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**Oceano Dunes District  
Pismo Creek Estuary Seasonal Bridge Project  
Initial Study/  
Mitigated Negative Declaration**

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**August 2013**



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

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Oceano Dunes District  
Pismo Creek Estuary Seasonal Bridge Project  
Initial Study/  
Mitigated Negative Declaration

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August 2013

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



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## MITIGATED NEGATIVE DECLARATION

**PROJECT:** Pismo Creek Estuary Seasonal Bridge Project

**PROJECT SPONSOR:** Oceano Dunes District, California Department of Parks and Recreation (CDPR), Off-Highway Motor Vehicle Recreation (OHMVR) Division

**LEAD AGENCY:** CDPR, OHMVR Division

**AVAILABILITY OF DOCUMENTS:** The Initial Study (IS) for this Mitigated Negative Declaration (MND) is available for review at:

- CDPR, Oceano Dunes District Office  
340 James Way, Ste. 270  
Pismo Beach, CA 93449  
(805) 773-7180  
Contact – Ronnie Glick
- CDPR, OHMVR Division  
1725 23rd Street, Suite 200  
Sacramento, CA 95816  
(916) 445-9152  
Contact – Ryan Miller

### PROJECT DESCRIPTION

The proposed project would install a seasonal (spring, summer, fall), floating pedestrian bridge across Pismo Creek Estuary to provide pedestrian access from the Pismo Coast RV Resort (PCRVR) to Pismo State Beach. The bridge would be an eight-foot wide, pontoon-style bridge with interlocking modules, handrails, and abutments. The abutments would be supported using two helical anchors at each abutment.

### FINDINGS

The OHMVR Division, having reviewed the Initial Study for the proposed project, finds that:

1. Revisions to the project plans and incorporated herein as mitigation would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and
2. There is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment. Pursuant to California Environmental Quality Act (CEQA) Guidelines sections 15064(f)(3) and 15070(b), a MND has been prepared for consideration as the appropriate CEQA document for the project.
3. A MND will be filed as the appropriate CEQA document of the Project.

### MITIGATION MEASURES

The project could result in significant adverse effects to special-status plant and wildlife species. However, the project has been revised to include the following measures, which reduce these impacts to a less-than-significant level. With implementation of these measures, the project would not substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of a rare or endangered plant or animal.

**Impact BIO-1:** Special-status plants could be impacted by the project if they occur in the area of disturbance.

**Mitigation Measure BIO-1:** Prior to the initiation of project activities, a qualified botanist shall perform a rare plant survey in the areas of potential ground disturbance during the blooming period of the special-status plants with the potential to occur in the project area described in this document. The month of May corresponds to the blooming period of all the potential special-status plants except Blochman's leafy daisy, which is a perennial and likely recognizable outside of the blooming period. Thus, the rare plant survey should be performed in May. If any federal or state listed plants are detected during the survey, they shall be flagged and avoided, and the bridge location shall be altered if necessary to avoid them. If any California Rare Plant Ranked (CRPR) plants with no federal or state Endangered Species Act listing are detected, they shall be avoided to the extent feasible. Removal of a small amount (less than 1 percent of populations on Pismo State Beach) of a locally common CRPR species such as crisp monardella would not be considered a significant impact if avoidance is not feasible.

**Impact BIO-2:** The proposed project could impact western snowy plovers if any are nesting in or near the area of project disturbance.

**Mitigation Measure BIO-2:** A qualified biologist shall survey the project area for western snowy plover nests no more than three days prior to initiation of project activities. Any western snowy plovers found in the project area will be undisturbed and work will not commence until they leave on their own accord. Any snowy plover nests found within 500 feet of the project area (which also includes the pathways where the project vehicles travel) will be left undisturbed. Nest protection strategies will be implemented as identified in the 2013 Nesting Season Management Plan to Avoid Take of California Least Tern and Western Snowy Plover at ODSVRA (or the take avoidance plan then in effect). Construction activities will not commence until the nest hatches (or nest fate is otherwise determined) and the chicks leave the project area on their own accord. Pre-project wildlife inspections shall be conducted every time bridge installation or removal is conducted in the project area.

**Impact BIO-3:** Several reptile and amphibian special-status species (California Species of Special Concern), coast range newt, western pond turtle, two-striped garter snake, and silvery legless lizard, have some potential to occur in the project area and could be impacted by project activities.

**Mitigation Measure BIO-3:** All work areas shall be inspected by a qualified biologist prior to commencing work. If any coast range newt, western pond turtle, two-striped garter snake, or silvery legless lizard is found in the project area, it shall be relocated to suitable habitat outside the work area. Pre-project wildlife inspections shall be conducted every time bridge installation or removal is conducted.

## **BASIS OF FINDINGS**

Based on the environmental evaluation presented herein, and with the implementation of the mitigation measures listed above, the project will not cause significant adverse effects related to aesthetics, agricultural/forestry resources, air quality, biological resources, cultural resources, geology/soils, greenhouse gas emissions, hazards/ hazardous materials, hydrology/water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, transportation/traffic, and utilities/service systems. In addition, substantial adverse effects on humans, either direct or indirect, will not occur. The project does not affect any important examples of the major periods of California prehistory or history. Nor will the project substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or

substantially reduce the number or restrict the range of a rare or endangered plant or animal. The project does not have impacts that are individually limited, but cumulatively considerable.

A copy of the IS is attached. Questions or comments regarding this IS/MND should be submitted in writing to:

Mr. Ronnie Glick  
Oceano Dunes District Office  
340 James Way, Suite 270  
Pismo Beach, CA 93449  
(805) 773-7170

Pursuant to section 21082.1 of the California Environmental Quality Act, the OHMVR Division has independently reviewed and analyzed the IS/MND for the proposed project and finds these documents reflect the independent judgment of the OHMVR Division.

OCEANO DUNES DISTRICT  
PISMO CREEK ESTUARY SEASONAL BRIDGE PROJECT  
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

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## CHAPTER 1 INTRODUCTION

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### 1.1 INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the Off-Highway Motor Vehicle Recreation (OHMVR) Division of the California Department of Parks and Recreation (CDPR). This IS/MND evaluates the potential environmental effects of the Pismo Creek Estuary Seasonal Bridge Project (project) located in Pismo Beach, California, in San Luis Obispo County (Figure 1). The bridge would be managed by the CDPR, Oceano Dunes District, including installation and removal, maintenance, and biological monitoring. Funding for the bridge itself would be provided by the Pismo Coast Village RV Resort.

The proposed project would install a seasonal (spring, summer, fall), floating pedestrian bridge across Pismo Creek Estuary (Estuary) to provide pedestrian access from the Pismo Coast RV Resort (PCRVR) to Pismo State Beach. The bridge would be an eight-foot wide, pontoon-style bridge with interlocking modules, handrails, and abutments. The abutments would be supported using two helical anchors at each abutment. The bridge would be installed when flows would not threaten to undermine the abutments or wash out the bridge. If installed, the bridge would be removed for any event that could threaten to undermine the abutments or wash out the bridge. The determination to remove the bridge would be based on current field conditions and anticipated rainfall or wave duration, frequency, and intensity.

### 1.2 REGULATORY GUIDANCE

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

According to CEQA Guidelines section 15070, a public agency shall prepare a proposed ND or a MND when:

1. The IS shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or,
2. The IS identifies potentially significant effects, but:
  - Revisions in the project plans made before a proposed MND and IS are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and
  - There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

This IS/MND has been prepared by the OHMVR Division of CDPR in accordance with CEQA and the CEQA Guidelines.

### 1.3 LEAD AGENCY CONTACT INFORMATION

The OHMVR Division is approving, providing, installing, and maintaining the project and is the CEQA lead agency. The contact person for the lead agency regarding the project and questions or comments regarding this IS/MND should be submitted to:

Mr. Ronnie Glick  
Oceano Dunes District Office  
340 James Way, Suite 270  
Pismo Beach, CA 93449  
(805) 773-7180  
Ronnie.Glick@parks.ca.gov

#### **1.4 PURPOSE AND DOCUMENT ORGANIZATION**

The purpose of this document is to evaluate the potential environmental effects of the proposed project. This document is organized as follows:

- Chapter 1 – Introduction

This chapter provides an introduction to the project and describes the purpose and organization of this document.

- Chapter 2 – Project Description

This chapter describes the project location, project area, site description, objectives, and characteristics.

- Chapter 3 – Environmental Checklist and Responses

This chapter contains the Environmental (IS) Checklist that identifies the significance of potential environmental impacts (by environmental issue) and provides a brief discussion of each impact resulting from implementation of the proposed project. This chapter also contains the Mandatory Findings of Significance.

- Chapter 4 – References

This chapter identifies the references and sources used in the preparation of this IS/MND.

- Chapter 5 – Report Preparation

This chapter provides a list of those involved in the preparation of this document.

#### **1.5 REQUIRED PERMITS, APPROVALS, OR AUTHORIZATIONS**

- Coastal Development Permit, California Coastal Commission
- Nationwide Permit, U.S. Army Corps of Engineers (USACE)
- Streambed Alteration Agreement, California Department of Fish and Wildlife (CDFW)
- Water Quality 401 Certification, Central Coast Regional Water Quality Control Board (RWQCB)

## CHAPTER 2 PROJECT DESCRIPTION

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### 2.1 PROJECT LOCATION AND OVERVIEW

The project would provide public access between the Pismo Coast RV Resort (PCRVR) and Pismo State Beach (Assessor's Parcel Numbers 005-241-015 and 005-241-053) in the City of Pismo Beach. The project is located near the Pismo Creek Estuary (estuary) mouth to the Pacific Ocean, approximately 0.4 mile downstream from the Highway 101 overpass in San Luis Obispo County (Figure 2). The estuary mouth where the project would be located is south of Addie Street and west of State Route 1/South Dolliver Street, and the PCRVR is located at 165 South Dolliver Street (Figure 2).

The Pismo Creek watershed drains a 47-square mile area of southern San Luis Obispo County. During the wintertime wet season, the estuary drains into the Pacific Ocean. However, outside of the wet season, low flows prevent the estuary from draining into the ocean, and the estuary flows south along the toe of a barrier dune and terminates west of the PCRVR. The estuary limits direct access to the beach from PCRVR and other inland development, causing beachgoers to walk south along the dune face before moving west onto Pismo State Beach. This access results in trampling of native and nonnative vegetation and destabilizing the dune. To improve public access and reduce dune erosion and habitat damage on the dune, the Oceano Dunes District proposes to install a seasonal (spring, summer, fall) floating bridge to span the estuary between the PCRVR and Pismo State Beach.

### 2.2 PROJECT OBJECTIVES

The project goals are to:

- Improve the ease of public access to Pismo State Beach
- Reduce dune erosion and habitat damage caused by pedestrians walking on the barrier dunes
- Reduce impacts to the estuary from pedestrians placing sand or logs in the water to provide dry footing across the water
- Improve safety of public access to Pismo State Beach

### 2.3 PROJECT DETAILS

#### 2.3.1 Floating Bridge

The proposed project consists of a seasonal, floating pedestrian bridge across Pismo Creek Estuary. The bridge proposed is an approximately 350-foot long, 8-foot wide pontoon-style floating bridge with interlocking modules, handrails, and abutments. Figure 3 shows an example of the bridge type proposed. The primary location of the bridge was chosen to minimize work within the wetted channel and is close to an existing stairway entrance over the dune from the PCRVR (see Photo 3 in Figure 4).

Two secondary (alternate) locations, one located north and the other south of the primary location for the bridge are shown in Figure 2 and could be used in the event that biological resources prevent the use of the primary bridge location. Therefore, the bridge location could change from year to year based on the conditions at the time the bridge is installed.

The diagonal orientation of the bridge as illustrated in Figure 2 would be parallel to prevailing winds to minimize bridge movement. The floating bridge would extend eight feet landward from the expected elevation of the mean high tide at each abutment. Each bridge abutment would be anchored using at least two helical anchors and would not be visible from the surface (hidden

under the bridge deck; see Figure 5). The helical anchors would be installed on a 45-degree angle and sloped away from the creek edge. The helical anchor design was chosen because:

- It requires minimal installation and removal time
- It involves minimal site disturbance because it can be installed using hand held equipment or a small excavator
- Helical anchors can be reused (provided they are not damaged during installation or removal)
- The anchors can be concealed under the floating bridge (invisible from ground level and eliminating anchorage trip hazards)

For a comparison of the anchorage designs contemplated for the floating bridge, please refer to Appendix A. For a comparison of bridge designs contemplated, please refer to Appendix B. A gangway would be used to connect the bridge to the existing stairway and would allow for fluctuations in stream flow. To allow for movement of all fish species, as well as an exchange of fresh and salt water, the interlocking pieces of the bridge deck would be configured to create wide openings under the bridge. The openings would be spaced as wide as possible while maintaining structural integrity and allowing for water flow even when the bridge rests on the estuary bed during low flows.

### **2.3.2 Bridge Set Up, Installation, Removal, and Storage**

The bridge deck would probably be assembled on the beach and floated to the opposite abutment. A particular brand of bridge has not been identified so the logistics have not been finalized. A bridge that can be built in sections and attached in succession to the bridge already on the water is preferred.

The bridge would be installed when flows would not threaten to undermine the abutments or wash out the bridge. After installation, the bridge would be removed for any event that could threaten to undermine the abutments or wash out the bridge. The determination to remove the bridge would be based on current field conditions and anticipated rainfall or wave duration, frequency, and intensity. When removing the bridge prior to the wet winter season, all efforts will be made to remove the bridge as early as possible prior to the onset of heavy rains and increased stream flows. The bridge, abutments, and anchors would be installed and removed each year by a licensed contractor employing hand crews and/or a small excavator. Installation and removal would last two to three days at each instance (four to six days per year).

The bridge will be stored in the Oceano Dunes District maintenance yard when not in use. The bridge would be transported to and from the beach by truck.

### **2.3.3 Bridge Management**

The pedestrian bridge would be fully managed by the Oceano Dunes District, including annual installation and removal, maintenance and biological monitoring. PCRVR would be responsible for the cost of the bridge itself. In addition, the Oceano Dunes District would develop a written agreement with the PCRVR to connect the bridge to the private property access point.

## **2.4 BEST MANAGEMENT PRACTICES INCORPORATED INTO THE PROJECT**

The Oceano Dunes District would incorporate the environmental protection measures in Table 2-1 as part of the Pismo Creek Estuary Seasonal Bridge Project. The measures are intended to minimize or avoid potential impacts on natural resources such as water, soil, vegetation, and wildlife from the project.

<p><b>Table 2-1. Environmental Protection Measures Incorporated into the Project</b></p>
<p><b>Sediment Control Measures</b></p> <ul style="list-style-type: none"> <li>• Installation and removal of the bridge shall be completed by a licensed contractor employing hand crews or a small excavator. At no time will the excavator be placed in the water body.</li> <li>• CDPR staff shall limit the amount of disturbance to vegetation, banks, and streams. Work and entrance into the work area shall be restricted to established areas.</li> <li>• CDPR staff shall limit project activities in the channel and along stream banks to the drier period of the year (spring, summer, fall), 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.</li> </ul>
<p><b>Fish:</b></p> <ul style="list-style-type: none"> <li>• The estuary is critical habitat for the federally endangered tidewater goby, and Pismo Creek is critical habitat for the federally threatened steelhead. Tidewater goby spawn year round with primary spawning occurring April through November. Adult steelhead migrate upstream between December and April, while juvenile and adult steelhead migrate downstream between March and May. To allow for movement of all fish species, as well as an exchange of fresh and salt water, the interlocking pieces of the bridge deck would be configured to create wide openings under the bridge. The openings would be spaced as wide as possible while maintaining structural integrity and allowing for water flow even when the bridge rests on part of the estuary bed during low flows. 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.</li> </ul>
<p><b>Birds:</b></p> <ul style="list-style-type: none"> <li>• The recognized breeding, nesting, and fledgling season for most birds is from February 1 to August 31. Prior to bridge maintenance, installation, or removal occurring during the recognized bird breeding season, a qualified biologist shall conduct surveys for nesting birds within 500 feet of the work area no more than 3 days prior to the work commencing.</li> <li>• If nests are found, the area would be flagged. No work shall be performed within 500 feet of a snowy plover or raptor nest and 100 feet of a non-raptor bird nest until the young have fledged.</li> </ul>
<p><b>General Protection of Riparian and Aquatic Habitats:</b></p> <ul style="list-style-type: none"> <li>• A Spill Plan shall be in place for prompt and effective response to an accidental spill. All park staff shall be informed of the importance of preventing spills and appropriate measures to take when a spill happens.</li> <li>• No maintenance or refueling would occur within 100 feet of wetlands, drainages, or sensitive plant and animal habitat or in a location where a spill would drain directly toward aquatic habitat. Absorbent materials and spill containers will be present during these activities. If a spill were to occur, it would be properly contained, disposed of, and reported.</li> <li>• All vehicles used near riparian areas shall be clean and free of leaks.</li> <li>• To minimize further disturbance to the work area, CDPR shall limit crew size, the number of vehicles and equipment, and access points.</li> </ul>

<b>Table 2-1. Environmental Protection Measures Incorporated into the Project</b>
<p><b>Basic Construction Management Practices:</b></p> <ul style="list-style-type: none"> <li>• Reduce the amount of the disturbed area where possible.</li> <li>• Limit vehicle speeds on unpaved roads/trails to no more than 15 miles per hour.</li> <li>• Cover all haul trucks transporting bridge parts on- and off-site.</li> <li>• Limit diesel equipment idling to no more than five minutes and post a sign at the construction staging area reminding equipment operators of this five-minute idling limit.</li> <li>• Properly maintain and tune all construction equipment in accordance with manufacturer’s specifications.</li> <li>• No installation, removal, or maintenance activities shall occur between weekday hours of seven p.m. and seven a.m., or any time on Sundays or holidays (Pismo Beach Municipal Code Chapter 9.24.050(5)(a)).</li> </ul>
<p><b>Cultural Resources:</b></p> <ul style="list-style-type: none"> <li>• In the event unanticipated resources are discovered within the project site, all ground disturbing activities would stop and a qualified state archaeologist would be contacted to evaluate the find. In the event the find is determined to be a historical or unique archaeological resource, avoidance measures or appropriate mitigations will be made by the archaeologist. Work could continue in other parts of the project area while historical or unique archaeological mitigations take place (14 CCR § 15064.5).</li> <li>• In the event that human remains are accidentally discovered, the project must come to a complete stop, and no further excavation or disturbance of the area or vicinity will occur. The county coroner is to be called immediately to determine if the remains are of Native American ancestry. If the coroner confirms that the remains are Native American, within 24 hours of the discovery the coroner is to contact the Native American Heritage Commission (NAHC). The NAHC will identify the person(s) believed to be the Most Likely Descendent (MLD), and the MLD will decide, along with the property owner, on appropriate treatment or disposing of the human remains and associated grave goods as provided in PRC section 5097.98. If the NAHC cannot identify the MLD, the MLD fails to make a recommendation, or the property owner rejects the MLD’s recommendations, the property owner can rebury the remains and associated burial goods in an area not subject to ground disturbance (14 CCR § 15064.5).</li> </ul>

Source: Oceano Dunes SVRA

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

- 1. Project Title:** Pismo Creek Estuary Seasonal Bridge Project
- 2. Lead Agency Name & Address:** CDPR, OHMVR Division  
1725 23<sup>rd</sup> Street, Suite 200  
Sacramento, CA 95816
- 3. Contact Person & Phone Number:** Ronnie Glick  
Oceano Dunes District Office  
(805) 773-7180
- 4. Project Location:** The project is located in Pismo Beach, near the Pismo Creek Estuary mouth to the Pacific Ocean, approximately 0.4 mile downstream from the Highway 101 overpass in San Luis Obispo County (APNs 005-241-015 and 005-241-053)
- 5. Project Sponsor Name & Address:** CDPR, Oceano Dunes District.
- 6. General Plan Designation:** The project area is owned and managed by the Oceano Dunes District. The land use designation in the Pismo Beach General Plan/Local Coastal Plan is Open Space.
- 7. Zoning:** The project area is owned and managed by the Oceano Dunes District. The zoning designation in the Pismo Beach Municipal Code is OS-R (Open Space-Recreation).
- 8. Description of Project:** See Chapter 2 Project Description
- 9. Surrounding Land Uses & Setting:** The project site is surrounded by Pismo State Beach to the North and South, the Pacific Ocean shoreline to the west, and an R.V. park to the east.
- 10. Approval Required from Other Public Agencies:** California Coastal Commission, USACE, CDFW, Central Coast RWQCB (see Section 1.5)

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:**

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

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

**DETERMINATION:**

On the basis of this initial evaluation:

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

I find that, although the original scope of the proposed project could have had a significant effect on the environment, there will not be a significant effect because revisions/mitigations to the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.

I find that the proposed project may have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT or its functional equivalent will be prepared.

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

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



Brent Marshall, Superintendent  
Oceano Dunes District

8/22/13

Date

**EVALUATION OF ENVIRONMENTAL IMPACTS**

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

**3.1 AESTHETICS**

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

**3.1.1 Regulatory and Environmental Setting**

The project is located in the southwest portion of San Luis Obispo County. The City of Pismo Beach is a small beach community with a population of about 7,600. Tourism is a dominant sector in the local economy due to the City’s proximity to the beach and related activities. Pismo Beach stretches along seven miles of coastline, and scenic values are high.

Sensitive viewers are individuals or groups of individuals who would be affected by changes to the aesthetics of the surrounding area. Public views from urban and rural residential areas can also be sensitive. The project could potentially affect the following groups of sensitive viewers: recreationists at Pismo State Beach, PCRVR patrons, and possibly patrons of vacation rentals along the western portions of Addie Street and Park Avenue and the public parking lot at the western end of Addie Street and Park Avenue. Motorists on primary access routes to these areas are also sensitive viewers. These routes include Cypress Street, Addie Street, and possibly Park Avenue.

The certified Pismo Beach LCP designates State Route 1 in the project area as a scenic corridor. It also requires new development to be sited and designed to reflect the small-scale character of the City, and to protect and enhance views of the ocean, river, and estuary. In accordance with these requirements, the proposed bridge would be a seasonal, low-profile linear structure that would not obstruct or otherwise degrade public views of Pismo Creek, Pismo Creek Estuary, Pismo State Beach, or the Pacific Ocean, including as seen from the beach, the public street, and various locations along the public recreation areas. As such, the proposed is in conformance with the LCP’s visual resource protection policies.

**3.1.2 Discussion**

*Would the proposed project:*

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

**Less Than Significant Impact.** The project is located in San Luis Obispo, California, in an established recreation area that is part of a state beach. Due to the low profile of the deck and

orientation of the proposed bridge (the highly visible portion of the bridge would be the length of the deck itself, which would be at ground level [extending no more than 24 inches high]; rope handrails would blend into the background at a distance) and intervening topography from the foredune and barrier dune, the bridge would be visible in the landscape but would not be obtrusive. Focal points in the landscape include the ocean itself, beach sand, and dunes. The proposed bridge does not block substantial portions of these views; therefore, the impact is considered less than significant. Walking surfaces such as low profile boardwalks and other similar surfaces are common in beach environments; therefore, a floating bridge would not be considered inconsistent with the character of the setting.

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

**No Impact.** The general area contains scenic resources such as trees; however, none are within view of a state scenic highway. The floating bridge installation would not result in the removal of any trees, rock outcroppings, or historic buildings within view of a state scenic highway. The nearest stretch of designated state scenic highway is State Route 1 north of San Luis Obispo, over 10 miles north of the project site. It is possible, but not likely, that the western portion of the project's northern most bridge location could be visible from State Route 1 (also known as Dolliver Street) a designated scenic corridor in the Pismo Beach LCP. However, as stated above even if the northern bridge location is viewable from State Route 1, the bridge would be unobtrusive due to the low profile and orientation of the bridge deck and because it would be set in the distance, approximately 1,000 feet (0.2 mile) away. In addition, views from State Route 1 to the beach are interrupted by the Cypress Street Bridge overcrossing, located approximately 200 feet west of State Route 1.

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

**Less Than Significant Impact.** The existing visual character or quality of the site or its surroundings would not significantly degrade as a result of the project. The floating bridge's profile is low to the ground (the hand rails only extend three feet above the grade of the bridge's walking surface) and therefore would not block views to or from the ocean and would become part of the landscape. The helical anchors are located in the ground under the bridge so there would be no visible footing and would require minimal site disturbance to install and remove. The massing of the bridge is concentrated in the interlocking modules of the bridge deck surface, which is proposed to be 8-foot wide and approximately 300 feet long.

The project would be built consistent with the LCP Principals D7 – Visual Quality is important, P-13 Natural Resource Preservation, and P-14 Immediate Ocean Shoreline: the proposed bridge would be a seasonal, low-profile linear structure that would not obstruct or otherwise degrade public views of Pismo Creek, Pismo Creek Estuary, Pismo State Beach, or the Pacific Ocean, including as seen from the beach, the public street, and various locations along the public recreation areas. As such, the proposed project is in conformance with the LCP's visual resource protection policies.

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

**No Impact.** The project would not create a new source of substantial light or glare affecting day or nighttime views in the area as no exterior lighting, reflective surfaces, or nighttime construction is proposed.

**3.2 AGRICULTURE AND FOREST RESOURCES**

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**3.2.1 Discussion**

*Would the proposed project:*

- a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

**No Impact.** The project area is mapped as “Other Land” by the Farmland Mapping and Monitoring Program (FMMP 2008) and is currently used for recreation and habitat management. There is no Prime Farmland, Unique Farmland or Farmland of Statewide Importance in or near the project area. Therefore, the proposed project would not convert Farmland to a non-agricultural use.

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

**No Impact.** The project area is not zoned for agricultural use and is not under a Williamson Act contract. Therefore, the project would not conflict with existing zoning for agricultural use or a Williamson Act contract.

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

**No Impact.** The project area is not zoned as forest land or timberland. Therefore, the project would not conflict with existing zoning or cause rezoning of forest or timber land.

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

**No Impact.** There is no forest land in or near the project area. Therefore, the project would not result in the loss of forest land or conversion of forest land to a non-forest use.

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

**No Impact.** The project does not involve changes in the existing environment which could result in conversion of Farmland to a non-agricultural use or forest land to a non-forest use.

**3.3 AIR QUALITY**

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

**3.3.1 Regulatory and 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. Federal, state, and local governments control air quality through the implementation of laws, ordinances, regulations, and standards.

The proposed project is located in the City of Pismo Beach on the San Luis Obispo County coast, within the South Central Coast Air Basin (SCCAB), an area of non-attainment for state ozone, fine particulate matter (PM2.5), and suspended particulate matter (PM10) air quality standards. The San Luis Obispo County Air Pollution Control District (SLO APCD) is responsible for maintaining air quality and regulating emissions of air pollutants within San Luis Obispo County. The SLO APCD carries out this responsibility by preparing, adopting, and implementing plans, regulations, and rules that are designed to achieve attainment of state and national air quality standards. In 2001, the SLO APCD adopted its *2001 Clean Air Plan*. This plan updates the SLO APCD's 1998 Clean Air Plan, addresses ozone and particulate matter emissions, and identifies the control measures necessary to attain air quality standards. The APCD currently has nine regulations containing approximately 100 rules that control and limit emissions from sources of air pollutants. This includes Rule 1001, Coastal Dunes Dust Control Requirements, which requires the OHMVR Division, as operator of the Oceano Dunes SVRA, to reduce particulate matter emissions from the area under its control. This rule, however, does not apply to the proposed floating bridge because the project would not take place on or within a Coastal Dune Vehicle Activity Area regulated by Rule 1001. Pollution from mobile sources, such as cars, trucks, trains and marine vessels, falls outside of the SLO APCD's jurisdiction and are regulated by state and federal agencies that establish the air pollution emission standards for these vehicles and the fuel they run on.

In April 2012, the SLO APCD adopted its *CEQA Air Quality Handbook*, which is designed to assist lead agencies in assessing the potential air quality impacts of a project. This guide describes when an air quality analysis is necessary for a project, prescribes the type of analysis that should be performed, quantifies significance thresholds to use for project impacts during operation (by land use type) and construction (daily or quarterly emissions) phases, and lists mitigation measures that may be implemented to reduce impacts to less than significance. The project would not result in operation emissions, and emissions associated with installation and removal of the bridge are expected to be below the applicable significance thresholds (see Response 3.3 (b) below).

### 3.3.2 Discussion

*Would the proposed project:*

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

**No Impact.** The proposed project would not conflict with or obstruct implementation of the SLO APCD's *2001 Clean Air Plan*. The project is consistent with the land use and transportation control measures and strategies outlined in the *2001 Clean Air Plan*. Per the SLO APCD's *CEQA Air Quality Handbook*, a project that is consistent with 2001 Clean Air Plan land use and transportation control measures does not conflict with or obstruct the implementation of the SLO APCD's *2001 Clean Air Plan*.

