

**Notice of Determination**

**TO:**

Office of Planning and Research

*For U.S. Mail:*  
 P.O. Box 3044  
 Sacramento, CA 95812

*Street Address:*  
 1400 Tenth Street  
 Sacramento, CA 95814

County Clerk

County of:

Address:

**FROM:**

Public Agency: California Department of Fish and Game

Address: 1234 East Shaw Avenue  
 Fresno, CA 93710

Contact: Dave Feliz

Phone: (831) 728-2822, extension 302

Lead Agency (if different from above):

Address:

Contact:

Phone:

***SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.***

State Clearinghouse Number: 2012041041

Project Title: Whistlestop Levee Repair and Public Access Improvement Project

Project Location (include county): Whistlestop Lagoon, Monterey County, California

Project Description: The Whistlestop Levee Repair and Public Access Improvement Project (proposed project) would include two key elements: (1) replacing the existing culverts located in the Whistlestop levee with an approximately 20-foot long bridge to improve water quality, fish passage, and trail safety for recreational users in the area; and (2) relocating an existing dock that extends off the Whistlestop levee to deeper water to reduce disturbance to mudflat habitat at low tides. The proposed project would be constructed between July and October 2012.

This is to advise that the California Department of Fish and Game ( Lead Agency or  Responsible Agency) has approved the above described project on 6-4-12 and has made the following determinations regarding the above described project:

1. The project [ will  will not] have a significant effect on the environment.
2.  An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.  
 A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [ were  were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [ was  was not] adopted for this project.
5. A statement of Overriding Considerations [ was  was not] adopted for this project.
6. Findings [ were  were not] made pursuant to the provisions of CEQA.

Exhibit 3: Mitigated Negative Declaration

This is to certify that the final EIR with comments and responses and record of project approval, or the Negative Declaration, is available to the General Public at:

California Department of Fish and Game  
20 Lower Ragsdale Drive, Suite 100  
Monterey, CA 93940-5738

Signature *Jeffrey R. Single* Date: 6-4-12  
Jeffrey R. Single, Ph.D., Regional Manager

Date Received for filing at OPR: \_\_\_\_\_

**Mitigation, Monitoring and Reporting Program for the Whistlestop Levee Repair and Public Access Improvement Project**

Mitigation	Implementing Responsibility	Monitoring Responsibility	Mitigation Timing
<b>IV. BIOLOGICAL RESOURCES</b>			
<p><b>Mitigation Measure BIO-1.</b> The project applicant would implement the BMPs outlined in Table IV-2 to minimize stormwater runoff, erosion, and potential water quality impacts associated with construction activities. In addition, all contractors working in a capacity that could increase the potential for adverse water quality impacts shall receive training regarding the environmental sensitivity of the site and need to minimize impacts. Contractors also shall be trained in implementation of stormwater BMPs for protection of water quality.</p>	Construction Contractor	ESNERR / CDFG	Before, during, and after construction.
<p><b>Mitigation Measure BIO-2.</b> A designated biologist will be on-site daily while construction activities, including pile driving, are taking place to (1) avoid adverse effects on special-status species, including fish, marine mammals, amphibians, and birds; (2) check for compliance with all mitigation and avoidance measures; and (3) ensure that signs, stakes, and fenced areas are intact, and that human activities are restricted outside of these protective zones.</p>	Qualified Biologist	ESNERR / CDFG	Before and During Construction
<p><b>Mitigation Measure BIO-3.</b></p> <p>1. <u>Seasonal Avoidance.</u> Construction will be scheduled to minimize effects on listed species and habitats. All work will be conducted between April 15 and October 15. No activities shall occur between October 15 or the onset of the rainy season, whichever occurs first, and May 1, except for during periods greater than 72 hours without precipitation. The National Weather Service (NWS) 72-hour forecast for the project area will be monitored. If a 70 percent or greater chance of rainfall is predicted within 72 hours of construction activity, all activities will cease until no further rain is forecast. If rain exceeds ¼ inch during a 24-hour period, work will cease until no further rain is forecast. Activities can only resume after site inspection by a qualified biologist. The rainy season is defined as a frontal system that results in depositing 0.25 inches or more of precipitation in one event.</p> <p>2. <u>Night Work.</u> All construction activities will occur during daylight hours (sunrise to sunset).</p> <p>3. <u>Environmental Awareness Training.</u> Prior to the start of construction, a qualified biologist will conduct an educational training program for all construction personnel including contractors and subcontractors. The</p>	Qualified Biologist	ESNERR / CDFG	Before and During Construction

### Exhibit 3: Mitigated Negative Declaration

Mitigation	Implementing Responsibility	Monitoring Responsibility	Mitigation Timing
<p>training will include, at a minimum, a description of California red-legged frog and their habitats; an explanation of the status of this species and protection under state and Federal laws; the avoidance and minimization measures to be implemented to reduce take of these species; communication and work stoppage procedures in case a listed species is observed within the project area; and an explanation of the Environmentally Sensitive Areas and the importance of maintaining the fencing around Environmentally Sensitive Areas. A fact sheet conveying this information will be prepared and distributed to all construction personnel. Upon completion of the program, personnel will sign a form stating that they attended the program and understand all the avoidance and minimization measures.</p> <p>4. <u>Environmentally Sensitive Area Fencing</u>. Prior to the start of construction, Environmentally Sensitive Areas – defined as areas containing sensitive habitats adjacent to or within construction work areas for which physical disturbance is not allowed – will be clearly delineated using high visibility orange fencing. Construction work areas include the active construction site and all areas providing support for the proposed project, including areas used for vehicle parking, equipment and material storage and staging, access roads, etc. The fencing will remain in place while construction activities are ongoing, and will be regularly inspected and fully maintained at all times. The final project plans will depict all locations where Environmentally Sensitive Area fencing will be installed and will provide installation specifications. The bid solicitation package special provisions will clearly describe acceptable fencing material and prohibited construction-related activities including vehicle operation, material and equipment storage, access roads and other surface-disturbing activities within Environmentally Sensitive Areas. In addition, hydrological features (i.e., topographic depressions, drainage ditches, culverts, etc.) outside of the proposed project footprint will not be manipulated (i.e., re-routed, dredged, filled, graded, etc.). This will avoid potential effects on wetlands and waters outside of the proposed project footprint that are hydrologically connected to aquatic features within the proposed project footprint.</p> <p>5. <u>Wildlife Exclusion Fencing</u>. Prior to the start of construction, Wildlife Exclusion Fencing (WEF) shall be installed along the access road where it passes by guzzler 15 and along the south border of the staging area located east of the levee. The exact length and location, fencing materials, installation specifications, and monitoring and repair criteria shall be approved by USFWS and CDFG prior to start of construction. In general, the fencing will be buried to a depth of 6 inches, will be a minimum of 3.3 feet tall following installation, and will include a barrier lip designed to prevent species, such as California red-legged frog, from climbing over. WEF specifications shall be provided on the final project plans. WEF shall remain in place throughout the duration of</p>			

### Exhibit 3: Mitigated Negative Declaration

Mitigation	Implementing Responsibility	Monitoring Responsibility	Mitigation Timing
<p>construction and shall be regularly inspected and fully maintained. Repairs to the WEF shall be made within 24 hours of discovery. Upon completion of the proposed project, the WEF shall be completely removed, the area cleaned of debris and trash, and returned to natural conditions.</p> <p>6. <u>Burrow Avoidance</u>. Small mammal burrows will be avoided to the maximum extent possible during installation of the exclusion fencing. Where burrows cannot be avoided, they will be hand excavated by the biologist prior to construction activities.</p> <p>7. <u>Access and Staging</u>. Vehicles transiting to and from the proposed project site will be confined to existing roadways to minimize disturbance of upland habitat. Prior to movement of a heavy construction equipment into the construction area, a USFWS-approved biologist will make sure the route is clear of amphibians. Staging of vehicles and equipment will be confined to a predetermined area. The staging area will be clearly marked on construction drawings and biologists will supervise the installation of orange barrier fencing separating the staging area from adjacent Environmentally Sensitive Areas. Vehicle speeds will not exceed 15 miles per hour to avoid special-status species that may be on or traversing the access road.</p> <p>8. <u>Biological Monitoring</u>. A qualified biologist will be present at all times during construction near frog-sensitive areas, including fence installation (see Mitigation Measure BIO-2). If a special-status amphibian species is encountered during excavation, or any proposed project activities that could potentially harm the species, activities will stop immediately until it moves from the construction area of its own accord and USFWS and CDFG are contacted. Project activities would only resume after authorization from USFWS or CDFG is provided. All special-status species sightings will be documented by the monitoring biologist and submitted to the CNDDDB.</p> <p>9. <u>Daily Inspection of Trenches and Fences</u>. Any open trenches located within 100-feet of guzzlers 15 and 17 will be covered or fully surrounded by silt fences at the end of each work day to prevent accidental entrapment of special-status amphibians. Trenches will be inspected daily prior to construction to ensure that no animals are trapped and that fences are working properly.</p> <p>10. <u>Restoration of Disturbed Habitat</u>. If suitable upland or wetland habitat is disturbed or removed, the project proponent will restore the suitable habitat back to its original value by covering bare areas with mulch and revegetating all cleared areas with wetland species similar to those currently found in the proposed project area.</p>			

### Exhibit 3: Mitigated Negative Declaration

Mitigation	Implementing Responsibility	Monitoring Responsibility	Mitigation Timing
<b>V. CULTURAL RESOURCES</b>			
<b>Mitigation Measure CUL-1:</b> An archaeological monitor shall be retained to observe any mechanical excavation below the grade of the existing levee, and/or at the proposed staging area. The monitor would be responsible for identifying and retrieving any prehistoric archaeological materials uncovered for analysis, as appropriate.	Qualified Archaeologist	ESNERR / CDFG	During Construction

# INITIAL STUDY AND DRAFT MITIGATED NEGATIVE DECLARATION

*pursuant to the California Environmental Quality Act, as amended*

## Whistlestop Levee Repair and Public Access Improvement Project

**PREPARED FOR:**

California Department of Fish and Game  
1234 East Shaw Avenue  
Fresno, California 93710  
(559) 243-4005

**PREPARED BY:**

Vinnedge Environmental Consulting  
1800 Grant Street  
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in association with

Lux Environmental Consulting, LLC

**March 2012**

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**Draft Initial Study Checklist** (pursuant to the California Environmental Quality Act)

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## APPENDICES

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Appendix A. Special-Status Plant Species and Wildlife Species with Potential to Occur in the Whistlestop Levee Repair Project Area, Monterey County
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**Whistlestop Levee Repair and Public Access Improvement Project**

**Draft Initial Study Checklist** (pursuant to the California Environmental Quality Act)

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## ACRONYMS AND ABBREVIATIONS

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APE – area of potential effect	FR – Federal Register
BMP – best management practice	GHG – greenhouse gases
CARB - California Air Resources Board	HAPC – Habitat Areas of Particular Concern
CDFG – California Department of Fish and Game	HFC – hydrofluorocarbons
CEQA – California Environmental Quality Act	MBTA – Migratory Bird Treaty Act
CESA – California Endangered Species Act	MBUAPCD - Monterey Bay Unified Air Pollution Control District
CFR – Code of Federal Regulations	mg/L – milligrams per liter
CH <sub>4</sub> – methane	MLW – mean low water
CNDDB – California Natural Diversity Database	MLLW – mean lower low water
CO <sub>2</sub> – carbon dioxide	MW – moment magnitude
CO <sub>2</sub> E – carbon dioxide equivalents	MMPA – Marine Mammal Protection Act
CRHR – California Register of Historical Resources	MSA – Magnuson-Stevens Fishery Conservation and Management Act
CWA – Clean Water Act	MTL – mean tide line
dB - decibel	NAHC - Native American Heritage Commission
dba - decibels (A-weighted)	NAVD88 – North American Vertical Datum of 1988
DO – dissolved oxygen	NCCAB – North Central Coast Air Basin
DPS – distinct population segment	NEPA – National Environmental Policy Act
DTSC – California Department of Toxic Substance Control	NF <sub>3</sub> – nitrogen trifluoride
EFH – Essential Fish Habitat	NHPA – National Historic Preservation Act
EIR – Environmental Impact Report	N <sub>2</sub> O – nitrous oxide
EPA – Environmental Protection Agency	NMFS – National Marine Fisheries Services
ESA – Federal Endangered Species Act	NOAA RC – National Oceanic and Atmospheric Administration Restoration Center
ESF – Elkhorn Slough Foundation	NOx – nitrogen oxide
ESNERR – Elkhorn Slough National Estuarine Research Reserve	NRHP – National Register of Historic Places
ESU – Evolutionarily Significant Unit	NWIC – Northwest Information Center
FGC – California Fish and Game Code	OSHA – Occupational Health and Safety Administration
FHWG – Fisheries Hydroacoustic Working Group	
FMP – Fisheries Management Plan	

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### **Whistlestop Levee Repair and Public Access Improvement Project**

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PFC – perfluorocarbons

PM10 - particulate matter less than 10 microns in diameter

ppt – parts per thousand

ROG – reactive organic gases

RWQCB – Regional Water Quality Control Board

SF<sub>6</sub> – sulfur hexafluoride

SEL – sound exposure level

SHPO – State Historic Preservation Office

SWRCB – State Water Resources Control Board

UPRR – Union Pacific Railroad

USACE – U.S. Army Corps of Engineers

USGS – U.S. Geological Survey

USFWS – U.S. Fish and Wildlife Service

VOC – volatile organic compound

WEF – Wildlife Exclusion Fencing

**INITIAL STUDY / MITIGATED NEGATIVE DECLARATION**  
*pursuant to the California Environmental Quality Act, as amended*

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**A. PROJECT DESCRIPTION**

1. **Project title:** Whistlestop Levee Repair and Public Access Improvement Project
2. **Lead agency name & address:** California Department of Fish and Game
3. **Contact person & phone number:** David Feliz, California Department of Fish and Game
4. **Project location:** Whistlestop Lagoon, about 3.5 miles east of Moss Landing in Elkhorn Slough, Monterey County, California
5. **Project sponsor's name & address:** Elkhorn Slough National Estuarine Research Reserve
6. **Applicable Land Use plan designation:** North Coast Coastal Land Use Plan
7. **Zoning:** Resource Conservation (Coastal Zone)
8. **Description of the Project:**

**BACKGROUND**

Whistlestop Lagoon is a 14.2-acre tidal environment located on the east side of Elkhorn Slough, an estuary in Monterey County, California, and in the northern portion of the Parsons Slough Complex (Figures 1 and 2). It is a former salt marsh that was diked and subsequently subsided before tidal flow was returned in the 1980s. Today, this area is a subtidal lagoon with a narrow fringing salt marsh that sits behind a levee embankment with three buried culverts. The lagoon provides habitat for benthic invertebrates, fish (including halibut, leopard sharks, and bat rays), egrets, and a variety of sea birds.

The Whistlestop Levee Repair and Public Access Improvement Project (proposed project) would include two key elements: (1) replacing the existing culverts located in the Whistlestop levee with an approximately 20-foot long bridge to improve water quality, fish passage, and trail safety for recreational users in the area; and (2) relocating an existing dock that extends off the Whistlestop levee to deeper water to reduce disturbance to mudflat habitat at low tides (Figure 3). The proposed project is supported by the National Oceanic and Atmospheric Administration Restoration Center (NOAA RC) through the American Reinvestment and Recovery Act fund. The NOAA RC will be conducting a separate review under the National Environmental Policy Act (NEPA) for the proposed project. Construction and operation of the proposed project, as described below, are the subject of evaluation in this California Environmental Quality Act (CEQA) document.

**PURPOSE AND NEED OF THE PROPOSED PROJECT**

**Whistlestop Levee and Culverts**

The existing Whistlestop levee is approximately 325 feet long and has an elevation of about 7 feet (all elevations are in North American Vertical Datum of 1988 [NAVD88]). There are currently three culverts in the Whistlestop levee: a 36-inch diameter central culvert and two smaller, 24-inch diameter culverts located to the west and east of the larger culvert (Figure 3). When functioning as designed, these culverts allow a maximum tidal range of about 50 centimeters inside the lagoon, or 20% of Elkhorn Slough's full tidal range. At this capacity, the

**Whistlestop Levee Repair and Public Access Improvement Project**

**Draft Initial Study Checklist** (pursuant to the California Environmental Quality Act)

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culverts provide sufficient flushing to maintain generally acceptable water quality conditions and access to the lagoon by large fish; however, the culverts are not currently functioning as designed. In July 2010, the largest, central culvert broke inside the levee (Figure 4a), and sinkholes have been forming over this culvert for several years. The smaller 24-inch culvert on the east side of the central culvert has also silted in, and sinkholes have begun to form on the levee in the general vicinity of the westernmost 24-inch culvert (Figure 4b). In addition, the stability of the levee may be somewhat compromised due to differential sinking. The large difference in water surface elevation on either side of the levee during extreme high tide events has resulted in overtopping and continued erosion of the structure (Figure 4c).

As an emergency measure to slow erosion of the levee and stop creation of new, hazardous sinkholes, the 36-inch culvert was capped in mid-July 2010 by Elkhorn Slough National Estuarine Research Reserve (ESNERR) staff. Capping of the large culvert led to additional tidal muting, a substantial reduction in the tidal range (currently only 20 centimeters), and a significant decrease in tidal flow into the lagoon, which has resulted in a pronounced drop in dissolved oxygen (DO) concentrations and episodes of anoxia. As a result of anoxic conditions and a fish kill, the cap on this culvert was removed in August 2011.

In addition to the ecologic impacts noted above, the failing Whistlestop levee poses a potential threat to the health and safety of visitors and ESNERR staff. ESNERR staff use the levee as an access road for habitat maintenance restoration projects and educational classes. The levee also serves as a public trail to the popular Hummingbird Island and the main channel of Parsons Slough, and provides an access point for telecommunications firms to reach a regional buried fiber optic cable conduit.

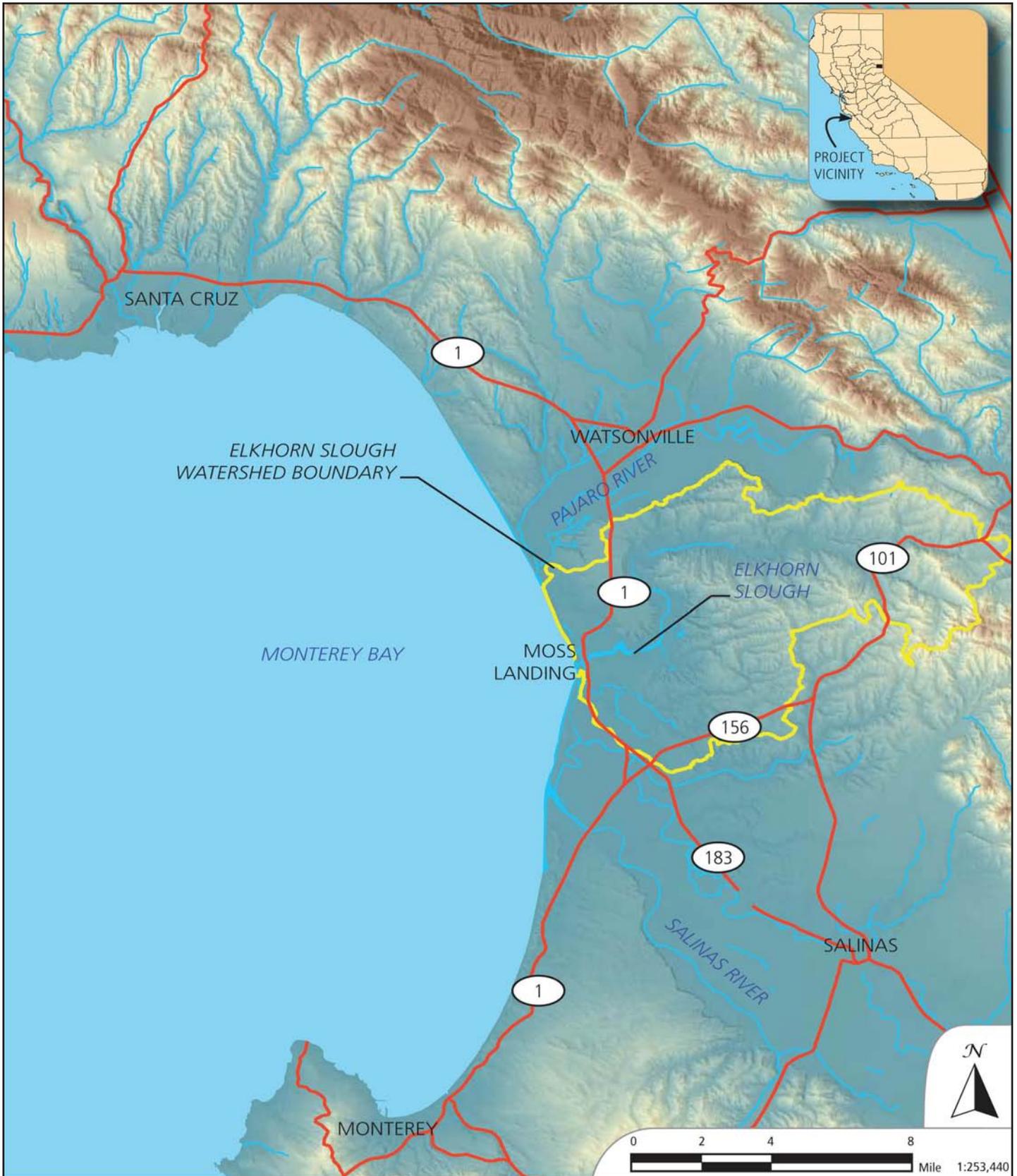
**Dock Relocation and Extension**

An existing 50-foot floating dock currently extends off the southeast corner of the Whistlestop levee embankment (Figure 3). This dock is used by ESNERR staff for water access to Parsons Slough. The dock is currently built on a shallow mudflat at an elevation of between mean low water (MLW) and the mean tide line (MTL), so most vessels accessing the dock disturb existing mudflat habitat in the area except at the highest of tides. Relocating and extending the dock to a deeper, subtidal channel, at or below mean lower low water (MLLW), would reduce disturbance to mudflat habitat at low tides when vessels access the dock.

**PROJECT DESCRIPTION**

As noted above, the proposed project would include two key elements: (1) replacing the existing culverts located in the Whistlestop levee with a 15 to 20-foot long bridge; and (2) relocating an existing dock that extends off the Whistlestop levee to deeper water. Both of these components are described in more detail below, along with proposed maintenance activities and monitoring measures.

Exhibit 3: Mitigated Negative Declaration



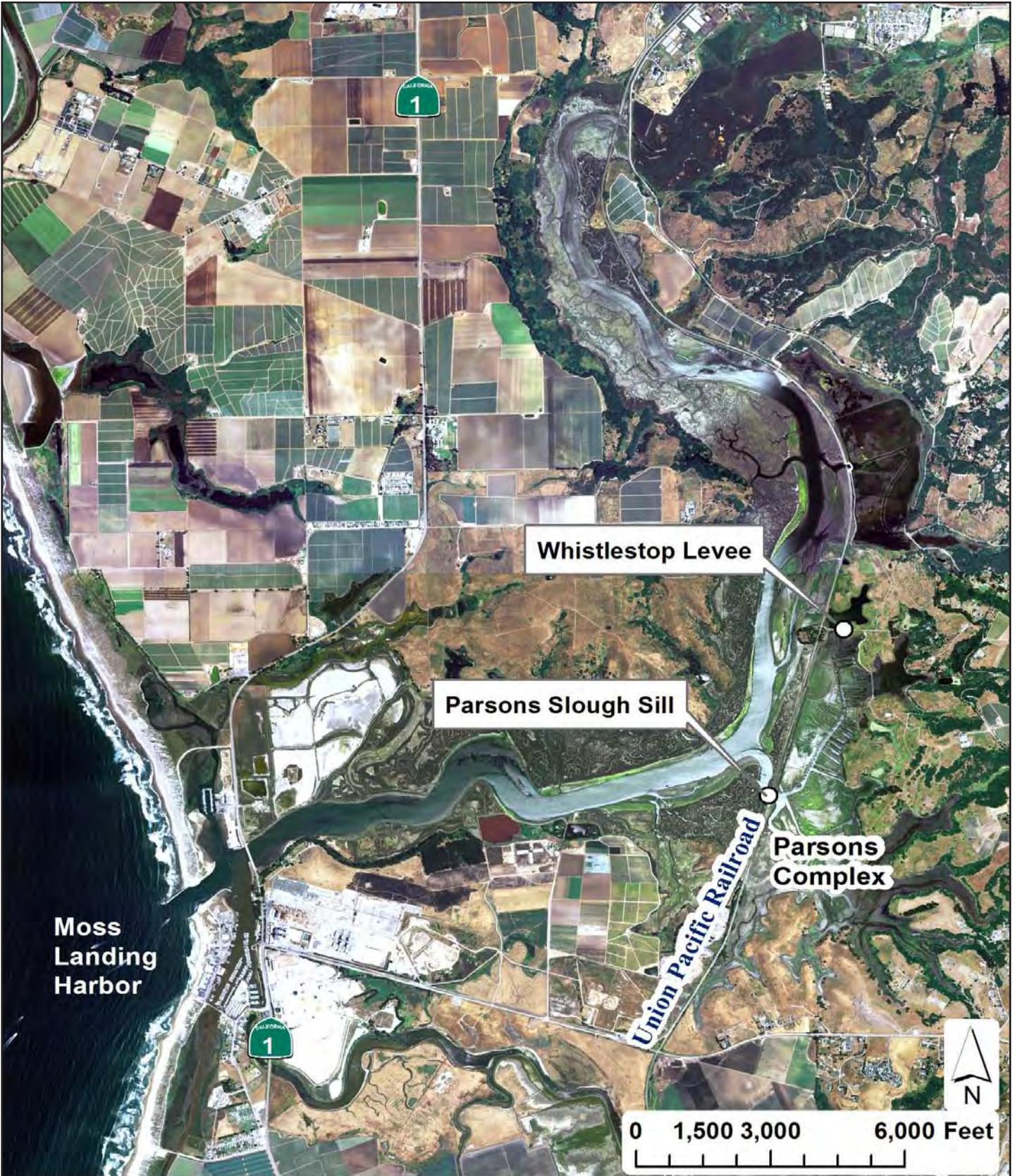
Title/Notes:

Project Vicinity

Figure:

1

## Exhibit 3: Mitigated Negative Declaration



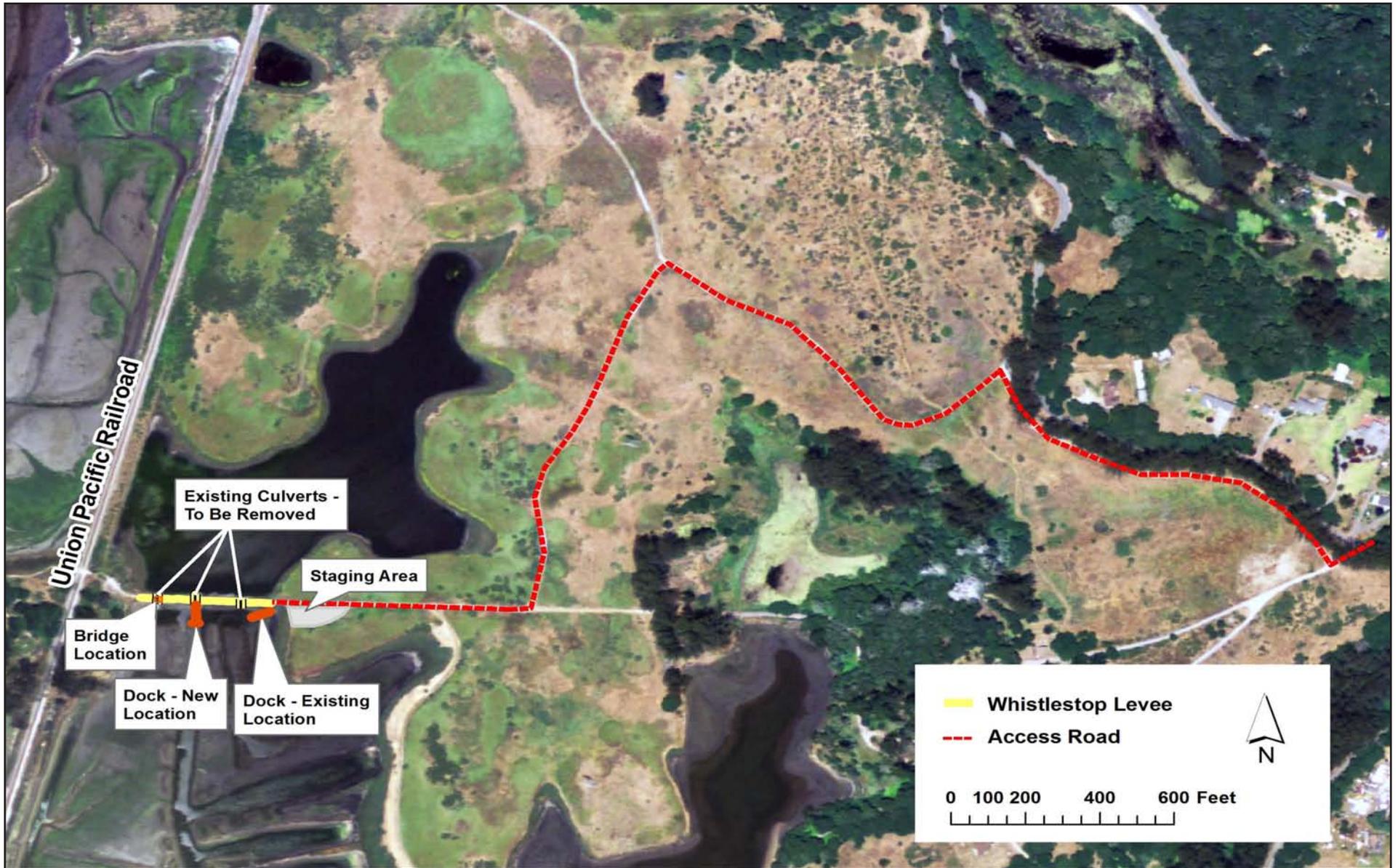
Title/Notes:

Project Area

Figure:

2

## Exhibit 3: Mitigated Negative Declaration



Title/Notes:

Proposed Project Components and Existing Infrastructure

Figure:

3

## Exhibit 3: Mitigated Negative Declaration



Title/Notes:

**Whistlestop Lagoon Levee — Existing Conditions**

Deformed 36-inch diameter culvert, looking west across Whistlestop levee. Cones mark the location of a large sink hole.

