1B.1	Remaining extant occurrences are in SLO and Los Angeles Counties.	Sandy openings in marshes and swamps (fresh water or brackish); 3-170 m.	Perennial stoloniferous herb, May-Aug.	Present- Only known extant population at Oso Flaco Lake. Observed during 2018 surveys.	1, 2, 3, 5, 6
Nuttall's milkvetch *Astragalus nuttallii* var. *nuttallii*	CRPR 4.2	Endemic to coast from San Francisco to SB County.	Coastal bluff scrub or coastal dunes; 3-120 m.	Perennial herb in the pea family (Fabaceae), Jan.-Nov.	Present- Known from CDPR surveys and CNDDB records to occur within HCP area including in Pismo Dunes Natural Preserve, Phillips 66 Leasehold, Oso Flaco, and vegetation islands.	3, 4, 5, 6
Davidson's saltscale *Atriplex serenana var. davidsonii*	CRPR 1B.2	Along coast from Santa Maria to San Diego.	Coastal bluff scrub or coastal scrub on alkaline soils; 10-200 m.	Annual herb, April-Oct.	Low- Determined to have a low chance of occurrence.	4
Brewer's calandrinia *Calandrinia breweri*	CRPR 4.2	Found in coastal California from Santa Rosa to San Diego.	Chaparral, and coastal scrub on sandy or loamy disturbed sites and burns.	Annual herb, Mar.-Jun.	None- No suitable habitat and no records from HCP area or nearby.	3
club-haired mariposa lily *Calochortus clavatus* var. *clavatus*	CRPR 4.3	Endemic to Los Angeles, Santa Barbara, San Benito, San Luis Obispo, and Ventura counties.	Chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland usually on serpentinite,	Perennial bulbiferous herb, May-Jun.	None- No suitable habitat and no records from HCP area or nearby.	3

[2] Species listed in bold are Covered Species in the Oceano Dunes District HCP.

Table C2. Special-status Plant Species with the Potential to Occur in the Oceano Dunes HCP Area

Species	Listing Status[1]	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur	Sources
			clay, or rocky soils; 75-1,300 m.			
San Luis Obispo mariposa lily *Calochortus obispoensis*	CRPR 1B.2	Endemic to SLO County.	Chaparral, coastal scrub or valley and foothill grassland often on serpentinite soils; 50-730 m.	Perennial bulbiferous herb, May-Jul.	Low- Determined to have a low chance of occurrence due to the limited habitat in the HCP area.	2, 3, 4
La Panza mariposa lily *Calochortus simulans*	CRPR 1B.3	Endemic to SLO and SB counties.	Chaparral, cismontane woodland, lower montane coniferous forest or valley and foothill grassland on sandy, often granitic and sometimes serpentinite soils; 395-1100 m.	Perennial bulbiferous herb, Apr.-Jun.	None- No suitable habitat and no records from HCP area or nearby.	2, 3
Cambria morning-glory *Calystegia subacaulis* subsp. *episcopalis*	CRPR 4.2	Endemic to SLO and SB counties.	Chaparral, cismontane woodland, coastal prairie or valley and foothill grassland usually on clay soils; 30-500 m.	Perennial rhizomatous herb, Mar.-May	None- No suitable habitat and no records from HCP area or nearby.	2, 3
San Luis Obispo sedge *Carex obispoensis*	CRPR 1B.2	Endemic to Monterey, San Diego, and SLO counites.	Closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland often in serpentine seeps and on clay soils; 10-820 m.	Perennial rhizomatous herb, Apr.-Jun.	None- No suitable habitat and no records from HCP area or nearby.	2
San Luis Obispo owl's clover *Castilleja densiflora* spp. *obispoensis*	CRPR 1B.2	Endemic to SLO County.	Meadows and seeps, or valley and foothill grassland sometimes on serpentinite soils; 10-400 m.	Annual herb, Mar.-May	Low- No suitable habitat; records from nearby but not in HCP area.	2, 3, 4
Monterey Coast paintbrush *Castilleja latifolia* ssp. *latifolia*	CRPR 4.3	Endemic to central coast.	Closed-cone coniferous forest, cismontane woodland	Perennial herb (hemiparasitic) in the broomrape family	Present - Known from CDPR surveys to be widespread in the HCP area,	4, 5, 6

Table C2. Special-status Plant Species with the Potential to Occur in the Oceano Dunes HCP Area

Species	Listing Status[1]	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur	Sources
			(openings), coastal dunes or coastal scrub on sandy soils; 0-185 m.	(Orobanchaceae), Feb.-Sep.	including Carpenter Creek, Oso Flaco Lake, vegetation islands, Pismo Dunes Natural Preserve, and Phillips 66 Leasehold. It primarily occurs within the silver dune lupine–mock heather scrub vegetation alliance (Lupinus chamissonis–Ericameria ericoides Shrubland Alliance)	
California jewelflower *Caulanthus californicus*	FE, SE, CRPR 1B.1	Santa Barbara Canyon, the Carrizo Plain in San Luis Obispo County, and the Kreyenhagen Hills in Fresno County	Nonnative Grassland, Upper Sonoran Subshrub Scrub, and Cismontane Juniper Woodland; 75-90 m.	Annual herb, Feb-Mar.	None- No suitable habitat and no records from HCP area or nearby.	1, 4
Lompoc ceanothus *Ceanothus cuneatus* var. *fascicularis*	CRPR 4.2	Endemic to Santa Barbara and SLO counties.	Chaparral (sandy); 5-400 m.	Perennial evergreen shrub, Feb.-Apr.	None- No suitable habitat and no records from HCP area or nearby.	3
Point Reyes ceanothus *Ceanothus gloriosus gloriosus*	CRPR 4.3	Endemic to Mendocino, Monterey, and SLO counties.	Coastal bluff scrub, closed-cone coniferous forest, coastal dunes, and coastal scrub; 5-520 m.	Perennial evergreen shrub, Mar.-May	None- No suitable habitat and no records from HCP area or nearby.	3
Congdon's tarplant *Centromadia parryi* ssp. *congdonii*	CRPR 1B.1	Endemic to the San Francisco Bay Area, Monterey coast and SLO County.	Valley and foothill grassland (alkaline); 0-230 m.	Annual herb, May-Nov.	None- No suitable habitat and no records from HCP area or nearby.	2, 3
coastal goosefoot *Chenopodium littoreum*	CRPR 1B.2	Endemic to SLO, SB and Los Angeles	Coastal dunes; 10-30 m.	Annual herb in the buckwheat family (Chenopodiaceae),	Present- Known from CDPR surveys and CNDDB	2, 3, 4, 5, 6

Table C2. Special-status Plant Species with the Potential to Occur in the Oceano Dunes HCP Area

Species	Listing Status[1]	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur	Sources
		Counties.		Apr.-Aug.	records to occur at Oso Flaco Lake and Phillips 66 Leasehold. The last documented occurrence at Oso Flaco Lake was in 1950. This species was only recently observed at Phillips 66 Leasehold; therefore, it likely has limited distribution in the HCP area.	
dwarf soaproot *Chlorogalum pomeridianum* var. *minus*	CRPR 1B.2	Endemic to Alameda, Colusa, Glenn, Lake, Santa Clara, San Luis Obispo, Sonoma, Tehama counties.	Chaparral (serpentinite); 305-1,000 m.	Perennial bulbiferous herb, May-Aug.	None- No suitable habitat and no records from HCP area or nearby.	2, 3
Brewer's spineflower *Chorizanthe breweri*	CRPR 1B.3	Endemic to SLO and Monterey Counties.	Closed-cone coniferous forest, chaparral, cismontane woodland or coastal scrub on serpentinite, rocky or gravelly soils; 45-800 m.	Annual herb, Apr.-Aug.	Low- Determined to have a low chance of occurrence due to limited suitable habitat in the HCP area.	2, 3, 4
Douglas's spineflower *Chorizanthe douglasii*	CRPR 4.3	Endemic to SLO, San Benito and Monterey Counties.	Chaparral, cismontane woodland, coastal scrub or lower montane coniferous forest on sandy or gravelly soils; 55-1600 m.	Annual herb in the buckwheat family (Polygonaceae), Apr.-Jul.	Present- Documented during previous CDPR surveys to occur within the Pavilion Hill vegetation island.	4, 5, 6
Palmer's spineflower *Chorizanthe palmeri*	CRPR 4.2	Endemic to Monterey, Santa Barbara, and SLO	Chaparral, cismontane woodland, and valley and foothill grassland on rocky,	Annual herb, Apr.-Aug.	None- No suitable habitat and no records from HCP area or nearby.	3

Table C2. Special-status Plant Species with the Potential to Occur in the Oceano Dunes HCP Area

Species	Listing Status[1]	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur	Sources
		counties.	serpentinite soils; 55-945 m.			
straight-awned spineflower *Chorizanthe rectispina*	CRPR 1B.3	Endemic to SLO, SB and Monterey Counties.	Chaparral, cismontane woodland or coastal scrub; 85-1035 m.	Annual herb, Apr.-Jul.	Low- Determined to have a low chance of occurrence due to the limited suitable habitat in the HCP area.	4
Chorro Creek bog thistle *Cirsium fontinale* var. *obispoense*	FE, SE, CRPR 1B.2	Endemic to SLO County.	Chaparral, cismontane woodland, coastal scrub or valley and foothill grassland in serpentinite seeps and drainages; 35-380 m.	Perennial herb, Feb.-Sep.	None- No suitable habitat and no records from area.	1, 2, 3, 4
surf thistle *Cirsium rhothophilum*	ST, CRPR 1B.2	Endemic to SLO and SB Counties.	Coastal bluff scrub or coastal dunes; 3-60 m.	Perennial herb, Apr.-Jun.	Present- Observed in CDPR surveys near Oso Flaco Creek and in the foredunes of the Oso Flaco area.	2, 3, 5, 6
La Graciosa thistle *Cirsium scariosum* var. *loncholepis*	FE, ST, CRPR 1B.1	Endemic to SLO, SB and Monterey Counties.	Cismontane woodland, coastal dunes, coastal scrub, marshes and swamps (brackish) or valley and foothill grassland on mesic, sandy soils; 4-220 m.	Perennial herb, May-Aug.	Present- Known from CDPR surveys and CNDDB records to occur at Oso Flaco Lake, near Jack Lake, in the Callander Dunes, and at the Dune Lake complex. Critical habitat for this species is present in the HCP area.	1, 2, 3, 5, 6
California saw-grass *Cladium californicum*	CRPR 2.2	Eastern and southern California.	Alkaline or freshwater meadows and seeps; 60-865 m.	Perennial rhizomatous herb in the sedge family (Cyperaceae), Jun.-Sep.	Present- Has not been found in the Oceano Dunes SVRA in recent years; however, it is was documented in the CNDDB as occurring near Oso Flaco Lake in 1990.	2, 3, 4, 5, 6

Table C2. Special-status Plant Species with the Potential to Occur in the Oceano Dunes HCP Area

Species	Listing Status[1]	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur	Sources
Pismo clarkia *Clarkia speciosa* ssp. *immaculata*	FE, SR, CRPR 1B.1	Endemic to SLO County.	Chaparral (margins, openings), cismontane woodland or valley and foothill grassland on sandy soils; 25-185 m.	Annual herb in the evening primrose family (Onagraceae), May-Jul.	Low- CNDDB occurrences have been documented at Nipomo Mesa and in Grover Beach. Only limited suitable habitat for this species is present in the HCP area.	1, 2, 3, 4
saltmarsh bird's beak *Cordylanthus maritimus* ssp. *maritimus*	FE SE 1B.1	Central and southern California coast.	Coastal dunes and coastal swamps; 0-30 m.	Annual herb, May-Oct.	None- No suitable habitat and no records from area.	1, 4
branching beach aster *Corethrogyne leucophylla*	CRPR 3.2	Endemic to coast from Santa Cruz to Santa Maria.	Closed-cone coniferous forest or coastal dunes; 3-60 m.	Perennial herb, May-Dec.	Low- Potential habitat present in the HCP area but no records from in or near the area.	3
Monterey cypress *Cupressus macrocarpa*	CRPR 1B.2	Endemic to Monterey county, but spread elsewhere artificially.	Closed-cone coniferous forest; 10-30 m.	Perennial evergreen tree.	Present- Observed in the HCP area; however, this species is not native in the HCP are and is only considered rare in Monterey county.	4, 6
paniculate tarplant *Deinandra paniculata*	CRPR 4.2	Several counties in southern California.	Coastal scrub, valley and foothill grassland, and vernal pools, usually on vernally mesic and sometimes on sandy sites; 25- 940 m.	Annual herb in the sunflower family (Asteraceae), Apr.-Nov.	Present- Observed in the HCP area during CDPR surveys in the southern portion of the Phillips 66 Leasehold. Suitable habitat for this plant is limited in the HCP area.	3, 4, 5, 6
dune larkspur *Delphinium parryi* ssp. *blochmaniae*	CRPR 1B.2	Endemic to SLO, SB and Ventura Counties.	Chaparral (maritime), coastal dunes; 0-200 m.	Perennial herb in the buttercup family (Ranunculaceae), Apr.-May	Present- Observed in the HCP area by CDPR staff almost every year within the Phillips 66 Leasehold and at South Oso Flaco.	2, 3, 4, 5, 6
umbrella larkspur	CRPR	Endemic to	Chaparral, and	Perennial herb,	Low- Determined	2, 3, 4

Table C2. Special-status Plant Species with the Potential to Occur in the Oceano Dunes HCP Area

Species	Listing Status[1]	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur	Sources
Delphinium umbraculorum	1B.3	Kern, Monterey, Santa Barbara, SLO, Ventura counties.	cismontane woodland; 400-1,600 m.	Apr.-Jun.	to have a low chance of occurrence due to the limited suitable habitat in the HCP area.	
beach spectaclepod *Dithyrea maritima*	ST, CRPR 1B.1	Southern coast and off-shore islands from San Luis Obispo to Los Angeles.	Coastal dunes, coastal scrub (sandy); 3-50 m.	Perennial rhizomatous herb, Mar.-May	Present- Known to occur at Oso Flaco Lake and south Oso Flaco area from CDPR and CNDDB records.	2, 3, 5, 6
Betty's dudleya *Dudleya abramsii* ssp. *bettinae*	CRPR 1B.2	Endemic to SLO county.	Chaparral, coastal scrub, and valley and foothill grassland on serpentinite, rocky soils; 20-180 m.	Perennial herb, May-Jul.	None- No suitable habitat and no records from area.	2, 3
mouse gray dudleya *Dudleya abramsii* ssp. *murina*	CRPR 1B.3	Endemic to SLO county.	Chaparral, cismontane woodland, and valley and foothill grassland on serpentinite soils; 90-525 m.	Perennial leaf succulent; May-Jun.	None- No suitable habitat and no records from area.	2, 3
Blochman's dudleya *Dudleya blochmaniae* ssp. *blochmaniae*	CRPR 1B.1	Along coast from west of Paso Robles to Mexican border.	Coastal bluff scrub, chaparral, coastal scrub or valley and foothill grassland on rocky, often clay or serpentinite soils; 5-450 m.	Perennial herb; Apr.-Jun.	None- No suitable habitat and no records from area.	2, 3
Blochman's leafy daisy *Erigeron blochmaniae*	CRPR 1B.2	Endemic to SLO and SB Counties.	Coastal dunes, coastal scrub; 3-45 m.	Perennial rhizomatous herb; Jun.-Aug.	Present- Locally common and widespread throughout the HCP area.	2, 3, 4, 5, 6
Indian Knob mountainbalm *Eriodictyon altissimum*	FE, SE, CRPR 1B.1	Endemic to SLO County.	Chaparral (maritime), cismontane woodland or coastal scrub; 80-270 m.	Perennial evergreen shrub, Mar.-Jun.	None- No suitable habitat and no records from area.	1, 2, 3, 4
Hoover's button-celery	CRPR 1B.1	Extant occurrences in	Vernal pools, 3-45 m.	Annual/perennial herb, Jul.-Aug.	None- No suitable habitat and no	2, 3

Table C2. Special-status Plant Species with the Potential to Occur in the Oceano Dunes HCP Area

Species	Listing Status[1]	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur	Sources
Eryngium aristulatum var. *Hooveri*		Alameda, San Benito, San Diego and SLO Counties.			records from area.	
suffrutescent wallflower *Erysimum suffrutescens*	CRPR 4.2	Endemic to and southern coast.	Coastal bluff scrub, chaparral (maritime), coastal dunes or coastal scrub; 0-150 m.	Perennial herb in the mustard family (Brassicaceae), Jan.-Jul.	Present- Locally common and widespread throughout the HCP area.	3, 4, 5, 6
Mesa horkelia *Horkelia cuneata* var. *puberula*	CRPR 1B.1	Endemic to central and southern coast.	Chaparral (maritime), cismontane woodland, coastal scrub on sandy or gravelly soils; 70-810 m.	Perennial herb in the rose family (Rosaceae), Feb.-Sep.	Present- Documented by the CNDDB within the Oceano Dunes SVRA at Oso Flaco Lake. However, the species was last documented at Oso Flaco Lake in 1973.	2, 3, 4, 5
Kellogg's horkelia *Horkelia cuneata* var. *sericea*	CRPR 1B.1	Endemic to coast from San Francisco Bay Area to vicinity of Lompoc.	Closed-cone coniferous forest, chaparral (maritime), coastal dunes or coastal scrub in sandy or gravelly openings; 10-200 m.	Perennial herb, Apr.-Sep.	Present- Observed in the Pismo Dunes Natural Preserve, in Pismo State Beach and in the Phillips 66 Leasehold during CDPR surveys.	2, 3, 4, 5, 6
Southwestern spiny rush *Juncus acutus* ssp. *leopoldii*	CRPR 4.2	Central and southern coast.	Coastal dunes (mesic), meadows and seeps (alkaline seeps) or marshes and swamps (coastal salt); 3-900 m.	Perennial rhizomatous herb in the rush family (Juncaceae); Mar.-Jun.	Present- Observed in the HCP area in the Pismo Dunes Natural Preserve and at the Eucalyptus Tree vegetation island during previous Oceano Dunes District surveys.	4, 5, 6
Jones' layia *Layia jonesii*	CRPR 1B.2	Endemic to SLO County.	Chaparral or valley and foothill grassland or clay or serpentinite soils; 5-400 m.	Annual herb, Mar.-May	None- No suitable habitat and no records from area.	2, 3
fuzzy prickly phlox *Linanthus californicus*	CRPR 4.2	Endemic to SLO and SB Counties.	Coastal dunes, 1-30 m.	Perennial deciduous shrub in the phlox family (Polemoniaceae),	Present- Observed during previous CDPR surveys in the Pismo Dunes	4, 5, 6

Table C2. Special-status Plant Species with the Potential to Occur in the Oceano Dunes HCP Area

Species	Listing Status[1]	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur	Sources
				Mar.-Aug.	Natural Preserve, Phillips 66 Leasehold, and the backdunes of South Oso Flaco.	
small-leaved lomatium *Lomatium parvifolium*	CRPR 4.2	Endemic to Monterey, Santa Cruz, and SLO counties.	Closed-cone coniferous forest, chaparral, coastal scrub, and riparian woodland on serpentinite soils; 20-700 m.	Perennial herb, Jan.-Jun.	None- No suitable habitat and no records from area.	3
San Luis Obispo County lupine *Lupinus ludovicianus*	CRPR 1B.2	Endemic to SLO County.	Chaparral or cismontane woodland on sandstone or sandy soils; 50-525 m.	Perennial shrub, Apr.-Jul	Low- Determined to have a low chance of occurrence due to the limited suitable habitat in the HCP area.	2, 3, 4
Nipomo Mesa lupine *Lupinus nipomensis*	FE, SE, CRPR 1B.1	Endemic to SLO County.	Coastal dunes; 10-50 m.	Annual herb, Dec.-May	Present- Observed in the HCP area in the eastern part of the Phillips 66 Leasehold in San Luis Obispo County Land Conservancy surveys; also known from CNDDB records.	1, 2, 3, 5, 6
Jones' bush mallow *Malacothamnus jonesii*	CRPR 4.3	Endemic to Monterey, Santa Barbara, and SLO counties.	Chaparral, and cismontane woodland; 160-1,075 m.	Perennial deciduous shrub, Apr.-Oct.	None- No suitable habitat and no records from area.	3
dunedelion *Malacothrix incana*	CRPR 4.3	Endemic to central and southern coast and off-shore islands.	Coastal dunes or coastal scrub; 2-35 m.	Perennial herb in the sunflower family (Asteraceae), Jan.-Oct.	Present- Observed during CDPR surveys at the Pavilion Hill vegetation island, 7.5 revegetation area, in North Oso Flaco, and near Oso Flaco Creek.	3, 4, 5, 6
southern curly-leaved monardella *Monardella sinuata*	CRPR 1B.2	Endemic to Santa Barbara, and SLO	Chaparral, cismontane woodland, coastal	Annual herb in the mint family (Lamiaceae), Apr.-	Low- Determined to have a low potential of	2, 3, 4

Table C2. Special-status Plant Species with the Potential to Occur in the Oceano Dunes HCP Area

Species	Listing Status[1]	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur	Sources
ssp. *sinuata*		counties.	dunes, and coastal scrub on sandy soils; 0-300 m.	Sep.	occurrence due to the limited suitable habitat in the HCP area. Nearby CNDDB occurrences from 1930s.	
crisp monardella *Monardella undulata* ssp. *crispa*	CRPR 1B.2	Endemic to SLO and SB Counties.	Coastal dunes or coastal scrub; 10-120 m.	Perennial rhizomatous herb, Apr.-Aug.	Present- Locally common and widespread throughout the HCP area. Occurs within the vegetation island habitats and at the edges of other vegetation within the HCP area according to 2012 vegetation mapping and CNDDB records.	2, 3, 4, 5, 6
San Luis Obispo monardella *Monardella undulata* ssp. *undulata*	CRPR 1B.2	Endemic to SLO and SB Counties.	Coastal dunes or coastal scrub (sandy); 10-200 m.	Perennial rhizomatous herb, May-Sep.	Present- Observed in the Pismo Dunes Natural Preserve, in the southern part of the Phillips 66 Leasehold, and in the southern backdunes of south Oso Flaco in CDPR surveys; also known from nearby CNDDB records.	2, 3, 4, 5, 6
California spineflower *Mucronea californica*	CRPR 4.2	Endemic to central and southern California.	Chaparral, cismontane woodland, coastal dunes, coastal scrub or valley and foothill grassland on sandy soils; 0-1400 m.	Annual herb in the buckwheat family (Polygonaceae, Mar.-Aug.	Present- Observed during CDPR surveys in the Pismo Dunes Natural Preserve, Phillips 66 Leasehold, and South Oso Flaco.	3, 4, 5, 6
Gambel's watercress *Nasturtium gambelii*	FE, ST,	Central and southern coast.	Marshes and swamps (freshwater or	Perennial rhizomatous herb,	Present- Known from the HCP area	1, 2, 3, 5, 6

Table C2. Special-status Plant Species with the Potential to Occur in the Oceano Dunes HCP Area

Species	Listing Status[1]	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur	Sources
	CRPR 1B.1		brackish).	Apr.-Oct.	at Oso Flaco Lake.	
spreading navarretia *Navarretia fossalis*	FT, CRPR 1B.1	Southern California	Chenopod scrub, marshes and swamps, playas, vernal pools.	Annual herb, Apr.-Jun.	None- No suitable habitat and no records from area.	1, 4
coast woolly-heads *Nemacaulis denudata* var. *denudata*	CRPR 1B.2	Central and southern coast.	Coastal dunes; 0-100 m.	Annual herb in the buckwheat family (Polygonaceae), Apr.-Sep.	Present- One CNDDB record in the HCP area within the dunes north of Oso Flaco Lake from 2000.	2, 3, 4
short-lobed broomrape *Orobanche parishii* ssp. *brachyloba*	CRPR 4.2	Central and southern coast and off-shore islands.	Coastal bluff scrub, coastal dunes or coastal scrub on sandy soils; 3-305 m.	Perennial herb (parasitic) broom-rape family (Orobanchaceae), Apr.-Oct.	Present- Known in HCP area from CDPR surveys and CNDDB from one occurrence in South Oso Flaco.	2, 3, 4, 5, 6
adobe yampeh *Perideridia pringlei*	CRPR 4.3	Endemic to central and southern California.	Chaparral, cismontane woodland, coastal scrub, and pinyon and juniper woodland on serpentinite, often clay soils; 300-1,800 m.	Perennial herb, Apr.-Jun.	None- No suitable habitat and no records from area.	3
Monterey pine *Pinus radiata*	CRPR 1B.1	Found in Monterey, Santa Cruz, SLO, and San Mateo counties.	Closed-cone coniferous forest, and cismontane woodland; 25-185 m.	Perennial evergreen tree.	Present- Has been observed in previous surveys at scattered locations in the HCP area; however, not native to HCP area.	4, 6
Torrey pine *Pinus torreyana* ssp. *torreyana*	CRPR 1B.2	Found in Santa Barbara, and San Diego counties.	Closed-cone coniferous forest, and chaparral on sandstone; 30-160 m.	Perennial evergreen tree.	Present- Has been observed in previous surveys at Pismo State Beach and in the Pismo Dunes Preserve; however, not native to HCP area.	4, 6
Hickman's popcorn	CRPR	Endemic to San	Closed-cone	Annual herb in the	Present- Observed	4, 5, 6

Table C2. Special-status Plant Species with the Potential to Occur in the Oceano Dunes HCP Area

Species	Listing Status[1]	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur	Sources
flower *Plagiobothrys chorisianus* var. *hickmanii*	4.2	Mateo, Santa Clara, Santa Cruz, San Benito, Monterey and SLO counties.	coniferous forest, chaparral, coastal scrub, marshes and swamps or vernal pools; 15-185 m.	borage family (Boraginaceae), Apr.-Jun.	during CDPR surveys at four vegetation islands within the HCP area, in the Phillips 66 Leasehold, and near Maidenform.	
sand almond *Prunus fasciculata* var. *punctata*	CRPR 4.3	Endemic to SLO and SB Counties.	Chaparral (maritime), cismontane woodland, coastal dunes or coastal scrub on sandy soils; 15-200 m.	Perennial deciduous shrub in the rose family (Rosaceae), Mar.-Apr.	Present- Observed during CDPR surveys within the Phillips 66 Leasehold.	3, 4, 5, 6
black-flowered figwort *Scrophularia atrata*	CRPR 1B.2	Endemic to SLO and SB Counties.	Closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub or riparian scrub; 10-500 m.	Perennial herb, Mar.-Jul.	Low- Suitable habitat occurs; however mostly occurs on much older sand dunes than are present in the area.	2, 3, 4
Blochman's groundsel *Senecio blochmaniae*	CRPR 4.2	Endemic to SLO and SB Counties.	Coastal dunes, 0-100 m.	Perennial herb in the sunflower family (Asteraceae), May-Oct.	Present- Locally common and widespread throughout HCP area. Occurs in the Blochman's groundsel scrub vegetation alliance (Senecio blochmaniae Shrubland Alliance) where Blochman's groundsel is dominant or co-dominant in the shrub layer.	3, 4, 5, 6
Guirado's goldenrod *Solidago guiradonis*	CRPR 4.3	Endemic to Fresno and San Benito counties.	Cismontane woodland, and valley and foothill grassland in serpentinite seeps; 600-1,370 m.	Perennial rhizomatus herb, Mar.-Sep.	None- No suitable habitat and no records from area.	3
San Bernardino aster *Symphyotrichum*	CRPR 1B.2	Endemic to southwestern	Cismontane woodland, coastal	Perennial rhizomatous herb,	Low- Determined to have a low	2, 3, 4

Table C2. Special-status Plant Species with the Potential to Occur in the Oceano Dunes HCP Area

Species	Listing Status[1]	Range in California	Habitat	Life Form/ Blooming Period	Potential to Occur	Sources
defoliatum		California.	scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps or valley and foothill grassland (vernally mesic) near ditches, streams or springs; 2-2040 m.	Jul.-Nov.	chance of occurrence due to the limited suitable habitat in the HCP area.	

[1] Listing Status Key:
FE – Federal Endangered
FT – Federal Threatened
SE – State Endangered
ST – State Threatened
SR – State Rare

California Rare Plant Rank:
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere.
CRPR 2: Plants rare, threatened, or endangered in Calif. but common elsewhere.
CRPR 3: More information about this plant needed (Review List).
CRPR 4: Limited distribution (Watch List).

CRPR Threat Code extensions and their meanings:
.1 – Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known).

Sources

1. USFWS. 2017. IPaC Official Species List. List generated August 29, 2017. https://ecos.fws.gov/ipac/publicDocument/VU27V52SPNBXJKHBCT2J7TYWX4
2. California Natural Diversity Database (CNDDB). 2017. Oceano and Pismo Beach USGS 7.5 Minute Quadrangles. California Department of Fish and Game, Biogeographic Data Branch. Last updated August, 2017.
3. California Native Plant Society Inventory of Rare and Endangered Plants, 2017. Oceano and Pismo Beach Quads. Available at: http://www.cnps.org/cnps/rareplants/ranking.php, accessed August 30, 2017.
4. California Department of Parks and Recreation, 2017. Oceano Dunes Habitat Conservation Plan: Appendix A. Listed and Other Special-status Species not Included in the HCP.
5. California Department of Parks and Recreation. 2017 (August). Oceano Dunes State Vehicular Recreation Area Wildlife Habitat Protection Plan. Prepared by California Department of Parks and Recreation Off-highway Motor Vehicle Division, Oceano Dunes District.
6. MIG|TRA Environmental Sciences, Inc., 2015 (February). Pismo State Beach and Oceano Dunes State Vehicular Recreation Area Vegetation Mapping Report.

Special-Status Plant Species Descriptions

Special-status plant species that are potentially impacted by the existing HCP covered activities, proposed new activities, and potential future activities are described below.

Red Sand Verbena

Red sand verbena (*Abronia maritima*) is a perennial herb in the four o'clock family (Nyctaginaceae) that blooms from February through November. It occurs on coastal dunes from 0 to 330 feet. It grows in the sand in stabilized beach sands of the interior dunes, typically in soil that is free of organic debris. It typically grows in areas from 200 to 5,000 feet from the surf. It forms a green mat along the ground and can sometimes be buried under loose sand. It is nearly extirpated in southern California (CNPS, 2019). Red sand verbena was observed in the HCP area near Strand Way, as well as in the western portion of the Pismo Dunes Natural Preserve. It has also been observed on Pavilion Hill, Tabletop, and Worm Valley vegetation islands; in north Oso Flaco; and near Oso Flaco Creek (MIG|TRA, 2015).

Sand Mesa Manzanita

Sand mesa manzanita (*Arctostaphylos rudis*) is a perennial evergreen shrub in the heath family (Ericaceae) that blooms from November through February. It occurs in maritime chaparral and coastal scrub on sandy soils from 80–1,050 feet. It is endemic to San Luis Obispo and Santa Barbara counties and is threatened by agriculture, road construction, road maintenance, and oil extraction. It has been severely reduced on Nipomo Mesa (CNPS, 2019). Sand mesa manzanita has been observed previously by CDPR staff within the Phillips 66 Leasehold in the HCP area (MIG|TRA, 2015). The closest CNDDB record to the study area is approximately 1.5 miles east at Nipomo Mesa (CDFW, 2019).

Marsh Sandwort

Marsh sandwort (*Arenaria paludicola*) is a perennial herb in the pink family (Caryophyllaceae). It has rooting, trailing stems and small white, inconspicuous flowers that bloom from May through August. It can also reproduce asexually by producing adventitious roots on the trailing stems that come into contact with suitable conditions. Historically, this species occurred in swamps, marshes, and other wet areas in widely disjunct localities in California and Washington between sea level and 1,480 feet. It is known to have occurred in four counties in the coastal region of Washington, as well as in San Francisco, Santa Cruz, San Luis Obispo, and San Bernardino counties in California (USFWS, 1998).

Marsh sandwort typically occurred on saturated, acidic bog soils that were predominantly sandy with a high organic content (USFWS, 1998). Currently, its primary habitat consists of boggy areas in freshwater marshes and swamps below 560 feet in elevation (USFWS, 2008). Marsh sandwort is found with dense mats of rushes, cattails (*Typha* sp.), and bur-reed (*Sparganium* spp.) (USFWS, 2008).

When it was federally listed in 1993, marsh sandwort was only known from one extant population near the San Luis Obispo County coast at Black Lake Canyon on the Nipomo Mesa Dune complex. Naturally occurring plants were last seen at Black Lake Canyon in 1994 after a steady decline since 1985 (USFWS, 1998). The species had since been reintroduced to Black Lake Canyon on three different occasions, but all attempts were unsuccessful, with the last

observation in 1999. Marsh sandwort is now considered to be extirpated from Black Lake Canyon (USFWS, 2008). Marsh sandwort has also been reintroduced to the Sweet Springs Audubon Nature Preserve in Los Osos in San Luis Obispo County in 2003 (USFWS, 2008) (CDFW, 2019).

Since marsh sandwort was federally listed, a natural population was rediscovered in the HCP area at Oso Flaco Lake in 1998 (Chestnut J. , 1998) (USFWS, 1998) (USFWS, 2008). Chestnut (1998) reported marsh sandwort from two locations, separated by approximately 330 feet, in a marshy area near the northeast corner of Oso Flaco Lake. The larger of the two locations contained at least 65 plants, and the smaller location contained at least 20 plants. The plants were growing in an area dominated by broad-fruited bur-reed (*Sparganium eurycarpum*) and appeared to be associated with Cusick's sedge (*Carex cusickii*), a large, tussock-forming species of localized occurrence in this area. This site now comprises the only known extant, wild population. This population has been in decline since 1998, however, with only 25 clumps reported in 2005. A decline in habitat quantity and quality was recorded at this site in late 2006 (CDFW, 2019). The vegetation at this location was observed to be thicker, denser, and more overgrown, consistent with biostimulation. Development and agricultural operations upstream from the lake have indirectly caused a decline in the quality of the marsh and swamp habitat through increases in nutrients (USFWS, 2008).