**b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

**Less Than Significant Impact.** The proposed project is a floating bridge that would be installed and removed seasonally such that it would only be in place when flows do not threaten to undermine the bridge abutments or wash out the bridge. The proposed bridge would not impact air quality after installation or removal. Installation and removal of the bridge would not involve the use of heavy construction equipment. The bridge, abutments and anchors would be installed by a licensed contractor with hand crews and/or a small excavator. The installation and removal are expected to result in a maximum of no more than 16 hours of emissions from a small excavator per year. Other emissions associated with the bridge are trucking the bridge parts to and from storage at the Oceano Dunes District maintenance yard, located approximately two miles south from the project site via truck. Thus, emissions associated with the installation or removal of the bridge are expected to be minimal, and are not expected to exceed thresholds of significance for construction emissions contained in the SLO APCD's *CEQA Air Quality Handbook*.

**c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

**No Impact.** As discussed in b) above, the project would not result in operational emissions and would have minimal construction emissions that would not exceed established thresholds of significance. In developing their CEQA significance thresholds, the SLO APCD identified the emission levels at which a project's individual emissions would be cumulatively considerable. Since the project would not individually exceed any significance thresholds, the project would not result in cumulatively considerable air quality impacts.

**d. Expose sensitive receptors to substantial pollutant concentrations?**

**Less Than Significant Impact.** A sensitive receptor is generically defined as a location where there is reasonable expectation that human populations, especially children, seniors, and sick

persons, would experience continuous exposure to air pollutants. These receptors typically include residences, hospitals, and schools. The closest sensitive receptors to the project site are the inhabitants of the PCRVR, located approximately 115 feet to the east. However, project emissions would be limited to those associated with a small excavator for a short period of time during bridge installation and truck trips to deliver the bridge parts to and from the site. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations.

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

**No Impact.** The proposed project is a seasonal floating bridge over Pismo Creek; installation of the bridge would occur with hand crews and/or a small excavator. The project is not expected to create objectionable odors.

**3.4 BIOLOGICAL RESOURCES**

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

**3.4.1 Regulatory Setting**

In addition to CEQA, other federal, state, and regional laws apply to the biological resources identified in this report. Each of these laws is identified and discussed below.

**Federal Endangered Species Act (FESA)**

FESA establishes a broad public and federal interest in identifying, protecting, and providing for the recovery of threatened or endangered species. The Secretary of the Interior and the Secretary of Commerce are designated in FESA as responsible for identifying endangered and threatened species and their critical habitat, carrying out programs for the conservation of these species, and rendering opinions regarding the impact of proposed federal actions on listed species. The USFWS and the National Marine Fisheries Service (NMFS) are charged with implementing and enforcing the FESA. USFWS has authority over terrestrial and continental aquatic species, and NMFS has authority over species that spend all or part of their life cycle at sea, such as salmonids.

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

### **The Migratory Bird Treaty Act of 1918 (MBTA)**

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

### **The Clean Water Act of 1972 (Section 404)**

The United States does not have a federal, comprehensive law protecting wetlands. However, through the regulation of activities in “waters of the United States,” the Clean Water Act of 1972 is the main federal law used to protect wetlands. Section 404 of the Clean Water Act regulates the discharge of dredged or fill material into “waters of the United States,” which includes traditional navigable waters, interstate waters, certain tributaries of any of these waters, and wetlands that meet these criteria or that are adjacent to any of these waters. In 1987, the USACE published a manual for the delineation wetlands, those that are regulated by Section 404, and generally defined wetlands as requiring the following three characteristics: hydrology, hydric soils, and hydrophytes (plants adapted to living in saturated soils).

The USACE also regulates activities in waters of the United States under the federal Rivers and Harbors Act. Section 10 of the Rivers and Harbors Act requires permits for any work or structures in navigable waters of the United States, including wetlands within or adjacent to these waters. Both dredging and filling are regulated activities under the Act. Navigable waters are defined as those waters that are subject to the ebb and flow of the tide, or that are presently have been, or may be used for transport of interstate or foreign commerce.

### **USFWS Wetland Definition**

In 1979, the USFWS adopted the wetland classification developed by Cowardin et al (1979). In this classification system, wetlands are defined as: lands that are transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water, and that have one or more of the following attributes: at least periodically, the land supports predominantly hydrophytes; the substrate is predominantly undrained hydric soil; and, the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year.

This USFWS wetland definition differs slightly from the USACE definition. The USACE definition requires all three wetlands attributes (hydrology, hydrophytes, and hydric soils) to be present, where the USFWS definition does not.

**California Endangered Species Act (CESA)**

Provisions of CESA protect state-listed threatened and endangered species. The Fish and Game Commission is charged with establishing a list of endangered and threatened species. CDFW regulates activities that may result in “take” of individuals (i.e., “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill”). Habitat degradation or modification is not expressly included in the definition of “take” under the California Fish and Game Code, but CDFW has interpreted “take” to include the killing of a member of a species which is the proximate result of habitat modification.

**California Fish and Game Code Section 1602**

Section 1602 of the California Fish and Game Code requires an entity to notify CDFW of any proposed activity that may substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing pavement where it may pass into any stream, river, or lake. CDFW uses the USFWS definition of wetlands when regulating these activities. The project would require Section 1602 authorization from CDFW.

**Other California Fish and Game Code Provisions**

The California Fish and Game Code protects a variety of species, separate from the protection afforded under CESA. The following specific statutes afford some limits on take of named species: sections 3503 (nests or eggs), 3503.5 (raptors and their nests and eggs), 3505 (egrets, osprey, and other specified birds), 3508 (game birds), 3511 (fully protected birds), 4150 (nongame mammals), 4700 (fully protected mammals), 4800 et seq. (mountain lions), 5050 (fully protected reptiles and amphibians), and 5515 (fully protected fish).

Pursuant to Fish and Game Code section 3503, it is unlawful to “take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.” Section 3503.5 provides similar protection specifically to raptors and their nests. CDFW typically recommends surveys for nesting birds that could potentially be directly (actual removal of trees/vegetation) or indirectly (noise disturbance) impacted by project-related activities. Disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “taking” by CDFW. Fully protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research or under an approved Natural Communities Conservation Plan.

**California Native Plant Protection Act**

The California Native Plant Protection Act of 1977 preserves, protects, and enhances endangered and rare plants in California by specifically prohibiting the importation, take, possession, or sale of any native plant designated by the California Fish and Game Commission as rare or endangered, except under specific circumstances. Various activities are exempted, although take as a result of these activities may require other authorization from CDFW under the California Fish and Game Code.

**California Coastal Act**

The Coastal Act includes specific policies (see Division 20 of the Public Resources Code) that address issues such as 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 policies of the Coastal Act constitute the statutory standards applied to planning and regulatory

decisions made by the Coastal Commission and by local governments, pursuant to the Coastal Act.

The Coastal Commission, in partnership with coastal cities and counties, plans and regulates the use of land and water in the coastal zone. Development activities, which are broadly defined by the Coastal Act to 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 coastal permit from either the Coastal Commission or the local government.

Relevant policies from the California Coastal Act protecting coastal resources include:

- Section 30231 Biological productivity; water quality
- Section 30233 Diking, filling or dredging; continued movement of sediment and nutrients
- Section 30240 Environmentally sensitive habitat areas; adjacent developments
- Section 30253 Minimization of adverse impacts
- Section 30255 Priority of coastal-dependent developments

Full text of these policies is contained in Section 3.10.1 Land Use

### **City of Pismo Beach General Plan/Local Coastal Plan**

The following policies from the City of Pismo Beach General Plan/Local Coastal Plan (LCP) protecting biological resources are relevant to the proposed project (all policy text is as given in the General Plan/LCP):

*CO-14 Riparian Habitat.* Riparian habitat is the environment associated with lands adjacent to freshwater sources perennial and intermittent streams, estuaries, marshes, springs, seeps. The habitat is characterized by plant and animal communities that require high soil moisture in excess of that available from precipitation. Among the major plants associated with riparian habitat in the Pismo Beach area are sycamore, cottonwood, willow, and occasionally oak. Large riparian areas occur along the banks of Pismo Creek, Meadow Creek, and Pismo Marsh, although smaller areas can be found in the planning area.

It is the policy of the City to preserve riparian habitat under the following conditions:

1. As part of discretionary planning permits, a biotic resources management plan shall be required.
2. The biotic resources management plan shall include standards for project development, which will avoid habitat disturbance.
3. The standards specified in the biotic resources management plan shall be utilized to determine the extent of development. The minimum standards that may be specified in the biotic plan for the preservation of habitat shall include:
  - Preservation of groupings of trees in which at least ten trees with a minimum six-inch diameter (measured four and one half feet above natural grade) will be preserved.
  - Plants may be removed from the habitat areas if diseased or if they present a hazard to public safety. A professional horticulturist or a certified landscape architect must certify such conditions. Plants removed for these reasons must be replaced with at least four minimum 15-gallon specimens of each species.
  - No significant disruption of riparian vegetation will be permitted. In addition, a minimum riparian buffer area shall be identified for each riparian habitat area at the time of development review. Except as specified in Policy CO-21 for Pismo Creek

and Policy CO-23 for Pismo Marsh, the minimum width of the buffer area shall be as identified by the biotic resources management plan and generally not less than 25 feet. Development standards for the minor riparian habitat areas and their respective buffer areas shall be the same as provided in Policy CO-21 with respect to kinds and locations of allowable uses.

**CO-15 Ocean Shore-Principal Open Space Resource.** The ocean shore is, and shall continue to be, the principle open space feature of Pismo Beach. Ocean front land shall be used for open space, recreation and related uses where feasible and where such uses do not deteriorate the natural resource.

**CO-18 Beach Access.** Due to public safety and habitat protection considerations, the construction of vertical access ways to the ocean along the rocky coast area shall be limited to those areas with sandy beaches. Prior to any approval for new access to the shoreline, the request shall first be evaluated in terms of protection of sensitive shoreline resources and safety. (See Park and Recreation Element, Access Component.)

**CO-21 Pismo Creek Protection.** Pismo Creek shall be retained in its natural state and protected from significant alterations. The following measures shall be employed to accomplish this intent:

- a. **Streamside Protection Zone.** There shall be a minimum streamside protection zone to conserve the environmentally sensitive habitats of the creek. This buffer zone shall be measured from the outer edge of the riparian vegetation or, where there is no riparian vegetation, from the top of the creek bank. The minimum width of the buffer shall be as follows:

West Bank

100 feet/Cypress northward to City limits  
25 feet/Cypress to the ocean

East Bank

100 feet/U.S. 101 northward to City limits  
50 feet/U.S. 101 to Dolliver Street  
25 feet/Dolliver to the ocean

A lesser buffer may be permitted if: 1) the minimum widths set forth above would render a parcel inaccessible or unusable for the purpose designated in the land-use plan; or 2) there is a showing by an applicant through the resource assessment study identified in item "h" that a lesser buffer will not result in loss of, or adverse effects on, streamside vegetation or the biotic quality of the stream. Alternative mitigations shall be required where lesser buffers are authorized. No new construction or vegetation removal, except for normal maintenance, shall be allowed in the buffer zone with the exception of public roadways or bridges identified in the Circulation Element, paths, trails, fences, flood control structures, and other similar structures deemed not to adversely affect the creek.

- b. **Open Space.** The sandspit and channel where Pismo Creek enters the ocean and those portions of parcels located within the creek channel shall remain as open space and no structures or fill shall be permitted thereon.
- c. **Conservation Dedication.** Any new development shall be required to dedicate as a condition of any discretionary approval, an easement for the protection of the streamside area consisting of 25 feet or more from the top of the creek bank. In addition, new development shall provide access amenities adjacent to the creek for the city to use as a greenbelt and/or recreation corridor.

- d. *Structures in the Stream Corridor.* No structures shall be located within the stream corridor except: dams; structures necessary for flood control purposes; bridges, when supports can be located outside of critical habitat; a public pathway and pipelines, when no alternative route is feasible.
- e. *Limitations on Development.* All development, including dredging, filling and grading, within the stream corridor shall be limited to activities necessary for flood control purposes, bridge construction, water supply projects, or lying of pipelines, when no alternative route is feasible. When such activities require removal of riparian plant species, revegetation with local native plants shall be required. Minor clearing of vegetation shall be permitted for hiking and equestrian trails, bike trails, viewpoints, etc.
- f. *Minimize Impacts.* All permitted construction and grading within stream corridors shall be carried out in such a manner as to minimize impacts from increased runoff, sedimentation, biochemical degradation, or thermal pollution.
- g. *Channeling.* No concrete channeling or other major creek alteration shall be permitted, unless no viable alternative exists.
- h. *Resource Protection Plan.* A Resource Assessment and Protection Plan shall be required and approved concurrent with city action on projects located on parcels which have a portion within the streamside protection zone. The plan shall include appropriate measures to protect the creek's biological and visual aspects.

### 3.4.2 Environmental Setting

#### Vegetation

Large portions of the project area are covered by the Pismo Creek Estuary (open water) and unvegetated sand. Vegetated areas include predominantly non-native vegetation characteristic of disturbed areas east of Pismo Creek Estuary near PCRVR, coastal marsh vegetation adjacent to the estuary, and coastal strand vegetation west of the estuary, described in more detail below.

The eastern portion of the project area (east of the estuary) consists of a sand dune primarily vegetated with large patches of non-native ice plant (*Carpobrotus edulis* and/or *C. chilensis*). Non-native searocket (*Cakile maritima*) also occurs in this area. This vegetation type is classified as ice plant mats (*Carpobrotus edulis* or other ice plants semi-natural herbaceous stands) in *A Manual of California Vegetation, Second Edition* (Sawyer, et al. 2009). A small stand of Monterey cypress (*Hesperocyparis macrocarpa*) trees occurs east of the ice plant, adjacent to PCRVR. This vegetation type is classified as Monterey cypress stands (*Callitropsis macrocarpa* woodland special stands) in Sawyer et al. (2009). Patches of arroyo willows (*Salix lasiolepis*) and tree-mallow (*Malva arborea*) occur intermittently on the eastern side of the estuary, particularly toward the southern end of the project area. This vegetation type corresponds to arroyo willow thickets (*Salix lasiolepis* Shrubland Alliance) in Sawyer et al. (2009). Above the wet areas at the dune's base, native silver bush lupine (*Lupinus chamissonis*) and beach bur (*Ambrosia chamissonis*) are common. This vegetation type is classified as silver dune lupine-mock heather scrub (*Lupinus chamissonis-Ericameria ericoides* Scrubland Alliance) in Sawyer et al. (2009).

There are patches of coastal salt marsh vegetation immediately adjacent to the estuary. Common plants in this vegetation type may include curly rush (*Juncus mexicanus*), fleshy Jaumea (*Jaumea carnosa*), salt grass (*Distichlis spicata*), Pacific silverweed (*Potentilla anserina* var. *pacifica*), creeping wild rye (*Leymus triticoides*), and common three-square (*Schoenoplectus pungens*). Saltbush (*Atriplex triangularis*) grows along the edge of the dune

(Althouse and Meade, Inc. 2010). This vegetation type could be classified as a number of vegetation alliances in Sawyer et al., depending on which species is dominant.

The western portion of the project area (west of the estuary) consists primarily of coastal strand vegetation, dominated by beach bur and sand verbena (*Abronia* spp.). Other common plants may include searocket, beach evening primrose (*Camissoniopsis cheiranthifolia*), and Pacific silverweed. This vegetation type is classified as dune mat (*Abronia latifolia*-*Ambrosia chamissonis* herbaceous alliance) in Sawyer et al. (2009). Small patches of silver dune lupine scrub also occur in the western portion of the project area.

## Wildlife

Fish sampling was conducted at four sites in Pismo Creek Estuary on May 19, 2005, by Hagar Environmental. The majority of captures were topsmelt (*Atherinops affinis*) in both numbers and biomass. Large numbers of staghorn sculpin (*Leptocottus armatus*) and starry flounder (*Platichthys stellatus*) were also captured. A single, smolt-sized (187mm fork length) steelhead (*Oncorhynchus mykiss*) was captured in the deepest part of the estuary, near the point where it turns to run across the beach (Hagar Environmental 2005). In 2007, the estuary was seined with the assumption of goby absence, but dozens of tidewater goby (*Eucyclogobius newberryi*) were found on the first haul (Coastal San Luis Resource Conservation District [CSLRCD] 2011). Additional surveys of the Pismo Creek Estuary, some cursory and some more thorough, have occurred in recent years (Rischbieter 2011, 2013). The most recent seining of some of the more-easily accessible areas of the Pismo Creek Estuary occurred on May 29, 2013 by CDPR staff (Rischbieter 2013). At that time, the estuary was open to the ocean, but few fish occupied the cross-beach outlet channel. No fish were caught in the narrower flowing parts, but two tidewater goby (about 15mm total length [TL]) were caught in a wider/static pool in the outlet channel. This outlet point was a little farther south than in recent years. Tidewater goby seemed most abundant a short distance north of the outlet, essentially where the outlet used to be in previous years, and a seine haul there yielded thousands of goby of all sizes and life stages. Among the abundant goby were a couple of staghorn sculpin (largest 63mm TL) and a few dozen threespine stickleback (*Gasterosteus aculeatus*) (to 44mm TL). Steelhead and tidewater goby are discussed in more detail in the special-status species section below.

No surveys for reptiles and amphibians have been conducted in the project area. However, pitfall traps and time-constrained searches in the vegetation islands to the south of the project area indicate that Pacific chorus frog (*Pseudacris regilla*), California alligator lizard (*Elgaria multicarinata multicarinata*), and coast range fence lizard (*Sceloporus occidentalis bocourtii*) are common species in similar habitats south of the project area (CDPR 2011).

Transect surveys for shorebirds are conducted at Pismo State Beach and Oceano Dunes SVRA once every season. Seventy-seven bird species have been observed along the shoreline from 2004-2010. The most common and abundant shorebirds identified were, in order, sanderlings (*Calidris alba*), Heermann's gulls (*Larus heermanni*), California gulls (*Larus californicus*), Western gulls (*Larus occidentalis*), ring-billed gulls (*Larus delawarensis*), western snowy plovers (*Charadrius alexandrinus* ssp. *nivosus* a federal threatened and California Species of Special Concern), whimbrels (*Numenius phaeopus*), western sandpipers (*Calidris mauri*), and willets (*Tringa semipalmata*). Not all of the species seen are classified as shorebirds. Brewer's blackbirds (*Euphagus cyanocephalus*) and brown pelicans (*Pelecanus occidentalis*) were non-shorebird species seen most commonly along the shoreline. Other non-shorebird species such as swallows were observed flying overhead (CDPR 2011). Western snowy plover is discussed in more detail in the special-status species section below.

No surveys for mammals have been conducted in the project area. However, in 2010 small mammal trapping in the vegetation islands to the south of the project area captured North American deer mouse (*Peromyscus maniculatus*), Heermann's kangaroo rat (*Dipodomys*

*heermanni*), California deermouse (*Peromyscus californicus*), dusky-footed wood rat (*Neotoma fuscipes*), western harvest mouse (*Reithrodontomys megalotis*), California pocket mouse (*Chaetodipus californicus*), and California meadow vole (*Microtus californicus*). The species detained in the greatest number was the North American deermouse, which made up 46% of the total captures. Larger mammals detected during nocturnal spotlight searches include coyote (*Canis latrans*), red fox (*Vulpes vulpes*), raccoon (*Procyon lotor*), opossum (*Didelphis virginianus*), striped skunk (*Mephitis mephitis*), Audubon cottontail (*Sylvilagus auduboni*), brush rabbit (*Sylvilagus bachmanni*), black-tailed jackrabbit (*Lepus californicus*), black-tailed deer (*Odocoileus hemionus columbianus*), and muskrat (*Ondatra zibethicus*) (CDPR 2011). It is likely that many of the same species are common in the project area.

### **Wildlife Movement Corridors**

Pismo Creek and Estuary may act as a movement corridor for anadromous fish such as steelhead during the rainy season when it is connected to the Pacific Ocean, although the larger Arroyo Grande Creek to the south is probably more important for steelhead. The project area is within the 18 square mile Guadalupe Nipomo Dunes complex, which extends south from the project area. The Dunes complex may act as a movement corridor for migratory bird species and large mammals. Most of the Dunes complex is protected as federal, state, or local government land. Developed land occurs to the east of the project area, which may act as a barrier to wildlife movement.

### **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. In this analysis, special-status species include:

- Species that are listed as threatened or endangered under the Federal Endangered Species Act or the California Endangered Species Act
- Species considered as candidates for listing as threatened or endangered under the Federal Endangered Species Act or the California Endangered Species Act
- California Species of Special Concern and species on the CDFW Watch List
- Fully protected species per California Fish and Game Code
- Plants considered by CDFW and the California Native Plant Society (CNPS) to be rare, threatened, or endangered (California rare plant rank, [CRPR] 1 or 2).

The special-status species with potential for occurrence in the project area are listed in the tables in Appendix C. The tables were prepared using information in the California Natural Diversity Database (CNDDDB 2013), the CNPS Rare Plant Inventory (2013), the California Department of Parks and Recreation, Oceano Dunes District Habitat Monitoring Report (CDPR 2011), and the Pismo Creek Estuary Enhancement Project Existing Conditions Report (CSLRCD 2011).

### **Special-Status Plant Species**

Based on CNDDDB and CNPS records as well as past surveys of the project area, 69 special-status plants occur in the region. Of these, 55 are unlikely to occur based on a lack of suitable habitat and a lack of known occurrences in the project area. The remaining 13 species have at least a moderate potential for occurrence and are described below.

Coastal Goosefoot. Coastal goosefoot (*Chenopodium littoreum*), a CRPR 1B.2 plant, is an annual herb in the Chenopodiaceae (goosefoot) family that blooms from April through August. It occurs on sand dunes from 10 to 30 meters elevation. It is endemic to San Luis Obispo, Santa

Barbara, and Los Angeles Counties and is known from fewer than 20 occurrences. It is possibly threatened by recreational activities, vehicles, and non-native plants (CNPS 2012).

Coastal goosefoot has a moderate potential to occur in the project area based on the presence of suitable habitat; it is known from south of the project area at Oso Flaco and Jack Lakes.

Saltmarsh Bird's Beak. Saltmarsh bird's beak (*Chloropyron maritimum* ssp. *maritimum*), a CRPR 1B.2 plant, is an annual herb (hemi-parasitic) in the Orobanchaceae (broom-rape) family that blooms from May through October. It occurs in coastal dunes or marshes and swamps (coastal salt) from 0 to 30 meters elevation. It is endemic to the southern California coast. It is threatened by vehicles, road construction, hydrological alterations, recreational activities, foot traffic, non-native plants, and loss of salt marsh habitat (CNPS 2012).

Saltmarsh bird's beak has a moderate potential to occur in the project area based on the presence of suitable habitat; although there are no records of this species in the project area.

Surf Thistle. Surf thistle (*Cirsium rhotophilum*), state threatened and a CRPR 1B.2 plant, is a low-growing, short-lived perennial in the sunflower family (Asteraceae) with white flowers in dense heads. 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 and sand movement and abrasion. Flowering occurs between April and June and occurs only in the narrow strip of coastal habitat between stabilized dunes and windblown beach. 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. 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 2004).

Surf thistle has a moderate potential to occur in the project area based on the presence of suitable habitat; it is known from south of the project area near Oso Flaco Lake.

La Graciosa Thistle. La Graciosa thistle (*Cirsium scariosum* var. *loncholepis*), federal and state threatened and a CRPR 1B.1 plant, is a bushy biennial or short-lived, perennial herb with large, smooth to slightly hairy leaves and clustered heads of white flowers. It is a spreading, mound-like or erect plant in the 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 mesic areas on the margins of dune swales, dune lakes, marshes, estuaries, coastal meadows, seeps, springs, intermittent streams, creeks, and rivers. This species thrives on sandy soils and is pollinated by hummingbirds and insects (USFWS 2000).

La Graciosa thistle has a moderate potential to occur in the project area based on the presence of suitable habitat; it is known from south of the project area near Oso Flaco Lake, near Jack Lake, in the Callander Dunes, and at the Dune Lake complex.

Dune Larkspur. Dune larkspur (*Delphinium parryi* ssp. *Blochmaniae*), a CRPR 1B.2 plant, is a perennial herb in the Ranunculaceae (buttercup) family that has purple and white or blue and white flowers and blooms from April through May. It occurs in maritime chaparral and on coastal dunes from 0 to 200 meters elevation. It is endemic to California and is threatened by development (CNPS 2012).

Dune larkspur has a moderate potential to occur in the project area based on the presence of suitable habitat; it is known from south of the project area near Oso Flaco Lake and at Callander Dunes.

Beach Spectaclepod. Beach spectaclepod (*Dithyrea maritima*), state threatened and a CRPR 1B.1 plant, is a low growing, whitish-flowered perennial herb in the Brassicaceae (mustard)

family. It is found in small transverse foredunes approximately 50-325 meters from the surf. Beach spectaclepod is usually found in areas of these 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. Several populations are found on Unocal's property in the Guadalupe Dunes just north of the Santa Maria River (CDFG 2004 and CNPS 2012).

Beach spectaclepod has a moderate potential to occur in the project area based on the presence of suitable habitat; it is known from south of the project area near Oso Flaco Lake and south of Oso Flaco Lake.

Blochman's Leafy Daisy. Blochman's leafy daisy (*Erigeron blochmaniae*), a CRPR 1B.2 plant, is a perennial rhizomatous herb that blooms from June through August. It is in the Asteraceae (aster) family and has light purple flowers. It occurs on coastal dunes and in coastal scrub from 3 to 45 meters elevation. It is endemic to California and is threatened by development, non-native plants and vehicles (CNPS 2012).

Blochman's leafy daisy has a high potential to occur in the project area based on the presence of suitable habitat and because it is locally common in the area.

Kellogg's Horkelia. Kellogg's horkelia (*Horkelia cuneata* var. *sericea*), a CRPR 1B.1 plant, is a perennial herb that blooms from April through September. It has white flowers and is in the Rosaceae (rose) family. It occurs in closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub on sandy or gravelly openings from 10 to 200 meters elevation. It is endemic to California and is possibly threatened by coastal development (CNPS 2012).

Kellogg's horkelia has a moderate potential to occur in the project area based on the presence of suitable habitat; it is known from south of the project area in the Pismo Dunes Natural Preserve, at Callander Dunes, and at Jack Lake.

Nipomo Mesa Lupine. Nipomo Mesa lupine (*Lupinus nipomensis*), federal and state threatened and a CRPR 1B.1 plant, is a low-growing, blue-flowered, annual herb in the 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, which also present a threat of herbivory. Nipomo Mesa lupine is restricted to dry sandy flats of stabilized coastal dunes that lie west of Nipomo Mesa in San Luis Obispo County. There is no recovery plan or designated critical habitat for this species (USFWS 2000).

Nipomo Mesa lupine has a moderate potential to occur in the project area based on the presence of suitable habitat; it is known from south of the project area near Jack Lake, near Black Lake, and at the Callander Dunes.

Crisp Monardella. Crisp monardella (*Monardella undulata* ssp. *crispa*), a CRPR 1B.2 plant, is a perennial rhizomatous herb that blooms from April through August. It has purple flowers and is in the Lamiaceae (mint) family. It occurs in coastal dunes and sandy scrub from 10 to 120 meters elevation. It is endemic to California and is threatened by vehicles (CNPS 2012).

Crisp monardella has a high potential to occur in the project area based on the presence of suitable habitat and because is locally common in the area.

San Luis Obispo Monardella. San Luis Obispo monardella (*Monardella undulata* ssp. *undulata*), a CRPR 1B.2 plant, is a perennial rhizomatous herb that blooms from May through September. It has purple flowers and is in the Lamiaceae (mint) family. It occurs in coastal dunes and sandy

coastal scrub from 10 to 200 meters elevation. It is endemic to California and is threatened by coastal development, vehicles, and potentially non-native plants (CNPS 2012).

San Luis Obispo monardella has a moderate potential to occur in the project area based on the presence of suitable habitat; it is known from the Pismo Dunes Natural Preserve, near Jack Lake, near Black Lake, in the Callander Dunes, in the Oso Flaco Lake area, and south of Oso Flaco Lake.

Coast Woolly-heads. Coast woolly-heads (*Nemacaulis denudata* var. *denudata*), a CRPR 1B.2 plant, is an annual herb in the Polygonaceae (buckwheat) family that blooms from April through September. It occurs on coastal dunes from 0 to 100 meters elevation. Populations have been much reduced by coastal development (CNPS 2012).

Coast woolly-heads has a moderate potential to occur in the project area based on the presence of suitable habitat, although there are no records of this species in the project area.

Black-flowered Figwort. Black-flowered figwort (*Scrophularia atrata*), a CRPR 1B.2 plant, is a perennial herb in the Scrophulariaceae (figwort) family that blooms from March through July. It occurs in closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub, and riparian scrub from 10 to 500 meters elevation. It is endemic to California and is threatened by energy development and mining (CNPS 2012).

Black-flowered figwort has a high potential to occur in the project area; the closest known occurrence is 0.5 mile northeast of the project area.

### **Special-Status Wildlife Species**

Based on CNDDDB as well as past surveys of the project area, 35 special-status animals occur in the region. Of these, 19 are unlikely to occur based on a lack of suitable habitat and a lack of known occurrences in the project area. The remaining 16 species have at least a moderate potential for occurrence and are described below.