Figure:

**4a**

## Exhibit 3: Mitigated Negative Declaration

A



B



Title/Notes:

**Whistlestop Lagoon Levee — Existing Conditions**

Recently formed sinkholes on Whistlestop levee, November 2010. A. at 36-inch diameter culvert, and B. near the 24-inch diameter culvert.

Figure:

**4b**

## Exhibit 3: Mitigated Negative Declaration

A



B



Title/Notes:

### Whistlestop Lagoon Levee — Existing Conditions

Whistlestop levee; A. flooded during a high tide event, and B. showing the deformed retaining wall on its south side.

Figure:

4c

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**Whistlestop Levee Repair and Public Access Improvement Project****Draft Initial Study Checklist** (pursuant to the California Environmental Quality Act)

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**Whistlestop Levee and Bridge**

The proposed project would remove up to three failed culverts in the Whistlestop levee and replace a section of the 325-foot long levee with a 15 to 20-foot long bridge (Figure 5). The new bridge would be located on the western side of the levee, outside of the primary deep-water channel connecting Whistlestop Lagoon to Parsons Slough, to minimize the potential for tidal erosion during ebb tides. To install the bridge, an approximately 20-foot section of the existing levee would be breached, and earth fill removed. The gap would be spanned with either a bridge constructed out of a concrete box culvert, or fabricated out of steel piles, beams and wood decking. The remaining levee edges under the bridge and resulting open channel surface would be armored with rock to protect against tidal scour and erosion.

The opening of tidal exchange under the bridge would improve water quality in Whistlestop Lagoon by increasing nutrient and energy exchange with the rest of the estuary. This opening in the levee would also improve passage for fish and wildlife between Whistlestop Lagoon and the adjacent estuarine habitat (Parsons Complex). Rock placed under the bridge would provide additional hard substrate habitat to support native oysters, and would minimize the potential for tidal scour and erosion. Placement of a bridge at this location would improve safety of ESNERR staff and the public when accessing Hummingbird Island on the west side of the levee. Finally, the proposed improvements to the levee would minimize routine maintenance activities currently required to ensure the culverts function correctly.

Hydrological analysis by the engineering firm URS indicate that breaching a 20-foot section of the 325-foot long levee and installing a short-span bridge would not significantly exacerbate tidal erosion in other parts of Elkhorn Slough. However, if post-construction hydrologic and engineering analysis determine that the removal of a portion of the levee is having an unanticipated adverse effect on the larger estuary (i.e., the tidal prism of Whistlestop Lagoon is increased significantly, contributing to high ebb tide current velocities and tidal scour and sediment export from Elkhorn Slough), ESNERR may choose to construct an "embankment" or "sill" under the bridge. If implemented, the final elevation of the channel under the bridge with the sill would be up to 3 feet above MLLW. At this elevation (the most restrictive channel height considered in preliminary analysis), the opening in the levee would provide more than a 10-fold increase in tidal flushing compared to existing conditions. Where appropriate, this Initial Study considers both a 'bridge only option' and a 'bridge with sill option' to provide a comprehensive assessment of the potential effects of the proposed project.

If the bridge only option is constructed (i.e., no sill or embankment is placed under the bridge), the maximum anticipated disturbance footprint at the levee, including rock armor, bridge, and disturbance to the side slopes of the levee would be about 20,000 square feet (0.46 acre). Up to 1,400 cubic yards of fill material (primarily soil) would be used to reconstruct the levee and associated slope. An additional 50 CY of rock would be used to armor the area in and around the bridge and levee and to provide a base for construction of the bridge. Up to 300 cubic yards of rock and earth fill would be used to construct a sill under the bridge, if it is determined to be necessary.

**Dock Relocation and Extension**

Under the proposed project, the existing 50-foot dock adjacent to the Whistlestop levee would be relocated to the central portion of the levee (Figure 3). The dock would be extended to include a 35-foot "T" section at its seaward end. Most of the dock would be floating, but the first 15-foot section of the dock would be supported by pilings placed in subtidal substrate, at an elevation of approximately 6.0 feet, providing ESNERR staff with the

**Whistlestop Levee Repair and Public Access Improvement Project**

**Draft Initial Study Checklist** (pursuant to the California Environmental Quality Act)

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ability to utilize the dock at most tides without disturbing the underlying mudflat habitat. The dock would be secured with seven new posts (4x4 or 6x6 wooden timbers) driven into the channel bed. Relocation and extension of the existing dock would increase the footprint of the dock over open water and intertidal mudflat by approximately 400 square feet.

**Maintenance**

Maintenance activities at the levee would include semiannual inspection and replacement of bridge parts and dislodged rock armor under the bridge and around the levee, as necessary. Design and construction measures, such as the use of deep bearing piles or screw anchors, would be taken to minimize the risk of settlement of the structure over time. If a fabricated bridge is constructed, the bridge could be raised if it settles, or as sea level rises, allowing ESNERR staff to place additional fill below it, or raise the abutment height as necessary, after appropriate authorization from regulatory agencies. If a culvert is constructed, fill could be placed on top of the culvert in the event of sea level rise, also after appropriate authorization from regulatory agencies.

Dock maintenance would include semiannual inspection of dock parts (such as hinges, boards, and floats) and repair or replacement of damaged parts as needed.

**Monitoring**

Water quality and other ecologic data have been collected at Whistlestop Lagoon for the past 20 years, punctuated by high frequency measurements using automated water quality instruments. These datasets are managed by ESNERR Research Program staff, and would continue to be collected and managed in the future. To specifically evaluate the effectiveness of the levee repair portion of the proposed project, water quality and nutrient sampling would continue on a monthly basis for at least 2 years following implementation of the proposed project.

Oyster recruitment, survival and growth on standard settlement plates have been monitored at a distance between 10 and 200 meters from the culverts at Whistlestop Lagoon since 2007. This standard monitoring would continue to assess whether implementation of the proposed project has measurable effects on oysters.

No specific monitoring of the relocated dock would be implemented.

**PROJECT CONSTRUCTION ACTIVITIES AND SCHEDULE**

The following describe the construction methodology, sequencing, and schedule for the proposed project.

**Construction Access and Staging**

The proposed project would be constructed using equipment located in upland areas on the western and/or eastern edges of the existing levee, and all equipment and materials would be staged in a previously disturbed upland area to the east of the levee, adjacent to the access road (Figure 3). The area needed for staging the proposed project would be approximately 1,000 square feet. A crane or excavator would be set up on the trail adjacent to the levee. Some materials, such as rock for erosion control, may be kept at an upland storage area just inside the ESNERR boundary, near the access to Elkhorn Road, if necessary. Loaders would be used to drive material from the storage area to the proposed project site, a 3,000-foot distance, along existing ESNERR access roads and trails. To minimize the potential for non-native invasive species to be introduced to Elkhorn Slough, all equipment would be cleaned before entering ESNERR property.

**Whistlestop Levee Repair and Public Access Improvement Project**

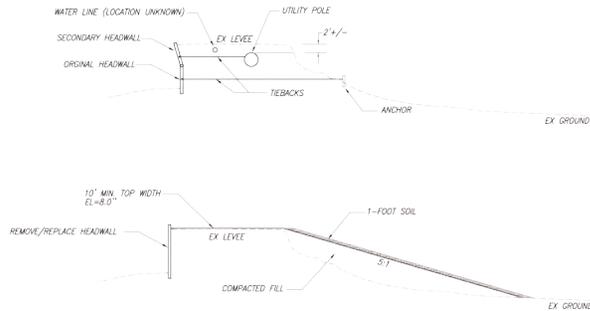
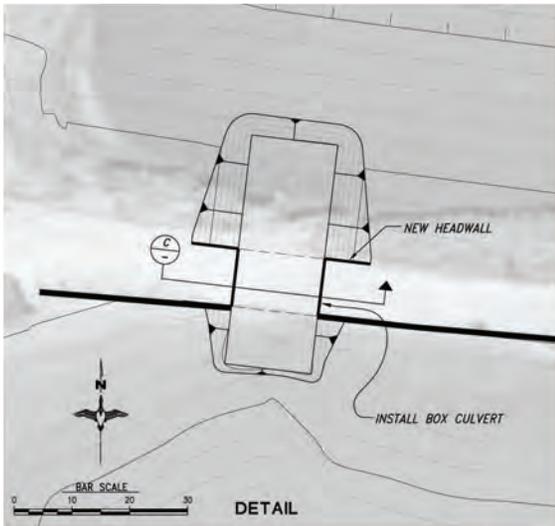
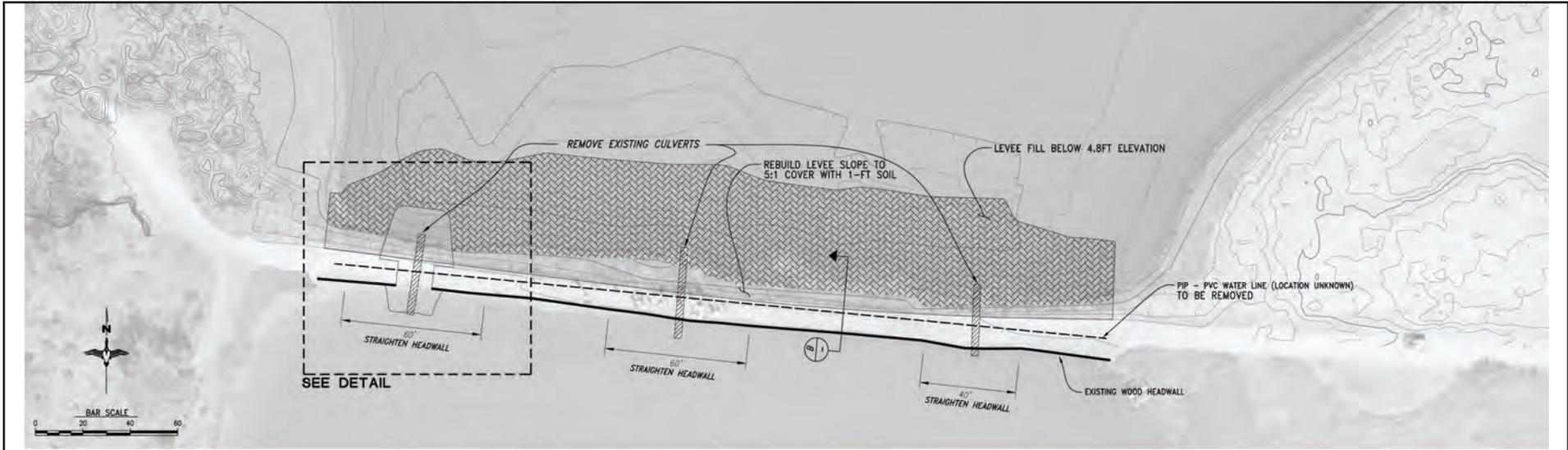
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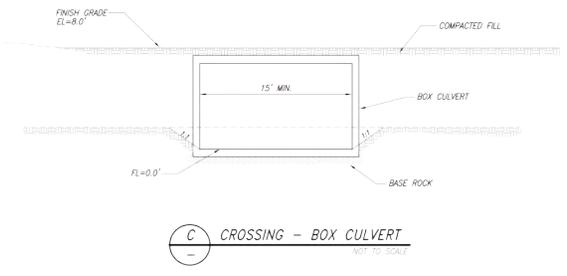
Access to the proposed project construction area would be provided on the existing dirt road that extends from Elkhorn Road to the levee.

## Exhibit 3: Mitigated Negative Declaration

# Exhibit 3: Mitigated Negative Declaration



**TYPICAL SECTION IMPROVED LEVEE**  
NOT TO SCALE



**CROSSING - BOX CULVERT**  
NOT TO SCALE

- NOTES:**
- 1.) REMOVE EXISTING CULVERTS
  - 2.) INSTALL BOX CULVERT
  - 3.) REBUILD LEVEE SLOPE TO 3:1 @ 90% ADD 1-FOOT SOIL

UNAUTHORIZED CHANGES & USES  
THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES MUST BE IN WRITING AND MUST BE APPROVED BY THE ENGINEER.

**SURVEY DATUM**  
The horizontal datum for this survey is the California Coordinate System of 1983, Zone 4 (8404), NAD 83, Epoch Date 2007.00 in U.S. Survey Feet. The vertical datum for this survey is the North American Vertical Datum of 1988 (NAVD88) computed using GEOID03. Both datums were derived from GPS observations collected on October 29, 2009. "Sold" observations were fixed to local area National Geodetic Survey (NGS) horizontal and vertical control points, respectively.

REV. NO.	DESCRIPTION	REVISIONS	DATE	APPROVED

**PRELIMINARY**

**DUCKS UNLIMITED INC.**  
WESTERN REGIONAL OFFICE

PROJECT NO.: US-CA-485-2  
**WHISTLESTOP LAGOON LEVEE REPAIR**  
ALT 1A - BOX CULVERT

DESIGNED BY: [ ]  
DRAWN BY: [ ]  
CHECKED BY: [ ]  
APPROVED BY: [ ]

DATE: 02.09.12

Title/Notes:

**Whistlestop Levee: Bridge Replacement Detail (Box Culvert)**

Figure:

**5**

## Exhibit 3: Mitigated Negative Declaration

**Whistlestop Levee Repair and Public Access Improvement Project**

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**Whistlestop Levee and Bridge**

Levee improvements would include removal of two or three of the existing culverts, depending on funding. At a minimum, the westernmost culvert and the largest, central culvert would be removed. If funding is not available for the removal of the easternmost culvert, it would be abandoned in place (this culvert is already silted over). The proposed project would also include removing approximately 20 linear feet of the western portion of the existing earthen levee (Figure 5). The resulting gap would be spanned by a bridge constructed out of either a 15-foot by 9-foot concrete box culvert, or fabricated out of steel piles, beams and wood decking. The type of bridge installed would be based on which one is more economical at the time the contract is bid. Both bridge options would have the same approximate project footprint.

Anticipated construction sequencing of the levee improvement component of the proposed project would be as follows:

- Construction contractor mobilizes and prepares the staging area
- Levee strengthened through the removal and replacement of inferior earthfill
- Failed culverts removed (central culvert would be removed after the cofferdam has been disassembled under the box culvert option)
- Timber headwall repaired in the areas where it is compromised
- Cofferdam installed around bridge site (box culvert option only)
- Levee section breached, and earth material from the levee at the bridge site removed
- Piles and foundation materials placed at the levee to support the bridge, if required
- Fabricated bridge or box culvert installed
- Wing walls installed
- Cofferdam removed (box culvert option only)
- Spur channels in Parsons Slough and Whistlestop Lagoon adjacent to the bridge excavated
- Rock riprap placed on the exposed portions of the levee under the bridge, and in the new, open channel on either side of the levee breach (i.e., in Parsons Slough and Whistlestop Lagoon)
- Temporary construction materials and facilities removed, and areas temporarily disturbed returned to pre-construction conditions

If a fabricated bridge is installed, the levee in the vicinity of the bridge would be excavated to about 1.5 foot below final elevation to allow for placement of about 1.5 foot of rock riprap under the bridge. After the levee has been breached, the fabricated bridge foundation would be constructed with footings supported by four piles which would be drilled or driven to approximate grade using a vibratory hammer. In anticipation of sea level rising at an increased rate during the next 40 years, the surface of the bridge would be installed approximately 1.0 foot higher than the existing height of the levee. The bridge would be bolted to the footings and lifting points at the four corners of the bridge to allow the structure to be raised with portable hydraulic jacks if it is necessary in the future. The bridge decking would consist of pressure treated Douglas fir or redwood. The metal would be unpainted and built with sufficient thickness to allow for rusting without compromising its structural integrity for the 40-year lifespan of the proposed project.

If a box culvert is used to construct the bridge, the levee at the bridge would be excavated to approximately 3-feet below final elevation to allow for the placement of piles and foundation rock to support the structure. The box culvert would be placed on top of the piles and foundation rock, the headwall repaired and the wing walls

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installed, and the levee backfilled. The levee would not be raised with this option since, in the event of sea level rise, fill can be placed over the top of the culvert.

Regardless of design, the elevation of the ground surface under the bridge after construction is complete would be 0-feet NAVD88, which would be 1 foot below adjacent elevations in Parsons Slough and 2 feet below adjacent elevations in Whistlestop Lagoon. This depth would allow a channel to form north and south of the bridge and would allow for colonization of the area by native oysters, without compromising water flow through the site. A small area north and south of the bridge would be excavated to expedite formation of this channel.

The remaining portions of the north side of the levee would be rebuilt at a slope of 5:1 (Figure 5). Rock riprap would be placed under the bridge (interior walls would be vertical and constructed of wood or steel), and in the new, open channels in Parsons Slough and Whistlestop Lagoon. Approximately 180 feet of headwall on the south side of the levee in the general vicinity of the existing culverts would be straightened to further reinforce the levee (Figure 5). Culverts would be removed by excavating through the levee to the culvert, and backfilling with material on site after the culverts have been removed and the timber headwall repaired. Once construction is complete, construction equipment would be removed and all temporarily disturbed areas returned to preconstruction conditions.

As noted above, if a box culvert is utilized to construct the bridge, the area around the bridge site would be dewatered using a sheetpile cofferdam, which would be installed using a vibratory hammer. Water removed from the cofferdam would be pumped to a silt curtain in Whistlestop Lagoon to minimize construction-related turbidity. Water connectivity between Parsons Slough and Whistlestop Lagoon after the cofferdam is in place would be maintained through the existing central culvert, which would be temporarily repaired for this purpose. The cofferdam would be in place for approximately seven days. For the components of the project that would occur in-water after the cofferdam is removed (i.e., channel excavation and placement of riprap), in-water construction would occur during slack or rising tide to ensure that construction-related turbidity in Parsons Slough would be minimized (i.e., sediment would either settle in place or be forced into Whistlestop Lagoon, where it would dissipate). Standard best management practices (BMPs) to minimize erosion, such as installation of silt fences, fiber rolls along the toes of slopes and designated staging area, and erosion control netting (such as jute or coir) on slope areas, would also be utilized during construction.

If a pre-fabricated bridge is utilized, dewatering of the site would not be necessary. Under this option, all in-water construction would occur during slack or rising tide and standard BMPs would be implemented to minimize the potential for erosion from work areas, as described above.

If post-construction hydrologic and engineering analyses determine a sill under the bridge is necessary to reduce tidal scour or sediment export from Parsons Slough, ESNERR would stage and mobilize necessary equipment in the same locations and sequence as described above. The sill would be constructed using equipment staged from the Whistlestop levee, after the bridge and rock rip-rap have been temporarily removed and stored in the upland staging area. As described above, all in-water work would be completed during slack tides and downstream water quality would be monitored during construction. Areas temporarily disturbed during construction would be returned to preconstruction conditions after the bridge and rock rip-rap areas under the bridge have been replaced.

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**Dock Relocation and Extension**

The existing floating dock used by ESNERR staff for water access to Parsons Slough would be moved to its new location and anchored in place with up to seven new posts installed in the channel bed using an impact or vibratory hammer. Construction sequencing of the dock relocation and replacement component of the proposed project would be as follows:

- Existing posts pulled
- Dock disassembled and secured to the Whistlestop levee
- New posts driven into the bed along the deeper channel
- Dock secured to posts as they are installed.

Similar to the levee and bridge component of the proposed project, all in-water construction would occur during slack or rising tide to ensure that construction-related turbidity in Parson Slough would be minimized, and standard BMPs would be implemented to minimize the potential for erosion from work areas. Pilings would be installed at low tide; however, in-water pile driving would be required for the two to four pilings placed below MLLW.

**Schedule**

Proposed project construction would be initiated between June and August of 2012. It is anticipated construction would last between 2 and 3 months.

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**9. Setting and surrounding land uses:**

The proposed project is located in the greater Elkhorn Slough estuary, situated 90 miles south of San Francisco and 20 miles north of Monterey. Elkhorn Slough is a shallow estuary extending from Monterey Bay at Moss Landing Harbor inland (east) for approximately 4 miles and then north for another 3.1 miles. Elkhorn Slough has an average depth of 4.6 feet, and is deepest at the Highway 1 bridge overcrossing where it measures 25 feet deep at MLLW. The main channel in Elkhorn Slough becomes narrower and shallower as it winds inland. Like many estuaries, Elkhorn Slough consists of a complex mix of channels, mudflats, marshes, and small tidal creeks.

Surrounding Elkhorn Slough are the hilly uplands and marine terraces that lie between the Pajaro and Salinas Valleys. The upland areas drain into Elkhorn Slough through Carneros Creek at the head of the estuary and through numerous small ephemeral creeks. Land use in these upland areas consist of agriculture (primarily strawberries and other row crops), cattle grazing, rural residences and the small town of Las Lomas.

Whistlestop Lagoon is located 3 miles northeast of Moss Landing Harbor. Upland habitats surround the mudflats, open water and marsh areas that characterize the immediate project setting, most of which are generally undeveloped as the ESNERR-managed area consists of 1,694 acres that are protected for long-term research, water quality monitoring, education, and coastal stewardship (ESNERR 2006).

North County Monterey High School and Elkhorn Elementary School are located approximately 2.2 miles southeast of the proposed project location.

The project area (or project study area) considered in this Initial Study includes all locations that could be directly or indirectly impacted by project activities, including the Parsons Slough Complex, Whistlestop Lagoon and levee and surrounding upland habitat (Figure 2). The project footprint includes the area subject to direct, construction-related impacts, which includes Whistlestop levee, the new dock location, staging areas and access roads as depicted in Figure 3.

**Other public agencies whose approval may be required:**

The Elkhorn Slough Estuary is managed by a partnership of state, Federal, and non-profit partners, and includes three State Marine Reserves, a State Ecological Reserve and Wildlife Management Area, a National Estuarine Research Reserve, and is part of a National Marine Sanctuary.

Approval from the following Federal agencies may be required to implement the proposed project:

- U.S. Army Corps of Engineers (USACE): USACE would require a Clean Water Act (CWA) Section 404 permit for the placement of dredge or fill material into waters of the United States.
- National Marine Fisheries Service (NMFS): Compliance with the Federal Endangered Species Act (ESA) would be required for potential effects on anadromous fish species federally-listed as threatened or endangered. NMFS would also review the proposed project for potential effects on Essential Fish Habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) of 1979, as amended, and marine mammals protected under the Marine Mammal Protection Act (MMPA) of 1972, as amended.
- U.S. Fish and Wildlife Service (USFWS): Compliance with the ESA would be required for potential effects on wildlife and resident aquatic species federally-listed as threatened or endangered. USFWS would also review the proposed project for compliance with the MMPA.
- U.S. Environmental Protection Agency (EPA): The EPA has oversight responsibility for all CWA permits.

Approval from the following state and local agencies may be required to implement the proposed project:

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- Central Coast Regional Water Quality Control Board (RWQCB). Several permits may be required from the RWQCB, including a Storm Water General Permit for Construction Activities, in accordance with Section 402 of the CWA; Water Quality Certification, in accordance with Section 401 of the CWA; and Waste Discharge Requirements, in accordance with the Porter-Cologne Water Quality Control Act.
- California Department of Fish and Game (CDFG). A Lake or Streambed Alteration Agreement, in accordance with Section 1602 of the California Fish and Game Code would be required for work in, under or over a stream or lakebed. CDFG is also a landowner and co-manager of ESNERR. CDFG is acting as the State lead agency under CEQA.
- County of Monterey. A Coastal Development Permit for development activities within California’s coastal zone may be required by the County. The County will also review construction drawings to consider a Design Review and Grading Permit.