A survey by CDPR contractors for marsh sandwort was attempted in 2013. Surveyors could not confirm presence of the plant due to problems with accessibility but did determine that habitat, including the sedge mat microhabitat used by this species, is still present in locations where marsh sandwort was observed in the past. The area was surveyed in June and September 2018 (Chestnut J., 2019). Surveyors found marsh sandwort growing in a narrow band just outside the overhead willow canopy and shoreward from the tule marsh that dominates that portion of the lake. They noted that in this narrow band, Cusick's sedge formed floating clumps that provided a substrate for the marsh sandwort to grow over. Although specific numbers of individuals or population acreage was not determined, it appeared the tule coverage had expanded compared to previous visits, and the habitat band for the sandwort was in turn shrinking (Chestnut J. , 2019). The CNDDB presumes only the populations at Oso Flaco Lake and Sweet Springs Audubon Nature Preserve in Los Osos to be extant. All other previously reported populations (i.e., 13 since 1899) are considered extirpated or presumed extirpated.

Nuttall's Milkvetch

Nuttall's milkvetch (*Astragalus nuttallii* var. *nuttallii*) is a perennial herb in the pea family (Fabaceae) that blooms from January through November. It is endemic to California and is possibly threatened by foot traffic (CNPS, 2019). It occurs in coastal bluff scrub and coastal dunes from 10 to 400 feet. Nuttall's milkvetch was observed nearby the HCP area in the Pismo Dunes Natural Preserve; at Boyscout Camp, Worm Valley, Tabletop, and Eucalyptus Tree vegetation islands; in the south end of the Phillips 66 Leasehold; in North Oso Flaco; in the northern part of Maidenform; near Oso Flaco Creek; and in the southwest portion of South Oso Flaco (MIG|TRA, 2015).

Monterey Coast Paintbrush

Monterey Coast paintbrush (*Castilleja latifolia* ssp. *latifolia*) is an annual herb in the broomrape family (Orobanchaceae) that blooms from March through May. It is endemic to California and is threatened by development and grazing (CNPS, 2019). It occurs in the coastal dunes from 30 to

1,300 feet. It is typically found in the stabilized hind dunes or on cliffs flanking the shore. Monterey Coast paintbrush is widespread in the HCP area. It was observed near the interpretive trail and Carpenter Creek, in the Pismo Dunes Natural Preserve, throughout the Phillips 66 Leasehold, at six of the vegetation islands, at Maidenform, near Oso Flaco Creek, and in the eastern part of South Oso Flaco (MIG|TRA, 2015).

Coastal Goosefoot

Coastal goosefoot (*Chenopodium littoreum*) is an annual herb in the goosefoot family (Chenopodiaceae) that blooms from April through August. It occurs on sand dunes from 30 to 100 feet. It is endemic to Los Angeles, Santa Barbara, and San Luis Obispo counties and is known from fewer than 20 occurrences. It is possibly threatened by recreational activities, vehicles, and non-native plants (CNPS, 2019). During rare plant surveys conducted in HCP area, coastal goosefoot was only observed in the southern part of the Phillips 66 Leasehold (MIG|TRA, 2015). It has also been documented in the CNDDB as occurring at Oso Flaco Lake and nearby the HCP area at Jack Lake (CDFW, 2019).

Douglas's Spineflower

Douglas's spine flower (*Chorizanthe douglasii*) is an annual herb in the buckwheat family (Polygonaceae) that blooms from April through July. It occurs in chaparral, cismontane woodland, coastal scrub, and lower montane coniferous forest on sandy or gravelly soils from 180 to 5,250 feet. It is endemic to Monterey, San Benito, and San Luis Obispo counties (CNPS, 2019). Douglas's spineflower has been previously documented at the Pavilion Hill vegetation island during an Oceano Dunes District survey (CDPR, 2011).

Surf Thistle

Surf thistle (*Cirsium rhothophilum*) is a low-growing, short-lived perennial in the sunflower family (Asteraceae) with white flowers in dense heads. Flowering occurs between April and June. It is characterized by large rosettes of spiny, white-woolly, deeply lobed and undulating leaves. The deep roots and white-woolly herbage are adaptations to the physical stresses of the dune habitat, such as high light intensity, sand movement and abrasion, and limited water. Surf thistle occurs only in the narrow strip of coastal habitat between stabilized dunes and windblown beach between 9 and 200 feet in elevation (CDFG, 2005).

This species of surf thistle is endemic to the dunes of the central California coast, from the Nipomo Dunes of southern San Luis Obispo County to Point Conception in Santa Barbara County, including populations within Pismo State Beach and Oceano Dunes SVRA. It grows in coastal foredunes on the slopes of transverse ridges in areas of active sand accumulation. At the southern extreme of its range, it is found in sand at the bases or tops of cliffs (CDFG, 2005).

Within the HCP area, surf thistle was observed near Oso Flaco Creek and in the foredunes of the South Oso Flaco area during vegetation mapping surveys conducted in 2012, as well as during rare plant surveys conducted annually since 2013. In addition, surf thistle has been observed in the north Oso Flaco area during previous surveys conducted by CDPR (CDPR, 2008).

La Graciosa Thistle

La Graciosa thistle (*Cirsium scariosum* var. *loncholepis*) 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 sunflower family (Asteraceae) 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 backdune and coastal wetlands on the margins of dune swales, dune lakes, marshes, estuaries, coastal meadows, seeps, springs, intermittent streams, creeks, and rivers (USFWS, 2009a). This species thrives on sandy soils and is pollinated by hummingbirds and insects (USFWS, 2000). The variety and abundance of pollinators indicate that this species is a generalist (i.e., utilizes a wide variety of pollinators). The distribution of individual plants within populations is often an elongated pattern that is consistent with seed dispersal caused by the prevailing coastal winds (USFWS, 2001b). It is often found growing in a mat of low-growing herbaceous plants, including rushes, sedge, salt grass, Bermuda grass (*Cynodon dactylon*), clover (*Trifolium wormskioldii*), yerba mansa (*Anemopsis californica*), silverweed (*Potentilla anserina*), and birdfoot trefoil (*Lotus corniculatus*) (USFWS, 2001b).

USFWS revised its designation of critical habitat for La Graciosa thistle in 2009 to include 24,103 acres of habitat in San Luis Obispo and Santa Barbara counties (USFWS, 2011a). This critical habitat is divided into six units. The Callender-Guadalupe Dunes unit is the second largest unit (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. At the time of the most recent USFWS 5-year review (USFWS, 2011a), La Graciosa thistle was considered to have eight extant occurrences distributed among four populations, including southern Callender Dunes Lake, Oso Flaco, southern Guadalupe Dunes, and the Santa Maria River. Two of these occurrences (i.e., Oso Flaco and southern Guadalupe Dunes) are within the HCP area or vicinity. Surveys in and around the HCP area in 2013 and 2015 confirmed the presence of La Graciosa thistle in the South Oso Flaco area at Surprise Lake; however, the Jack Lake occurrence appears to be extirpated (MIG|TRA, 2015). This species was also observed at Surprise Lake in the South Oso Flaco area in April of 2017 (Skinner, 2017).

Dune Larkspur

Dune larkspur (*Delphinium parryi* ssp. *blochmaniae*) is a perennial herb in the buttercup family (Ranunculaceae) 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 sea level to 650 feet. It is endemic to California and is threatened by development (CNPS, 2019). Dune larkspur has been previously documented in the HCP area in the Phillips 66 Leasehold and at Oso Flaco Lake in 1998 (CDFW, 2019). From 1998 to 2011, Oceano Dunes District staff has observed dune larkspur almost every year within the Phillips 66 Leasehold property and at South Oso Flaco where it has been present near Beigle Road (CDPR, 2011).

Beach Spectaclepod

Beach spectaclepod (*Dithyrea maritima*) is a low-growing, whitish-flowered perennial herb in the mustard family (Brassicaceae). It is found in small transverse foredunes within approximately 160–1,000 feet from the surf (CDFG, 2005). Beach spectaclepod is usually found in areas of fragile dunes where the sand is relatively unstable. Historically occurring as far south as Los Angeles County and possibly Baja California Norte, Mexico, this species currently occurs in the dunes of San Luis Obispo and Santa Barbara counties and on San Nicholas and San Miguel Islands (CDFG, 2005). Several populations are found on Unocal's property in the Guadalupe Dunes just north of the Santa Maria River [CDFG 2004 as cited in (MIG|TRA, 2015)] (CNPS, 2019). In the HCP area, beach spectaclepod is protected and monitored closely

within the foredune area just north and south of Oso Flaco Lake (CDPR, 2011). Specifically, beach spectaclepod has been observed in the North Oso Flaco area during vegetation mapping surveys conducted in 2012 and in the North and South Oso Flaco areas during rare plant surveys conducted annually since 2012.

Blochman's Leafy Daisy

Blochman's leafy daisy (*Erigeron blochmaniae*) is a perennial rhizomatus herb that blooms from June through August. It is in the sunflower family (Asteraceae) and has light purple flowers. It occurs on coastal dunes and in coastal scrub from 10 to 150 feet. It is often found in scattered locations in stabilized sand dunes or dune scrub habitats. It often co-occurs with other species, including California spineflower (*Mucronea californica*) and blochman's groundsel (*Senecio blochmaniae*). It is endemic to Santa Barbara and San Luis Obispo counties and is threatened by development, non-native plants, and vehicles (CNPS, 2019). Blochman's leafy daisy is locally common and widespread in the HCP area. It was previously documented in the area by Oceano Dunes District surveys (CDPR, 2011) and CNDDB records with the most recent observation in 2002 in the vicinity of Oso Flaco Lake (CDFW, 2019).

Suffrutescent Wallflower

Suffrutescent wallflower (*Erysium insulare* var. *suffrutescens*) is a perennial herb in the mustard family (Brassicaceae) that blooms from January through July. It is endemic to the southern California coast and is threatened by coastal development, vehicles, and non-native plants (CNPS, 2019). It occurs in coastal bluff scrub, maritime chaparral, coastal dunes, and coastal scrub from sea level to 500 feet. Suffrutescent wallflower is locally common and widespread in coastal dune scrub communities of the HCP area.

Kellogg's Horkelia

Kellogg's horkelia (*Horkelia cuneata* var. *sericea*) is a perennial herb that blooms from April through September. It has white flowers and is in the rose family (*Rosaceae*). It occurs in closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub on sandy or gravelly openings from 30 to 650 feet. It is endemic to California and is possibly threatened by coastal development (CNPS, 2019). Kellogg's horkelia has been documented in the Pismo Dunes Natural Preserve in Pismo State Beach and in the Phillips 66 Leasehold during Oceano Dunes District surveys (CDPR, 2011). It was also documented in the Phillips 66 Leasehold by the CNDDB with the most recent observation in 1998 (CDFW, 2019).

Southwestern Spiny Rush

Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*) is a perennial rhizomatous herb in the rush family (Juncaceae) that blooms from March through June. It occurs in coastal dunes (mesic), meadows and alkaline seeps, and in coastal salt marshes and swamps from 10 to 3,000 feet. It is often found along the fringes of coastal saline and brackish marshes or along the transition from dune scrub to wetland vegetation. It occurs with native and non-native vegetation, including Arroyo willow, pacific silverweed (*Argentina pacifica*), and dock (*Rumex* sp.). It is threatened by urbanization and flood control projects (CNPS, 2019). Southwestern spiny rush has been documented in the HCP area in the Pismo Dunes Natural Preserve and within the Eucalyptus Tree vegetation island during previous Oceano Dunes District surveys (CDPR, 2011).

Fuzzy Prickly Phlox

Fuzzy prickly phlox (*Linanthus californicus*) is a perennial deciduous shrub in the phlox family (Polemoniaceae) that blooms from March through August. It is endemic to Santa Barbara and San Luis Obispo counties (CNPS, 2019). It occurs on coastal dunes from 3 to 100 feet. In the HCP area, fuzzy prickly phlox was observed in the Pismo Dunes Natural Preserve, the southern part of the Phillips 66 Leasehold, and in the backdunes of South Oso Flaco (MIG|TRA, 2015).

Nipomo Mesa Lupine

Nipomo Mesa lupine (*Lupinus nipomensis*) is a low-growing, blue-flowered, annual herb in the pea family (Fabaceae). 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 (Walters & Walters, 1988), which also present a threat of herbivory (USFWS, 2000) (USFWS, 2009b). Nipomo Mesa lupine is restricted to dry sandy flats of stabilized coastal dunes that lie west of Nipomo Mesa in San Luis Obispo County (USFWS, 2009b). Associated species include perennial species such as California croton (*Croton californicus*), mock heather, dune eriogonum (*Eriogonum parvifolium*), dune ragwort, and perennial veldt grass (a non-native, invasive species).

At the time of the USFWS 5-year review (USFWS, 2009b), only one Nipomo Mesa lupine population was known to be extant. Individuals in this population are scattered across a 2-mile stretch of backdune habitat west of State Route 1 and in between Black Lake Canyon and Oso Flaco Lake in San Luis Obispo County. USFWS considered all occurrences or colonies in the site to comprise a single population; it is now recorded as one occurrence in CNDDB (CDFW, 2018a). USFWS estimates the total amount of suitable habitat for Nipomo Mesa lupine in San Luis Obispo County to be approximately 1,000 acres, but the extant occurrences cover approximately 100 acres (USFWS, 2009b). The majority of the habitat for the species is privately owned, mostly by Philips 66, with smaller portions owned 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 (USFWS, 2009b). In the HCP area and vicinity, Nipomo Mesa lupine was only observed in the eastern part of the Phillips 66 Leasehold, which is land that Oceano Dunes District manages as part of the SVRA. It has also been documented in the Phillips 66 Leasehold in annual surveys conducted by the Land Conservancy of San Luis Obispo County (LCSLO, 2015) (Bohlman, 2014).

Dunedelion

Dunedelion (*Malacothrix incana*) is a perennial herb in the sunflower family (Asteraceae) that blooms from January through October. It is endemic to California (CNPS, 2019). It occurs in the foredunes and coastal scrub areas near the ocean from 10 to 115 feet. In the HCP area, dunedelion was observed at the Pavilion Hill vegetation island and the 7.5 Revegetation Area, in North Oso Flaco, and near Oso Flaco Creek (MIG|TRA, 2015).

Crisp Monardella

Crisp monardella (*Monardella undulata* ssp. *crispa*) is a perennial rhizomatus herb that blooms from April through August. It has purple flowers and is in the mint family (Lamiaceae). It occurs in coastal dunes and sandy scrub from 30 to 400 feet. This species is common in the Nipomo

Dunes complex and is often found in the more open sandy areas, especially around the margins of active dunes. It is endemic to Santa Barbara and San Luis Obispo counties and is threatened by vehicles (CNPS, 2019). Crisp monardella is locally common and widespread in the Oceano HCP area and was observed at the sandy edges of other vegetation throughout the area. It has been documented in the HCP area during previous Oceano Dunes District surveys (CDPR, 2011) and in CNDDB records with the most recent observation in 1998 (CDFW, 2019).

San Luis Obispo Monardella

San Luis Obispo monardella (*Monardella undulata* ssp. *undulata*) is a perennial rhizomatus herb that blooms from May through September. It has purple flowers and is in the mint family (Lamiaceae). It is endemic to Santa Barbara and San Luis Obispo counties and is threatened by coastal development, vehicles, and potentially non-native plants (CNPS, 2019). It occurs in coastal dunes and sandy coastal scrub from 30 to 650 feet. San Luis Obispo monardella was observed in the HCP area in the Pismo Dunes Natural Preserve, as well as within the Phillips 66 Leasehold, and in the southern backdunes of south Oso Flaco (MIG|TRA, 2015). It has also been documented adjacent to the HCP area near Black Lake and Jack Lake (CDFW, 2019).

California Spineflower

California spineflower (*Mucronea californica*) is an annual herb in the buckwheat family (Polygonaceae) that blooms from March through August. It occurs in chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland from sea level to 4,600 feet. It is often found in scattered locations in areas with more open dune scrub vegetation and disturbed areas, such as dirt roads and paths that have been cut through dune scrub. It occurs with a variety of native and non-native species, including mock heather, European beachgrass, and ice plant. It is endemic to California and is threatened by aggregate mining, vehicles, flood control modification, urbanization, water percolation projects, and possibly by non-native plants (CNPS, 2019). In the HCP area, California spineflower has been observed in the Dunes Preserve, in the Phillips 66 Leasehold, and at South Oso Flaco (MIG|TRA, 2015).

Gambel's Watercress

Gambel's watercress (*Nasturtium gambelii*) is an herbaceous perennial in the mustard family (Brassicaceae). This species characteristically roots from the stem, which bears scattered compound leaves and dense clusters of white flowers. Gambel's watercress is found in freshwater or brackish marsh habitats at the margins of lakes and along slow-flowing streams. It grows in or just above the water level and requires a permanent source of water. Historically, Gambel's watercress occurred in interior wetland areas of Orange, San Bernardino, and Los Angeles counties, as well as coastal wetland areas of San Luis Obispo and Santa Barbara counties. A population from Mexico is thought to be extirpated (CDFW, 2018a). At the time of listing, there were three known populations of Gambel's watercress, all within San Luis Obispo County. These locations included Black Lake Canyon, Oso Flaco Lake, and Little Oso Flaco Lake (USFWS, 1993). The Black Lake Canyon and Little Oso Flaco Lake populations are now considered to be "possibly extirpated" (USFWS, 2009c) (USFWS, 2011b) (CDFW, 2018a), with some observers indicating individuals appeared to show introgression with *N. officinale* (white or common watercress). The Gambel's watercress occurrence at Oso Flaco Lake was observed in fall 2013 (Chestnut J. , 2013), and the Oso Flaco area was surveyed again in 2018. Within the Oso Flaco Lake area, surveyors found a very healthy population of Gambel's watercress on the farm drain on the agricultural property. The number of individuals or distribution acreage was

not determined. The populations of Gambel's watercress previously observed along the Oso Flaco Lake Causeway were gone (Chestnut J. , Gambel's Watercress and Marsh Sandwort Observations; pers. comm., 2019)).

Pure Gambel's watercress is known from two wild populations that discovered in 1998 and 2016 on Vandenberg Airforce Base in Santa Barbara County and one population that was introduced in 2008 within the Guadalupe-Nipomo Dunes NWR, where a combination of 600 marsh sandwort and Gambel's watercress plants were planted at 8 sites. However, the plants have not fully established at the refuge, and the USFWS does not consider it to be a viable population (USFWS, 2011b).

The population in Black Lake Canyon in San Luis Obispo County has not been seen since 1994 (CDFW, 2018a). An unknown watercress species (*Nasturtium* sp.) was observed in the HCP area near Oso Flaco Creek during vegetation mapping surveys conducted in 2012.

Gambel's watercress within the Oceano Dunes SVRA is threatened by lake eutrophication (artificial or natural addition of substances such as nitrates and phosphates to an aquatic system) and hybridization. Hybridization and subsequent genetic introgression with the closely related *N. officinale*, habitat loss and degradation, biostimulation, sedimentation, encroachment of non-native eucalyptus trees, and drilling of water wells in the immediate watershed are serious threats to any remaining Gambel's watercress (USFWS, 2009c) (USFWS, 2011b) (CDFW, 2018a). In 2013, the RWQCB amended the Central Coastal Basin plan by adopting total maximum daily loads (TMDLs) for nutrients and orthophosphates in the Lower Santa Maria River watershed, including Oso Flaco Lake and tributaries; the State Water Resources Control Board adopted the amendment in 2014 (State Water Resource Control Board, 2014). Achieving the TMDLs should help alleviate adverse effects on native species from nitrogen and other biostimulator chemicals that are found in the watershed (RWQCB, 2013).

Hickman's Popcornflower

Hickman's popcorn flower (*Plagiobothrys chorisianus* var. *hickmanii*) is an annual herb in the borage family (Boraginaceae) that blooms from April through June. It is endemic to California (CNPS, 2019). It occurs in closed-cone coniferous forest, chaparral, coastal scrub, marshes and swamps, and vernal pools from 50 to 280 feet. Hickman's popcorn flower has been documented in four vegetation islands within the HCP area, in the Phillips 66 Leasehold, and near Maidenform (CDPR, 2011).

Sand Almond

Sand almond (*Prunus fasciculata* var. *punctata*) is a perennial deciduous shrub in the rose family (Rosaceae) that blooms from March through April. It is endemic to Santa Barbara and San Luis Obispo counties (CNPS, 2019). It occurs in maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on sandy soils from 50 to 650 feet. In the HCP area, sand almond has only been observed in the southern part of the Phillips 66 Leasehold (MIG|TRA, 2015).

Blochman's Groundsel

Blochman's groundsel (*Senecio blochmaniae*) is a perennial herb in the sunflower family (Asteraceae) that blooms from May through October. It occurs in coastal dunes and in sandy areas on coastal floodplains from sea level to 330 feet. It is endemic to Santa Barbara and San Luis Obispo counties and is threatened within its range by non-native plants, development, and vehicles (CDFW, 2018a). Blochman's groundsel is locally common and widespread in the HCP

area, especially within dune scrub habitat. This species often co-occurs with Blochman's leafy daisy.

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Habitat Conservation Plan EIR

Appendix D: Biological Effects of Existing Covered Activities

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Oceano Dunes District HCP EIR
Appendix D: Biological Effects of Existing Covered Activities

Special-Status Animal Species

Existing covered activities are ongoing visitor use or park operation activities occurring within the HCP area. No changes to these activities are proposed by the HCP, therefore, the proposed project would have no new impact generated by these activities. Effects to special-status animal species from these activities are existing baseline environmental conditions.

Covered activities that are short in duration, occur infrequently, or by the nature of activity cause minimal impacts to a species or its habitat, have low risk of causing injury or mortality but may cause disturbance that could result in harassment. FESA defines harassment as "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering."

Discussion of each covered special-status species below separates covered activities into impact categories as follows taking into consideration both the risk and severity of the impact:

- **Negligible** – Minimal impact on the resource occurs; any change that occurs is barely perceptible and not easily measurable. Negligible impacts have not been observed and are extremely unlikely to occur.
- **Minor** – Change in a resource occurs, but no substantial resource impact results; the change in the resource is detectable but does not alter the condition of the resource. Minor impacts have either been observed or are thought to occur and most or all impacts are thought to be avoided with the implementation of avoidance and minimization measures (AMMs). Both lethal and non-lethal impacts can be minor depending on the frequency, duration, and location of the activity.
- **Moderate** – Noticeable change in a resource occurs and this change alters the condition of the resource, but the integrity of the resource remains intact. Moderate impacts have been observed or are thought to occur and cannot be avoided. Both lethal and non-lethal impacts can be moderate depending on the frequency, duration, and location of the activity.
- **Major** – Substantial impact or change in a resource occurs that is easily defined and highly noticeable and that measurably alters the condition of the resource; the integrity of the resource does not necessarily remain intact.

Western Snowy Plover (SNPL)

Impacts to SNPL from HCP covered activities are described in the HCP section 4.3. The existing risk of impact to SNPL from existing covered activities is summarized in EIR Table 6-4.

Covered activities occurring outside of SNPL primary and secondary habitat areas (HCP Maps 10 and 23) have no risk of impacting SNPL and are dismissed from further discussion. Existing covered activities with no impact to SNPL include golfing (CA-4), campground maintenance (CA-20), street sweeping (CA-25), routine riparian maintenance (CA-26), ASI courses (CA-35),

Pismo Beach Golf Course operations (CA-37), natural history/interpretation (CA-39), CDPR ag land management (CA-46), and bioreactor maintenance (CA-47).

No major impacts from existing conditions on SNPL have been identified. Existing covered activities with negligible to moderate impacts to SNPL are described below and are part of the baseline environmental setting.

Park Visitor Activities

Motorized Recreation (CA-1) and Camping (CA-2). Motorized recreation and camping occur on an ongoing basis in the HCP area in primary and secondary SNPL breeding and wintering shoreline habitat year-round from Grand Avenue to Post 6 and seasonally (non-breeding months) south of Post 6 to the southern riding boundary. Impacts to SNPL from motorized recreation and camping are described in HCP sections 4.3.1.1.1 and 4.3.1.1.2. Take of SNPL has been documented in the HCP area from motor vehicle recreation as summarized in EIR Table 6-8.

Although infrequent, SNPL have been found during the breeding season dead or injured outside the seasonal exclosure and these mortalities/injuries have been attributed to vehicle strike from motorized activities (e.g., a dead individual is found in a tire track), including from campers driving to camp sites. Unprotected SNPL nests outside of exclosures are also at risk of being crushed by a vehicle, although SNPL AMMs 1 through 30 reduce the risk of this occurring; therefore, this is thought to be an infrequent event. Chicks have also been observed in the open riding area where they are at risk of being struck by a vehicle; however, CDPR implements SNPL AMMs 17 through 19 to minimize the risk of a chick being struck by a vehicle and few chicks are thought to be killed by vehicles in the open riding area. In addition, wintering SNPL have been struck by vehicles when they occur in areas where vehicles are driving through. Although CDPR implements SNPL AMMs 1 through 30 to reduce this impact, wintering SNPL are still found dead or injured near tire tracks each year. This indicates that wintering SNPL are still vulnerable to vehicle strike despite the implementation of AMMs. As a result, this lethal impact is moderate. This trend is expected to continue in the future.

Disturbance by motorized recreation can result in stress, reproductive failure, reduced foraging success, illness, or even death. SNPL breeding habitat south of Post 6 in Oceano Dunes SVRA is seasonally closed to motorized recreation under the existing natural resource management program. Therefore, SNPL within the seasonal exclosure south of Post 6 are not disturbed by motorized recreation. SNPL nesting near the Southern Exclosure fence line adjacent to the open riding area or outside the Southern Exclosure within the open riding area have been observed being disturbed by nearby recreation. CDPR implements SNPL AMMs 1 through 30, including installing bumpouts if SNPL appear to be disturbed by nearby recreation activities. Disturbance is difficult to document, however, and it is likely that some disturbance occurs despite the implementation of AMMs. This non-lethal impact is minor. This trend is expected to continue in the future.

Recreationists increase the presence of trash, most of which is disposed of properly in dumpsters. However, any trash that is accessible to predatory species is thought to artificially increase the number of individual predators in areas being used by SNPL and thus indirectly increase predation on SNPL. CDPR implements SNPL AMMs 32 through 42, which includes requiring all visitors to deposit all trash in dumpsters/receptacles and providing trash bags to all campers and CDPR staff and manually removing litter and garbage from the beaches. CDPR also implements a predator management program to control avian and/or mammalian predators that are observed targeting or disturbing SNPL adults, chicks, or eggs. Generalist predators that

forage on refuse continue to be present in the HCP area and are often suspected of preying on eggs, chicks, adults, and juveniles. Therefore, this indirect lethal impact is moderate. This trend is expected to continue in the future.

Habitat quality is permanently reduced in areas open to motorized recreation and camping due to the high level of disturbance. Motorized vehicle recreation reduces available habitat for SNPL and other shorebirds by limiting use in the open riding area compared to non-motorized areas, especially in certain conditions such as during high tides. SNPL are less frequent in areas open to motorized vehicles indicating that they may avoid these areas, especially during the breeding season. In addition, motorized recreation in the non-breeding season when the seasonal exclosure has been removed, alters dune vegetation and topography necessary for SNPL to breed in the coming breeding season. Specifically, motorized recreation reduces vegetation, organic surface materials (e.g., driftwood), and micro-topography required for SNPL breeding and foraging. CDPR implements SNPL AMMs 43 through 45 to restore habitat that has been impacted during the non-breeding season. In addition, CDPR closes off a portion of the open riding area during the breeding season (i.e., the seasonal exclosure) to ensure that suitable habitat is available SNPL breeding, foraging, and roosting. Other primary and secondary habitat for SNPL continues to be used for motorized recreation and remains unavailable or of reduced quality for SNPL. As a result, this habitat impact is moderate. This trend is expected to continue in the future.

Pedestrian Activity (CA-3). Pedestrian activity occurs on an ongoing basis in the HCP area, including within areas where motorized vehicles are not allowed (e.g., Oso Flaco, vegetation islands). Impacts to SNPL from pedestrian activity are described in HCP section 4.3.1.1.3. Pedestrians are not permitted within the seasonal exclosure, which is fenced with predator fence or symbolic fence, and therefore pedestrians do not impact nesting or brooding SNPL within the seasonal exclosure. The cryptic nature of SNPL nests and chicks makes it possible for a pedestrian to crush/kill or injure an active SNPL nest or a chick that is outside the fenced area and not yet identified by monitors. CDPR implements SNPL AMMs 1 through 3, 5 through 8, 14 through 16, 21 through 30, and 47 through 51 to reduce the risk of this occurring. There are no records of SNPL chicks or eggs being crushed/killed or injured due to pedestrian activities in the HCP area and AMMs appear to prevent this from happening. As a result, this this lethal impact is minor. This trend is expected to continue in the future.

Pedestrians moving through habitat occupied by SNPL can disturb nesting, foraging, or roosting SNPL. SNPL frequently feed on terrestrial insects that typically are found in the wrack line where people prefer to walk. Foraging SNPL adults and chicks interrupted by humans stop foraging and move away from the wrack until the disturbance has passed. Stationary activities, such as picnicking and sunbathing, can displace SNPL for long periods. In addition, frequent or prolonged pedestrian activities can keep SNPL from using otherwise suitable habitat. This impact has been most acute along the shoreline south of the Oso Flaco boardwalk, where monitors have observed visitor presence keeping SNPL off nests. CDPR implements SNPL AMMs 1 through 3, 5 through 8, 14 through 16, 21 through 30, and 47 through 51 to reduce the risk of pedestrians causing significant disturbance, however, some disturbance still likely occurs in the HCP area. As a result, this non-lethal impact is minor to moderate depending on the duration and frequency of the disturbance. This trend is expected to continue in the future.

SNPL chicks that enter an area open to pedestrians, have been picked up by a well-meaning visitor attempting to “rescue” the chick by picking it up and moving it to another location or bringing it to park staff. Specifically, this was observed in 2014 when a 1 to 2-day-old SNPL chick was picked up by a park visitor and given to park staff. CDPR implements SNPL AMMs 1

and 2, which includes providing educational information regarding SNPL. These AMMs appear to have reduced this impact since this has not been documented since 2014. As a result, this non-lethal impact is minor. This trend is expected to continue in the future.

Recreationists increase the presence of trash as described above for motorized recreation (CA-1) and camping (CA-2). CDPR implements SNPL AMMs 32 to 42 to reduce the effects on SNPL. This indirect lethal impact is moderate. This trend is expected to continue in the future.

Fishing (CA-5). Impacts to SNPL from fishing activity are described in HCP section 4.3.1.1.5. Fishing impacts on SNPL are similar to effects from pedestrians (CA-3). Effects are more limited to the shoreline areas where foraging occurs rather than to beach nesting areas. As a result, lethal impacts to SNPL likely don't occur from fishing activities.

People fishing generally occupy the shoreline for longer periods than pedestrians passing through. As a result, SNPL also appear to avoid foraging near fishing activity. CDPR implements all AMMs listed above for pedestrians and SNPL AMM 52 to reduce effects on SNPL. As a result, this non-lethal impact is minor. This trend is expected to continue in the future.

Increased predation on SNPL could result from visitor trash or discarded fishing bait as described above for motorized recreation (CA-1) and camping (CA-2). CDPR implements SNPL AMM 53 to reduce the effects on SNPL. This indirect lethal impact is moderate. This trend is expected to continue in the future.

Bicycling (CA-4), Dog Walking (CA-6), Equestrian (CA-7), Boating/Surfing (CA-8), and Aerial/Wind Driven Activities (CA-9). In accordance with Superintendent's Order 554-003-2015[1], kite flying and kiteboarding are not allowed in areas where chicks are expected to forage (i.e., between Pier Avenue and the southern Oceano Dunes SVRA boundary) or within 1,000 feet of the shoreline during the breeding season. In addition, most of these activities do not occur in areas where SNPL are known to nest; however, if, in the future, SNPL nest in new areas, the cryptic nature of SNPL nests and chicks makes it possible for an active SNPL nest or a chick that is outside the fenced area and not yet identified by monitors to be crushed/killed or injured by pedestrians associated with these activities. CDPR implements SNPL AMMs 1 through 3, 5 through 8, 14 through 16, 21 through 30, and 47 through 51 to reduce the risk of this occurring and there are no records of SNPL chicks or eggs being crushed/killed or injured due to these activities in the HCP area. Therefore, AMMs appear to prevent this from happening. As a result, this lethal impact is negligible. This trend is expected to continue in the future.

Dog walking, equestrian recreation, and boating/surfing activities have been observed disturbing SNPL during foraging or roosting activities outside the seasonal exclosure in the breeding and non-breeding season and aerial/wind driven activities sometimes result in disturbance to SNPL foraging or roosting during the non-breeding season. Specifically, SNPL are displaced from foraging or roosting habitat during the period of disturbance. Most disturbances are short in duration and SNPL will move to other locations to forage and/or roost. In addition, CDPR

[1] Superintendent's Orders are subject to change (approximately every 3-5 years); therefore, the numbers and titles associated with the Superintendent's Order will likely change during the HCP term. However, the subject matter will continue to be addressed within the new Superintendent's Orders. In addition, Superintendent's Orders can be updated or added due to new or changed circumstances as part of the adaptive management process (HCP section 5.6).

implements AMMs 54 through 57 to reduce the disturbances associated with dog walking and horses. As a result, this non-lethal impact is minor. This trend is expected to continue in the future.

Holidays (CA-10) and Special events (CA-11). Impacts to SNPL from holidays and special events are described in HCP sections 4.3.1.1.10 and 4.3.1.1.11. The existing impact of holidays and special events is similar to those of motorized vehicles (CA-1), camping (CA-2), and pedestrians (CA-3). Potential adverse impacts to SNPL from visitor activities may be exacerbated during periods of high visitor use, such as holidays (CA-10) or special events (CA-11). Holidays and special events do not increase the number of day use or camping vehicles or OHV allowed on the beach.

Fireworks are prohibited in the HCP area, however, a once a year the City of Pismo has a firework display on July 4 on the Pismo Beach pier. Therefore, during the July 4 holiday, many fireworks spectators congregate in the northern portion of the HCP area, which is over 2 miles from the northern edge of the Southern Exclosure. SNPL are largely precluded from foraging and roosting in areas that are heavily congested during the fireworks displays (e.g., the area north of Grand Avenue). In addition, although fireworks are illegal in the HCP area, illegal fireworks have been regularly observed during the July 4 week in or near SNPL breeding habitat, including adjacent to the seasonal exclosure. Illegal fireworks in these areas have been observed disturbing nesting, roosting, and/or foraging SNPL. Specifically, disturbance from fireworks has been observed causing SNPL to flush or move from the area, which results in increased vigilance or stress, decreased foraging, and/or decreased brooding. CDPR implements AMMs addressing holidays (SNPL AMMs 25 through 28 and AMMs 61 through 62), including increasing staff near the Southern Exclosure to minimize illegal firework use. As a result, this non-lethal impact is minor to moderate, depending on the amount of disturbance due to fireworks during the holiday. This trend is expected to continue in the future.