Steelhead-South-Central California Coast Evolutionarily Significant Unit (ESU). Steelhead are seagoing (anadromous) rainbow trout. Where they have access to cool ocean waters, they typically spend one or two years at sea and attain sizes reminiscent of other species of Pacific salmon (well over 10 pounds and lengths in excess of 30 inches). Like other Pacific salmon, steelhead will usually return to their natal stream at maturity and ascend to headwaters to spawn. Juvenile steelhead will spend one to three years in those streams before emigrating to the ocean. Unlike other salmon species, adult steelhead typically do not die after one spawning but can return to the ocean and then repeat their anadromous spawning ascent in subsequent years. In waters where they are isolated from the ocean or are otherwise landlocked, rainbow trout establish resident populations and individuals typically do not attain lengths greater than 20 inches. Whether anadromous or resident, these fish require cool water (generally under 70° F) and cover (NMFS 2013).

The National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries) identified 10 geographic ESUs within the steelhead's range, 6 of which are in California. Steelhead populations were grouped into ESUs based on genetic similarity and similarity in life history brought on by rainfall patterns and topography. San Luis Obispo Coast steelhead populations are included in one of the four federally threatened ESUs, the South-Central California Coastal ESU (NMFS 2012). The steelhead of the South-Central California Coastal ESU is also a California Species of Special Concern.

Steelhead use the Pismo Creek Estuary for upstream migration as adults and for downstream migration as juveniles and adults. Adult steelhead primarily migrate upstream December through April, while juveniles migrate downstream March through May. A fisheries survey completed in 2005 identified steelhead in the Pismo Creek Estuary and one smolt-sized

steelhead in the estuary (CSLRCD 2011). In addition, a fish die-off in 2004 affected dozens of steelhead smolts (CSLRCD 2011). It is unknown to what degree steelhead use the estuary for rearing. There is also a 2008 CNDDDB record of steelhead in Pismo Creek.

Tidewater Goby. Tidewater goby is listed as a federally endangered species and a California Species of Special Concern. Endemic to coastal California, tidewater gobies are adapted to coastal lagoons, marshes, the uppermost brackish zone of larger estuaries, and lower stream reaches where the water is fairly still. Tidewater gobies rarely inhabit marine or freshwater habitats. They avoid open areas where there is strong wave action or strong currents, though they enter marine environments when flushed out of brackish habitats by high flows (or normal breaching of lagoon sandbars, if present) following storm events. Tidewater gobies prefer a sandy substrate for breeding, but they can be found on rock, mud, and silt substrates as well. Tidewater goby can spawn year round with their primary spawning occurring April through November. The species is typically found in water less than 3.3 feet (1 m) deep and salinities of less than 12 parts per thousand, though they have been documented in waters with salinity levels from 0 to 42 parts per thousand, water depths from <10 to 80 inches (25 to 200 cm), and waters with temperature from 46 to ≤77 degrees Fahrenheit (8 to 25 degrees C°). The tidewater goby is benthic in nature, with a diet consisting mostly of small crustaceans and aquatic insects (USFWS 2005).

Tidewater goby is known to occur in Pismo Creek and Estuary from CNDDDB records and local surveys (Rischbieter 2011, 2013).

Coast Range Newt. The Coastal Range newt (*Taricha torosa torosa*), a California Species of Special Concern, is a subspecies of the California newt. It is native to the coast, California Coast Ranges, and western Transverse and Peninsular Ranges, from Mendocino County south to San Diego County. Reproduction is aquatic. Adults probably reach reproductive maturity in their third year. The breeding season lasts 6 to 12 weeks. Adults migrate from terrestrial locations to ponds, reservoirs, and sluggish pools in streams to breed, typically beginning anywhere from late December to February, depending on rainfall amounts. Populations that breed in stream pools migrate later, typically in March and April, after the stream flooding has subsided. Migration may take several weeks and cover large distances. Terrestrial newts summer in moist habitats under woody debris or in rock crevices and animal burrows but can sometimes be seen wandering overland in moist habitat or conditions any time of the year. Adults eat small invertebrates such as worms, snails, slugs, sowbugs, and insects. Larvae eat small aquatic invertebrates, decomposing organic matter, and possibly other newt larvae (California Herps 2013).

Coast Range newt has a moderate potential to occur in the project area based on the presence of suitable habitat, although there are no records of this species from the project area.

California Red-legged Frog. California red-legged frog (*Rana draytonii*), federal threatened and a California Species of Special Concern, is endemic to California and Baja California and has been found at elevations from sea level to about 5,000 feet, with most observations occurring below 3,500 feet. It uses a variety of habitat types including various aquatic, riparian, and upland habitats. California red-legged frog can use many types of aquatic systems, provided a permanent water source, ideally free of nonnative predators, is nearby; however, individual frogs may complete their entire life cycle in a pond or other aquatic site that is suitable for all life stages. California red-legged frog breeds in aquatic habitats such as marshes, ponds, deep pools, and backwaters in streams and creeks, lagoons, and estuaries. Breeding adults are often associated with dense, shrubby riparian or emergent vegetation and areas with deep (>27 inches), still, or slow-moving water. This species also successfully breeds in artificial ponds with little or no emergent vegetation and has been observed in stream reaches that are not covered

in riparian vegetation. California red-legged frog also uses small mammal burrows and moist leaf litter for cover (USFWS 2002).

Although California red-legged frog has been recorded 1.5 mile upstream of the project area on a tributary to Pismo Creek, the Pismo Creek Estuary may be too saline to support red-legged frog, and it is unlikely to occur at the project site.

Western Pond Turtle. The western pond turtle (*Actinemys marmorata*), a California Species of Special Concern, ranges in size from 3.5 to 7 inches and is the only freshwater turtle native to California. It occurs in ponds and small lakes with abundant vegetation. It is also found in marshes, slow-moving streams, reservoirs, and occasionally brackish water. The southwestern pond turtle feeds on aquatic plants, such as pond lilies, beetles, aquatic invertebrates, fishes, frogs, and carrion. It requires basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks, as well as underwater retreats to hide from predators and humans. Females deposit their eggs in nests in sandy banks or in the case of foothill streams, in upland areas away from the stream. Nests have been observed in many soil types, from sandy to very hard, and have been found up to 100 meters from the water. Certain fish species, bullfrogs, garter snakes, wading birds, and some mammals prey on hatchlings and juveniles (Stebbins 1985).

Western pond turtle has a high potential to occur in the project area based on the presence of suitable habitat and a 2008 record in Pismo Creek.

Silvery Legless Lizard. The silvery legless lizard (*Anniella pulchra pulchra*), a California Species of Special Concern, is a small slim lizard approximately 4 to 7 inches long with no limbs. This species is often confused with snakes; however, it is distinguished from snakes by its movable eyelids. Its smooth scales and shovel-shaped snout allow it to more easily move through loose or sandy soil. Typically this species is silver to beige above with a yellow underside. Silvery legless lizards inhabit beaches, pine-oak woodland, chaparral, and riparian habitat where there is suitable loamy or sandy soil available for burrowing. They forage for insects and spiders in leaf litter during the day. No eggs are laid by this species; instead, live birth produces up to four young from September through November (Stebbins 1985).

Silvery legless lizard has a moderate potential to occur in the project area based on the presence of suitable habitat, although the nearest records of this species are several miles south of the project area in the vegetation islands at Oceano Dunes SVRA.

Two-striped Garter Snake. Two-striped garter snake (*Thamnophis hammondi*) is a California Species of Special Concern. As with most garter snakes, it is highly aquatic and has two yellow-orange lateral stripes, one on each side of the body. It is distinguished from other garter snakes due to its lack of a middorsal stripe. Its olive color body ranges from 24 – 36 inches long. Typical habitat for this species is a perennial or intermittent stream with a rocky bottom and dense riparian vegetation. However, it is also found in other permanent freshwater sources such as ponds. Frogs, fish, tadpoles, toads and earthworms all contribute to the snake's diet. Two-striped garter snakes mate in the spring (March) and bear anywhere from 1 to 25 live young in the fall (late August through November) (Stebbins 1985).

Two-striped garter snake has a moderate potential to occur in the project area based on the presence of suitable habitat, although the nearest records of this species are several miles south of the project area at Oso Flaco Lake.

American White Pelican. American white pelican (*Pelecanus erythrorhynchos*), a California Species of Special Concern, breeds primarily in the interior of North America from the Canadian and U.S. prairies patchily south and west to southern Oregon, northeastern California, and western Nevada and winters along the Pacific coast from Central California to Nicaragua and from Florida to the Yucatan Peninsula. In California, breeding populations are mainly confined to

the Klamath Basin. American white pelicans nest in colonies, usually on earthen, sandy, or rocky islands, peninsulas or on tule mat islands. White pelicans typically forage cooperatively in shallow inland waters, such as open areas in marshes and along lake or river edges; wintering and nonbreeding birds also feed in shallow coastal marine habitats (Shuford and Gardali 2008).

American white pelican has a high potential to occur in the project area based on the presence of suitable foraging habitat and detection in point count surveys in the vegetation islands south of the project area. There is no breeding habitat in the project area.

California Brown Pelican. California brown pelican (*Pelecanus occidentalis californicus*), a California Fully Protected Species, can be found roosting on the beach or flying over and feeding along the California shoreline. Brown pelicans breed on rocky or low, brushy slopes of undisturbed islands in the Channel Islands and Mexico (Cogswell 1977). After breeding they disperse along the California coastline.

Brown pelican is presumed to be present in the project area based on the presence of suitable foraging habitat and detection in shorebird transect surveys south of the project area. There is no breeding habitat in the project area.

Northern Harrier. The Northern harrier (*Circus cyaneus*), a California Species of Special Concern, inhabits fresh and saltwater marshes, as well as upland grasslands. This medium-sized raptor often flies close to the ground while hunting for small mammals and birds. The male and female of this species are highly sexually dimorphic. The female is larger than the male and has dominantly brown colored plumage while the male is dominated with gray plumage. However, both have white rumps that are obvious during flight (Sibley 2000).

Northern harrier has a high potential to occur in the project area based on the presence of suitable foraging habitat and detection in point count surveys in the vegetation islands south of the project area. It is known to breed in the region, although the project area lacks breeding habitat.

American Peregrine Falcon. The American peregrine falcon (*Falco peregrines* ssp. *anatum*) is a California Fully Protected species. Peregrine falcons 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. Peregrine falcons nest near water on cliffs, banks, dunes, or mounds. They will also occasionally nest on buildings or bridges, in cavities in trees or snags, or in the abandoned nests of other raptors. Peregrine falcons occur in California as residents or in the winter as migrants that breed farther north (White et al. 2002).

American peregrine falcon is presumed to be present in the project area based on the presence of suitable foraging habitat and detection in shorebird transect surveys south of the project area. It is known to breed in the region, although the project area lacks breeding habitat.

Western Snowy Plover. The western snowy plover, federal threatened and a California Species of Special Concern, is a distinct subspecies of snowy plover that ranges from the southern tip of Baja California, Mexico, along the coast as far north as southern Washington to interior sites in Oregon, California, and as far east as Kansas, and south into coastal Texas (USFWS 2007). The western subspecies can be further separated into populations, depending on breeding locations. The Pacific Coast population is defined as the individuals that occupy breeding sites along the Pacific Ocean on the North American mainland coast, peninsula offshore islands, interior bays, estuaries, and rivers (USFWS 2007). It is this population that was listed as threatened under FESA. The western snowy plovers that occupy portions of the San Luis Obispo County coastline are part of the Pacific Coast population. Regional snowy plover populations along the Pacific Coast may be comprised of resident breeders that do not migrate, migratory breeders that leave during the winter months (November to January) and return at the

onset of the breeding season, and wintering birds that migrate from interior or other coastal breeding sites and arrive in November and remain until February (Warriner et al. 1986).

Snowy plovers breed and forage on sandy beaches. Nests are typically found on flat open areas of the back beach or back dunes where vegetation is sparse or non-existent (Stenzel et al. 1981). Low or sparse vegetation allows the birds to visually detect approaching predators or other potential threats at a distance. Areas that have been overgrown by introduced European beach grass (*Ammophila* spp.) are not suitable as nesting habitat. After the chicks hatch, they tend to move into areas where there is at least some vegetation or beach debris, which provides cover from the heat of the sun, inclement weather, and predators. In general, snowy plover nests are most often located within 100 meters of water, or at least within sight of it (Stenzel et al. 1981, USFWS 2007).

Throughout the non-breeding season, snowy plovers along the coast tend to aggregate in loose flocks along the beach, often around the mouths of freshwater creeks and rivers and along the swash line or upper beach. These flocks may consist of resident adults, juveniles born in the area, overwintering birds that breed elsewhere along the Pacific Coast and interior sites (Warriner et al. 1986), and transitory adults and juvenile birds on migration.

While most known nesting locations are south of the project area, one snowy plover nest was detected near the Pismo Creek Estuary in 2009. Wintering and nonbreeding snowy plovers do occur regularly in the project area.

California Least Tern. California least tern, federal and state threatened and a California Fully Protected Species, is a colonial nesting seabird that historically nested along the Pacific Coast from Baja California to Monterey Bay, California (USFWS 2006, Grinnell 1928). In mid to late April, California least tern returns to nesting grounds along the coast of California and Baja, Mexico. The breeding season lasts about five months, after which the birds migrate to wintering sites on the coasts of Central and South America (Sibley 2000). California least terns observed at Oceano Dunes SVRA typically nest among the large open expanses of the beach and dunes that are completely or nearly completely devoid of vegetation. Nests are normally located where terrestrial predators can be detected over a large area. This allows adults time to leave their nest or young chicks and mob the intruder. California least terns feed on fish caught by diving into the surface waters of freshwater lakes and rivers and oceans. Foraging occurs mostly in mid-late July through mid-August; however, they may forage there any time of the year when present in the area. California least terns begin to arrive in the area in mid-May and depart mid-August to beginning of September.

While known nesting locations are south of the project area, California least terns may forage in the project area.

Willow Flycatcher. The state endangered willow flycatcher (*Empidonax trailii*) is a common migrant in spring (mid-May to early June) and fall (mid-August to early September) at elevations below 600-2500 meters, primarily in riparian habitats (Gaines 1977).

The willow flycatcher has a high potential to occur in the project area based on detection in point count surveys in vegetation islands south of the project area; there is some suitable riparian habitat for this species in the willows. It may breed in the region, but there is limited nesting habitat in the project area.

Loggerhead Shrike. The loggerhead shrike (*Lanius ludovicianus*), a California Species of Special Concern, receives its name from its relatively large head in comparison to body size. Loggerhead shrikes have a black mask, gray head and back, and white chest. The loggerhead shrike is an unusual member of the order of Passerines because it is a top-level predator. Loggerhead shrikes possess a hooked bill, not unlike many raptor species, and capture and kill large prey by impaling them on a thorn or barbed wire fence. Prey items for loggerhead shrikes

consist of large insects, small mammals and birds, amphibians, reptiles, carrion, and other invertebrates. In southern portions of their range, loggerhead shrikes are non-migratory and defend a territory as a pair year round (Shuford and Gardali 2008).

Loggerhead shrike has a high potential to occur in the project area based on detection in point count surveys in vegetation islands south of the project area, although there are limited perching sites in the project area. It may breed in the region, but there is limited nesting habitat in the project area.

Yellow Warbler. The yellow warbler (*Setophaga petechia*), a California Species of Special Concern, sings from the tops of willow and cottonwood trees along streams and ponds throughout California. This warbler is most abundant in early succession riparian habitats that possess dense thickets of young willow trees. The male has distinctive reddish streaking on his chest with a bright yellow face. Insects, other arthropods, and occasionally wild fruits make up the diet of the yellow warbler. This species is a common brown-headed cowbird host and is one of the few species documented as rejecting the nest parasitism by building a new nest bottom over the existing clutch, thus creating a multi-tiered nest (Lowther 1999).

Yellow warbler has a high potential to occur in the project area based on detection in point count surveys in vegetation islands south of the project area. The willows in the project area may provide some suitable nesting habitat for this species, although it may prefer denser riparian thickets.

### 3.4.3 Discussion

*Would the proposed project:*

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

**Less than Significant with Mitigation.** Many of the special-status plants with the potential to occur in the project area are likely absent due to the high level of disturbance from foot traffic, erosion, and invasive plants (ice plant). However, certain special-status plants, such as crisp monardella, are locally common and often occur in barren or disturbed areas. Thus, there is a possibility that special-status plants may occur in the project area. The area of ground disturbance associated with the project would be limited to the area around the bridge abutments and the access route to the construction site. Installation of the bridge would not involve the use of heavy construction equipment. The bridge, abutments, and anchors would be installed by a licensed contractor with hand crews and/or a small excavator. Nevertheless, special-status plants could still be impacted by the project if they occur in the area of disturbance. Mitigation Measure BIO-1, listed below, would reduce potential impacts to special-status plants to a less than significant level. Installation of the pedestrian bridge to reduce foot traffic through vegetated areas, as well as future phases of the project to reduce erosion and revegetate the area with native plants, would improve habitat for any special-status plants in the area over the long term.

As stated under Special-Status Wildlife Species in Section 3.4.2, the federally threatened steelhead South-Central California Coast ESU and the federally endangered tidewater goby occur in the estuary. The proposed project would not alter the hydrology of the project area or significantly impact water quality. To allow movement of all fish species as well as an exchange of fresh and salt water, the interlocking pieces of the bridge would be constructed to create wide openings under the bridge. Openings would 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. Although shadow or disturbances to the surface of the water from pedestrians crossing the bridge could cause temporary disturbances to tidewater goby and steelhead, the bridge would impact a very small area of the estuary, and such disturbances are not expected to impact tidewater goby and steelhead populations as a whole.

Several special-status reptile and amphibian species have the potential to occur in the project area, but they are unlikely to be impacted by the project due to the small area of disturbance and because hydrology and water quality would not be significantly impacted by the project.

As stated under Special-Status Wildlife Species in Section 3.4.2, a number of special-status bird species are known to occur or have a high potential to occur in the project area. However, most of these species are unlikely to be impacted by the project because they do not nest in the project area, or they nest in trees or shrubs. No trees or shrubs would be trimmed or removed as part of the project. However, one special-status bird, the federal threatened western snowy plover, nests on the ground and has been recorded nesting in the project area in the past. Thus, the proposed project could impact western snowy plovers if any are nesting in or near the area of project disturbance. Mitigation Measure BIO-2 would reduce this impact to a less than significant level.

Several amphibian and reptile California Species of Special Concern have a moderate potential to occur in the project area. It is unlikely these species would be negatively impacted by the project; however, Mitigation Measure BIO-3 would reduce any impact to a less than significant level.

**Impact BIO-1:** Special-status plants could be impacted by the project if they occur in the area of disturbance.

**Mitigation Measure BIO-1:** Prior to the initiation of project activities, a qualified botanist shall perform a rare plant survey in the areas of potential ground disturbance during the blooming period of the special-status plants with the potential to occur in the project area described in this document. The month of May corresponds to the blooming period of all the potential special-status plants except Blochman's leafy daisy, which is a perennial and likely recognizable outside of the blooming period. Thus, the rare plant survey should be performed in May. If any federal or state listed plants are detected during the survey, they shall be flagged and avoided, and the bridge location shall be altered if necessary to avoid them. If any CRPR plants with no federal or state listing are detected, they shall be avoided to the extent feasible. Removal of a small amount (less than 1 percent of populations on Pismo State Beach) of a locally common CRPR species such as crisp monardella would not be considered a significant impact if avoidance is not feasible.

**Implementation:** OHMVR Division

**Effectiveness:** Implementation would avoid disturbance to special-status plants

**Feasibility:** Feasible

**Monitoring:** OHMVR Division shall retain qualified biologists to conduct pre-activity surveys and monitor project activities. The biologist(s) shall prepare a written record of survey results, and implementation of any avoidance/minimization measures shall be kept on file at the Oceano Dunes District office.

**Impact BIO-2:** The proposed project could impact western snowy plovers if any are nesting in or near the area of project disturbance.

**Mitigation Measure BIO-2:** A qualified biologist shall survey the project area for western snowy plover nests no more than three days prior to initiation of project activities. Any western snowy plovers found in the project area will be undisturbed and work will not commence until they leave on their own accord. Any snowy plover nests found within 500 feet of the project area (which also includes the pathways where the project vehicles will travel) will be left undisturbed.

Nest protection strategies will be implemented as identified in the 2013 Nesting Season Management Plan to Avoid Take of California Least Tern and Western Snowy Plover at ODSVRA (or the take avoidance plan then in effect). Construction activities will not commence until the nest hatches (or nest fate is otherwise determined) and the chicks leave the project area on their own accord. Pre-project wildlife inspections shall be conducted every time bridge installation or removal work is conducted in the project area.

**Implementation:** OHMVR Division

**Effectiveness:** Implementation would avoid disturbance of western snowy plover by project activities

**Feasibility:** Feasible

**Monitoring:** OHMVR Division shall retain qualified biologists to monitor project activities. The biologist(s) shall prepare a written record of monitoring results, and implementation of any avoidance/minimization measures shall be kept on file at the Oceano Dunes District office.

**Impact BIO-3:** Several reptile and amphibian special-status species (California Species of Special Concern), coast range newt, western pond turtle, two-striped garter snake, and silvery legless lizard, have some potential to occur in the project area and could be impacted by project activities.

**Mitigation Measure BIO-3:** All work areas shall be inspected by a qualified biologist prior to commencing work. If any coast range newt, western pond turtle, two-striped garter snake, or silvery legless lizard is found in the project area, it shall be relocated to suitable habitat outside the work area. Pre-project wildlife inspections shall be conducted every time bridge installation or removal work is conducted.

**Implementation:** OHMVR Division

**Effectiveness:** Implementation would avoid negatively impacting coast range newt, western pond turtle, two-striped garter snake, or silvery legless lizard individuals by project activities

**Feasibility:** Feasible

**Monitoring:** OHMVR Division shall retain qualified biologists to monitor project activities. The biologist(s) shall prepare a written record of monitoring results, and implementation of any avoidance/minimization measures shall be kept on file at the Oceano Dunes District office.

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

**Less Than Significant Impact.** The project area contains arroyo willow stands (riparian) as well as areas with coastal salt marsh vegetation, both of which are sensitive natural communities. The native foredune habitat on the western side of the project area is also considered a sensitive natural community. However, project disturbance would be limited to a relatively small area around the bridge abutments and no foredune, riparian, or marsh vegetation would be removed. The project would also obtain a Lake and Streambed Alteration Agreement with CDFW. Therefore, impacts to sensitive habitats would be less than significant.

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

**Less Than Significant Impact.** Although not a wetland as defined by Section 404 of the Clean Water Act, the Pismo Creek Estuary is a water of the U.S. protected by Section 404 of the

Clean Water Act. While the estuary has two of the three components – hydrology and vegetation – to be considered a wetland according to Section 404, sand comprises the estuary's substrate, and sand is not a hydric soil (the third component necessary to be defined as a wetland). The project would require a Nationwide Permit from the USACE and a Clean Water Certification from the Central Coast RWQCB in order to comply with Sections 404 and 401 of the Clean Water Act, respectively. Nationwide Permit 11 allows for temporary recreational structures placed for seasonal use provided they are removed within 30 days after use has been discontinued. The OHMVR Division would comply with the General Conditions required for all Nationwide Permits. The proposed project would not result in the permanent discharge of fill into the estuary and would not significantly impact water quality or hydrology (see Section 3.9, Hydrology and Water Quality). Fill is defined as:

Material placed in waters of the U.S. where the material has the effect of either replacing any portion of a water of the United States with dry land or changing the bottom elevation of any portion of a water. The examples of "fill material" identified in today's rule include rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in waters of the U.S. (67 FR 31129 2002).

Installation of the bridge abutments and anchors could cause a small amount of sand to erode into the estuary, but no significant sedimentation is expected to result (see Section 3.6 Geology). No toxic substances would be placed in the estuary. Thus, impacts to Waters protected by Section 404 of the Clean Water Act would be less than significant.

**d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

**Less Than Significant Impact.** The proposed project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. To allow movement of all fish species as well as an exchange of fresh and salt water, the interlocking pieces of the bridge would be constructed to create wide openings under the bridge. Openings would 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. The project would not impact terrestrial wildlife movement and would not impede the use of native wildlife nursery sites in the project area.

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

**Less Than Significant Impact.** While California Coastal Act section 30233 and Policy 21(b) of the Pismo Beach LCP disallow any structures or fill within the sandspit or channel of Pismo Creek, Pismo Beach LCP Policy 21(d) specifically allows bridges when supports can be located outside of (USFWS and NMFS designated) critical habitat. Pismo Creek and Estuary is critical habitat for tidewater goby and South-Central California ESU steelhead. The supports (helical anchors) of the proposed bridge would be located outside of the waterway and therefore outside of the designated critical habitat for the tidewater goby and steelhead. The bridge deck would float on the water surface and would be installed when flows would not threaten to undermine the abutments or wash out the bridge. If installed, the bridge would be removed for any event that could threaten to undermine the abutments or wash out the bridge. The determination to remove the bridge would be based on current field conditions and anticipated rainfall or wave duration, frequency, and intensity. The bridge was determined to have a less than significant impact on tidewater goby and steelhead critical habitat because tidewater goby and steelhead populations are not expected to be impacted (see response to Question 3.4(a) above). In addition, the proposed floating bridge poses fewer impacts to biological resources than current

beach access, which involves trampling of vegetation on the dune behind Pismo Creek Estuary and construction of illegal sand or log bridges across the estuary. Impacts associated with the proposed floating bridge would be minimized as no permanent impervious surfaces are proposed, and erosion and sedimentation are also not anticipated as the installation and removal of the anchors would occur in the sand. The project also would not result in biochemical degradation or thermal pollution. No concrete channeling is proposed, and a Resource Protection Plan could be required by the City or the Coastal Commission as part of the LCP approval for this project.

The project is expected to be consistent with all other local policies and ordinances protecting biological resources. No trees would be removed to accommodate the project, and no riparian vegetation would be impacted. Impacts to the water quality and hydrology of the creek would be less than significant.

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

**No Impact.** The OHMVR Division is currently developing an HCP that includes most of the CDPR-owned lands, but the HCP has not been completed or approved by the trustee agencies. The OHMVR Division does not anticipate that this HCP will be adopted prior to undertaking the proposed project. The project, therefore, would not conflict with any adopted HCP.

**3.5 CULTURAL RESOURCES**

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

**3.5.1 Environmental Setting**

The project area is located within the Northern Chumash or Obispeño language territory. The term Obispeño represents a geographic and linguistic subdivision within the greater Chumash cultural family, and was assigned by Europeans in the 18<sup>th</sup> century to identify the group to the San Luis Obispo de Tolosa Mission that was established in present-day San Luis Obispo in 1772 (Perez 2011: 22). The Central Coast of California contains an abundant amount of archaeological evidence suggesting human coastal and nearshore acclimation has existed within the past 10,000 years, including evidence of human occupation as early as 12,000 to 13,000 years ago (Jones et al. 2007: 125). The broad chronological sequence of the Central Coast includes three major cultural divisions that are marked by highly distinctive tool assemblages and include the Millingstone Culture, the Hunting Culture, and the Late Period (Jones et al. 2007: 135).

The Millingstone Culture dates from 8000 to 3500/3000 cal B.C. (Early Archaic) and is present in southern California, especially within the coastal zones of Santa Barbara, Ventura, Los Angeles, and San Diego Counties. The Millingstone Culture is distinguishable by the presence of large numbers of well-made handstones, millingslabs, and crudely formed core and cobble-core tools; with the minimal presence of flake tools, and large side-notched projectile points. Jones et al. suggest the large number of grinding equipment and cobble tools, together with the minimal amount of bifaces and projectile points in the archaeological record, implies a lifeway heavily reliant upon the collection and processing of vegetal and marine foods and hunting small game (Jones et al. 2007: 137). The Hunting Culture dates from 3500/3000 cal B.C. to cal A.D. 1000/1250 (Early/Middle) and is quite distinguishable from the Millingstone Culture, most notably due to its extensive quantities of large stemmed and notched projectile points. Hunting sites include a less frequent amount of portable mortars, pestles appear for the first time, and cobble-core tools become less abundant (Jones et al. 2007: 138).

The Late Period dates from cal A.D. 1250 to 1769, and archaeological assemblages associated with the Late Period are notably different from the Hunting Culture, and include the Desert Side-notched and Cottonwood projectile point series, small bifacial bead drills, bedrock mortars, hopper mortars, Class E (lipped) and K (cupped) *Olivella* beads, and steatite disk beads (Jones et al. 2007: 140). The first of several Spanish encounters with the Obispeño occurred between

1769 and 1770 during Don Gaspar de Portolá journey near the present-day project area (Gibson 2002). The obliteration of California Indians because of displacement, disease, poverty, mission life, etc. occurred during the mission period. The mission period in the Chumash territory spanned from 1772 until 1834. In 1834 missions were secularized, the process in which church land was transferred over to either private ownership or divided into land grants (Grant 1978: 506). Unfortunately, the end of the missions provided very little relief and hope to an already desecrated population and culture. Secularization brought an end to control and abuse through religious fervor, in exchange for political control of indigenous populations by the Mexican government. With the arrival of Anglo-Americans to California in 1847, the Chumash continued to deteriorate through their exploitation as cheap laborers, by alcohol abuse, and through disease-related deaths (Perez 2011).