Other public agencies with jurisdiction over the proposed project may include:

- California State Historic Preservation Office (SHPO): Section 106 of the National Historic Preservation Act (NHPA), as codified in 36 Code of Federal Regulations (CFR) 800.4, requires Federal agencies to consult with SHPO for resources that are eligible for listing as historic resources.

**B. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED**

The environmental factors checked below would be potentially affected by the proposed project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Aesthetics                      | <input type="checkbox"/> Agriculture Resources                | <input type="checkbox"/> Air Quality            |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources        | <input type="checkbox"/> Geology / Soils        |
| <input type="checkbox"/> Hazards/Hazardous Materials     | <input checked="" type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning    |
| <input type="checkbox"/> Mineral Resources               | <input type="checkbox"/> Noise                                | <input type="checkbox"/> Population / Housing   |
| <input type="checkbox"/> Public Services                 | <input type="checkbox"/> Recreation                           | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities / Service Systems     | <input type="checkbox"/> Mandatory Findings of Significance   |   |

Some proposed applications that are not exempt from CEQA review may have little or no potential for adverse environmental impact related to most of the topics in the Environmental Checklist; and/or potential impacts may involve only a few limited subject areas. These types of projects are generally minor in scope, located in a non-sensitive environment, and are easily identifiable and without public controversy. For the environmental issue areas where there is no potential for significant environmental impact (and not checked above), there is no potential for significant environmental impact to occur from construction, operation, or maintenance of the proposed project. This finding can be made using the project description, environmental setting, or other information as supporting evidence, which is provided in the Environmental Checklist below. For those environmental issue areas where there is potential for significant environmental impact (checked above), mitigation measures have been identified in this document that would reduce impacts to a less than significant level.

**Whistlestop Levee Repair and Public Access Improvement Project**

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**C. LEAD AGENCY DETERMINATION**

On the basis of this initial evaluation:

- I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- I find that the proposed project **MAY** have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an **earlier EIR or NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Jeffrey R. Single  
\_\_\_\_\_  
Printed name

Regional Manager  
\_\_\_\_\_  
Title

**Whistlestop Levee Repair and Public Access Improvement Project****Draft Initial Study Checklist** (pursuant to the California Environmental Quality Act)**D. EVALUATION OF ENVIRONMENTAL EFFECTS**

The Environmental Checklist and discussion that follows is based on sample questions provided in the CEQA Guidelines (Appendix G of the California Code of Regulations, Title 14, Division 6, Chapter 3), which focus on various individual concerns within 16 different broad environmental categories, such as air quality, cultural resources, land use and traffic (and arranged in alphabetical order). The Guidelines also provide specific direction and guidance for preparing responses to the Environmental Checklist. Each question in the Checklist essentially requires a “yes” or “no” reply as to whether or not the project will have a potentially significant environmental impact of a certain type, and, following a Checklist table with all of the questions in each major environmental heading, citations, information and/or discussion that supports that determination. The Checklist table provides, in addition to a clear “yes” reply and a clear “no” reply, two possible “in-between” replies, including one that is equivalent to “yes, but with changes to the project that the proponent and the Lead Agency have agreed to, *no*”, and another “no” reply that requires a greater degree of discussion, supported by citations and analysis of existing conditions, threshold(s) of significance used and project effects than required for a simple “no” reply. Each possible answer to the questions in the Checklist, and the different type of discussion required, are discussed below:

- **Potentially Significant Impact.** Checked if a discussion of the existing setting (including relevant regulations or policies pertaining to the subject) and project characteristics with regard to the environmental topic demonstrates, based on substantial evidence, supporting information, previously prepared and adopted environmental documents, and specific criteria or thresholds used to assess significance, that the project will have a potentially significant impact of the type described in the question.
- **Less Than Significant With Mitigation.** Checked if the discussion of existing conditions and specific project characteristics, also adequately supported with citations of relevant research or documents, determine that the project clearly will or is likely to have particular physical impacts that will exceed the given threshold or criteria by which significance is determined, but that with the incorporation of clearly defined

<sup>1</sup> A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

“Potentially Significant Impact” is appropriate if there is substantial evidence leading to a fair argument that an effect is significant. If there are one or more “Potentially Significant Impact” entries when the determination is made without the possibility of mitigation, then an EIR is required.

“Less Than Significant w/ Mitigation” applies where the incorporation of mitigation measures would reduce an effect from “Potentially Significant Impact” to a “Less than Significant Impact.” Mitigation measures and a brief explanation of how or whether they reduce the effect to a less than significant level is provided in the text of this report.

Earlier analyses may be used where, pursuant to tiering, Program EIR, Master EIR, or other CEQA processes, an effect has been adequately analyzed in an earlier EIR or negative declaration.

This checklist incorporates references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document includes, where appropriate, a reference to the page or pages where the statement is substantiated. A source list is attached and other sources used or individuals contacted are cited in the discussion.

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mitigation measures into the project, that the project applicant or proponent has agreed to, such impacts will be avoided or reduced to less-than-significant levels.

- Less Than Significant Impact. Checked if a more detailed discussion of existing conditions and specific project features, also citing relevant information, reports or studies, demonstrates that, while some effects may be discernible with regard to the individual environmental topic of the question, the effect would not exceed a threshold of significance which has been established by the Lead or a Responsible Agency. The discussion may note that due to the evidence that a given impact would not occur or would be less than significant, no mitigation measures are required.
- No Impact. Checked if brief statements (one or two sentences) or cited reference materials (maps, reports or studies) clearly show that the type of impact could not be reasonably expected to occur due to the specific characteristics of the project or its location (e.g. the project falls outside the nearest fault rupture zone, or is several hundred feet from a 100-year flood zone, and relevant citations are provided). The referenced sources or information may also show that the impact simply does not apply to projects like the one involved. A response to the question may also be "No Impact" with a brief explanation that the basis of adequately supported project-specific factors or general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a basic screening of the specific project).

The discussions of the replies to the Checklist questions must take account of the whole project involved in the project, including off-site as well as on-site effects, both cumulative and project-level impacts, indirect and direct effects, and construction as well as operational impacts. Except when a "No Impact" reply is indicated, the discussion of each issue must identify:

- a) the significance criteria or threshold, if any, used to evaluate each question; and
- b) the mitigation measure identified, if any, to reduce the impact to less than significance, with sufficient description to briefly explain how they reduce the effect to a less than significant level.

Earlier analyses may be used where, pursuant to the tiering, program Environmental Impact Report (EIR), or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D) of the Guidelines). In this case, a brief discussion should identify the following:

- a) **Earlier Analysis Used.** Identify and state where they are available for review.
- b) **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
- c) **Mitigation Measures.** For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

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**E. EVALUATION OF ENVIRONMENTAL IMPACTS**

**I. AESTHETICS**

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

Comments:

Whistlestop Lagoon is part of the scenic Elkhorn Slough complex, which is characterized by channels, wetlands, and surrounding open space and agriculture. Elkhorn Slough is an environmentally sensitive area with high visual quality and recreational importance. At high tide, much of the slough appears as open water surrounded by agricultural and undeveloped open space characterized by grasses and trees. At lower tides, the slough is generally characterized by mudflats and some wetland and marsh vegetation with tidal channels. Whistlestop Lagoon is somewhat unique within the estuary in that the majority (over 9 acres) of the approximate 14-acre lagoon is inundated 100% of the time. At most tide levels, the lagoon appears as an open water area interspersed with smaller areas of intertidal mudflat, tidal marsh and uplands at higher elevations and along the fringes of the lagoon. Other features visible in and around the project area include trails, levees, culverts, overhead power lines, and support towers. No residences or other visual receptors are situated near the proposed project site, with the exception of recreational users that access Hummingbird Island via the Whistlestop levee. A few scenic overlooks are located along hiking trails in the surrounding uplands.

Would the Project:

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

The presence of construction equipment and ground disturbance required to construct the proposed project would temporarily affect the visual quality of the project area. Monterey County has designated three scenic routes in the region: Highway 1, Highway 156, and portions of Elkhorn Road. Neither the proposed project site nor the proposed staging area would be visible from these three scenic routes, or from any of the other main roads in the area. Monterey County considers Elkhorn Slough an official “Scenic Waterway”; however, on-water public access to Whistlestop Lagoon (or Parsons Slough) is prohibited. Trees located on Hummingbird Island block views of the project site from Elkhorn Channel to the west. As such, it is unlikely that public traveling by

**Whistlestop Levee Repair and Public Access Improvement Project**

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watercraft in Elkhorn Slough would be able to view construction activities. For these reasons, temporary changes in the visual quality of the project area during construction are considered *less than significant*.

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

Because the Whistlestop levee would be closed to the public during construction, potentially sensitive visual receptors accessing Hummingbird Island via the trail on the levee would not be affected. Construction equipment located in the staging area may be visible from trails around Elkhorn Slough; however, this impact on scenic resources would be temporary (2 to 3 months), and all areas temporarily disturbed during construction would be restored to pre-project conditions after construction is complete. For these reasons, temporary changes in the scenic resources of the project area during construction are considered *less than significant*.

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

Once complete, a 20-foot section of the existing levee would be replaced with a bridge, and some additional erosion control infrastructure (riprap) would be installed to protect the area from scour. The proposed bridge would be constructed of either a concrete box culvert or steel piles, beams, and wood decking, most of which would be designed to blend in with the exiting visual character of the area. The rock rip-rap under the bridge would reflect more of a man-made component; however, it would be limited in size (only in the general vicinity of the bridge), would not be visible at higher tides, and would not be substantially different than the visual character of the levee it would replace, or the remaining sections of the levee that would remain after the proposed project is complete. Similarly, the extended and relocated dock would not substantially alter the aesthetic of the area around the levee, which currently supports a smaller dock. As such, it is anticipated that once constructed, the proposed project would have a *less than significant* impact on visual quality in and adjacent to the project area.

Similarly, if a 3-foot sill is constructed under the bridge in the future, impacts on the visual quality of the site would be minor. Although the sill would be visible at higher tides, it would not be substantially different in character than the existing levee and bridge. Therefore, construction of a sill under the bridge in the future would also have a *less than significant* impact on visual quality.

It should be noted that after implementation of the proposed project, the physical appearance of Whistlestop Lagoon itself would change, in that, at lower tides, it would become characterized by mudflats and some wetland and marsh vegetation, rather than open water (assuming a sill is not constructed). Although a change in the visual character of the immediate project setting, this change would be consistent with the visual character of the adjacent Parsons Slough, and would have a *less than significant* impact on visual quality. If a sill is constructed under the bridge, the overall visual character of the lagoon would not appreciably change.

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

Project construction would occur during the daytime and would not result in a new source of nighttime lighting or glare. Similarly, no permanent lighting would be installed as a result of the proposed project. The proposed project would have *no impact* on visual resources from light and glare.

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**II. AGRICULTURE AND FOREST RESOURCES**

<p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</p>	<p>YES: Potentially Significant Impact</p>	<p>NO: Less Than Significant With Mitigation</p>	<p>NO: Less Than Significant Impact</p>	<p>NO: No Impact</p>
<p>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.</p>				X
<p>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract.</p>				X
<p>c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined by Public Resources Code section 4526)?</p>				X
<p>d) Result in the loss of forest land or conversion of forest land to non-forest use?</p>				X
<p>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.</p>				X

Comments:

a – e) Based upon a review of the Conservation Element, Map of Important Farmlands, and Map of Agricultural Preserves prepared by Monterey County, no impact to agricultural resources from the proposed project would occur because there is currently no farmland, as defined by the California Resources Agency, within the proposed project area. The proposed project location is not zoned for agricultural use or protected under a California Land Conservation (Williamson Act) contract. Farmland adjacent to the larger Elkhorn Slough would not be affected by the proposed project. Moreover, no forest lands are located within or adjacent to the project area and, as such, the project would not result in any direct loss of forest land or lands currently under timber preserve. Thus, the proposed project have **no impact** on agriculture or forestry resources.

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**III. AIR QUALITY**

Environmental Factors and Focused Questions for Determination of Environmental Impact	YES: Potentially Significant Impact	NO: Less Than Significant With Mitigation	NO: Less Than Significant Impact	NO: No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan.				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.			X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).			X	
d) Expose sensitive receptors to substantial pollutant concentrations.				X
e) Create objectionable odors affecting a substantial number of people.				X
f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
g) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Comments:

The project area is located within Monterey County and the Monterey Bay Unified Air Pollution Control District (MBUAPCD). The MBUAPCD’s jurisdiction is the North Central Coast Air Basin (NCCAB), composed of Monterey, Santa Cruz, and San Benito Counties. The most recently adopted air quality plan is the 2008 Air Quality Management Plan, which includes strategies for MBUAPCD to reach attainment for the State’s 8-hour ambient air quality standards (MBUAPCD 2008a). The Monterey County General Plan (Monterey County 2010) governs land use in the project area and recognizes the need to provide for growth and to maintain good air quality by taking proper actions to achieve desired standards of air quality.

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Would the Project:**a) Conflict with or obstruct implementation of the applicable air quality plan?**

If a project is proposed in a city or county with a general plan that is consistent with the most recently adopted air quality plan, and if the project is consistent with that general plan, then the project is considered to be consistent with applicable air quality plans and policies. The proposed project would be consistent with the current land use designation for the project area within Monterey County (i.e., Resource Conservation [Coastal Zone]), and the 2010 General Plan (Monterey County 2010) is consistent with the strategies identified in the 2008 Air Quality Management Plan. The proposed project would not conflict with or obstruct implementation of the applicable air quality plan and would have ***no impact*** on this environmental factor.

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

The NCCAB basin lies along the central coast of California and covers an area of 5,159 square miles. The semi-permanent high pressure cell in the eastern Pacific is the basic controlling factor in the climate of the air basin. In the summer, the generally northwest-southeast orientation of mountainous ridges tends to restrict and channel the onshore air currents. In the fall, the north or east winds develop to transport pollutants from either the San Francisco Bay area or the Central Valley into the NCCAB. The general absence of deep, persistent atmospheric inversions and occasional storm systems usually result in good air quality for the basin as a whole in winter and early spring (MBUAPCD 2008b).

The proposed project could impact local pollutant concentrations during project construction by generating dust. Construction would also generate some emissions from construction worker vehicles trips and construction equipment emissions. This impact would be considered ***less than significant***, as explained below.

**CONSTRUCTION-RELATED EMISSIONS**

Construction of the proposed project would involve use of equipment and materials that would temporarily generate dust and emit ozone precursor emissions (i.e., reactive organic gases [ROG] and nitrogen oxide [NO<sub>x</sub>]). Fugitive dust (including particulate matter less than 10 microns in diameter [PM<sub>10</sub>]) and other criteria pollutants would be generated from the operation of heavy equipment (primarily diesel-operated), and construction worker vehicle trips (primarily gasoline-operated). The entire NCCAB is a nonattainment area for PM<sub>10</sub> and a substantial increase in PM<sub>10</sub> emissions would be considered a significant impact by the MBUAPCD.

The Monterey County General Plan requires the County to implement MBUAPCD measures to address off-road mobile source and heavy duty equipment emissions as conditions of approval for future development to ensure that construction-related NO<sub>x</sub> emissions from non-typical construction equipment do not exceed the MBUAPCD's daily threshold for NO<sub>x</sub> (Monterey County 2010). However, only typical construction equipment (e.g., excavators, dump trucks) would be used to construct the proposed project. Given that construction-related volatile organic compound (VOC) and NO<sub>x</sub> emissions from typical construction equipment are accommodated in the emissions inventories of State- and federally-required air quality plans, the potential generation of ozone precursor emissions during construction would be ***less than significant***.

With respect to PM<sub>10</sub>, according to the MBUAPCD's CEQA Air Quality Guidelines, project-related construction activities that have the potential to disturb fewer than 8.1 acres with minimal grading, and 2.2 acres with major earthmoving, would not be expected to exceed the MBUAPCD's PM<sub>10</sub> threshold and would be considered less

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than significant. Neither major nor minor earthmoving activities at the project site would be expected to exceed these thresholds because the area of disturbance subject to excavation would be approximately 0.25-acre. In addition, the MBUAPCD's CEQA Guidelines establish a threshold of significance for PM10 construction-related emissions of 82 pounds per day. Construction-related emissions were modeled for the Parsons Slough Project, a larger and longer duration project located at mouth of Parsons Slough, and presented in the Parsons Slough Project Initial Study / Mitigated Negative Declaration (Vinnedge Environmental Consulting 2010). As described in that document, PM10 emissions for the Parsons Slough Project were modeled at 4 pounds per day, well below the MBUAPCD threshold of significance of 82 pounds per day. It is anticipated that construction of the proposed project would generate fewer emissions than the Parsons Slough Project, given the more limited area that would be disturbed and the shorter duration of construction. As such, the potential generation of PM10 during construction of the proposed project would be *less than significant*.

**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).**

As discussed above, the entire NCCAB is a nonattainment area for PM10 and a substantial increase in PM10 emissions would be considered a significant impact by the MBUAPCD. However, the proposed project would result in air pollutant emissions well below the MBUAPCD significance thresholds; therefore, the proposed project's individual impact on regional air quality would be less than significant. For projects with less than significant individual impacts that are consistent with the adopted regional air quality plan, the CEQA Air Quality Guidelines state that the cumulative impact would also be *less than significant* (MBUAPCD 2008b).

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

As noted in b), the proposed project would not generate substantial pollutant concentrations and thus would not expose sensitive receptors to substantial pollutant concentrations. In addition, the nearest residence is approximately 4,500 feet southwest of the project site. As a result, there would be *no impact* on sensitive receptors from exposure to substantial air pollutant concentrations.

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

The MBUAPCD defines odors as emissions of one or more pollutants that are a nuisance to healthy persons and may trigger asthma episodes in people with sensitive airways (MBUAPCD 2008b). The proposed project would have no odor-generating components; therefore, there would be *no impact*.

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

In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill No. 32; California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), which requires the California Air Resources Board (CARB) to design and implement emission limits, regulations, and other measures, such that statewide greenhouse gas (GHG) emissions will be reduced to 1990 levels by 2020.

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California now recognizes seven GHGs: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF<sub>6</sub>) (California Health and Safety Code section 38505(g)), and nitrogen trifluoride (NF<sub>3</sub>) (Senate Bill No. 104, Chapter 331). Carbon dioxide is the reference gas for climate change because it gets the most attention and is considered the most important GHG. To account for the warming potential of different GHGs, GHG emissions are quantified and reported as carbon dioxide equivalents (CO<sub>2</sub>E). The effects of GHG emission sources (i.e., individual projects) are reported in metric tons per year of CO<sub>2</sub>E.

State Bill 97, 2007 Statutes, Chapter 185, acknowledges that local agencies must analyze the environmental impact of GHG under CEQA. The Natural Resources Agency adopted the CEQA Guidelines Amendments on December 30, 2009, which became effective on March 18, 2010. The 2010 Conservation/Open Space Element of the Monterey County General Plan states that within 24 months of the adoption of the General Plan, Monterey County will develop and adopt a Greenhouse Gas Reduction Plan with a target to reduce emissions by 2020 to a level that is 15% less than 2005 emission levels (Monterey County 2010).

Four types of analyses are used in this Initial Study to determine whether the project could be in conflict with the County or State goals for reducing GHG emissions.

- A. Identification of any potential conflicts with the recommended actions identified in the Assembly Bill No. 32 Draft Scoping Plan.
- B. Evaluation of the relative size of the project. The proposed project's GHG emissions are compared to the size of major facilities that are required to report GHG emissions to the state (i.e., emissions more than 25,000 metric tons per year of CO<sub>2</sub>E). The proposed project size is also compared to the estimated state GHG reduction goal of 174 metric tons per year of CO<sub>2</sub>E by 2020. As noted above, the 25,000 metric ton annual limit identifies the large stationary point sources in California that make up 94 percent of the stationary emissions. If the project's total emissions are below this limit, its total emissions are equivalent in size to the smaller projects in California that as a group only make up 6% of all stationary emissions. It is assumed that the activities of these smaller projects will not conflict with the State's ability to reach Assembly Bill No. 32 overall goals. In reaching its goals, the CARB will focus upon the largest emitters of GHG emissions.
- C. Evaluation of the basic energy efficiency parameters of the proposed project to determine whether its design is inherently energy efficient.
- D. Evaluation of any potential conflicts with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHG.

With regard to Item A, the proposed project would not pose any apparent conflict with the most recent list of the CARB early action strategies.

With regard to Item B, based on size, the project would not be classified as a major source of GHG emissions; operational emissions would be substantially less than 1% of the lower reporting limit of 25,000 metric tons per year of CO<sub>2</sub>E.

When compared to the overall state reduction goal of approximately 174 million metric tons per year of CO<sub>2</sub>E, the maximum GHG emissions for the project (<1 metric tons per year of CO<sub>2</sub>E, or a negligible percentage of the state goal) are quite small and would not conflict with the State's ability to meet the Assembly Bill No. 32 goals.

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With regard to Item C, there are, at a minimum, two elements of the design that are inherently energy efficient and keep the generation of GHG emissions to a minimum. First, as noted above, the project is very small in size and construction activities would be relatively short in duration and would not be considered a major source of GHG emissions. Second, the project is efficiently located adjacent to the staging area.

With regard to Item D, the project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHG.

The review of Items A, B, C, and D indicate that the proposed project would not conflict with the state goals in Assembly Bill No. 32 and therefore, this impact would be ***less than significant***.

**g) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?**

As stated in f) above, the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG. This impact would be ***less than significant***.

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**IV. BIOLOGICAL RESOURCES**

Environmental Factors and Focused Questions for Determination of Environmental Impact	YES: Potentially Significant Impact	NO: Less Than Significant With Mitigation	NO: Less Than Significant Impact	NO: No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service.			X	
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.		X		
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.				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.				X
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.				X

**BACKGROUND**

This section describes the existing biological resources located within the proposed project area and the surrounding Elkhorn Slough. Biological resources include wetland, aquatic and terrestrial environments, and special-status plant and animal species. This section describes potential impacts that may occur to biological resources as a result of levee repair and dock replacement activities and provides mitigation measures to offset

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potential construction-related impacts. This section also describes the beneficial effects project implementation would potentially have on biological resources in the project area.

**Methods**

The results of this assessment are based on a review of relevant databases and project-specific biological survey reports. The following databases were searched to determine what special-status plant and wildlife species may have the potential to occur within and adjacent to the proposed project site:

- California Natural Diversity Database (CNDDDB) for the U.S. Geological Survey (USGS) 7.5-minute Prunedale quadrangle, and the eight surrounding quadrangles (CDFG 2012).
- U.S. Fish and Wildlife Service Threatened and Endangered Species Database (USFWS 2012).

Tables A-1 and A-2 in Appendix A provide a summary of the status, habitat requirements, and potential for occurrence for each of the special-status species identified on the CNDDDB and USFWS lists for the project study area. In evaluating the occurrence potential of target species, biologists considered relevant literature, knowledge of regional biota, existing data from regional experts and observations made during the field investigations as analysis criteria.

**Setting**

The Elkhorn Slough is a estuary extending inland for 7 miles from the midpoint of Monterey Bay in Central California. The estuary contains approximately 2,690 acres of distinctive habitat types including subtidal channels, tidal creeks, mudflats, salt marshes, and tidal brackish marshes (ESNERR unpublished data). These habitats provide a rich ecosystem essential for over 340 bird, 550 marine invertebrate, and 102 fish species (Caffrey et al. 2002). Elkhorn Slough is an important nursery for commercial and recreational fish and a premier migratory stopover for birds. Estuaries like Elkhorn Slough are among the most threatened ecosystems in California, and as a result, a disproportionate number of rare, threatened, and endangered species reside in these areas. In the Elkhorn Slough watershed, two dozen species are included in these categories. The estuary also provides many beneficial human uses such as recreational boating, hiking, and bird watching. Moreover, the coastal wetlands minimize shoreline erosion and filter polluted waters (ESTWPT 2007).

The proposed project would be located at Whistlestop Lagoon, which is a 14.2-acre tidal environment located on the east side of Elkhorn Slough. Whistlestop Lagoon is located in the northern portion of the Parsons Slough Complex. It is a former salt marsh that was diked and subsequently subsided before tidal flow was returned in the 1980s. Today, this area is a subtidal lagoon with a narrow fringing salt marsh that sits behind a levee embankment with three buried culverts. Tidal conditions at Whistlestop Lagoon are muted and lag several hours behind the tide at the entrance to Parsons Slough (Moffatt & Nichol 2008). Surveys of the area indicate that Whistlestop Lagoon currently has lower invertebrate diversity (Ritter et al. 2008), higher Olympia oyster (*Ostrea lurida*) mortality, lower Olympia oyster recruitment (Wasson 2010), fewer sharks (Owens 2005), more bottom algae, and a much shallower oxic sediment layer than adjacent, fully tidal areas such as Parsons Slough (Hughes et al. 2010). The July 14, 2010 failure and subsequent capping of the 36-inch diameter central culvert further degraded the water quality within Whistlestop Lagoon by decreasing tidal flow into the lagoon, which resulted in a pronounced drop in DO concentrations and episodes of anoxia (Figures 6 and 7).

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Natural communities are communities that are dominated by species native to the area, and that are diverse, regionally uncommon, or of special concern to local, state, and Federal agencies. Table IV-1 displays the natural communities and acreages present within the larger project study area.

**Table IV-1. Natural Community in the Parsons Slough Complex**

Habitat Type	Acres
Tidal Mudflat	377.6
Restricted Mudflat	10.4
Fully Tidal Salt Marsh	33.5
Restricted Salt marsh	3.2
Fresh or Brackish Marsh/Channel	0.6
Subtidal Saltwater Channel	32.9
Intertidal Saltwater Channel	0.3
Impounded Fresh Water (Not Included)	9.7
<b>Total Acreage</b>	<b>468.2</b>

Source: ESNERR et al. 2010.