Special events concentrate people in specific locations within the park. Those locations are always within portions of the park that already accommodate daily human activity. Special events also change use patterns and increase visitation on days that might normally not be at capacity. Special events require a permit from the District and are subject to conditions that protect the environment, such as demarcation of the event area, biological monitors, and trash control (SNPL AMM 63 and AMM 64). Specific special event AMMs are based on past experience and dependent on the event location, timing, and potential to impact covered species like SNPL. Currently, this non-lethal impact is considered minor to moderate, depending on the location and type of special event. This trend is expected to continue in the future.

Natural Resources Management

SNPL and CLTE Management (CA-12a and 12b). Impacts to SNPL from these management activities are described in HCP section 4.3.1.2.2 and section 4.3.1.2.3. Existing SNPL and CLTE management activities includes surveying, monitoring, banding, predator control, habitat enhancement, and erecting fencing and exclosures. Minor adverse impacts can result from monitors or their vehicles accidentally crushing nests, although this has not been documented within the HCP area to date. As a result, this lethal impact is considered minor. This trend is expected to continue in the future.

Monitors have caused temporary disturbance to SNPL during fence installation/maintenance, surveys, banding, habitat enhancement, and other monitoring activities. At times, this disturbance has resulted in chicks leaving the protection of the seasonal exclosure and entering

the open riding area and/or chicks moving into the territory of another nest and being attacked or chased out by the attending adult. CDPR implements AMMs (e.g., SNPL AMMs 72 and 73) to reduce the risk of a chick being flushed into the open riding area or the territory of another nest. As a result, lethal impacts associated with monitoring activities are not thought to occur and are considered negligible. However, some disturbance does occur during monitoring activities due to the nature of the activities. As a result, non-lethal impacts are moderate. This trend is expected to continue in the future.

Fences placed in otherwise open habitat can be hazardous to flying birds. Shorebirds have been observed being killed upon striking cable (symbolic) fences at other sites (Page et al. 2002). Although infrequent, monitors at Oceano Dunes SVRA have observed SNPL striking the seasonal exclosure fence while flying (CDPR 2014a). In 2015, CDPR placed brightly colored strips of fencing along sections of the Southern Exclosure to increase the visibility of the exclosure fence. The strip of fencing was attempted as an experiment in 2015 and was placed on the western and northern Southern Exclosure fence in 2016 with favorable results. CDPR will continue to implement this program by lining the top of the Southern Exclosure fence with a strip of thicker plastic fencing (orange silt construction fencing cut into approximately 1-foot sections) in March of each year, covering most of the western and northern Southern Exclosure fenced areas. If staff resources are available, some of the eastern fenceline and bumpout fencing will also be lined with this strip fencing. Therefore, it is anticipated the visible fencing will continue to reduce the likelihood of a SNPL striking a fence in areas where it is installed. SNPL are known to nest in the Oso Flaco area and can still strike symbolic fencing in this area. However, this event has rarely been documented since the implementation of the SNPL and CLTE management program. As a result, this event will continue to be rare. Overall, the seasonal exclosure fence is an important protective measure that has increased SNPL reproductive success in the HCP area. Therefore, the seasonal exclosure fence will continue to be used despite the potential for birds to strike the fence.

Installation of SNPL single-nest exclosures can be disruptive to SNPL and adults are sometimes displaced from incubation for the duration of the exclosure construction. Single-nest exclosures also pose a risk to incubating adult SNPL because they can increase the likelihood that predators key onto the exclosure and prey on the attending adults. CDPR implements AMMs (SNPL AMMs 67 through 72 and AMMs 88 and 89) to reduce these impacts. However, lethal take of SNPL has occurred in the HCP area from predation at the single-nest exclosures (EIR Table 6-8). As a result, this lethal impact is moderate. This trend is expected to continue in the future.

Take of SNPL associated with banding occurs under an existing permit authorization from the USFWS. Take associated with banding is associated with the capture of the SNPL chicks and is non-lethal, although injury or mortality can occur during banding. CDPR implements AMMs to minimize the risk of injuries or mortalities occurring during banding (SNPL AMMs 81 and 82) and this rarely, if ever occurs. As a result, the lethal impact from banding is negligible and the non-lethal impact from banding is moderate. This trend is expected to continue in the future.

Within the HCP area, cameras are sometimes installed at SNPL nests to document nest predators. Cameras have been effective for identifying nest predators in other locations in California (Demers and Robinson-Nilsen 2012). While they collect useful data on nesting SNPL, cameras that are used to monitor nests need to be maintained, which can cause additional disturbance when the monitors approach the cameras to maintain them. Cameras have not been observed influencing nest success in the HCP area to date. To ensure effects from cameras are minimized, CDPR will also continue to implement the SNPL and CLTE management program, which

includes AMMs to be implemented while using still or video cameras (SNPL AMMs 74 through 80), such as training monitors on how to install cameras, not installing cameras when the wind speed is above 15 mph or strong enough to move sand or if it is raining, waiting to deploy cameras if a predator sighting recently occurred, and not installing cameras on nests that are readily visible to the public. As a result, the effects of using cameras near SNPL nests are considered to be minor. This trend is expected to continue in the future.

Collecting SNPL chicks and eggs as part of the ongoing salvage and rescue activities in the HCP area (AMM 90) requires handling chicks and/or eggs to relocate them to an authorized wildlife facility.[2] This activity can also result in increased stress and vigilance of chicks while monitors attempt to capture the chicks. In addition, captive rearing is not always successful, and eggs or chicks may not survive in the captive facility. Despite this potential outcome, in studies where survival of captive-reared young is low, proponents of the technique point out that even small numbers that survive and breed indicate some success toward conservation of the species since otherwise the eggs or chicks would not have survived (Roche et al. 2008, Neuman et al. 2013). In the past, approximately 112 eggs and 52 chicks within the HCP area have been salvaged when they were found abandoned or injured. A portion of these individuals have survived to fledging age in a captive rearing facility. These fledglings have been released back into the wild, and many were documented as integrating into the wild SNPL population and breeding, although not necessarily within the HCP area. As a result, salvaging SNPL eggs and chicks will continue to be beneficial to the individuals removed, which—if they go on to breed—would benefit SNPL overall.

Based upon many years of implementation, the monitoring data presented in the HCP demonstrate these management activities have a beneficial effect that exceed the risk level of incidental take and have increased SNPL reproductive success in the HCP area. Therefore, the overall existing impact of SNPL and CLTE management activities on SNPL is beneficial. This trend is expected to continue in the future.

Tidewater Goby and Salmonid Surveys (CA-13), CRLF Surveys and Management (CA-14), Listed Plant Monitoring, Propagation, and Habitat Enhancement (CA-15), Habitat Restoration Program (CA-16), Invasive Plant and Animal Control (CA-17), and Water Quality Monitoring (CA-19). Tidewater goby and salmonid surveys already occur approximately four times per year in Arroyo Grande Creek and lagoon and at least annually in Pismo Creek and lagoon/Carpenter Creek and Oso Flaco Creek. CRLF surveys occur multiple times per year between January and September, including numerous daytime and nighttime surveys within appropriate aquatic habitats (e.g., Arroyo Grande Creek, Oso Flaco Lake, Oso Flaco Creek, Pismo Creek, Carpenter Creek). The District also already manages and restores vegetation in the HCP area, monitors water quality, and conducts invasive species control in the HCP area, as determined to be necessary. The activities occur by CDPR staff who are trained in avoidance and minimization protocols. As a result, these activities do not modify SNPL habitat and have not been documented as resulting in lethal take.

These activities have resulted in non-lethal impacts to SNPL, including harassment as defined by FESA. Although most of these activities do not occur in areas where SNPL are known to nest,

[2] Impacts associated with the proposed new activity SNPL egg and chick capture for captive rearing if observed to be threatened by recreation activities and other non-covered species management activities (AMM 22) is included in EIR section 6.3.2.1.

listed plant monitoring occurs in North and South Oso Flaco during the breeding season and can disturb nesting SNPL and deter them from incubating eggs or brooding chicks during the period of disturbance. In addition, SNPL have been known to nest near Arroyo Grande Creek; therefore, tidewater goby and salmonid surveys and CRLF surveys and management can disturb nesting SNPL if they nest at Arroyo Grande Creek. All of these activities can disturb foraging or roosting SNPL by displacing them from foraging or roosting habitat during the period of disturbance and/or deterring them from foraging or roosting during the period of disturbance. CDPR staff implements AMMs, including, but not limited to, SNPL AMMs 91 through 99 to minimize any impacts to SNPL. As a result, these non-lethal impacts are considered minor. This trend is expected to continue in the future.

Habitat Monitoring System (CA-18). Impacts to SNPL from the habitat monitoring system activities are described in HCP section 4.3.1.2.9. During the breeding season monitors conduct three surveys for birds within and along the shoreline of the seasonal exclosure and elsewhere in the HCP area. Lethal impacts have not been documented to date with the implementation of AMMs.

These surveys can disturb nesting or brooding SNPL. CDPR implements SNPL AMMs (HCP Table 5-2), as appropriate, such as having a monitor with 10(a)(1)(A) Recovery Permit (or approved by the USFWS) conduct the surveys near the seasonal exclosure, to minimize the impact. However, some disturbance to nesting and foraging/roosting SNPL may occur. Therefore, this non-lethal impact is minor. However, based upon many years of implementation, the monitoring data presented in the HCP demonstrate the information collected as part of these surveys have a beneficial effect that exceeds the risk level of take. Therefore, the overall existing impact of habitat monitoring system on SNPL is beneficial. This trend is expected to continue in the future.

Park Maintenance

General Facilities Maintenance (CA-21) and Heavy Equipment Response (CA-29). Impacts to SNPL from general facilities maintenance and heavy equipment response are described in HCP section 4.3.1.3.2 and section 4.3.1.3.10, respectively. General facilities maintenance and heavy equipment response currently occur as needed in the HCP area, except for mechanical trash removal, which is described in more detail in EIR section 6.3.2.1. Park maintenance vehicles or equipment can injure or kill SNPL adults, juveniles, or chicks. Park maintenance vehicles, equipment, or workers can also accidentally crush nests. However, this has not been documented in the HCP area. CDPR also implements SNPL AMMs 100 through 103 to reduce the risk of park maintenance vehicles or equipment striking a SNPL or crushing a nest and these AMMs appear to reduce the lethal impacts from these activities. As a result, this lethal impact is minor. This trend is expected to continue in the future.

General facilities maintenance activities and heavy equipment response can adversely affect SNPL in the HCP area by disturbing nesting, brooding, roosting, or foraging SNPL, which can result in stress, reproductive failure, reduced foraging, illness, or even death. Such impacts are generally short in duration and relatively infrequent. CDPR implements SNPL AMMs 100 through 103 to specifically address general facilities maintenance activities and similar AMMs are applied to heavy equipment response. These AMMs reduce the risk of general maintenance activities or heavy equipment response disturbing SNPL; however, some disturbance still occurs. As a result, this non-lethal impact is moderate. This trend is expected to continue in the future.

Trash Control (CA-22). Impacts to SNPL from trash control activities are described in HCP section 4.3.1.3.3. Dumpsters are emptied in the HCP area every week. Other garbage bins are emptied regularly, including within Pismo State Beach and along various creeks. Vehicles driving to the trash bins are not known to have struck an SNPL to date and the risk of a vehicle striking a SNPL adult, juvenile, or chick or crushing a nest during trash control activities is considered low. As a result, the lethal impact is considered negligible. This trend is expected to continue in the future.

Trash bins are not located in areas where trash control activities disturb incubating, brooding, foraging, or roosting SNPL. Implementation of SNPL AMMs 100 through 103 ensures that the risk of disturbance to SNPL from trash control activities is low and this non-lethal impact is minor. This trend is expected to continue in the future.

Trash dumpsters attract a large number of gulls that land and forage in the dumpsters if they are left uncovered. As a result, the continued use of the uncovered trash bins within or near SNPL breeding habitat artificially increases the number of predatory species, including gulls, and thus increases depredation of SNPL. Increasing the number of trash bins on holidays and during special events to accommodate the increased number of visitors also artificially increases the number of predators at these times and increases depredation of SNPL. To reduce these impacts, CDPR is evaluating several options to reduce the movement of trash from the dumpsters and reduce predator presence at the dumpster sites. CDPR also implements a predator management program to ensure depredation of SNPL is minimized. Reducing predator presence near the dumpsters reduces the risk of predation on SNPL. However, the existing lethal indirect impacts due to predation as a result of trash control is moderate. This trend is expected to continue in the future. However, a solution to reduce the movement of trash in the future could reduce this impact further.

Wind Fencing (CA-23), Sand Ramp/Other Vehicle Access (CA-24), Perimeter and Vegetation Island Fencing (CA-27), Minor grading (CA-30), and Boardwalk/Other Pedestrian Access Maintenance (CA-31). Fencing, minor grading, and boardwalk/pedestrian access maintenance occur within the HCP area as needed but are typically conducted outside the nesting season. The activities occur by CDPR staff who are trained in avoidance and minimization protocols. Impacts to nesting SNPL have not been observed from these activities, especially with the implementation of SNPL AMMs. In addition, these activities do not modify SNPL nesting habitat. As a result, lethal and nesting habitat modification impacts are negligible. This trend is expected to continue in the future.

These activities can disturb foraging or roosting SNPL by displacing them from foraging or roosting habitat during the period of disturbance and/or deterring SNPL from foraging or roosting during the period of disturbance. However, these activities are typically localized and relatively short in duration. In addition, SNPL AMMs are applied, as appropriate. As a result, this non-lethal impact is negligible. This trend is expected to continue in the future.

Cable Fence Maintenance (CA-28). Cable fence maintenance occurs by CDPR staff who are trained in avoidance and minimization protocols. Impacts to nesting SNPL have not been observed from these activities, especially with the implementation of SNPL AMMs (HCP Table 5-2). In addition, these activities do not modify SNPL nesting habitat. As a result, lethal take and

nesting habitat modification impacts are negligible. This trend is expected to continue in the future.

Cable fence maintenance can disturb foraging or roosting SNPL by displacing them from foraging or roosting habitat during the period of disturbance and/or deterring SNPL from foraging or roosting during the period of disturbance. However, SNPL AMMs are applied, as appropriate, including delaying activities if SNPL are observed nearby. As a result, the non-lethal impact is negligible. This trend is expected to continue in the future.

Cable fence maintenance can modify SNPL foraging habitat and deter SNPL from foraging in the area if sand is pushed out of the cable fence area into foraging habitat. This has been observed in the HCP in the past. However, additional foraging habitat is present along the HCP area shoreline, including within the protected exclosure area. As a result, this foraging habitat modification impact is minor. This trend is expected to continue in the future.

Visitor Services

Ranger, Lifeguard, Park Patrols (CA-32). Regular ranger and park aide patrols occur throughout the HCP areas open to the public to ensure that visitors are obeying regulations. Patrols are largely conducted via vehicles. Lifeguards perform their services at their assigned lifeguard towers and on roaming patrols that extend from Pismo State Beach to the southern open riding area boundary. Lifeguard towers are installed seasonally around spring break. Tower sites are subject to change but are currently near Grand and Pier Avenues and the North Beach Campground. CDPR rangers, lifeguards, and park aides all must drive across Arroyo Grande Creek and Pismo Creek, when necessary. Impacts from crossing creeks are described in more detail under CA-40 below.

Ranger, lifeguard, and park patrols occur by CDPR staff who are trained in avoidance and minimization protocols. Ranger and patrol vehicles have struck SNPL in the past; however, this has not been documented as happening since 2002 and given the increased AMMs, such as SNPL AMM 100, that require staff training and SNPL AMM 101 that requires all CDPR staff to observe closures and speed limits, vehicle strike is not expected to occur. As a result, this lethal impact is negligible. This trend is expected to continue in the future.

Ranger and patrol activities do not occur in areas where SNPL are known to nest; however, if SNPL nest in new areas these activities could result in disturbance of nesting SNPL and SNPL could be deterred from incubating eggs or brooding chicks. These activities could also result in disturbance of SNPL during foraging or roosting. Specifically, SNPL could be displaced from foraging or roosting habitat during the period of disturbance and/or could be deterred from foraging or roosting during the period of disturbance. These activities are typically localized and relatively short in duration. In addition, SNPL AMMs are implemented, as appropriate, including establishing a buffer around all SNPL nests (AMM 6) and requiring all CDPR staff to observe closures (AMM 101); therefore, this non-lethal impact is minor. This trend is expected to continue in the future.

Emergency Response (CA-33) and Access by non-CDPR vehicles (CA-34). Emergency response and access by non-CDPR vehicles occurs within the HCP area as needed. Impacts to SNPL from emergency response and non-CDPR vehicles are described in HCP section 4.3.1.4.2 and section 4.3.1.4.3, respectively. Impacts to SNPL from emergency response and non-CDPR vehicles is generally be similar to park maintenance activities, although CDPR emergency responders sometimes have to travel quickly through areas where SNPL are present and non-CDPR emergency personnel are not always trained before entering an area.

SNPL foraging or roosting along the shoreline and not protected by an exclosure can be struck by a speeding emergency vehicle, which can occur during the breeding or non-breeding season. In addition, a nest outside the exclosure that has not yet been discovered by monitors could be crushed by a speeding emergency vehicle during the breeding season. An emergency vehicle has not been observed striking a foraging or roosting SNPL or crushing a SNPL nest in the HCP area to date; however, this event may be difficult to observe. Therefore, although unlikely, it is possible for a roosting or foraging SNPL or a SNPL nest to be struck by an emergency vehicle. As a result, this lethal impact is moderate. This trend is expected to continue in the future.

Medevac helicopters are also sometimes used in the HCP area during emergencies. Medevac helicopters flying low over or landing within occupied SNPL habitat can cause significant disturbance to nesting and/or brooding SNPL. The noise from the helicopter can be highly disruptive to SNPL and the helicopter itself may be seen as a threat. Adults may flush from the nest and leave the eggs unattended. SNPL nests or chicks may be abandoned if the adult is disturbed enough it does not return to the nest or chicks. Chicks may also be separated from adults leaving them vulnerable to predation and/or inclement weather, they may become separated from their brood, or they may move into the open riding area where they are vulnerable to vehicle strike. In addition, helicopters can lead to increased vigilance in adults which can lead to them being energetically stressed or to reduced foraging. However, helicopter activity in the HCP area is an infrequent event, especially in areas where SNPL typically nest. Therefore, this non-lethal impact is minor. This trend is expected to continue in the future.

Emergencies that occur within a seasonal exclosure can be highly disruptive to SNPL as adults may flush from the nest and leave the eggs unattended for the duration of the disturbance. SNPL nests or chicks may be abandoned if the adult is injured, killed, or disturbed enough it does not return to the eggs or chick. In addition, SNPL chicks that are out in the open may be separated from adults during the disturbance, which may leave them vulnerable to predation and/or inclement weather. Disturbance can also separate broods, cause chicks to move into the open riding area, and expose chicks to inclement weather. Although emergency response has occurred within the seasonal exclosure, such events are rare and do not occur in most years. Monitors also inform emergency responders of the locations of sensitive areas and escort emergency response personnel into and out of the seasonal exclosure to minimize the potential for vehicle strike, when feasible (AMM 111). Monitors also attempt to survey the area once the emergency situation has resolved and all emergency personnel are clear in order to document and alleviate any impacts that occurred. Due to event infrequency, short-term duration of disturbance, and use of monitors (as feasible), the non-lethal impact of these covered activities is considered minor. This trend is expected to continue in the future.

Emergency response also disturbs and/or deters foraging SNPL when they drive past, and they can become malnourished if the disturbance is prolonged. However, typically, emergency response drives through an area quickly. In addition, adequate alternative foraging habitat is present in the HCP area for SNPL, including during the non-breeding season. AMM 112 is also implemented, which includes identifying locations of non-breeding flocks of SNPL using appropriate signage. As a result, this non-lethal impact is minor. This trend is expected to continue in the future.

Beach Concessions (CA-36). Concession operated services occur throughout the open riding area away from the seasonal exclosure. These services have not been observed impacting nesting SNPL. During the non-breeding season, SNPL have been observed roosting and foraging along the shoreline south of Grand Avenue, which is open to street-legal vehicles. Vehicles driving to

and from the concession services can disturb individual SNPL in this area by flushing them from their location and causing them to become energetically stressed. As a result, this non-lethal impact is moderate. This trend is expected to continue in the future.

Other Activities

Vehicle Crossing of Creeks (CA-40). CDPR vehicles regularly cross Pismo/Carpenter Creek. CDPR vehicles sometimes cross Oso Flaco Creek close to shoreline to access the southern portion of the HCP area. CDPR and non-CDPR vehicles also regularly cross Arroyo Grande Creek. SNPL have been known to nest near Arroyo Grande Creek. Vehicle crossing of Arroyo Grande Creek have disturbed nesting, foraging, and roosting SNPL at Arroyo Grande Creek. In addition, although CDPR vehicles are trained in avoidance and minimization measures, vehicles crossing CDPR vehicles crossing Oso Flaco and Pismo/Carpenter Creek could disturb foraging and roosting SNPL. This non-lethal impact is minor. This trend is expected to continue in the future.

A vehicle has not been observed striking a nesting SNPL near Arroyo Grande Creek to date. However, although unlikely, a vehicle crossing Arroyo Grande Creek could injure or kill a nesting SNPL. This is especially unlikely because any vehicle crossing of the creek remains close to the shore where SNPL are not expected to nest. A vehicle crossing a creek can also injure or kill a SNPL adult, juvenile, or chick foraging in the area; however, CDPR implements SNPL AMMs 4 through 23 to reduce this impact. As a result, lethal impacts from vehicles crossing Arroyo Grande Creek are considered minor. This trend is expected to continue in the future.

Dust Control Activities (CA-44). Many dust control projects have already been conducted in the HCP area, as described in HCP Section 2.2.5.5. Impacts associated with future dust control activities are discussed in EIR section 6.4.1.1. Dust control activities associated with the Oceano Dunes SVRA Dust Control Program Environmental Impact Report (EIR; CDPR 2017) conducted to date required 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 SNPL. As a result, the lethal or non-lethal impact from dust control activities associated with the Dust Control Program EIR likely have not occurred and the impact is negligible.

Dust control vegetation that has been planted in the HCP area, and to a lesser degree wind fencing, installed near known SNPL breeding, roosting, and/or foraging habitat may have impacted breeding SNPL by providing habitat for predators to hide and stalk nesting, foraging, and/or roosting SNPL. In addition, protective perimeter fence posts, wind fencing, and some temporary dust and meteorological monitoring equipment may be tall and sturdy enough to provide perching habitat for common ravens, gull species, raptors, or other avian species that may have preyed on SNPL nests. At this time, these indirect impacts from dust control activities are not known. CDPR implements all AMMs (HCP Table 5-2) for dust control activities, as appropriate. In addition, CDPR implements a predator management program to control avian and/or mammalian predators that are observed targeting or disturbing SNPL adults, chicks, or eggs. The existing indirect lethal impact of existing dust control activities on SNPL is considered minor.

Vegetation that has been planted in the HCP area within SNPL habitat associated with dust control activities reduces available suitable SNPL breeding and/or wintering habitat by decreasing the amount of open, wide beaches. Reducing SNPL habitat by planting vegetation in suitable habitat for this species leads to less open (or wide), sparsely vegetated beaches and may

potentially increase predation on adults, chicks, and/or eggs if SNPL are not able to detect predators moving towards the nest location. Dust control activities associated with the Dust Control Program EIR were designed and implemented to avoid active nest areas and SNPL primary habitat/critical habitat. Most existing dust control activities occurred within tertiary habitat where SNPL have rarely nested in the past (HCP Table 3-2). However, some secondary habitat was lost. As a result, the habitat impacts are considered moderate.

A 48-acre area located outside the seasonal exclosure just north of Post 6 and within primary habitat for SNPL has been fenced as a preliminary step toward establishing a new foredune and permanently closing the area to vehicles and camping. The 48-acre area was closed during the SNPL non-breeding season, and a SNPL breeding season has not occurred since the closure; therefore, impacts to breeding SNPL associated with the closure are not known at this time. Effects of fencing the 48-acre area on wintering SNPL are discussed here. However, due to the speculative nature of fencing the 48-acre area on breeding SNPL, impacts on breeding SNPL are addressed in EIR section 6.4.1.1.

Lethal impacts to SNPL did not occur during fence installation. Installing fencing around the 48-acre area may have disturbed foraging and/or roosting wintering SNPL by displacing them from suitable foraging and/or roosting habitat during the disturbance and/or deterring them from foraging and/or roosting during the period of disturbance. However, CDPR conducted pre-construction surveys for SNPL prior to starting work and delayed activity until SNPL were no longer present (SNPL AMM 101). As a result, potential non-lethal impacts to foraging and/or roosting SNPL from foredune construction were considered negligible.

Cultural Resource Management (CA-45). Cultural resource management activities are generally conducted outside areas where SNPL are typically observed or outside the SNPL breeding season and do not impact SNPL. In the unlikely event that cultural resource management activities must occur during the breeding season in areas SNPL typically nest, these activities could disturb and/or displace SNPL from roosting or nesting. In addition, cultural resource management activities could disturb and/or displace SNPL from roosting or foraging during the non-breeding season. To reduce any impacts from cultural resource management activities, CDPR implements SNPL AMMs, as appropriate. Therefore, surveys are conducted in areas where SNPL could occur to ensure SNPL nests, adults, and chicks are not present within and near the cultural resource management area, and activities are delayed until an experienced monitor determines no impacts will occur if a SNPL is observed during the surveys. Furthermore, environmental monitors accompany archaeologists in the field when cultural resources protection work must occur within or adjacent to areas where SNPL are known to nest to limit the potential for disturbance to nesting SNPL. Therefore, the impacts from cultural resource management activities are considered negligible. This trend is expected to continue in the future.

Use of Pesticide (CA-51). CDPR currently uses pesticides in the HCP area, as necessary, to control invasive species. The activities occur by CDPR staff who are trained in avoidance and minimization protocols. Aerial spraying occurs in the backdunes to control veldt grass. These areas are not considered suitable habitat for SNPL; therefore, aerial spraying does not impact breeding or wintering SNPL. Other forms of pesticide use do not occur in areas where SNPL are known to nest during the breeding season. Although unlikely, if SNPL nest in new areas these activities can result in disturbance of nesting SNPL and SNPL can be deterred from incubating eggs or brooding chicks. Pesticide use does occur within SNPL nesting habitat outside the breeding season when wintering SNPL are present. In addition, SNPL may be impacted by drift

from herbicide sprayed outside, but nearby known breeding areas. However, CDPR implements SNPL AMMs 115 through 122, which include delaying work if a SNPL is observed nearby, not spraying if wind speed is over 10 miles per hour, and ensuring all workers are trained to work in sensitive habitat, to reduce these impacts in the event a SNPL nest occurs nearby. Ultimately, pesticide use in the HCP area is beneficial to SNPL by reducing the spread of invasive plant species into SNPL breeding and non-breeding habitat. This trend is expected to continue in the future.

SNPL Critical Habitat

Park Visitor Activities

Motorized Recreation (CA-1), Camping (CA-2), Pedestrian Activity (CA-3), Holidays (CA-10), and Special events (CA-11). In the final rule designating SNPL critical habitat in the HCP area, the USFWS acknowledged that portions of Oceano Dunes SVRA have been degraded by recreation activities. However, the USFWS noted use of an area for recreational activities does not preclude the use of the area by SNPL.

While some covered activities have been occurring for much longer, almost all of the covered activities have been occurring in the HCP area for over 20 years, including at the time when the USFWS designated SNPL critical habitat. For example, at least some covered activities currently occur within and will continue to occur within almost all of the 780 acres of SNPL critical habitat in the HCP area. These activities are conducted in the same manner as they were conducted at the time critical habitat was designated. Within the critical habitat, 356 acres of critical habitat are open to motorized recreation and camping at least part of the year. Approximately 300 acres open to motorized recreation are currently closed via seasonal exclosures to motorized activities during the SNPL and CLTE breeding season.

Heavy recreational use in the HCP area may continue to reduce the quality of some designated SNPL critical habitat for nesting or wintering activities. Specifically, SNPL may continue to use areas that are heavily used by humans, but productivity may continue to be limited in these areas. Heavy recreational use in critical habitat was occurring within the HCP area at the time critical habitat was designated; therefore, critical habitat for SNPL has not been adversely changed by recreational activities.

EIR section 6.3.2.1 discusses future changes SNPL critical habitat associated with the Boneyard Exclosure and 6 Exclosure reduction (CA-50). EIR section 6.4.1.1 discusses future changes to SNPL critical habitat associated with the New Particulate Matter Reduction Plan (PMRP) for dust control (CA-44).

California Least Tern (CLTE)

Impacts to CLTE from HCP covered activities are described in the HCP section 4.4. The existing risk of impact to CLTE from covered activities is summarized in EIR Table 6-4.

Covered activities occurring outside of CLTE primary and secondary habitat areas have no risk of impacting CLTE and are dismissed from further discussion. Covered activities with no impact to CLTE include golfing (CA-4), campground maintenance (CA-20), sand ramp and other vehicle access (CA-24), street sweeping (CA-25), ASI courses (CA-35), Pismo Beach Golf

Course operations (CA-37), CDPR ag land management (CA-46), and bioreactor maintenance (CA-47).

No major impacts from existing conditions on CLTE have been identified. Existing covered activities affecting CLTE are described below and are part of the baseline environmental setting.

Park Visitor Activities

Motorized Recreation (CA-1) and Camping (CA-2). Motorized recreation and camping occur on an ongoing basis in the HCP area in primary and secondary CLTE breeding habitat from Grand Avenue to Post 6. Impacts to CLTE from motorized recreation and camping are described in HCP sections 4.4.1.1.1 and 4.4.1.1.2. Take of CLTE has been documented in the HCP area from motor vehicle recreation is summarized in EIR Table 6-9.

Motorized recreation and camping activities are not allowed within the seasonal exclosure south of Post 6 during the breeding season. Since CLTE almost exclusively nest and form their night roost within the seasonal exclosure, motorized recreation and camping rarely, if ever, directly impact incubating adults, eggs, and individuals within the night roost. If a CLTE does nest outside the exclosure, an unprotected nest can be crushed by a vehicle, although CLTE AMMs 1 through 23 reduce the risk of this occurring and this is thought to be an infrequent event. Chicks have been observed in the open riding area where they are at risk of being struck by a vehicle; however, CDPR implements CLTE AMMs 14 and 15 to minimize the risk of a chick being struck by a vehicle and few chicks are thought to be killed by vehicles in the open riding area. In addition, if in the future CLTE in the HCP area change their night roost location to an area outside the exclosure that is accessible to vehicles, individuals in the night roost can be struck by a vehicle, although CLTE AMM 16 is implemented to reduce the risk of this occurring. Given that chicks and fledglings that are inexperienced at flying are observed each year in the open riding area and. although unlikely, CLTE adults or eggs can be crushed/killed or injured outside the seasonal exclosure by vehicle strike from motorized activities, including from campers driving to camp sites, this lethal impact is considered moderate. This trend is expected to continue in the future.

Disturbance by motorized recreation can result in stress, reproductive failure, reduced foraging success, illness, or even death. CLTE breeding habitat south of Post 6 in Oceano Dunes SVRA is seasonally closed to motorized recreation under the existing natural resource management program. Therefore, CLTE within the seasonal exclosure are not disturbed by motorized recreation. CLTE nesting near the fence line adjacent to the open riding area have been observed being disturbed by nearby recreation. CDPR implements CLTE AMMs 1 through 23, including installing bumpouts if CLTE appear to be disturbed by nearby recreation activities. Disturbance is difficult to document, however, and it is likely that some disturbance occurs despite the implementation of AMMs. As a result, this non-lethal impact is minor. This trend is expected to continue in the future.

Recreationists increase the presence of trash as described above for motorized recreation (CA-1) and camping (CA-2) for SNPL. CDPR implements CLTE AMMs 24 through 33 to reduce the effects on CLTE. This indirect lethal impact is moderate. This trend is expected to continue in the future.

Habitat quality is permanently reduced in areas open to motorized recreation and camping due to the high level of disturbance. Motorized vehicle recreation reduces available habitat for CLTE and other shorebirds by limiting use in the open riding area compared to non-motorized areas. CLTE are less frequent areas open to motorized vehicles, indicating that they may avoid these

areas. In addition, motorized recreation in the non-breeding season when the seasonal exclosure has been removed, alters dune vegetation and topography necessary for CLTE to breed in the coming breeding season. Specifically, motorized recreation reduces vegetation, organic surface materials (e.g., driftwood), and micro-topography required for CLTE breeding and foraging. CDPR implements CLTE AMMs 34 through 36 to restore habitat that has been impacted during the non-breeding season. In addition, CDPR closes off a portion of the open riding area during the breeding season (i.e., the seasonal exclosure) to ensure that suitable habitat is available CLTE breeding and roosting. Other primary and secondary habitat for CLTE continues to be used for motorized recreation and remains unavailable or of reduced quality for CLTE. As a result, this habitat impact is moderate. This trend is expected to continue in the future.

Pedestrian Activity (CA-3). Pedestrian activity occurs on an ongoing basis in the HCP area, including within areas where motorized vehicles are not allowed (e.g., Oso Flaco, vegetation islands). Impacts to CLTE from pedestrian activity are described in HCP section 4.4.1.1.3. Pedestrians are not permitted within the Southern Exclosure, which is fenced with predator fence, and therefore pedestrians do not impact nesting CLTE within the seasonal exclosure. Within the HCP area, CLTE nests have rarely been found outside the fenced areas. Although CLTE almost exclusively nest within the Southern Exclosure, CLTE could nest outside the exclosure in areas open to pedestrians. If a CLTE establishes a nest outside the seasonal exclosure in an area open to pedestrians, the cryptic nature of CLTE nests and chicks makes it possible for a pedestrian to crush eggs or kill or injure chicks in an active CLTE nest that has not yet identified by monitors. CDPR implements CLTE AMMs 1 through 3, 5 through 12, 14 through 16, 21 through 23, and 37 through 39 to reduce the risk of this occurring. There are no records of CLTE chicks or eggs being crushed/killed or injured due to pedestrian activities in the HCP area and AMMs appear to prevent this from happening. As a result, this lethal impact is minor. This trend is expected to continue in the future.