The project area contains an extensive amount of previously recorded archaeological sites, all of which were identified during several cultural resource inventories of the area extending as far back as 1958 and up to 2011. Together these excavation studies conclude the archaeology located within and adjacent to the project area dates between the Early/Middle Hunting Culture, cal. 3000 B.P. and the Late Period, cal A.D. 1250 to 1769 (Perez 2011).

The Pismo Creek watershed has been used for ranching and other agricultural uses since the establishment of the Mission San Luis Obispo in 1772. A large dairy farm owned by the Steele family was established in the region in 1865 (Central Coast Salmon Enhancement 2009). The project area is currently owned by CDPH and is used for recreation and habitat management. The PCRVR and other developed land uses occur to the east of the project area.

### 3.5.2 Discussion

*Would the proposed project:*

**a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?**

**No Impact.** There are no historical resources in the project area (Perez 2013 pers. comm.). Therefore, the proposed project would not impact a historical resource.

**b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?**

**c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

**d. Disturb any human remains, including those interred outside of formal cemeteries?**

**Less Than Significant Impact.** (Responses b-d). There are no known archaeological resources, paleontological resources, unique geologic features, or human remains in the project area (Perez 2013 pers. comm.). However, the project area was once occupied by the Northern Chumash, and unknown cultural resources could be present. Ground disturbance associated with the project would be limited to the area around the bridge abutments and anchors; no large-scale or deep grading or excavation would occur. The bridge, abutments, and anchors would be installed by a licensed contractor with hand crews and/or a small excavator. In the unlikely event that unknown archaeological resources, paleontological resources, unique geologic features, or human remains are uncovered, the following standard measures would be implemented per the objectives, criteria, and procedures required by PRC section 21082, standard measures to avoid impacts to cultural resources:

- In the event unanticipated resources are discovered within the project area, all ground disturbing activities would stop and a qualified state archaeologist would be contacted to

evaluate the find. In the event the find is determined to be a historical or unique archaeological resource, avoidance measures or appropriate mitigations will be made by the archaeologist. Work could continue in other parts of the project area while historical or unique archaeological mitigations take place (14 CCR § 15064.5).

- In the event that human remains are accidentally discovered, the project must come to a complete stop and no further excavation or disturbance of the area or vicinity will occur. The county coroner is to be called immediately to determine if the remains are of Native American ancestry. If the coroner confirms that the remains are Native American, within 24 hours of the discovery the coroner is to contact the Native American Heritage Commission. The Commission will identify the person(s) believed to be the Most Likely Descendent (MLD), and the MLD will decide, along with the property owner, on appropriate treatment or disposing of the human remains and associated grave goods as provided in PRC section 5097.98. If the Native American Heritage Commission cannot identify the MLD, the MLD fails to make a recommendation, or the property owner rejects the MLD's recommendations, the property owner can rebury the remains and associated burial goods in an area not subject to ground disturbance (14 CCR 15064.5).

**3.6 GEOLOGY AND SOILS**

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

**3.6.1 Environmental Setting**

The Pismo Creek watershed consists of three distinct geologic blocks separated by the Edna and Huasna fault zones. The upper watershed is underlain by Franciscan metasediments and ultrabasic rocks (mainly serpentines), and upper Cretaceous and early Tertiary sedimentary units. The Edna Valley comprises the middle third of the watershed, with a critical veneer of water-bearing sedimentary rocks typically 100 feet in thickness – ranging up to 300 feet -- overlying Franciscan and consolidated-sedimentary rocks. The Coastal San Luis Range is composed of mainly mid- to late-Miocene (late-Tertiary) consolidated sedimentary rocks of the Monterey and Pismo formations, plus coeval volcanic units of the Obispo formation, forming most of the ridge along the coast. The project area is underlain by Quaternary deposits (Balance Hydrologics, Inc. 2008).

The soils in the project area are sandy and have low infiltration rates and high runoff potential (Balance Hydrologics, Inc. 2008).

### 3.6.2 Discussion

*Would the proposed project:*

**a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**

**i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?**

**No Impact.** The proposed project is not located in an Alquist-Priolo Fault Zone (San Luis Obispo County 1999).

**ii. Strong seismic ground shaking?**

**Less Than Significant Impact.** The project area is located in a seismically active region and is subject to occasional seismic ground shaking. The closest active faults to the project 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 (San Luis Obispo County 1999). However, the proposed project is not expected to attract additional people to the area, and the risks related to seismic ground shaking would be similar to existing conditions after project completion.

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

**Less Than Significant Impact.** 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 project area has a moderate potential for liquefaction (San Luis Obispo County 1999). The proposed project does not include any buildings or structures designed for human habitation. Therefore, risks associated with seismic-related ground failure are considered to be less-than-significant.

**iv. Landslides?**

**No Impact.** There are no hills or mountains near the project area; therefore, the project area is not subject to landslides.

**b. Result in substantial soil erosion or the loss of topsoil?**

**Less Than Significant Impact.** The proposed project would reduce soil erosion over time by reducing pedestrian traffic and preventing vegetation loss on the sand dune east of the estuary. Ground disturbance associated with the project would be limited to the area around the bridge abutments and anchors. The bridge, abutments, and anchors would be installed by a licensed contractor with hand crews and/or a small excavator. The small footprint of disturbance would not be considered to result in substantial soil erosion or loss of topsoil.

**c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?**

**Less Than Significant Impact.** As described above, the project area has a moderate potential for liquefaction; therefore, the potential for liquefaction-induced lateral spreading is also moderate. However, as stated previously, the project is not expected to attract more people to the area, and the proposed project does not include any buildings or structures designed for human habitation. The project area is not at risk from landslides as the project area is relatively

flat. The project area is not located on Karst formations and has not been subjected to mining activities; thus the potential for subsidence or collapse is expected to be low.

**d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?**

**No Impact.** 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 project area are not expected to be expansive. In addition, the proposed floating bridge would be removed during the rainy season when soil expansion is most common.

**e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?**

**No Impact.** The proposed project does not involve the use of septic tanks or other alternative wastewater disposal systems.

**3.7 GREENHOUSE GAS EMISSIONS**

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

**3.7.1 Environmental and Regulatory Setting**

Gases that trap heat in the atmosphere and affect regulation of the Earth’s temperature are known as greenhouse gases (GHGs). Common GHGs include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), and sulfur hexafluoride (SF<sub>6</sub>).

GHG emissions from human activities contribute to overall GHG concentrations in the atmosphere, and climate scientists have become increasingly concerned about the effects of these emissions on global climate change. Human (anthropogenic) production of GHGs has increased steadily since pre-industrial times, and atmospheric CO<sub>2</sub> concentrations have increased from a pre-industrial value of 280 ppm to 394 ppm in April 2012 (NOAA 2012). The United Nations’ International Panel on Climate Change (IPCC) fourth assessment report (AR4) concluded that recent regional climate changes, particularly temperature increases, are affecting many natural systems including water, ecosystems, food, coasts, and health (IPCC 2007). The AR4 concluded that most of the observed increase in global average temperature since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations (IPCC 2007).

GHGs can remain in the atmosphere long after they are emitted. The potential for a GHG to absorb and trap heat in the atmosphere is considered its global warming potential (GWP). The reference gas for measuring GWP is CO<sub>2</sub>, which has a GWP of one. By comparison, CH<sub>4</sub> has a GWP of 21, which means that one molecule of CH<sub>4</sub> has 21 times the effect on global warming as one molecule of CO<sub>2</sub>. Multiplying the estimated emissions for non-CO<sub>2</sub> GHGs by their GWP determines their carbon dioxide equivalent (CO<sub>2</sub>e), which enables a project’s combined global warming potential to be expressed in terms of mass CO<sub>2</sub> emissions.

In 2006, the California State Legislature adopted the California *Global Warming Solutions Act of 2006*, Assembly Bill (AB) 32, which required the California Air Resources Board (CARB) to: 1) determine 1990 statewide GHG emissions, 2) approve a 2020 statewide GHG limit that is equal to the 1990 emissions level, 3) adopt a mandatory GHG reporting rule for significant GHG emission sources, 4) adopt a Scoping Plan to achieve the 2020 statewide GHG emissions limit, and 5) adopt regulations to achieve the maximum technologically feasible and cost-effective reductions.

In 2007, CARB approved a statewide 1990 emissions level and corresponding 2020 GHG emissions limit of 427 million metric tons of carbon dioxide equivalents (MMTCO<sub>2</sub>e) (CARB 2007). In 2009, CARB adopted its 2008 *Climate Change Scoping Plan*, which projects, absent regulation or under a “business as usual” (BAU) scenario, 2020 statewide GHG emissions levels of 596 MMTCO<sub>2</sub>e and identifies the numerous measures (i.e., mandatory rules and regulations and voluntary measures) that will achieve at least 174 MMTCO<sub>2</sub>e of reductions and

reduce statewide GHG emissions to 1990 levels by 2020 (CARB 2009). In 2011, the CARB released a supplement to the 2008 Scoping Plan Functional Equivalent Document (FED) that included an updated 2020 BAU statewide GHG emissions level projection of 507 MMTCO<sub>2e</sub> (CARB 2011).

In 2011, the San Luis Obispo County Board of Supervisors adopted the EnergyWise Plan, which outlines the County's approach to reducing municipal and community-wide GHG emissions to 15% below baseline 2006 levels by establishing goals, measures, and actions (San Luis Obispo County 2011). This plan includes emissions from off-road equipment and transportation in its GHG inventories and reduction goals.

The SLO APCD CEQA Air Quality Handbook (2009) identifies a GHG significance threshold of project operations of 1,150 MTCO<sub>2e</sub> per year.

### 3.7.2 Discussion

*Would the proposed project:*

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

**Less Than Significant Impact.** The proposed seasonal floating bridge would not generate greenhouse gas emissions once it is installed or removed. The bridge, abutments, and anchors would be installed by a licensed contractor with hand crews and/or a small excavator. Thus, greenhouse gas emissions from the project would be limited to those associated with a small excavator over a short period of time. Nearby routine riparian maintenance activities were calculated to generate 25.5 MTCO<sub>2e</sub> per year, which is below the SLO APCD's CEQA significance threshold of 1,150 MTCO<sub>2e</sub> per year (TRA Environmental Sciences 2012). The proposed project would generate significantly less MTCO<sub>2e</sub> per year than the routine riparian maintenance project (16 hours small excavator vs. 30 hours backhoe and 40 hours landscaping equipment annually, respectively), and thus would also be well under SLO APCD's CEQA significance threshold. Therefore, greenhouse gas emissions associated with the project would not have a significant impact on the environment.

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

**Less Than Significant Impact.** The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purposes of greenhouse gases. The EnergyWise Plan does not contain any measures or actions for directly limiting or reducing greenhouse gas emissions from project-related activities and includes off-road equipment (including construction equipment) in its baseline (2006) and forecasted (2020) land use and transportation GHG emissions estimates and reduction goals.

**3.8 HAZARDS AND HAZARDOUS MATERIALS**

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**3.8.1 Discussion**

*Would the proposed project:*

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

**Less Than Significant Impact.** (Responses a-b) The proposed project would not involve the routine transport, use or disposal of hazardous materials and is unlikely to release hazardous materials into the environment. The project is a floating bridge over the Pismo Creek Estuary to improve pedestrian access to Pismo State Beach. The proposed floating bridge would not contain hazardous materials. Installation and removal of the bridge would not involve the use of heavy construction equipment that could leak construction fuels or fluids. The bridge, abutments, and anchors would be installed by a licensed contractor with hand crews and/or a small excavator. No equipment re-fueling, maintenance, or staging would occur near the estuary or any other water source.

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

**No Impact.** The proposed project would not emit or handle hazardous or acutely hazardous materials, substances, or hazardous waste; and the project site is not within one-quarter mile of an existing or proposed school. The closest school to the project site is approximately 0.75 mile northeast of the site.

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

**No Impact.** The project site is not included on a list of hazardous materials sites pursuant to Government Code section 65962.5. The site is currently used for recreation and habitat management and is not anticipated to contain any hazardous materials.

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

**No Impact.** The project site is not within an airport land use plan or within two miles of a public or public use airport. The closest public airport to the project area is the Oceano Airport, approximately 2.25 miles south of the project site.

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

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

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

**No Impact.** The proposed project would not interfere with an adopted emergency response plan or emergency evacuation plan.

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

**No Impact.** The project site is not in a wild land fire hazard area (San Luis Obispo County 2000). In addition, the proposed project is a floating bridge over Pismo Creek; the bridge would not contain highly flammable materials. Therefore, the proposed project would not expose people or structures to a risk of loss, injury or death involving wild land fires.

**3.9 HYDROLOGY AND WATER QUALITY**

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

**3.9.1 Environmental and Regulatory Setting**

**Climate and Precipitation**

The project region experiences a Mediterranean-type climate with cool, wet winters and hot, dry summers. The wet season typically extends from November through March with a local long-term, mean annual precipitation of 16 inches near the coast. Winter temperatures typically

range from 40 to 70°F while summer temperatures typically range from 60 to 90°F. Summertime fog can be an important hydrologic component for sustaining vegetation near the coast during summer months, which are otherwise usually dry (Central Coast Salmon Enhancement 2009).

### **Hydrology**

The project area is in the Pismo Creek watershed, which occupies approximately 47 square miles within southern San Luis Obispo County, California. The drainage rises to a maximum elevation of almost 2,865 feet above mean sea level. It includes approximately 54 percent mountainous and foothill area and 46 percent valley area. Pismo Creek flows through relatively rugged terrain in a steep, incised channel, with small alluvial deposits appearing sporadically. The main stem originates at the confluence of East Corral de Piedra and West Corral de Piedra Creeks and flows south-southwest for approximately 5.5 miles to the City of Pismo Beach and the Pacific Ocean. The creek is channelized and rock revetted within the first stream mile underneath the Highway 101 bridge adjacent to the wastewater treatment plant. The mouth of Pismo Creek is in the dune region known locally as Pismo Beach. The Pismo Creek Estuary is typical of the small coastal watersheds that form sand-bars in low flow summer and fall periods. The sandbars typically wash away during heavy winter flows. At high tide, salt water flows into Pismo Creek for nearly 0.5 miles upstream, to about where the levee begins that protects the wastewater treatment plant (Central Coast Salmon Enhancement 2009).

Stream flow within the Pismo Creek watershed, as in most California central coastal streams, is characterized as flashy whereby runoff is often negligible except during or after periods of precipitation, when stream discharge quickly rises and falls as the storm passes over the watershed and drops its precipitation. During the dry summer months, stream flow is not typically sustained and usually diminishes toward the end of the precipitation season in April. A permanent stream gauge is not installed on Pismo Creek; however, past flow measurements and stream modeling provide some flow information. Flow rates measured by the Central Coast Ambient Monitoring Program average 4 cubic feet per second (cfs) with a range of 0 to 42 cfs (CSLRCD 2011).

### **Water Quality**

The Central Coast Basin Plan (2011) outlines the beneficial uses for the Pismo Creek Estuary and includes groundwater recharge, recreation, fishing, habitat, sensitive species, migration, spawning, and shellfish harvesting. Water quality in the estuary is affected by adjacent and upstream land uses. The estuary receives direct stormwater from approximately 15 city outfalls and indirect stormwater from the entire watershed. There is limited water quality data for Pismo Creek and its estuary, with data available from the Central Coast Ambient Monitoring Program (CCAMP) and a fecal contaminant study by the City of Pismo Beach (CSLRCD 2011).

The CCAMP monitoring station on Pismo Creek is immediately upstream of Highway 101 and is not part of the estuary. This site is monitored monthly for nutrients, coliforms, salts, total dissolved solids (TDS), total suspended solids (TSS), dissolved oxygen (DO), pH, temperature, salinity, turbidity, and flow. Monthly samples were collected since January 2001 with an eight month break in 2003. Analytes that are slightly impacted and impacted include boron, chloride, fecal coliform, conductivity, TDS, EPT (Ephemeroptera, Plecoptera, and Trichoptera) Taxa, nitrate as N, total phosphate as P, TSS, toxicity to invertebrate growth in sediment, and turbidity. Analytes that are very impacted or extremely impacted include sodium, orthophosphate as P, dissolved and saturated oxygen, chlorophyll a in water column, and total ammonia as N. The definitions for levels of impact vary based on the analyte and can be found on the CCAMP website. At this time the RWQCB is recommending Total Maximum Daily Load for chloride, *E. coli*, fecal coliform, dissolved oxygen, and sodium on Pismo Creek (CSLRCD 2011).

In 2008, the City of Pismo Beach completed a study funded by the Clean Beaches Initiative (CBI) Prop 50 to perform DNA source tracking on water samples from the near shore environment to narrow down the potential sources of elevated total and fecal coliform in the ocean near the Pismo Pier. The CBI study found that the source of bacterial contamination on the beach is bird dropping at the pier. These findings were based on DNA-source fingerprinting, observations, and tracking oceanographic conditions. The study also showed that fecal coliform from human, dog, and livestock bacterioids were present in Pismo Creek and Estuary (CSLRCD 2011).

### **Flood Hazard and Sea Level Rise**

The project area is within the Federal Emergency Management Agency (FEMA) 100-year Flood Zone. In the Hydrology and Geology Assessment of Pismo Creek Watershed (Balance Hydrologics 2008), a HEC-HMS watershed model estimated the 100-year flow to be 4,381 cfs. However, FEMA reports the 100-year flow at 14,700 cfs. In general, there are widely variable flow rates determined for the watershed. The 100-year flood zone is constricted under Highway 101 and then widens at the estuary. The 100-year flood results in the inundation of several streets adjacent to the estuary including Addie and Park Streets to the north, the RV parks, and North Beach Campground in Pismo State Beach to the south. Floodwaters of the Pismo Creek watershed and Meadow Creek watershed merge in the area immediately south of the estuary during large events. It is likely that much of Meadow Creek's water flows toward the mouth of Pismo Creek and the ocean during maximum flood stage. An overflow channel from Carpenter Creek and Meadow Creek directs floodwaters to the Pismo Creek Estuary through a flood gate just downstream of the wooden planked pedestrian/limited car bridge (CSLRCD 2011). Major flooding events (including flash floods) occurring in San Luis Obispo County in the last 50 years occurred between late December and early May (San Luis Obispo County 2011a).

The proximity to the ocean also necessitates evaluation of flood risk from sea level rise. Hazard maps developed by the Pacific Institute show sea level rise affecting the current 100-year flood zone with some extension north of the estuary into the core of Pismo State Beach (CSLRCD 2011).

### **3.9.2 Discussion**

*Would the proposed project:*

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

**Less Than Significant Impact.** The project is a floating bridge over the Pismo Creek Estuary to improve pedestrian access to Pismo State Beach. Installation and removal of the bridge would not involve the use of heavy construction equipment that could leak construction fuels or fluids into the estuary. The bridge, abutments and anchors would be installed by a licensed contractor with hand crews and/or a small excavator. No equipment re-fueling, maintenance or staging would occur near the estuary or any other water source. The proposed floating bridge would not contain hazardous materials that could leak into the estuary.

Installation of the bridge could cause a small amount of sand to erode into the estuary. However, the proposed project would reduce erosion and sedimentation over the long term by preventing foot traffic and vegetation disturbance on the sand dune.

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

**No Impact.** The proposed project would not use groundwater or interfere with groundwater recharge. The project is a floating bridge over the Pismo Creek Estuary to improve pedestrian access to Pismo State Beach; the project would not increase impervious surface area.

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

**No Impact.** The proposed project would not alter the drainage pattern of the site or area, or alter the course of a stream or river. The project is a floating bridge over the estuary to improve pedestrian access to Pismo State Beach. The bridge, abutments, and anchors would be installed by a licensed contractor with hand crews and/or a small excavator. The project would not result in erosion or siltation on- or off-site.

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

**No Impact.** As stated above, the proposed project would not alter the drainage pattern of the site or area, or alter the course of a stream or river. The project would not increase impervious surface area and thus would not increase the amount of surface runoff. To allow an exchange of fresh and salt water, the interlocking pieces of the bridge would be constructed to create wide openings under the bridge. Openings would 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. The project would not result in flooding on- or off-site.

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

**No Impact.** Surface run-off in the project area drains into Pismo Creek Estuary. There are no existing or planned storm water drainage systems in the project area. In addition, the project would not increase impervious surface area and thus would not increase the amount of surface runoff. The project is a floating bridge over the estuary and it does not include new sources of polluted runoff.

- f. Otherwise substantially degrade water quality?**

**No Impact.** The project would not substantially degrade water quality.

- g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?**

**No Impact.** Although the project area is within a 100-year flood hazard area, the proposed project does not include any housing.

**h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?**

**No Impact.** Although the project area is within a 100-year flood hazard area and will be affected by sea level rise, the proposed project does not include any structures that would impede or redirect flood flows or create a hazard due to sea level rise. The proposed floating bridge would lie flat on the surface of the estuary and would rise and fall according to the water level. The bridge would be installed when flows would not threaten to undermine the abutments or wash out the bridge. If installed, the bridge would be removed for any event that could threaten to undermine the abutments or wash out the bridge. The determination to remove the bridge would be based on current field conditions and anticipated rainfall or wave duration, frequency, and intensity.

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

**Less Than Significant Impact.** Although the project area is within a 100-year flood hazard area, the proposed project would not expose people or structures to a risk of loss, injury, or death involving flooding beyond existing conditions. The proposed floating bridge would improve access from PCRVR to the beach but is not expected to attract additional people to the project area. The project area is in the Dam Failure Inundation Zone for the Lopez Dam San Luis Obispo County 2009); however, the project would not interfere with implementation of the San Luis Obispo County Dam and Levee Failure Evacuation Plan (San Luis Obispo County 2008).

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

**Less Than Significant Impact.** The project area could be subject to inundation by seiche due to its proximity to the Pismo Creek Estuary and by tsunami due to its proximity to the Pacific Ocean. The project area is not at risk of inundation by mudflow. The project would not increase the risk of seiche or tsunami compared to existing conditions and would not interfere with the San Luis Obispo County Tsunami Response Plan (San Luis Obispo County 2010) in effect in the project area.

**3.10 LAND USE AND PLANNING**

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

**3.10.1 Environmental and Regulatory Setting**

The following table provides a list of relevant Coastal Commission and Pismo Beach LCP policies and the proposed project’s consistency with those policies:

<b>Table LU-1. Land Use Policies and Consistency</b>	
<b>Policy</b>	<b>Consistency</b>
<b>California Coastal Act (2013)</b>	
Section 30231 Biological productivity; water quality. The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.	<p>The Biological Resources section of this document provides substantiation for why the project would not significantly alter or adversely affect the creek. Therefore, construction of the bridge within the streamside protection zone would be consistent with the intent of Section 30231. The supports (helical anchors) of the proposed bridge would be located outside of the waterway and therefore outside of the critical habitat for the tidewater goby and steelhead. The bridge deck would float on the water surface; however, this intrusion into critical habitat would be a less than significant impact, and marine organism populations would be maintained. See Biological Resources section of this document for further discussion.</p> <p>Impacts are minimized as no permanent impervious surfaces or waste water discharges are proposed, and significant erosion and sedimentation are also not anticipated as the installation and removal of the anchors would occur in the sand, disturbing a small area, approximately 40 square feet, which would then be covered by the bridge decking. The project would not result in biochemical degradation or thermal pollution.</p> <p>No concrete channeling is proposed. A Resource Protection Plan could be required by the City or the Coastal Commission as part of the LCP approval</p>

<b>Table LU-1. Land Use Policies and Consistency</b>	
<b>Policy</b>	<b>Consistency</b>
	for this project.
<p>Section 30233 Diking, filling or dredging; continued movement of sediment and nutrients</p> <p>(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:</p> <p>(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.</p> <p>(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.</p> <p>(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.</p> <p>(4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.</p> <p>(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.</p> <p>(6) Restoration purposes.</p> <p>(7) Nature study, aquaculture, or similar resource dependent activities.</p>	<p>The seasonal floating bridge with helical anchors was selected as the least environmentally damaging bridge alternative to provide pedestrian access across the estuary. Furthermore, as provided by response e) in the Biological Resources Section, Pismo Creek and Estuary is critical habitat for tidewater goby and South-Central California ESU steelhead. The supports (helical anchors) of the proposed bridge would be located outside of the waterway and therefore outside of the designated critical habitat for the tidewater goby and steelhead. The bridge deck would float on the water surface and would be installed when flows would not threaten to undermine the abutments or wash out the bridge. If installed, the bridge would be removed for any event that could threaten to undermine the abutments or wash out the bridge. The determination to remove the bridge would be based on current field conditions and anticipated rainfall or wave duration, frequency, and intensity. The bridge was determined to have a less than significant impact on tidewater goby and steelhead critical habitat because tidewater goby and steelhead populations are not expected to be impacted (see response to Question 3.4(a) above in the Biological Resources section). In addition, the proposed floating bridge poses fewer impacts to biological resources than current beach access, which involves trampling of vegetation on the dune behind Pismo Creek Estuary and construction of illegal sand or log bridges across the estuary. Impacts associated with the proposed floating bridge would be minimized as no permanent impervious surfaces are proposed, and erosion and sedimentation are also not anticipated as the installation and removal of the anchors would occur in the sand. The project also would not result in biochemical degradation or thermal pollution. No concrete channeling is proposed, and a Resource Protection Plan could be required by the City or the Coastal Commission as part of the LCP approval for this project.</p>
<p>Section 30240 Environmentally sensitive habitat areas; adjacent developments</p> <p>(a) 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.</p> <p>(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to</p>	<p>As stated above and in the Biological Resources section, impacts to sensitive habitat areas are minimized. The proposed project is a seasonal floating bridge and is a coastal dependent use.</p> <p>The purpose of the seasonal floating bridge is to reduce dune erosion and habitat damage caused by pedestrians walking on the barrier dunes, reduce impacts to the estuary from pedestrians placing sand or logs in the water to provide dry footing</p>

<b>Table LU-1. Land Use Policies and Consistency</b>	
<b>Policy</b>	<b>Consistency</b>
prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.	across the water. Improving safety of public access to Pismo State Beach also promotes the continuance of recreation in the area.
Section 30251 Scenic and visual qualities. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.	The bridge is a low-profile temporary structure that promotes pedestrian beach access to and from the PCRVR. Low profile walking surfaces are not uncommon in beach environments. The bridge would not be a prominent feature in the landscape if viewed from SR 1, a designated scenic roadway in the Pismo Beach LCP. The bridge would not be visible from a designated State Scenic Highway. The SR1 State Scenic Highway designation occurs on a stretch of the highway over 10 miles north of the project site. Compared with other bridge structures contemplated for this project (fixed spanning, swinging spanning), the floating bridge proposed is the most unobtrusive. The fixed spanning and swinging spanning bridges were also found to be physically and financially cost prohibitive.
Section 30252 Maintenance and enhancement of public access. The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing nonautomobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.	The goals of the project are to improve the ease of public access to Pismo State Beach, reduce dune erosion and habitat damage caused by pedestrians walking on the barrier dunes, reduce impacts to the estuary from pedestrians placing sand or logs in the water to provide dry footing across the water, and to improve safety of public access to Pismo State Beach.
Section 30253 Minimization of adverse impacts. New development shall do all of the following: (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard. (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.	The project is the seasonal (temporary) installation of a floating pedestrian bridge and is not intended for human habitation. Therefore the typical structural design elements to avoid or minimize structural collapse or failure due to seismic hazards are not applicable and do not present a hazardous condition with an unacceptable level of risk. While the project is located within the 100-year floodplain, the installation is temporary and scheduled for yearly installation outside of the wet/rainy season to avoid the flood hazard. Therefore, the project avoids high hazard levels as a result of flooding.