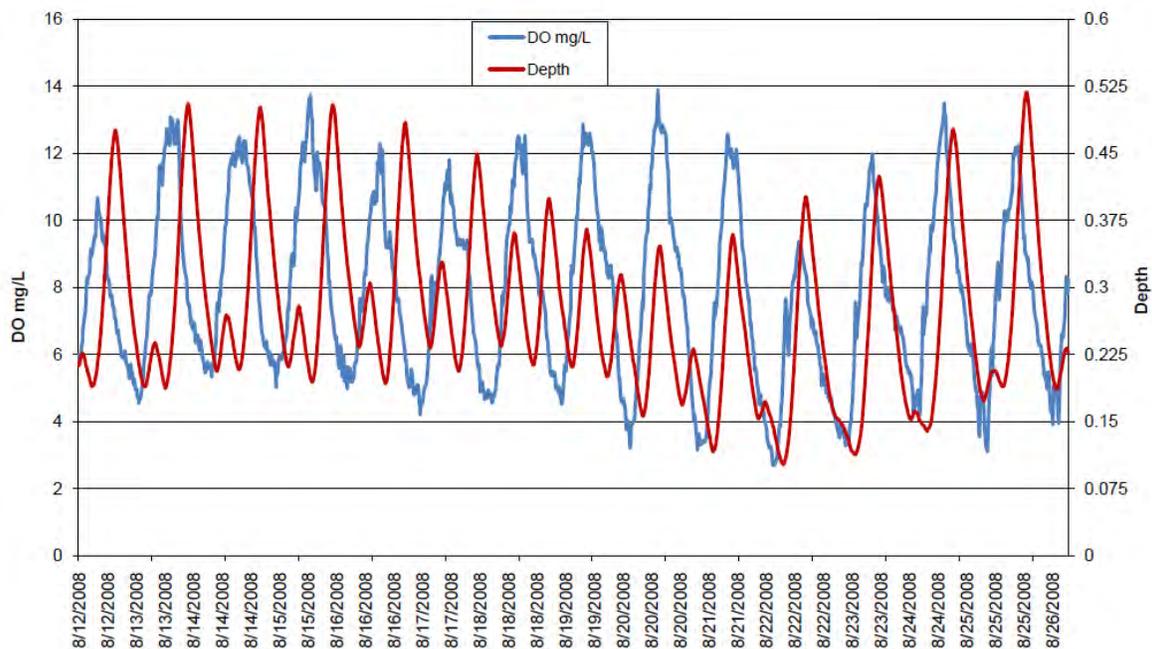
Salt marsh in the larger Parsons Slough Complex is dominated by pickleweed (*Salicornia pacifica*). Vegetated tidal marsh contributes nutrients to the system and provides habitat for a variety of species including shore crabs (*Hemigrapsus oregonensis*) and song sparrows (*Melospiza melodia*) (Van Dyke and Wasson 2005). Many water birds such as great egrets (*Ardea alba*) use salt marshes as roosting sites during high tides. Although mid-to high elevation salt marsh tends to be almost a monoculture of pickleweed, high elevation salt marsh at the ecotone between wetland and upland tends to have a higher diversity of vegetation.

The proposed project area is also located within areas identified as EFH for various life stages of marine and estuarine fish species managed under the following three Fisheries Management Plans (FMP): Pacific Coast Salmon FMP, Coastal Pelagic Species FMP, and Pacific Coast Groundfish FMP. In addition, the project area is located within an area designated as Habitat Areas of Particular Concern (HAPC) for Pacific Coast groundfish species. Elkhorn Slough is an estuary and is therefore considered an HAPC. Native Olympia oyster beds and patches of eelgrass (*Zostera marina*) occurring within the main channel of Elkhorn Slough constitute HAPC. There is no eelgrass within or adjacent to Whistlestop Lagoon. The closest eelgrass population is located at Seal Bend in the main channel of Elkhorn Slough.

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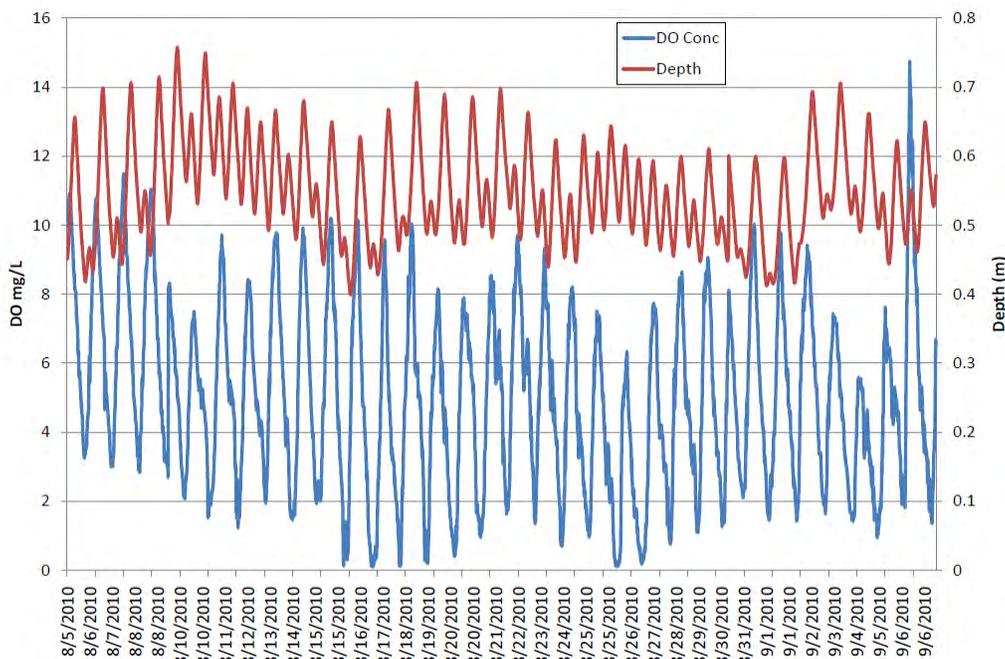
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**Figure 6. Whistlestop Lagoon Tidal Range (meters) and Dissolved Oxygen Concentration (mg/L) in Summer 2008 Prior to Culvert Failure**



Source: ESNERR unpublished data

**Figure 7. Whistlestop Lagoon Tidal Range (meters) and Dissolved Oxygen Concentration (mg/L) in Summer 2010 After Culvert Failure**



Source: ESNERR unpublished data

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***NATIVE OLYMPIA OYSTER BEDS***

The Olympia oyster is a native species of oyster limited almost entirely to estuaries along the Pacific Coast of North America. Their numbers have declined greatly in the past century due to habitat loss, poor water quality, over harvesting, sedimentation, and introduction of non-native predators and competitors. Olympia oysters prefer salinities above 22 parts per thousand (ppt). In their natural state, Olympia oysters form sparse to dense beds in coastal bays and estuaries and in drought conditions move up into channels and sloughs, dying off when wetter conditions return. Olympia oysters are not reef builders like their East and Gulf coast cousin, *Crassostrea virginica*. Olympia oysters contribute to the overall health of the environment in the following ways.

1. Olympia oysters provide physical habitat structure sought by juvenile fish and crustaceans, worms, and foraging fish and birds (NOAA 2008).
2. Olympia oysters provide food resources to various species of sharks and rays (Baker 1995).
3. Olympia oysters stabilize sediment, reduce suspended sediment, and improve light penetrations thereby improving the physical conditions that encourage the establishment of submerged aquatic vegetation, such as eelgrass beds.
4. Olympia oyster, a filter feeders, can help modulate plankton blooms (NOAA 2008).

The current Elkhorn Slough Olympia oyster population size is estimated at only 5,000 to 10,000 individuals. To the south of Elkhorn Slough, the next known Olympia oyster population is hundreds of miles away in Mugu Lagoon; to the north, the next population is in San Francisco Bay. The Elkhorn Slough population of Olympia oysters, which is evident in the archaeological record for the past 10,000 years, provides connectivity between northern and southern California populations and supports ecosystem functions typically associated with healthy oyster beds, including improved water quality, shoreline protection, and increased fish and invertebrate diversity. As mentioned previously, Whistlestop Lagoon has higher Olympia oyster mortality and lower Olympia oyster recruitment when compared to other areas within the estuary (Wasson 2010). Recent monitoring efforts by ESNERR researchers have found that Parsons Slough and the Azevedo wetland complex currently support some of the densest adult Olympia oyster populations on available hard substrates within Elkhorn Slough, and the highest recruitment rates in the estuary. However, total oyster populations in the project area are small due to few hard substrates available for oyster recruitment.

**Special-Status Species**

For the purposes of this Initial Study, the term “special-status species” refers to all plants or animals listed as threatened, endangered, or proposed for listing under the ESA or the California Endangered Species Act (CESA); plants listed as rare under the California Native Plant Protection Act; plants considered by the California Native Plant Society to be “rare, threatened, or endangered in California”; species that meet the definition of rare or endangered under CEQA; animals fully protected in California; and nesting raptors protected in California.

***SPECIAL-STATUS PLANTS***

There are no special status plants within the proposed project footprint. Whistlestop Lagoon contains native salt marsh vegetation but no special-status plant species. Wasson and Woolfolk (2007) identified five native salt marsh plant species in the wetland/upland ecotone within the “Five Fingers” area of the Parsons Slough Complex. These salt marsh species were pickleweed, salt marsh dodder (*Cuscuta salina*), salt grass (*Distichlis spicata*), alkali heath (*Frankenia salina*), and fleshy jaumea (*Jaumea carnosa*).

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***SPECIAL-STATUS WILDLIFE***

The region currently supports a variety of vegetation communities and aquatic habitats that are essential for the dispersal, refuge, breeding, and foraging activities of common and special-status wildlife species. The USFWS and CNDDDB database searches identified special-status wildlife and fish species that may potentially occur in the project vicinity (Appendix A). Several of these species were removed from further evaluation due to lack of habitat or because the project area is outside the species' known range. Several species were identified as having some potential to occur within the proposed project area. These species are discussed in more detail below.

**FISH**

Special-status fish species potentially occurring in the larger Elkhorn Slough include the Southern Distinct Population Segment (DPS) of North American green sturgeon (*Acipenser medirostris*), tidewater goby (*Eucyclogobius newberryi*), and three listed salmonid species: coho salmon (*Oncorhynchus kisutch*), Chinook salmon (*O. tshawatscha*), and steelhead (*O. mykiss*). The potential for each of these species to occur within Elkhorn Slough in general, and within the proposed project area in particular, is considered very low.

***Green Sturgeon***

The Southern DPS of green sturgeon is federally listed as threatened; it has no state listing status. There is very little data on green sturgeon presence in, and use of, Elkhorn Slough. Adult and/or subadult green sturgeon of unknown DPS were collected in Elkhorn Slough and adjacent areas (i.e., Moss Landing Harbor, Jetties Slough, and Bennett Slough) in surveys from the 1970s to 1990s (Yoklavich et al. 2002). One green sturgeon of unknown DPS was impinged and died at the Moss Landing Power Plant in 2006 (Tenera 2007). Based on the detection of tagged northern (non-listed) DPS fish and southern DPS fish in Monterey Bay, green sturgeon in Elkhorn Slough could belong to either DPS (NMFS 2008). Due to the lack of information regarding the DPS green sturgeon in Elkhorn Slough belong to, federally-listed Southern DPS green sturgeon are assumed to be present within the proposed project area. Critical habitat for southern DPS green sturgeon was recently designated (74 Federal Register [FR] 52300) and includes portions of Monterey Bay. However, the designation specifically excludes the Elkhorn Slough Complex due to the high degree of uncertainty as to the extent to which southern DPS fish use this area.

***Tidewater Goby***

The tidewater goby is federally-listed as endangered; it has no state listing status. This species inhabits brackish to fresh water habitats along the California coast from Tillas Slough in Del Norte County, south to Agua Hedionda lagoon in San Diego County. Tidewater gobies range upstream a short distance into freshwater and downstream into water of up to about 75% sea water (28 ppt) (USFWS 2005). The species typically is found in salinities of less than 12 ppt in shallow lagoons and lower stream reaches where slow moving or still, but not stagnant, water is found with high oxygen levels (USFWS 2005). Tidewater gobies are known to occur in Bennett Slough and Moro Cojo Slough (CDFG 2012), both of which are part of the overall Elkhorn Slough Estuary. Furthermore, Bennett Slough has been federally designated as a critical habitat recovery unit (MNT-1) for the species (73 FR 5920).

A recent study by Ritter et al. (2008) of different tidal regimes in Elkhorn Slough found tidewater gobies only at sites with minimal tidal flow. These sites were in the Mojo Cojo Slough system and Struve Pond (Moffatt & Nichol 2008). Tidewater gobies are not known to occur in the project area (Moffatt & Nichol 2008). Although

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tidewater gobies have a high potential to occur in two slough complexes that are part of the overall Elkhorn Slough Complex (Bennett and Moro Cojo), the species' dependence on low tidal flows is expected to exclude it from the main channel of Elkhorn Slough as well as the Parsons Slough Complex (including Whistlestop Lagoon).

*Salmonids*

Three listed salmonid species occur in the waters of Monterey Bay: coho salmon, Chinook salmon, and steelhead. Listed coho and Chinook salmon are grouped into Evolutionarily Significant Units (ESUs) depending on the geographic location of their spawning sites and/or the timing of their spawning migrations. Steelhead are grouped into DPSs according to their spawning sites locals. Depending on the ESU and/or DPS, listed salmonids in Monterey Bay may be federally endangered, threatened, or not listed. Coho and Chinook salmon do not spawn as far south as Elkhorn Slough. However, while coho salmon have not been reported from the larger project area, Chinook salmon of unknown origin have occasionally been recorded in Elkhorn Slough (Yoklavich et al. 2002), and Tenera (2007) reported hatchery-origin juvenile Chinook salmon from the intakes of the Moss Landing Power Plant in Moss Landing Harbor. Steelhead spawn in coastal and inland streams of California as far south as the U.S.-Mexico border. Steelhead of unknown origin have been reported from Elkhorn Slough (Yoklavich et al. 2002). South-central coast steelhead are known to spawn in Gabilan Creek, which is connected to Moss Landing Harbor via Alisal Slough, Tembladero Slough and the Old Salinas River channel, which connects Elkhorn Slough to the current estuary of the Salinas River (Boughton et al. 2006). As such, both adult and juvenile steelhead may migrate through the harbor, and may occasionally enter other portions of Elkhorn Slough.

**AMPHIBIANS**

Three special-status amphibians occur in the watershed: Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum*); California tiger salamander (*Ambystoma californiense*); and California red-legged frog (*Rana draytonii*). Although many freshwater springs, wet meadows, marshes, and shallow lakes have been lost in north Monterey County over the last 150 years, some of these habitats, either natural or artificial, do persist in the Elkhorn Slough watershed. Today, natural freshwater meadow habitat can be found on the valley floor of Long Valley and in areas of Porter Ranch. Natural freshwater marsh remains in portions of south Strawberry Marsh, at the confluence of Porter Marsh and Corncob Canyon Creek, in the lowest reaches of Carneros Creek, and in portions of McClusky Slough. Natural ponds remain at McClusky and Zmudowski Sloughs and in a string of ponds extending from Werner Lake to several spots along San Miguel Canyon Road (Twin Lakes Ponds) and off San Juan Road (Barrington Reservoir). Artificial ponds are scattered throughout the watershed and greatly outnumber natural sites. A significant impact to the persistence of these amphibians is the presence of the introduced American bullfrog (*Rana catesbeiana*) and non-native predatory fish species, which occur throughout the watershed (primarily at long-lived or permanent wetlands).

ESNERR staff biologists conduct regular surveys for amphibians in freshwater pond habitat located on the Reserve. In addition to natural and artificial ponds, there are dozens of freshwater "guzzlers" located within the Reserve. The guzzlers provide a consistent year-round source of drinking water for wildlife. These guzzlers also inadvertently provide suitable aquatic habitat for amphibians. In most years, nocturnal surveys have been conducted in each freshwater pond on a monthly or quarterly basis. In general, monitoring of freshwater habitat on the Reserve consists of the following schedule:

- Monthly daytime surveys of all guzzlers;

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- Annual dip-netting and seining of available freshwater in June and July for detection of amphibian breeding; and
- Annual nighttime eyeshine surveys for California red-legged frogs in all ponds.

In addition, ESNERR researchers have been conducting a mark-recapture of the California red-legged frog populations since 2005. Presence of special-status amphibians within the project area are discussed by species below.

*Santa Cruz Long-toed Salamander*

The Santa Cruz long-toed salamander is both federally-listed and state-listed as endangered, and is a fully protected species in the State of California. This species inhabits coastal woodland and chaparral near ponds and marshes, which are used for breeding (CDFG 1990). The Santa Cruz long-toed salamander spends most of the year underground in animal burrows or in spaces among root systems of woody plants. Habitat requirements include shade and abundant soil humus with nearby shallow ponds with abundant submerged vegetation (NatureServe 2011). There is no suitable freshwater habitat for Santa Cruz long-toed salamander in the proposed project footprint; however, in 2010 and 2011, this species was documented breeding at Cattail Pond, which is located approximately 0.5-mile southeast of Whistlestop levee. Other populations of this species are located more than 2 miles from the proposed project area in McClusky and Moro Cojo Sloughs (ESF 2011).

*California Tiger Salamander*

The Central population of California tiger salamander is federally-listed as threatened (the Sonoma and Santa Barbara populations were reinstated with an 'endangered' status in August 2005). In 2010, the species was listed as threatened by the State. California tiger salamanders require two major habitat components: freshwater breeding sites and nearby terrestrial aestivation or refuge sites. They inhabit valley and foothill grasslands and the grassy understory of open woodlands, usually within 1 mile of freshwater ponds (Jennings and Hayes 1994). This amphibian is terrestrial as an adult and spends most of its time underground in subterranean refuge sites, or refugia. The nearest record of this species is from the CDNNB, where in 1988, a dead adult was found on Strawberry Road located approximately 0.58 miles east of the proposed project staging area (CDFG 2012). This species has also been documented approximately 1 mile north of the project area on Brothers Ranch, and approximately 1 mile southeast of the project area on private property (D'Amore pers. comm. 2012).

Although ESNERR biologists have conducted extensive surveys of the Reserve ponds for this species, California tiger salamander has never been detected within the Reserve. It is possible that the Reserve lacks suitable upland refuge (ground squirrel burrows) to support a breeding population of California tiger salamander, or that available freshwater ponds are not suitable for breeding due to presence of bullfrogs and permanence / depth of water. There is no suitable freshwater habitat for California tiger salamander in the proposed project footprint and the proposed access and staging areas consist of compact dirt and gravel areas that are devoid of burrows.

*California Red-legged Frog*

The California red-legged frog is federally-listed as threatened and is a State Species of Special Concern. As with the other two amphibians, there is no suitable freshwater habitat for California red-legged frog in the proposed project footprint. Whistlestop Lagoon, the Parsons Slough Complex and the main channel of the Elkhorn Slough are tidally influenced water bodies and do not contain aquatic habitat for this species. However, artificial ponds

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and wildlife guzzlers, which are scattered throughout the project study area and within 1-mile of the project footprint, provide potential and occupied aquatic/breeding habitat for this species. ESNERR itself has 11 freshwater ponds, nine of which have had documented presence of California red-legged frogs in over a decade of monitoring. California red-legged frogs have used Lower Cattail Swale for breeding since at least 1997, when rigorous amphibian monitoring at the Reserve began. Seven of these 11 ponds are ephemeral and only provide potential breeding habitat in the wettest of years on a roughly decadal cycle. Two clusters of ponds (the Rookery Complex and Upper and Lower Cattail Swale) provide breeding habitat in most years (Figure 8).

**BIRDS**

Elkhorn Slough is recognized as a Globally Important Bird Area by the American Bird Conservancy. More than 265 bird species (73% of the California total) have been recorded in the Elkhorn Slough area. Most are seasonal visitors, but approximately 40 are year-round residents. Aquatic birds — shorebirds, seabirds, herons, and waterfowl — account for much of the slough's avian diversity. As one of the largest estuaries in California, Elkhorn Slough is a major stopover for birds migrating along the Pacific flyway. More than 20,000 sandpipers, plovers, and their relatives may be present at the peak of migration (Ramer et al. 1991). A number of these aquatic species nest in Elkhorn Slough, and roost near the proposed project area. Double-crested cormorants have been observed roosting adjacent to Whistlestop levee in trees on Hummingbird Island. Caspian terns (*Sterna caspia*) nest on man-made islands in the area, and the federally-listed western snowy plover (*Charadrius alexandrinus nivosus*) is a known breeder in portions of the greater Elkhorn Slough. Eggs and nests of all birds are protected under Section 3503 of the California Fish and Game Code (FGC), as well as under the Federal Migratory Bird Treaty Act (MBTA). The recently de-listed and state fully protected California brown pelican (*Pelecanus occidentalis*) also roosts in the open water habitat located in and adjacent to Whistlestop Lagoon.

*Western Snowy Plover*

The western snowy plover is a federally-listed as threatened and a State Species of Special Concern. The plover is a small shorebird that nests on coastal sandy beaches and the shores of salt ponds and alkaline lakes. The sandy, silty bottoms of the former salt ponds in Elkhorn Slough provide ideal nesting sites for the snowy plover and are the most productive snowy plover habitat in the Monterey Bay region. They also nest along the beach near Moss Landing Harbor (3 miles southwest of the proposed project footprint) (CDFG 2012). Snowy plover forage for insects and marine invertebrates in wet sand along the edge of the water. Though snowy plovers may forage on the mudflats in the Parsons Complex on occasion, there is no suitable nesting habitat for this species within the project area and project actions would not affect this species.

*California Brown Pelican*

This species was recently de-listed from its endangered status under the ESA, but is fully protected in California. Brown pelicans roost at the Elkhorn Slough Reserve in highest numbers between July and October (ESF 2002). Reports of up to 5,000 pelicans have been recorded in the Elkhorn Slough vicinity. Within the project area, pelicans roost in open water habitats.

*Special-Status Raptors*

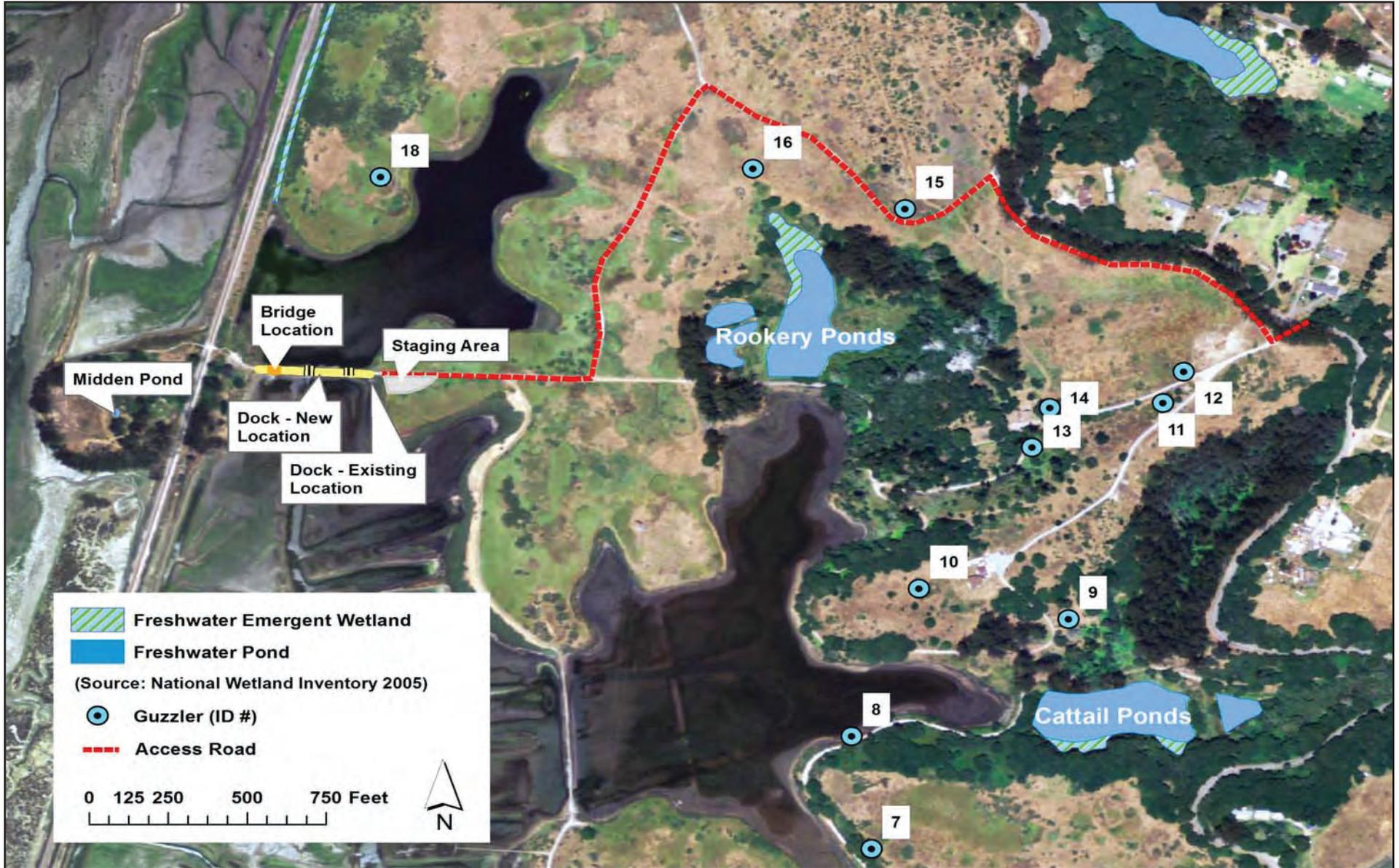
Upland habitat surrounding the proposed project area contains suitable habitat for special-status raptors. Active raptor nests are protected under FGC Section 3503.5. Raptor species that could use the site for nesting include northern harrier (*Circus cyaneus*), western burrowing owl (*Athene cunicularia hypugea*), and short-eared owl

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*(Asio flammeus)*. These ground-nesting raptors may inhabit upland and emergent marsh habitats throughout, and adjacent to, the proposed project area. The large, mature eucalyptus trees located in the vicinity could support tree-nesting raptors such as red-tailed hawk (*Buteo jamaicensis*) and white-tailed kite (*Elanus leucurus*). White-tailed kite will forage on small mammals that inhabit seasonal wetland (when dry) and upland habitats within and adjacent to the site. White-tailed kite nesting sites are designated as fully protected under FGC Section 3511.



Title/Notes:

Santa Cruz Long-toed Salamander and California Red-legged Frog Habitat Near Proposed Project Footprint

Figure:

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**MAMMALS**

Fifty-nine species of mammals are believed to occur in the Elkhorn Slough watershed, five of which are marine. The southern sea otter (*Enhydra lutris*) returned to its historic range in the slough in the early 1980s, and the number using the slough has increased gradually since then (Richman 1997). Harbor seal (*Phoca vitulina*) populations have also increased in recent years. California sea lion (*Zalophus californianus*), harbor porpoise (*Phocoena phocoena*), and juvenile gray whale (*Eschrichtius robustus*) are sighted infrequently in the lower reaches of the slough. All species of marine mammals are protected under the MMPA; however this analysis only considers the southern sea otter and harbor seals because only those two species occupy nearby Parsons Slough.