CLTE nesting near the fence line or outside the seasonal exclosure have been observed being disturbed by nearby pedestrian activities. Chronic disturbance of breeding adults from pedestrian activities near the exclosure indirectly affects chicks or eggs. Chicks or eggs have been abandoned, left unattended for prolonged periods of time, and/or exposed to predation when the disturbance from pedestrian activity has last too long. In addition, eggs have buried by sand or not properly incubated. When adults defend a nest against a threat, eggs and/or chicks are left unattended and exposed to inclement weather, heat stress, and/or predation. These effects are exacerbated if human disturbance coincides with periods of high wind or extreme temperature. CDPR implements AMMs 1 through 3, 5 through 12, 14 through 16, 21 through 23, and 39 (as appropriate) and these AMMs appear to be successful at reducing disturbance impacts. As a result, this non-lethal impact is minor. This trend is expected to continue in the future.

Pedestrians moving through aquatic habitat areas occupied by foraging CLTE (e.g., Oso Flaco Lake) have been seen disturbing CLTE foraging and/or roosting in these areas. This has been most frequent at the footbridge hand railing at Oso Flaco Lake, which is used by CLTE for perching after chicks have fledged and adult birds are teaching fledglings to fish in the lake. Pedestrians at the lake disturb CLTE adults and fledglings and deter them from foraging in the area. Fledglings learning to fish have become energetically stressed since they are unable to forage normally. CDPR implements CLTE AMMs 1 and 38 to reduce the risk of this occurring. As a result, this non-lethal impact is minor. This trend is expected to continue in the future.

CLTE chicks that enter an area open to pedestrians, have been picked up by a well-meaning visitor attempting to “rescue” the chick by picking it up and moving it to another location or

bringing it to park staff. Specifically, this was observed in 2010 when a park visitor picked up an injured fledgling in the open riding area and gave it to park staff. CDPR implements CLTE AMMs 1 and 2, which includes providing educational information regarding CLTE. These AMMs appear to have reduced this impact since this has not been documented since 2010. Therefore, this non-lethal impact is minor. This trend is expected to continue in the future.

Recreationists increase the presence of trash as described above for motorized recreation (CA-1) and camping (CA-2) for SNPL. CDPR implements CLTE AMMs 24 through 33 to reduce the effects on CLTE. Therefore, this indirect lethal impact is moderate. This trend is expected to continue in the future.

Fishing (CA-5). Visitors in the HCP area fish along the shoreline, at Oso Flaco Lake, and in other aquatic habitats were CLTE forage. People fishing generally occupy habitat longer than pedestrians who are just passing through. Foraging and/or roosting CLTE often avoid areas near fishing activities. Lethal impacts to CLTE likely don't occur from fishing activities. However, some CLTE are still observed foraging and roosting in locations where fishing occurs and fishing activities that remain near foraging and/or roosting CLTE for extended periods of time, disrupt foraging for long periods, thereby disrupting normal foraging behavior and causing adults and/or chicks to become energetically stressed. This has been observed at Oso Flaco Lake where adult CLTE often take fledglings to teach them to forage. To reduce impacts to foraging CLTE, CDPR implements AMMs 38 and 40. Therefore, if fishing activity is observed disturbing CLTE, visitors are asked to relocate, as needed. Monitors also retain the option to close access to Oso Flaco Lake, as needed, to ensure foraging and/or roosting birds are not disturbed. The existing impact of fishing on CLTE is minor. This trend is expected to continue in the future.

Increased predation on CLTE could result from visitor trash or discarded fishing bait as described above for motorized recreation (CA-1) and camping (CA-2). CDPR implements CLTE AMMs 24 to 33 and AMM 41 to reduce the effects. This indirect lethal impact is moderate. This trend is expected to continue in the future.

Bicycling (CA-4), Dog Walking (CA-6), Equestrian (CA-7), Boating/Surfing (CA-8), and Aerial/Wind Driven Activities (CA-9). In accordance with Superintendent's Order 554-003-2015[3] and AMMs 47 and 48, kite flying and kiteboarding are not allowed in areas where chicks are expected to forage (i.e., between Pier Avenue and the southern Oceano Dunes SVRA boundary) or within 1,000 feet of the shoreline during the breeding season. As a result, lethal and non-lethal impacts from kite flying and kite boarding are negligible. This trend is expected to continue in the future.

Impacts from park visitor activities (CA-4, CA-6, CA-7, CA-8, and CA-9) on CLTE are similar to those described above for SNPL. Specifically, with the implementation of CLTE AMMs, including, but not limited to, AMMs 42 through 46, lethal and non-lethal impacts are minor. This trend is expected to continue in the future.

[3] Superintendent's Orders are subject to change (approximately every 3-5 years); therefore, the numbers and titles associated with the Superintendent's Order will likely change during the HCP term. However, the subject matter will continue to be addressed within the new Superintendent's Orders. In addition, Superintendent's Orders can be updated or added due to new or changed circumstances as part of the adaptive management process (HCP section 5.6).

Holidays (CA-10) and Special events (CA-11). Impacts to CLTE from holidays and special events are described in HCP sections 4.4.1.1.10 and 4.4.1.1.11. The existing impact of holidays and special events is similar to those of motorized vehicles (CA-1), camping (CA-2), and pedestrians (CA-3). Potential impacts to CLTE from visitor activities may be exacerbated during periods of high visitor use, such as holidays (CA-10) or special events (CA-11) and are similar to those described for SNPL above. CDPR implements AMMs specifically addressing holidays and special events (CLTE AMMs 49 through 54). As a result, lethal and non-lethal impacts from holidays and special events on CLTE are minor or moderate, depending on the amount and location of the disturbance. This trend is expected to continue in the future.

Natural Resources Management

SNPL and CLTE Management (CA-12a and 12b). Impacts to CLTE from these management activities are described in HCP section 4.4.1.2.2 and section 4.4.1.2.3. SNPL and CLTE management activities include surveying, monitoring, banding, predator control, habitat enhancement, and erecting fencing and exclosures. Effects from the activities are similar to those described above for SNPL, although predators have not been observed keying in on the large single-nest exclosures used to protect CLTE nests outside the seasonal exclosure. Lethal take of CLTE has been documented as occurring from CLTE striking the symbolic fence (EIR Table 6-9) and monitors are known to disturb CLTE during some activities. CLTE chicks are also banded, which results in capture of CLTE chicks. CLTE AMMs 55 through 76 are implemented to minimize injury, harm, and disturbance to CLTE associated with SNPL and CLTE management activities. Lethal and non-lethal impacts from these activities are moderate. However, based upon many years of implementation, the monitoring data presented in the HCP demonstrate these management activities have a beneficial effect that exceed the risk level of incidental take and have increased CLTE reproductive success in the HCP area. Therefore, the overall existing impact of SNPL and CLTE management activities on CLTE is beneficial.

Tidewater Goby and Salmonid Surveys (CA-13), CRLF Surveys and Management (CA-14), Listed Plant Monitoring, Propagation, and Habitat Enhancement (CA-15), Habitat Restoration Program (CA-16), Invasive Plant and Animal Control (CA-17), and Water Quality Monitoring (CA-19). Tidewater goby and salmonid surveys already occur approximately four times per year in Arroyo Grande Creek and lagoon and at least annually in Pismo Creek and lagoon/Carpenter Creek and Oso Flaco Creek. CRLF surveys occur multiple times per year between January and September, including numerous daytime and nighttime surveys within appropriate aquatic habitats (e.g., Arroyo Grande Creek, Oso Flaco Lake, Oso Flaco Creek, Pismo Creek, Carpenter Creek). The District also already manages and restores vegetation in the HCP area, monitors water quality, and conducts invasive species control in the HCP area, as determined to be necessary. The activities occur by CDPR staff who are trained in avoidance and minimization protocols. As a result, these activities do not modify CLTE habitat and have not been documented as resulting in lethal take.

These activities have resulted in non-lethal impacts to CLTE, including harassment as defined by FESA. Although most of these activities do not occur in areas where CLTE are known to nest or roost, listed plant monitoring occurs in North and South Oso Flaco during the breeding season. CLTE are not known to nest within North or South Oso Flaco and have not been disturbed by these activities to date. However, if CLTE nest in these areas in the future these activities can disturb nesting CLTE and deter them from incubating eggs or brooding chicks during the period of disturbance. All of these activities can disturb foraging or roosting CLTE by displacing them from foraging and/or roosting habitat during the period of disturbance and/or could be deterred

from foraging and/or roosting during the period of disturbance. CDPR staff implements AMMs, including, but not limited to, CLTE AMMs 77 through 86 to minimize any impacts to CLTE. As a result, the non-lethal impacts are considered minor. This trend is expected to continue in the future.

Habitat Monitoring System (CA-18). Impacts to CLTE from the habitat monitoring system activities are described in HCP section 4.4.1.2.9. Impacts to CLTE are similar to those described above for SNPL above. CDPR implements AMMs (HCP Table 5-2), as appropriate, such as having a monitor with 10(a)(1)(A) Recovery Permit (or approved by the USFWS) conduct the surveys near the seasonal exclosure, to minimize the impact. This non-lethal impact is minor; however, based upon many years of implementation, the monitoring data presented in the HCP demonstrate the information collected as part of these surveys have a beneficial effect that exceeds the risk level of incidental take. Therefore, the overall existing impact of habitat monitoring system on CLTE is beneficial. This trend is expected to continue in the future.

Park Maintenance

General Facilities Maintenance (CA-21) and Heavy Equipment Response (CA-29). Impacts to CLTE from general facilities maintenance and heavy equipment response are described in HCP section 4.4.1.3.2 and section 4.4.1.3.10, respectively. General facilities maintenance and heavy equipment response currently occur as needed in the HCP area, except for mechanical trash removal, which is described in more detail in EIR section 6.3.2.2. The activities occur by CDPR staff who are trained in avoidance and minimization protocols. Impacts to nesting CLTE and CLTE night roost are not known to occur from these activities because CLTE almost exclusively nest and establish their night roost within the Southern Exclosure where these activities are not permitted. In addition, implementation of CLTE AMMs 16 and 87 through 89 ensures these impacts do not occur. As a result, lethal and non-lethal impacts are negligible. This trend is expected to continue in the future.

In the rare event that a CLTE establishes a nest that is outside the exclosure and has not yet been discovered by monitors, activities that occur in primary breeding habitat for CLTE can result in destruction or disturbance of a CLTE nest. CDPR implements CLTE AMM 7, which requires daily searches for nests in potential nesting habitat that is outside these exclosures to reduce this impact. In addition, any nests found outside a seasonal exclosure are quickly protected by a single-nest exclosure CLTE AMMs 10 through 14). As a result, these lethal and non-lethal impacts are considered negligible. This trend is expected to continue in the future.

Foraging and/or roosting CLTE can be disturbed by activities within foraging habitat, such as Oso Flaco Lake. Specifically, activities can disturb CLTE adults and fledglings and deter them from foraging in the area. Fledglings learning to fish can become energetically stressed when they are unable to forage normally. However, these activities have minimal impacts on foraging CLTE because activities are either accomplished quickly or accomplished outside the period when CLTE are on site. In addition, CDPR implements CLTE AMMs 87 through 89 to ensure the impact is minimized. As a result, this non-lethal impact is minor. This trend is expected to continue in the future.

Trash Control (CA-22). Impacts to CLTE from trash control activities are described in HCP section 4.4.1.3.3. Dumpsters are emptied in the HCP area every week. Other garbage bins are emptied regularly, including within Pismo State Beach and along various creeks. Vehicles conducting trash activity are not known to have struck a CLTE to date and this is not thought to happen since CLTE typically remain protected within the seasonal exclosure or are observed

flying in the air to forage during the nesting season. Trash bins are also not located in areas where trash control activities can disturb incubating CLTE. Implementation of CLTE AMMs 1 through 23 and 87 through 89 ensure vehicle strike and/or disturbance does not occur. Therefore, lethal and non-lethal impacts are negligible. This trend is expected to continue in the future.

Trash dumpsters attract a large number of gulls that land and forage in the dumpsters if they are left uncovered. As a result, the continued use of the uncovered trash bins within or near CLTE breeding habitat artificially increases the number of predatory species, including gulls, and thus increases depredation of CLTE. Increasing the number of trash bins on holidays and during special events to accommodate the increased number of visitors also artificially increases the number of predators at these times and increase depredation of CLTE. To reduce these impacts, CDPR is evaluating several options to reduce the movement of trash from the dumpsters and reduce predator presence at the dumpster sites. CDPR also implements a predator management program to ensure depredation of CLTE is minimized. Reducing predator presence near the dumpsters reduces the risk of predation on CLTE. However, the existing lethal indirect impacts due to predation as a result of trash control is moderate. This trend is expected to continue in the future. However, a solution to reduce the movement of trash in the future could reduce this impact further.

Wind Fencing (CA-23), Perimeter and Vegetation Island Fencing (CA-27), Cable Fence Maintenance (CA-28), Minor Grading (CA-30), and Boardwalk/Other Pedestrian Maintenance (CA-31). These activities typically occur outside the nesting season and don't impact CLTE. However, at times, boardwalks and/or fencing need to be maintained to ensure their integrity and this can occur during the nesting season. The activities occur by CDPR staff who are trained in avoidance and minimization protocols. Impacts to CLTE have not been observed from these activities, especially with the implementation of CLTE AMMs. In addition, these activities do not modify CLTE nesting or foraging habitat. As a result, lethal, non-lethal, and habitat modification impacts are considered negligible. This trend is expected to continue in the future.

Routine Riparian Maintenance (CA-26). Routine riparian maintenance is currently conducted in the HCP area at Oso Flaco Lake, Meadow Creek, Carpenter Creek, Pismo Lake, and Oceano Lagoon under a CDFW Lake and Streambed Alteration Agreement (1600-2012-0001-R4). Routine riparian maintenance activities are not conducted in suitable CLTE nesting habitat; therefore, these activities will not affect nesting CLTE and lethal impacts to CLTE do not occur. The Pismo Lake spillway and the two culverts at Oso Flaco Lake are maintained as needed. CLTE may forage and/or roost adjacent to riparian maintenance areas in open water habitats including Pismo Lake and Oso Flaco Lake. Maintenance typically entails CDPR staff manually or, if needed, mechanically removing vegetation, debris, and sediment build-up above the natural channel bed. Noise from equipment during culvert maintenance can temporarily disturb foraging CLTE and interfere with foraging activity if conducted during the CLTE breeding season. Routine riparian maintenance work in or adjacent to CLTE foraging habitat is implemented outside of the breeding season, when feasible. If maintenance activities must be conducted during the breeding season, CDPR implements CLTE AMM 96 to minimize disturbance to foraging CLTE. This includes having a monitor present to observe CLTE behavior and stopping work if CLTE are observed being disturbed until it is determined that no additional impacts will occur. As a result, the non-lethal impacts of these activities on CLTE are negligible. This trend is expected to continue in the future.

All tree trimming and invasive plant removal activities at Oso Flaco Lake occur between August 15 and March 1, which is largely outside the CLTE breeding season. If CLTE are present in Oso

Flaco Lake, tree trimming and invasive plant removal can disturb foraging CLTE and interfere with foraging activities. To reduce this impact, CDPR implements CLTE AMM 96. Lethal impacts from tree trimming do not occur. Because most tree trimming occurs when CLTE are already gone from the HCP area and AMMs are implemented to avoid impacts if a CLTE is observed, non-lethal impacts from tree trimming and invasive removal are also considered negligible. This trend is expected to continue in the future.

Visitor Services

Ranger, Lifeguard, Park Patrols (CA-32) and Beach Concessions (CA-36). Regular ranger and park aide patrols occur throughout the HCP areas open to the public to ensure that visitors are obeying regulations. Patrols are largely conducted via vehicles. Lifeguards perform their services at their assigned lifeguard towers and on roaming patrols that extend from Pismo State Beach to the southern open riding area boundary. Lifeguard towers are installed seasonally around spring break. Tower sites are subject to change but are currently near Grand and Pier Avenues and the North Beach Campground. CDPR rangers, lifeguards, and park aides all must drive across Arroyo Grande Creek and Pismo Creek, when necessary. Concession operated services occur throughout the open riding area away from the seasonal exclosure.

Ranger, lifeguard, and park patrols occur by CDPR staff who are trained in avoidance and minimization protocols. Although ranger and patrol vehicles have struck SNPL in the past, this has not been observed for CLTE. This is most likely because CLTE almost exclusively nest and form their night roost within the Southern Exclosure where these activities do not occur. Furthermore, CLTE AMMs, such as CLTE AMM 87 that requires staff training, and CLTE AMM 88 that requires all CDPR staff observe closures and speed limits, ensure vehicle strike of CLTE from ranger, lifeguard, or park patrol does not occur. As a result, this lethal impact is negligible. This trend is expected to continue in the future.

Ranger and patrol activities do not occur in areas where CLTE are known to nest or form their night roost; however, if a CLTE nest or night roost was established in a new area outside the seasonal exclosure these activities could result in disturbance of nesting CLTE and CLTE could be deterred from incubating eggs or attending chicks. These activities could also result in disturbance of roosting CLTE. Specifically, CLTE could be displaced from roosting habitat during the period of disturbance. Ranger and patrol activities are typically localized and short in duration since they pass through the area quickly. In addition, CDPR implement CLTE AMMs 7 and 9 through 16 to reduce disturbance impacts to nesting CLTE from motorized vehicle activity. As a result, this non-lethal impact is minor. This trend is expected to continue in the future.

Vehicles driving to and from the concession services can strike an individual CLTE in the concession area or disturb an individual by flushing them from their location and causing them to become energetically stressed. However, CLTE do not typically nest or form their night roost outside of the Southern Exclosure. In addition, concession services are required to drive the speed limit and observe other park regulations (CLTE AMM 98). As a result, this non-lethal impact is negligible. This trend is expected to continue in the future.

Emergency Response (CA-33) and Access by non-CDPR vehicles (CA-34). Impacts to CLTE from emergency response and non-CDPR vehicles are described in HCP section 4.4.1.4.2 and section 4.4.1.4.3, respectively. Impacts from emergency activities are not known and have not been documented, although these impacts may be difficult to observe. Potential impacts to CLTE from emergency response and non-CDPR vehicles are generally similar to park maintenance

activities; however, CDPR emergency responders sometimes have to travel quickly through areas where CLTE could be present and non-CDPR emergency personnel are not always trained before entering an area.

Most CLTE nest and roost within the Southern Exclosure and are protected from being injured or killed by a speeding emergency vehicle. Although this has not been documented in the HCP area to date, CLTE nesting or roosting along the shoreline and not protected by an exclosure can be struck by a speeding emergency vehicle, especially since emergency vehicles often need to travel through an area quickly. This is most likely to occur after the chicks have fledged when CLTE have been observed roosting along the shoreline near water bodies, including Arroyo Grande creek. Since emergency response is relatively infrequent and most CLTE found roosting outside the exclosure can fly, this lethal impact is considered minor. This trend is expected to continue in the future.

The impact of medevac helicopters on CLTE is similar to those described above for SNPL and is considered a minor non-lethal impact. This trend is expected to continue in the future.

Emergencies that occur within a seasonal exclosure, and especially within the Southern Exclosure, can be highly disruptive to CLTE. Adults may flush from the nest and leave the eggs unattended for the duration of the disturbance. CLTE nests or chicks can be abandoned if the adult is injured, killed, or disturbed enough it does not return to the eggs or chick. In addition, CLTE chicks that are out in the open can be separated from adults during the disturbance, which can leave them vulnerable to predation and/or inclement weather. Disturbance can also cause chicks to move into the open riding area. Although emergency response has occurred within the seasonal exclosure, such events are rare and do not occur in most years. Monitors also inform emergency responders of the locations of sensitive areas and escort emergency response personnel into and out of the seasonal exclosure, when feasible (CLTE AMM 97). Monitors also attempt to survey the area once the emergency situation has resolved and all emergency personnel are clear in order to document and alleviate any impacts that occurred. Due to event infrequency, short-term duration of disturbance, and use of monitors (if feasible), the non-lethal impact of these covered activities is considered minor. This trend is expected to continue in the future.

Natural History and Interpretation Programs (CA-39). Natural history and interpretive programs occur at Oso Flaco Lake where CLTE forage. The footbridge hand railing at Oso Flaco Lake is used by CLTE for perching after chicks have fledged and when adult birds are teaching fledglings to fish in the lake. As a result, foraging and roosting CLTE have been temporarily disturbed by noise and activities associated with interpretive walks and field trips at Oso Flaco Lake. To minimize possible disturbance to foraging and/or roosting CLTE at Oso Flaco Lake, CDPR implements AMM 99, which requires that CDPR hold large group programs when CLTE are not present or modify the program to avoid disturbance. As a result, this non-lethal impact is considered a negligible impact. This trend is expected to continue in the future.

Other Activities

Vehicle Crossing of Creeks (CA-40). CDPR vehicles regularly cross Pismo/Carpenter Creek. CDPR vehicles sometimes cross Oso Flaco Creek close to shoreline to access the southern portion of the HCP area. CDPR and non-CDPR vehicles also regularly cross Arroyo Grande Creek. Although unlikely, if a CLTE nest is located near Arroyo Grande Creek, a vehicle crossing the creek can injure or kill a nesting CLTE. This is unlikely because any vehicle crossing of the creek is typically close to the shore where CLTE do not nest. In addition, CLTE

have only been documented nesting near Arroyo Grande Creek one time in the past. As a result, lethal impact from vehicles crossing Arroyo Grande Creek is considered minor. This trend is expected to continue in the future.

CDPR vehicles regularly cross Pismo/Carpenter Creek. CDPR vehicles sometimes cross Oso Flaco Creek close to shoreline to access the southern portion of the HCP area. CDPR and non-CDPR vehicles cross Arroyo Grande Creek. CDPR and non-CDPR vehicles crossing creeks can disturb roosting CLTE if they roost at this location. CLTE are typically only observed roosting at these locations toward the end of the breeding season when chicks have fledged. At this time, CLTE are capable of flying out of harm's way. In addition, CDPR implements CLTE AMMs, including AMMs associated with motorized recreation (CA-1), which reduce the impacts to CLTE roosting in this area. This non-lethal impact is minor. This trend is expected to continue in the future.

Dust Control Activities (CA-44). Many dust control projects have already been conducted in the HCP area, as described in HCP Section 2.2.5.5. Impacts associated with future dust control activities are discussed in EIR section 6.4.1.2. Dust control activities associated with the Oceano Dunes SVRA Dust Control Program EIR (CDPR 2017) conducted to date required 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 CLTE. As a result, the lethal and non-lethal impacts from existing dust control activities is negligible.

The indirect impacts on CLTE from existing dust control activities are similar to those described for SNPL above. Vegetation planted in the HCP area may increase the number of predators in the HCP area and thus artificially increase predation on CLTE. CDPR implements all AMMs (HCP Table 5-2), as appropriate. In addition, CDPR implements a predator management program to control avian and/or mammalian predators that are observed targeting or disturbing CLTE adults, chicks, or eggs. The existing indirect lethal impact of existing dust control activities on CLTE is considered minor.

Vegetation planting associated with the Dust Program EIR within suitable CLTE habitat has similar impacts as those described above for SNPL, although CLTE are not present in the HCP area during the winter. Vegetation that has been planted in the HCP area to date reduces available suitable CLTE breeding habitat by decreasing the amount of open, wide beaches. Dust control activities associated with the Dust Program EIR were designed to avoid active nest areas and CLTE primary habitat. Dust control activities generally occurred in tertiary habitat where they did not impact breeding CLTE. However, some secondary habitat has been lost, but the existing habitat impacts have been minor.

A 48-acre area located outside the seasonal exclosure just north of Post 6 and within primary habitat for CLTE has been fenced as a preliminary step toward establishing a new foredune and permanently closing the area to vehicles and camping. The 48-acre area was closed during the non-breeding season when CLTE are not present, and a CLTE breeding season has not occurred since the closure; therefore, impacts to CLTE associated with the closure are not known at this time. Due to the speculative nature of fencing the 48-acre area on breeding CLTE, impacts on breeding CLTE are addressed in EIR section 6.4.1.2.

Cultural Resource Management (CA-45). Cultural resource management activities have similar impacts on CLTE as described above for SNPL and similar AMMs are implemented to reduce these impacts. As a result, lethal impacts do not occur, and non-lethal impacts are considered minor. This trend is expected to continue in the future.

Use of Pesticide (CA-51). Pesticide impacts to CLTE are similar as those described for SNPL above. Pesticide use, including aerial spraying, does not occur during the breeding season in areas where CLTE are known to nest. The activities occur by CDPR staff or contractors working under the direction of CDPR staff who are trained in avoidance and minimization protocols. In addition, CLTE AMMs 103 through 110, which include delaying work if a CLTE is observed nearby, not spraying if wind speed is over 10 miles per hour, and ensuring all workers are trained to work in sensitive habitat, are implemented to reduce these impacts in the event a CLTE occurs nearby. As a result, lethal impacts to CLTE do not occur and non-lethal impacts are considered minor. Ultimately, pesticide use in the HCP area is beneficial to CLTE by reducing the spread of invasive plant species into CLTE breeding habitat. This trend is expected to continue in the future.

California Red-legged Frog (CRLF)

Impacts to CRLF from HCP covered activities are described in the HCP section 4.5. The existing risk of impact to CRLF from covered activities is summarized in EIR Table 6-4. There have been no recorded instances of historic take of CRLF.

Covered activities occurring outside of CRLF aquatic and upland dispersal habitat areas (HCP Maps 14 and 25) and/or that have no risk of impacting CRLF and are dismissed from further discussion. Existing covered activities with no impact to CRLF include bicycling and golfing (CA-4), fishing (CA-5), dog walking (CA-6), boating/surfing (CA-8), aerial/wind driven activities (CA-9), SNPL and CLTE management (CA-12a and 12b), habitat restoration program (CA-16), general facilities maintenance (CA-21), trash control (CA-22), wind fencing (CA-23), sand ramp/other vehicle access (CA-24), street sweeping (CA-25), perimeter and veg island fencing (CA-27), cable fencing (CA-28), heavy equipment response (CA-29), minor grading (CA-30), ranger/lifeguard (CA-32), access by non-CDPR vehicles (CA-34), ASI courses (CA-35), beach concessions (CA-36), natural history/interpretation (CA-39), cultural resource management (CA-45), and bioreactor maintenance (CA-47).

Existing covered activities affecting CRLF are described below and are part of the baseline environmental setting.

Park Visitor Activities

Motorized Recreation (CA-1), Camping (CA-2), Pedestrian Activities (CA-3), Equestrian Recreation (CA-7), Holidays (CA-10), and Special Events (CA-11). Motorized recreation and camping occur on an ongoing basis in the HCP area. Motorized recreation and camping do not impact CRLF aquatic habitat. No additional vehicles are allowed to enter the HCP area on holidays or during special events. Therefore, no additional impact to CRLF occurs from motorized recreation on holidays or during special events.

Motorized recreation and camping are generally limited to the open sand beaches and dunes in the HCP area. These areas are considered suitable upland dispersal habitat for CRLF and CRLF could disperse through and be injured or killed by vehicles. However, CRLF have not been observed in these areas and this habitat is likely rarely used by CRLF for dispersal over other more suitable habitats since these areas provide minimal cover and are generally inhospitable to CRLF. In addition, CRLF AMMs 1 through 3 are implemented to reduce any impacts in areas where motorized recreation is permitted. As a result, this lethal impact is minor. This trend is expected to continue in the future.

Although motorized recreation and camping are permitted in CRLF upland habitat and could reduce the quality of upland habitat, the impacts of motorized recreation and camping on the quality of CRLF upland dispersal and aestivation habitat are negligible since these activities are not expected to permanently alter barren sand habitat where they occur. This trend is expected to continue in the future.

The two designated campgrounds within the HCP area are adjacent to Meadow Creek, Carpenter Creek, and Oceano (Meadow Creek) Lagoon. CRLF have been observed in Oceano (Meadow Creek) Lagoon and, although not positively identified, were potentially observed in Carpenter Creek and could be injured or killed by campground activities. However, activities at the campground have not been observed directly impact CRLF and the likelihood of direct impacts in the campground areas is low. As a result, this lethal impact is negligible. This trend is expected to continue in the future.

Indirect effects on CRLF from recreation activities include an increase in trash, which could potentially boost predator populations (e.g., raccoons) and thereby incidentally increase predation on CRLF. CDPR implements CRLF AMMs 4 through 9, including informing all visitors they are to dispose of their trash in a trash dumpster and enforcing rules to ensure the campsites are maintained in a clean condition, to reduce this impact. The increase in visitors on holidays and during special events could increase the amount of trash in the HCP area; however, this does not result in additional effects on CRLF that have not previously been described. As a result, this indirect lethal impact is minor. This trend is expected to continue in the future.

Most pedestrian- and equestrian-based activities have little, if any, effect on CRLF or its habitat since CRLF in the HCP area have only been found in aquatic habitats less frequented by visitors. Pedestrians and equestrians crossing creeks or entering lagoons could stir up sediment and increase turbidity in CRLF aquatic habitat. However, these impacts are temporary, localized, and short in duration. In addition, CRLF AMM 10 is implemented to reduce impacts from pedestrians crossing Carpenter Creek and Pismo Creek. As a result, this non-lethal impact is minor. This trend is expected to continue in the future.

Natural Resources Management

Tidewater Goby and Salmonid Surveys (CA-13), Listed Plant Management (CA-15), Invasive Plant and Animal Control (CA-17), and Water Quality Monitoring (CA-19). Tidewater goby and salmonid surveys already occur approximately four times per year in Arroyo Grande Creek and lagoon and at least annually in Pismo Creek and lagoon/Carpenter Creek and Oso Flaco Creek. The District also already monitors water quality and conducts invasive species control in the HCP area, as determined to be necessary. The activities occur by CDPR staff who are trained in avoidance and minimization protocols. Generally, depending on the location of the activities (e.g., Oso Flaco Lake), egg masses and CRLF individuals may be present. If CRLF are encountered unintentionally during seining or dipnetting associated with tidewater goby and salmonid surveys (CA-13), CDPR biologists can impact all life stages (i.e., eggs, tadpoles, juveniles, and adults) when handling individuals and egg masses to remove them from the dipnet or seine. In addition, although infrequent, electrofishing is conducted as part of the salmonid surveys in habitat upstream of tidewater goby habitat (e.g., Arroyo Grande Creek). If CRLF are present, electrofishing can injure or kill all CRLF life stages or result in capture of any CRLF life stages. CDPR implements CRLF AMMs 12 through 14, including conducting a visual survey for CRLF prior to sampling for tidewater gobies in areas where CRLF egg masses may be present and postponing sampling for tidewater gobies until the CRLF eggs have hatched or CRLF are no

longer present. To date, CRLF have not been injured or killed during these activities. As a result, lethal impacts from tidewater goby and salmonid surveys are considered minor. This trend is expected to continue in the future.

Any listed plant management (CA-15) for marsh sandwort and Gambel's watercress at Oso Flaco Lake, invasive plant or animal control in Oso Flaco Lake or other suitable habitat (CA-17), and water quality monitoring (CA-19) can temporarily affect all life stages of CRLF (i.e., eggs, tadpoles, juveniles, and adults) by disturbing CRLF, if present. CDPR implements CRLF AMMs 18 through 20 to minimize the impact due to disturbance, including conducting surveys for CRLF within 100 feet of activities to ensure no CRLF are present and delaying activities until any individuals have moved from the area or appropriate AMMs (e.g., relocation or biological monitoring) are in place. As a result, non-lethal impacts due to disturbance are minor. Ultimately, listed plant management, invasive pest plant and animal control, and water quality monitoring and improvements in aquatic habitat where CRLF may occur, are beneficial to CRLF by reducing invasive species in the area, improving water quality, and providing more suitable habitat for CRLF. This trend is expected to continue in the future.

Activities within aquatic habitats can indirectly affect CRLF by temporarily stirring up sediment and increasing turbidity in areas where they occur. Sediment stirred up during activities are minimal, localized, and temporary and activities do not typically occur in areas where CRLF are present. As a result, this non-lethal impact is minor. This trend is expected to continue in the future.

CDPR biologists or their contractors can facilitate the introduction of amphibian chytridiomycosis when they move from one aquatic habitat to another. Amphibian chytridiomycosis is a disease caused by the zoospore fungus pathogen *Batrachochytrium dendrobatidis* (Bd), which can cause lethargy and weakness in adult frogs and usually results in death of tadpoles. Amphibian chytridiomycosis is transported in water or mud, including in muddy footwear. To minimize the potential to spread Bd, CDPR biologists use the Recommended Equipment Decontamination Procedures (CRLF AMM 15). This includes disinfecting equipment and clothing after entering a pond/stream or before entering a new pond where CRLF may occur. Bd has not been found within the HCP area and the decontamination procedures will continue to minimize the threat. As a result, impacts associated with Bd are negligible or minor. This trend is expected to continue in the future.

CRLF Surveys and Management (CA-14) and Habitat Monitoring System (CA-18). CRLF surveys occur multiple times per year between January and September, including numerous daytime and nighttime surveys within appropriate aquatic habitats (e.g., Arroyo Grande Creek, Oso Flaco Lake, Oso Flaco Creek, Pismo Creek, Carpenter Creek). Most CRLF surveys result in negligible impacts to CRLF since most surveys for CRLF are eyeshine surveys conducted from kayaks or the edge of the waterbodies and only involve visually scanning for CRLF and/or egg masses. Eyeshine surveys are sometimes conducted multiple times at one site during the breeding season if a CRLF is observed in order to attempt to better determine the breeding status of CRLF at these locations. During these surveys, care is taken not to disturb sediments, vegetation, or any visible larvae. Therefore, impacts to CRLF and/or egg masses from eyeshine surveys are negligible. This trend is expected to continue in the future.