<b>Table LU-1. Land Use Policies and Consistency</b>	
<b>Policy</b>	<b>Consistency</b>
<p>(c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.</p> <p>(d) Minimize energy consumption and vehicle miles traveled.</p> <p>(e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.</p>	<p>The project is consistent with requirements of the San Luis Obispo County Air Pollution Control District, see the Air Quality section.</p> <p>By providing pedestrian access over the creek, vehicle miles traveled could be reduced for those visitors staying at the RV park who may have otherwise driven to another site to access the beach across the creek.</p>
<p>Section 30255 Priority of coastal-dependent developments. Coastal-dependent developments shall have priority over other developments on or near the shoreline. Except as provided elsewhere in this division, coastal-dependent developments shall not be sited in a wetland. When appropriate, coastal-related developments should be accommodated within reasonable proximity to the coastal-dependent uses they support.</p>	<p>See response above for Section 30233.</p>
<b>Pismo Beach LCP</b>	
<b>Hazards</b>	
<p>S-2: New development. New development within the City's jurisdiction shall be designed to withstand natural and man-made hazards to acceptable levels of risk by: ... (c) Evaluating new development...to ensure that construction or operation of the project will not cause hazardous conditions at an unacceptable level of risk; (d) Requiring new development to avoid portions of sites with high hazard levels.</p>	<p>The project is the seasonal (temporary) installation of a floating pedestrian bridge and is not intended for human habitation. Therefore the typical structural design elements to avoid or minimize structural collapse or failure due to seismic hazards are not applicable and do not present a hazardous condition with an unacceptable level of risk. While the project is located within the 100-year floodplain, the installation is temporary and scheduled for yearly installation outside of the wet/rainy season to avoid the flood hazard. Therefore, the project avoids high hazard levels as a result of flooding.</p>
<p>S3: Bluff Setbacks. All structures shall be set back a safe distance from the top of the bluff in order to maintain the structure for a minimum of 100 years...</p> <p>S4: Blufftop Guidelines/Geologic Studies. Site specific geologic studies required for all blufftop development.</p> <p>The LCP addresses risks due to bluff hazards. It prohibits new development on bluff faces, requires adequate setbacks from bluffs (S3), and addresses the need for long-term stability and structural integrity and avoidance of land altering devices or other development requiring shoreline protection at present or in the future (S4).</p>	<p>The project is the seasonal (temporary) installation of a floating pedestrian bridge and is not intended for human habitation. Typical setback and geologic studies requirement are generally not applicable for the type of development proposed.</p>
<p>S5: Development on the Bluff Face. No additional development shall be permitted on any bluff face,</p>	<p>The project is the seasonal (temporary) installation of a floating pedestrian bridge that would occur</p>

<b>Table LU-1. Land Use Policies and Consistency</b>	
<b>Policy</b>	<b>Consistency</b>
except engineered staircase or accessways to provide public beach access...	within the bluff setback. Accessways to provide public beach access are specifically allowed by this policy.
<p>S7: Hazards Overlay Zone. Areas of blufftop hazards are subject to the requirements of the Hazards Overlay Zone.</p> <p>17.078.060 Shoreline Protection Criteria and Standards</p> <p>A. No permanent above ground structures shall be permitted on dry sandy beach...</p> <p>E. New development shall not be permitted where it is determined that shoreline protection will be necessary for protection of the new structures now or in the future based on a one hundred year geologic projection.</p> <p>G. No additional development shall be permitted on any bluff face except for engineered staircases or accessways to provide public beach access.</p>	The project is not a permanent above ground structure; it will be installed and removed seasonally. The proposed bridge does not require shoreline protection now, nor would it in the future; it would not be installed if shoreline protection were required. Accessways to provide public beach access are specifically allowed by this policy.
<p>S8: Flood Plain Zoning. Areas subject to flooding shall be mapped within and subject to the Flood Plain Overlay zone.</p> <p>S9: Restrictions on Development within the 100-year flood plain. 1) No habitable structure shall be approved for construction within the area of the 100-year flood plain...2) No new fill, structure, or other obstruction shall be permitted or placed or constructed within a floodway unless a detailed hydraulic study has been prepared and approved by the City Engineer....3) No new development shall be allowed in the 100-year flood plain which will contribute to or increase flood hazards on the same or other properties...4) Any new development within the flood plain shall require a hydrological engineer's report....</p>	The project is not a habitable structure. While the project is located within the 100-year floodplain, the installation is temporary and scheduled for yearly installation and removal outside of the wet/rainy season to avoid the flood hazard. Therefore, the project avoids high hazard levels as a result of flooding. As the project would be temporarily installed outside of the wet/rainy season, a detailed hydraulic study assessing the impacts of the proposed structure has not been prepared.
<b>Visual</b>	
<p>Principal P-2 Natural Resources – Key Foundation of the City</p> <p>Principal P-6 The Big Three – Ocean, Coastal Cliffs, and Shoreline Resources</p> <p>Principal P-7 Visual Quality is Important</p> <p>Principal P-14 Immediate Ocean Shoreline (Also Coastal Act section 30251)</p> <p>The LCP provides a series of principles and objectives for protecting visual resources. These highlight the importance of the beaches and other open space shoreline areas as well as the small-scale character of the built environment. These call for the protection of scenic views and direct new development to blend with the existing open space</p>	The bridge is a low-profile temporary structure that promotes pedestrian beach access to and from the PCRVR. Low profile walking surfaces are not uncommon in beach environments. The bridge would not be a prominent feature in the landscape if viewed from SR 1, a designated scenic roadway in the Pismo Beach LCP. The bridge would not be visible from a designated State Scenic Highway. The SR1 State Scenic Highway designation occurs on a stretch of the highway over 10 miles north of the project site. Compared with other bridge structures contemplated for this project (fixed spanning, swinging spanning), the floating bridge proposed is the most unobtrusive. The fixed spanning and swinging spanning bridges were also

<b>Table LU-1. Land Use Policies and Consistency</b>	
<b>Policy</b>	<b>Consistency</b>
and built environment.	found to be physically and financially cost prohibitive.
<p>CO-21 Pismo Creek Protection. Pismo Creek shall be retained in its natural state and protected from significant alterations.</p> <ul style="list-style-type: none"> <li>a. Streamside protection zone. There shall be a minimum streamside protection zone to conserve environmentally sensitive habitats of the creek....No new construction or vegetation removal, except for normal maintenance, shall be allowed in the buffer zone with the exception of public roadways or bridges identified in the Circulation Element, paths, trails, fences, flood control structures, and other similar structures deemed to not adversely affect the creek.</li> <li>b. Open Space. The sandspit and channel where Pismo Creek enters the ocean and those portions of parcels located within the creek channel shall remain as open space and no structures or fill shall be permitted thereon....</li> <li>c. Conservation Dedication....</li> <li>d. Structures in the stream corridor. No structures shall be located within the stream corridor except: dams, structures necessary for flood control purposes, bridges, when supports can be located outside of critical habitat, public pathways and pipelines, when no alternative route exists.</li> <li>e. Limitations on Development. All development, including dredging, filling, and grading, within the stream corridor shall be limited to activities necessary for flood control purposes, bridge construction, water supply projects, or laying of pipelines, when no alternative route is feasible. When such activities require removal of riparian plant species, revegetation with local native plants shall be required. Minor clearing of vegetation shall be permitted for hiking and equestrian trails, bike trails, viewpoints, etc.</li> <li>f. Minimize impacts. All permitted construction and grading within stream corridors shall be carried out in such a manner as to minimize impacts from increased runoff, sedimentation, biochemical degradation, or thermal pollution.</li> <li>g. Channeling. No concrete channeling.</li> </ul>	<p>The Biological Resources section of this document provides substantiation for why the project would not significantly alter or adversely affect the creek. Therefore, construction of the bridge within the streamside protection zone would be consistent with the intent of CO-21. While subsection (b) of this policy disallows any structures or fill within the sandspit or channel, subsection (d) specifically allows bridges when supports can be located outside of critical habitat, and consistent with subsection (b), the creek area would remain as open space. The supports (helical anchors) of the proposed bridge would be located outside of the waterway and therefore outside of the critical habitat for the tidewater goby and steelhead. The bridge deck would float on the water surface; however, this intrusion into critical habitat would be a less than significant impact, see Biological Resources section of this document for further discussion.</p> <p>Subsection (e), which limits development in the stream corridor, specifically allows bridge construction when no alternative route if feasible, which is applicable to this project. Impacts are minimized as no permanent impervious surfaces are proposed, and significant erosion and sedimentation are also not anticipated as the installation and removal of the anchors would occur in the sand disturbing a small area, approximately 40 square feet, which would then be covered by the bridge decking. The project is also not expected to result in biochemical degradation or thermal pollution.</p> <p>No concrete channeling is proposed. A Resource Protection Plan could be required by the City or the Coastal Commission as part of the LCP approval for this project.</p>

<b>Table LU-1. Land Use Policies and Consistency</b>	
<b>Policy</b>	<b>Consistency</b>
<p>h. Resource Protection Plan. A Resource Assessment and Protection Plan shall be required and approved concurrent with City action on project located on parcels which have a portion within the streamside protection zone. The plan shall include appropriate measures to protect the creek's biological and visual aspects.</p>	
<b>Public Access</b>	
<p>Principal P-22 Public Shoreline Access. The continued development and maintenance of public access to the Pismo Beach coastline shall be considered a critical part of the City's parks and recreation program.</p>	<p>The project provides seasonal pedestrian access across the estuary which if it is not in place causes erosion and destabilization to the dune and dune vegetation from trampling. The project can also protect marine species from paths visitors create across the estuary by placing logs or sand to create their own bridges across the waterway, which can completely cut of the southernmost portions of the estuary from the main estuary.</p>
<b>Hydrology</b>	
<p><i>CO-28 Natural Drainage Channels.</i> Drainage channels shall remain in a natural open space state with minimal or no use of concrete channels. Dredging, filling, and grading within stream corridors shall be limited to activities necessary for flood control purposes, bridge construction, water supply projects, or laying of pipelines when no alternative route is feasible. Revegetation and restoration of the natural setting shall be required. Alteration of existing drainage patterns shall be prohibited unless special studies prove that the proposed alteration will not cause any adverse impacts downstream or to other aspects of the environment. Prior to approval of any new development, a detailed analysis of surface water runoff patterns shall be undertaken to determine storm drain needs and identify mitigations for any with possible adverse environmental impacts. No runoff that will negatively affect the Pismo Marsh shall be permitted.</p>	<p>This policy allows dredging and filling within stream corridors for the purpose of installing bridges. However, no dredging or grading is required for the project and the bridge would only be in place when flows would not threaten to undermine the abutments or wash out the bridge. If installed, the bridge would be removed for any event that could threaten to undermine the abutments or wash out the bridge. The determination to remove the bridge would be based on current field conditions and anticipated rainfall or wave duration, frequency, and intensity. The specific bridge type and abutment design proposed were chosen due to their minimal disturbance footprint. The project would not alter existing drainage patterns.</p>
<p><i>CO-30 Soil Conservation.</i> City grading regulations shall require soil conservation measures. Construction of structures or pathways on easily erodible areas shall be prohibited unless appropriate compensatory measures are taken.</p>	<p>The project is the installation of a seasonal floating bridge that would remove pedestrians off of easily erodible dune and dune crest areas. Grading to install the project is not required. Bridge anchors will be drilled into the sand and bridge decking materials will sit on the sand surface over the anchoring system where it is connected to the deck. No significant erosion is expected from these activities.</p>

<b>Table LU-1. Land Use Policies and Consistency</b>	
<b>Policy</b>	<b>Consistency</b>
<p><i>CO-31 Grading and Drainage Regulations.</i> The following specific grading and drainage policies shall be applicable to development and construction projects. The city's grading ordinance shall be revised to include these policies:</p> <p>a. Development plans shall minimize cut and fill operations, and any development requiring extensive cut and fill may be denied if it is determined that the development could be carried out with less alteration to the natural terrain.</p> <p>j. Degradation of the water quality of the groundwater basins, streams, or wetlands shall not result from development of a project. Pollutants such as chemicals, fuels, lubricants, raw sewage, and other harmful waste shall not be discharged into or alongside streams or wetlands during or after construction.</p>	<p>Installation of the project would involve the placement of two helical anchors at each bridge abutment. The helical anchoring system was selected because it disturbs the smallest footprint. Pollutants such as chemicals, fuels, lubricants, raw sewage, or other harmful waste would not be discharged as a result of the project.</p>
<b>Safety</b>	
<p><i>S9 Restrictions on Development within the 100-year flood plain.</i> 2) No new fill structure or other obstruction shall be permitted to be placed or constructed within a flood way unless a detailed hydraulic study has been prepared and approved by the City engineer ensuring that the proposed project will not obstruct any passing floodwaters.</p>	<p>The project does place a structure within the 100-year flood plain; however, as stated in the hydrology section, the project would not alter the drainage pattern of the site or area, or alter the course of a stream or river. The proposed project does not include any structures that would impede or redirect flood flows or create a hazard due to sea level rise. The proposed floating bridge would lie flat and float on the surface of the estuary when installed and would rise and fall according to the water level. The interlocking pieces of the bridge would be constructed to create wide openings under the bridge to allow the movement of fish and water underneath it. Therefore, a detailed hydraulic study has not been prepared for the project.</p>

**3.10.2 Discussion**

*Would the proposed project:*

**a. Physically divide an established community?**

**No Impact.** The project has no components that would divide an established community. The proposed seasonal bridge would improve pedestrian access in the area.

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

**Less Than Significant Impact.** None of the proposed work would change the nature of any land use within the area. While the project is inconsistent with Coastal Act sections 30233 and 30255, and subsection (b) of Policy CO-21 in the Pismo Beach LCP, which disallows any structures or fill within the sandspit or channel, subsection (d) of Pismo Beach LCP Policy CO-

21 specifically allows bridges when supports can be located outside of critical habitat. The supports (helical anchors) of the proposed bridge would be located outside of the waterway and therefore outside of the critical habitat for the tidewater goby and steelhead. The bridge deck would float on the water surface, which would not adversely affect tidewater goby or steelhead habitat. This bridge's seasonal presence in critical habitat would be a less than significant impact, as the bridge can be configured to allow the passage of fish species beneath it even when the bridge deck sits on the bottom of the estuary. See Biological Resources section Response 3.4a) of this document for further discussion. If the bridge were in place, visitors to the area would no longer construct "volunteer" crossings such as log jams and sand bars that completely block a portion of the estuary, causing unregulated fill within critical habitat. The project would be partially consistent with the requirement of subsection (b) that the creek area remains as open space, because no permanent development is proposed. Therefore, the project would not have a significant conflict with or impact on an applicable land use plan, policy, or regulation.

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

**No Impact.** None of the project sites are located in an area covered by a habitat conservation plan or natural community conservation plan. As mentioned in the Biological Resources section the OHMVR Division is currently developing an HCP that includes most of the CDPR-owned lands, but it has not been completed or approved by trustee agencies. The project, therefore, would not conflict with an adopted HCP.

**3.11 MINERAL RESOURCES**

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

**3.11.1 Discussion**

*Would the proposed project:*

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

**No Impact.** (Responses a-b). There are no known mineral resources in the project area, and no mineral resources would be removed from the area. No locally important mineral resources are delineated in the San Luis Obispo County (San Luis Obispo County 2010a) or City of Pismo Beach (City of Pismo Beach 1993) General Plans. Therefore, the proposed project would not result in the loss of availability of a known mineral resource of value to the region or state.

**3.12 NOISE**

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**3.12.1 Discussion**

*Would the proposed project:*

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

**Less Than Significant Impact.** The project is a floating bridge over the Pismo Creek Estuary to improve pedestrian access to Pismo State Beach. The bridge would be installed and removed seasonally such that the bridge would only be in place when flows do not threaten to undermine the bridge abutments or wash out the bridge. Installation and removal of the bridge would take no more than six days per year and would not involve the use of heavy construction equipment that could generate excessive noise. The bridge, abutments, and anchors would be installed by a licensed contractor with hand crews and/or a small excavator. Installation and removal of the bridge would take place between the hours of 7 a.m. and 7 p.m. Monday through Saturday, consistent with the City of Pismo Beach Noise Ordinance (Municipal Code section 9.24.050). The proposed floating bridge would not generate noise once it is installed or removed.

- b. Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?**

**No Impact.** The project would not result in excessive groundborne vibration or ground borne noise levels.

**c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

**No Impact.** The proposed project would not permanently increase noise levels in the project vicinity. Once the proposed floating bridge is installed or removed, it would not generate noise.

**d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

**Less Than Significant Impact.** As stated above, project noise generation would be limited to seasonal bridge installation and removal with a hand crew and/or small excavator and would not be substantial. Installation and removal of the bridge would take no more than six days per year and would take place between the hours of 7 a.m. and 7 p.m. Monday through Saturday, consistent with the City of Pismo Beach Noise Ordinance (Municipal Code section 9.24.050).

**e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

**No Impact.** The project site is not within an airport land use plan or within two miles of a public or public use airport. The closest public airport to the project area is the Oceano Airport, approximately 2.25 miles south of the project site. The proposed project would not expose people residing or working in the project area to excessive noise levels.

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

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

**3.13 POPULATION AND HOUSING**

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

**3.13.1 Discussion**

*Would the proposed project:*

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

**No Impact.** The proposed project is a floating bridge over the Pismo Creek Estuary to improve pedestrian access to the beach and is not expected to attract additional people to the area. The project does not include new homes, businesses, or infrastructure. Therefore, the project would not induce population growth either directly or indirectly.

- b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**

**No Impact.** The project would not displace any existing houses.

- c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

**No Impact.** The proposed project would not displace any people or necessitate construction of replacement housing elsewhere.

**3.14 PUBLIC SERVICES**

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**3.14.1 Discussion**

*Would the proposed project:*

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

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

**No Impact.** The proposed project is a floating bridge over the Pismo Creek Estuary to improve pedestrian access to the beach. The project does not include structures for human habitation and is not expected to attract additional people to the area. Therefore, the project would not increase the need for public services or facilities or create an adverse impact on existing public services or facilities.

**3.15 RECREATION**

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

**3.15.1 Discussion**

*Would the proposed project:*

- a. **Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

**No Impact.** The proposed project is a floating bridge over the Pismo Creek Estuary to improve pedestrian access to the beach. The project is not expected to attract additional people to the area. Therefore, the project would not increase the use of Pismo State Beach or other existing parks or recreational facilities.

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

**No Impact.** The proposed project would improve pedestrian access to Pismo State Beach; it would not include or require the construction or expansion of recreational facilities.

**3.16 TRANSPORTATION/TRAFFIC**

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

**3.16.1 Discussion**

*Would the proposed project:*

- a. **Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?**
- b. **Conflict with an applicable congestion management program, including, but not limited to a level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

**No Impact.** (Responses a-b) The proposed project is a floating bridge over the Pismo Creek Estuary to improve pedestrian access to Pismo State Beach. The project is 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. Therefore, the project 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.

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

**No Impact.** The proposed project would not impact air traffic patterns.

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

**No Impact.** The proposed project does not include any roads, driveways, or intersections and would not increase hazards due to a design feature. The project does not include incompatible uses.

**e. Result in inadequate emergency access?**

**No Impact.** The proposed floating bridge would improve pedestrian access to Pismo State Beach and would not result in inadequate emergency access.

**f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities supporting alternative transportation (e.g., bus turnouts, bicycle racks)?**

**No Impact.** The proposed floating bridge would improve pedestrian access to Pismo State Beach and would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities and would not decrease the performance of such facilities.

**3.17 UTILITIES AND SERVICE SYSTEMS**

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

**3.17.1 Discussion**

*Would the proposed project:*

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

**No Impact.** (Responses a-b) The proposed project is a floating bridge over the Pismo Creek Estuary to improve pedestrian access to Pismo State Beach. The project would not require water or produce wastewater. Therefore, the project would not exceed the wastewater treatment requirements of the Central Coast RWQCB or require or result in the construction of new water or wastewater treatment facilities or the expansion of existing facilities.

- c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**No Impact.** There are no existing storm water drain facilities in the project area. The proposed project would not increase surface water runoff in the project area. Therefore, the project would not result in the construction of new storm drain facilities.

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

**No Impact.** The proposed project would not require water; therefore, no new or expanded entitlements are needed.

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

**No Impact.** The proposed project would not generate wastewater; therefore, the project would not impact the capacity of existing wastewater treatment providers in the region.

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

**No Impact.** The proposed project would not generate solid waste; therefore, the project would not impact the permitted capacity of existing landfills in the region.

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

**No Impact.** The proposed project would not generate solid waste and thus would not violate any federal, state, or local statutes or regulations related to solid waste.

**3.18 MANDATORY FINDINGS OF SIGNIFICANCE**

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

**3.18.1 Discussion**

*Would the proposed project:*

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

**Less Than Significant Impact with Mitigation.** The project is proposed to provide the least environmentally damaging alternative for providing pedestrian access from the PCRVR to Pismo State Beach. Oceano Dunes District would implement the Best Management Practices listed in Table 2-1 to avoid and minimize impacts to the environment. In addition, OHMVR Division staff would consult with regulatory agencies to be sure that any impacts to regulated waters receive proper authorization. Mitigation measures (BIO-1 to BIO-2) are also proposed to avoid impacting special-status species. The project would not affect important examples of the major periods of California history or prehistory.

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

**Less Than Significant Impact.** The project would not have environmental effects that are individually limited, but cumulatively considerable. The project does not propose new uses at the project site, and all impacts to disturbed habitats (vegetation) would be minimized. There are no projects currently planned or proposed in the project area that would result in cumulative impacts when considered alone or in combination.

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

**Less Than Significant Impact.** The project would not have environmental effects that would cause substantial adverse effects on humans, either directly or indirectly. Temporary impacts to air quality during construction would be avoided through the use of best management practices identified in Table 2-1, to minimize PM<sub>10</sub> emissions during construction.

**CHAPTER 4 REFERENCES**

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- Althouse and Meade, Inc. 2010. Re: Pismo Estuary Plant List. Memo to Cheryl Lenhardt, Coastal San Luis RCD. November 23.
- Balance Hydrologics. 2008. *Hydrology and Geology Assessment for the Pismo Creek Watershed, San Luis Obispo County, California*.
- California Air Resources Board (CARB) 2007. *Staff Report California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit*. Sacramento, CA. November 16, 2007. [http://www.arb.ca.gov/cc/inventory/pubs/reports/staff\\_report\\_1990\\_level.pdf](http://www.arb.ca.gov/cc/inventory/pubs/reports/staff_report_1990_level.pdf)
- \_\_\_\_\_. 2009. *Climate Change Scoping Plan – A Framework for Change*. Endorsed by ARB December 2008. Sacramento, CA. May 11, 2009. <http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>
- \_\_\_\_\_. 2011. *Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document*. Released August 19, 2011. Sacramento, CA. Approved August 24, 2011. <http://www.arb.ca.gov/cc/scopingplan/fed.htm>
- California Department of Fish and Wildlife (CDFW), 2004. Species Accounts – Plants. Available at: [http://www.dfg.ca.gov/wildlife/nongame/t\\_e\\_spp/docs/2004/t\\_eplants.pdf](http://www.dfg.ca.gov/wildlife/nongame/t_e_spp/docs/2004/t_eplants.pdf)
- California Department of Parks and Recreation (CDPR), 2011. Habitat Monitoring Report. Oceano Dunes State Vehicular Recreation Area 2004-2011. Prepared by California Department of Parks and Recreation, Off-highway Motor Vehicle Division, Oceano Dunes District. March.
- California Herps, 2012. California Herps: A Guide to the Amphibians and Reptiles of California. Available at: <http://www.californiaherps.com/> (accessed October, 2012).
- California Natural Diversity Database (CNDDDB). 2012. California Department of Fish and Wildlife, Biogeographic Data Branch. Last updated December 2012.
- California Native Plant Society (CNPS). 2013. Inventory of Rare and Endangered Plants, Pismo Beach and Eight Surrounding Quads. Available at: <http://www.rareplants.cnps.org/result.html?adv=t&quad=35120B6:9>, (accessed January 2013).
- Central Coast Regional Water Quality Control Board. 2011. *Central Coast Basin Plan*.
- Central Coast Salmon Enhancement. 2009. Pismo Creek/Edna Area Watershed Management Plan. Prepared for Department of Fish and Game, State of California on behalf of the Pismo Creek/Edna Area Steering Committee. March.
- Coastal San Luis Resource Conservation District (CSLRCD). 2011. Pismo Creek Estuary Enhancement Project Existing Conditions Report. Prepared for California Department of Parks and Recreation, Oceano Dunes District.
- Cogswell, H.L. 1977. *Water Birds of California*. California Natural History Guides Series, Series Volume No. 40. University of California Press.
- Farmland Mapping and Monitoring Program (FMMP). 2008. San Luis Obispo County Important Farmland 2008. California Department of Conservation, Division of Land Resource Protection. Available at: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2008/slo08.pdf>, (accessed January 15, 2013).
- Gaines, D. 1977. Birds of the Yosemite Sierra. Cal-Syl Press, Oakland.

- Grinnell, J. 1928. A distributional summation of the ornithology of lower California. Univ. of California Publ. Zool. 32:1-300.
- Intergovernmental Panel on Climate Change (IPCC). 2007. *Summary for Policymakers*. In: "Climate Change 2007: Impacts, Adaptation and Vulnerability." Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 7-22.
- Lowther, P. E., C. Celada, N. K. Klein, C. C. Rimmer and D. A. Spector. 1999. Yellow Warbler (*Setophaga petechia*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/454doi:10.2173/bna.454>
- National Marine Fisheries Service (NMFS), Office of Protected Resources, 2013. Steelhead Trout (*Oncorhynchus mykiss*). Available online at: <http://www.nmfs.noaa.gov/pr/species/fish/steelheadtrout.htm>, last updated March 13 (accessed April 2013).
- National Marine Fisheries Service (NMFS), Northwest Regional Office. 2012. Steelhead (*Oncorhynchus mykiss*). Available online at: <http://www.nwr.noaa.gov/ESA-Salmon-Listings/Salmon-Populations/Steelhead/Index.cfm>, last updated June 28<sup>th</sup> (accessed December 2012).
- Perez, Alicia C., M.A., Associate State Archaeologist, California State Parks OHMVR Division, HQ, 2013, personal communication.
- Pismo Beach, City of. 2013. Pismo Beach Municipal Code, Chapter 9.24 Noise Control. Available at: [http://www.amlegal.com/nxt/gateway.dll/California/pismo/pismobeachmunicipalcode/preface?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:pismobeach\\_ca](http://www.amlegal.com/nxt/gateway.dll/California/pismo/pismobeachmunicipalcode/preface?f=templates$fn=default.htm$3.0$vid=amlegal:pismobeach_ca), (accessed January 23, 2013).
- \_\_\_\_\_. Pismo Beach, City of, 1993. City of Pismo Beach General Plan/Local Coastal Plan. Available at: <http://www.pismobeach.org/index.aspx?nid=109>, (accessed January 15, 2013).
- San Luis Obispo County. 2011a. San Luis Obispo County Local Hazard Mitigation Plan. Revision 2. July.
- \_\_\_\_\_. 2011b. *EnergyWise Plan – Designing Energy and Climate Solutions for the Future*. Prepared by PMC for San Luis Obispo County. San Luis Obispo County, Ca. November 2011.
- \_\_\_\_\_. 2010. Tsunami Emergency Response Plan. Office of Emergency Services. October 2005, Revised August 2006 (Administrative Revision), Revised March 2010 (Administrative Revision). Available online at: <http://www.slocounty.ca.gov/Assets/OES/Plans/Tsunami+Response+Plan.pdf>, (accessed January 2013).
- \_\_\_\_\_. 2010a. San Luis Obispo County General Plan Conservation and Open Space Element. May. Available at: <http://www.slocounty.ca.gov/Assets/PL/Elements/COSE.pdf>, (accessed January 15, 2013).
- \_\_\_\_\_. 2009. Natural Hazard Map: Dam Failure Inundation Zones. Department of Planning & Building, Geographic Technology Section. April 30th. Available online at: <http://www.sloplanning.org/gis/mapimagepdf/damfail.pdf>, (accessed January, 2013).

- \_\_\_\_\_. 2008. Dam and Levee Failure Evacuation Plan. Office of Emergency Services. Revised September 2002, Administrative Update August 2007, Revised July 2008. Available online at: <http://www.slocounty.ca.gov/Assets/OES/Plans/Dam+and+Levee+Plan.pdf>, (accessed January 2013).
- \_\_\_\_\_. 2000. San Luis Obispo County Natural Hazard Disclosure (Fire). Available at: <http://www.sloplanning.org/gis/mapimagepdf/wildfire.pdf>, (accessed January 15, 2013).
- \_\_\_\_\_. 1999. San Luis Obispo County General Plan Safety Element. December. Available at: <http://www.slocounty.ca.gov/Assets/PL/Elements/Safety+Element.pdf> (accessed January 14, 2013).
- San Luis Obispo County Air Pollution Control District (SLO APCD) 2012. *CEQA Air Quality Handbook: A Guide for Assessing the Air Quality Impacts for Projects Subject to CEQA Review*. San Luis Obispo County, CA. April 2012.
- \_\_\_\_\_. San Luis Obispo County Air Pollution Control District (SLO APCD) 2001. 2001 Clean Air Plan. San Luis Obispo County, CA. December 2001.
- Sawyer, J.O., T. Keeler-Wolf, and J.M. Evans. 2009. *A Manual of California Vegetation* (2<sup>nd</sup> edition). California Native Plant Society, Sacramento. 1300 pp.
- Shuford, W.D. and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. *Studies of Western Birds* 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.
- Sibley, D.A., 2000. *The Sibley Guide to Birds*. New York: Chanticleer Press, Inc.
- Stebbins, R.C. 1985. *Western Reptiles and Amphibians*. New York: Houghton Mifflin Company.
- Stenzel, L.E., S.C. Peaslee, and G.W. Page. 1981. II. Mainland Coast. Pages 6-16 in Page, G.W. and L.E. Stenzel, (eds.). The breeding status of the snowy plover in California. *Western Birds* 12(1):1-40.
- TRA Environmental Sciences, Inc. 2012. Oceano Dunes District Routine Riparian Maintenance Mitigated Negative Declaration/Initial Study. Prepared for State of California Department of Parks and Recreation Off-Highway Motor Vehicle Recreation Division. October.
- U.S. Fish and Wildlife Service (USFWS), 2007. Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (*Charadrius alexandrinus nivosus*). Portland, Oregon. In 2 volumes. Sacramento, California. xiv + 751 pages.
- \_\_\_\_\_. 2006. California least tern (*Sternula antillarum browni*) 5-Year Review Summary and Evaluation. U. S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, Carlsbad, California. September 2006.
- \_\_\_\_\_. 2005. Recovery Plan for the Tidewater goby (*Eucyclogobius newberryi*). U.S. Fish and Wildlife Service, Portland, Oregon. vi + 199 pp.
- \_\_\_\_\_. 2002. Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*). U.S. Fish and Wildlife Service, Portland, Oregon. viii + 173 pp.
- \_\_\_\_\_. 2000. Endangered and Threatened Wildlife and Plants; Final Rule for Endangered Status for Four Plants From South Central Coastal California. 65 Fed. Reg. 14888.
- Warriner, J.S., J.C. Warriner, G.W. Page, and L.E. Stenzel, 1986. Mating system and reproductive success of a small population of polygamous Snowy Plovers. *Wilson Bull.* 98:15-37.