*Southern Sea Otter*

Southern sea otters are a federally threatened species currently found along the mainland coastline of California from San Mateo County to Santa Barbara County (USFWS 2008). They are also a fully protected species in the State of California. Approximately 70% of the southern sea otter population occurs within the boundaries of the Monterey Bay National Marine Sanctuary and approximately 3.5% of the population occurs in the Elkhorn Slough Estuary (Richman 1997, Maldini et al. 2009). Though sea otters occupy Parsons Slough year-round, they do not usually occupy Whistlestop Lagoon. Over the past decade, a single otter has been found in Whistlestop Lagoon on rare occasions, but it has not been documented in the lagoon since October 2009 (Eby pers. comm. 2011). Research scientists rarely observe southern sea otter north of ESNERR's South Marsh water monitoring station, which is located 2,100 feet south of Whistlestop Lagoon.

*Harbor Seal*

Harbor seals are nonmigratory marine mammals found in subarctic and temperate waters of the North Atlantic and North Pacific Oceans and contiguous sea. Harbor seals are not federally listed under the ESA, but are protected under the MMPA (although they are not listed as "depleted" under the MMPA). There is no designated critical habitat for harbor seals. Harbor seals inhabit Elkhorn Slough year-round and occur individually or in groups. They usually occupy areas just beyond the mouth of Elkhorn Slough in the Moss Landing North Harbor, and in the lower portion of Elkhorn Slough extending up to Parsons Slough and Rubis Creek. Elkhorn Slough is primarily used for resting and hauling out, although there is some foraging. Pups are raised in Elkhorn Slough during pupping season. They are rarely seen in tidally restricted areas.

There are an estimated 100 harbor seals using the Parsons Slough Complex on a daily basis (Maldini et al. 2010). Harbor seals in Parsons Slough use exposed mudflats during low tide to haul out. Approximately 60% of Parsons Slough consists of mudflats during low tide. Consistent with harbor seal behavior, abundance on the mudflats is highest during low tide in the daytime. Harbor seal activity at night is unknown, but researchers speculate that harbor seals leave Parsons Slough at night to forage in the main channel or Monterey Bay (Maldini et al. 2010).

Research scientists rarely observe harbor seals, or any marine mammals, within 1 mile of the project area. Harbor seals will infrequently wander north in Parsons Slough Complex, but no closer than 0.5 mile of the Whistlestop levee (Eby pers. comm. 2011). Furthermore, the closest haul out site is located at the mouth of Parsons Slough, which is 1 mile south of Whistlestop Lagoon. As such, the proposed project would have no impact on harbor seals or their habitat.

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Comments:

This section addresses the above checklist in evaluating both direct and indirect impacts of the proposed project on biological resources.

Direct impacts on biological resources include the potential to disturb individual species or their habitat during construction of the proposed project. Aquatic habitats could be directly impacted by soil/sediment disturbance, temporary turbidity, and noise disturbance associated with pile driving. Natural habitat communities could be directly impacted by construction vehicle access and staging activities. These potential effects would be temporary, lasting three months or less, and all disturbed areas would be restored to pre-project conditions upon completion of the proposed project.

Indirect impacts on biological resources include long term improvement of estuarine habitat function in Whistlestop Lagoon. The opening of tidal exchange under the bridge, coupled with the placement of rocks under the bridge to armor the opening, would improve water quality in Whistlestop by increasing nutrient and energy exchange with the rest of the estuary. This opening in the levee would also improve passage for fish and wildlife between Whistlestop Lagoon and the adjacent estuarine habitat (Parsons Complex), and would create new hard substrate (rock base of proposed bridge) for Olympia oysters to populate.

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 CDFG and USFWS?**

The project's potential effects on special-status species and their habitats are discussed by species type below.

***SPECIAL STATUS PLANTS***

As described above, there are no special-status plants within or adjacent to the proposed project footprint, though some sensitive vegetation (salt marsh habitat) is located on the fringe of Whistlestop Lagoon. Construction equipment and personnel would be restricted to the project footprint and established staging and access area. Therefore, ***no impact*** on special-status plants would occur.

***SPECIAL STATUS FISH***

**Increased Sedimentation and Turbidity**

Construction activities, including limited dewatering at the bridge site (if required), may result in direct effects on special-status fish during in-water construction (e.g., installation of wooden piles, placement of rock riprap). All heavy construction equipment (crane or excavator) would be positioned in upland areas on the western and/or eastern edges of the existing levee, and no heavy equipment would enter aquatic habitat. However, increased sedimentation rates and/or turbidity concentrations could result if fine sediment is mobilized within, or discharged to, aquatic habitat during levee removal and bridge installation.

Increased sedimentation and turbidity may also adversely affect water quality and substrate composition. Specific rates of sedimentation would be dependent upon the duration, volume, and frequency at which sediments are contributed to the surface water flow. All in-water construction would occur during slack or rising tide to ensure that downstream construction-related turbidity in Parson Slough would be minimized (i.e., sediment would either settle in place or be forced into Whistlestop Lagoon, where it would dissipate and/or settle). In addition, water removed from the sheetpile cofferdam (if utilized) would be pumped to a silt curtain in

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Whistlestop Lagoon to further minimize the potential for constructed-related turbidity in and downstream of the project area. None-the-less, temporary increases in turbidity levels would be largely unavoidable due to constraints presented by construction in a tidal system. Implementation of Mitigation Measure BIO-1 below would reduce this impact to **less than significant with mitigation**. Implementation of Mitigation Measures BIO-2 would ensure that the BMPs provided in Table IV-2 are effective and that unexpected adverse effects on special-status species, including fish, do not occur.

**Mitigation Measure BIO-1.** The project applicant would implement the BMPs outlined in Table IV-2 to minimize stormwater runoff, erosion, and potential water quality impacts associated with construction activities. In addition, all contractors working in a capacity that could increase the potential for adverse water quality impacts shall receive training regarding the environmental sensitivity of the site and need to minimize impacts. Contractors also shall be trained in implementation of stormwater BMPs for protection of water quality.

**Table IV-2. Construction-Related Best Management Practices**

BMP ID	Name	BMP
BMP -1	Erosion Control and Construction-Related Turbidity	<ol style="list-style-type: none"> <li>1. Traffic speeds on unpaved roads will be limited to 15 mph.</li> <li>2. If dewatering is required during construction, a silt curtain will be installed in Whistlestop Lagoon to filter and decant water removed during dewatering activities.</li> <li>3. In-water construction activities will occur during slack or rising tides.</li> <li>4. Sandbags or other erosion control measures will be employed to prevent runoff and construction-related turbidity.</li> <li>5. Upland soils exposed due to construction activities will be seeded and stabilized using erosion control fabric or hydroseeding. Areas below the mean high water mark are exempt from this BMP.</li> <li>6. Erosion control fabric will consist of natural fibers that will biodegrade over time. No plastic or other non-porous material will be used as part of a permanent erosion control approach.</li> <li>7. Erosion control fabric will be anchored in place. Anchors can include U-shaped wire staples, metal geotextiles stake pins, or triangular wooden stakes.</li> <li>8. Other erosion control measures shall be implemented as necessary to ensure that sediment or other contaminants do not reach surface water bodies for stockpiled or reused/disposed sediments.</li> </ol>
BMP -2	Staging and Stockpiling of Materials	<ol style="list-style-type: none"> <li>1. All construction equipment will be staged in upland areas, away from sensitive natural communities or habitats.</li> <li>2. All construction-related items, including equipment, stockpiled material, temporary erosion control treatments, and trash will be removed within 72 hours of project completion. All residual soils and/or materials will be cleared from the project site.</li> <li>3. Building materials and other construction-related materials, including chemicals, will not be stockpiled or stored where they could spill into water bodies or storm drains, or where they could cover aquatic or riparian vegetation.</li> </ol>
BMP -3	Spill Prevention and Response Plan	A Spill Prevention and Response Plan will be developed prior to commencement of construction activities, and will summarize the measures described below. The work site will be routinely inspected to verify that the Spill Prevention and Response Plan is properly implemented and maintained. Contractors will be notified immediately if there is a noncompliance issue.

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BMP ID	Name	BMP
		<ol style="list-style-type: none"> <li>1. Equipment and materials for cleanup of spills will be available on site.</li> <li>2. All spills and leaks will be cleaned up immediately and disposed of properly.</li> <li>3. Prior to entering the work site, all field personnel shall be appropriately trained in spill prevention, hazardous material control, and cleanup of accidental spills.</li> <li>4. Field personnel shall implement measures to ensure that hazardous materials are properly handled and the quality of water resources is protected by all reasonable means.</li> <li>5. Spill prevention kits shall always be in close proximity when using hazardous materials (e.g., crew trucks and other logical locations). All field personnel shall be advised of these locations and trained in their appropriate use.</li> <li>6. Absorbent materials will be used on small spills located on impervious surfaces rather than hosing down the spill; wash waters shall not discharge to surface waters. For small spills on pervious surfaces such as soils, wet materials will be excavated and properly disposed of rather than buried. The absorbent materials will be collected and disposed of properly and promptly.</li> <li>7. As defined in 40 CFR 110, a federal reportable spill of petroleum products is the spilled quantity that:               <ul style="list-style-type: none"> <li>▪ violates applicable water quality standards;</li> <li>▪ causes a film or sheen on, or discoloration of, the water surface or adjoining shoreline; or</li> <li>▪ causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines.</li> </ul> <p>If a spill is reportable, the contractor’s superintendent will notify ESNERR, and ESNERR will take action to contact the appropriate safety and cleanup crews to ensure that the Spill Prevention and Response Plan is followed. A written description of reportable releases must be submitted to the appropriate RWQCB and the California Department of Toxic Substances Control (DTSC). This submittal must contain a description of the release, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases will be documented on a spill report form.</p> <p>If an appreciable spill has occurred, and results determine that project activities have adversely affected surface water or groundwater quality, a detailed analysis will be performed to the specifications of DTSC to identify the likely cause of contamination. This analysis will include recommendations for reducing or eliminating the source or mechanisms of contamination. Based on this analysis, ESNERR or contractors will select and implement measures to control contamination, with a performance standard that surface and groundwater quality must be returned to baseline conditions. These measures will be subject to approval by ESNERR, DTSC, and the RWQCB.</p> </li> </ol>
BMP - 4	Equipment and Vehicle Maintenance and Cleaning	<ol style="list-style-type: none"> <li>1. All vehicles and equipment will be kept clean. Excessive build-up of oil or grease will be prevented.</li> <li>2. Vehicle and equipment maintenance activities will be conducted in a designated area to prevent inadvertent fluid spills from adversely impacting water quality. This area will be clearly designated with berms, sandbags, or other barriers.</li> <li>3. Secondary containment, such as a drain pan or drop cloth, to catch spills or leaks will</li> </ol>

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BMP ID	Name	BMP
		<p>be used when removing or changing fluids. Fluids will be stored in appropriate containers with covers, and properly recycled or disposed of off-site.</p> <ol style="list-style-type: none"> <li>4. Cracked batteries will be stored in a non-leaking secondary container and removed from the site.</li> <li>5. Spill cleanup materials will be stockpiled where they are readily accessible.</li> <li>6. Incoming vehicles and equipment will be checked for leaking oil and fluids (including delivery trucks and employee and subcontractor vehicles). Leaking vehicles or equipment will not be allowed on-site.</li> <li>7. Vehicles and equipment will not be washed on-site. Vehicle and equipment washing will occur at an appropriate wash station.</li> </ol>
BMP - 5	Refueling	<ol style="list-style-type: none"> <li>1. All fueling sites shall be equipped with secondary containment and avoid a direct connection to underlying soil, surface water, or the storm drainage system.</li> <li>2. For stationary equipment that must be fueled on-site, secondary containment such as a drain pan or drop cloth shall be provided in such a manner to prevent accidental spill of fuels to underlying soil, surface water, or the storm drainage system.</li> </ol>
BMP -6	On-Site Hazardous Materials Management	<ol style="list-style-type: none"> <li>1. The products used and/or expected to be used and the end products that are produced and/or expected to be produced after their use will be inventoried.</li> <li>2. As appropriate, containers will be properly labeled with a “Hazardous Waste” label and hazardous waste will be properly recycled or disposed of off-site.</li> <li>3. Contact of chemicals with precipitation will be minimized by storing chemicals in watertight containers or in a storage shed (completely enclosed), with appropriate secondary containment to prevent any spillage or leakage.</li> <li>4. Quantities of equipment fuels and lubricants greater than 55 gallons shall be provided with secondary containment that is capable of containing 110 percent of the volume of primary container(s).</li> <li>5. Petroleum products, chemicals, cement, fuels, lubricants, and non-storm drainage water or water contaminated with the aforementioned materials shall not be allowed to enter receiving waters or the storm drainage system.</li> <li>6. Sanitation facilities (e.g., portable toilets) will be surrounded by a berm, and a direct connection to the storm drainage system or receiving water will be avoided.</li> <li>7. Sanitation facilities will be regularly cleaned and/or replaced, and inspected regularly for leaks and spills.</li> <li>8. Waste disposal containers will be covered when they are not in use, and a direct connection to the storm drainage system or receiving water will be avoided.</li> <li>9. All trash that is brought to a project site during construction activities (e.g., plastic water bottles, plastic lunch bags) will be removed from the site daily.</li> </ol>
BMP - 7	Fire Prevention	<ol style="list-style-type: none"> <li>1. All earthmoving and portable equipment with internal combustion engines will be equipped with spark arrestors.</li> <li>2. During the high fire danger period (April 1–December 1), work crews will have appropriate fire suppression equipment available at the work site.</li> <li>3. On days when the fire danger is high, flammable materials will be kept at least 10 feet away from any equipment that could produce a spark, fire, or flame.</li> <li>4. On days when the fire danger is high, portable tools powered by gasoline-fueled internal combustion engines will not be used within 25 feet of any flammable materials unless at least one round-point shovel or fire extinguisher is within</li> </ol>

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BMP ID	Name	BMP
		immediate reach of the work crew (no more 25 feet away from the work area).
BMP - 8	Work Site Housekeeping	<ol style="list-style-type: none"> <li>1. The work site will be maintained in a neat and orderly condition, and left in a neat, clean, and orderly condition when work is complete.</li> <li>2. Materials or equipment left on the site overnight will be stored as inconspicuously as possible, and will be neatly arranged.</li> </ol>

**Mitigation Measure BIO-2.** A designated biologist will be on-site daily while construction activities, including pile driving, are taking place to (1) avoid adverse effects on special-status species, including fish, marine mammals, amphibians, and birds; (2) check for compliance with all mitigation and avoidance measures; and (3) ensure that signs, stakes, and fenced areas are intact, and that human activities are restricted outside of these protective zones.

**Short-Term Suspension and Dispersion of Oxygen-demanding Substances**

Placement of rock fill and wood piles may result in the suspension of oxygen-demanding substances, particularly anaerobic organic substrate materials within the proposed project footprint. Depending on tides, these substances may also be dispersed into Parsons Slough. Suspension and dispersion of oxygen-demanding materials may result in temporary decreases in DO concentrations within the water column, which may lead to stress or mortality to fish species or their prey. However, all in-water construction would occur during slack or rising tides to ensure that construction-related suspension and dispersion of oxygen-demanding substances would be spatially minimized. Therefore, this impact would be *less than significant*.

**Accidental Spills and Use of Hazardous Materials**

Equipment refueling, fluid leakage, and maintenance activities within or near water bodies could pose a risk of accidental water contamination that may result in injury or death to aquatic life. Many commonly used hydraulic fluids contain organophosphate ester additives that are toxic to fish species. Acute lethal and sublethal effects have been documented in salmonids in particular (as opposed to warm water species), and would presumably affect special-status fish species and their habitat. Leaks or spills of petroleum hydrocarbon products found in construction equipment have similar adverse effects on fish. Implementation of the BMPs described in Mitigation Measure BIO-1 would reduce this impact to *less than significant with mitigation*.

**Underwater Sound Pressures**

As part of the proposed project, four steel or wood piles may be installed to provide the foundation for the bridge placed in the levee, and the relocated dock would be supported on seven wooden posts (4x4 or 6x6 wooden timbers) driven into the channel substrate. In addition, a sheetpile cofferdam would be installed around the bridge site if a box culvert is used to construct the bridge. Pile driving activities create underwater sound pressure levels that may adversely affect fish species. Fish may be injured or killed by the impact sounds generated by percussive pile driving. Their hearing may also be affected or their behavior altered. Underwater sound pressures produced during pile driving activities may temporarily reduce the quality of habitat for fish during construction through disturbance or loss of prey species and creation of habitat conditions that may prove to be distracting, disorienting, and otherwise unsuitable for these species.

The specific effects of pile driving on fish depend on a wide range of factors including the type of pile, type of hammer, fish species, environmental setting, and many other factors (Popper et al. 2006). Current criteria for minimizing or avoiding sound pressure injuries to fish from pile driving activities were developed by the Fisheries

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Hydroacoustic Working Group (FHWG) and are presented in the Agreement in Principal for Interim Criteria for Injury to Fish from Pile Driving Activities (FHWG 2008). These agreed upon criteria identify sound pressure levels of 206 decibel (dB)-peak and 187 dB accumulated Sound Exposure Level (SEL) for all fish except those that are less than 2 grams in weight. In that case, the criterion for the accumulated SEL is 183 dB.

The four pilings that would provide the foundation for the bridge, as well as the two sheetpiles that would comprise the cofferdam at the bridge site, would be installed using a vibratory driver, and would be installed at low tide. According to Caltrans (2009), underwater sound pressures generated by vibratory drivers are about 10-20 dB lower than when using an impact hammer. In their summary of available data collected for near-source (10 meter) unattenuated sound pressures generated during in-water steel pile installations using a vibratory driver, peak sound pressures never exceeded 195 dB and SELs never exceeded 180 dB. As such, underwater sound pressures generated during the installation of the proposed bridge pilings and sheetpile cofferdam are expected to remain well below the FHWG (2008) interim criteria. This impact would be *less than significant*.

Pilings for the new dock would be wooden, not steel, and would generally be installed at low tide. In-water pile driving would be required for the two to four pilings placed below MLLW. The peak sound pressure levels from driving piles of different sizes and compositions generally range from 177 dB for a 12- to 14-inch wood pile (which is considerably larger than the 4x4 or 6x6 wooden piles proposed for this action) to 220 dB for a 96-inch steel pile, as measured 10 meters from the pile (Caltrans 2009). As such, underwater sound pressure levels expected to occur during the installation of up to four wooden piles for the dock relocation would be below the FHWG (2008) interim criteria. Therefore this impact would be *less than significant*.

**Direct Habitat Loss**

Construction of the proposed project (bridge only) would require placement of about 1,400 cubic yards of rock fill and would result in the concomitant loss of a minor, but unquantified, amount of subtidal habitat within the proposed project footprint. The 'bridge with sill' option would require an additional 300 cubic yards of fill placed in subtidal habitat. Conversely, the proposed removal of the existing levee would result in a minor but unquantified gain in habitat subject to tidal inundation. In general, the proposed project area, would likely increase the extent and value of intertidal mudflat habitat, particularly under the no-sill option. *No impact* would occur.

**Operation-Related Water Quality Impacts**

Replacement of the failed culverts with an open span bridge would improve water quality in Whistlestop Lagoon by increasing nutrient and energy exchange with Parsons Slough and the rest of the estuary. The increased tidal exchange would also decrease the eutrophication symptoms of the algal mats and shallow sediment oxic layer that currently occur in the lagoon, which would increase benthic invertebrate diversity and abundance. These anticipated effects would continue to be monitored by water quality sondes that would be deployed for at least 2 years following implementation of the proposed project (as described in Section VIII, Hydrology and Water Quality). Although less pronounced, these benefits would also be realized if a sill is constructed under the bridge in the future. No adverse water quality effects on fish are expected to occur as a result of the proposed project and, in the long-term, the proposed project would result in a *beneficial impact* on water quality.

**AMPHIBIANS**

The proposed project would include replacement of a failing levee in a tidal lagoon and relocation of an existing dock to deeper water. As described above, tidal marsh habitat in the project footprint does not provide aquatic habitat for special status amphibians, including Santa Cruz long-toed salamander, California tiger salamander, or

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California red-legged frog, as it is too saline to support these species. However, during construction, personnel and vehicles would pass through upland habitat that is within 1-mile of freshwater habitat known to support breeding populations of California red-legged frog and Santa Cruz long-toed salamander. In addition, construction vehicles would pass within 10-feet of California red-legged frog non-breeding aquatic habitat during construction of the proposed project. Specifically, an existing gravel road would provide access to the staging area and levee by construction vehicles (Figures 3 and 8). This road is adjacent to a freshwater “guzzler” (known as guzzler 15). Researchers have documented juvenile frogs (up to three) using this guzzler during varying times of the year. The guzzler does not provide breeding habitat for the frogs, but a year round source of freshwater for this species. Currently, the access road is regularly used by ESNERR research staff with no adverse effect on the species.

The NOAA RC is conducting informal consultation with USFWS for potential project impacts to federally listed amphibians. Given what is known about dispersal behavior in California red-legged frog (Bulger et al. 2003; Fellers and Kleeman 2007; D'Amore 2007), any frog movement from this guzzler to nearby freshwater ponds would likely occur during wet or rainy nights. Proposed construction activities would occur during the dry summer months and only during daylight hours. It is unlikely frogs would travel from guzzler 15 or Rookery Pond into the proposed project footprint or across the Whistlestop Levee during the construction period. Similarly, salamander dispersal movement occurs during winter rain events and it is even more unlikely that Santa Cruz long-toed salamander would travel over 0.5-mile from a breeding pond into the work area, as there are no suitable underground burrows in the work area suitable for salamander estivation.

The minimization and avoidance measures provided in Mitigation Measures BIO-3 would be implemented during construction of the proposed project and would reduce the potential for project activities to disturb special-status amphibians. Use of biological monitor, as provided in Mitigation Measure BIO-2, would further reduce the potential for adverse effects on special-status species during construction. As a result, this impact would be ***less than significant with mitigation***.

**Mitigation Measure BIO-3.**

1. **Seasonal Avoidance**. Construction will be scheduled to minimize effects on listed species and habitats. All work will be conducted between April 15 and October 15. No activities shall occur between October 15 or the onset of the rainy season, whichever occurs first, and May 1, except for during periods greater than 72 hours without precipitation. The National Weather Service (NWS) 72-hour forecast for the project area will be monitored. If a 70 percent or greater chance of rainfall is predicted within 72 hours of construction activity, all activities will cease until no further rain is forecast. If rain exceeds ¼ inch during a 24-hour period, work will cease until no further rain is forecast. Activities can only resume after site inspection by a qualified biologist. The rainy season is defined as a frontal system that results in depositing 0.25 inches or more of precipitation in one event
2. **Night Work**. All construction activities will occur during daylight hours (sunrise to sunset).
3. **Environmental Awareness Training**. Prior to the start of construction, a qualified biologist will conduct an educational training program for all construction personnel including contractors and subcontractors. The training will include, at a minimum, a description of California red-legged frog and their habitats; an explanation of the status of this species and protection under state and Federal laws; the avoidance and minimization measures to be implemented to reduce take of these species; communication and work stoppage procedures in case a listed species is observed within the project area; and an explanation of

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the Environmentally Sensitive Areas and the importance of maintaining the fencing around Environmentally Sensitive Areas. A fact sheet conveying this information will be prepared and distributed to all construction personnel. Upon completion of the program, personnel will sign a form stating that they attended the program and understand all the avoidance and minimization measures.

4. Environmentally Sensitive Area Fencing. Prior to the start of construction, Environmentally Sensitive Areas – defined as areas containing sensitive habitats adjacent to or within construction work areas for which physical disturbance is not allowed – will be clearly delineated using high visibility orange fencing. Construction work areas include the active construction site and all areas providing support for the proposed project, including areas used for vehicle parking, equipment and material storage and staging, access roads, etc. The fencing will remain in place while construction activities are ongoing, and will be regularly inspected and fully maintained at all times. The final project plans will depict all locations where Environmentally Sensitive Area fencing will be installed and will provide installation specifications. The bid solicitation package special provisions will clearly describe acceptable fencing material and prohibited construction-related activities including vehicle operation, material and equipment storage, access roads and other surface-disturbing activities within Environmentally Sensitive Areas. In addition, hydrological features (i.e., topographic depressions, drainage ditches, culverts, etc.) outside of the proposed project footprint will not be manipulated (i.e., re-routed, dredged, filled, graded, etc.). This will avoid potential effects on wetlands and waters outside of the proposed project footprint that are hydrologically connected to aquatic features within the proposed project footprint.
5. Wildlife Exclusion Fencing. Prior to the start of construction, Wildlife Exclusion Fencing (WEF) shall be installed along the access road where it passes by guzzler 15 and along the south border of the staging area located east of the levee. The exact length and location, fencing materials, installation specifications, and monitoring and repair criteria shall be approved by USFWS and CDFG prior to start of construction. In general, the fencing will be buried to a depth of 6 inches, will be a minimum of 3.3 feet tall following installation, and will include a barrier lip designed to prevent species, such as California red-legged frog, from climbing over. WEF specifications shall be provided on the final project plans. WEF shall remain in place throughout the duration of construction and shall be regularly inspected and fully maintained. Repairs to the WEF shall be made within 24 hours of discovery. Upon completion of the proposed project, the WEF shall be completely removed, the area cleaned of debris and trash, and returned to natural conditions.
6. Burrow Avoidance. Small mammal burrows will be avoided to the maximum extent possible during installation of the exclusion fencing. Where burrows cannot be avoided, they will be hand excavated by the biologist prior to construction activities.
7. Access and Staging. Vehicles to and from the proposed project site will be confined to existing roadways to minimize disturbance of upland habitat. Prior to movement of a heavy construction equipment into the construction area, a USFWS-approved biologist will make sure the route is clear of amphibians. Staging of vehicles and equipment will be confined to a predetermined area. Prior to movement of heavy construction equipment into the construction area, the staging area will be clearly marked on construction drawings and biologists will supervise the installation of orange barrier fencing separating the staging area from adjacent Environmentally Sensitive Areas. Vehicle speeds will not exceed 15 miles per hour to avoid special-status species on or traversing the access road.

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8. Biological Monitoring. A qualified biologist will be present at all times during construction near frog-sensitive areas, including fence installation (see Mitigation Measure BIO-2). If a special-status amphibian species is encountered during excavation, or any proposed project activities that could potentially harm the species, activities will stop immediately until it moves from the construction area of its own accord and USFWS and CDFG are contacted. Project activities would only resume after authorization from USFWS or CDFG is provided. All special-status species sightings will be documented by the monitoring biologist and submitted to the CNDDDB.
9. Daily Inspection of Trenches and Fences. Any open trenches located within 100-feet of guzzlers 15 and 17 will be covered or fully surrounded by silt fences at the end of each work day to prevent accidental entrapment of special-status amphibians. Trenches will be inspected daily prior to construction to ensure that no animals are trapped and that fences are working properly.
10. Restoration of Disturbed Habitat. If suitable upland or wetland habitat is disturbed or removed, the project proponent will restore the suitable habitat back to its original value by covering bare areas with mulch and revegetating all cleared areas with wetland species that are currently found in the proposed project area.