Dipnetting surveys for CRLF has only rarely occurred in the HCP area to date; however, CDPR has always had the option to dipnet for purposes of monitoring, identification, and management of the species. If dipnet surveys are conducted, CDPR biologists or their contractors could

impact all life stages of CRLF (i.e., eggs, tadpoles, juveniles, and adults) when handling individuals and egg masses. During these surveys, CDPR biologists could capture, injure, or kill a CRLF egg mass, tadpole, juvenile, or adult. To reduce impacts associated with these surveys when they do occur, CDPR implements CRLF AMM 16, which requires that the survey be conducted by a USFWS-approved biologist in accordance with the USFWS Revised Guidance on Site Assessments and Field Surveys for the CRLF. However, CRLF adults/sub-adults, juveniles, tadpoles, or egg masses are still captured and crushing of egg masses, mortality, and/or injury can still occur. As a result, this lethal impact is moderate. Ultimately, CRLF surveys and management have a beneficial effect on CRLF by providing information necessary to contribute to conservation of the species. This trend is expected to continue in the future.

If dipnetting is conducted, these surveys involve biologists standing in water. Surveys within aquatic habitats can impact CRLF by temporarily stirring up sediment and increasing turbidity. Sediment stirred up during wading and/or dip netting activities is minimal, localized, and temporary. In addition, CRLF AMM 18 is implemented to minimize turbidity associated with any activities within water. Therefore, this non-lethal impact is minor. This trend is expected to continue in the future.

CDPR biologists or their contractors could facilitate the introduction of amphibian chytridiomycosis when entering the water for CRLF surveys similar to the impact described above for CA-13, CA-15, CA-17 and CA-19. The impacts associated with Bd are negligible or minor. This trend is expected to continue in the future.

Ultimately, these activities (CA-14 and CA-18) have an overall beneficial effect on CRLF by providing information necessary to contribute to conservation of the species and/or improving CRLF habitat in the long-term. This trend is expected to continue in the future.

Park Maintenance

Campground Maintenance (CA-20) and Boardwalk/Other Pedestrian Maintenance (CA-31). The two designated campgrounds within the HCP area are adjacent to Meadow Creek, Carpenter Creek, and Oceano (Meadow Creek) Lagoon. CRLF have been observed in Oceano (Meadow Creek) Lagoon and, although not positively identified, were potentially observed in Carpenter Creek. Impacts to CRLF in the HCP area have not been documented but can occur. Maintenance vehicles at the campground or near other aquatic areas can inadvertently strike a CRLF that has left the creek or lagoon corridors and kill or injure it. This mostly likely to occurs if activities occur during the night or under wet conditions. CDPR implements CRLF AMM 23 to avoid ground disturbing maintenance activities during heavy precipitation (i.e., at least 0.5-inch of precipitation in a 24-hour period). Therefore, maintenance activities that continue in any weather conditions are limited to housekeeping-type routine maintenance activities such as repairs to hose bibs and changing lightbulbs that do not impact CRLF. In addition, CRLF AMM 22 is implemented and all maintenance personnel continue to receive a training prior to activities that, at a minimum, cover CRLF life history and work constraints. CRLF have not been observed being killed by maintenance activities to date. As a result, this lethal impact is considered minor. This trend is expected to continue in the future.

Park Maintenance/Other Activities

Routine Riparian Maintenance (CA-26) and CDPR Ag Land Management (CA-46). Riparian maintenance and agricultural land management activities that could impact CRLF include the clearing of debris, vegetation, and sediment; riparian tree and shrub vegetation control (e.g., removing or trimming vegetation); and emergent and invasive species control. CRLF could

occur in riparian areas or agricultural ditches where maintenance activities are located. CDPR implements CRLF AMMs 24, 25 and 26, as appropriate, which include conducing activities during periods when egg masses or larvae are unlikely to be present, conducting pre-activity surveys no more than two weeks prior to maintenance activities, having a 10(a)(1)(A) permitted biologist (or USFWS-approved biologist) on-site during activities, and implementing appropriate AMMs, as necessary (e.g., exclusion fencing, relocation). As a result, lethal and non-lethal impacts from riparian maintenance activities are negligible. This trend is expected to continue in the future.

CRLF have not been found within the agricultural ditches; however, CRLF adults could be present in these areas and activities could disturb or injure/kill an individual (e.g., when equipment is used to remove sediment, debris, or vegetation). CDPR implements CRLF AMM 24, which includes conducting activities during low flow periods (if feasible) and CRLF AMM 27, which includes a 10(a)(1)(A) permitted biologist (or USFWS-approved biologist) relocating CRLF (if necessary), to reduce the potential to disturb, injure, or kill CRLF. As a result, this lethal impact is considered minor. This trend is expected to continue in the future.

Riparian maintenance and agricultural management activities can temporarily result in an increase in turbidity especially if the in-stream vegetation traps and holds sediments. Temporarily suspended sediment can affect CRLF. However, sediment stirred up during activities is minimal, localized, and temporary. In addition, heavy equipment is not placed in the water, and any back-hoe work is restricted to the roadside or upper bank with only the bucket placed in the water body (CRLF AMM 28). As a result, this non-lethal impact is considered minor. This trend is expected to continue in the future.

Riparian maintenance activities can indirectly attract CRLF predators into potential CRLF habitat areas. For example, temporary disturbance of stream channel soils during removal of sediment or emergent vegetation can create areas of ponded water that support bull frog and invasive red swamp crayfish, both of which prey upon CRLF. To minimize these effects, CDPR implements CRLF AMM 34, which requires that CDPR smooth the disturbed areas with the potential to pond water with a rake to avoid creation of potential habitat for CRLF predators. As a result, this indirect impact is negligible. This trend is expected to continue in the future.

CDPR biologists could facilitate the introduction of Bd, which is transported in water or mud, including in muddy footwear as described above for Natural Resource Management Activities CA-13, CA-15, CA-17 and CA-19. Decontamination procedures (CRLF AMM 15) continue to minimize the threat. As a result, impacts associated with Bd are negligible. This trend is expected to continue in the future.

Riparian maintenance activities can temporarily impact an annual maximum of approximately 0.3 acre of wetlands for culvert cleanout, debris removal, and emergent vegetation removal. In addition, approximately 2 miles of riparian corridor segments are subject to tree maintenance and invasive weed control as the need arises. Maintenance of these areas will reoccur over the course of the permit, as needed, when vegetation regrows. These activities temporarily reduce aquatic and/or riparian habitat available for CRLF. This habitat impact is moderate. This trend is expected to continue in the future.

Visitor Services

Emergency Response (CA-33). It is necessary from time to time for law enforcement and/or medical aids to respond to an emergency that is located off a designated trail. When this occurs, there may be some trampling of vegetation near an aquatic resource or a creek may be crossed.

To date, it has not been possible to document the impacts associated with the emergency response. Generally, it is possible, but highly unlikely, that eggs, tadpoles, juveniles, or adults could be directly affected by such an incident by being struck/crushed by a vehicle. This is especially be true for vehicles that need to drive above the 15-mph speed limit to respond to an emergency. Because the risk of impact is low, this lethal impact is considered minor. This trend is expected to continue in the future.

Emergency response activities that cross creeks temporarily stir up sediment and increase turbidity. Sediment stirred up during activities is minimal, localized, and temporary. As a result, this non-lethal impact is minor. This trend is expected to continue in the future.

Pismo Beach Golf Course Operations (CA-37). CRLF has been observed in Arroyo Grande Creek, Carpenter Creek[4], and Oceano (Meadow Creek) Lagoon. CRLF also have a low to moderate potential to occur in nearby Meadow Creek, which is adjacent to Pismo Beach Golf Course. It is also possible that CRLF may disperse to Meadow Creek, Carpenter Creek, and/or the golf course ponds, especially during wet weather, although this is not known to have occurred in the HCP area to date. If CRLF disperse through the golf course, golf course operations and maintenance activities, such as golf cart traffic and mowers could potentially strike CRLF individuals and injure or kill them. The potential for such incidents is low because golf carts travel on small paved paths where CRLF are less likely to occur and most adult CRLF movement is during the night when no golfing activity occurs. Maintenance activities, including mowing, are unlikely to affect CRLF because maintenance activities occur during the day when CRLF movement is less likely to occur and grass height at the golf course does not provide adequate cover for frogs. Maintenance activities occasionally remove emergent vegetation or sediment from the water features in the golf course potentially impacting CRLF. Existing AMMs 25 and 26 require pre-activity surveys, on-site monitoring during project activity, and relocation of CRLF if necessary. As a result, lethal and non-lethal impacts to CRLF from golf course activities are considered minor. This trend is expected to continue in the future.

Other Activities

Vehicle Crossing of Creeks (CA-40). CRLF are not known to occur in the portions of Arroyo Grande Creek or Oso Flaco Creek where vehicles are permitted to cross since most vehicles cross close to the ocean and CRLF do not occur within saltwater. Therefore, no lethal or non-lethal impacts occur in these locations.

CRLF can occur in Carpenter Creek and can be impacted by motor vehicles crossing this creek. CRLF may be inadvertently struck by a vehicle; however, this is not thought to have occurred and is unlikely since vehicle operators crossing the creek are encouraged to cross in areas with no or low flow and travel at speeds of less than 15-mph. In addition, CDPR implements CRLF AMM 36, which requires that CDPR staff periodically review conditions and identify issues that may result from vehicles crossing Carpenter Creek. As a result, this impact is negligible. This trend is expected to continue in the future.

Vehicles crossing Carpenter Creek stir up sediment and increase turbidity in the creek; however, these impacts are minimal, localized, and temporary. In addition, CDPR implements CRLF AMM 36, which requires that CDPR staff periodically review conditions and identify issues that

[4] In 2019, a potential CRLF tadpole was observed, although it was not positively identified.

may result from vehicles crossing Carpenter Creek. As a result, this indirect non-lethal impact is minor. This trend is expected to continue in the future.

Dust Control Activities (CA-44). Dust control activities are currently occurring in the HCP area as part of the Dust Control Program EIR. Dust control activities do not result in impacts to CRLF aquatic habitat. Dust control activities temporarily disturb suitable aestivating or dispersing CRLF during activities. It is unlikely, but possible, that CRLF can disperse through or be found in open sand areas prior to dust control measures being installed. Individuals in a dust control work area can be injured or crushed. CDPR implements AMMs for CRLF, as appropriate, including conducting pre-activity surveys as necessary and delaying activities until the individual moves from the work area or appropriate AMMs are in place (e.g., relocation, exclusion fencing, biological monitoring). Impacts to CRLF from dust control activities have not been observed and are not known. As a result, impacts to dispersing CRLF are minor.

Dust control activities alters upland dispersal habitat for CRLF through planting of vegetation and placement of dust control devices and monitoring equipment. This impact is minor since few CRLF have been found in the HCP area and additional dispersal habitat continues to be available in the HCP area. In addition, dust control devices may provide additional cover for dispersing CRLF and benefit the species. Impacts associated with future dust control activities are discussed in EIR section 6.4.1.3.

Use of Pesticides (CA-51). Very few pesticides are tested for toxic effects to amphibians. Most studies look at mammals, birds, fish, and insects. In the absence of robust toxicity data for amphibians in aquatic habitats, the Environmental Protection Agency (EPA) uses fish toxicity as a surrogate. Pesticides used the HCP area can cause mortality if CRLF ingest a toxic pesticide directly or through their food source. Pesticides can also cause indirect effects by changing food availability and habitat quality, including water quality. Many pesticides used in the HCP area are used in upland habitat only and, therefore, do not impact CRLF since CRLF only disperse through this area. The pesticides used in or near aquatic habitat in the HCP area have been found to either be non-toxic to CRLF or have been shown to have low toxicity slight toxicity to fish; therefore, CRLF mortality is not thought to occur. In addition, CDPR implements CRLF AMMs 42 through 49 to ensure the mortality or indirect impacts to CRLF do not occur.

CRLF present within pesticide work area could be injured or killed by workers applying the pesticides. In addition, CRLF could be disturbed by workers applying the pesticides and may move from protective cover and be exposed to predation or inclement weather. However, CDPR implements CRLF AMM 42 to ensure that CRLF in the work area are not injured, killed, or disturbed by activities. With this AMM, CRLF are likely not injured or killed; however, some disturbance may still occur. As a result, the lethal impact is considered negligible and the non-lethal (harassment) impact is considered minor.

Ultimately, these pesticides have a beneficial effect on CRLF by improving CRLF habitat by preventing the encroachment of invasive plant species. Pesticide use in upland areas, adjacent to waterbodies, and, at times, within waterbodies will continue into the future under appropriate permits.

Tidewater Goby

Impacts to tidewater goby from HCP covered activities are described in the HCP section 4.6. The existing risk of impact to tidewater goby from covered activities is summarized in EIR Table 6-4.

Covered activities occurring outside of tidewater goby habitat areas have no impact on tidewater goby and are dismissed from further discussion. Existing covered activities with no impact to tidewater goby include camping (CA-2), bicycling and golfing (CA-4), fishing (CA-5), boating/surfing (CA-8), aerial/wind driven activities (CA-9), SNPL and CLTE management (CA-12a and 12b), listed plant management (CA-15), habitat restoration program (CA-16), campground maintenance (CA-20), general facilities maintenance (CA-21), trash control (CA-22), wind fencing (CA-23), sand ramp/other vehicle access (CA-24), street sweeping (CA-25), perimeter and veg island fencing (CA-27), cable fencing (CA-28), heavy equipment response (CA-29), minor grading (CA-30), boardwalk/other pedestrian maintenance (CA-31), access by non-CDPR vehicles (CA-34), ASI courses (CA-35), beach concessions (CA-36), Pismo Beach Golf Course operations (CA-37), natural history/interpretation (CA-39), riding in 40 Acres (CA-42), replacement of safety and education center (CA-43), dust control program (CA-44), cultural resource management (CA-45), CDPR ag land management (CA-46), and bioreactor maintenance (CA-47).

Existing covered activities affecting tidewater goby are described below and are part of the baseline environmental setting.

Park Visitor Activities

Motorized Recreation (CA-1), Pedestrian Activities (CA-3), Dog Walking (CA-6), Equestrian (CA-7), Holidays (CA-10), and Special Events (CA-11). Most of these activities do not occur in tidewater goby habitat and; therefore, do not impact tidewater goby. However, vehicles, pedestrians, and dogs, and equestrians can and do cross tidewater goby habitat in Arroyo Grande Creek. Pedestrians, dogs, and equestrians also cross tidewater goby habitat in Pismo Creek, Oso Flaco Creek, and Carpenter Creek, as allowed. Impacts to tidewater goby from these activities have not been observed and are not known. In general, these activities can trample or injure tidewater goby or collapse tidewater goby breeding burrows within Arroyo Grande Creek estuary and Pismo Creek estuary. CDPR implements Tidewater goby AMMs 1 through 10 within the HCP area to reduce the risk of killing or injuring tidewater goby or crushing tidewater goby burrows. Therefore, this lethal impact is considered minor. This trend is expected to continue in the future. Impacts from vehicles crossing creeks are also discussed further under Other Activities CA-40 below.

Recreation activities disturb tidewater goby habitat and/or increase turbidity or degrade water quality. These impacts can be exacerbated during holidays and special events. Tidewater goby AMMs 1 through 14 are implemented in the HCP area to reduce these impacts. Therefore, any habitat disturbance, water quality degradation, or increase in turbidity is minimal, localized, and temporary. This non-lethal impact is minor. This trend is expected to continue in the future.

Natural Resources Management

Tidewater Goby and Salmonid Surveys (CA-13), CRLF Surveys and Management (CA-14), Invasive Plant and Animal Control (CA-17), Habitat Monitoring System (CA-18), and Water Quality Monitoring (CA-19). Tidewater goby and salmonid surveys already occur approximately four times per year in Arroyo Grande Creek and lagoon and at least annually in Pismo Creek and lagoon/Carpenter Creek and Oso Flaco Creek. CDPR biologists and/or contractors capture all life stages of tidewater goby during seining associated with regular tidewater goby and salmonid surveys (CA-13). Tidewater goby have also been injured or even killed during seining associated with monitoring tidewater goby and salmonid populations, although this is fairly uncommon. Mortality or injury occur if fish become tangled in seine nets, burrows are trampled during

survey work, and/or spawning substrates are disrupted during survey activities. Tidewater goby AMMs 15 through 24 are implemented in the HCP area to reduce the risk of lethal take of tidewater goby during tidewater goby and salmonid surveys; however, tidewater goby are still captured each year and, in some years, individuals are injured or killed. As a result, the lethal impact is minor and the non-lethal (capture) impact is moderate. Ultimately, tidewater goby and salmonid surveys have a beneficial effect on tidewater goby by providing information necessary to contribute to conservation of the species. This trend is expected to continue in the future.

Dipnet surveys are rare in the HCP area, but when dip net surveys are necessary to survey for CRLF, tidewater goby egg burrows can be disturbed, and tidewater goby can be captured in dip nets if the surveys occur in tidewater goby habitat. Captured individuals can be injured or even killed when caught in the dip net. Tidewater goby AMMs 27 and 28 are implemented in the HCP area to reduce the risk of lethal take of tidewater goby during CRLF surveys. To date, CRLF surveys are not thought to have injured or killed tidewater goby. As a result, this lethal and non-lethal impact is minor. This trend is expected to continue in the future.

All activities indirectly affect tidewater goby when conducted in suitable tidewater goby habitat by temporarily stirring up sediment and increasing turbidity. Increased turbidity reduces visibility for tidewater gobies, resulting in reduced foraging success, difficulty escaping from predators, and reduced reproductive success. However, sediment stirred up during activities is minimal, localized, and temporary and will not affect tidewater goby or their habitat in the long-term. Ultimately, these activities (CA-13, CA-17, CA-18, and CA-19) have an overall beneficial effect on tidewater goby by providing information necessary to contribute to conservation of the species and/or improving tidewater goby habitat in the long-term. This trend is expected to continue in the future.

Park Maintenance

Routine Riparian Maintenance (CA-26). Riparian maintenance activities that could potentially affect tidewater goby include culvert maintenance and emergent vegetation removal when these activities are located near or within occupied habitat. Tidewater goby individuals can be injured or killed, and egg burrows can be crushed during these activities if tidewater goby are present near the culverts or vegetation maintenance. CDPR implements AMMs 34 through 39, to minimize impacts to tidewater goby during riparian maintenance activities, including conducting a pre-activity survey, ensuring heavy equipment does not enter the water, and relocating individuals, as necessary. These measures are thought to be sufficient to minimize lethal and non-lethal impacts. As a result, the lethal and non-lethal impacts are considered negligible. This trend is expected to continue in the future.

Culvert maintenance requires a backhoe bucket to enter the water and can require personnel to enter the water. These activities stir up sediments and temporarily affect downstream water quality by increasing turbidity. In addition, removing vegetation can stir up sediments and increase turbidity. The effect of turbidity is the same as described above for Natural Resource Management activities (CA-13, CA-14, CA-17, and CA-19) and is minor. This trend is expected to continue in the future.

Riparian maintenance can affect tidewater goby habitat if an equipment leak or spill occurs and enters the water. Tidewater goby AMMs 40 and 41 are implemented, which require that refueling and maintenance of equipment occur at least 60 feet from riparian habitat and appropriate spill containment be kept on-site at all times so any spills can immediately be

cleaned. As a result, impacts on water quality from riparian maintenance are negligible. This trend is expected to continue in the future.

Visitor Services

Ranger, Lifeguard, Park Patrols (CA-32) and Emergency Response (CA-33). It is necessary from time to time for law enforcement and/or medical aid to respond to an emergency. It is possible, but highly unlikely, that eggs, juveniles, or adults could be crushed, injured, or killed by such an incident. As a result, this lethal impact is minor.

Emergency or law enforcement personnel may also trample vegetation or a cross a creek and stir up sediments, temporarily affecting downstream water quality by increasing turbidity. Increased turbidity can reduce visibility for tidewater gobies, resulting in reduced foraging success, difficulty escaping from predators, and reduced reproductive success. Potential damage to tidewater goby habitat is minor, localized, and temporary. This non-lethal but is considered minor.

Other Activities

Vehicle Crossing of Creeks (CA-40). Vehicles or equipment crossing creeks (i.e., Arroyo Grande Creek, Oso Flaco Creek, or Pismo/Carpenter Creek) can harm or kill tidewater goby if they are present at the time of crossing, though this is not possible to document. However, during high-flow, winter flood events when tidewater goby may be migrating through, vehicular crossing of creeks is prohibited or very limited. In addition, CDPR implements tidewater goby AMMs 43 and 44, which include reviewing conditions and identifying/addressing issues if ponded water is present at the vehicle crossings. Although these AMMs are thought to greatly minimize any lethal impacts, some lethal impacts are thought to still occur. As a result, this lethal impact is considered moderate. This trend is expected to continue in the future.

Crossing creeks stirs up sediment, which could affect upstream reaches of Arroyo Grande Creek or Oso Flaco Creek by increasing turbidity. However, any effects from increased turbidity are minor, localized, and temporary and do not affect tidewater goby in the long-term. As a result, this non-lethal impact is considered minor. This trend is expected to continue in the future.

Use of Pesticide (CA-51). Pesticides used the HCP area can cause mortality if tidewater goby ingest a toxic pesticide directly or through their food source. Pesticides can also cause indirect effects by changing food availability and habitat quality, including water quality. Many pesticides used in the HCP area are used in upland habitat only and, therefore, do not impact tidewater goby. The pesticides used in or near aquatic habitat in the HCP area have been found to have low toxicity to slight toxicity to fish; therefore, they are not thought to be toxic to tidewater goby. Tidewater goby AMMs 47 through 55 are also implemented to reduce the risk of mortality or indirect impacts to tidewater goby. As a result, the lethal and non-lethal impacts are considered minor. Ultimately, these pesticides have a beneficial effect on tidewater goby by improving tidewater goby habitat by preventing the encroachment of invasive plant species. Pesticide use in upland areas, adjacent to waterbodies, and, at times, within waterbodies will continue into the future under appropriate permits.

Tidewater Goby Critical Habitat

Critical habitat for tidewater goby is designated within the HCP area in Pismo Creek and Oso Flaco Lake. Activities currently occurring in the HCP area do not permanently modify or reduce the quality of tidewater goby critical habitat. All of the baseline activities were being conducted during the time that the USFWS designated tidewater goby critical habitat.

California (Coast) Horned Lizard and Silvery Legless Lizard

The existing risk of impact to coast horned lizard and silvery legless lizard from existing covered activities is summarized in EIR Table 6-4. Silvery legless lizard and coast horned lizard may occur throughout the HCP area, although coast horned lizard is thought to be very uncommon in the HCP area. The potential to encounter these species is 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.

Covered activities occurring outside of coast horned lizard and silvery legless lizard habitat and/or that have no risk of impacting these species and are dismissed from further discussion. Existing covered activities with no impact to California horned lizard and silvery legless lizard include bicycling and golfing (CA-4), fishing (CA-5), equestrian recreation (CA-7), boating/surfing (CA-8), aerial/wind driven activities (CA-9), SNPL and CLTE management (CA-12a and 12b), tidewater goby and salmonid surveys (CA-13), CRLF surveys and management (CA-14), water quality monitoring (CA-19), campground maintenance (CA-20), sand ramp/other vehicle access (CA-24), street sweeping (CA-25), Pismo Beach Golf Course operations (CA-37), natural history/interpretation (CA-39), vehicle crossing creeks (CA-40), CDPR ag land management (CA-46), and bioreactor maintenance (CA-47). SNPL and CLTE management (CA-12b) has a low beneficial impact by providing additional protection and cover for these species during the SNPL and CLTE breeding season.

Existing covered activities affecting coast horned lizard and silvery legless lizard are described below and are part of the baseline environmental setting.

Park Visitor Activities

Motorized Recreation (CA-1), Camping (CA-2), Dog Walking (CA-6), and Special Events (CA-11). Motorized recreation, dog walking, and camping do not impact vegetation island habitat or other moist habitat (e.g., Oso Flaco Lake) for coast horned lizard or silvery legless lizard. Motorized recreation and camping are generally limited to the beaches and dunes in the HCP area and/or designated campgrounds. Silvery legless lizard was observed in the designated campgrounds in the past, although this is considered to be an uncommon occurrence. Although beaches, dunes, and campgrounds are considered suitable upland habitat for coast horned lizard and silvery legless lizard and these species can disperse through and be injured or killed or disturbed by vehicles, people, or dogs in these areas, this habitat is thought to be infrequently used by these species for dispersal over other more suitable habitats since these areas provide minimal cover. As a result, the lethal and non-lethal impacts are considered minor. This trend is expected to continue in the future.

The effects of motorized recreation and camping to the quality of upland habitat are negligible since these activities are do not permanently alter barren sand habitat where they occur. This trend is expected to continue in the future.

Recreationists increase the presence of trash as described above for motorized recreation (CA-1) and camping (CA-2) for SNPL and CLTE. CDPR implements SNPL AMMs 32 to 42 and CLTE AMMs 24 through 33 to reduce the effects on SNPL and CLTE. These measures also reduce the effect of trash on coast horned lizard and silvery legless lizard. Therefore, this indirect lethal impact is minor. This trend is expected to continue in the future.

No additional vehicles are allowed to enter the HCP area during special events and special events typically occur in areas where motorized recreation already occurs, so the impacts from special

events are thought to be similar to those from motorized recreation. Therefore, no additional lethal or non-lethal impacts to coast horned lizard or silvery legless lizard occur during special events.

Park Visitor Activities

Pedestrian Activities (CA-3) and Holidays (CA-10). Pedestrians are allowed within the vegetation islands and other areas where coast horned lizard and silvery legless lizard may occur. Impacts to coast horned lizard and silvery legless lizard from pedestrian activities are not known. Pedestrians walking through suitable habitat for these species can injure or kill species. In addition, pedestrians can deter these species from foraging or resting and cause them to move from protective cover exposing them to predators. Potential impacts to coast horned lizard and silvery legless lizard from visitor activities may be exacerbated during periods of high visitor use, such as holidays. As a result, lethal and non-lethal impacts from pedestrian activities on coast horned lizard and silvery legless lizard are considered minor to moderate depending on the duration, type, and intensity of the activity. This trend is expected to continue in the future.

Recreationists increase the presence of trash as described above for motorized recreation (CA-1) and camping (CA-2). CDPR implements SNPL AMMs 32 to 42 and CLTE AMMs 24 through 33 to reduce the effects on SNPL and CLTE. These measures also reduce the effect of trash on coast horned lizard and silvery legless lizard. Therefore, this indirect lethal impact is minor. This trend is expected to continue in the future.

Natural Resources Management

Listed Plant Management (CA-15), Habitat Restoration Program (CA-16), and Invasive Plant and Animal Control (CA-17). Listed plant management, habitat restoration, and invasive plant and animal control activities can result in injury or mortality of coast horned lizard and silvery legless lizard if they are present within the work area. The potential to encounter these species is highest in already vegetation or moist areas (e.g., vegetation islands); however, these species can also be found in open sand areas as they travel and disperse between more suitable habitat areas. As part of CDPR's standard practices in the HCP area, pre-construction surveys are conducted, if determined necessary by a CDPR Environmental Scientist, prior to conducting listed plant management, habitat restoration, or invasive plant management in the vegetation islands or other suitable habitat for coast horned lizard and silvery legless lizard to avoid harm and injury to individual lizards. If an individual is observed during the pre-construction survey or work, activities are delayed until the individual has moved from the area or a qualified biologist moves the individual from the area. With implementation of these measures, the lethal and non-lethal impacts on coast horned lizard and silvery legless lizard is minor. Overall, these activities could create additional vegetated and/or cover habitats for both silvery legless lizard and coast horned lizard and remove potential non-native predators and are, therefore, beneficial to this species. This trend is expected to continue in the future.

Habitat Monitoring System (CA-18). As part of the Habitat Monitoring System within the HCP area, coverboards are used to inventory reptiles and amphibians present in the vegetation island habitat. Silvery legless lizards and coast horned lizards, if present, are handled for identification purposes during coverboard surveys. These species could also be killed or injured during handling, although this is unlikely and has not been documented to date. As a result, the Habitat Monitoring System has moderate lethal and non-lethal (capture) impacts on coast horned lizard and silvery legless lizard. Ultimately, however, the Habitat Monitoring System has beneficial

impacts on these species by providing useful information on the species distribution and habitat in the HCP area. This trend is expected to continue in the future.

Park Maintenance

General Facilities Maintenance (CA-21), Trash Control (CA-22), Wind Fencing (CA-23), Routine Riparian Maintenance (CA-26), Perimeter and Vegetation Island Fencing (CA-27), Cable Fence Maintenance/Replacement (CA-28), Heavy Equipment Response (CA-29), Minor Grading (CA-30), and Boardwalk/Other Pedestrian Maintenance (CA-31). Trash control, wind fencing, perimeter fencing, cable fencing, heavy equipment response, minor grading, and general facilities maintenance occur outside of vegetated areas (i.e., typical coast horned lizard and silvery legless lizard habitat) or within open sand areas. Although open sand areas are considered suitable upland habitat for coast horned lizard and silvery legless lizard and these species could disperse through and be injured or killed by equipment associated with these activities, this habitat is thought to be infrequently used by these species for dispersal over other more suitable habitats since these areas provide minimal cover. As a result, the lethal impact of these activities on coast horned lizard or silvery legless lizard are considered minor. Trash control (CA-22) has a moderate beneficial effect on silvery legless lizard and coast horned lizards by reducing the presence of potential predators. This trend is expected to continue in the future.

Boardwalks within the HCP area span dune vegetation or open sand beaches. Coast horned lizard and silvery legless lizard could use the boardwalk as cover and/or they could occur within vegetation adjacent to the boardwalk, although their occurrence in these areas is unknown. Vegetation island fencing is installed directly adjacent to habitat where coast horned lizard or silvery legless lizard have been found in the past. Riparian maintenance activities include activities such as exotic species control and riparian tree maintenance. Coast horned lizard and silvery legless lizard may use riparian vegetation as cover, although their occurrence in these areas is not known. Boardwalk maintenance, vegetation island fencing, and riparian maintenance activities may injure or kill these species, as well as cause them to move from cover into more open habitat where they are at risk of predation. As part of CDPR's standard practices in the HCP area, pre-construction surveys are conducted, as determined necessary by a CDPR Environmental Scientist, prior to boardwalk maintenance, vegetation island fencing, and riparian maintenance within or adjacent to suitable habitat for coast horned lizard and silvery legless lizard to avoid harm and injury to individual lizards. If an individual is observed during the pre-construction surveys, activities are delayed until the individual has moved from the area or the individual is moved out of harm's way by a qualified biologist. With implementation of this measure, the non-lethal impact on coast horned lizard and silvery legless lizard is considered minor. This trend is expected to continue in the future.

Visitor Services

Ranger, Lifeguard, Park Patrols (CA-32), Emergency Response (CA-33), Access by Non-CDPR Vehicles (CA-34), ASI Courses (CA-35), Beach Concessions (CA-36). Ranger, lifeguard, and park patrols; emergency response; access by non-CDPR vehicles; ASI courses; and beach concessions all occur within open sand areas. Although open sand areas are considered suitable upland habitat for coast horned lizard and silvery legless lizard and these species could disperse through and be injured or killed by beach construction equipment associated with these activities, this habitat is thought to be infrequently used by these species for dispersal over other more suitable habitats since these areas provide minimal cover. As a result, the lethal and non-lethal

impacts of these activities on coast horned lizard or silvery legless lizard is considered minor. This trend is expected to continue in the future.

Other Activities

Dust Control Activities (CA-44). Dust control activities are currently occurring within the HCP area as part of the Dust Control Program EIR. Dust control activities can result in injury or mortality of these species if they are present within the work area. The potential to encounter these species is highest in already vegetation or moist areas, which don't typically require dust control measures; however, these species can be found in open sand areas as they travel and disperse between more suitable habitat areas. These species can also be attracted to areas where dust control measures are implemented (e.g., straw bales and vegetation); therefore, maintenance of these areas can result in injury or mortality of these species. However, dust control activities require pre-construction surveys prior to removing or installing dust control measures to avoid harm and injury to individual lizards (MIG|TRA 2017). If an individual is observed during the pre-construction survey or during the dust control activities, activities are delayed until a qualified biologist (i.e., a biologist with a Scientific Collecting Permit) relocates the individual. With implementation of this project requirement, the lethal and non-lethal impacts on coast horned lizard and silvery legless lizard is minor. Overall, the dust control program has created additional vegetated and/or cover habitats for both silvery legless lizard and coast horned lizard and is, therefore, beneficial to this species. Impacts from future dust control activities are discussed in EIR section 6.4.1.5.

Cultural Resources Management (CA-45). Cultural resource management activities typically occur within open sand areas, although they could occur anywhere in the HCP area. Cultural resource management activities typically involve minimal disturbance and do not typically require ground disturbance. As a result, lethal impacts to coast horned lizard or silvery legless lizard are not expected. Should a cultural resource site be located in upland habitat utilized by coast horned lizard or silvery legless lizard, testing, data recovery, stabilization, or restoration of the site could result in disturbance to individuals within the cultural resource work area. However, any disturbance is likely to be temporary and short in duration and lizards are expected to move from the area to nearby suitable habitat. Therefore, the non-lethal impact of these activities on California horned lizard or silvery legless lizard is minor.

Use of Pesticide (CA-51). Pesticides in the HCP area are used to prevent the spread of invasive species. Application of pesticides in the HCP area could result in injuring or killing coast horned lizard or silvery legless lizard if they are trampled during application, although this is unlikely since these species typically move out of harm's way. Pesticide application could also result in temporarily flushing coast horned lizard or silvery legless lizard from cover, although these species typically find additional cover and/or return to their previous cover after the disturbance has passed. In addition, AMMs for pesticides are implemented for listed species to reduce the risk of mortality or indirect impacts, which also benefit coast horned lizard and silvery legless lizard. As a result, these lethal and non-lethal impacts are minor.

Although pesticides are not thought to cause mortality to wildlife species, mortality is difficult to observe and can occur. Pesticides used the HCP area can cause mortality if coast horned lizard or silvery legless lizard ingest a toxic pesticide directly or through their food source. Pesticides could also cause indirect effects by changing food availability and habitat quality. Many pesticides used in the HCP area are used in upland habitat where coast horned lizard and silvery legless lizard may occur. Pesticides in the HCP area typically have low toxicity to slight toxicity

to animals and target invasive plant species; therefore, the risk of mortality is low. AMMs for pesticides are implemented for listed species to reduce the risk of mortality or indirect impacts, which also benefit coast horned lizard and silvery legless lizard. In addition, all pesticides in the HCP area are used in accordance with the label. As a result, this lethal impact is minor.