White, Clayton M., Nancy J. Clum, Tom J. Cade and W. Grainger Hunt. 2002. Peregrine Falcon (*Falco peregrinus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/660doi:10.2173/bna.660>

## **CHAPTER 5 REPORT PREPARATION**

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TRA Environmental Sciences, Inc.  
545 Middlefield Road, Suite 200  
Menlo Park, CA 94025  
(650) 327-0429  
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Senior Project Manager: Paula Hartman  
Project Manager: Christina Lau  
Report Preparation: Megan Kalyankar, Christina Lau  
Graphics: Sandy Ho, Sarah Daniels





- Project Area
- Dunes**
- Barrier Dune
- Pismo State Beach
- Pedestrian Bridge Options**
- Primary
- Foredunes
- Roads
- Secondary

**Figure 2** Aerial Overview of Project  
*Pismo Creek Estuary Seasonal Bridge Project*

**Figure 3. Floating Bridge Example**



### Figure 4. Project Site Photos

### Photo Page for the Pismo Creek Estuary Seasonal Pedestrian Bridge

Photo1. Project Area

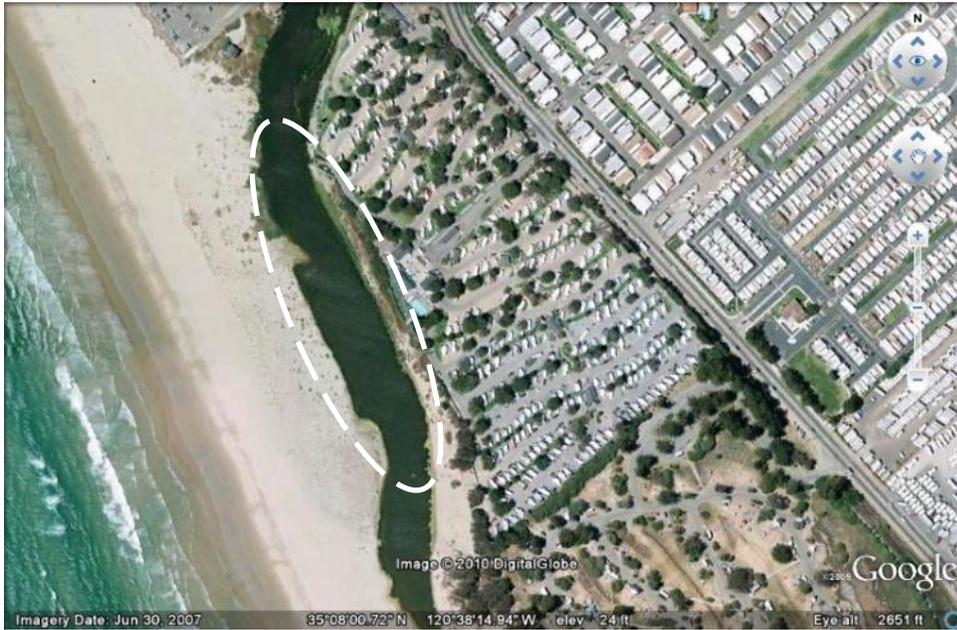


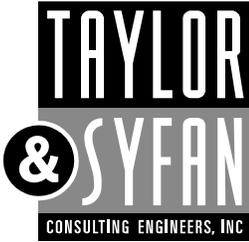
Photo 2. Primary location for seasonal, floating pedestrian bridge.



**Figure 4. Project Site Photos (continued)**

Photo 3. The eastern pedestrian bridge abutment will be placed at the bottom of an existing walkway over the dunes.





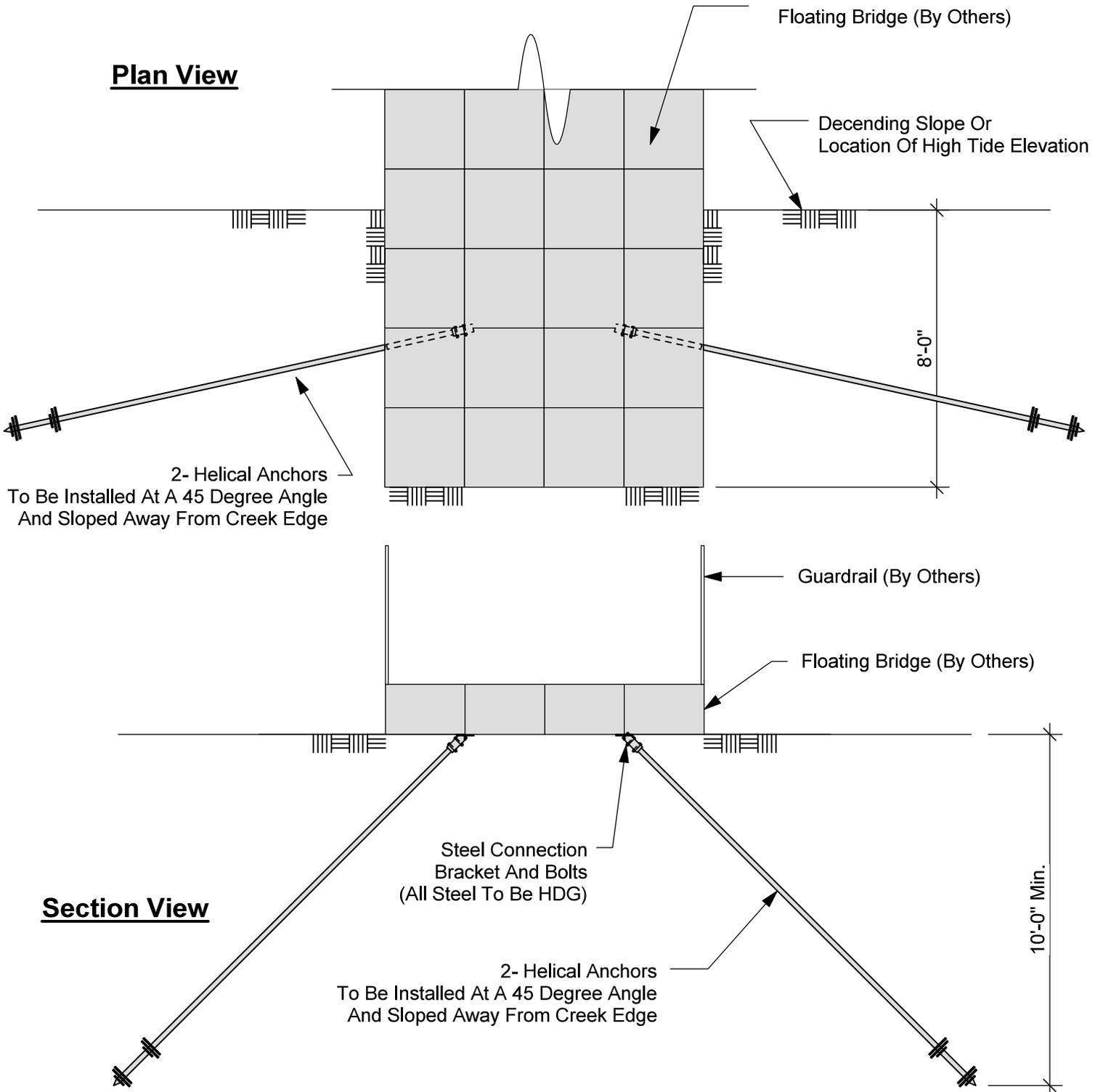
San Luis Obispo | Pasadena  
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800.579.3881  
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Job No.: 10427

Job Name: Temporary Bridge Abutments

**Figure 5. Helical Anchor Detail**  
**Option 1--Helical Anchors**



**Oceano Dunes District**

**Pismo Creek Estuary Seasonal Bridge Project IS/MND**

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**APPENDIX A**

**TEMPORARY BRIDGE ABUTMENT PRELIMINARY CONCEPTS**

**Central Coast:**

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 (626)793.7438  
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---

**Temporary Bridge Abutment**


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Date: December 20, 2010

To: Coastal San Luis Resource Conservation District  
 Attn: Mr. Neil Havlik  
 c/o Lenhardt Engineering, Inc.  
 Attn: Ms. Cheryl Lenhardt, P.E.

From: Randy Davidson, P.E.  
 Taylor & Syfan Consulting Engineers

Project: State Parks Floating Bridge Project  
 Pismo Creek Estuary, Pismo Beach, California

T&S Job No.: 10427

---

Subject: Temporary Bridge Abutment Preliminary Concepts

---

The following illustrates three temporary floating bridge abutment designs.

These preliminary designs are based on the Geotechnical recommendations provided in the soils report issued by Earth Systems Pacific, dated December 9, 2010, a creek flow of 10psf, provided by Lenhardt Engineering, Inc., and a wind force of 16.2 psf (85 mph), determined by Taylor and Syfan.

The following general instruction apply to all abutment designs:

1. The floating bridge should extent 8-feet landward past the expected elevation of high tide.
2. Shell foundations, driven piles, and helical anchor foundations shall be located no closer than 5-feet from any descending slope.
3. The bridge shall be orientated to minimize force from creek flow and wind force.

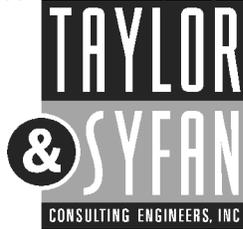
Sincerely,

A handwritten signature in black ink that reads "Randall G. Davidson".

Randy Davidson, P.E.  
 Senior Managing Engineer  
 Taylor & Syfan Consulting Engineers



SENIOR MANAGING ENGINEER

**Central Coast:**

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---

## Temporary Bridge Abutment

### **Option 1—Helical Anchors**

The floating bridge abutment could be supported using a minimum of 2 helical anchors at each abutment.

An additional helical anchor with a chain could be incorporated to anchor the bridge abutment if site conditions restricts the minimum distance from descending slope edge or high tide elevation.

Since the manufacture of the floating docks / walk-ways have application for using their products as a floating landing (or dock), the connection of the helical anchor should be a similar connection to that of an anchor connection.

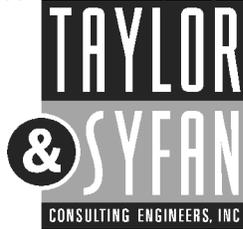
The helical anchors will need to installed on a 45-degree angle and sloped away from the creek edge.

#### **Advantages for helical anchor use:**

1. Installation / Construction time—quick installation and removal.
2. Minimum site disturbance during installation and removal.
3. Could be installed with hand held equipment or a small excavator.
4. Helical anchors could be reused, provided they are not damaged during installation or removal.
5. Anchorage would be concealed under the floating bridge, so visual impacts would be negligible. Additionally, there should be no pedestrian trip hazards.

#### **Disadvantages for helical anchor use:**

1. Requires licensed contractor that specializes in helical anchor installation.
2. Require calculations by the helical anchor manufacture.
3. Annual cost to install and dissemble.

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## Temporary Bridge Abutment

### **Option 2—Driven Piles**

The floating bridge abutment could be supported using a minimum of six 8-inch diameter driven piles at each abutment, three each side of the bridge.

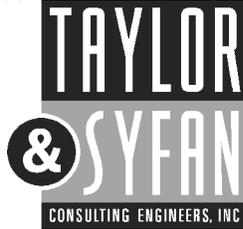
The piles are to be 8-inch diameter and may be wood or steel. Wood piles are required to be marine grade and moisture protected. Steel piles are required to be hot dip galvanized. Regardless of material, piles should have protective caps for protection during driving. Piles are to spaced a minimum horizontal distance of 4 pile diameters. Piles may be installed by using impact hammers or jetting, see soils report. Piles will be interconnected with a steel channel and bolted to the side of the bridge abutment.

#### **Advantages for driven pile use:**

1. Installation / Construction Time—quick installation.
2. Minimum site disturbance during installation.
3. Anchorage would be next to the bridge, therefore visual impacts will be minimal.
4. Given the anchorage location, pedestrian trip hazards should be minimal.

#### **Disadvantages for driven pile use:**

1. Requires licensed contractor that specializes in driven pile installation.
2. Would likely require heavy equipment to install and remove. Removal of driven piles could be intense and require additional time and machinery.
3. Any unremoved piles would create pedestrian trip hazards.
4. Any piles damaged during installation or removal would be required to be replaced.
5. Large annual cost to install and disassemble.

**Central Coast:**

684 Clarion Court  
San Luis Obispo, CA 93401  
(805)547.2000  
(805)547.2001 fax  
(800)579.3881

**Southern California:**

1276 E. Colorado Blvd.  
Suite 201  
Pasadena, CA 91106  
(626)793.7438  
(626)793.7439 fax

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**Temporary Bridge Abutment**

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**Option 3—Shallow Shell Foundation**

The floating bridge abutment could be supported using a shallow shell foundation, each side of the bridge abutment.

The shell foundation would be a box constructed out of wood, steel or concrete that would be filled with beach sand after fabrication. Prior to back filling the shell, it will be bolted to the side of the bridge abutment.

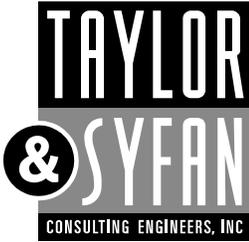
The shell foundation would required a minimum depth of 42-inches, with a 24-inch embedment, a 4-foot width , and an 8-foot length. The shell foundation must be located a minimum of 5-feet from any descending slope.

**Advantages for shallow shell foundations use:**

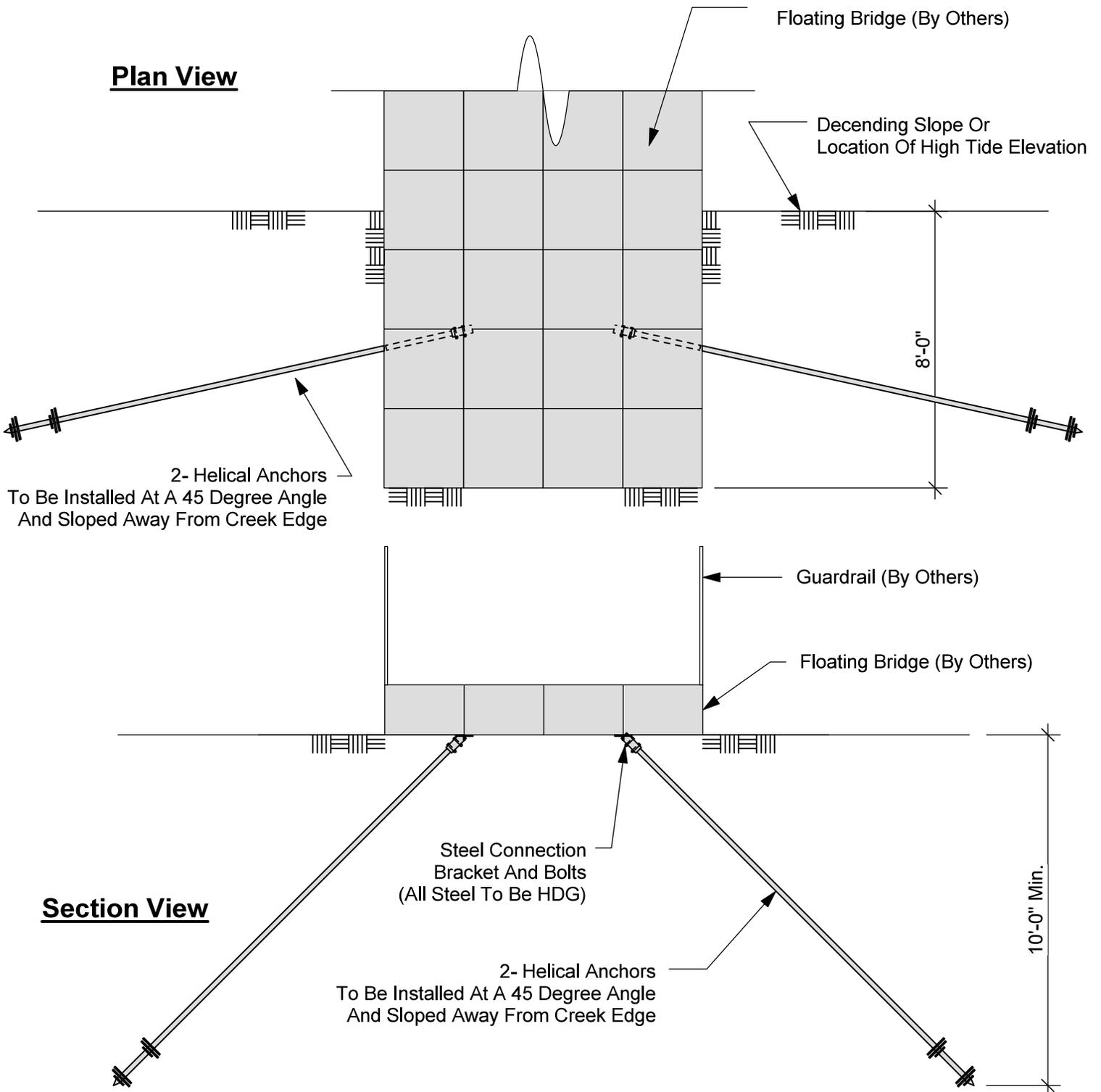
1. Doesn't require a specialized contractor for installment.
2. Can be installed with hand held equipment or a small excavator.

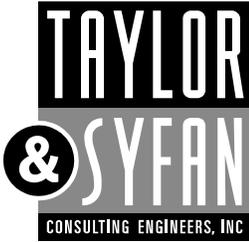
**Disadvantages for shallow shell foundations use:**

1. Construction and installation time.
2. Requires large site area to construct.
3. Large area of site disturbance during installation and removal.
4. Visual impacts, given size and location, shell foundations will be seen.
5. Given size and location, shell foundations could create pedestrian trip hazards.
6. Annual cost to install and disassemble.

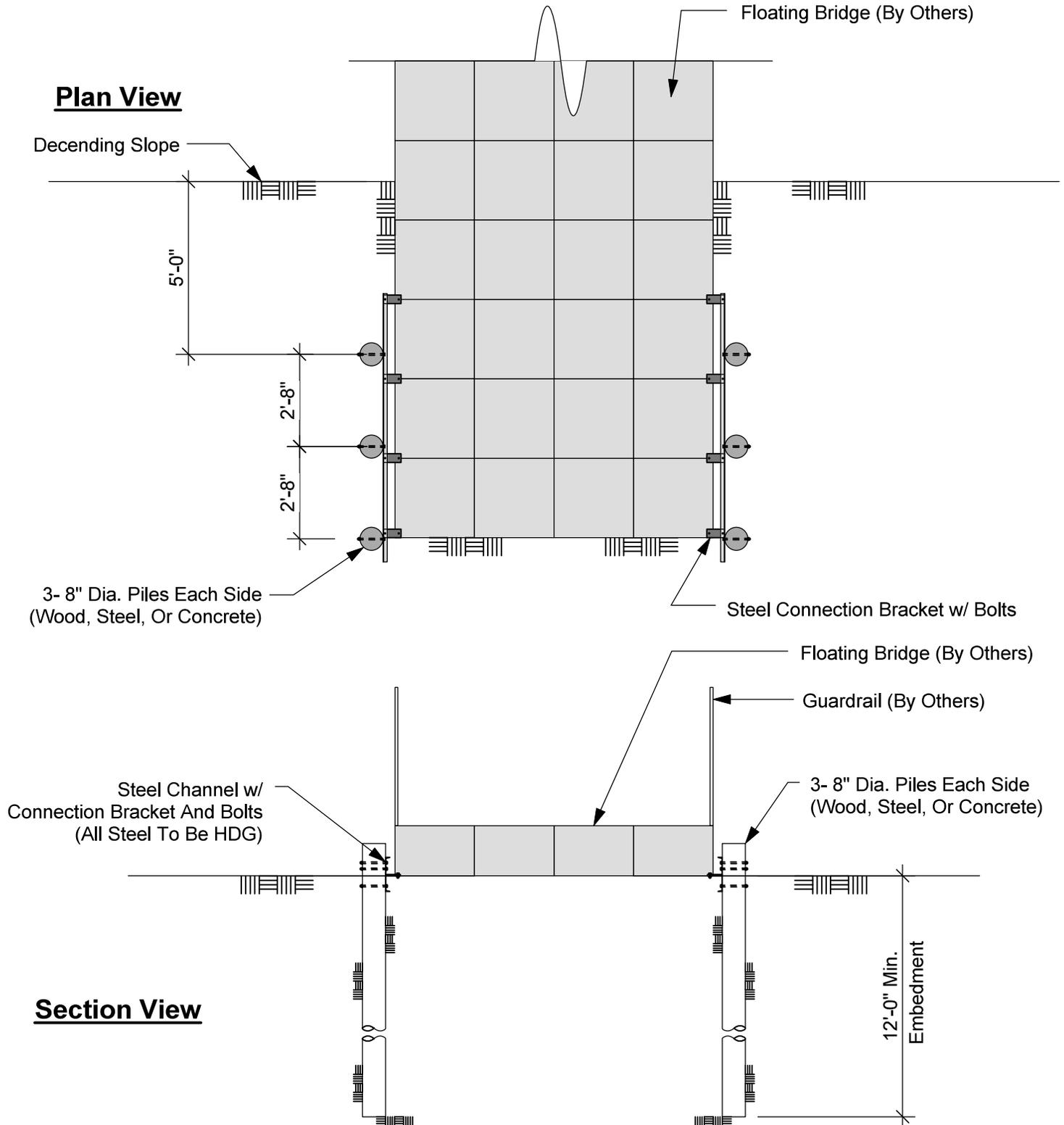


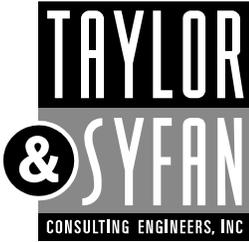
## Option 1--Helical Anchors



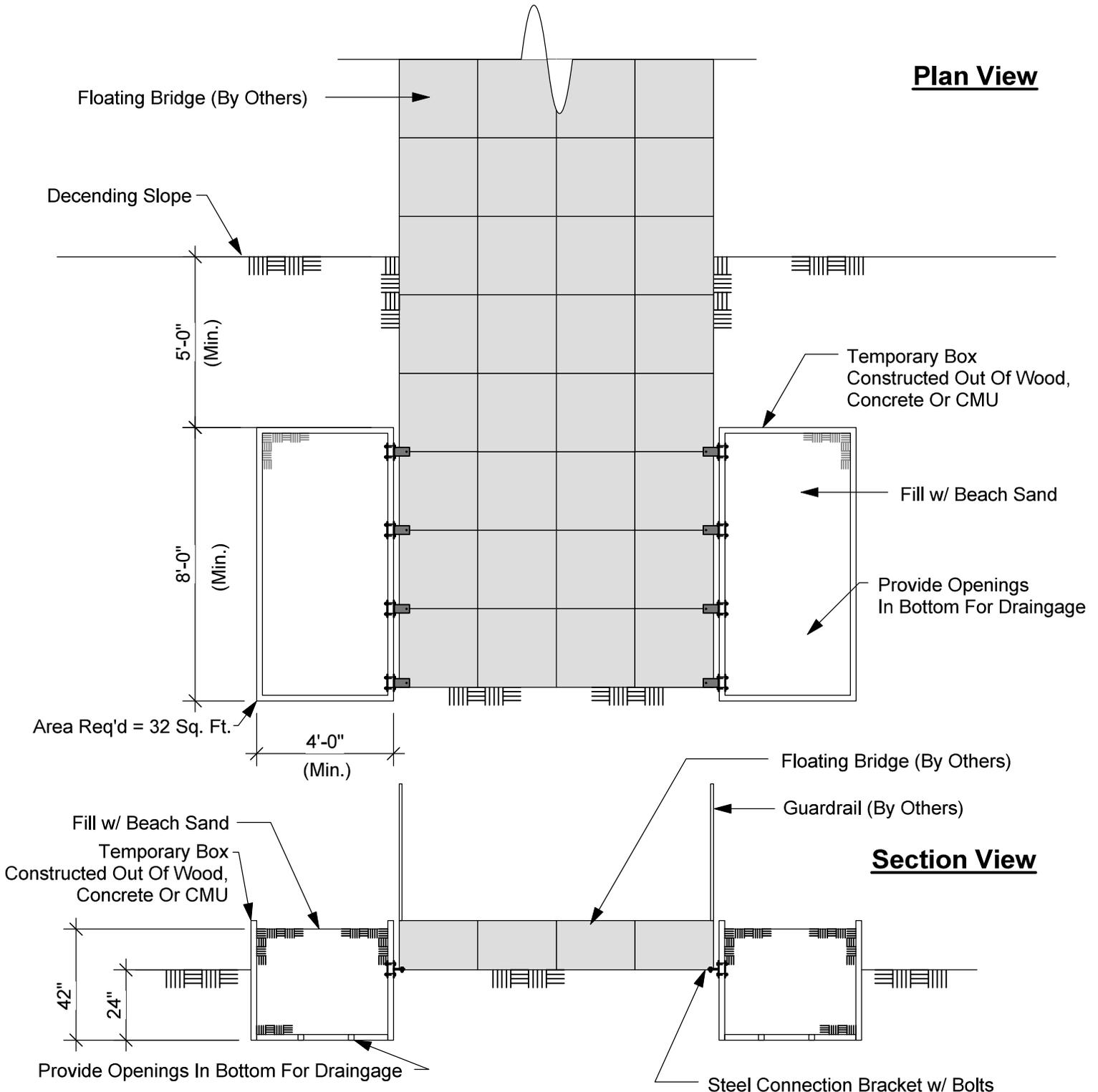


## Option 2--Driven Piles





# Option 3--Shallow Shell Foundation



**Oceano Dunes District**

**Pismo Creek Estuary Seasonal Bridge Project IS/MND**

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**APPENDIX B**

**DESIGN MEMORANDUM**

## **DESIGN MEMORANDUM**

### **Seasonal, Floating Bridge**

#### **I. Overview**

The Pismo Creek Estuary limits direct access to the beach from the Pismo Coast Village RV Resort, forcing pedestrians to walk south along the dunes before moving onto the beach. The project goal was to provide access to the beach while reducing or eliminating traffic on the dune.

#### **II. Design Constraints**

The following design constraints were developed in collaboration with the Pismo Creek Estuary stakeholders:

1. Habitat protection – The project is intended to reduce traffic in the dune area without adverse impacts to the estuary habitat.
2. Cost – The goal was to implement a bridge concept that was feasible in terms of initial cost and annual operation and maintenance costs. This requirement eliminated the option to use a spanning bridge structure.
3. Seasonal use – The bridge is intended to be used in the summer months during low flows in the estuary. This required a system that could be easily installed and removed.
4. Flexibility of location – The location of the bridge requires flexibility due to annual water level changes and the possibility of nesting Snowy Plover. Figure 5 shows the proposed bridge location and two alternate locations.
5. The bridge is required to be oriented parallel to the prevailing wind to reduce the forces caused by high winds.
6. ADA compliance is not currently considered as a design constraint because access to the bridge is not ADA compliant.
7. Adequate spacing between floats is required to ensure water flow and wildlife movement under the bridge in times of low water.

### III. Recommended Concept

The recommended option for a seasonal pedestrian bridge over the estuary is a floating bridge. The primary bridge location would connect an existing stairway at the Pismo Coast Village RV Resort to Pismo State Beach (Figure 6, 7). The bridge should be at least 331 feet long and eight (8) feet in width with handrails.

There are two types of floating bridges that may be applicable for this use. The first type is a Modular Pontoon System (MPS), and the second type is a Modular Deck System (MDS). The type of floating bridge should be selected based on the desires of the California Department of Parks and Recreation, Oceano Dune District, requirements of the permit agencies, and available funding.

#### Type 1 - Modular Pontoon System

The MPS system is a series of plastic floats linked together to create a floating platform of the desired length and width (Figures 1, 2). This system is the lowest cost of the two options. The bridge can be installed by hand. Each float is approximately 19 inches square and light enough to be carried by one person.

**Figure 1. Example Modular Pontoon Floating Bridge**



**Figure 2. Side View MPS System****Considerations**

MPS systems may not be ADA compliant because the handrails and surface may not comply with current regulations. This is currently not a design constraint, however it should be evaluated in the final design process.

MPS bridges have limited spacing between floats. There are floats available that have a reduced width that could allow for water and wildlife to pass in times of low water. These floats do not hold as much weight as a standard float. The float spacing should be carefully considered in coordination with the permit agencies to provide adequate lift for pedestrians as well as spacing for water flow and wildlife movement.

**Vendors and Cost**

MPS systems are sold by VersaDock and Airfloat. The current preliminary cost estimate ranges from \$350 to \$450 per linear foot of bridge depending on the railing system selected.