**BIRDS**

Suitable nesting, foraging and roosting habitat for special-status and migratory birds occurs in the project area. Special-status birds with potential to occur in the project area are listed in Table 1 in Appendix A. Upland areas surrounding the project area provide potential nesting habitat for special-status birds, including raptors, and nesting birds protected under the MBTA. Shorebirds forage in intertidal mudflat habitat during low tide, while waterfowl roost and forage in subtidal habitat within project area. Because project activities are scheduled to occur during the late summer or early fall months, construction noise is not expected to disturb bird nesting activity. During the late summer, most nesting is complete (or almost complete), and the introduction of construction noise into the area would not result in nest failure.

Waterfowl and shorebirds that forage and roost in Whistlestop Lagoon may be temporarily impacted by construction noise. However, there is evidence that an abundance of suitable foraging habitat is available to waterfowl and shorebirds (benthic invertebrates) throughout the larger Elkhorn Slough (Oliver et al. 2009). Temporary disturbance of roosting birds during the two to three month construction period would not be considered a significant impact because there is an abundance of suitable roosting habitat available to these birds in the larger Parsons Slough Complex. Temporarily displaced waterfowl and shorebirds will move to other suitable roosting and foraging habitat during construction. Therefore this impact would be *less than significant*.

**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 CDFG or USFWS?**

Table IV-3 indicates the anticipated changes to habitat type as a result of the proposed project, both under a 'bridge only option' and a 'bridge with sill option'.

**Table IV-3. Habitat Acreages in Whistlestop Lagoon with and without the Proposed Project**

Inundation	Habitat Type	Habitat Acreages in Whistlestop Lagoon (acres) <sup>1</sup>
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Frequency		Existing Conditions	Bridge Only	3-foot Sill and Bridge
<0.05%	Upland	1.46	0.48	0.48
0.05% - 6%	Ecotone	1.10	1.29	1.42
>6% - 20%	Tidal Marsh	0.73	1.26	1.25
>20% - 99.9%	Intertidal Mudflat	1.66	10.34	1.47
100%	Subtidal	9.18	0.82	9.63

Source: Gambino pers. comm. 2011

<sup>1</sup> Assumed total acreage at 8 feet NAVD: 14.26 acres

As illustrated in this table, the most substantive changes in habitat type would occur in intertidal mudflat and subtidal habitat types. Under the ‘bridge only option’ the acreage of intertidal mudflat would increase from 1.66 acres to an estimated future 10.34 acres; a concomitant decrease in subtidal habitat (areas that occur below the elevation of MLLW and are permanently covered with water) from the current 9.18 acres to a future 0.82 acre would also occur. If a sill were constructed under the bridge in the future, the acreages of intertidal mudflat and subtidal habitats would remain similar to existing conditions.

The long-term effect of the project on natural communities would be beneficial as the estimated increase in intertidal mudflat habitat under the ‘bridge only option’ would more closely reflect historic habitat conditions that may have been present in Whistlestop Lagoon prior to the construction of the levee. Under the ‘bridge with sill’ option, there would be no increase in intertidal mudflat habitat; nevertheless, the proposed project would improve water quality in Whistlestop Lagoon by increasing nutrient and energy exchange, while also improve passage for fish and wildlife between Whistlestop and the adjacent estuarine habitat (Parsons Complex). The overall effect of both options is expected to improve ecological functions and values of natural communities within the project area. This impact is considered *less than significant*.

The potential impacts of the proposed project on EFH and HAPC are similar to the habitat effects discussed under item a) above. NOAA has initiated consultation with NMFS under the provisions of the MSA. All recommendations for the proposed project identified by NMFS during the consultation process will be implemented. This impact is considered *less than significant*.

Upland natural communities in and adjacent to the Whistlestop levee include both sensitive communities such as riparian scrub and non-sensitive communities such as blackberry scrub. These natural communities would be avoided during construction activities. Construction vehicles would use established dirt and gravel roads to access the levee, and staging of construction equipment would occur in a previously disturbed area and returned to pre-project conditions upon completion of construction activities. Therefore this impact 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?**

A delineation of waters of the U.S. in support of the proposed project was completed by Wetlands & Water Resources (WWR) in 2011. A total of 10.74-acres of waters of the U.S. were identified within the delineation area, including 7.86 acres of tidal waters and 2.88 acres of wetlands (emergent salt marsh, seasonally saturated wetland and seasonally saturated marsh) (WWR 2011). A preliminary jurisdictional determination for the

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delineation area was issued by USACE in November 2011 (Hicks pers. comm. 2011). There are no waters of the U.S. within the project area that were not considered jurisdictional by USACE. As such, it is anticipated that the delineation of waters of the U.S. prepared for USACE will be representative of waters of the State regulated by the RWQCB.

Construction activities associated with the proposed project would result in the permanent fill of waters of the U.S. and State to facilitate construction of the bridge and associated infrastructure. Specifically, up to 0.29 acre of waters of the U.S., including 0.03 acre of emergent salt marsh and seasonal wetland and 0.26 acre of tidal waters, would be permanently filled as a result of levee improvements and placement of rock-rip rap under the proposed bridge. If a sill is constructed under the bridge, the area of permanent fill would increase to approximately 0.50 acre to accommodate the side slopes of the embankment. In addition, areas adjacent to the project footprint (primarily tidal waters) could be temporarily disturbed during construction.

Temporary disturbance of this aquatic habitat is considered less than significant because of the relatively small area of disturbance, in comparison to the amount of available habitat in the larger estuary. Further, all disturbed areas would be restored to pre-project conditions. Permanent fill of waters of the U.S. resulting from installation of the bridge (or the bridge and sill if necessary) would also be considered less than significant because the small proportion of area lost would not appreciably diminish the overall function or habitat value of the area. With implementation of the BMPs described in Table IV-2 this impact is considered ***less than significant with mitigation***.

**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?**

The breaching and removal of a 20-foot section of the existing levee at the site of the proposed bridge would improve passage for fish and wildlife between Whistlestop and the adjacent estuarine habitat (Parsons Complex). Rock placed around the bridge and in the water passage would provide additional hard substrate habitat to support native oysters. Also, the replacement of the existing culverts with an open span bridge would eliminate the possibility of future culvert failures that would impede the movement of tides and fish in and out of Whistlestop. The installation of an embankment to reduce tidal scour and sediment transport, if necessary, would not interfere with movement of fish because this embankment would only extend 3-feet above the channel bottom and would be completely underwater during flood and slack tides (approximately 54-69% of the time or 13-17 hours per day on average), allowing complete access between Whistlestop and Parsons Complex during these times. As such, the proposed project would have a beneficial effect on movement of fish and improved conditions for migratory species. ***No impact*** would occur.

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

Because the proposed project would not result in the loss of any mature trees and would result in the restoration of tidal marsh habitat, it would be consistent with local policies. The proposed project would have ***no impact*** on local policies or ordinances protecting biological resources.

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**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.**

There are no Habitat Conservation Plans or Natural Community Conservation Plans that apply to the project area or vicinity. Elkhorn Slough is part of and managed in accordance with several other management plans and programs, including the following:

- Monterey Bay National Marine Sanctuary Final Management Plan (NOAA 2008);
- The Elkhorn Slough National Estuarine Research Reserve Final Management Plan 2007-2011 (ESNERR 2006).
- Draft Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California (USFWS 2010);
- Elkhorn Slough Watershed Conservation Plan (Scharffenberger et al. 1999);
- Salinas Valley Integrated Regional Water Management Plan (RMC 2006); and
- Elkhorn Slough Tidal Wetland Strategic Plan (ESTWPT 2007).

Implementation of the proposed project would be consistent with the conservation goals set forth under these plans. The proposed project would have **no impact** on any of these plans or policies.

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**V. CULTURAL RESOURCES**

Environmental Factors and Focused Questions for Determination of Environmental Impact	YES: Potentially Significant Impact	NO: Less Than Significant With Mitigation	NO: Less Than Significant Impact	NO: No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5.				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5.		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.				X
d) Disturb any human remains, including those interred outside of formal cemeteries.		X		

Comments:

Prehistoric and historic resources of the project area were assessed in a cultural resources evaluation prepared by Holman & Associates in January 2010 (Holman & Associates 2010) and Denise Bradley in December 2011 (Bradley 2012). These investigations were designed to satisfy environmental requirements specified in CEQA and its guidelines (Title 14 California Code of Resources, Section 15064.5) and NHPA Section 106 by: (1) identifying and recording significant cultural resources within an “area of potential effect” (APE), (2) offering a preliminary significance evaluation of the identified cultural resources in accordance with a Phase I investigation, (3) assessing the potential impacts to cultural resources resulting from the implementation of the proposed project, and (4) offering recommendations designed to protect resource integrity, as warranted.

The Holman & Associates report (2010) was prepared in support of the Parsons Slough Project, an independent project that involved construction of a submerged underwater barrier at the mouth of Parson Slough, and which was constructed in the spring of 2011. The APE for that project was broad and included two areas (the eastern-most oyster restoration area and the Rookery Bridge dock replacement area) that overlap with the APE for the proposed project. Bradley (2012) evaluated the potential historical significance of the Whistlestop levee itself, which was not evaluated by Holman & Associates in 2010. These two reports in combination cover the entire APE for the proposed project.

Literature Review:

An archaeological literature review at the Northwest Information Center (NWIC) was completed in 2010 and 2011 to obtain information about recorded historic and/or prehistoric sites in and around the APE, and previous archaeological surveys that had been conducted in the general vicinity of Elkhorn Slough and Whistlestop Lagoon. There are no recorded historic and/or prehistoric sites recorded inside the APE, but there are several recorded prehistoric sites in the immediate vicinity, as described below. There have been a total of three surveys that included or were immediately adjacent to the project APE. Chavez and Hupman (2001) completed an

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archaeological field study of the proposed Union Pacific Railroad (UPRR) bridge replacement project, an area southwest of the Whistlestop levee, with negative findings. Edwards and Smith (1992) completed a survey for sites of historical interest in a small parcel of land located east of the Whistlestop levee, also with negative findings. King (1982) completed an inventory of both historic and prehistoric sites inside the 980 acre Elkhorn Slough Estuarine Sanctuary (the former ESNERR), which includes all of the current APE, with the intent of developing recommendations for the preservation of those resources. King and associates recorded a number of historic sites and a total of 12 previously unrecorded prehistoric sites, and found that three major classes or types of archaeological sites could be identified in the Elkhorn Slough area, based on their surficial characteristics: (1) large occupation sites situated on ancient sand dunes; (2) moderate to large occupation sites on marine terraces; and (3) special use sites or “camps” adjacent to the historic water line. The latter two types were found to be represented within ESNERR, but the first described was not (King 1982). King noted that even the apparently simple waterside special use sites he discovered held potentially important information for the understanding of the past several thousand years of use of the estuary by the Native American population.

Finally, Jones (2002) completed a comprehensive survey of the archaeology and prehistory of Elkhorn Slough. This survey includes a discussion of the regional archaeological context, and utilizes information gained from the large number of studies that have been done up to the present in Elkhorn Slough, including references about the paleoenvironment as reconstructed through fish studies, palynological studies, and bioarchaeological studies. The Jones overview identifies the scientific importance of even the most simple of the archaeological resources found inside ESNERR (i.e., the single use resource procurement areas described as small shell mounds at the water’s edge), and discusses the types of sites that have been found and those that have not (namely resource locations that are currently buried under either water or soil deposits along the current edges of both Elkhorn Slough and Parsons Slough).

Field Inspection and Native American Consultation:

A visual inspection of the broader, Parsons Slough Project APE was conducted by Holman and Associates in December 2009. As noted above, two areas within that APE are applicable to the Whistlestop project: the western-most oyster restoration area and the Rookery Bridge dock replacement area. Both areas were inundated at the time of the site visit and no visible archaeological resources were observed.

Denise Bradley visited the project area on October 18, 2011 to assess the historical significance of the Whistlestop levee. Photographs and field notes taken during the visit provided the basis for the description of the Whistlestop levee and aided in the analysis and evaluation of its significance.

In December 2009, Miley Holman sent a letter to the Native American Heritage Commission (NAHC) requesting review of the Sacred Lands Files for the APE. Two Native American groups, the Amah Mutun Tribal Band and the Ohlone/Constonoan Esselen Nation, responded that the broader Parsons Slough Project APE was considered archaeologically sensitive and requested that a tribal monitor be retained to observe any earthmoving activities and to consult with the project proponents regarding the discovery and/or disposition of any cultural resource items or human remains.

Would the Project:

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

The two built environmental features in the APE include the Whistlestop levee and a dock. Based on information provided by ESNERR and a review of aerial photographs, the dock was added to the site within the last 25 years

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and is not considered a historic resource. The Whistlestop levee, however, appears to have been constructed sometime between 1872, when the Southern Pacific Railroad was built through the Elkhorn Slough, and 1917, when it is shown on the 1917 USGS San Juan Bautista 15-minute map, and is therefore greater than 50 years old. The builder of the levee is also unknown, but it seems likely that the levee was built to provide access between upland areas to the east and the Elkhorn rail stop on the Southern Pacific Railroad, located adjacent to the west end of the levee (Bradley 2012).

This earthen levee is an example of a common type of levee structure found throughout the Elkhorn Slough. Given the lack of information about its origins and history, Bradley (2012) determined that the Whistlestop levee does not appear to possess significance under National Register of Historic Place (NRHP) or California Register of Historical Resources (CRHR) Criteria A/1, B/2, or C/3. Therefore, the proposed project would have **no impact** on historical resources.

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

There are no known archaeological resources in the APE. However, Holman and Associates (2010) concluded that there remains a slight chance that buried archaeological resources could be uncovered if mechanical excavation would disturb previously undisturbed sediments. With implementation of Mitigation Measures V-1, the potential impacts associated with disturbing buried archaeological deposits would be **less than significant with mitigation**.

**Mitigation Measure V-1:** An archaeological monitor shall be retained to observe any mechanical excavation below the grade of the existing levee, and/or at the proposed staging area. The monitor would be responsible for identifying and retrieving any prehistoric archaeological materials uncovered for analysis, as appropriate.

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

The proposed project would not affect paleontological resources because it would not excavate or otherwise affect materials below recent sediments. Therefore, the proposed project would have **no impact** on paleontological resources.

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

There are no known human remains in the APE. However, Holman and Associates (2010) concluded that there remains a slight chance that buried archaeological resources, including human remains, could be uncovered if mechanical excavation would disturb previously undisturbed sediments. With implementation of Mitigation Measures V-1 as described in b) above, the potential impacts associated with disturbing buried human remains would be **less than significant with mitigation**.

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**VI. GEOLOGY AND SOILS**

Environmental Factors and Focused Questions for Determination of Environmental Impact	YES: Potentially Significant Impact	NO: Less Than Significant With Mitigation	NO: Less Than Significant Impact	NO: No Impact
<p>a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</p> <ul style="list-style-type: none"> <li>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.</li> <li>ii) Strong seismic ground shaking.</li> <li>iii) Seismic-related ground failure, including liquefaction.</li> <li>iv) Landslides.</li> </ul> <p>b) Result in substantial soil erosion or the loss of topsoil.</p> <p>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.</p> <p>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.</p> <p>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.</p>			<p>X</p> <p>X</p> <p>X</p> <p>X</p> <p>X</p>	<p>X</p> <p>X</p> <p>X</p>

Comments:

The Monterey Bay region overlies a large mass of Cretaceous granitic rocks termed the Salinian Block. Since the early Miocene, the Salinian Block has been carried northward on the Pacific Plate along the active transform plate boundary between the Pacific and North American tectonic plates. The relative motion between the two

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plates is described as right-lateral strike-slip. This motion is accommodated by the seismically active San Andreas Fault System.

The proposed project area is located within the active San Andreas Fault System. In the project area, the San Andreas Fault System consists of many active or potentially active fault systems, including the onshore/offshore San Andreas Fault, the onshore/offshore Palo Colorado-San Gregorio Fault Zone, and the Monterey Bay Fault Zone. The California Division of Mines and Geology has listed the San Gregorio Fault as having the potential for a significant magnitude quake (Moment magnitude [ $M_w$ ] of 6.0 or greater). The USGS estimates a 21% probability of an earthquake with a  $M_w$  of 6.7 or greater occurring in San Andreas Fault before 2032 (The Working Group on Northern California Earthquake Potential 2003).

Would the project:**a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death due to 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?**

The proposed project would not expose people or structures to potential substantial adverse effects due to rupture of a known earthquake fault, seismic groundshaking, liquefaction, or landslides because the levee and bridge would be designed to withstand groundshaking and seismic ground failure hazards, including liquefaction. Furthermore, the nearly flat project site is not subject to landsliding or other slope failure hazards. Therefore this impact would be *less than significant*.

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

Parsons Slough is a relatively large tidally-influenced salt marsh that lies slightly lower than is needed to establish vegetated habitat areas. In fact, it is the largest area of former marshlands that has subsided within Elkhorn Slough (ESTWPT 2007). Most of Parsons Slough lies between 0 to +3 feet (0 and approximately +1 meter) NAVD88. Its eastern area is lowest in elevation. Existing geomorphology indicates that the site is subsiding slowly due to various factors including head-cutting of the main entrance channel, increased tidal prism and consequent erosion, residual effects of former diking/drainage/farming, and reduced inputs of sediment from the watershed. Minor erosion may be generated in association with construction of the proposed project; however, because most in-water construction activities would occur during slack tides, this impact is expected to be *less than significant*.

**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.**

The geotechnical conditions in the vicinity of proposed project are based on two borings drilled near the UPRR bridge, which is 0.8-mile south of the project area, in September 2001 (Kleinfelder 2002). The two borings, which were located approximately 40 feet downstream of the UPRR bridge were drilled to depths of 89 and 99 feet below the channel invert. The subsurface conditions found in both borings were approximately 62 feet of soft clayey silt underlain by very dense sandy soils. The proposed project would not impact or change the value of any geological resources. *No impact* would occur.

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**d) Be located on expansive soil, as defined in Table 181-B of the Uniform Building Code (1994), creating substantial risks to life or property.**

The project would not be subject to expansive soil conditions because the soils in the project area are generally sandy and continuously wetted. Therefore they would not have any opportunity to shrink and swell. **No impact** would occur.

**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.**

No septic systems are proposed as part of the project. **No impact** would occur.

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**VII. HAZARDS AND HAZARDOUS MATERIALS**

Environmental Factors and Focused Questions for Determination of Environmental Impact	YES: Potentially Significant Impact	NO: Less Than Significant With Mitigation	NO: Less Than Significant Impact	NO: No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.			X	
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.			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within a quarter mile of an existing or proposed school.			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 ("Cortese List," prepared by the California Integrated Waste Management Board) and, as a result, would it create a significant hazard to the public or the environment.				X
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.				X
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.				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.				X
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.				X

Comments:

a – c) Small quantities of paints, solvents, and other hazardous materials could be used during construction. These would be stored and handled appropriately, and would not result in a public hazard. Construction

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equipment would not be re-fueled or repaired in the project area. The project area is not within 0.25 mile of a school. Occupational Safety and Health Administration (OSHA) regulations require that a project-specific health and safety plan be developed prior to any construction activities by the construction contractor. The site- and project-specific health and safety plan would identify potential safety hazards in the construction area (e.g., operation of heavy equipment on a barge) and would identify standard safety precautions to ensure worker health (e.g., use hearing protection). The health and safety plan would also identify whom to contact in an emergency and the location of the nearest medical facility. Measures identified in the health and safety plan would be implemented to protect workers at the site. Impacts would be **less than significant**.

d) The project area is not listed on the “Cortese List” of hazardous materials sites (<http://www.envirostor.dtsc.ca.gov>). **No impact** would occur.

e) The project area is not located within 2 miles of a public airport or under a current airport land use plan. The closest airport is located in Watsonville, approximately 10 miles north of the project area. **No impact** would occur.

f) A private airstrip is located near Long Valley Spur, approximately 1.75 miles east of the project area. The proposed project would not result in a safety hazard for people residing or working in the project area because it would not involve any obstructions to aircraft flight paths. **No impact** would occur.

g – h) The project area is not located on a busy thoroughfare and would not increase traffic; therefore, it would not interfere with an emergency response or evacuation plan. The project would be located in a National Estuarine Reserve; it would not expose people or structures to risk involving wildland fires. **No impact** would occur.

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**VIII. HYDROLOGY AND WATER QUALITY**

Environmental Factors and Focused Questions for Determination of Environmental Impact	YES: Potentially Significant Impact	NO: Less Than Significant With Mitigation	NO: Less Than Significant Impact	NO: No Impact
a) Violate any water quality standards or waste discharge requirements.		X		
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.				X
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.			X	
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.			X	
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.				X
f) Otherwise substantially degrade water quality.			X	
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.				X
h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows.				X
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.				X
j) Inundation by seiche, tsunami, or mudflow.				X

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Comments:

**TIDAL HYDROLOGY**

Historic recordings of water surface elevations within Parsons Slough have indicated that the slough has a tidal signature that is almost identical to that of the Monterey reference station (Broenkow and Breaker 2005), though there is a slight (less than one hour) lag time between tides at the two locations. The exception is Whistlestop Lagoon, where tides are muted and lag several hours behind the tidea at the entrance to Parsons Slough, even prior to culvert failure (Moffatt & Nichol 2008). Table VIII-1 provides preliminary modeling data indicating how the inundation frequency in Whistlestop Lagoon would change within implementation of the proposed project.

**Table VIII-1. Inundation Frequency in Whistlestop Lagoon with and without the Proposed Project**

Inundation Frequency	Elevation in Whistlestop Lagoon (feet, NAVD)			Acreage that Exceeds Indicated Inundation Frequency in Whistlestop Lagoon (acres) <sup>1</sup>		
	Existing Conditions	Bridge Only	3-foot Sill & Bridge	Existing Conditions	Bridge Only	3-foot Sill & Bridge
<0.05%	>5.92	>7.30	>7.30	--	--	--
0.05%	5.92	7.30	7.30	12.80	13.78	13.78
6%	4.93	5.63	5.51	11.71	12.50	12.36
20%	4.36	4.56	4.47	10.98	11.24	11.11
99.9%	2.90	0.10	3.11	9.32	0.90	9.64
100%	2.84	0.07	3.10	9.18	0.82	9.63

Source: Gambino pers. comm. 2011

<sup>1</sup> Assumed total acreage at 8 feet NAVD: 14.26 acres

**WATER QUALITY**

The primary water quality variable of interest within Parsons Slough and Whistlestop Lagoon is DO, which is one of the most critical water quality parameters to the support of biological systems. Lack of adequate DO in the water column can adversely affect a broad range of aquatic and benthic wildlife on multiple trophic levels, including fish, sharks, rays, clams, oysters, crabs, and worms. Most surface waters in Central California have average DO concentrations of 8-12 milligrams per liter (mg/L) (CCAMP 2010); 98% of coastal waters in Central California have DO levels above 5 mg/L (SWRCB 2006). Dissolved oxygen levels below 5 mg/L are typically deemed “hypoxic” (low oxygen) for aerobic organisms (fish, amphibians, etc.), while levels below 2 mg/L are considered “functionally anoxic” (most aquatic organisms would respond as if there were no oxygen).

Based on long-term water quality monitoring conducted by ESNERR, the three existing culverts, when functioning as designed, provide sufficient tidal flushing to maintain generally acceptable water quality conditions in Whistlestop Lagoon, although surveys of the area indicate the lagoon currently has lower invertebrate diversity (Ritter et al. 2008), higher Olympia oyster mortality, lower Olympia oyster recruitment (Wasson 2010), fewer sharks (Owens 2005), more bottom algae, and a much shallower oxic sediment layer than adjacent, fully tidal areas (Hughes et al. 2010). However, the culverts are not currently functioning as designed. The July 2010 failure and subsequent capping of the 36-inch diameter central culvert resulted in a significant

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decrease in tidal flow into the lagoon, which resulted in a pronounced drop in DO concentrations and episodes of anoxia (Figures 6 and 7).

Would the Project:**a) Violate any water quality standards or waste discharge requirements.**

In-water construction activities (e.g., installation of wooden piles, placement of rock rip-rap) and ground disturbance at the upland staging area have the potential to result in temporary, short-term increases in sedimentation rates and turbidity concentrations in channels and downstream of the project area, which may adversely affect water quality and channel substrate composition. However, as provided in the project description, all in-water construction would occur during slack or rising tide to ensure that construction-related turbidity in Parsons Slough would be minimized (i.e., sediment would either settle in place or be forced into Whistlestop Lagoon, where it would dissipate). In addition, if a cofferdam is used to install the bridge, any water removed from the cofferdam would be pumped to a silt curtain in Whistlestop Lagoon to decant and filter the water before it is reintroduced into the water column. Finally, the BMPs provided in Mitigation Measure BIO-1 described in Section IV, Biological Resources, would be implemented to further reduce the effects of construction-related ground disturbance. The proposed construction methods considered in combination with Mitigation Measure BIO-1 would reduce this effect to ***less than significant with mitigation***.

Similarly, although all in-water construction activities would be conducted using equipment staged in upland areas on the western and/or eastern edges of the existing levee (no heavy equipment would enter channels), construction equipment could release contaminants such as oil, grease, and fuel into adjacent water bodies, which could degrade water quality and potentially violate water quality standards for specific chemicals, DO, oil and grease, suspended sediment or toxicity. This impact would also be reduced to ***less than significant with mitigation*** through implementation of the BMPs provided in Mitigation Measure BIO-1.

**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.**

The proposed project would not 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. The proposed project would have ***no impact*** on groundwater.

**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.**

The replacement of the three existing culverts with a free span bridge and the associated opening of a 20-foot section of the existing levee would increase tidal action within Whistlestop Lagoon. As indicated in Table VIII-1, the area within Whistlestop Lagoon inundated 100% of the time would decrease from 9.18 acres to 0.82 acres under a 'bridge only' option. Although this change reflects a substantial alteration in the existing drainage pattern of the area, it is not anticipated to result in substantial erosion or siltation on- or off-site, particularly given that the levee opening would be located on the west side of the levee, outside the main channel into Parsons Slough. In fact, the increase in tidal action is anticipated to result in a beneficial impact by increasing nutrient and energy exchange with the rest of the estuary, as described above. If a sill is constructed under the

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bridge, less tidal flushing is anticipated to occur and the overall inundation frequency would remain generally unchanged (Table VIII-1). Overall, this impact would be ***less than significant***.

**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.**

As discussed in c) above, the proposed project would alter drainage patterns in the study area, but would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. All portions of the project area are tidally influenced and regularly inundated, and the proposed project would only have localized effects on areas within Whistlestop Lagoon that would be inundated 100% of the time, versus inundated only during certain portions of the tide cycle (Table VIII-1). This impact would be ***less than significant***.

**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.**

The proposed project lies within tidal waters. It would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. There would be ***no impact*** to stormwater runoff volumes or sources.