Ultimately, pesticides have a beneficial effect on coast horned lizard and silvery legless lizard by improving habitat by preventing the encroachment of invasive plant species.

Western Spadefoot Toad

The existing risk of impact to western spadefoot toad from covered activities is summarized in EIR Table 6-4. Overall, impacts to western spadefoot toad are considered to be similar to CRLF as described above, with the exception that western spadefoot toad does not occur in agricultural lands or at the Pismo Beach golf course. As a result, unlike CRLF, no impacts occur from Pismo Beach Golf Course Operations (CA-37) or CDPR Agricultural Land Management (CA-46). Although western spadefoot toad is known to aestivate in upland habitats for longer periods than CRLF, this species is considered very uncommon in the HCP area and; therefore, this species is considered unlikely to be impacted by covered activities in upland or aquatic habitat.

Western Pond Turtle (WPT)

The existing risk of impact to WPT from existing covered activities is summarized in EIR Table 6-4. WPT have been found within numerous lakes within and near the HCP area, including Oso Flaco Lake. WPT may occur within the creeks in the HCP area when they are dispersing; however, WPT, to date, have not been observed in the HCP area creeks.

Covered activities occurring outside of WPT aquatic habitat areas and/or activities that have no risk of impacting WPT and are dismissed from further discussion. Existing covered activities with no impact to WPT include motorized recreation (CA-1), bicycling and golfing (CA-4), dog walking (CA-6), equestrian recreation (CA-7), boating/surfing (CA-8), aerial/wind driven activities (CA-9), special events (CA-11), SNPL and CLTE management (CA-12a and 12b), habitat restoration program (CA-16), campground maintenance (CA-20), general facilities maintenance (CA-21), trash control (CA-22), wind fencing (CA-23), sand ramp/other vehicle access (CA-24), street sweeping (CA-25), perimeter and veg island fencing (CA-27), cable fencing (CA-28), heavy equipment response (CA-29), minor grading (CA-30), ranger/lifeguard (CA-32), emergency response (CA-33), access by non-CDPR vehicles (CA-34), ASI courses (CA-35), beach concessions (CA-36), natural history/interpretation (CA-39), dust control activities (CA-44), cultural resource management (CA-45), CDPR agricultural land management (CA-46), and bioreactor maintenance (CA-47).

Existing covered activities affecting WPT are described below and are part of the baseline environmental setting.

Park Visitor Activities

Camping (CA-2). Camping does not directly impact WPT aquatic habitat. The two designated campgrounds within the HCP area are adjacent to Meadow Creek, Carpenter Creek, and Oceano (Meadow Creek) Lagoon. WPT may use these creeks for dispersal. Activities at the campground have not been observed directly impacting WPT. Therefore, lethal impacts to WPT in the HCP area are negligible. This trend is expected to continue in the future.

Indirect effects on WPT from camping activities include an increase in trash, which can boost predator populations and thereby incidentally increase predation on WPT or reduce water

quality. The natural resource management program in the HCP area reduces these impacts by informing all visitors they are to dispose of their trash in a trash dumpster and enforcing rules to ensure the campsites are maintained in a clean condition. As a result, this indirect lethal impact is considered minor. This trend is expected to continue in the future.

Pedestrian Activities (CA-3), Fishing (CA-5), and Holidays (CA-10). Most pedestrian- and equestrian-based activities have little, if any, effect on WPT or its habitat since WPT are found in aquatic habitats less frequented by visitors. Although it has never been observed in the HCP, WPT could get caught by fisherman using bait in suitable aquatic habitat (e.g., Oso Flaco Lake) and could be injured or killed. WPT could also ingest a fishhook. WPT that ingest a fishhook typically die from the trauma or starve. This has been observed at other locations in California and Oregon where fishing is allowed but has never been observed in the HCP area. Despite the possibility for lethal impacts, they have not been observed in the HCP area to date and are considered unlikely to occur. As a result, this lethal impact is minor. This trend is expected to continue in the future.

Pedestrians crossing creeks, entering lagoons, and/or wading or fishing in freshwater habitats disturb basking WPT and deter them from basking and or foraging, which could increase stress and/or expose WPT to predation. However, these impacts are temporary, localized, and relatively short in duration and additional suitable habitat is present away from pedestrian activity where WPT can forage or bask. As a result, this non-lethal impact is minor. This trend is expected to continue in the future.

Indirect effects on WPT from pedestrian and/or fishing activities can include an increase in trash, which can boost predator populations and thereby incidentally increase predation on WPT or reduce water quality. The natural resource management program in the HCP area reduces these impacts by informing all visitors they are to dispose of their trash in a trash dumpster and enforcing rules to ensure the campsites are maintained in a clean condition. The increase in visitors on holidays could increase the amount of trash in the HCP area; however, this does result in additional effects on WPT that have not previously been described. As a result, this indirect lethal impact is considered minor. This trend is expected to continue in the future.

Natural Resources Management

Tidewater Goby and Salmonid Surveys (CA-13), Listed Plant Management (CA-15), Invasive Plant and Animal Control (CA-17), Habitat Monitoring System (CA-18), and Water Quality Monitoring (CA-19). These activities have not resulted in mortality or injury of a WPT to date and are unlikely to in the future since they are conducted by experienced natural resource staff members familiar with the species in the HCP area. As a result, the lethal impact on WPT is negligible.

Depending on the location of the tidewater goby/salmonid surveys, listed plant management, invasive plant and animal control, and water quality monitoring, WPT individuals can be present (e.g., Oso Flaco Lake), although impacts from these activities have not been documented to date. Any listed plant management (CA-15) for marsh sandwort and Gambel's watercress at Oso Flaco Lake, invasive plant or animal control (CA-17) in Oso Flaco Lake or other suitable aquatic habitat, and water quality monitoring (CA-19) can temporarily affect WPT, if present. Activities can disturb basking WPT and deter them from basking and or foraging, which can increase stress and/or expose WPT to predation. Interruption of basking can ultimately lead to a decrease in survival. Activities in Oso Flaco Lake and other suitable freshwater habitat associated with the natural resource management program is temporary and relatively short in duration. In addition,

activities are conducted by natural resources staff familiar with the species in the HCP area. However, if activities in Oso Flaco Lake or other areas where WPT have previously been observed last for an extended period of time, a pre-construction survey for WPT is conducted, as determined to be necessary by CDPR Environmental Scientist staff. If an individual is observed during the pre-construction survey, activities are delayed until the individual has moved from the area or until appropriate AMMs are in place. AMMs could include relocation and/or biological monitoring. As a result, non-lethal impacts due to disturbance are considered minor. This trend is expected to continue in the future.

Activities within aquatic habitats can indirectly affect WPT by temporarily stirring up sediment and increasing turbidity. Sediment stirred up during activities are minimal, localized, and temporary. As a result, this non-lethal impact is minor. Ultimately, listed plant management (CA-15), invasive pest plant and animal control (CA-17), habitat monitoring system (CA-18), and water quality monitoring (CA-19) in aquatic habitat where WPT occurs, are beneficial to WPT by reducing invasive species in the area, increasing water quality, and providing more suitable habitat for WPT. This trend is expected to continue in the future.

CRLF Surveys and Management (CA-14). Most CRLF surveys are eyeshine surveys conducted from the edge of the waterbodies and only involve visually scanning for CRLF and/or egg masses. During these surveys, care is taken not to disturb sediment or vegetation. Eyeshine surveys can disturb basking WPT and deter them from basking and or foraging, which could increase stress and/or expose WPT to predation. As a result, this non-lethal impact is considered minor to moderate, depending on the duration of the disturbance. This trend is expected to continue in the future.

CDPR biologists or their contractors can impact WPT during CRLF monitoring surveys that involve dipnetting, although this has not been documented to date. During these surveys, CDPR biologists could capture, injure, or kill a WPT. However, dipnetting surveys in the HCP area are infrequent and are conducted by an experience USFWS-approved or permitted biologist in accordance with the USFWS Revised Guidance on Site Assessments and Field Surveys for the CRLF. As a result, this lethal impact is minor. This trend is expected to continue in the future.

If dipnetting is conducted, these surveys involve biologists standing in water. Surveys within aquatic habitats can impact WPT by temporarily stirring up sediment and increasing turbidity. Sediment stirred up during wading and/or dip netting activities is minimal, localized, and temporary and; therefore, this non-lethal impact is minor. CRLF surveys and management slightly benefit WPT since WPT often occupy the same habitat and WPT individuals and habitat are sometimes located during these surveys. This trend is expected to continue in the future.

Park Maintenance

Routine Riparian Maintenance (CA-26). Riparian maintenance activities that can affect WPT include the clearing of debris, vegetation, and sediment; riparian tree and shrub vegetation control (e.g., removing or trimming vegetation); and emergent and invasive species control. WPT are not known to occur within Meadow and Carpenter Creeks. WPT are known to occur in riparian areas at Oso Flaco Lake and Oceano Lagoon where maintenance activities are located. Lethal (injury or mortality) impacts to WPT are not expected since CDPR staff conducting the activities are trained in avoidance and minimization measures and/or escorted by a staff member trained in AMMs. If WPT are present in the riparian maintenance work area, they can be disturbed or caught by hand equipment used to remove sediment, debris, or vegetation. As part of the natural resources program in the HCP area, activities are conducted during low flow

periods (if feasible). In addition, pre-construction surveys are conducted by CDPR prior to conducting riparian maintenance, as determined necessary by a CDPR Environmental Scientist, within suitable aquatic habitat for WPT to avoid harm and injury to individual WPT. If an individual is observed during the pre-construction survey or during the riparian maintenance activities, activities are delayed until the individual has moved from the area or until appropriate AMMs are in place. AMMs could include relocation, exclusion fencing, and/or biological monitoring. As a result, non-lethal impacts from disturbance on WPT are minor. This trend is expected to continue in the future.

Riparian maintenance activities at Oso Flaco Lake can temporarily result in an increase in turbidity especially if the in-stream vegetation traps and holds sediments. Temporarily suspended sediment can affect WPT. However, sediment stirred up during activities are minimal, localized, and temporary. In addition, heavy equipment is not placed in the water, and any back-hoe work is restricted to the roadside or upper bank with only the bucket placed in the water body. As a result, this non-lethal impact is minor. Riparian maintenance activities slightly benefit WPT by improving habitat. This trend is expected to continue in the future.

Boardwalk/Other Pedestrian Maintenance (CA-31). Any effects on WPT aquatic habitat during boardwalk maintenance are minor and temporary, and direct impacts to individuals have not occurred and are not expected to occur.

Visitor Services

Pismo Beach Golf Course Operations (CA-37). Despite being artificial and areas of periodic high human use, golf courses can provide suitable habitat for turtles. WPT have been observed in the Pismo State Beach golf course ponds and low-growing turf grass in sunny areas. WPT have not been documented as being impacted by golf course operations to date, however, impacts can occur during these activities. If WPT are present in the low-growing turf grass, golf course operations and maintenance activities, such as golf cart traffic and mowers can strike WPT individuals and injure or kill them. The potential for such incidents is low because golf carts travel on small paved paths where WPT are less likely to occur. In addition, WPT are typically visible enough that the mower operators can avoid them. As a result, this lethal impact is considered minor. This trend is expected to continue in the future.

Pismo State Beach golf course activities near the golf course ponds can disturb basking WPT and deter them from basking and or foraging, which can increase stress and/or expose WPT to predation. However, most golf course activities (e.g., mowing, golfing) do not occur close enough to the ponds to disturb WPT. As a result, this non-lethal impact is minor. This trend is expected to continue in the future.

Golf course maintenance may include removal of overgrown emergent vegetation, which could disturb, injure, or kill WPT. However, these activities are typically conducted by hand and have not resulted in mortality or injury of a WPT to date. In addition, these impacts are typically localized and short in duration. As a result, lethal and non-lethal impacts to WPT from golf course activities are considered minor. This trend is expected to continue in the future.

Other Activities

Vehicle Crossing of Creeks (CA-40). WPT are not known to occur in Arroyo Grande Creek or in Oso Flaco Creek in the areas where vehicles are permitted to cross and are unlikely to be present in this area since they require freshwater only; therefore, no impacts are likely to occur in these locations. WPT can occur in Carpenter Creek and can be impacted by motor vehicles crossing

this creek. WPT may be inadvertently struck by a vehicle; however, this is unlikely since WPT have never been observed in this area and vehicle operators crossing the creek are encouraged to cross in areas with no or low flow and travel at speeds of less than 15 miles per hour. As a result, this lethal impact is considered minor. This trend is expected to continue in the future.

Vehicles crossing Carpenter Creek can stir up sediment and increase turbidity in the creek; however, these impacts are minimal, localized, and temporary. As a result, this non-lethal impact is minor. This trend is expected to continue in the future.

Use of Pesticides (CA-51). The District Draft Aquatic Pesticide Application Plan (APAP) states that imazapyr and glyphosate are both used within aquatic habitats. The APAP also states that both these pesticides have been found to have low toxicity to wildlife since they target specific enzymes for plants needed to process aromatic amino acids. As a result, direct WPT mortality does not occur from pesticide use in aquatic habitats. In addition, application of these pesticides takes place between October 1 and February 28 when WPT are less likely to be present.

Broad-scale insecticide use to reduce mosquito larvae in wetland areas that contain WPT may reduce invertebrate prey, although label restrictions on the pesticide products are designed to reduce that risk and all pesticides in the HCP area are used in accordance with the label. Herbicide use for aquatic invasive plants may alter the availability of cover and basking sites especially for very small turtles. However, no relevant information was found detailing either of these potential threats. Overall, pesticides have a beneficial effect on WPT by preventing encroachment of invasive plants and allowing the establishment of native plants. This trend is expected to continue in the future.

Western Burrowing Owl

Western burrowing owls in California generally breed from February 1 to August 31. Breeding burrowing owls do not occur within the HCP area. Therefore, no impacts to breeding burrowing owls occur. This trend is expected to continue in the future.

Burrowing owls in California are also found in burrows or other wintering habitat (e.g., driftwood, dune vegetation) outside the breeding season from September 1 to January 31. Suitable habitat for wintering burrowing owl is present in the HCP area, and wintering burrowing owls have been observed in the HCP area. Burrowing owl may be found in suitable small mammal burrows, in dune vegetation, and/or near woody debris on the beach. To date, burrowing owls have been observed in the HCP area at Oso Flaco Lake in 1999 and 2012, in the Phillips 66 Leasehold in 2006, near the chemical toilets on the beach in 2005 and 2006, at Oceano Lagoon in 2010, at the Grand Avenue ramp in 2019, and in the Oso Flaco Lake parking lot in 2019. In addition, burrowing owl tracks were observed at Pavilion Hill in 2016 (R. Chapman, pers. comm 2016). Therefore, wintering burrowing owls could be impacted by existing covered activities. The existing risk of impact to western burrowing owls from covered activities is summarized in EIR Table 6-4.

Covered activities occurring outside of western burrowing owl habitat and/or activities that have no risk of impacting burrowing owl have no impact on these species and are not further discussed. Covered activities with no impact to western burrowing owl include bicycling and golfing (CA-4), fishing (CA-5), boating and surfing (CA-8), SNPL and CLTE management (CA-12a and 12b), tidewater goby and salmonid surveys (CA-13), CRLF surveys and management (CA-14), water quality monitoring (CA-19), campground maintenance (CA-20), routine riparian maintenance (CA-26), cable fence maintenance and replacement (CA-28), Pismo Beach Golf

Course operations (CA-37), natural history/interpretation (CA-39), vehicle crossing of creeks (CA-40), CDPR ag land management (CA-46), and bioreactor maintenance (CA-47).

Impacts from existing covered activities in suitable burrowing owl winter habitat can occur within any terrestrial habitat in the HCP area. Most covered activities in suitable burrowing owl winter habitat have minor impacts on the species. Pesticide use and invasive plant and animal control in the HCP area have beneficial effects on burrowing owl by improving habitat and reducing the non-native, invasive species.

Existing covered activities affecting burrowing owl are described below and are part of the baseline environmental setting.

Park Visitor Activities

Motorized recreation (CA-1), camping (CA-2), pedestrian recreation (CA-3), dog walking (CA-6), equestrian recreation (CA-7), aerial/wind driven activities (CA-9). Although infrequent, burrowing owls have been observed in the HCP area in the winter in areas where vehicles are permitted, including Oso Flaco Lake parking lot, Grand Avenue ramp, and the open riding area. Burrowing owls within areas where motorized vehicles are permitted could be struck by vehicles and injured or killed or burrows/winter habitat cover could be crushed or destroyed. However, as stated previously, western burrowing owl is uncommon in the areas open to motorized vehicles and, to date, has only rarely been observed in these areas. In addition, most birds fly out of harm's way and; therefore, this risk of this impact occurring is low. As a result, lethal impacts from motorized activities on western burrowing owl within the HCP area are minor. This trend is expected to continue in the future.

Pedestrians are allowed in other areas where motorized vehicles are not, including the Oso Flaco area. Human foot traffic in the HCP area can disturb burrowing owls, potentially resulting in the abandonment of burrows/cover locations. Pedestrians moving through habitat occupied by burrowing owl can disturb burrowing owl individuals. Foraging burrowing owls interrupted by humans stop foraging and move away from the area until the disturbance has passed. Burrowing owl in burrows, dune vegetation, and/or behind wooden debris may flush from these locations and be exposed to predators and inclement weather. Stationary activities, such as picnicking and sunbathing, can displace burrowing owl for longer periods. Although burrowing owls are uncommon in the HCP area, this non-lethal impact is considered minor to moderate, depending on the duration of impacts. This trend is expected to continue in the future.

Covered activities could alter suitable wintering habitat by temporarily changing the microtopography or removing organic material (e.g., woody debris) that wintering owls use for cover. However, most covered activities are associated with recreation activities where burrowing owl are less likely to occur due to the ongoing level of disturbance. In addition, suitable habitat is available in other locations in the HCP area, so burrowing owls can move from the area of disturbance to a more suitable location. As a result, impacts to habitat are considered negligible or minor. This trend is expected to continue in the future.

Recreationists increase the presence of trash as described above for motorized recreation (CA-1) and camping (CA-2) for SNPL and CLTE. CDPR implements SNPL AMMs 32 to 42 and CLTE AMMs 24 through 33 to reduce the effects of trash, which also benefits species such as burrowing owl. Therefore, this indirect lethal impact is moderate. This trend is expected to continue in the future.

Holidays (CA-10) and Special Events (CA-11). Potential impacts to burrowing owl from visitor activities are likely exacerbated during periods of high visitor use, such as holidays (CA-10) and special events (CA-11) that occur during the wintertime. Holidays that increase visitor presence in the HCP area during this time include, but are not limited to, Thanksgiving, Christmas, New Years, and Martin Luther King holidays. Holidays do not increase the number of day use or camping vehicles or OHV allowed on the beach; however, additional pedestrian activity could occur during holidays, which could exacerbate the effects of pedestrian activities described above depending on the location and number of visitors. As a result, risk of non-lethal impacts from holidays on burrowing owls is minor to moderate, depending on the duration of activities and number of visitors. This trend is expected to continue in the future.

Park Maintenance, Visitor Services, and Natural Resources Management

Listed plant management (CA-15), habitat restoration (CA-16), invasive plant and animal control (CA-17), habitat monitoring system (CA-18), general facilities maintenance (CA-21), trash control (CA-22), wind fencing (CA-23), sand ramp/other vehicle access (CA-24), street sweeping (CA-25), perimeter and vegetation island fencing (CA-27), heavy equipment response (CA-29), minor grading (CA-30), boardwalk/other pedestrian maintenance (CA-31), life guard and ranger patrols (CA-32), emergency response (CA-33), access by non-CDPR vehicles (CA-34), ASI courses (CA-35), beach concessions (CA-36), and cultural resources management (CA-45). Park operation and natural resource management covered activities within the vicinity of a burrowing or foraging burrowing owl are not expected to result in injury or mortality of a burrowing owl but can temporarily displace individuals from their winter habitat or from foraging, altering their normal behavior patterns. Activities can also flush individuals from optimal habitat to less suitable habitat where they could be exposed to inclement weather or predation. However, the risk of these impacts occurring is low since western burrowing owl is uncommon with the HCP area. In addition, many park operation and natural resource management covered activities are temporary and short in duration. Finally, pre-construction surveys are conducted, as determined to be necessary by CDPR Environmental Scientist staff, prior to park operation and natural resource management activities to reduce impacts to wintering burrowing owl that are known to occur in the HCP area. If a wintering burrowing owl is observed, activities are delayed until the individual has moved from the area or until appropriate AMMs (e.g., biological monitoring) are in place. As a result, non-lethal impacts from park operation and natural resource management disturbance are considered minor. This trend is expected to continue in the future.

Other Activities

Dust Control Activities (CA-44). Dust control activities in the HCP area are already occurring as part of the Dust Control Program EIR. Impacts from future dust control activities are discussed in EIR section 6.4.1.8. Dust control activities require pre-construction surveys for burrowing owl in the backdunes during the winter season (September 1 through February 28). If any burrows are found and determined to be occupied, dust control activities cannot occur within 100 feet of the burrow location. As a result, lethal impacts to burrowing owl are negligible.

Disturbance impacts to burrowing owl within burrows from dust control activities do not occur due to the 100 foot no disturbance buffer. Dust control activities can temporarily displace foraging individuals or individuals using woody debris or dune vegetation for cover, altering their normal behavior patterns. Dust control activities can also displace birds from safe resting

locations and move them into areas where they are vulnerable to predation and recreation disturbance. As a result, non-lethal impacts on burrowing owl within the HCP area are moderate.

Little is known about the burrowing owl habitat in the HCP area during the winter. Planting vegetation associated with dust control activities within the HCP area may reduce available suitable wintering habitat for burrowing owl, including reducing areas with woody debris or reducing open areas with suitable small mammal burrows. However, burrowing owls may also use dune vegetation for cover during the winter and dust control activities could increase the amount of vegetative cover. Overall, the habitat impacts are unknown and could range from minor to moderate.

Use of Pesticide (CA-51). Pesticide use occurs by CDPR staff or by contractors working under the direction of CDPR staff who are trained in avoidance and minimization protocols. Burrowing owl can be impacted by drift from herbicide. However, as part of the natural resource management program in the HCP area, measures are implemented to reduce impacts from drift, which include not spraying if wind speed is over 10 miles per hour and ensuring all workers are trained to work in sensitive habitat. In addition, best management practices are implemented when applying pesticides. Pesticides used in the HCP area do not result in lethal impacts to birds. This trend is expected to continue in the future.

Pesticide application can result in disturbance of individual burrowing owl by deterring them from resting or foraging. Helicopter sprayers flying within the HCP area can be highly disruptive to birds and may cause burrowing owl to flush from the cover. However, as part of their standard practice, CDPR conducts surveys for special-status species, including burrowing owl, prior to conducting ground application of herbicides if the activities are determined by a CDPR Environmental Scientist to have potential to impact burrowing owl. If a burrowing owl individual is observed, activities are delayed until appropriate AMMs are in place. AMMs include establishing a no disturbance buffer, as determined by a qualified biologist, and/or conducting biological monitoring. Helicopter spraying in the HCP area is infrequent and is conducted quickly (e.g., 90 acres in approximately 2.5 hours). As a result, any impacts to burrowing owl from helicopter activity are infrequent and short in duration. As a result, non-lethal impacts from pesticides are minor. This trend is expected to continue in the future.

Nesting Birds

The existing risk of impact to nesting birds, including special-status species such as least bittern (*Ixobrychus exilis*), white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), American peregrine falcon (*Falco peregrinus*), loggerhead shrike (*Lanius ludovicianus*), California horned lark (*Eremophilia alpestris actia*), and yellow warbler (*Setophaga petechia*) from covered activities is summarized in EIR Table 6-4.

Existing park operations, including recreation, natural resources management, park maintenance, visitor services, and other existing activities could impact nesting birds in different ways depending on their preferred nesting habitat. As a result, impacts could occur anywhere in the HCP area. For example, activities that take place on the beach, could impact nesting shorebirds or other ground nesting birds, including the special-status species California horned lark. Activities at Oso Flaco Lake and within riparian areas could impact nesting songbirds, waterbirds, and raptors, including the special-status species such as yellow warbler, least bittern, white-tailed kite, and northern harrier. Activities adjacent to trees or other perches in the HCP area could impact nesting songbirds or raptors, including special-status species such as white-tailed kite and loggerhead shrike. Many common bird species are also impacted by covered

activities in developed areas, such as the designated campgrounds. Any impacts that occur to nesting birds only occur during the nesting season (generally February 1 through September 15 for raptors and March 1 through August 31 for passerines and other non-raptors).

Existing covered activities affecting nesting birds are described below and are part of the baseline environmental setting.

Park Visitor Activities

Motorized Recreation (CA-1), Camping (CA-2), Bicycling and Golfing (CA-4), Dog Walking (CA-6), Equestrian Recreation (CA-7), and Aerial/Wind Driven Activities (CA-9). These recreation activities occur on a daily basis in the HCP area, including during the breeding and non-breeding season. Due to the high level of disturbance from the existing recreation activities, only those birds adapted to nesting in urban areas, such as American crow (*Corvus brachyrhynchos*), black phoebe (*Sayornis nigricans*), house finch (*Haemorhous mexicanus*), are thought to be impacted by these activities. Nests for these species are typically located in trees and shrubs that are not directly impacted by these activities. As a result, lethal impacts from these recreational activities on nesting birds within the HCP area are considered negligible. This trend is expected to continue in the future.

Covered activities within the vicinity of a nesting bird can temporarily displace individuals from their nest or from foraging, altering their normal behavior patterns. However, birds that nest in this area are adapted to a high level of disturbance from existing recreation activities. In addition, many covered activities are temporary and short in duration and only disturb the nesting bird during the period that activity is located within the vicinity of the nest. As a result, non-lethal impacts from disturbance are considered minor. This trend is expected to continue in the future.

Recreationists increase the presence of trash as described above for motorized recreation (CA-1) and camping (CA-2) for SNPL and CLTE. CDPR implements SNPL AMMs 32 to 42 and CLTE AMMs 24 through 33 to reduce the effects of trash and these AMMs also protect nesting birds. This indirect lethal impact is moderate. This trend is expected to continue in the future.

Pedestrian Activities (CA-3), Holidays (CA-10), and Special Events (CA-11). Pedestrians are permitted areas that motorized vehicles are not (e.g., vegetation islands, South Oso Flaco) where suitable habitat for nesting birds (e.g., shrubs, trees) are located. In addition, pedestrians occur in developed areas (e.g., campgrounds) where common, urban adapted birds are known to nest. Nests for most avian species occur above the ground in a tree or shrub and are not impacted by pedestrians. Pedestrians can inadvertently crush/kill eggs or chicks in a nest within a low-lying shrub or on the ground, although this is unlikely since any birds that use low-lying shrubs for nesting or nest on the ground are not found in areas that are regularly disturbed by pedestrian activity. As a result, this lethal impact is negligible. This trend is expected to continue in the future.

Recreationists increase the presence of trash as described above for motorized recreation (CA-1) and camping (CA-2) for SNPL and CLTE. CDPR implements SNPL AMMs 32 to 42 and CLTE AMMs 24 through 33 to reduce the effects of trash and these AMMs benefit other nesting birds in the HCP area as well. Despite this, generalist predators still remain the area and this indirect lethal impact is moderate. This trend is expected to continue in the future.

Potential impacts to nesting birds from visitor activities may be exacerbated during periods of high visitor use, such as holidays (CA-10) or special events (CA-11) the same as described for

SNPL. As a result, non-lethal impacts from holidays and special events on nesting birds are moderate. This trend is expected to continue in the future.

Fishing (CA-5), Boating/Surfing (CA-8). Fishing and/or boating could disturb riparian and aquatic nesting individuals in the HCP area, including special-status species such as yellow warbler and least bittern. Nesting adults could be driven from the nest and, ultimately, neglect or abandon the eggs or chicks. Foraging adults interrupted by humans stop foraging and move away from the area until the disturbance has passed. Fishing can displace individuals for long periods if the visitor remains in the same place for a long period of time. However, within the HCP area fishing occurs along the shoreline or at Oso Flaco Lake. Impacts to nesting birds along the shoreline are similar to those discussed under impacts to CLTE and SNPL above since these birds are known to nest near the shoreline. Oso Flaco Lake is currently posted with fish advisory signs. As a result, fishing at Oso Flaco Lake is not common and impacts are minimal when a visitor does fish at this location. As a result, the non-lethal impact is minor. This trend is expected to continue in the future.

Natural Resources Management

SNPL and CLTE Management (CA-12a and 12b). Most nesting birds are not impacted by SNPL management activities since these activities occur on the open beach where SNPL and CLTE nest. Ground nesting birds, including California horned lark and killdeer (*Charadrius vociferous*), are known to nest in the HCP area in similar habitat to SNPL and CLTE and may be injured or killed or a nest may be crushed by a CDPR staff vehicle during SNPL and CLTE management activities. However, **t**he activities occur by CDPR staff who are trained in avoidance and minimization protocols. As a result, lethal impacts to ground nesting birds from SNPL and CLTE management activities, including, monitoring, erecting exclosures, salvage and rescue, and banding have not been documented in the HCP area and are not thought to occur. Therefore, lethal impacts from SNPL and CLTE management activities are negligible. This trend is expected to continue in the future.

SNPL and CLTE management activities could disturb foraging or nesting individuals if nests are located adjacent to areas where SNPL and CLTE nest. Nesting adults could be driven from the nest and, ultimately, neglect or abandon the eggs or chicks. Foraging adults and chicks (if precocial) interrupted by humans stop foraging and move away from the area until the disturbance has passed. Because CDPR staff are trained in avoidance and minimization protocols, all CDPR staff surveys for nesting birds, as appropriate. In addition, most activities are short in duration and only result in temporary disturbances to any nearby nesting birds. As a result, non-lethal disturbance impacts to nesting birds from these activities are considered minor. This trend is expected to continue in the future.

Raptors and other potential avian predators, such as American peregrine falcon, loggerhead shrike, and northern harrier, that are observed targeting SNPL and CLTE are either trapped and removed or killed as authorized under the USFWS depredation permit number MB25976A-0 and in coordination with the CDFW. As a result, predator management program activities could result in mortality or removal of adult raptors or other potential SNPL and CLTE avian predators during the nesting season, which ultimately leads to the abandonment of eggs or chicks. CDPR implements all measures in the depredation permit prior to targeting a potential predator for removal, including attempting to determine if the bird is associated with a nest by observing behavior, in order to minimize this impact. Harassment of potential avian predators using hazing techniques could disturb foraging or nesting individuals. Nesting adults could be driven from the

nest and, ultimately, neglect or abandon the eggs or chicks. Foraging adults and chicks (if precocial) interrupted by hazing activities could stop foraging and/or become stressed until the disturbance has passed. As a result, lethal and non-lethal impacts from predator management activities on nesting raptors or other potential SNPL and CLTE avian predators are moderate. This trend is expected to continue in the future.

CRLF Surveys and Management (CA-14). CRLF surveys and management do not result in lethal impacts to nesting birds. CRLF surveys and management occur adjacent to and within waterbodies from February to October, some of which occurs during the avian nesting season. CRLF surveys conducted during the breeding season could disturb riparian or aquatic nesting birds, including, but not limited to, special-status species such as yellow warbler and least bittern. CRLF surveys are conducted by qualified biologists experienced in recognizing breeding behavior and familiar with nesting bird AMMs, however, some disturbance of nesting birds could still occur. As a result, this non-lethal impact is minor. This trend is expected to continue in the future.

Tidewater Goby and Salmonid Surveys (CA-13), Listed Plant Management (CA-15), Habitat Restoration Program (CA-16), Invasive Plant and Animal Control (CA-17), Habitat Monitoring System (CA-18), and Water Quality Monitoring (CA-19). Lethal impacts to nesting birds are not known to occur from these activities and are not thought to occur since these activities do not remove trees or other structures that birds typically nest in. These activities occur by CDPR staff who are trained in avoidance and minimization protocols. However, despite this, these activities, if they occur in suitable habitat for nesting birds, can result in non-lethal impacts to nesting birds. Specifically, activities during the breeding season can disturb nesting birds and deter them from incubating eggs or chicks during the period of disturbance. These activities can also disturb foraging birds by displacing them from foraging habitat during the period of disturbance and/or deterring them from foraging. As part of their standard practice, CDPR conducts a nesting bird survey prior to conducting the activity if any activities are determined by a CDPR Environmental Scientist to have potential to impact nesting birds. If a nest is observed, activities are delayed until appropriate AMMs are in place. AMMs include establishing a no disturbance buffer, as determined by a qualified biologist, and/or conducting biological monitoring. As a result, the non-lethal impact from these activities on nesting birds is considered minor. In addition, habitat restoration and invasive plant and animal control benefit many nesting birds by improving habitat and reducing potential predators or competing species in the HCP area. The habitat monitoring system also benefits nesting birds by providing additional information on nesting bird species and distribution in the HCP area. This trend is expected to continue in the future.

Park Maintenance

Campground maintenance (CA-20), General Maintenance Activities (CA-21), Trash Control (CA-22), Wind Fencing (CA-23), Sand Ramp/Other Vehicle Access (CA-24), Street Sweeping (CA-25), Perimeter and Vegetation Island Fencing (CA-27), Cable Fence Maintenance/Replacement (CA-28), Heavy Equipment Response (CA-29), Minor Grading (CA-30), and Boardwalk/Other Pedestrian Maintenance (CA-31). The activities occur by CDPR staff who are trained in avoidance and minimization protocols. Trash control, street sweeping, wind fencing, perimeter fencing, cable fencing, heavy equipment response, minor grading, and boardwalk/pedestrian maintenance, and general facilities maintenance generally occur in open sand areas or within developed areas of the park, where only common, urban adapted species are known to nest. Lethal impacts to nesting bird species from these activities don't occur since trees

and other structures where birds nest are not removed by these activities. Therefore, the lethal impact from these activities is negligible. This trend is expected to continue in the future.

Some ground nesting birds are known to nest in the HCP area, including California horned lark and killdeer. Ground nesting birds are sensitive to disturbance and are not known to nest in areas of high recreational or vehicle activity. However, vegetation island fencing occurs in suitable habitat for these species away from recreation activities and can result in destruction of a ground nesting bird nest during the breeding season. As part of the natural resource management program, precautions for SNPL and CLTE are taken when driving in areas where SNPL or CLTE could nest that also protect other ground nesting birds in these areas. In addition, as part of their standard practice, CDPR conducts a nesting bird survey prior to conducting the activity if any activities are determined by a CDPR Environmental Scientist to have potential to impact nesting birds. If a nest is observed, activities are delayed until appropriate AMMs are in place. AMMs include establishing a no disturbance buffer, as determined by a qualified biologist, and/or conducting biological monitoring. As a result, this lethal impact is minor. This trend is expected to continue in the future.