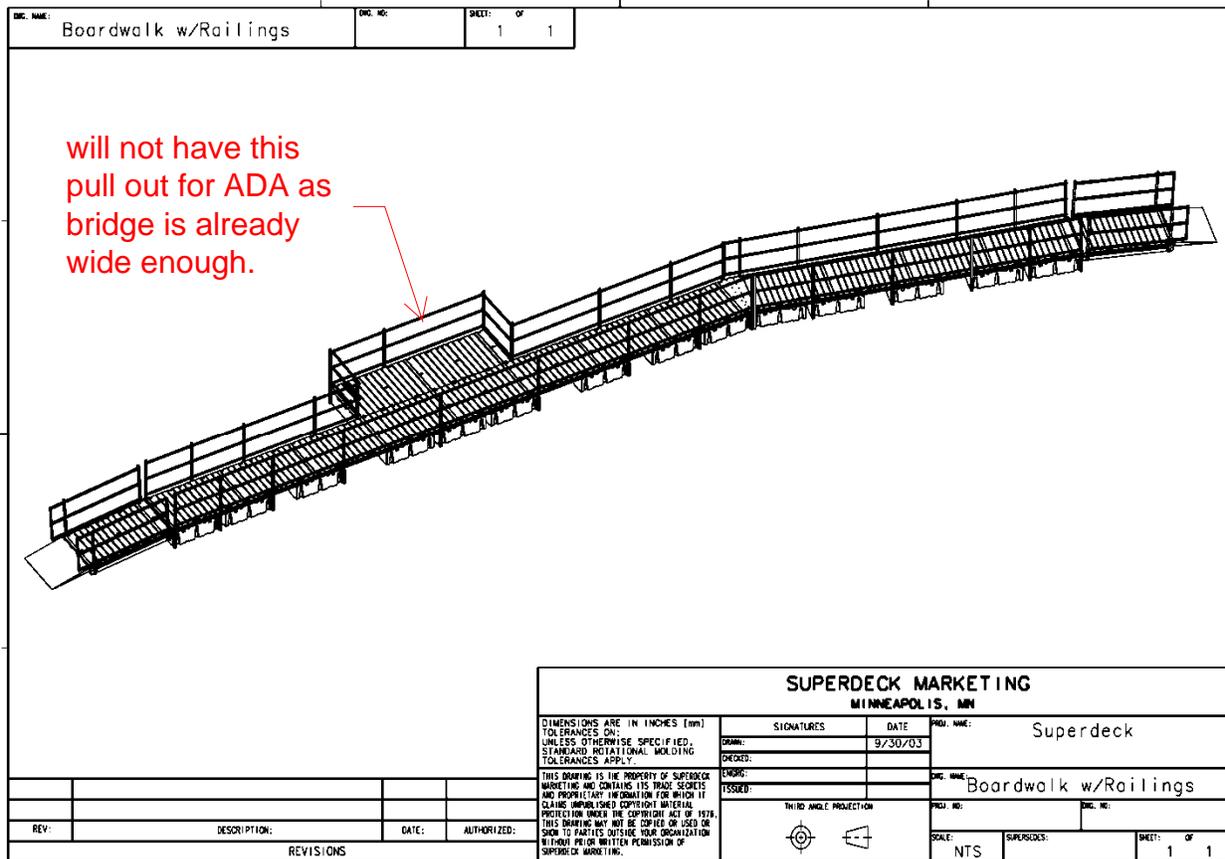
**Type 2 - Modular Deck System**

The MDS consists of simulated wood planks supported by large plastic floats which are linked together to create a floating platform of desired length and width (Figure 3, 4). This system is the higher cost of the two options. The bridge can be installed by hand. The decks can be preassembled on land and lifted into place by a few people.

**Figure 3. Example Modular Deck Floating Bridge**



Figure 4. Schematic View of MDS.



**Considerations**

MDS platforms can be ADA compliant. This is currently not a design constraint, however it should be evaluated in the final design process.

MDS bridges have larger spacing between floats. This will provide a larger opening to allow for water and wildlife to pass in times of low water. The float spacing should be carefully considered in coordination with the permit agencies to provide adequate lift for pedestrians and adequate spacing.

**Vendors and Cost**

MPS systems are sold by SuperDeck. The current preliminary cost estimate ranges from ??? (waiting for cost information) per linear foot of bridge depending on the railing system selected.

#### IV. Anchorage Options

The structural engineering company Taylor and Syfan, Inc. were retained to evaluate potential options for anchoring the bridge in place. Their design memo can be found in Appendix G. Based on their analysis and the goals of this project the Helical Anchor is the recommended option for anchoring the bridge. This method will require the use of a specialty contractor with experience using helical anchors. Helical Anchors are similar to large screws that are designed for use in soil. They can be installed quickly with light equipment and cause very little disturbance to the surrounding area.

**Figure 5. Detail of helical anchor**

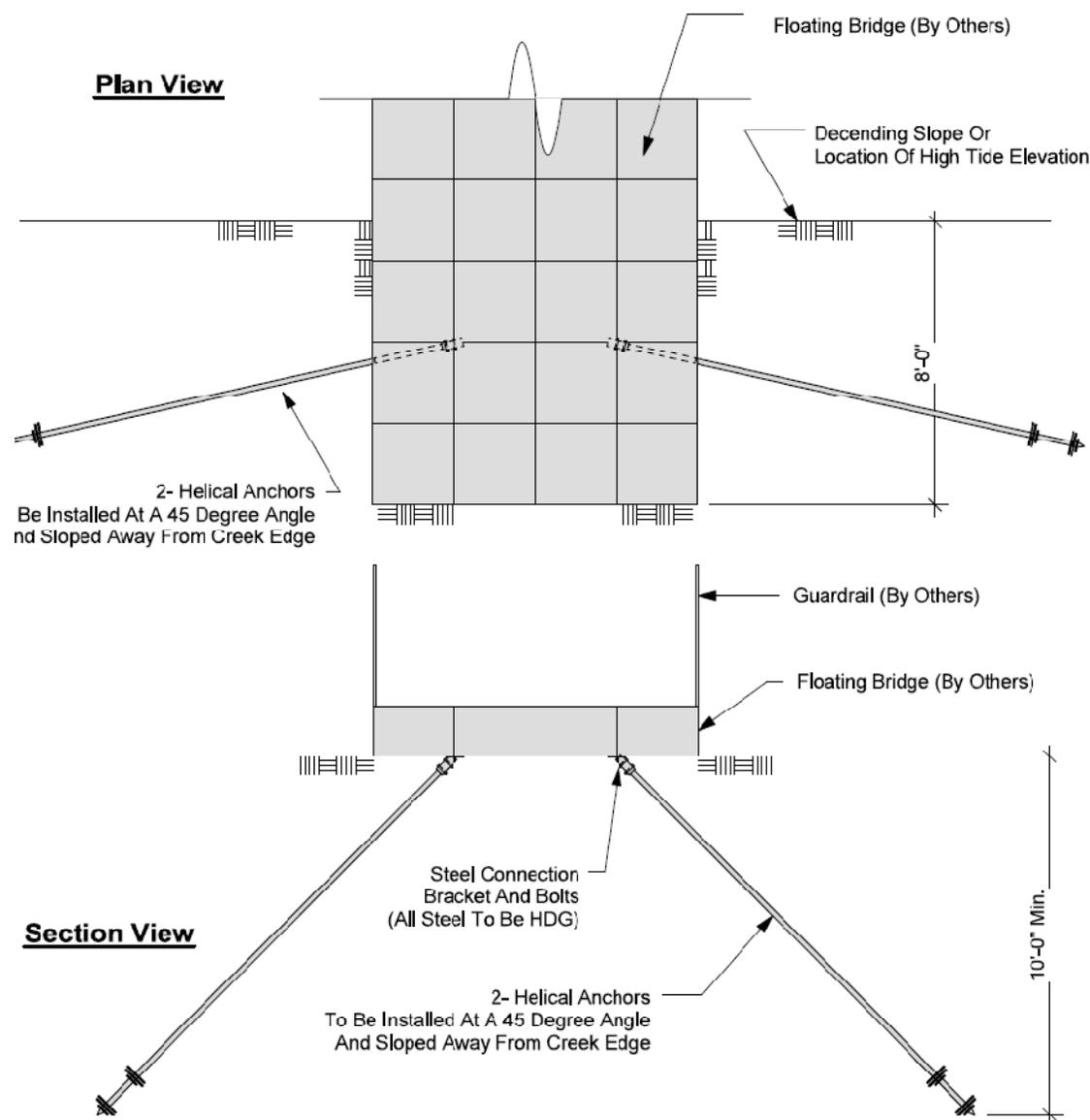


Figure 6. Overview of Bridge Locations

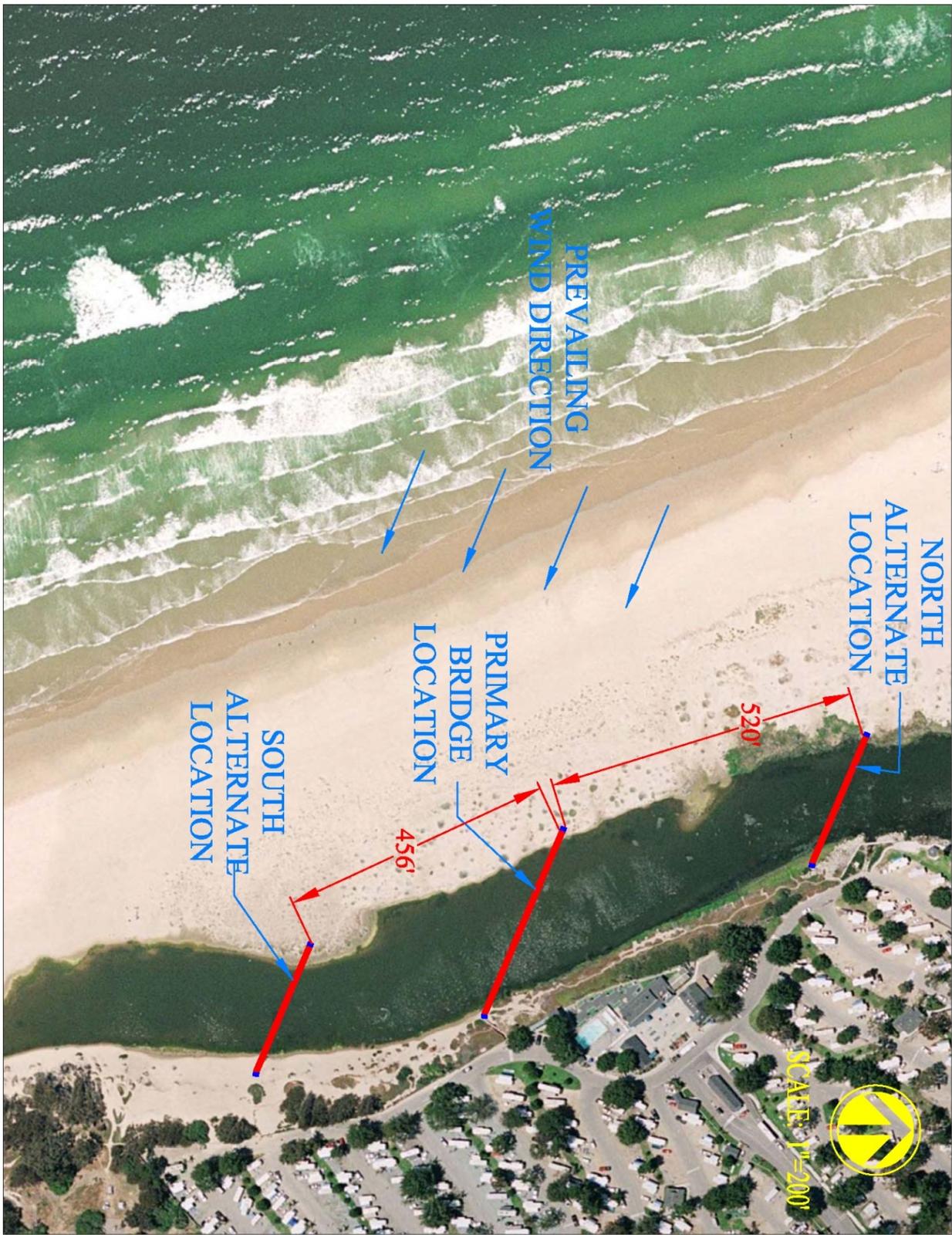


Figure 7. Primary Bridge Location

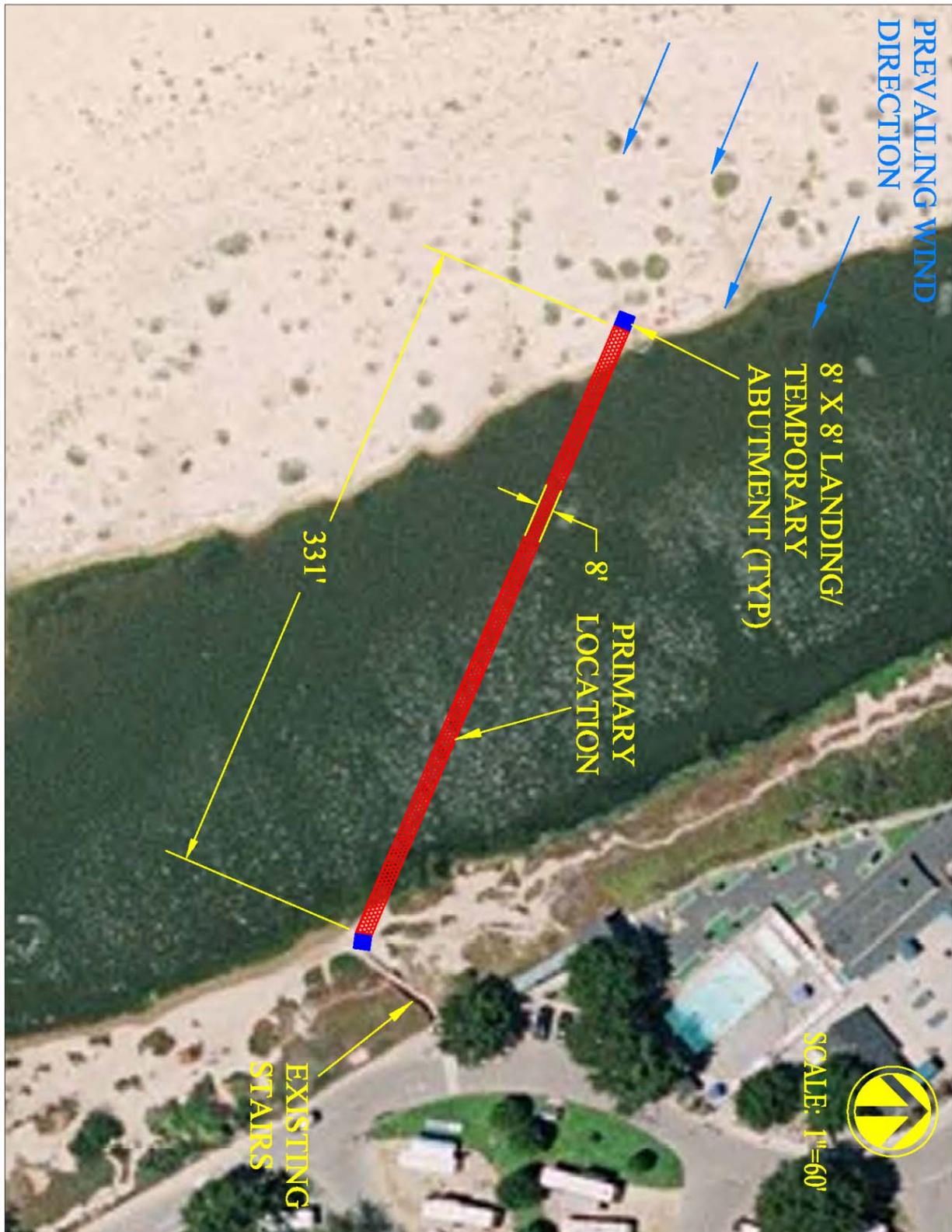
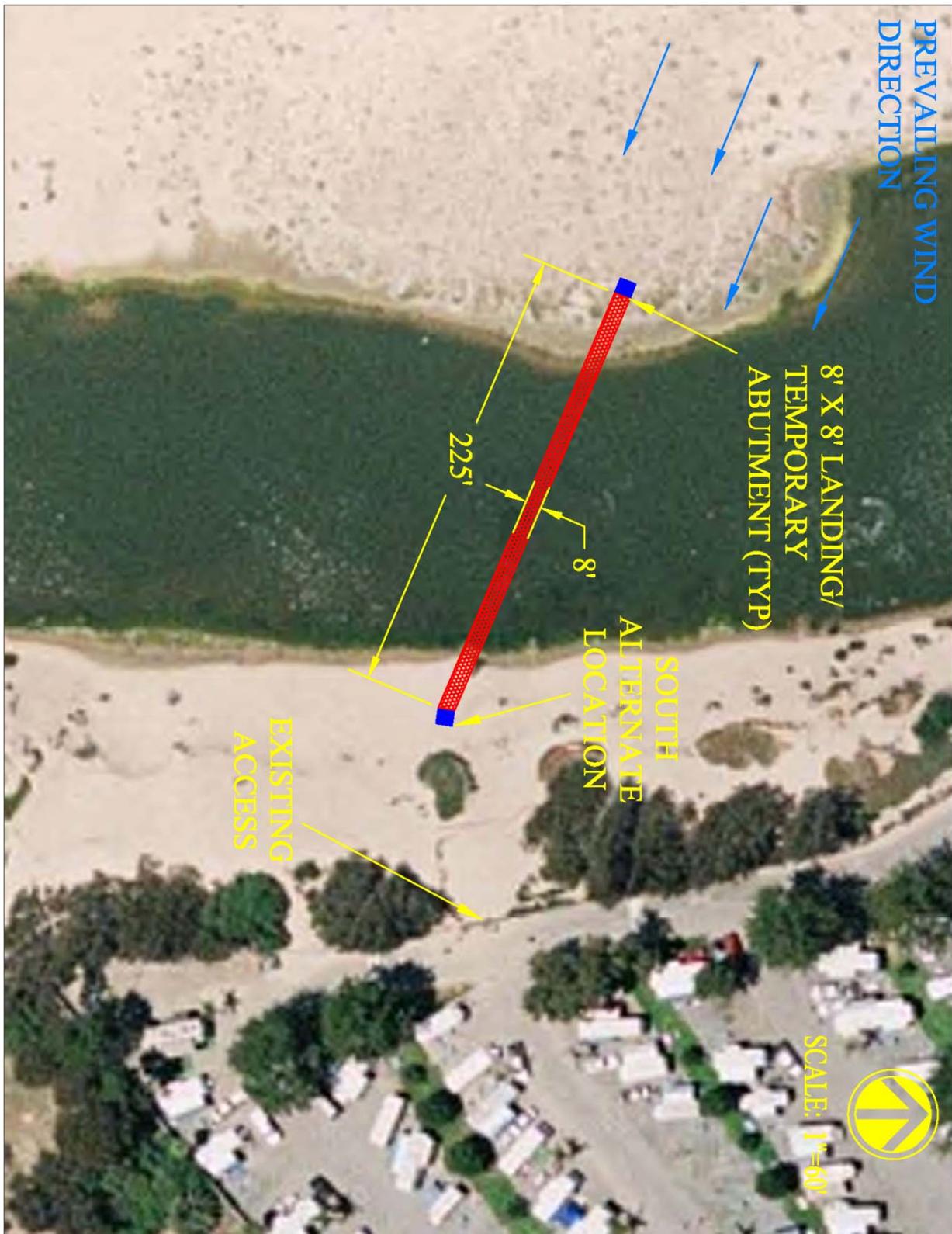


Figure 8. Secondary Location, Northern Alternate



Figure 9. Secondary Location, Southern Alternate



**Oceano Dunes District**

**Pismo Creek Estuary Seasonal Bridge Project IS/MND**

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**APPENDIX C**

**SPECIAL-STATUS SPECIES TABLES**

**Table C1. Special-status Plant Species with the Potential to Occur in the Project Area**

Species	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential for Occurrence	Source
Hoover's bent grass <i>Agrostis hooveri</i>	CRPR 1B.2	Endemic, coastal SLO and Santa Barbara 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 records from area and limited suitable habitat.	1,2,3
Arroyo de la Cruz Manzanita <i>Arctostaphylos cruzensis</i>	CRPR 1B.2	Endemic to Monterey and SLO Counties.	Broadleafed upland forest, coastal bluff scrub, closed-cone coniferous forest, chaparral, coastal scrub and valley and foothill grassland on sandy soils; 60-310 m.	Perennial evergreen shrub, Dec.-Mar.	Low-No records from area and limited suitable habitat; site is likely outside of elevation range.	1,2
Santa Lucia manzanita <i>Arctostaphylos luciana</i>	CRPR 1B.2	Endemic to SLO County.	Chaparral or cismontane woodland on shale; 350-850 m.	Perennial evergreen shrub, Dec.-Mar.	None-Site is outside of elevation range for this species.	1,2
Morro manzanita <i>Arctostaphylos morroensis</i>	FT, CRPR 1B.1	Endemic to SLO County.	Chaparral (maritime), cismontane woodland, coastal dunes (pre-Flandrian) or coastal scrub on Baywood fine sand; 5-205 m.	Perennial evergreen shrub, Dec.-Mar.	Low-Some suitable habitat in project area (coastal dunes); however, this species is only known from the Morro Bay area.	1,2,3
Oso Manzanita <i>Arctostaphylos osoensis</i>	CRPR 1B.2	Endemic to SLO County.	Chaparral or cismontane woodland on dacite porphyry buttes; 95-500 m.	Perennial evergreen shrub, Feb.-Mar.	Low-No records from area and limited suitable habitat; site is likely outside of elevation range.	1,2
Pecho manzanita <i>Arctostaphylos pechoensis</i>	CRPR 1B.2	Endemic to SLO and SB Counties.	Closed-cone coniferous forest, chaparral or coastal scrub on siliceous shale; 125-850 m.	Perennial evergreen shrub, Nov.-Mar.	Low-No records from area and limited suitable habitat; site is likely outside of elevation range.	1,2,3
Santa Margarita manzanita <i>Arctostaphylos pilosula</i>	CRPR 1B.2	Endemic, occurs in SLO, Santa Barbara and Monterey Counties.	Broad-leaved upland forest, closed-cone coniferous forest, chaparral or cismontane woodland sometimes on sandstone; 170-1100 m.	Perennial evergreen shrub, Dec.-May	Low-No records from area and limited suitable habitat; site is likely outside of elevation range.	1,2,3
Sand mesa manzanita <i>Arctostaphylos rudis</i>	CRPR 1B.2	Endemic to SLO and Santa Barbara Counties.	Chaparral (maritime) or coastal scrub on sandy soils; 25-322 m.	Perennial evergreen shrub, Nov.-Feb.	Low-No records from area and limited suitable habitat.	1,2
Dacite manzanita <i>Arctostaphylos tomentosa</i> ssp. <i>Daciticola</i>	CRPR 1B.1	Endemic to SLO County.	Chaparral or cismontane woodland on dacite porphyry buttes; 100-300 m.	Perennial evergreen shrub, Mar.-May	None-No records from area and no suitable habitat.	1,2

Species	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential for Occurrence	Source
Marsh sandwort <i>Arenaria paludicola</i>	FE, SE, CRPR 1B.1	Remaining extant occurrences are in SLO and Los Angeles Counties.	Sandy openings in marshes and swamps (fresh water or brackish); 3-170 m.	Perennial stoloniferous herb, May-Aug.	Low-No records from area and limited suitable habitat.	1,2,3
Mile's milk-vetch <i>Astragalus didymocarpus</i> var. <i>milesianus</i>	CRPR 1B.2	Endemic to SLO, Santa Barbara and Ventura Counties.	Coastal scrub (clay); 20-90 m.	Annual herb, Mar.-Jun.	None-No records from area and no suitable habitat.	1,2
Coulter's saltbrush <i>Atriplex coulteri</i>	CRPR 1B.2	Along coast from San Luis Obispo to Mexican border.	Coastal bluff scrub, coastal dunes, coastal scrub or valley and foothill grassland on alkaline or clay soils; 3-460 m.	Perennial herb, Mar.-Oct.	Low-No records from area and no alkaline or clay soils in the project area.	1,2
San Joaquin spearscale <i>Atriplex joaquiniana</i>	CRPR 1B.2	Endemic to Central Valley and San Francisco Bay Area.	Chenopod scrub, meadows and seeps, playas and valley and foothill grassland on alkaline soils; 0-835 m.	Annual herb, April-Oct.	Low-No records from area and limited suitable habitat.	1,2
San Luis Obispo mariposa lily <i>Calochortus obispoensis</i>	CRPR 1B.2	Endemic to SLO County.	Chaparral, coastal scrub or valley and foothill grassland often on serpentinite soils; 50-730 m.	Perennial bulbiferous herb, May-Jul.	Low-No records from area and limited suitable habitat; no serpentine soils in project area.	1,2,3
La Panza mariposa lily <i>Calochortus simulans</i>	CRPR 1B.3	Endemic to SLO and Santa Barbara 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-Site is outside of elevation range for this species.	1,2,3
Dwarf calycadenia <i>Calycadenia villosa</i>	CRPR 1B.1	Endemic to Fresno, Monterey, Santa Barbara and SLO Counties.	Chaparral, cismontane woodland, meadows and seeps, and valley and foothill grassland on rocky, fine soils; 240-1350 m.	Annual herb, May-Oct.	None-Site is outside of elevation range for this species.	2
Hardham's evening-primrose <i>Camissoniopsis hardhamiae</i>	CRPR 1B.2	Endemic to Monterey and SLO Counties.	Chaparral or cismontane woodland on sandy, decomposed, carbonate or burned areas; 140-945 m.	Annual herb, Mar.-May	Low-No records from area and limited suitable habitat; site is likely outside of elevation range.	1,2

Species	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential for Occurrence	Source
San Luis Obispo sedge <i>Carex obispoensis</i>	CRPR 1B.2	Endemic to Monterey, San Diego and SLO Counties.	Closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland often in serpentinite seeps, sometimes gabbro, often on clay soils; 10-820 m.	Perennial rhizomatous herb, April-June	Low-No records from area and limited suitable habitat; no serpentine soils in project area.	1,2
San Luis Obispo owl's clover <i>Castilleja densiflora</i> spp. <i>obispoensis</i>	CRPR 1B.2	Endemic to SLO County.	Meadows and seeps or valley and foothill grassland sometimes on serpentinite soils; 10-400 m.	Annual herb, Mar.-May	Low-No records from area and limited suitable habitat; no serpentine soils in project area.	1,2,3
Congdon's tarplant <i>Centromadia parryi</i> ssp. <i>congdonii</i>	CRPR 1B.2	Endemic to the San Francisco Bay Area, Monterey coast and SLO County.	Valley and foothill grassland (alkaline); 0-230 m.	Annual herb, May-Nov.	Low-No records from area and limited suitable habitat; no alkaline soils in project area.	1,2,3
Pappose tarplant <i>Centromadia parryi</i> ssp. <i>Parryi</i>	CRPR 1B.2	Endemic to the Central Valley, San Francisco Bay Area and SLO County.	Chaparral, coastal prairie, meadows and seeps, marshes and swamps (coastal salt), and valley and foothill grassland (vernally mesic) often on alkaline soils; 2-420 m.	Annual herb, May-Nov.	Low-No records from area and limited suitable habitat; no alkaline soils in project area.	2
Coastal goosefoot <i>Chenopodium littoreum</i>	CRPR 1B.2	Endemic to SLO, Santa Barbara and Los Angeles Counties.	Coastal dunes; 10-30 m.	Annual herb, Apr.-Aug.	Moderate-Some suitable habitat in project area (coastal dunes); occurs at Oso Flaco and Jack Lakes.	1,2
Dwarf soaproot <i>Chlorogalum pomeridianum</i> var. <i>minus</i>	CRPR 1B.2	Inner Coast Ranges from near Red Bluff to near Santa Rosa; SLO County coast.	Chaparral (serpentinite); 305-1000 m.	Perennial bulbiferous herb, May-Aug.	None-Site is outside of elevation range for this species.	1,2
Saltmarsh bird's beak <i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	CRPR 1B.2	Endemic to Central and Southern California coast.	Coastal dunes or marshes and swamps (coastal salt); 0-30 m.	Annual herb (hemi-parasitic), May-Oct.	Moderate-Some suitable habitat in project area (coastal dunes), but no records from the area.	1,2
Brewer's spineflower <i>Chorizanthe breweri</i>	CRPR 1B.3	Endemic to SLO and Monterey Counties.	Closed-cone coniferous forest, chaparral, cismontane woodland or coastal scrub on serpentinite, rocky or gravelly soils; 45-800 m.	Annual herb, Apr.-Aug.	Low-Occurs in the region, but no suitable habitat in project area.	1,2,3