**f) Otherwise substantially degrade water quality.**

It is anticipated that replacement of the failed culverts in the Whistlestop levee with an open span bridge would improve water quality in Whistlestop Lagoon by increasing nutrient and energy exchange with the rest of the estuary. The increased tidal exchange would also decrease the eutrophication symptoms of the algal mats and shallow sediment oxic layer that currently occur in the lagoon, which would increase benthic invertebrate diversity and abundance. These anticipated effects would continue to be monitored by water quality sondes that would be deployed for at least 2 years following implementation of the proposed project. Although less pronounced, these benefits would also be realized if a sill is constructed under the bridge in the future. In the long-term, the proposed project would result in a beneficial effect on water quality. Therefore the project would have ***less than significant*** impact on 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.**

The proposed project would be located within the 100-year floodplain, which is controlled by the tides of the Pacific Ocean. The majority of Parsons Slough is zoned "AE," or high risk area. These areas have a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage (FEMA 2009). The project would not involve any new housing or structures other than the proposed bridge and dock, and no housing would be placed in a high-risk area. In the event the bridge structure failed, there would be no flooding elsewhere in Elkhorn Slough. Therefore the project would have ***no impact*** on flood hazards.

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

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As described in g) above, proposed project infrastructure (bridge and dock) would be placed with the 100-year floodplain. However, neither structure would substantially impede or redirect flood flows. In anticipation of sea level rising at an increased rate during the next 40 years, the surface of a fabricated bridge (if used) would be installed approximately 1.0 foot higher than the existing height of the levee. The bridge would be bolted to the footings and lifting points at the four corners of the bridge, which would enable the structure to be raised with portable hydraulic jacks if it is necessary in the future. Similarly, if necessary, fill could be added to the top of a concrete box culvert (if used) to mitigate the effects of sea level rise. The dock would be a floating dock able to rise and fall with the tide. As a result, the proposed project would have **no impact** on flood flows.

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

As described in g) and h) above, construction of the proposed project would not expose people or structures to significant risk of loss, injury, or death involving flooding. The proposed project would have **no impact** related to exposing people or property to flood-related risks.

**j) Inundation by seiche, tsunami, or mudflow.**

Tsunamis are triggered in a body of water by a sudden movement, such as a large-scale slump or slide, which is often caused by earthquakes, movement of the oceans crust, or large explosions. Tsunamis have extremely long wave periods and wavelengths and can travel at great speeds. The potential of a tsunami to cause great damage to coastal communities depends on coastline orientation, coastline shape, and local bathymetry (Ingmanson and Wallace 1995). The proposed project would not expose people to inundation by Tsunami waves, nor would a tsunami pose a significant threat to the proposed infrastructure. **No impact** would occur.

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**IX. LAND USE AND PLANNING**

Environmental Factors and Focused Questions for Determination of Environmental Impact	YES: Potentially Significant Impact	NO: Less Than Significant With Mitigation	NO: Less Than Significant Impact	NO: No Impact
a) Physically divide an established community.				X
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.				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan.				X

Would the Project:

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

The majority of the Parsons Complex (except for a few tips of the “Five Fingers” on the eastern side of Parsons Slough) is owned and managed by the CDFG as part of ESNERR. ESNERR operates in partnership with NOAA and the local, non-profit Elkhorn Slough Foundation (ESF). ESNERR also offers opportunities for public access and is home to an award-winning visitor’s center. The property features over 5 miles of maintained hiking trails and has boardwalks, a wildlife viewing blind, and a fully-accessible scenic overlook. Construction of the proposed project would result in the continued protection and restoration of the estuarine ecosystem and would not physically divide an established community. **No impact** would occur.

**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.**

The proposed project would not conflict with any applicable land use plan, policy or regulation. The project area is designated as Resource Conservation (Coastal Zone) in Monterey County’s North County Coastal Land Use Plan and the Coastal Implementation Plan, Part II. Because the purpose of the proposed project is to improve water quality conditions in Whistlestop Lagoon, as well as access over the existing levee, project activities would be consistent with this plan. **No impact** would occur.

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

CDFG’s current land management practices within the project area include long-term research, water-quality monitoring, education and coastal stewardship (ESNERR 2006). No construction or operational activities associated with the proposed project would result in a decrease in habitat values. The proposed project is not

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located in – nor would it conflict with – a Natural Communities Conservation Plan or Habitat Conservation Plan. Land use at the project site would not change as a result of this project. No land use plan or general plan amendments are required for this project. **No impact** would occur.

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**X. MINERAL RESOURCES**

Environmental Factors and Focused Questions for Determination of Environmental Impact	YES: Potentially Significant Impact	NO: Less Than Significant With Mitigation	NO: Less Than Significant Impact	NO: No Impact
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.				X
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.				X

Comments:

a – b) The proposed project would use typical aggregate resources in the course of construction, including rock, gravel, and sand necessary to construct the bridge and dock, rock rip-rap around the bridge opening in the levee, and to construct a sill under the bridge, if necessary. These resources are readily available in the region and no additional sources would be required to meet the project’s demand. No significant deposits of mineral resources are present in the project area and the project area is not identified as significant for mineral resources by any Federal, state, or local plans. Therefore, the project would have **no impact** on mineral resources.

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**XI. NOISE**

Environmental Factors and Focused Questions for Determination of Environmental Impact	YES: Potentially Significant Impact	NO: Less Than Significant With Mitigation	NO: Less Than Significant Impact	NO: No Impact
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.			X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.				X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.			X	
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.				X
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.				X

Comments:

This section discusses construction noise impacts on the human environment. Potential impacts of construction noise on sensitive fish and wildlife species are discussed in Section IV, Biological Resources.

Monterey County Municipal Code (10.60.030) states that construction-related noise should be managed to reduce impacts on adjacent land uses, and prohibits noise levels from exceeding 85 decibels (A-weighted) (dBA) at 50 feet (15.2 meters). This prohibition does not apply to aircraft or to any machine, mechanism, device, or contrivance operated in excess of 2,500 feet from any occupied dwelling unit (Monterey County 2009).

Noise sensitive receptors would include occupants of residences, schools, religious facilities, and parks. There are no homes, schools, or religious facilities near the project area; the nearest residence is approximately 4,500 feet southwest of the project site. However, the project area is contained entirely within a preserve, where recreational users generally expect a limited amount of noise.

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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.**

Construction activities associated with the proposed project would result in a temporary increase in noise from the operation of construction equipment in the project area. Similarly, trucks and on-road vehicles would arrive at the project area via Elkhorn Road, the only available access route. The peak noise levels associated with passing trucks and commuting worker vehicles would be approximately 70 to 75 dBA at 50 feet (15.2 meters). It is unlikely that short-term use of construction equipment would exceed the Monterey County Noise Control Ordinance level of 85 dBA at 50 feet. If these noise levels did exceed the Monterey County Noise Control Ordinance's 85 dBA limit at 50 feet, the proposed project would be in compliance with the Noise Ordinance because noise sources would be "machines, mechanisms, devices, or contrivances operated in excess of 2,500 feet from any occupied dwelling unit (Monterey County 2009)". At this distance, project noise would not be expected to be noticeable above background noise. Furthermore, construction activities would be limited in duration (up to three months), and the only sensitive noise receptors would be recreational users in the Parsons Slough Complex or adjacent Elkhorn Slough, all of which would be passing through the area or visiting for short periods of time. As a result, it is anticipated that construction noise impacts to sensitive human receptors would be *less than significant*.

**b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.**

Construction activities associated with the proposed project would result in a temporary increase in vibration from the operation of construction equipment in the project area. Occupational Safety and Health Administration regulations require that a project-specific health and safety plan be developed prior to any construction activities by the construction contractor to identify any noise levels that would expose workers and the general public to unsafe noise levels. Site- and project-specific, the health and safety plan would identify potential safety hazards in the construction area and would identify standard safety precautions to ensure worker health. The health and safety plan would also identify whom to contact in an emergency and the location of the nearest medical facility. Measures identified in the health and safety plan would be implemented to protect workers at the site. Therefore this impact would be *less than significant*.

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

No permanent increase in ambient noise would result from the proposed project. *No impact* would occur.

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

As mentioned in a), construction of the proposed project would result in a periodic increase in noise levels in the vicinity of the project area. However, this increase in construction noise would be temporary and short in duration (up to three months). The only sensitive noise receptors would be recreational users in the Parsons Slough Complex or adjacent Elkhorn Slough, all of which would be passing through the area or visiting for short

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periods of time. As a result, it is anticipated that periodic increase in construction noise levels would be *less than significant*.

**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.**

The project area is not located within 2 miles of a public airport or in an area with an airport land use plan. Project activities would not expose people residing or working in the project area to excessive noise levels. **No impact** would occur.

**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.**

The project area is located 1.75 miles west of a private airstrip. It would not subject additional people to aircraft noise. Therefore **no impact** would occur.

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**XII. POPULATION AND HOUSING**

Environmental Factors and Focused Questions for Determination of Environmental Impact	YES: Potentially Significant Impact	NO: Less Than Significant With Mitigation	NO: Less Than Significant Impact	NO: No Impact
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).				X
b) Displace substantial numbers of existing housing, units, necessitating the construction of replacement housing elsewhere.				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.				X

Comments:

a – c) The proposed project would neither create an additional demand for housing or displace any people from existing housing. The proposed project would not add any housing to the vacant, residentially zoned parcels, nor would any housing be demolished. The proposed project would not result in the creation of any new jobs or create a demand for additional employees. Construction of the proposed project would be handled by contracted workers. These contracted jobs would not result in long-term employment or population growth and, therefore, would not affect the demand for housing or the availability of housing in the local area or region. Similarly, once installed, the bridge and dock infrastructure would not directly result in an increase of jobs since they would be maintained and operated by existing ESNERR staff. Monitoring of the project area would be conducted by local research scientists or ESNERR staff and volunteers. **No impacts** to population or housing would occur.

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**XIII. PUBLIC SERVICES**

Environmental Factors and Focused Questions for Determination of Environmental Impact	YES: Potentially Significant Impact	NO: Less Than Significant With Mitigation	NO: Less Than Significant Impact	NO: No Impact
a) 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 following public services:				
i) Fire protection.				X
ii) Police protection.				X
iii) Schools.				X
iv) Parks.			X	
v) Other public facilities.				X

Comments:

a) The proposed project would not create any temporary or long-term demands on public services and there would be no new fire protection, police, schools, or other public facilities constructed to serve the proposed project. The proposed project would have **no impact** on these public services. Recreational use near Whistlestop Lagoon and the adjacent Hummingbird Island may be temporarily disturbed during construction, but this impact would be temporary and **less than significant**, as described in Section XIV, Recreation, below.

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**XIV. RECREATION**

Environmental Factors and Focused Questions for Determination of Environmental Impact	YES: Potentially Significant Impact	NO: Less Than Significant With Mitigation	NO: Less Than Significant Impact	NO: No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.			X	
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.			X	

Comments:

a – b) Recreational resources within the project area include the trail over the Whistlestop levee, which provides access to Hummingbird Island, a popular location for bird watching and hiking. There are also established hiking trails located throughout ESNERR, adjacent to the project area, that are accessible to recreational users during daytime hours. Recreational activities could be temporarily disrupted by construction activities and construction noise during installation of the bridge and dock. However, this temporary disturbance would be limited in duration (no more than three months), and the remaining trail system within ESNERR would be available for use in the interim. Once complete, the proposed project would provide improved safe access across the levee, resulting in a beneficial impact on recreational use of the project area. The proposed project is not anticipated to increase the recreational use of the area, or result in a physical deterioration of existing facilities. As a result, potential impacts to recreational facilities in the project area, and recreational use of trails in the project vicinity, would be ***less than significant***.

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**XV. TRANSPORTATION AND TRAFFIC**

Environmental Factors and Focused Questions for Determination of Environmental Impact	YES: Potentially Significant Impact	NO: Less Than Significant With Mitigation	NO: Less Than Significant Impact	NO: No Impact
a) Exceed the capacity of the existing circulation system, based on applicable measures of effectiveness (as designated in a general plan policy, ordinance, etc.), taking into account all relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
b) Conflict with an applicable congestion management program, including but not limited to, level of service standards and travel demand measures and other standards established by the county congestion management agency for designated roads or highways			X	
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.			X	
d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment).			X	
e) Result in inadequate emergency access.			X	
f) Result in inadequate parking capacity.			X	
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).				X

Comments:

a – e) The proposed project would involve transport of rock and other materials from a regional provider, such as Graniterock, which is located approximately 20 miles southeast of the project area on Highway 101. Construction vehicles would use Elkhorn Road to access the project area and stage construction equipment. Truck traffic to the project area is expected to be limited to a few trips a day at the peak. In addition, fewer than 10 construction workers would drive to the staging area daily during the construction period. Therefore, project traffic would not impact traffic on Highway 101 or other roads in the vicinity of the project. Large trucks or wide loads that could result in potential traffic hazards would be adequately flagged and, if necessary, accompanied by flag vehicles to assure no traffic conflicts. Anticipated traffic would not impact programs supporting

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alternative transportation, or result in increased access restrictions in event of an emergency. This impact would be *less than significant*.

**f) Result in inadequate parking capacity.**

Construction equipment and worker vehicles would be parked in upland areas near the entrance to Elkhorn Road, in the staging area, or in the visitor parking lot at the ESNERR visitor center, all of which have adequate capacity to accommodate the limited number of vehicles anticipated during construction. This impact would be *less than significant*. No additional vehicles or required parking are anticipated after the proposed project is complete.

**g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).**

Introduction of construction vehicles to the area would not conflict with any adopted policies, plans, or programs supporting alternative transportation. Therefore the project would have *no impact* on alternative transportation.

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**XVI. UTILITIES AND SERVICE SYSTEMS**

Environmental Factors and Focused Questions for Determination of Environmental Impact	YES: Potentially Significant Impact	NO: Less Than Significant With Mitigation	NO: Less Than Significant Impact	NO: No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board				X
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.				X
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.				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.				X
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste.			X	

Comments:

There are no utility lines or related infrastructure in the project area. There is a buried fiber optic cable conduit located on Hummingbird Island, adjacent to the project area, which is only accessible via the Whistlestop levee. In addition, five overhead power lines cross portions of Parsons Slough. All power lines enter Parsons Slough from the southwest corner originating from the Moss Landing plant and trend north, northeast, and east through the area. One overhead line crosses the east side of Parsons Slough and extends to the north along the eastern portion of South Marsh. Two more overhead lines extend northeast across Parsons Slough, and two other overhead lines extend east across the area. All are high voltage lines that would be avoided by any project work. Project construction would be designed to avoid all utilities adjacent to the project area. No new or additional utilities or service systems would be required to serve the site as a result of the proposed project.

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Would the Project:

**a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board; OR 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; OR 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.**

The project would not generate any wastewater, therefore it would not exceed any wastewater treatment requirements or result in the construction of new wastewater treatment or storm water drainage facilities or expansion of existing facilities. **No impact** would occur.

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

The project would not have any demand for water. **No impact** would occur.

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

The project would not increase demand associated with wastewater treatment facilities because it would not generate any wastewater. **No impact** would occur.

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

Small amounts of solid waste would be generated during construction and would be hauled to an approved landfill. This impact would be **less than significant**.

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

The proposed project would comply with Federal, state, and local statutes and regulations related to solid waste. This impact would be **less than significant**.

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**XVII. MANDATORY FINDINGS OF SIGNIFICANCE**

Environmental Factors and Focused Questions for Determination of Environmental Impact	YES: Potentially Significant Impact	NO: Less Than Significant With Mitigation	NO: Less Than Significant Impact	NO: No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major Periods of California history or prehistory?			X	
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?				X

Would the Project:

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

Potentially significant effects on environmental quality, including impacts to biological resources, cultural resources and hydrology/water quality are identified in the preceding sections of this Initial Study. As detailed in this document, those impacts would be less than significant with implementation of mitigation measures identified in this Initial Study. The project as proposed does not have the potential to degrade the quality of the environment, as it is a restoration project, and the overall effects would be beneficial to habitat for fish and wildlife species. These effects would be *less than significant*.

**b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?**

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CEQA Guidelines (Section 15355[b]) define cumulative impacts as those resulting from closely related past, present, and reasonably foreseeable projects. CEQA Guidelines (Section 15125[a]) also define the analytical baseline as the conditions on the ground at the time that the Initial Study is prepared. Impacts of past projects are generally considered as part of these baseline conditions.

Two restoration projects have been planned, approved, or recently implemented in or near project area, as noted below. These project would have similar temporary construction impacts to those of the proposed project, but would not overlap in time or location. Long-term impacts to the Elkhorn Slough estuary from these projects in combination with the proposed project are anticipated to be cumulatively beneficial.

No other infrastructure improvement projects are proposed in or near the project area, or in a location or manner that could result in a cumulative effect on resources considered in this Initial Study.

- Oak Woodland and Freshwater Habitat Restoration Plan – This project would remove about 13 acres of Eucalyptus trees within ESNERR over a 10 year period to restore oak woodland habitat and provide a more suitable habitat for native animal species. This project would also restore Lower Cattail Swale, which provides important habitat for native amphibian species. An application for a Coastal Development Permit for this project has been submitted to Monterey County.
- Minhoto Tidal Marsh Restoration Project – This project would restore up to 55 acres of tidal marsh southwest of the project area. Restoration objectives would be accomplished through the placement of clean fill material to restore elevations on-site to those able to support tidal marsh vegetation. This project is currently in a preliminary design phase, with environmental review slated for 2012 / 2013.
- Parsons Slough Project – This project involved construction of an underwater barrier (sill) at the mouth of Parsons Slough to reduce tidal scour in the larger Elkhorn Slough Estuary. This project was completed in 2010.
- Moss Landing Wildlife Area Phase 2 Project – CDFG project on a managed wildlife area with goals to maximize habitat variety and quality for nesting and foraging birds, particularly breeding and rearing habitat for the western snowy plover; provide additional opportunities for wildlife viewing; improve public access; and create access compliant with the Americans with Disabilities Act.
- Triple M Ranch Wetland Restoration Project – Restoration project to improve water quality, restore sensitive and special-status species habitat, and demonstrate compatibility between natural areas and production farming. The project site would be located in the Elkhorn Slough watershed east of Sill Road and south of Hall Road.

The proposed project would not contribute substantively to any cumulative adverse environmental impacts. Cumulative impacts would be *less than significant*.

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

As described in this Initial Study, the proposed project would not result in health risks or substantial emissions of air pollutants. It would have no effect on utilities or services. Noise impacts would be short-term and reduced to less than significant levels by restrictions on maximum daytime and nighttime noise levels. The proposed project would have *no impact* on environmental factors that could cause substantial adverse effects on human beings, either directly or indirectly.

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**PERSONAL COMMUNICATION**

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## Appendix A

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**Special-Status Plant Species and Wildlife Species with Potential to Occur in the Whistlestop Levee Repair Project Area, Monterey County**

**TABLE A-1. SPECIAL-STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR IN THE WHISTLESTOP LEVEE REPAIR PROJECT AREA, MONTEREY COUNTY**

Common Name Scientific Name	Listing Status (Federal/State)	General Habitat	Potential for Occurrence in Project Area
<b>Federal or State Listed Species</b>			
Ben Lomond spineflower <i>Chorizanthe pungens</i> var. <i>hartwegiana</i>	FE / -	Maritime Ponderosa Pine Sandhills	None: lacks suitable vegetation associations and substrate.
Monterey Spineflower <i>Chorizanthe pungens</i> var. <i>pungens</i>	FT / -	Sandy Sites in: Maritime Chaparral Cismontane Woodland Coastal Dunes Coastal Scrub Valley and Foothill Grassland	None: lacks suitable vegetation associations and substrate.
Monterey Spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i>	FE / -	Sandy or Gravelly Sites in: Maritime Chaparral Openings in Cismontane Woodland Coastal Dunes Coastal Scrub	None: lacks suitable vegetation associations and substrate.
Seaside Bird's-beak <i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	- / CE	Sandy, Often Disturbed Sites in: Closed-cone Coniferous Forest Maritime Chaparral Cismontane Woodland Coastal Dunes Coastal Scrub	None: lacks suitable vegetation associations and substrate.
Yadon's Wallflower <i>Erysimum menziesii</i> ssp. <i>yadonii</i>	FE / CE	Coastal Dunes	None: lacks suitable vegetation associations or substrate present.
Monterey Gilia <i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	FE / CT	Sandy Sites in openings of: Maritime Chaparral Cismontane Woodland Coastal Dunes Coastal scrub	None: lacks suitable vegetation associations and substrate.
Santa Cruz Tarplant <i>Holocarpha macradenia</i>	FT / CE	Often on Clay Sites in: Coastal Prairie Coastal Scrub Valley and Foothill Grassland	None: lacks suitable vegetation associations and substrate.
Contra Costa Goldfields <i>Lasthenia conjugens</i>	FE / -	Occurs on Mesic Sites in: Cismontane Woodland Alkaline Playas Valley and Foothill Grassland Vernal Pools	None: lacks suitable vegetation associations and vernal hydrology.
Tidestrom's lupine <i>Lupinus tidestromii</i>	FE / CE	Coastal Dunes	None: lacks suitable vegetation associations and substrate.

Exhibit 3: Mitigated Negative Declaration

**Whistlestop Levee Repair and Public Access Improvement Project**

**Draft Initial Study Checklist** (pursuant to the California Environmental Quality Act) – Appendix A

Common Name Scientific Name	Listing Status (Federal/State)	General Habitat	Potential for Occurrence in Project Area
White-rayed Pentachaeta <i>Pentachaeta bellidiflora</i>	FE / CE	Often on Serpentine Sites in: Cismontane Woodland Valley and Foothill Grassland	None: lacks suitable vegetation associations and substrate.
Yadon's Piperia <i>Piperia yadonii</i>	FT / -	Occurs on Sandy Sites in: Coastal Bluff Scrub Closed-cone Coniferous Forest Maritime Chaparral	None: lacks suitable vegetation associations and substrate.
San Francisco popcorn- flower <i>Plagiobothrys torreyi</i> <i>var. diffusus</i>	- / CT	Coastal Prairie Valley and Foothill Grassland	None. Not documented from Monterey County. Project area lacks suitable vegetation associations.
<b>California Native Plant Society Listed and Locally Rare Species</b>			
Hooker's manzanita <i>Arctostaphylos hookeri</i> <i>ssp. hookeri</i>	CNPS 1B.2	Chaparral	None: lacks suitable vegetation associations.
Pajaro manzanita <i>Arctostaphylos</i> <i>pajaroensis</i>	CNPS 1B.1	Chaparral	None: lacks suitable vegetation associations.
Monterey Indian plant <i>Castilleja latifolia</i>	CNPS 4.3	Coastal dune	None: lacks suitable vegetation associations.
Monterey ceanothus <i>Ceanothus cuneatus</i> <i>var. rigidus</i>	CNPS 4.2	Chaparral	None: lacks suitable vegetation associations.
Congdon's tarplant <i>Centromadia parryi</i> <i>ssp.</i> <i>Congdonii</i>	CNPS 1B.2	Grassland	None: lacks suitable vegetation associations.
Eastwood's goldenbush <i>Ericameria fasciculata</i>	CNPS 1B.1	Maritime chaparral	None: lacks suitable vegetation associations.
Fragrant fritillary <i>Fritillaria liliacea</i>	CNPS 1B.2	Cismontane woodland, Coastal prairie, coastal scrub, valley and foothill grassland near the coast, on clay or serpentine soils	None: lacks suitable vegetation associations.
Small-leaved lomatium <i>Lomatium parvifolium</i>	CNPS 4.2	Chaparral, coastal scrub, and riparian woodland	None: lacks suitable vegetation associations.
Gairdner's Yampah <i>Perideridia gairdneri</i> <i>ssp. gairdneri</i>	CNPS 4.2	Grassland and chaparral	None: lacks suitable vegetation associations.
Artist's popcorn flower <i>Plagiobothrys</i> <i>chorisianus var.</i> <i>chorisianus</i>	CNPS 1B.2	Occurs in mesic valley and foothill grassland and possibly in coastal salt marsh and swamps	None: Documented from Moss Landing Power Plant. Suitable habitat within project area but not within footprint.

**Whistlestop Levee Repair and Public Access Improvement Project**

**Draft Initial Study Checklist** (pursuant to the California Environmental Quality Act) – Appendix A

Common Name Scientific Name	Listing Status (Federal/State)	General Habitat	Potential for Occurrence in Project Area
Pine rose <i>Rosa pinetorum</i>	CNPS 1B.2	Closed cone coniferous forest	None: lacks suitable vegetation associations.
Santa Cruz clover <i>Trifolium buckwestiorum</i>	CNPS 1B.1	Occurs in broadleaved upland forest, cismontane woodland, and margins of coastal prairies	None: lacks suitable vegetation associations.
Water sack clover <i>Trifolium depauperatum</i> <i>var. hydrophilum</i>	CNPS 1B.2	Marshes and swamps, and valley and foothill grassland, and vernal pools. Occurs on mesic and alkaline sites.	None. Documented from Moro Cojo Slough. Suitable habitat within project area but not within footprint.

Source: CNDDDB 2010; USFWS 2010; ESNERR 2006

**STATUS CODES:**

FEDERAL

FE = Listed as Endangered by the USFWS

FT = Listed as Threatened by the USFWS

FC = Candidate for Federal listing

STATE

CE = Listed as Endangered by the State of California

CT = Listed as Threatened by the State of California

CALIFORNIA NATIVE PLANT SOCIETY (CNPS STATUS)

1A – Plants presumed extinct in California

1B – Plants rare, threatened, or endangered in California and elsewhere

2 – Plants rare, threatened, or endangered in California, but more common elsewhere

3 – Plants about which we need more information – a review list

4 – Plants of limited distribution – a watch list

CNPS THREAT CODE EXTENSIONS:

.1 -- Seriously endangered in California

.2 -- Fairly endangered in California

.3 -- Not very endangered in California

## Whistlestop Levee Repair and Public Access Improvement Project

Draft Initial Study Checklist (pursuant to the California Environmental Quality Act) – Appendix A

**TABLE A-2. SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE WHISTLESTOP LEVEE REPAIR PROJECT AREA, MONTEREY COUNTY**

Common Name Scientific Name	Listing Status (Federal/State)	General Habitat	Potential for Occurrence in Project Area
<b>FISHES</b>			
Central California coast coho salmon <i>Oncorhynchus kisutch</i>	FE / CE	Anadromous. Spawns in freshwater in areas with suitable spawning gravels. Juveniles require cool, clean water, cover, and sufficient dissolved oxygen.	Not expected. Known to occur in Monterey Bay, but have not been observed in Elkhorn Slough. Although the species may at times stray into the Elkhorn Slough, their occurrences are deemed sufficiently infrequent that the proposed project would be unlikely to impact the species.
Central California coast steelhead <i>Oncorhynchus mykiss</i>	FT / CSC	Anadromous. Spawns in freshwater in areas with suitable spawning gravels. Juveniles require cool, clean water, cover, and sufficient dissolved oxygen.	Possible. Steelhead of unknown run/ESU have occasionally been observed in Elkhorn Slough. Although the species may at times stray into the project area, their occurrences are deemed sufficiently infrequent that the proposed project would be unlikely to impact the species.
Central Valley Spring- run Chinook Salmon <i>Oncorhynchus tshawytscha</i>	FT / CT	Anadromous. Inhabit major rivers in central California. Migrate into headwaters in February through July and hold in pools until spawning period. Spawn in central valley.	Possible. Chinook salmon of unknown run/ESU have occasionally been observed in Elkhorn Slough. Although the species may at times stray into the project area, their occurrences are deemed sufficiently infrequent that the proposed project would be unlikely to impact the species.
Sacramento River Winter-run Chinook Salmon <i>Oncorhynchus tshawytscha</i>	FE / CE	Anadromous. Inhabit major rivers in central California. Spawn in the Sacramento River watershed.	Possible. Chinook salmon of unknown run/ESU have occasionally been observed in Elkhorn Slough. Although the species may at times stray into the project area, their occurrences are deemed sufficiently infrequent that the proposed action would be unlikely to impact the species.