All of these activities, when conducted during the breeding season, can disturb nearby nesting birds and deter them from incubating eggs or chicks during the period of disturbance. These activities can also disturb foraging birds by displacing them from foraging habitat during the period of disturbance and/or deter them from foraging during the period of disturbance. However, any activities, are relatively short in duration. In addition, as part of their standard practice, CDPR conducts a nesting bird survey prior to conducting the activity if any activities are determined by a CDPR Environmental Scientist to have potential to impact nesting birds. If a nest is observed, activities are delayed until appropriate AMMs are in place. AMMs include establishing a no disturbance buffer, as determined by a qualified biologist, and/or conducting biological monitoring. As a result, the non-lethal impact from these activities on nesting birds is considered minor. This trend is expected to continue in the future.

Routine Riparian Maintenance (CA-26). Riparian maintenance activities only impact riparian or aquatic nesting birds, including special-status species least bittern and yellow warbler. Riparian maintenance activities can result in destruction of a bird nest if they are present within the work area. Riparian maintenance activities can also disturb nearby nesting birds and drive adult birds from the nest and, ultimately, lead to neglect or abandonment of eggs or chicks. However, riparian maintenance activities generally occur outside the recognized nesting season and if they are within the nesting season, the Streambed Alteration Agreement (1600-2012-0001-R4) lays out pre-project survey requirements. If a nesting birds is found, a buffer zone is required around the nest until the young have fledged. With implementation of this project requirement, the non-lethal impact on nesting birds is minor. This trend is expected to continue in the future.

Visitor Services

Ranger, Lifeguard, Park Patrols (CA-32), Emergency Response (CA-33), Access by Non-CDPR Vehicles (CA-34), ASI Courses (CA-35), Beach Concessions (CA-36), Pismo Beach Golf Course operations (CA-37), and Natural History/Interpretation (CA-39). Many of these activities, including CA-32, CA-33, CA-34, CA-35, CA-36, and CA-37 occur in areas of high disturbance where only common, urban adapted species nest. Natural history/interpretation (CA-39) occurs in areas of the park where other birds, including riparian birds and waterbirds are known to nest.

Lethal impacts to nesting species do not occur from these activities since trees and other structures, where birds are known to nest, are not removed by these activities. Therefore, the lethal impact from these activities is negligible. This trend is expected to continue in the future.

These activities and associated vehicle travel during the breeding season can disturb nesting birds and deter them from incubating eggs or chicks during the period of disturbance. These activities can also disturb foraging birds by displacing them from foraging habitat during the period of disturbance and/or deter them from foraging during the period of disturbance. However, any activities, including, but not limited, vehicle travel to the beach concessions, vehicle travel and park patrol stops, and emergency response are relatively short in duration and last only the period of time that a vehicle travels through. In addition, natural history/interpretation programs are conducted by CDPR staff trained to identify nesting bird behavior and are conducted away from areas where birds nest. As a result, the non-lethal impact from these activities on nesting birds is considered minor. This trend is expected to continue in the future.

Medevac helicopters are sometimes used in the HCP area during emergencies. Medevac helicopters flying low over or landing within the HCP area can cause significant disturbance to nesting birds. The noise from the helicopter can be highly disruptive to nesting birds and the helicopter itself could be seen as a threat, especially to nesting raptors. Adults may flush from the nest and leave the eggs unattended, and wind generated by the rotors may move enough sand to bury any ground nests in the area. Nests or chicks can also be abandoned if the adult is disturbed enough it does not return to the nest or chicks. In addition, helicopters can lead to increased vigilance in adults which could lead to them being energetically stressed or to reduced foraging. However, helicopter activity in the HCP area is a sporadic event; therefore, this non-lethal impact is rarely (if ever) expected to occur and is minor. This trend is expected to continue in the future.

Other Activities

Vehicle Crossing of Creeks (CA-40). Vehicle crossing of creeks occurs close to the shore where birds do not nest. A vehicle crossing a creek can injure or kill an adult or juvenile, or chick (if precocial) foraging in the area. This has not been documented in the HCP area but may be difficult to observe. However, it is unlikely that an individual is struck by a vehicle crossing a creek since few nesting birds in the HCP area forage for long periods within the portion of the creek crossed by vehicles and vehicles crossing creeks are expected to follow the posted speed limits. In addition, most foraging birds typically fly out of harm's way. Vehicles crossing creeks can also disturb foraging birds by displacing them from foraging habitat during the period of disturbance and/or deter them from foraging during the period of disturbance. However, most vehicle crossings are expected to be temporary and short in duration. As a result, lethal and non-lethal impacts from vehicles crossing creeks in the HCP are considered minor. This trend is expected to continue in the future.

Dust Control Activities (CA-44). Dust control activities do not impact aquatic or riparian nesting birds, since these activities do not occur in aquatic or riparian habitat. Dust control activities can result in destruction of a bird nest if they are present within the work area. Dust control activities can also disturb nearby nesting birds and drive adult birds from the nest and, ultimately, lead to neglect or abandonment of eggs or chicks. However, dust control activities already require pre-construction surveys for nesting birds from February 1 to August 15 in accordance with the Oceano Dunes SVRA Dust Control Program MMRP (CDPR 2017). If a nesting birds is found, a

buffer zone is established around the nest until the young have fledged. With implementation of this project requirement, impact on nesting birds is minor. Impacts from future dust control activities are discussed in EIR section 6.4.1.7.

Planting vegetation associated with dust control activities within the HCP area can reduce available suitable nesting habitat for some ground nesting birds, including California horned lark, by decreasing the amount of bare ground. However, California horned lark is thought to be an uncommon nester in the HCP area. As a result, the habitat impacts are minor. Impacts from future dust control activities are discussed in EIR section 6.4.1.7.

Cultural Resources Management (CA-45). Cultural resource management activities typically occur within open sand areas, although can occur anywhere in the HCP area except aquatic habitat. Since cultural resource management activities do not occur in aquatic habitat, they do not impact riparian or aquatic nesting birds. Cultural resource management activities do not directly impact any trees or vegetation. As a result, lethal impacts to nesting birds do not occur. This trend is expected to continue in the future.

Testing, data recovery, stabilization, or restoration of a cultural resource site during the breeding season, can result in disturbance to nesting individuals during the breeding nearby the cultural resource work area. As part of their standard practice, CDPR conducts a nesting bird survey prior to conducting the activity if any activities are determined by a CDPR Environmental Scientist to have potential to impact nesting birds. If a nest is observed, activities are delayed until appropriate AMMs are in place. AMMs include establishing a no disturbance buffer, as determined by a qualified biologist, and/or conducting biological monitoring. Therefore, the non-lethal impact of these cultural resource management on nesting birds is minor. This trend is expected to continue in the future.

CDPR Ag Land Management (CA-46) and Bioreactor Maintenance on Ag Land (CA-47). Activities in agricultural lands do not impact nesting birds.

Use of Pesticide (CA-51). This activity occurs by CDPR staff who are trained in avoidance and minimization protocols. Nesting birds can be impacted by drift from herbicide. However, as part of the natural resource management program in the HCP area, measures are implemented to reduce impacts from drift, which include not spraying if wind speed is over 10 miles per hour and ensuring all workers are trained to work in sensitive habitat. In addition, best management practices are implemented when applying pesticides. Pesticides used in the HCP area do not result in lethal impacts to nesting birds.

Pesticide application can result in disturbance of nesting birds and nesting birds can be deterred from incubating eggs or brooding chicks. However, as part of their standard practice, conducts a nesting bird survey prior to conducting any ground herbicide application activity if any activities are determined by a CDPR Environmental Scientist to have potential to impact nesting birds. If a nest is observed, activities are delayed until appropriate AMMs are in place. AMMs include establishing a no disturbance buffer, as determined by a qualified biologist, and/or conducting biological monitoring. Helicopters sprayers flying within the HCP area can cause significant disturbance to nesting birds. The noise from the helicopter can be highly disruptive to nesting birds and the helicopter itself could be seen as a threat, especially to nesting raptors. Adults may flush from the nest and leave the eggs unattended. However, helicopter spraying is not conducted within 200 feet of a riparian area or wetland; therefore, riparian nesting birds are not impacted. In addition, helicopter application is conducted infrequently and can be conducted quickly (e.g., 90 acres in about 2.5 hours); therefore, any disturbance from helicopters is infrequent and short in

duration. Overall, non-lethal impacts from pesticides are minor. Ultimately, pesticide use in the HCP area is beneficial to many nesting birds by reducing the spread of invasive plant species into breeding habitat. This trend is expected to continue in the future.

Bats

The existing risk of impact to bats, including special-status species such as pallid bat, Townsends' big-eared bat, western red bat, and common bat species, from covered activities is summarized in EIR Table 6-4.

Existing park operations including recreation, natural resources management, park maintenance, visitor services, and other existing activities can impact roosting and/or foraging bats. Most impacts, if any, occur near wooded or aquatic areas and do not result in injury or mortality of bats. As a result, only activities that occur within in these areas are discussed further. Bats can be disturbed by activities in the HCP area; however, disturbance to roosting or foraging bats is uncommon in the HCP area since most activities do not occur at night when bats are most active and are out in the open, and any disturbances are typically temporary and short in duration. As a result, impact to foraging or wintering bats within the HCP area is negligible or minor, depending on the duration, timing, and location of the activity. In addition, some activities have beneficial impacts on foraging and roosting bats, including invasive plant and animal control (CA-17), habitat monitoring system (CA-18), water quality monitoring (CA-19), and pesticide use (CA-51) since they provide important information on bat activity in the HCP area and/or improve the quality of foraging and roosting habitat.

Existing covered activities with the greatest potential to impact bats are discussed further below.

Park Visitor Activities

Motorized Recreation (CA-1) and Camping (CA-2). Motorized recreation and camping are allowed within the HCP area 24 hours per day. Therefore, these activities can impact foraging and/or roosting bats, including by striking foraging bats. Motorized recreation and camping are not known to have injured or killed bats since bats are typically flying over water to forage and/or roosting in trees and are not typically susceptible to vehicle strike. Therefore, this lethal impact is negligible. This trend is expected to continue in the future.

Bats are particularly susceptible to perturbations from human activities which have contributed to the decline in several species. Disturbance from recreation during hibernation and rearing can result in roost abandonment. Noise associated with overnight camping and nighttime motorized activity can lead to roost abandonment and exposure. Introducing sources of light and glare from camping and/or motorized recreation at night could disrupt bats and deter them from normal foraging and/or mating behavior or disrupt normal circadian/hibernation cycles). Lights in unpopulated areas could also affect the ability of bats and many insects (i.e., bat prey) to navigate at night indirectly leading to increased stress and/or mortality. The specific disturbance related impacts to bats in the HCP area from motorized recreation and camping are not known; however, the non-lethal impacts to bats is considered minor to moderate depending on the location and timing. This trend is expected to continue in the future.

Holidays (CA-10) and Special events (CA-11). Potential impacts to bats from visitor activities may be exacerbated during periods of high visitor use, such as holidays (CA-10) or special events (CA-11). As a result, non-lethal impacts from holidays and special events on bats is moderate. This trend is expected to continue in the future.

Park Maintenance

Routine Riparian Maintenance (CA-26). Routine riparian maintenance activities last for several hours or several days. Maintenance activities associated with the removal of trees can kill or injure bats. However, as part of their standard practices, CDPR conducts pre-construction surveys for bat roosts, as necessary, prior to the removal of any trees to avoid harm and injury to bats. If a roost is observed during the pre-construction survey or during riparian maintenance activities, activities are delayed until the appropriate AMMs are in place. AMMs can include postponing the removal of trees, establishing buffers around roost sites, or exclusion of bats from the roost site. As a result, lethal impacts to roosting bats are minor. This trend is expected to continue in the future.

Riparian maintenance activities can also temporarily displace foraging bats, altering their normal behavior patterns and/or flush foraging and/or roosting bats from optimal habitat to less suitable habitat. These impacts are typically temporary and short in duration and last only the time of the riparian maintenance activity. As a result, non-lethal impacts from routine riparian maintenance on bats is minor. This trend is expected to continue in the future.

American Badger

American badgers are known to occur in the HCP area; however, due to their secretive behavior, very little is known about the American badger in the HCP area. To date, American badger is known to occur in the vegetation islands and Phillips 66 leasehold within the HCP area. Overall, American badger is most likely to use areas that are further away from urban areas and connected to other open space habitat.

Although little is known about American badger in the HCP area, this section discusses potential impacts that could occur if an American badger is present. The existing risk of impact to American badger from covered activities is summarized in EIR Table 6-4. Because American badger has only infrequently been observed in the HCP area, these impacts are thought to be unlikely, but possible.

Existing covered activities occurring outside of American badger habitat and/or have no or negligible risk of impacts on American badger and are not further discussed. Existing covered activities with no impact to American badger include bicycling and golfing (CA-4), fishing (CA-5), dog walking (CA-6), equestrian recreation (CA-7), boating/surfing (CA-8), aerial/wind driven activities (CA-9), special events (CA-11), SNPL and CLTE management (CA-12a and 12b), tidewater goby and salmonid surveys (CA-13), CRLF surveys and management (CA-14), water quality and monitoring (CA-19), campground maintenance (CA-20), general facilities maintenance (CA-21), trash control (CA-22), wind fencing (CA-23), sand ramp/other vehicle access (CA-24), street sweeping (CA-25), routine riparian maintenance (CA-26), cable fence maintenance and replacement (CA-28), boardwalk/other pedestrian maintenance (CA-31), ranger, lifeguard, and park patrols (CA-32), access by non-CDPR vehicles (CA-34), ASI courses (CA-35), beach concessions (CA-36), Pismo Beach Golf Course operations (CA-37), natural history/interpretation (CA-39), vehicles crossing creeks (CA-40), CDPR ag land management (CA-46), and bioreactor maintenance (CA-47).

Some activities have beneficial impacts on American badger, including habitat restoration program (CA-16), invasive plant and animal control (CA-17), habitat monitoring system (CA-18), and pesticide use (CA-51) since they provide important information on badger activity in the HCP area and/or improve the quality of habitat.

Existing covered activities that can impact American badger are described below and are part of the baseline environmental setting.

Park Visitor Activities

Motorized Recreation (CA-1), Camping (CA-2), Pedestrian Activities (CA-3), and Holidays (CA-10). Recreation activities are not permitted in the Phillips 66 Leasehold; therefore, American badgers in this area are not impacted by these park visitor activities. In addition, motorized recreation and camping are generally limited to the open sand beaches and dunes in the HCP area. American badger tracks have been observed in areas open to vehicles one time. Although unlikely, if a badger does use an area open to vehicles to move from one location to another or to forage, it could be injured or killed by a vehicle or disturbed by the noise from vehicle or camping activity. Since badgers do not typically occur in open beach or dune areas, these lethal and non-lethal impacts are negligible. This trend is expected to continue in the future.

American badgers are sensitive to repeated human activities, particularly actions that alter soil integrity. Repeated human visitation associated with recreation activities in the HCP area in areas where American badger can affect the routine behavior of American badgers and ultimately result in den abandonment. In addition, pedestrians in the project area could destroy American badger dens if they are located within the dune vegetation or vegetation islands where pedestrians can walk. However, American badgers are uncommon in the HCP area and most likely avoid areas where recreation is allowed. As a result, this non-lethal impact is considered minor. This trend is expected to continue in the future.

Natural Resources Management

Listed Plant Management (CA-15), Habitat Restoration Program (CA-16), Invasive Plant and Animal Control (CA-17), and Habitat Monitoring System (CA-18). Lethal impacts to American badger from these activities has never been documented and is unlikely to occur. Listed plant management, habitat restoration, habitat monitoring, and invasive plant and animal control activities in the Phillips 66 Leasehold or vegetation islands could result in disturbance to American badger and ultimately result in den abandonment if they are present within or near the work area. As part of CDPR's standard practice, pre-construction surveys are conducted, as determined to be necessary by CDPR Environmental Scientist staff, prior to conducting listed plant management, habitat restoration, habitat monitoring, or invasive plant management in suitable habitat (e.g., areas where American badger or badger dens have been observed previously) to avoid disturbance to American badger. If an individual is observed during the pre-construction survey, activities are delayed until the individual has moved from the area or until appropriate AMMs are in place (e.g., a no disturbance buffer). With implementation of this measure, the non-lethal impacts on American badger is considered minor. Overall, habitat restoration and invasive plant and animal control creates additional vegetated and/or cover habitats for American badger is, therefore, beneficial to this species. In addition, the Habitat Monitoring System has beneficial impacts on this species by providing useful information on the species distribution and habitat in the HCP area. This trend is expected to continue in the future.

Park Maintenance

Perimeter and Vegetation Island Fencing (CA-27), Heavy Equipment Response (CA-29), and Minor Grading (CA-30). Lethal impacts to American badger from these activities has never been documented and is unlikely to occur. Vegetation island and perimeter fencing occur adjacent to vegetation islands, which is considered suitable habitat for American badger. Installation and

maintenance of vegetation island fencing and/or perimeter fencing and any grading or heavy equipment use associated with these activities could disturb American badger if they are present nearby. Vegetation island and perimeter fencing occurs within areas open to recreation activities, including motorize recreation. Because they are highly sensitive to disturbance, no American badgers have been observed in the open riding area or other areas open to recreation and American badger tracks have only been observed one time in the open riding area. As a result, the non-lethal impact on American badger is considered negligible. This trend is expected to continue in the future.

Visitor Services

Emergency Response (CA-33). CDPR emergency responders sometimes have to travel quickly throughout the HCP area; however, emergency responders very rarely travel through vegetated areas. Therefore, American badger have not been documented as being struck by emergency vehicles and dens have not been observed being crushed by emergency vehicles. As a result, this lethal impact is considered negligible. This trend is expected to continue in the future.

If emergency occurs adjacent to a vegetation island or other areas where American badger could occur, it can be highly disruptive to American badger. However, such events are rare and do not occur in most years. In addition, emergency response typically occurs quickly. Due to event infrequency and short-term duration of disturbance, the non-lethal impact of these covered activities is considered minor. This trend is expected to continue in the future.

Other Activities

Dust Control Activities (CA-44). Dust control already occurs in the HCP area in accordance with the Dust Control Program EIR. Dust control activities can crush an American badger den or result in disturbance to American badger if they are present within or near the work area and ultimately result in burrow abandonment and relocation. However, dust control activities require pre-work surveys for American badger and American badger dens no more than 7 days prior to installation of project features. If dens are found, a 100-foot buffer zone is required. As a result, lethal and non-lethal impacts on American badger within the HCP area are minor.

Planting vegetation associated with dust control activities within the HCP area may reduce available suitable foraging or denning habitat for American badger by installing dust control measures such as wind fencing. However, dust control activities are thought to have an overall beneficial impact by increasing the amount of vegetation and, thus, suitable habitat for American badger in the HCP area. Impacts from future dust control activities are discussed in EIR section 6.4.1.8.

Cultural Resource Management (CA-45). Cultural resource management activities typically involve minimal disturbance and do not typically require ground disturbance. As a result, lethal impacts to American badger are considered negligible. This trend is expected to continue in the future.

Should a cultural resource site be located in suitable American badger habitat, testing, data recovery, stabilization, or restoration of the site can disturb individuals within or near the cultural resource work area. However, any disturbance is temporary and short in duration and American badger are typically not present in these areas. As a result, this non-lethal impact is considered minor. This trend is expected to continue in the future.

Pesticide Use (CA-51). Pesticides used in the HCP area do not result in lethal impacts to American badger. Ground pesticide application does not occur in areas where American badger

typically occur (e.g., Phillips 66 Leasehold). Aerial spraying could disturb American badger since it is conducted in the backdunes and Phillips 66 Leasehold where American badgers are more likely to occur. Specifically, aerial spraying has the potential to flush American badger from dens or other cover. However, helicopter application is conducted infrequently and can be conducted quickly (e.g., 90 acres in about 2.5 hours). As a result, non-lethal impacts from helicopter are short term in duration. Overall, pesticide use benefits American badger by improving habitat for American badger in the HCP area.

Special-Status Plant Species

Existing covered activities are ongoing visitor use or park operation activities occurring within the HCP area. No changes to these activities are proposed by the HCP, therefore, the proposed project would have no new impact generated by these activities. Effects to special-status plant species from these activities are existing environmental conditions.

Impacts to HCP covered special-status plant species (i.e., marsh sandwort [*Arenaria paludicola*], surf thistle [*Cirsium rhothophilum*], beach spectaclepod [*Dithyrea maritima*], La Graciosa thistle [*Cirsium scariosum* var. *loncholepis*], Nipomo Mesa lupine [*Lupinus nipomensis*], and Gambel's watercress [*Nasturtium gambelii*]) from covered activities are described in the HCP section 4.7. The risk of impact to these six HCP covered plant species as well as 19 additional special-status plants potentially impacted by existing HCP covered activities is summarized in EIR Table 6-5. Although the remaining 19 special-status species are not covered by the HCP, some of these species are expected to directly benefit from the HCP's conservation program for listed species through the implementation of AMMs for covered activities if they occur in areas where covered species are known to occur. Specifically, Blochman's groundsel (*Senecio blochmaniae*), Bochman's leaf daisy (*Erigeron blochmaniae*), California spineflower (*Mucronea californica*), coastal goosefoot (*Chenopodium littoreum*), Nuttall's milkvetch (*Astragualus nuttallii* var. *nuttalli*), dune larkspur (*Delphinim parryi* ssp. *blochmaniae*), crisp monardella (*Monardella undualata* ssp. *undulata*), dunedelion (*Malacothrix incana*), fuzzy prickly phlox (*Linanthus californicus*), red sand verbena (*Abronia maritima*), suffrutescent wallflower (*Erysimum suffrutescens*), southern spiny rush (*Juncus acutus* ssp. *leopoldii*), Monterey coast paintbrush (*Castilleja latifolia*), sand almond (*Prunus fasciculata* var. *punctata*), San Luis Obispo monardella (*Monardella undulata* ssp. *undulata*), and Douglas' spineflower (*Chorizanthe douglasii*) occur in the same coastal dune and foredune habitat as surf thistle, Nipomo Mesa lupine, and/or beach spectaclepod. AMMs that protect special-status plant species include, but not are limited to, installation of protective fencing (Listed Plant AMM-2), closure of informal trails (Listed Plant AMM-3), habitat restoration (Listed Plant AMM-4), water quality monitoring (Listed Plant AMM-10), and invasive plant control (Listed Plant AMMs 15 through 22). A description of the Listed Plant AMMs can be found in HCP section 5.3.

Existing covered activities occurring outside of special-status plant species habitats and/or that have no risk of impacting special-status plant species are dismissed from further discussion. Covered activities that have no impact on special-status plant species include bicycling and golfing (CA-4), surfing (CA-8), aerial/wind driven activities (CA-9), water quality monitoring projects (CA-19), campground maintenance (CA-20), street sweeping (CA-25), American Safety Institute courses (CA-35), Pismo Beach Golf Course operations (CA-37), motorized vehicle crossing of Pismo/Carpenter, Arroyo Grande Creek, and Oso Flaco Creeks (CA-40), CDPR management of agricultural lands (CA-46), and maintenance of a bioreactor on agricultural lands (CA-47).

Existing covered activities that can impact special-status plants are described below and are part of the baseline environmental setting.

Park Visitor Activities

Motorized vehicle recreation (CA-1) and Camping (CA-2). Motorized recreation already occurs in the HCP area year-round on a daily basis within areas open to motorized recreation. A portion of the open riding is closed to motorized recreation from March 1 through September 30 during the SNPL and CLTE breeding season. Impacts on special-status plants due to motorized recreation in the past have been difficult to assess and have not been documented in the open riding area. Direct impacts to special-status plants in the vegetation islands are not known to occur since these areas are fenced off and motorized recreation is prohibited from entering these areas. In general, areas open to motorized recreation (and areas where most non-designated camping occurs) almost entirely consist of bare sand and are not known to contain special-status plant species. Although unlikely, some special-status plant species including, but not limited to, Blochman's groundsel, Bochman's leaf daisy, California spineflower, coastal goosefoot, crisp monardella, dunedelion, fuzzy prickly phlox, red sand verbena, and suffrutescent wallflower, could occur within sand dune areas and/or areas with sparse vegetation open to motorized recreation and may go undetected. If special-status plant species occur in the areas where motorized recreation is allowed, these activities can crush or destroy special-status plant species individuals. However, the direct impact on special-status plant individuals is considered to be negligible due to lack of occurrences and lack of suitable habitat in those areas. This trend is expected to remain the same in the future.

Indirect impacts to special-status plants due to motorized recreation in the past have been difficult to assess and have not been documented in the open riding area. Numerous special-status plant species including Blochman's groundsel, Bochman's leaf daisy, southern spiny rush, Monterey coast paintbrush, Douglas' spineflower, crisp monardella, dunedelion, red sand verbena, and suffrutescent wallflower have been observed in the vegetation islands throughout the open riding area. Motor vehicles are known to inadvertently spread invasive plants (e.g., on tires) by moving seeds or plant segments if they move from one place with invasive species to a less impacted area. Therefore, motorized recreation adjacent to vegetation islands can introduce invasive plants that compete with special-status plants in the area. As a result, motorized recreation indirect impacts on special-status plant individuals adjacent to motorized activities is minor. This trend is expected to continue in the future.

Motorized vehicles recreation and camping degrades or modifies potentially suitable habitat for special-status plant species that might otherwise occur in sparsely vegetated or coastal dune habitat, including listed plant species such as surf thistle and beach spectaclepod, and prevents these species from establishing within the foredunes. As a result, motorized recreation has likely kept some special-status plants from growing in the open riding area and; therefore, has had a moderate impact on special-status plant species habitat within areas open to recreation. This trend is expected to continue in the future.

Pedestrian activities (CA-3), Dog walking (CA-6), Equestrian recreation (CA-7), Holidays (CA-10), and Special events (CA-11). Pedestrians are allowed with the HCP area 24 hours a day and the HCP area has had up to 670,000 day use visitors in a year. Impacts to special-status plants due to pedestrian recreation in the past have been difficult to assess and have not been documented in the HCP area. Pedestrians are allowed within the vegetation islands and the Oso Flaco area where motorized vehicles are not allowed. Special-status plants have been

documented in the vegetation islands and Oso Flaco area. In general, pedestrians walking through areas where special-status plants can occur may trample special-status plant individuals in these areas and disturb their habitat. Pedestrians can also inadvertently facilitate the spread of invasive species (e.g., on shoes or clothing) by moving seeds or plant segments if they move from one place with invasive plants to a less impacted area. Invasive species could outcompete special-status plant species. Impacts to special-status plants from visitor activities may be exacerbated during periods of high visitor use, such as holidays (e.g., July 4). To reduce impacts to special-status plants, fencing is installed around vegetation islands, which often deters pedestrians from entering and trampling special-status plant species in the vegetation islands. In addition, informal trails within known special-status plant habitat are also closed and restored to pre-trail conditions. Vegetation in many of the vegetation island areas is also dense and pedestrians typically do not walk through vegetated areas. The seasonal exclosure is also in place during the typical blooming period for many special-status plants in the open riding area and/or Oso Flaco, including, but not limited to, surf thistle and beach spectaclepod, and, thus, prohibits pedestrians from entering these areas and trampling special-status plant species. As a result, direct and indirect impacts to special-status plants from pedestrian activities are considered to be minor. This trend is expected to continue in the future.

Dogs (other than service dogs) are not allowed in the Dunes Preserve or Oso Flaco area. Therefore, special-status plant species in these areas are not be impacted by dogs. Impacts to special-status plants in areas where dogs are allowed are similar to pedestrian activities (described above) since all dogs are required to be kept on a leash and with their owner at all times. As a result, direct and indirect impacts to special-status plants from dogs are considered to be minor. This trend is expected to continue in the future.

Impacts to special-status plants due to equestrian recreation in the past have been difficult to assess and have not been documented in the HCP area. Equestrians activity typically occurs the northern HCP area including beaches and trails at Pismo State Beach and the Dunes Preserve. Equestrians traveling through the Dunes Preserve can disturb designated La Graciosa thistle critical habitat, as well as suitable habitat for other special-status plant species in this area. In addition, although unlikely, equestrian recreation in bare sand could impact special-status plant species that might grow in these areas (see CA-1 above). Equestrians travelling through areas where special-status plants are present could trample or crush individuals. However, to date, equestrians travelling through these areas typically stay on sandy trails where special-status plant species do not occur and rarely travel off-trail. As a result, direct and indirect impacts from equestrians are considered negligible. This trend is expected to continue in the future.

Fishing (CA-5) and Boating (CA-8). Fishing and boating are allowed within the HCP area year-round. Shore fishing and boating within the ocean do not impact special-status plant species since these activities occur on the wet sand subject to tidal flows and/or the ocean where no suitable habitat for special-status plant species is present. Fishing and non-motorized boating does occur within Oso Flaco Lake where special-status plant species, including marsh sandwort, La Graciosa thistle, and Gambel's watercress are known to or have potential to occur. Impacts on special-status plants from fishing and boating in Oso Flaco Lake are not known. In general, people fishing along the lake shoreline and/or launching boats from the lake shoreline can trample special-status plant individuals in these areas. In addition, people and boats can inadvertently facilitate the spread of invasive species (e.g., on shoes, clothing, or boats) by moving seeds or plant segments if they move from one place with invasive plants to a less impacted area. Invasive species can outcompete special-status plant species. Fish consumption

advisories are posted at Oso Flaco Lake due to high levels of pesticides. As a result, fishing in Oso Flaco Lake is not a regular activity. In addition, marsh sandwort, Gambel's watercress, and La Graciosa thistle are not known to occur in areas where fishing boats typically enter the water or along the shoreline areas where visitors might fish. As a result, direct and indirect impacts from fishing and boating on special-status plants are considered to be minor. This trend is expected to continue in the future.

Natural Resources Management

SNPL and CLTE management (CA-12a and 12b), Tidewater goby and salmonid surveys (CA-13), CRLF surveys and management (invasive species control) (CA-14). SNPL and CLTE management already occur within the HCP area on a daily basis during the breeding season from March 1 through September 30. In addition, regular monitoring for wintering SNPL occurs during the non-breeding season from October 1 through February 29. Tidewater goby and salmonid surveys already occur approximately four times per year in Arroyo Grande Creek and lagoon and at least annually in Pismo Creek and lagoon/Carpenter Creek and Oso Flaco Creek. Finally, CRLF surveys occur multiple times per year between January and September, including numerous daytime and nighttime surveys. Impacts on special-status plants from these activities are similar to those described above for pedestrian activities (CA-3) and/or fishing (CA-5) since CDPR staff enter areas, including vegetation islands and Oso Flaco Lake and/or Oceano (Meadow Creek) Lagoon, where special-status plants are known to or could occur. However, CDPR staff are trained in avoidance and minimization protocols and are aware of the locations of known special-status plant species. As a result, these activities are considered to have a negligible direct and indirect impact on special-status plants. This trend is expected to continue in the future.

Listed plant monitoring and habitat enhancement (CA-15), Habitat restoration program (CA-16), and Invasive plant and animal control (CA-17), and Habitat Monitoring System (HMS) implementation (CA-18). CDPR already manages and restores vegetation in areas occupied or potentially occupied by listed plant species to benefit these and other native species, including other special-status plant species. These management measures include controlling invasive plant species, restoring foredune and dune scrub habitat that has been overwhelmed by invasive plant species, and monitoring listed plant species populations, including response of the listed plant species to habitat restoration. Impacts from pesticide use are described in Pesticide Use (CA-51).

Areas occupied by marsh sandwort, Gambel's watercress, and Nipomo Mesa lupine do not receive prescribed fire treatments and, therefore, are not affected by prescribed fire activities. Prescribed fire is currently used infrequently in the HCP area to manage invasive plant species in the foredunes and could present a threat to special-status plants, including, but not limited to, beach spectaclepod, surf thistle, La Graciosa thistle, Blochman's groundsel, Bochman's leaf daisy, southern spiny rush, Monterey coast paintbrush, Douglas' spineflower, crisp monardella, dunedelion, red sand verbena, suffrutescent wallflower found within foredune habitat. While conducting prescribed fire activities, special-status plants could be damaged or burned, despite best efforts to exclude the fire from the occupied special-status plant habitat. In addition, a special-status plant could be accidentally broken or trampled during any activities within occupied habitat. To reduce these impacts, CDPR implements Listed Plant AMMs 11 through 14, including establishing a fire line of mineral soils around known populations of special-status plant species and a trained botanist remains on-site during all fire activities. In addition, heavy equipment, including fire engines, are required to stay out of known sensitive habitat and locations for the placement and staging of heavy equipment are clearly marked on a map. As a

result, direct impacts from fire treatments are considered to be negligible. This trend is expected to continue in the future.

Yearly vegetation planting for habitat restoration can directly affect special-status plant species, including by trampling individuals during vegetation planting activities. However, vegetation is not planted directly in areas known to be occupied by special-status plants and is instead planted primarily in bare sand areas adjacent to existing vegetated areas, including vegetation islands, where special-status plants are less likely to occur. As a result, the risk of these activities damaging existing special-status plant populations is low. Restoration projects are also designed to match the existing plant community composition in the area to ensure that additional species planted are compatible with special-status plant species and that any additional species will not out compete existing special-status plant species. CDPR also implements Listed Plant AMMs 7 through 9, as appropriate. As a result, direct impacts from habitation restoration are negligible. This trend is expected to continue in the future.

The greatest threats during invasive plant and animal control activities are trampling and physical disruption to special-status plants while manually removing invasive vegetation. CDPR implements AMMs 15 through 22, as appropriate, including conducting pre-project surveys, implementing buffer zones, and using hand pulling methods are utilized, as necessary, to avoid any unnecessary impacts. In addition, biological monitors are present at all phases of the work to ensure that precautions and prohibitions regarding avoiding damage to special-status plant species are observed. The biological monitor can also stop work if unanticipated damage to special-status plant species occurs. As a result, direct impacts from invasive plant and animal control are negligible. This trend is expected to continue in the future.