Species	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential for Occurrence	Source
Straight-awned spineflower <i>Chorizanthe rectispina</i>	CRPR 1B.3	Endemic to SLO, Santa Barbara and Monterey Counties.	Chaparral, cismontane woodland or coastal scrub; 85-1035 m.	Annual herb, Apr.-Jul.	Low-Occurs in the region, but no suitable habitat in project area.	1,2
Chorro Creek bog thistle <i>Cirsium fontinale</i> var. <i>obispoense</i>	FE, SE CRPR 1B.2	Endemic to SLO County.	Chaparral, cismontane woodland, coastal scrub or valley and foothill grassland in serpentinite seeps and drainages; 35-380 m.	Perennial herb, Feb.- Sep.	Low-No records from area and limited suitable habitat; no serpentine soils in project area.	1,3
Cuesta Ridge thistle <i>Cirsium occidentale</i> var. <i>lucianum</i>	CRPR 1B.2	Endemic to SLO County.	Chaparral (openings), serpentinite, often steep rocky slopes and disturbed roadsides; 500-750 m.	Perennial herb, April- June	None-Site is outside of elevation range for this species.	1,2
Surf thistle <i>Cirsium rhotophilum</i>	ST, CRPR 1B.2	Endemic to SLO and Santa Barbara Counties.	Coastal bluff scrub or coastal dunes; 3-60 m.	Perennial herb, Apr.- Jun.	Moderate-Some suitable habitat in project area (coastal dunes); occurs to the south near Oso Flaco Lake.	1,2,3
La Graciosa thistle <i>Cirsium scariosum</i> var. <i>loncholepis</i>	FE, ST, CRPR 1B.1	Endemic to SLO, Santa Barbara 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.	Moderate-Some suitable habitat in project area (coastal dunes), occurs to the south near Oso Flaco Lake, near Jack Lake, in the Callander Dunes, and at the Dune Lake complex.	1,2
California saw-grass <i>Cladium californicum</i>	CRPR 2.2	Eastern and southern California.	Alkaline or freshwater meadows and seeps; 60-865 m.	Perennial rhizomatous herb, Jun.- Sep.	Low-Occurs in the region, but no suitable habitat in project area.	1,2
Pismo clarkia <i>Clarkia speciosa</i> ssp. <i>immaculata</i>	FE, CRPR 1B.1	Endemic to SLO County.	Chaparral (margins, openings), cismontane woodland or valley and foothill grassland on sandy soils; 25-185 m.	Annual herb, May-Jul.	Low-Occurs in the region, but limited suitable habitat in project area; chaparral in project area is disturbed by erosion/foot traffic.	1,2,3
Dune larkspur <i>Delphinium parryi</i> ssp. <i>blochmaniae</i>	CRPR 1B.2	Endemic to SLO, Santa Barbara and Ventura Counties.	Chaparral (maritime), coastal dunes; 0-200 m.	Perennial herb, Apr.- May	Moderate-Some suitable habitat in project area; occurs south of Oso Flaco Lake and at the Callander Dunes.	1,2

Species	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential for Occurrence	Source
Eastwood's larkspur <i>Delphinium parryi</i> ssp. <i>eastwoodiae</i>	CRPR 1B.2	Endemic to SLO County.	Chaparral (openings) or valley and foothill grassland on serpentinite soils, coastal; 75-500 m.	Perennial herb, Feb.-Mar.	Low-No records from area and limited suitable habitat; no serpentine soils in project area.	1,2
Beach spectaclepod <i>Dithyrea maritima</i>	ST, CRPR 1B.1	Southern coast and off-shore islands from San Luis Obispo to Los Angeles.	Coastal dunes, coastal scrub (sandy); 3-50 m.	Perennial rhizomatous herb, Mar.-May	Moderate-Suitable habitat in project area, occurs to the south at Oso Flaco Lake and south of Oso Flaco Lake.	1,2,3
Betty's dudleya <i>Dudleya abramsii</i> ssp. <i>bettinae</i>	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-June	Low-No records from area and limited suitable habitat; no serpentine soils in project area.	1,2
Mouse-gray dudleya <i>Dudleya abramsii</i> ssp. <i>murina</i>	CRPR 1B.3	Endemic to SLO County.	Chaparral, cismontane woodland, and valley and foothill grassland on serpentinite soils; 90-440 m.	Perennial leaf succulent, May-June	Low-No records from area and limited suitable habitat; no serpentine soils in project area.	1,2,3
Blochman's dudleya <i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	CRPR 1B.1	Along coast from west of Paso Robles to Mexican border.	Coastal bluff scrub, chaparral, coastal scrub or valley and foothill grassland on rocky, often clay or serpentinite soils; 5-450 m.	Perennial herb; Apr.-Jun.	Low-No records from area and limited suitable habitat; no serpentine soils in project area.	1,2,3
Blochman's leafy daisy <i>Erigeron blochmaniae</i>	CRPR 1B.2	Endemic to SLO and SB Counties.	Coastal dunes, coastal scrub; 3-45 m.	Perennial rhizomatous herb; Jun.-Aug.	High-Occurs near project area and suitable habitat is present in the project area.	1,2,3
Indian Knob mountainbalm <i>Eriodictyon altissimum</i>	FE, SE, CRPR 1B.1	Endemic to SLO County.	Chaparral (maritime), cismontane woodland or coastal scrub; 80-270 m.	Perennial evergreen shrub, Mar.-Jun.	Low-No records from area and limited suitable habitat.	1,2,3
Hoover's button-celery <i>Eryngium aristulatum</i> var. <i>hooveri</i>	CRPR 1B.1	Extant occurrences in Alameda, San Benito, San Diego and SLO Counties.	Vernal pools, 3-45 m.	Annual/perennial herb, Jul.-Aug.	None-There are no vernal pools in the project area.	1,2,3

Species	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential for Occurrence	Source
Ojai fritillary <i>Fritillaria ojaiensis</i>	CRPR 1B.2	Endemic to Santa Barbara, Ventura and possibly Monterey and SLO Counties.	Broadleaved upland forest (mesic), chaparral and lower montane coniferous forest on rocky soils; 300-998 m.	Perennial bulbiferous herb, Feb.-May	None-Site is outside of elevation range for this species.	2
San Benito fritillary <i>Fritillaria viridea</i>	CRPR 1B.2	Endemic to Fresno, Monterey, San Benito, and SLO Counties.	Chaparral (serpentinite); 200-1525 m.	Perennial bulbiferous herb, Mar.-May	None-No records from area and no suitable habitat; site is likely outside of elevation range.	1,2
Mesa horkelia <i>Horkelia cuneata</i> var. <i>puberula</i>	CRPR 1B.1	Endemic to central and southern coast.	Chaparral (maritime), cismontane woodland, coastal scrub on sandy or gravelly soils; 70-810 m.	Perennial herb, Feb.-Sep.	Low-Occurs in the region, but limited suitable habitat in project area; chaparral in project area is disturbed by erosion/foot traffic.	1,2,3
Kellogg's horkelia <i>Horkelia cuneata</i> var. <i>sericea</i>	CRPR 1B.1	Endemic to coast from San Francisco Bay Area to vicinity of Lompoc.	Closed-cone coniferous forest, chaparral (maritime), coastal dunes or coastal scrub in sandy or gravelly openings; 10-200 m.	Perennial herb, Apr.-Sep.	Moderate-Suitable habitat in project area, occurs to the south in the Pismo Dunes Natural Preserve, at Callander Dunes and at Jack Lake.	1,2
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	CRPR 1B.1	Central Valley and Southern California coast.	Marshes and swamps (coastal salt), playas and vernal pools; 1-1220 m.	Annual herb, Feb.-June	Low-No records from area and limited suitable habitat.	1,2
Jones' layia <i>Layia jonesii</i>	CRPR 1B.2	Endemic to SLO County.	Chaparral or valley and foothill grassland or clay or serpentinite soils; 5-400 m.	Annual herb, Mar.-May	Low-No records from area and limited suitable habitat; no serpentine or clay soils in project area.	1,2,3
San Luis Obispo County lupine <i>Lupinus ludovicianus</i>	CRPR 1B.2	Endemic to SLO County.	Chaparral or cismontane woodland on sandstone or sandy soils; 50-525 m.	Perennial shrub, Apr.-Jul	Low-No records from area and limited suitable habitat.	1,2
Nipomo Mesa lupine <i>Lupinus nipomensis</i>	FE, SE, CRPR 1B.1	Endemic to SLO County.	Coastal dunes; 10-50 m.	Annual herb, Dec.-May	Moderate- Some suitable habitat in project area (coastal dunes), occurs to the south near Jack Lake, near Black Lake and at the Callander Dunes.	1,2

Species	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential for Occurrence	Source
Caramel Valley bush mallow <i>Malacothamnus palmeri</i> var. <i>involutus</i>	CRPR 1B.2	Endemic to Monterey and SLO Counties.	Chaparral, cismontane woodland and coastal scrub; 30-1100 m.	Perennial deciduous shrub, May-Oct.	Low-No records from area and limited suitable habitat.	2
Santa Lucia bush mallow <i>Malacothamnus palmeri</i> var. <i>palmeri</i>	CRPR 1B.2	Endemic to Monterey and SLO Counties.	Chaparral (rocky); 60-360 m.	Perennial deciduous shrub, May-Jul.	Low-No records from area and limited suitable habitat.	2
Palmer's monardella <i>Monardella palmeri</i>	CRPR 1B.2	Endemic to Monterey and SLO Counties.	Chaparral and cismontane woodland on serpentinite soils; 200-800 m.	Perennial rhizomatous herb, June-Aug.	Low-No records from area and limited suitable habitat; no serpentine soils in project area.	1,2
Crisp monardella <i>Monardella undulata</i> ssp. <i>crispa</i>	CRPR 1B.2	Endemic to SLO and Santa Barbara Counties.	Coastal dunes or coastal scrub; 10-120 m.	Perennial rhizomatous herb, Apr.-Aug.	High-Occurs throughout Oceano Dunes area according to 2012 vegetation mapping and CNDDDB records.	1,2,3
San Luis Obispo monardella <i>Monardella undulata</i> ssp. <i>undulata</i>	CRPR 1B.2	Endemic to SLO and Santa Barbara Counties.	Coastal dunes or coastal scrub (sandy); 10-200 m.	Perennial rhizomatous herb, May-Sep.	Moderate-Suitable habitat in project area, occurs in the Pismo Dunes Natural Preserve, near Jack Lake, near Black Lake, in the Callander Dunes, in the Oso Flaco Lake area, and south of Oso Flaco Lake.	1,2
Woodland woollythreads <i>Monolopia gracilis</i>	CRPR 1B.2	Endemic to California coast from near Oakland to near San Luis Obispo.	Broadleafed upland forest (openings), chaparral (openings), cismontane woodland, North Coast coniferous forest (openings), and valley and foothill grassland on serpentinite soils; 100-1200 m.	Annual herb, Feb.-July	Low-No records from area and limited suitable habitat; no serpentine soils in project area.	1,2
Gambel's watercress <i>Nasturtium gambelii</i>	FE, ST, CRPR 1B.1	Central and southern coast.	Marshes and swamps (freshwater or brackish)	Perennial rhizomatous herb, Apr.-Oct.	Low-Occurs in the region, but no suitable habitat in project area.	1,2
Coast woolly-heads <i>Nemacaulis denudata</i> var. <i>denudata</i>	CRPR 1B.2	Central and southern coast.	Coastal dunes; 0-100 m.	Annual herb, Apr.-Sep.	Moderate-Suitable habitat, but no records from area.	1,2

Species	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential for Occurrence	Source
Hooked popcorn flower <i>Plagiobothrys uncinatus</i>	CRPR 1B.2	Endemic to Monterey, San Benito, Santa Clara, Santa Cruz, SLO and San Mateo Counties.	Closed-cone coniferous forest, chaparral, coastal scrub, marshes and swamps and vernal pools; 15-185 m.	Annual herb, Apr.-June	Low-No records from area and limited suitable habitat.	1
Diablo Canyon blue grass <i>Poa diaboli</i>	CRPR 1B.2	Endemic to SLO County.	Closed-cone coniferous forest, chaparral (mesic), cismontane woodland and coastal scrub on shale, sometimes in burned areas; 120-400 m.	Perennial rhizomathous herb, Mar.-May	None-No records from area and no suitable habitat.	1,2
White rabbit-tobacco <i>Pseudognaphalium leucocephalum</i>	CRPR 2.2	Southern California coast.	Chaparral, cismontane woodland, coastal scrub and riparian woodland; 0-2100 m.	Perennial herb, Jul.-Sep.	Low-No records from area and limited suitable habitat.	2
Adobe sanicle <i>Sanicula maritima</i>	CRPR 1B.1	Endemic to Monterey and SLO Counties.	Chaparral, coastal prairie, meadows and seeps, and valley and foothill grassland on clay, serpentinite soils; 30-240 m.	Perennial herb, Feb.-May	Low-No records from area and limited suitable habitat; no serpentine soils in project area.	1,2
Black-flowered figwort <i>Scrophularia atrata</i>	CRPR 1B.2	Endemic to SLO and Santa Barbara Counties	Closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub, or riparian scrub; 10-500 m.	Perennial herb, Mar.-Jul.	High-Suitable habitat, closest occurrence 0.5 miles northeast.	1,2,3
Chaparral ragwort <i>Senecio aphanactis</i>	CRPR 2.2	Coast and Coast Ranges from San Francisco Bay Area to Mexican border.	Chaparral, cismontane woodland and coastal scrub, sometimes on alkaline soils; 15-800 m.	Annual herb, Jan.-Apr.	Low-No records from area and limited suitable habitat; no alkaline soils in project area.	1
Cuesta Pass checkerbloom <i>Sidalcea hickmanii</i> ssp. <i>anomala</i>	CRPR 1B.2	Endemic to SLO County.	Closed-cone coniferous forest or chaparral on rocky, serpentinite soils; 600-800 m.	Perennial herb, May-June	None- Site is outside of elevation range for this species.	1
Most beautiful jewel flower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	CRPR 1B.2	Endemic to Alameda, Contra Costa, Monterey, Santa Clara and SLO Counties.	Chaparral, cismontane woodland, and valley and foothill grassland on serpentinite soils; 94-1000 m.	Annual herb, Mar.-Oct.	Low-No records from area and limited suitable habitat; no serpentine soils in project area.	1,2
California seablite <i>Suaeda californica</i>	FE, CRPR 1B.1	Endemic to SLO County.	Marshes and swamps (coastal salt); 0-15 m.	Perennial evergreen shrub, Jul.-Oct.	Low-No records from area and limited suitable habitat.	1,2

Species	Listing Status	Range in California	Habitat	Life Form/ Blooming Period	Potential for Occurrence	Source
San Bernardino aster <i>Symphotrichum defoliatum</i>	CRPR 1B.2	Endemic to southwestern California.	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps or valley and foothill grassland (vernally mesic) near ditches, streams or springs; 2-2040 m.	Perennial rhizomatous herb, Jul.-Nov.	Low- Occurs in the region, but limited suitable habitat in project area.	1,2
Saline clover <i>Trifolium hydrophilum</i>	CRPR 1B.2	Endemic to San Francisco Bay Area, Sacramento Valley, Monterey Coast and SLO County coast.	Marshes and swamps, valley and foothill grassland (mesic, alkaline) and vernal pools; 0-300 m.	Annual herb, Apr.-Jun.	Low-No records from area and limited suitable habitat.	1,2
Caper-fruited tropidocarpum <i>Tropidocarpum capparideum</i>	CRPR 1B.1	Endemic to Fresno, Monterey and SLO Counties.	Valley and foothill grassland (alkaline hills); 1-455 m.	Annual herb, Mar.-Apr.	Low-No records from area and limited suitable habitat; no alkaline soils in project area.	1
<p>Listing Status Key:                      FE – Federal Endangered                      FT – Federal Threatened                      FC – Federal Candidate                      SE – State Endangered                      ST – State Threatened                      SC – State Candidate</p>		<p>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).  <b>CRPR Threat Code extensions and their meanings:</b>                      .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 (&lt;20% of occurrences threatened or no current threats known).</p>				

Sources

1. California Natural Diversity Database (CNDDB). 2013. California Department of Fish and Wildlife, Biogeographic Data Branch. Pismo Beach, Morro Bay South, San Luis Obispo, Lopez Mtn., Arroyo Grande NE, Oceano and Port Saint Luis Quads. Last updated December 2012.
2. California Native Plant Society Inventory of Rare and Endangered Plants. 2013. Pismo Beach and 6 surrounding Quads. Available at: <http://www.rareplants.crpr.org/result.html?adv=t&quad=35120A5:1>, accessed January 7, 2013.
3. Coastal San Luis Resource Conservation District. 2011. Pismo Creek Estuary Enhancement Project Existing Conditions Report. Prepared for California Department of Parks and Recreation, Oceano Dunes District.

**Table C2. Special-status Animal Species with the Potential to Occur in the Project Area**

Species	Listing Status	Range in California	Habitat	Potential to Occur	Sources
<i>Invertebrates</i>					
Morro shoulderband snail <i>Helminthoglypta walkeriana</i>	FE	Restricted to the coastal strand in the immediate vicinity of Morro Bay.	Inhabits the duff beneath <i>Haplopappus</i> , <i>Salvia</i> , <i>Dudleya</i> , and <i>Mesembryanthemum</i> .	None-The project site is outside of the known range of this species.	1
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	Endemic to the grasslands of the Central Valley, Central Coast Mtns, and South Coast Mtns, in astatic rain-filled pools.	Inhabit small, clear-water sandstone depression pools and grassed swale, earth slump, or basalt-flow depression pools.	None-There are no vernal pools in the vicinity of the project site.	1
<i>Fish</i>					
Steelhead - south/central California coast ESU <i>Oncorhynchus mykiss irideus</i>	FT, CSSC	Coastal river basins from the Russian River south to Soquel and Aptos Creek, and the drainages of San Francisco and San Pablo Bays, including the Napa River.	Hatches in fresh water, lives adult life in the ocean, and returns to natal stream or river to spawn; spawning and rearing habitat is consists of perennial streams with clear, cool to cold, fast flowing water with a high dissolved oxygen content and abundant gravels and riffles.	Present- One 2003 CNDDDB record from Pismo Creek, a single smolt was found in a 2005 survey of Pismo Creek Estuary.	1,3
Tidewater goby <i>Eucyclogobius newberryi</i>	FE CSSC	Occurs in brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River.	Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	Present-CNDDDB occurrence in Pismo Creek from 2008, dozens were seined from Pismo Estuary in 2007.	1,3
<i>Amphibians and Reptiles</i>					
California tiger salamander <i>Ambystoma californianse</i>	FT ST CSSC	Endemic, found in isolated populations the Central Valley and Central Coast ranges.	Needs underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal wetlands for breeding.	None-There are no vernal pools in the vicinity of the project site.	3
Coast Range newt <i>Taricha torosa</i>	CSSC	Coastal drainages from Mendocino County to San Diego County.	Lives in terrestrial habitats and will migrate over 1 km to breed in ponds, reservoirs and slow-moving streams.	Moderate-Suitable breeding and terrestrial habitats in project area, but no CNDDDB records.	1, 3

Species	Listing Status	Range in California	Habitat	Potential to Occur	Sources
Foothill yellow-legged frog <i>Rana boylei</i>	CSSC	Coast Ranges and Sierra Nevada in northern and central California.	Partly shaded, shallow streams and rifles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg laying. Need at least 15 weeks to attain metamorphosis.	Low- No CNDDDB records from area, and Pismo Creek may be marginal breeding habitat.	1
California red-legged frog <i>Rana draytonii</i>	FT CH CSSC	Historically, this species was found along the coast and Coast Ranges from Mendocino County in northern California south to northern Baja California, and inland east through the northern Sacramento Valley into the foothills of the Sierra Nevada mountains, south to Tulare county, and possibly Kern county.	Inhabits lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Moderate-Closest CNDDDB occurrence is 1.5 mile upstream of Pismo Beach on tributary to Pismo Creek; the Pismo Creek Estuary may be too saline to support this species.	1,2,3
Western pond turtle <i>Actinemys marmorata</i>	CSSC	From Oregon border of Del Norte and Siskiyou Counties south along the coast to San Francisco Bay, inland through the Sacramento Valley and on western slope of Sierra Nevada.	Ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation in woodlands, grasslands, and open forests.	High-2008 CNDDDB record from Pismo Creek, suitable habitat in project area.	1,2,3
Black legless lizard <i>Anniella pulchra nigra</i>	CSSC	Sand dunes and sandy soils in the Morro Bay and Monterey Bay regions.	Inhabits sandy soils/dune areas with bush lupine and mock heather as dominant plants. Moist soil is essential.	None-The project site is outside of the known range of this species.	1
Silvery legless lizard <i>Anniella pulchra pulchra</i>	CSSC	Occurs from the southern edge of the San Joaquin River in northern Contra Costa County south to northwestern Baja California Del Norte just south of Colonia Guerrero. Five lineages; Lineage D occurs in project area.	Dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and riparian habitats with moist, sandy soils.	Moderate-Suitable habitat in occurs in the project area but there are no records from area.	1,3

Species	Listing Status	Range in California	Habitat	Potential to Occur	Sources
Coast (California) horned lizard <i>Phrynosoma coronatum</i> (frontale population)	CSSC	Historically, found along the Pacific coast from the Baja California border west of the deserts and the Sierra Nevada, north to the Bay Area, and inland as far north as Shasta Reservoir, and south into Baja California. Ranges up onto the Kern Plateau east of the crest of the Sierra Nevada. Current range is more fragmented.	Chaparral, grasslands, coniferous forests in fine, loose soils.	Low- No records from area and limited suitable habitat.	1,2,3
Two-striped garter snake <i>Thamnophis hammondi</i>	CSSC	Coastal California from vicinity of Salinas to northwest Baja California, from sea level to about 7,000 feet.	Highly aquatic, found in or near permanent fresh water, often along streams with rocky beds and riparian growth.	Moderate-Pismo Creek may provide suitable habitat, but closest known occurrence is Oso Flaco Lake.	2
<i>Birds</i>					
American white pelican <i>Pelecanus erythrorhynchos</i>	CSSC (nesting)	Year-round resident along the Coast and Central Valley from the San Francisco Bay Area south to the border with Mexico; and a summer resident in the northeast corner of California.	White pelicans nest on the ground in colonies on earthen, sandy, or rocky, islands, peninsulas, or tule mats. They forage in shallow inland waters or shallow coastal marine waters.	High-Detected south of the project area during 2004-2010 terrestrial point count surveys.	2
California brown pelican <i>Pelecanus occidentalis californicus</i>	CFP	Year-round resident along southern California coast, migrant elsewhere along coast.	Colonial nester on coastal islands just outside the surf line.	Present-Detected in project area during 2004-2010 shoreline transect and terrestrial point count surveys.	2,3
Northern harrier <i>Circus cyaneus</i>	CSSC	Throughout lowland California; has been recorded in fall at high elevations.	Grasslands, meadows, marshes, and seasonal and agricultural wetlands.	High-Detected south of the project area during 2004-2010 terrestrial point count surveys.	2
White-tailed kite <i>Elanus leucurus</i>	CFP	Lowland areas west of Sierra Nevada from head of Sacramento Valley south, including coastal valleys and foothills, to western San Diego County at Mexico border	Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging.	Low- No records from project area and limited suitable habitat.	1

Species	Listing Status	Range in California	Habitat	Potential to Occur	Sources
American Peregrine falcon <i>Falco peregrines</i> ssp. <i>anatum</i>	CFP	Year-round resident throughout California.	Nests on cliffs or man-made structures such as buildings and bridges; feeds on birds.	Present-Detected in project area during 2004-2010 shoreline transect and terrestrial point count surveys.	2,3
California black rail <i>Laterallus jamaicensis</i> ssp. <i>coturniculus</i>	ST	This endemic subspecies of the black rail ( <i>Laterallus jamaicensis</i> ) occurs in the San Francisco Bay region, parts of the Central Valley and at the southeastern border of the State.	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. It needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Low-No records near project area and limited suitable habitat; this species is uncommon in the region.	1
California clapper rail <i>Rallus longirostris</i> ssp. <i>levipes</i>	FE SE CFP	This California endemic inhabits salt water and brackish marshes traversed by tidal sloughs in the vicinity of the San Francisco Bay.	Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	None-Project site is outside of known range of this species.	1
Western snowy plover <i>Charadrius alexandrinus</i> ssp. <i>nivosus</i>	FT CSSC BCC	Pacific population of western snowy plover occurs along the entire coastline.	Occurs on sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Present-Known to nest south of project area and forage and winter in the area.	1,2,3
California least tern <i>Sternula antillarum browni</i>	FE SE CFP	Nests along the coast from San Francisco Bay south to Northern Baja California.	Colonial breeder on bare or sparsely vegetated flat substrates, sandy beaches, alkali flats, landfills, or paved areas.	Present-Known to nest south of project area and forage in the area.	1,2,3
Burrowing owl <i>Athene cunicularia</i>	CSSC	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.	Low- Closest occurrence near Oso Flaco Lake and limited suitable habitat.	1
Willow flycatcher <i>Empidonax traillii</i>	SE	Occurs as a summer (breeding) migrant in moist thickets and riparian areas throughout California.	Nests in dense riparian habitats with perennial water.	High- Detected south of the project area during 2004-2010 terrestrial point count surveys.	2
Loggerhead shrike <i>Lanius ludovicianus</i>	CSSC (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.	High- Detected south of project area during 2004-2010 terrestrial point count surveys.	1,2

Species	Listing Status	Range in California	Habitat	Potential to Occur	Sources
Purple martin <i>Progne subis</i>	CSSC	Summer resident in coastal California.	Inhabits woodlands, low elevation coniferous forests of Douglas fir, Ponderosa pine and Monterey pine. Nests in old woodpecker cavities mostly, also in human-made structures.	Low- No records from area and limited suitable habitat.	1
Bank swallow <i>Riparia riparia</i>	ST	Occurs primarily around the remaining natural river banks of the Sacramento and Feather Rivers in the Sacramento Valley.	Colonial nester, nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine textured/sandy soils near streams, rivers, lakes, or ocean to dig nesting hole.	Low-Detected south of the project area during 2004-2010 terrestrial point count surveys but only occurs in the area as an occasional migrant.	2
Yellow warbler <i>Setophaga petechia</i>	CSSC	Nests over all California except Central Valley, Mojave Desert region, and high altitudes in Sierra Nevada; winters along Colorado River and in parts of Imperial and Riverside Counties.	Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral; may also use oaks, conifers, and urban areas near stream courses.	High-Detected south of the project area during 2004-2010 terrestrial point count surveys.	2
Tricolored blackbird <i>Agelaius tricolor</i>	CSSC (nesting colony)	Permanent resident in Central Valley from Butte to Kern Counties; breeds at scattered coastal locations from Marin to San Diego Counties and at scattered locations in Lake, Sonoma, and Solano Counties; rare nester in Siskiyou, Modoc, and Lassen Counties.	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grain fields; habitat must be large enough to support 50 pairs; probably requires water at or near the nesting colony.	Low-No records from area and limited suitable habitat.	1
<i>Mammals</i>					
Pallid Bat <i>Antrozous pallidus</i>	CSSC	Throughout California except high Sierra from Shasta to Kern Counties and northwest coast, primarily at lower and mid-elevations.	Occurs in a variety of typically arid habitats including all types of woodland especially oak savanna and grassland. May also be found in riparian areas and wetlands, orchards, vineyards, and cropland if appropriate roosting sites are available.	Low-No records from project area and limited roosting habitat available in the project area.	1
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	CSSC	Found throughout California, but details of its distribution are not well known.	Roosts in caves, buildings, hollow trees; forages in many habitats. Most abundant in mesic habitats.	Low-No records from project area and limited roosting habitat available in the project area.	1

Species	Listing Status	Range in California	Habitat	Potential to Occur	Sources
Western mastiff bat <i>Eumops perotis californicus</i>	CSSC	Uncommon resident in southeastern San Joaquin Valley and Coast Ranges from Monterey County southward through southern California, from the coast eastward to the Colorado Desert.	Inhabits many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Low-No records from project area and limited roosting habitat available in the project area.	1
Big free-tailed bat <i>Nyctinomops macrotis</i>	CSSC	Low lying areas in southern California.	Needs high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	Low-No records from project area and limited roosting habitat available in the project area.	1
Morro Bay kangaroo rat <i>Dipodomys heermanni morroensis</i>	FE SE	Coastal sage scrub on the south side of Morro Bay.	Needs sandy soil, but not active dunes, prefers early seral stages.	None-The project site is outside of the known range of this species.	1
American badger <i>Taxidea taxus</i>	CSSC	Occurs throughout California and the western United States and Canada.	Variety of open habitats with friable soils.	Low- Known from region, but soils in project area are sandy and area is probably too disturbed to support this species.	1
<sup>1</sup> Listing Status Key: FE – Federal Endangered FT – Federal Threatened SE – State Endangered ST – State Threatened CFP – California Fully Protected CSSC – California Species of Special Concern					

Sources

- California Natural Diversity Database (CNDDDB). 2012. California Department of Fish and Game, Biogeographic Data Branch. Last updated December 2012.
- California Department of Parks and Recreation. 2011. Habitat Monitoring Report. Oceano Dunes State Vehicular Recreation Area 2004-2011. Prepared by California Department of Parks and Recreation Off-highway Motor Vehicle Division, Oceano Dunes District. March. Appendix 2. Sensitive wildlife, Oceano Dunes.
- Coastal San Luis Resource Conservation District, 2011. Pismo Creek Estuary Enhancement Project Existing Conditions Report. Prepared for California Department of Parks and Recreation, Oceano Dunes District.