**Whistlestop Levee Repair and Public Access Improvement Project****Draft Initial Study Checklist** (pursuant to the California Environmental Quality Act) – Appendix A

<b>Common Name Scientific Name</b>	<b>Listing Status (Federal/State)</b>	<b>General Habitat</b>	<b>Potential for Occurrence in Project Area</b>
Central Valley Fall/Late Fall-run Chinook Salmon <i>Oncorhynchus tshawytscha</i>	- / CSC	Anadromous. Inhabit major rivers in central California. Spawn in central valley.	Possible. Chinook salmon of unknown run/ESU have occasionally been observed in Elkhorn Slough. Although the species may at times stray into the project area, their occurrences are deemed sufficiently infrequent that the proposed action would be unlikely to impact the species.
North American green sturgeon, Southern Distinct Population Segment (DPS) <i>Acipenser medirostris</i>	FT / -	Within the marine environment, the Southern DPS occupies coastal bays and estuaries from Monterey Bay, California, to Puget Sound, Washington.	Possible. There is very little data on green sturgeon presence in, and use of, Elkhorn Slough. Based on available data their occurrences are deemed sufficiently infrequent that the proposed action would be unlikely to affect the species.
Tidewater goby <i>Eucyclogobius newberryi</i>	FE / -	Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water & high oxygen levels.	Not expected. Known to occur in Bennett and Moro Cojo sloughs within the Elkhorn Slough Complex, but the species' dependence on low tidal flows is expected to exclude it from the tidally influenced project area.
<b>INVERTEBRATES</b>			
Ohlone tiger beetle <i>Cicindela ohlone</i>	FE / -	Found only on, and adjacent to, coastal prairie terrace habitat marked by poorly drained clay soils. Specific clay soils that provide moisture, composition, and temperature conditions necessary for egg-laying and larval development.	None. No suitable habitat for this species within or adjacent to the project area.
Globose dune beetle <i>Coelus globosus</i>	- / -	Burrows beneath the sand surface of foredunes and sand hummocks, and is most commonly found beneath dune vegetation.	Not Expected. Known from Sunset State Beach and Salinas River State Beach within 5 miles of the project area. No suitable dune habitat in project area.
Monarch butterfly <i>Danaus plexippus</i>	- / -	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Host plant is milkweed ( <i>Asclepius</i> spp.). Fall migration occurs from August through October. Overwintering roosts in California commonly occur on Eucalyptus tree.	Not Expected. Known from ESNERR and documented CNDDDB occurrence within 5 miles of project area. Suitable winter roost sites in upland habitat adjacent to project area.

Exhibit 3: Mitigated Negative Declaration

**Whistlestop Levee Repair and Public Access Improvement Project**

**Draft Initial Study Checklist** (pursuant to the California Environmental Quality Act) – Appendix A

Common Name Scientific Name	Listing Status (Federal/State)	General Habitat	Potential for Occurrence in Project Area
California brackish water snail <i>Tryonia imitator</i>	- / -	Coastal lagoons, estuaries and salt marshes in permanently submerged areas in a wide range of sediment types and salinities.	Possible. Known from the estuary but not from Whistlestop Lagoon or the Parsons Slough Complex (K. Wasson pers. comm. 2010).
Zayante band-winged grasshopper <i>Trimerotropis infantilis</i>	FE / -	Open habitat characterized by a sparse canopy of ponderosa pines surrounded by a diverse assemblage of subshrubs and herbaceous plants.	None. No suitable habitat for this species within or adjacent to the project area.
Olympia oyster <i>Ostrea lurida</i>	- / -	The Olympia oyster survives in broad range of habitats but most abundant in estuaries, small rivers, and streams; however it is limited almost entirely to estuaries throughout its range from Baja California to Alaska.	Present. Small population occupies Whistlestop Lagoon. Also known from Elkhorn Channel and from the Parsons Complex.
<b>AMPHIBIANS</b>			
California Tiger Salamander <i>Ambystoma californiense</i>	FT / PT	Freshwater ponds and wetlands in annual grasslands and grassy understory of valley-foothill hardwood forests. Use underground refuges, usually ground squirrel burrows.	Not Expected. This species has been documented within 1 mile of the project area, but does not occur in suitable habitat within the Reserve (N. D'Amore pers comm. 2012, CNDDDB 2012).
Santa Cruz Long-Toed Salamander <i>Ambystoma macrodactylum croceum</i>	FE / CE, FP	Wet meadows, coastal woodlands and chaparral near ponds and freshwater marshes. Breeds in shallow, temporary freshwater ponds.	Not Expected. Breeding habitat for this species is located 0.5-mile south of the project area in Cattail Ponds. Other known populations located >2.0 miles from the project site in McClusky and Moro Cojo Sloughs. Species is not expected to migrate into the vicinity of the proposed project area.
California red-legged frog <i>Rana draytonii</i>	FT / CSC	Lowlands or foothills in or near sources of water with shrubby or emergent riparian vegetation.	Possible. The proposed project footprint does not contain suitable aquatic or upland habitat for this species. However, frogs have been documented in freshwater habitat within 1 mile of the Whistlestop levee. The nearest breeding pond is Rookery Pond complex, which is approximately 1,080 feet (about 330 meters) east of the Whistlestop Levee. Also known breeding in Cattail Ponds located 0.5-mile south of the proposed project.

Exhibit 3: Mitigated Negative Declaration

**Whistlestop Levee Repair and Public Access Improvement Project**

**Draft Initial Study Checklist** (pursuant to the California Environmental Quality Act) – Appendix A

Common Name Scientific Name	Listing Status (Federal/State)	General Habitat	Potential for Occurrence in Project Area
<b>REPTILES</b>			
Silvery legless lizard <i>Anniella pulchra pulchra</i>	- / CSC	Inhabit areas with sandy or loose loamy soils such as under sparse vegetation of beaches, chaparral, or pine-oak woodland; or near sycamores, cottonwoods, or oaks that grow on stream terraces.	None. No suitable sand dune habitat occurs within the project area.
Black legless lizard <i>Anniella pulchra nigra</i>	- / CSC, FP	Sand dunes and moist sandy soils with bush lupine and mock heather as dominant plants	None. No suitable sand dune habitat occurs within the project area.
Western pond turtle <i>Emys (Clemmys) marmorata</i>	- / CSC	A moderate sized freshwater turtle that inhabits permanent or nearly permanent bodies of water and low gradient slow moving streams below 6,000 feet elevation.	Possible. No suitable freshwater habitat occurs within the project area but Rookery Ponds (1,080 feet east of the footprint) may provide suitable aquatic habitat for this species.
<b>BIRDS</b>			
Double-crested Cormorant <i>Phalacrocorax auritus</i>	- / WL	Aquatic habitats such as lakes, artificial impoundments, slow-moving rivers, lagoons, estuaries, swamps, seacoasts and coastal cliffs.	Present. Suitable nesting and roosting habitat in pines and eucalyptus trees adjacent to the project area. Documented roosting from the project area.
California Gull <i>Larus californicus</i>	- / WL	Habitat generalist in non-breeding season. Breeds in lakes, farms, and marshes. Nests on gravel islands in large rivers or lakes.	Present. Suitable habitat present in and adjacent to project area.
Long-billed Curlew <i>Numenius americanus</i>	- / WL	Coastal mudflats and marshes. Breeds in dry grasslands and shrub savannah.	Present. Suitable foraging habitat present in the project area.
California Brown Pelican <i>Pelicanus occidentalis californicus</i>	DL / FP	Pelagic. Beach and nearshore waters. Roosts during daytime on area beaches.	Present. Roosts in open water in Whistlestop Lagoon and on South Marsh. Species has been delisted from ESA due to recovery.
Western Snowy Plover <i>Charadrius alexandrinus nivosus</i>	FT / CSC	Inhabit coastal beaches above the normal high-tide limit in flat, open areas with sandy or saline substrates; vegetation and driftwood are usually sparse or absent.	Not Expected. Present in former salt ponds west of project area near Moss Landing. Project activities would not impact breeding habitat for plover.
California Least Tern <i>Sterna antillarum browni</i>	FE / CE,FP	Nearshore beaches with bare or sparse vegetation, including sandy beaches, alkali flats, paved areas or land fills. Salt marshes.	Not Expected. Observed in Elkhorn Slough during migration. Does not nest in project area.

Exhibit 3: Mitigated Negative Declaration

**Whistlestop Levee Repair and Public Access Improvement Project**

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Common Name Scientific Name	Listing Status (Federal/State)	General Habitat	Potential for Occurrence in Project Area
California Clapper Rail <i>Rallus longirostris obsoletus</i>	FE / CE, FP	Saltwater and brackish marshes traversed with tidal sloughs. Associated with abundant growths of pickleweed.	None. Last recorded in the area in 1972. Restricted to salt marsh habitats in San Francisco Bay.
California Black Rail <i>Laterallus jamaicensis coturniculus</i>	- / CT, FP	Salt and freshwater marshes, grassy wet meadows.	None. No suitable marsh habitat in project area. No known from within 5 miles of project area (CNDDDB 2012).
White-tailed Kite <i>Elanus leucurus</i>	- / FP	Inhabits grasslands, agriculture fields, oak woodlands, savannah and riparian habitats in rural and urban areas. Feeds primarily on California voles. Year-round resident of Central and Coastal California. Breeding begins in February; sometimes double-brooded.	Possible. Known near South Marsh (CNDDDB 2012). Suitable nesting habitat present in eucalyptus trees near Whistlestop Lagoon.
Northern Harrier <i>Circus cyaneus</i>	- / CSC	Inhabits both freshwater and saltwater marshes and adjacent upland grasslands. Nests on the ground in tall grasses in grasslands and meadows. Breeding begins in March; single-brooded.	Possible. Suitable nesting and foraging habitat in upland habitat adjacent to project area.
Bald Eagle <i>Haliaeetus leucocephalus</i>	DL, EPA/ SE, FP	Winters at lakes, reservoirs, river systems and some rangelands and coastal wetlands. Nests in large conifers near aquatic sources. Breeding begins in May; single-brooded.	Not Expected. Suitable foraging habitat in project area. No documented nesting from the project area and only 1 or 2 historical sightings from the larger estuary.
Golden Eagle <i>Aquila chrysaetos</i>	EPA / FP	A large diurnal raptor that nests on cliffs and in large trees in open areas. Forages in open terrain including grasslands, deserts, savannahs and early successional stages of forest and shrub habitats.	Possible. Suitable foraging habitat in vicinity of project area. This species is occasionally observed soaring over Parsons Slough grasslands. No suitable nesting habitat in or near project area.
Osprey <i>Pandion haliaetus</i>	- / 3503.5	Inhabits rivers, lakes and coastal habitats. Nest in tall trees near water bodies with sufficient prey. Range is almost cosmopolitan throughout California.	Possible. Suitable foraging habitat in project area. Suitable nesting habitat in eucalyptus trees.
Peregrine Falcon <i>Falco peregrinus anatum</i>	- / CE, FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodlands; open grasslands, meadows or marshes.	Not Expected. Migrant only. Nesting not documented from Elkhorn Slough.

Exhibit 3: Mitigated Negative Declaration

**Whistlestop Levee Repair and Public Access Improvement Project**

**Draft Initial Study Checklist** (pursuant to the California Environmental Quality Act) – Appendix A

Common Name Scientific Name	Listing Status (Federal/State)	General Habitat	Potential for Occurrence in Project Area
Short-eared Owl <i>Asio flammeus</i>	- / CSC	Inhabits open grasslands, prairies, marshes and agricultural fields with sufficient vegetative cover and abundant small mammal prey. Nests on the ground in a shallow depression.	Possible. Suitable nesting and foraging habitat in grasslands adjacent to project area. Known from vicinity (CNDDDB 2012).
Western Burrowing Owl <i>Athene cunicularia hypugaea</i>	- / CSC	Valley bottoms and foothills with low vegetation and fossorial mammal activity.	Possible. Suitable upland habitat in grassland adjacent to Whistlestop Lagoon. Not documented from within 2 miles of the project area (CNDDDB 2012).
Bank Swallow <i>Riparia riparia</i>	- / CT	Riparian and other lowland habitats. Requires vertical banks/cliffs with fine/ sandy soils near streams, rivers, lakes, or ocean for breeding.	Not Expected. No suitable bank habitat present in project area. Known from approximately 1 mile northwest of project area (CNDDDB 2012).
Black Swift <i>Cypseloides niger</i>	- / CSC	Nests on canyon walls near water and sheltered by overhanging rock or moss, preferably near waterfalls or on sea cliffs.	Not Expected. No suitable nesting habitat in project area. No known occurrences from vicinity.
Tricolored Blackbird <i>Agelaius tricolor</i>	- / CSC	Highly colonial species, most numerous in central valley. Largely endemic to California. Nest in emergent vegetation within aquatic and riparian habitats.	Possible. Limited suitable emergent vegetation (blackberry) near Whistlestop Lagoon. This species has been documented 2 miles north of the project area (CNDDDB 2012).
<b>MAMMALS</b>			
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	- / CSC	Deciduous woodlands, scrubs, and thickets.	None. No suitable habitat present in project area.
Townsend's big-eared bat <i>Corynorhinus (=Plecotus) townsendii townsendii</i>	- / CSC	Inhabits caves and mines, but may also use bridges, buildings, rock crevices and tree hollows in coastal lowlands, cultivated valleys and nearby hills characterized by mixed vegetation throughout California below 3,300 meters.	Possible. Marginal foraging and roosting habitat present in trees near project area.
Hoary bat <i>Lasiurus cinereus</i>	- / -	Ubiquitous throughout California. A solitary foliage rooster that prefers evergreens, but will use deciduous trees in forested habitats, particularly in edge habitat. May forage in small to large groups. Feeds primarily on moths, but will eat a variety of other insects. Migrates great distances.	Not Expected. Suitable foraging habitat present in study area. Known from within 5 miles of project area (CNDDDB 2012).

Exhibit 3: Mitigated Negative Declaration

**Whistlestop Levee Repair and Public Access Improvement Project**

**Draft Initial Study Checklist** (pursuant to the California Environmental Quality Act) – Appendix A

Common Name Scientific Name	Listing Status (Federal/State)	General Habitat	Potential for Occurrence in Project Area
Salinas harvest mouse <i>Reithrodontomys megalotis distichilis</i>	- / -	Fresh and brackish water wetlands and adjacent uplands.	Possible. Known from ESNERR and from within 1 mile of project area (CNDDDB 2012).
Monterey / Salinas Ornate Shrew <i>Sorex ornatus salarius</i>	- / CSC	Ornate shrews are typically found in brackish water marshes; along streams; in brushy areas of valleys and foothills; and in forests. They especially favor low, dense vegetation that forms a cover for worms and insects.	Possible. Suitable brushy vegetation present near Whistlestop Lagoon, however this species has not been documented from the area.
Southern sea otter <i>Enhydra lutris nereis</i>	FT, MMPA / FP	An aquatic mustelid that inhabits shallow nearshore waters with rocky or sandy bottoms that support large populations of benthic invertebrate prey.	Not Expected. Inhabits Parsons Slough but individual otters do not travel north of South Marsh located 2,100 feet south of Whistlestop Lagoon.
Harbor seal <i>Phoca vitulina</i>	MMPA / -	Marine mammal found in temperate coastal habitats. Uses rocks, reefs, beaches, and drifting glacial ice as haul-out and pupping sites. Found near shore in estuaries or protected waters, but may range far out to sea in deep pelagic waters or up freshwater rivers and into lakes.	Not Expected. Inhabit Parsons Slough but seals do not travel north of South Marsh located 2,100 feet south of Whistlestop Lagoon.
American badger <i>Taxidea taxus</i>	- / CSC	A large mustelid that inhabits open areas with friable soils within woodland, grassland, savannah and desert habitats. A fossorial mammal that preys predominately on ground squirrels and pocket gophers.	Not expected. Suitable upland habitat is present in the grassland east of Whistlestop Lagoon, however this species has never been observed within the Reserve. Known from within 5 miles of the project area (CNDDDB 2012).

Source: CNDDDB 2010, USFWS 2010

STATUS CODES:

FEDERAL

FE = Listed as Endangered

FT = Listed as Threatened

DL = Delisted

MMPA = Marine Mammal Protection Act

EPA = Bald Eagle and Golden Eagle Protection Act

STATE

CE = Listed as Endangered by the State of California

CT = Listed as Threatened by the State of California

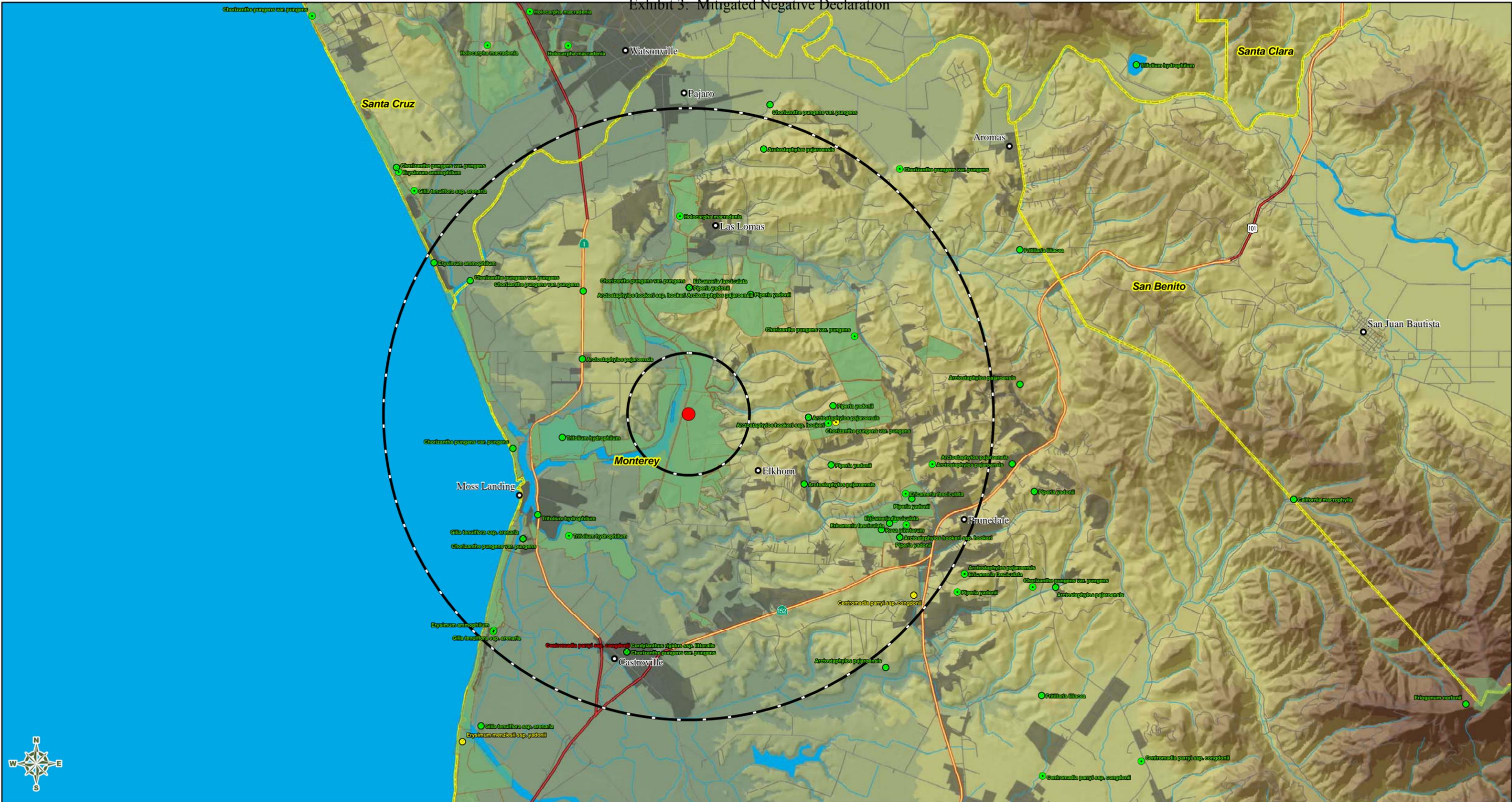
PT = Proposed for Listed as Threatened

CSC = California species of special concern

FP = California Fish and Game Code §4700 (fully protected species)

WL = California Fish and Game Watch List

3503.5 = California Fish and Game Code §3503.5 (no harm to raptor nests or eggs)



January 2012

Legend	
<span style="color: red;">●</span> Project Area Location	Public Land and Easements
<span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; display: inline-block;"></span> Distance Radii	<span style="background-color: #d3d3d3; border: 1px solid black; width: 10px; height: 10px; display: inline-block;"></span> Water Bodies
<span style="border: 2px dashed black; border-radius: 50%; width: 10px; height: 10px; display: inline-block;"></span> 1 & 5 miles	<span style="color: blue;">~</span> Waterways
<span style="border: 1px solid yellow; width: 10px; height: 10px; display: inline-block;"></span> County Boundaries	California Natural Diversity Database Occurrences Presence
	<span style="color: green;">●</span> Presumed Extant
	<span style="color: yellow;">●</span> Possibly Extirpated
	<span style="color: red;">●</span> Extirpated
	California Natural Diversity Database Occurrences Precision
	<span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; display: inline-block;"></span> Non-Specific
	<span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; display: inline-block; border-style: dashed;"></span> Specific

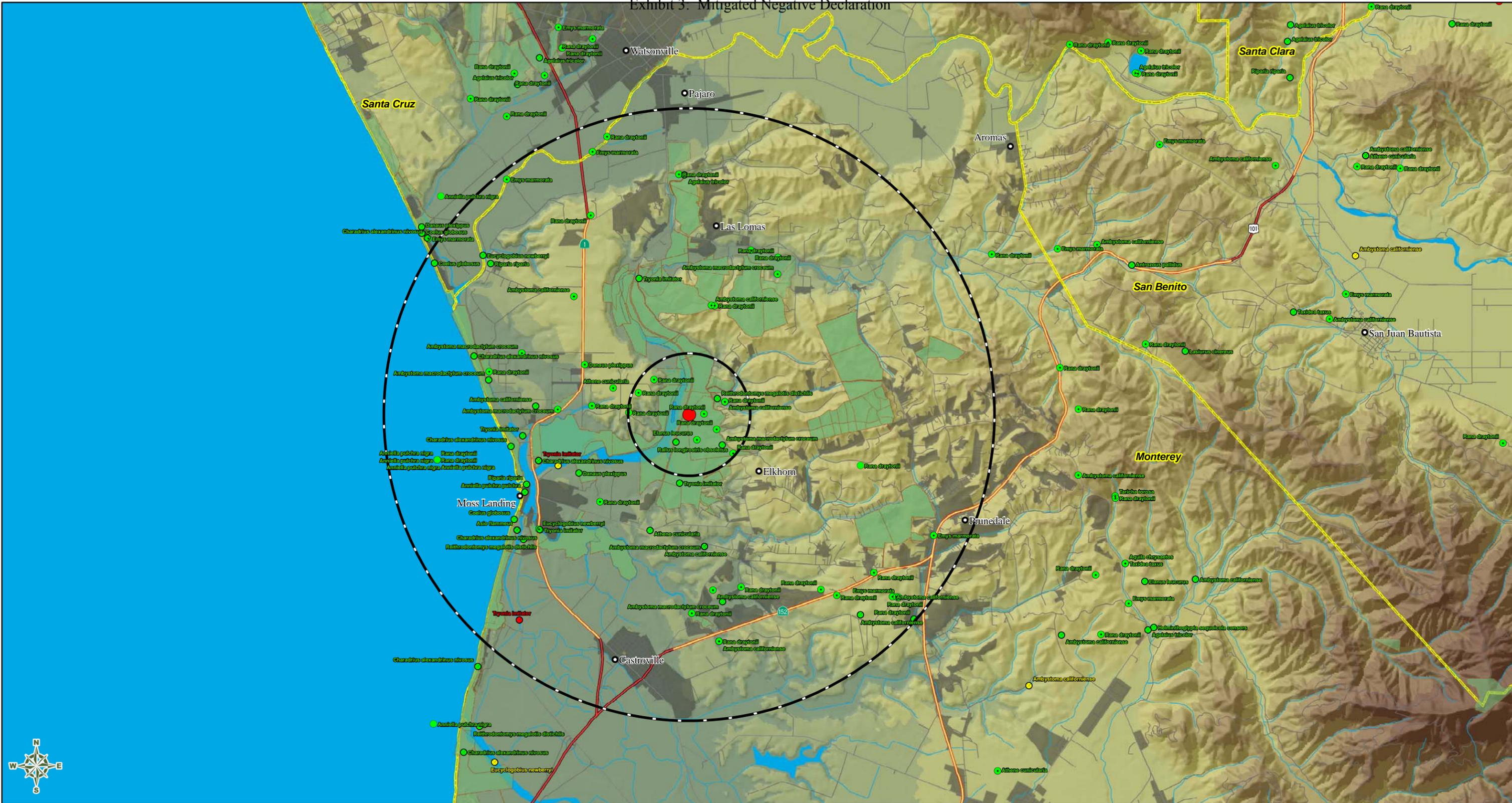
## Appendix A

### Special Status Plants Within 1 and 5 Miles of the Project Area

#### Whistlestop Levee Repair and Public Access Improvement Project

#### ESNERR





January 2012

Legend			
<span style="color: red;">●</span> Project Area Location	Public Land and Easements	California Natural Diversity Database Occurrences Presence	California Natural Diversity Database Occurrences Precision
Distance Radii	Water Bodies	<span style="color: green;">●</span> Presumed Extant	Non-Specific
County Boundaries	Waterways	<span style="color: yellow;">●</span> Possibly Extirpated	Specific
		<span style="color: red;">●</span> Extirpated	

**Appendix A**  
**Special Status Animals Within 1 and 5 Miles of the Project Area**  
 Whistlestop Levee Repair and Public Access Improvement Project  
 ESNERR