Overall, monitoring, invasive species removal, and habitat restoration activities provide a net benefit for the listed plants and other native special-status plant species by removing invasive weedy species and thereby reducing competition from these species for space, light, water, and nutrients, as well as by providing additional suitable habitat for special-status species throughout the HCP area.

Park Maintenance. General Facilities Maintenance (CA-21), Trash control (CA-22), Wind fencing installation, maintenance, and removal (CA-23), Sand ramp and other vehicular access maintenance, including roadway resurfacing (CA-24), Cable fence maintenance and sand movement (CA-28), and Minor grading (less than 50 cubic yards) (CA-30). These activities already occur regularly within the HCP area. Impacts from these activities are similar to those described for motorized vehicle (CA-1) described above, especially since these activities occur on open sand beach. As a result, direct and indirect impacts are considered to be negligible to minor. This trend is expected to continue in the future.

Routine riparian maintenance (CA-26). Riparian habitat at the Oso Flaco Lake causeway, parking lot, and boardwalk; Meadow Creek access road, ranger station, and maintenance yard; Meadow Creek and Carpenter Creek, Pismo Lake, and Oceano Lagoon is maintained regularly. Routine riparian maintenance already occurs regularly in the HCP area and has not resulted in the loss of special-status plant species to date. Special-status plants, including marsh sandwort and Gambel's watercress are, however, known to occur at some or all of the routine riparian maintenance locations. Therefore, riparian maintenance can directly impact special-status plant species if they occur in an area designated for maintenance activities. However, CDPR implements AMM 23 as a part of conducting riparian maintenance, which requires conducting pre-activity surveys annually prior to commencing activities, flagging any observed special-

status plants, and avoiding flagged areas. As a result, direct impacts from routine riparian maintenance on special-status plants are negligible.

To date marsh sandwort and/or Gambel's watercress have not been observed within the Oso Flaco Lake culvert. However, the possibility still exists that either marsh sandwort or Gambel's watercress could be attached to plants or root balls that are clogging the culvert at Oso Flaco Lake. Should this happen, it will require the individual(s) to be removed from the culvert. Every effort will be made to identify special-status plants before removal of vegetation in the culvert occurs to allow the opportunity to salvage the plant by moving it to another location. Although marsh sandwort or Gambel's watercress will be salvaged if possible, some individuals could be destroyed. However, any special-status plant left in the culvert will likely be damaged anyway due to high winter flows. As a result, any Gambel's watercress or marsh sandwort individuals that are blocking the culvert will be lost regardless of culvert maintenance activities. Therefore, direct impacts from culvert maintenance at Oso Flaco Lake on special-status plants are minor.

Perimeter and vegetation island fence installation, maintenance, and removal (CA-27). Perimeter and vegetation island fence are currently present in the HCP area and need to be maintained or replaced on regular basis to ensure their integrity. Numerous specials-status plant species including Blochman's groundsel, Bochman's leaf daisy, southern spiny rush, Monterey coast paintbrush, Douglas' spineflower, crisp monardella, dunedelion, red sand verbena, and suffrutescent wallflower have been observed in the vegetation islands throughout the HCP area. Although unlikely, special-status plant species could be crushed or destroyed individuals during installation or maintenance of vegetation island fencing or perimeter fencing near vegetated areas, especially if the fencing encroaches on existing vegetation. However, as part of CDPR's standard practices, a pre-activity clearance survey is conducted, if determined to be necessary by CDPR Environmental Scientist staff, prior to installing or maintaining the fence to ensure special-status species are not present in the work area. If a special-status plant species is observed during the pre-activity survey, they are flagged and/or fenced and avoided during covered activities. As a result, direct impacts to special-status plant species from perimeter and vegetation island fence installation and maintenance is considered to be negligible. This trend is expected to continue in future.

Heavy equipment response (CA-29). Heavy equipment (e.g., tractors, loaders) response is used throughout the HCP area, as needed, for things such as removing stranded vehicles to burying deceased marine life. Heavy equipment response does not occur within open water habitat; therefore, Gambel's watercress and marsh sandwort are not impacted. Beach spectaclepod, surf thistle, and other special-status plant species can be directly harmed during a heavy equipment response in occupied habitat anywhere within the HCP area. Special-status plants could be driven over or crushed by vehicles or attendant personnel and habitat could be temporarily damaged. To reduce any impacts from heavy equipment response, CDPR implements standard practices and Listed Plant AMMs as a component of utilizing heavy equipment, including conducting pre-activity clearance surveys, if determined to be necessary by CDPR Environmental Scientist staff, and flagging areas that may support special-status plant species. Heavy equipment response operations are also rare in areas where special-status plants are known to occur; thus, the potential direct impact of these operations on special-status plants is considered be negligible. This trend is expected to continue in future.

Boardwalk and other pedestrian access maintenance (CA-31). Most boardwalk and other pedestrian access maintenance occur within the HCP area once a year. Special-status plant species are not typically located directly adjacent to these areas. However, if special-status plant

species occupy habitat requiring clearing for pedestrian access purposes, they can be damaged and/or removed or trampled by field crews. Most work only includes trimming vegetation encroaching on footpaths with hand tools, therefore, special-status plants are unlikely to be impacted since they do not typically encroach on the boardwalks or trails. In addition, these impacts are avoided through the implementation of CDPR's standard practices and Listed Plant AMMs. Specifically, pre-activity clearance surveys are conducted, if determined to be necessary by CDPR Environmental Scientist staff, and areas that may support special-status plant species are flagged. Thus, the potential direct impact of these operations on special-status plants is negligible.

The Oso Flaco boardwalk will be replaced and/or maintained both on land and within aquatic habitat. Impacts from Oso Flaco Lake boardwalk in aquatic habitat are described in Oso Flaco Lake Boardwalk Replacement (CA-48) in EIR Section 6.4.1.9. Special-status plant species that can be impacted in upland habitat include those species that have been found within South Oso Flaco and the Oso Flaco Lake area, including, but not limited to, La Graciosa thistle, beach spectaclepod, surf thistle, Blochman's leafy daisy, crisp monardella, San Luis Obispo monardella, dune larkspur, Nuttall's milkvetch, red sand verbena, Suffrutescent wall flower, fuzzy prickly phlox, California spineflower, Blochman's groundsel, Monterey Coast paintbrush, and dunedelion. Maintenance activities such as vegetation trimming, replacing damaged sections of boardwalk, and minor trail realignment can have direct impacts on special-status plants that occur within the project area. Project activities can affect these plants through direct disturbance of vegetation, modification or destruction of habitat, or through damage to underground root structures. Vehicle traffic and worker foot traffic can result in the injury or mortality of individual special-status plants. Excavation activities can result in the mechanical or physical removal of vegetation and modification of the seed bank. However, as part of CDPR's standard practices for this type of construction, measures are developed to protect special-status plant species and their habitat, including, but not limited to, conducting pre-activity clearance surveys, as necessary, to protect individual plant species from construction related impacts. With implementation of these measures, the direct impact on special-status plants is minor.

Project activities within terrestrial habitats can also cause an increase in invasive weed cover. Invasive plants degrade habitat quality for native plants and animals by altering vegetative structure and/or outcompeting native plants. However, CDPR actively removes invasive plants from the HCP area as part of the invasive plant and animal control activity (CA-17). As a result, indirect impacts to special-status plants from boardwalk and/or pedestrian access activities is minor.

Visitor Services

Ranger, lifeguard, and park aide patrols (CA-32) and Natural history and interpretation programs (CA-39). Guided hikes associated with the natural history and interpretation programs are located on existing trails and do not impact special-status plant species. Impacts from vehicles associated with these activities are similar to those described for motorized vehicle (CA-1) described above. Although, CDPR staff are trained in avoidance and minimization protocols and are aware of the locations of known special-status plant species. As a result, direct impacts to special-status plants are negligible. This trend is expected to continue in the future.

Access by non-CDPR vehicles (CA-34) Concessions (CA-36). Impacts from vehicles associated with these activities are similar to those described for motorized vehicle (CA-1) described above,

especially since vehicles associated with these activities occur on open sand beach. As a result, direct impacts are considered to be minor. This trend is expected to continue in the future.

Emergency response by CDPR staff (CA-33). Emergency response activities already occur within the HCP area and can occur anywhere where an emergency response is required. Emergency response activities by nature require a quick response for public safety, therefore, protection of natural resources may not be possible during an emergency response. Effects on special-status plant species from emergency response activities is similar to those listed under heavy equipment response (CA-29) except that implementing protection measures is often not possible and emergency response, although extremely rare, can occur within aquatic habitats as well and impact aquatic special-status plant species such as marsh sandwort and Gambel's watercress. Within the HCP area, emergency response activities within known special-status plant species habitats are extremely rare and destruction of sensitive habitat has not been documented to date. As a result, the potential direct impact of these activities on special-status plants is considered minor. This trend is expected to continue in the future.

Other Activities

Dust Control Activities (CA-44). Dust control activities currently occur in the HCP area. Dust control activities can directly impact special-status plant species and their habitat. Direct effects include trampling or removing special-status plants during work activities. Indirect effects include habitat alteration (e.g., changing species composition as a result of altered wind, sand transport, or moisture content). The potential magnitude of impacts on special-status plants and their habitat varies depending on where activities take place. However, dust control project requirements identified in the Dust Control Program MMRP (CDPR 2017) include AMMs, such as conducting pre-work surveys for special-status plants within 100 feet of the work areas, flagging and protection for special-status plants, establishment of 25-foot avoidance areas around special-status plants, and restoration of disturbed habitat to avoid impacts to special-status plant species. In addition, planting of native dune vegetation for dust control activities may benefit special-status plants. Therefore, direct impacts to special-status plants as a result of dust control activities are negligible. Impacts from future dust control activities are described in EIR Section 6.4.1.9.

Cultural Resources Management (CA-45). Cultural resources management does not occur within the HCP area aquatic habitats (e.g., Arroyo Grande Creek, Oso Flaco Lake, Pismo Creek); therefore, special-status plants found in aquatic habitat (e.g., Gambel's watercress and marsh sandwort) are not impacted by these activities. Cultural resources management currently occurs in terrestrial habitats in the HCP area and is not known to have directly impacted special-status plants to date. However, cultural resource sites have been located in areas adjacent to known occurrences of special-status plants. To minimize the potential to indirectly impact special-status plants, as part of their standard practice and/or Listed Plant AMMs, prior to the start of any cultural resources management activities adjacent to special-status plant species habitat, a CDPR biologist flags and/or fences the work area and ensures any nearby special-status plant habitat is avoided. Therefore, the direct impact on special-status plant species is negligible. This trend is expected to continue in the future.

Use of pesticides (CA-51). Herbicide use by aerial spraying may impact non-target, native vegetation, including special-status plant species. Truck mounted spraying and manual removal does not affect non-target vegetation because invasive vegetation is clearly identified for removal. However, herbicide application conducted on foot or from truck mounted sprayers can

result in trampling or inadvertent damage to special-status plant species if they occupy the same area as target plant species. Contamination of special-status plants from herbicides can also result from application drift, rainfall runoff, or residue leaching through the soil into groundwater. For any weed control activities, listed plants are flagged and avoided. Herbicide application does not occur during inclement weather to reduce impacts to non-target vegetation, including special-status species. In addition, only trained applicators apply herbicides and all label rates and other CDPR standard practices are followed. CDPR also takes extra precautions applying herbicides near open water and wetlands and other sensitive habitats that support native habitats and special-status plant species. Timing of herbicide application takes into account wind speed and moisture in the air to reduce the potential of transfer of herbicide to non-target plants. As a result, direct and indirect impacts from herbicide are considered minor. Overall, the use of herbicides results in reduced non-native vegetation and allow for expansion of native plant communities; therefore, herbicide application is expected to result in a net benefit to native vegetation, including special-status plant species. This trend is expected to continue in the future.

Sensitive Natural Communities

Covered activities occurring outside sensitive natural communities and/or that have no risk of impacting sensitive natural communities are dismissed from further discussion. Covered activities with no impact on sensitive natural communities golfing (CA-4); boating/surfing (CA-8); aerial/wind driven activities (CA-9); campground maintenance (CA-20); street sweeping (CA-25); ASI courses (CA-35); Pismo Beach Golf Course operations (CA-37), CDPR agricultural land management (CA-46); bioreactor on agricultural lands (CA-47), and CDPR UAS use for park activities (CA-52).

Some existing covered activities occur in sensitive natural communities as defined by the USFWS, CDFW, and/or CCC. However, many of these recreation related activities, park maintenance activities, and/or natural resource management activities do not remove or destroy sensitive natural vegetation communities and/or result in significant impacts to sensitive natural communities. These activities include bicycling (CA-4), fishing (CA-5), dog walking (CA-6), SNPL and CLTE Management (CA-12a and 12b), tidewater goby and salmonid surveys (CA-13), CRLF surveys and associated management (CA-14), listed plant monitoring and propagations (CA-15), habitat restoration (CA-16), invasive plant and an animal control (CA-17), habitat monitoring system (CA-18), water quality monitoring (CA-19), general facilities maintenance (CA-21), trash control (CA-22), wind fencing (CA-23), sand ramp and other vehicular maintenance (CA-24), perimeter and vegetation island fencing (CA-27), cable fence maintenance (CA-28), heavy equipment response (CA-29), minor grading (CA-30), boardwalk and other pedestrian maintenance (CA-31), ranger and lifeguard patrols (CA-32), emergency response by CDPR staff (CA-33), access by non-CDPR vehicles (CA-34), ASI courses (CA-35), concessions (CA-36), natural history and interpretation programs (CA-39), and cultural resource management (CA-45). In addition, habitat restoration (CA-16), invasive plant and animal control (CA-17), and water quality monitoring (CA-19) improve habitat by planting native plants, improving water quality, removing invasive plants, and ultimately restoring native vegetation and sensitive natural communities in the HCP area. Perimeter and vegetation island fencing (CA-27) also benefits sensitive natural communities by restricting vehicles from entering native vegetation areas and/or driving out of the HCP area into off-site sensitive areas. Because these

activities do not have a substantial adverse impact on any riparian habitat or sensitive natural community they are dismissed from further discussion.

A discussion of existing park operations that could result in impacts to sensitive natural vegetation communities follows.

Motorized Recreation (CA-1), Camping (CA-2), Pedestrian Activities (CA-3), Equestrian Recreation (CA-7), Holidays (CA-10) and Special Events (CA-11). Human uses, including motorized recreation, camping, pedestrian activities, and equestrian recreation, can alter vegetation within sensitive natural communities. Human visitors in the area can trample vegetation and/or disturb soils making them less suitable for native vegetation. Human visitors and horses can also introduce non-native, invasive plant species that can out-compete native vegetation, thus, changing the composition of natural communities. These impacts can be exacerbated during holidays and special events when more visitors may be in the HCP area. However, within the HCP area, most of these recreation activities occur on bare sand. In addition, CDPR provides educational content and posts signs to keep visitors from entering sensitive areas and CDPR closes and restores informal trails in sensitive natural communities. As a result, direct and indirect impacts to sensitive natural communities from these activities are minor. This trend is expected to continue in the future.

Routine Riparian Maintenance (CA-26). Routine riparian maintenance activities routinely occur in HCP area. These activities include ongoing maintenance of trails, infrastructure, or other projects designed to facilitate access while still providing the greatest protection possible to riparian and aquatic maintenance areas. Routine riparian maintenance impacts Oso Flaco Lake, Meadow Creek, Carpenter Creek, Pismo Lake, and/or Oceano Lagoon during culvert maintenance; removal of sediment, vegetation, and/or debris from the spillway at Pismo Lake; removal of emergent species; removal of exotic species; and/or trimming of riparian trees and vegetation. CDPR currently has a Lake or Streambed Alteration Agreement (1600-2012-0001-R4) for these activities in compliance with Section 1600 of the California Fish and Game Code. The Lake and Streambed Alteration Agreement includes measures to protect riparian vegetation including, minimizing the amount of riparian vegetation removed (including trees and shrubs) to the minimum necessary to complete the project, leaving roots and stumps in place to facilitate regrowth and prevent erosion, replacing all woody plants/trees with a diameter breast height (DBH) of four inches at a 3:1 ratio, replacing all heritage trees with a DBH of 24 inches or greater at a 10:1 ratio, and submitting a revegetation plan to the CDFW for review and approval. As a result, direct impacts to riparian vegetation are minor. This trend is expected to continue in the future. Impacts to jurisdictional waters associated with the riparian maintenance activities are discussed in more detail below under jurisdictional waters.

Motorized Vehicle Crossing of Pismo/Carpenter, Arroyo Grande Creek, and Oso Flaco Creeks (CA-40). Impacts to sensitive natural communities from this activity are discussed below under jurisdictional waters below since the sensitive natural communities are aquatic resources.

Dust Control (CA-44). Dust control activities currently occur in the HCP area. Dust control activities have the potential to directly and indirectly impact sensitive natural vegetation communities, including by altering habitat (e.g., changing species composition as a result of altered wind, sand transport, or moisture content). The magnitude of impacts on sensitive vegetation communities varies depending on where activities take place. In general, the magnitude of impacts on sensitive vegetation communities are lowest when dust control activities take place in open sand habitat because these areas support little to no dune vegetation

and any impacts to this habitat are not significant. 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, the impact to sensitive plant communities increases. Some dust control activities (e.g., deployment of temporary monitoring sites) require a minor amount (e.g., less than 0.5 acre) of native vegetation removal. However, dust control project requirements (CDPR 2017) include AMMs, such as impacting the minimum area necessary and clearly defining the project boundary. In addition, planting native dune vegetation for dust control activities generally benefits the sensitive natural vegetation communities within the dune system. Therefore, direct and indirect impacts to sensitive natural communities as a result of dust control activities are negligible. Impacts associated with future dust control activities are included in EIR Section 6.4.2.

Use of Pesticides (CA-51). CDPR controls infestations of terrestrial invasive plant species, including Russian wheatgrass (*Elymus farctus ssp. boreali-atlanticus*), veldt grass (*Ehrharta calycina*), European beachgrass (*Ammophila arenaria*), cape ivy (*Delairea odorata*), and pampas grass (*Cortaderia selloana*) within the HCP area, including within sensitive natural vegetation communities where invasive plant species are prevalent. Herbicide use by aerial spraying, truck mounted spraying, and manual removal may impact native vegetation communities by trampling or inadvertently damaging native vegetation within the community. Contamination of non-target, native species from herbicides could also result from application drift, rainfall runoff, or residue leaching through the soil into groundwater. However, herbicide application does not occur during inclement weather to reduce impacts to non-target vegetation. In addition, only trained applicators apply herbicides and all label rates and other CDPR standard practices are followed. Timing of herbicide application takes into account wind speed and moisture in the air to reduce the potential of transfer of herbicide to non-target plants. CDPR also applies all algaecides and aquatic pesticides in accordance with the Statewide General National Pollutant Discharge Elimination System (NPDES) Permit for Residual Aquatic Pesticide Discharges to Waters of the United States from Algae and Aquatic Weed Control Application. Currently, CDPR is developing an Aquatic Pesticide Application Plan for the NPDES Permit. All algaecides and aquatic herbicides used by CDPR are registered for use on aquatic sites by the California Department of Pesticide Regulation. As a result, direct and indirect impacts from herbicide are considered minor. Overall, the use of herbicides results in reduced non-native vegetation and allow for expansion of native plant communities; therefore, herbicide application is expected to result in a net benefit to native vegetation. This trend is expected to continue in the future.

Jurisdictional Waters and Wetlands

Many existing covered activities do not occur within or near jurisdictional waters, including wetlands and have no risk of impacting these resources. As a result, these activities are dismissed from further discussion. Covered activities with no impacts on jurisdictional waters include camping (CA-2), bicycling and golfing (CA-4), special events (CA-11), SNPL/CLTE habitat protection/fencing (CA-12a), SNPL/CLTE management (CA-12b), habitat restoration (CA-16), campground maintenance (CA-20), general facilities maintenance (CA-21), trash control (CA-22), wind fencing installation/maintenance/removal (CA-23), sand ramp and other vehicular access maintenance (CA-24), street sweeping (CA-25), perimeter and vegetation island fence installation/maintenance/removal (CA-27), heavy equipment response (CA-29), minor grading (CA-30), boardwalk and other pedestrian access maintenance (CA-31), range, lifeguard, and staff patrols (CA-32), access by non-CDPR vehicles (CA-34), American Safety Institute courses (CA-35), concessions (CA-36), natural history and interpretation programs (CA-39), dust control

activities (CA-44), cultural resources management (CA-45), CDPR management of agricultural lands (CA-46), and maintenance of a bioreactor on agricultural lands (CA-47).

Some existing covered activities occur in or adjacent to jurisdictional waters, including wetlands, creeks, lakes, and/or the ocean. However, many of these activities are recreation-related or park maintenance activities that cause temporary impacts (e.g., increased turbidity) and are not subject to Section 404/401 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, or Section 1600 of California Fish and Game Code. These activities include motorized recreation (CA-1), pedestrian activities (CA-3), fishing (CA-5), dog walking (CA-6), equestrian recreation (CA-7), boating/surfing (CA-8), aerial/wind driven activities such as kiteboarding (CA-9), holidays (CA-10), tidewater goby and salmonid surveys (CA-13), CRLF surveys and associated management (CA-14), listed plant monitoring and propagations (CA-15), invasive plant and an animal control (CA-17), habitat monitoring system (CA-18), water quality monitoring (CA-19), cable fence maintenance (CA-28), emergency response by CDPR staff (CA-33), and Pismo Beach Golf Course operations (CA-37). Because these activities are not subject to Section 404/401 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, or Section 1600 of California Fish and Game Code and do not have a substantial adverse impact on federally or state protected wetlands they are dismissed from further discussion.

A discussion of existing park operations that could result in impacts to jurisdictional waters follows.

Routine Riparian Maintenance (CA-26). Routine riparian maintenance activities impact Oso Flaco Lake, Meadow Creek, Carpenter Creek, Pismo Lake, and/or Oceano Lagoon during culvert maintenance; removal of sediment, vegetation, and/or debris from the spillway at Pismo Lake; removal of emergent species; removal of exotic species; and/or trimming of riparian trees and vegetation. CDPR currently has a Lake or Streambed Alteration Agreement (1600-2012-0001-R4) for these activities in compliance with Section 1600 of the California Fish and Game Code and measures from the LSAA are implemented, as appropriate, during all riparian maintenance activities. Therefore, direct and indirect impacts from routine riparian maintenance on jurisdictional resources are minor. This trend is expected to continue in the future.

Motorized Vehicle Crossing of Pismo/Carpenter, Arroyo Grande Creek, and Oso Flaco Creeks (CA-40). Vehicles crossing Pismo/Carpenter, Arroyo Grande, and Oso Flaco Creeks can temporarily affect water quality by exposing water to hazardous materials (e.g., fuel, lubricants) and/or stirring up sediment. However, these impacts are typically localized and minimal, if they occur at all. As a result, direct and indirect impacts from motorized vehicles crossing are negligible. This trend is expected to continue in the future.

Use of Pesticides (CA-51). CDPR controls infestations of terrestrial invasive plant species Russian wheatgrass, European beachgrass, veldt grass, and giant reed present within the HCP area including along riparian corridors, lagoons and wetlands. Aerial application of pesticides is not conducted within 100 feet to reduce impact to aquatic resources. Contamination of water from pesticide application can occur from application drift, rainfall runoff, or residue leaching through the soil into groundwater. However, herbicide application does not occur during inclement weather to reduce impacts from drift. In addition, only trained applicators apply herbicides and all label rates and other CDPR standard practices are followed. Timing of herbicide application takes into account wind speed and moisture in the air to reduce the potential of transfer of herbicide to adjacent waterbodies. CDPR also applies all algaecides and aquatic in accordance with the Statewide General NPDES Permit for Residual Aquatic Pesticide

Discharges to Waters of the United States from Algae and Aquatic Weed Control Application. Currently, CDPR is developing an Aquatic Pesticide Application Plan for the NPDES Permit. In addition, CDPR applies all algaecides and aquatic herbicides according to label directions. All algaecides and aquatic herbicides used by CDPR are registered for use on aquatic sites by the California Department of Pesticide Regulation. As a result, direct and indirect impacts to aquatic resources from pesticide use are considered to be minor. This trend is expected to continue in the future.

Wildlife Movement and Nursery Sites

The effect of existing covered activities on wildlife movement and nursery sites is described below. No changes are proposed to existing activities. Therefore, these effects are considered part of the environmental baseline conditions within the HCP area.

Park Visitor Activities

Park visitor activities (CA-1 to CA-11) are recreational uses that generally do not involve activities that restrict wildlife movement. Motorized recreation deters wildlife from moving through areas open to motorized use, including small and large mammals, birds, reptiles, and amphibians. Some park visitor activities can also impede wildlife movement during Special Events (CA-11). However, these impacts are temporary, are not substantial, and do not cause the population decline of any wildlife species in the HCP area. The existing impact of park visitor activities on wildlife movement and nursery sites is minor.

Natural Resources Management

The natural resources program helps mitigate for potential impacts to wildlife movement from visitor activities by monitoring and protecting HCP covered animal species (CA-12 through CA-14), plant monitoring and vegetation planting (CA-15), restoring and enhancing wildlife habitat (CA-16), controlling invasive species (CA-17), monitoring wildlife populations in the HCP area (CA-18), and monitoring water quality (CA-19). The existing impact of natural resources management activities on wildlife movement and nursery sites is beneficial.

Park Maintenance and Visitor Services

Park maintenance activities (CA-20 to CA-31) and visitor services (CA-32 to CA-39) do not impede wildlife since they do not create permanent barriers to wildlife movement within the HCP area. In addition, most park maintenance activities are temporary and relatively short in duration and only deter wildlife from moving through the area during the period of disturbance. As a result, park maintenance and visitor services have negligible to minor impact on wildlife movement.

Other Activities

Existing covered activities such as creek crossings (CA-40), agricultural land management (CA-46), bioreactor maintenance (CA-47), and pesticide use (CA-51) do not involve activities or structures that impede wildlife movement or affect nursery sites.

Dust Control activities (CA-44) do not 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 activities are installed on open sand areas and do not represent a substantial barrier to wildlife migration or movement.

Wintering/Migratory Birds

Existing park operations, including recreation, natural resources management, park maintenance, visitor services, and other existing activities are known to impact wintering and/or migratory birds. Impacts can occur anywhere in the HCP area depending on the type of bird. For example, activities that take place on the wet sand portion of the beach, can impact shorebirds and other birds foraging along the wrack line or intertidal areas. Activities at Oso Flaco Lake can impact foraging or roosting waterbirds and songbirds. The HCP area contains numerous birding hotspots, including areas used by birds during spring and fall migrations. The primary birding hotspots in the HCP area include Oso Flaco Lake, Oceano Lagoon, and Oceano Campground. The risk of impact on migratory birds is considered higher at the birding hotspots.

Many covered activities have been observed temporarily displacing foraging or wintering birds, altering their normal behavior patterns. Covered activities have also been observed flushing wintering or foraging birds from optimal habitat to less suitable habitat. However, most disturbances are temporary and short in duration and/or birds fly to other areas to forage/roost and avoid disturbance. As a result, impacts of most covered activities on wintering/migratory birds are negligible or minor and do not result in mortality or injury (CA-2 through CA-9; CA-12 through CA-40; CA-44 through CA-47; CA-51). These activities are not discussed further. In addition, some activities have beneficial impacts on wintering/migratory birds, including invasive plant and animal control (CA-17), habitat monitoring system (CA-18), and pesticide use (CA-51) since they provide important information on migratory activity in the HCP area and/or improve the quality of foraging habitat. This trend is expected to continue in the future.

Impacts to wintering/migratory birds, including special-status species with some exceptions such as the western burrowing owl, do not require permits, authorizations, or implementation of AMMs during the non-breeding season timeframe to ensure that impacts are less than significant. As a result, only specific existing covered activities thought to have lethal impacts to wintering/migratory birds are discussed further below.

Park Visitor Activities

Motorized Recreation (CA-1). Most birds fly out of harm's way when vehicles approach. However, foraging or roosting birds within areas where motorized vehicles are permitted have been struck by vehicles and injured or killed, including individuals and flocks along the shoreline. As a result, the lethal impacts from motorized recreation on wintering or migratory birds within the HCP area are moderate. This trend is expected to continue in the future.

Holidays (CA-10) and Special events (CA-11). Impacts to wintering and migratory birds from visitor activities are likely exacerbated during periods of high visitor use, such as holidays (CA-10) or special events (CA-11) the same as described for SNPL. As a result, risk of lethal impacts from holidays and special events on wintering and migratory birds is moderate. This trend is expected to continue in the future.

Appendix E: Native American Communications

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STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., ROOM 100
West SACRAMENTO, CA 95691
(916) 373-3710
Fax (916) 373-5471

June 4, 2018

Jay Baker
California Department of Parks and Recreation

Sent by Email: jay.baker@parks.ca.gov

Re : Pismo SB and Oceano Dunes SVRA Public Works Plan, San Luis Obispo County

Dear Mr. Baker,

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results indicate Native American cultural sites are present. Please contact the San Luis Obispo County Chumash Council, 1030 Ritchie Road, Grover Beach, CA 93433; 805-481-2461. Other sources for cultural resources should also be contacted for information regarding known and/or recorded sites.

Enclosed is a list of Native American tribes who may also have knowledge of cultural resources in the project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these tribes, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at frank.lienert@nahc.ca.gov.

Sincerely,

Frank Lienert
Associate Governmental Program Analyst

Native American Heritage Commission
Native American Contacts
6/4/2018

Santa Ynez Band of Chumash Indians
Kenneth Kahn, Chairperson
P.O. Box 517 Chumash
Santa Ynez , CA 93460
kkahn@santaynezchumash.org
(805) 688-7997

(805) 686-9578 Fax

vak titvu titvu - Northern Chumash Tribe
Mona Olivas Tucker, Chairwoman
660 Camino Del Rev Chumash
Arrovo Grande , CA 93420
olivas.mona@gmail.com
(805) 489-1052 Home

(805) 748-2121 Cell

Barbareno/Ventureno Band of Mission Indians
Julie Lvnn Tumamait-Stenslie, Chair
365 North Poli Ave Chumash
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itumamait@hotmail.com
(805) 646-6214

Northern Chumash Tribal Council
Fred Collins, Chairman
P.O. Box 6533 Chumash
Los Osos , CA 93412
fcollins@northernchumash.org
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Salinan Tribe of Monterev, San Luis Obispo Counties
John Burch, Traditional Lead
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Atascadero , CA 93422
info@salinantribe.com
(805) 858-8199

(805) 423-5195 Cell

Barbareno/Ventureno Band of Mission Indians
Eleanor Arrellanes
P.O. Box 5687 Chumash
Ventura , CA 93005
(805) 701-3246

Xolon-Salinan Tribe
Karen White, Council Chairperson
P.O. Box 7045 Salinan
Spreckels , CA 93962
xolon.salinan.heritage@gmail.com
831-238-1488

Barbareno/Ventureno Band of Mission Indians
Raudel Joe Banuelos, Jr.
331 Mira Flores Court Chumash
Camarillo , CA 93012
(805) 427-0015

Coastal Band of the Chumash Nation
Mia Lopez
24 S. Voluntario Street Chumash
Santa Barbara , CA 93101
mialopez2424@gmail.com
(805) 324-0135

Salinan Tribe of Monterev, San Luis Obispo Counties
Fredrick Segobia
7070 Morro Road, Suite A Salinan
Atascadero , CA 93422 Chumash
info@salinantribe.com
831-385-1490

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was pr oduced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American Tribes with regard to cultural resources assessments for the proposed Pismo SB and Oceano Dunes SVRA Public Works Plan, San Luis Obispo County

Native American Heritage Commission
Native American Contacts
6/4/2018

Xolon-Salinan Tribe
Donna Haro. Tribal Headwoman
P.O. Box 7045 Salinan
Spreckels , CA 93962
dhxolonaakletse@gmail.com
(925) 470-5019

Northern Chumash Tribal Council
Violet Cavanaugh
P.O. Box 6533 Chumash
Los Osos , CA 93412
760-549-3532

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was pr oduced.

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This list is only applicable for contacting local Native American Tribes with regard to cultural resources assessments for the proposed
Pismo SB and Oceano Dunes SVRA Public Works Plan, San Luis Obispo County

State of California • The Resources Agency **Edmund G. Brown, Jr., *Governor***
DEPARTMENT OF PARKS AND RECREATION **Lisa Ann L. Mangat, *Director***
Off Highway Motor Vehicle Division HQ
1725 23rd Street, Suite 200
Sacramento, CA 95816-7100
916-323-8392 – Fax: 916-324-1610

April 12, 2017

Northern Chumash Tribe
Chairwoman
Mona Olivas Tucker
660 Camino Del Rey
Arroyo Grande, CA 93420

Dear Chairwoman Tucker:

The California Department of Parks and Recreation (CDPR) is in the process of preparing a Habitat Conservation Plan (HCP) for the Oceano Dunes State Vehicle Recreation Area (ODSVRA). The HCP is a guidance document that provides a framework for promoting the protection and recovery of natural resources, including endangered species, while streamlining the permitting process for recreation management, natural resource management, maintenance, and planned development. Below please find a description of the proposed project, maps showing the project location (attached), and the name of our project points of contact, pursuant to PRC § 21080.3.1 (d).

In conjunction with the HCP, an environmental review will be conducted, including identifying any potential impacts to cultural resources as well as natural resources. In general, operations at the Park will remain unchanged, with a few possible exceptions. The amount of land closed off seasonally to allow for bird nesting may be reduced. Additionally, trails-only OHV riding may be allowed in a previously off limits area (known as "40 Acres". See attached map for location). If CDPR decides to explore these options in the future, they will be subject to further environmental review in compliance with CEQA.

The California Native American Heritage Commission (NAHC) has previously been contacted regarding traditional cultural properties and sacred sites within Oceano Dunes State Vehicle Recreation Area. A search of the NAHC sacred lands file did not indicate the presence of any such resources within the project area.

You are identified by DPR as the point of contact for consultation under AB52. Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing, with the California Department of State Parks. If you have any comments or questions, or would like further information about this project, please contact me (916-628-0966 or jay.baker@parks.ca.gov, or address above) or ODSVRA Tribal Liaison Stephanie Little (805-610-6229, stephanie.little@parks.ca.gov).

Thank you for your time and assistance. I look forward to hearing from you.

Sincerely,

Jay Baker
Associate State Archaeologist
OHMVR Sacramento, CA
California Department of Parks and Recreation