CALENDAR ITEM
C45

A 13 04/23/15
W 26823
S 5 G. Asimakopoulos

GENERAL LEASE - PUBLIC AGENCY USE

APPLICANT:

Port of Stockton
2201 W. Washington Street
Stockton, CA 95203

AREA, LAND TYPE, AND LOCATION:

Sovereign land in the San Joaquin River, on Rough and Ready Island, adjacent to Assessor's Parcel Numbers 145-020-15, 145-020-19, and 162-030-07, near the city of Stockton, San Joaquin County.

AUTHORIZED USE:

Demolition and removal of an existing two-lane bridge; and the construction, use, and maintenance of two temporary trestle bridges and a new four-lane removable span bridge

LEASE TERM:

25 years, beginning April 23, 2015.

CONSIDERATION:

The public use and benefit; with the State reserving the right at any time to set a monetary rent if the Commission finds such action to be in the State's best interests.

SPECIFIC LEASE PROVISIONS:

1. Lessee shall not place, attach, or authorize the placement of any utilities or other improvements on the Bridge or within the Lease Premises without the Lessor's prior review and approval. Separate leases may need to be obtained for all utilities not operated by Lessee.

2. Lessee shall place warning signage and/or buoys, clearly visible from the shore and in the water, both upstream and downstream of the construction site, to provide notice of the bridge replacement project and to advise the public to exercise caution. Lessee shall place and maintain such signage

at all times during bridge removal and construction activities, and shall notify the California Department of Parks and Recreation's Division of Boating and Waterways of the location, description, and purpose of such signage upon their installation and removal.

OTHER PERTINENT INFORMATION:

1. Applicant owns and has the right to use the uplands adjoining the lease premises.

2. The existing Navy Drive Bridge (Bridge No. 29C-0023) crossing the San Joaquin River in San Joaquin County, was constructed by the U.S. Navy in 1941, but was not previously authorized by the Commission. The bridge, which provides local and regional access to the Port of Stockton's East Complex and West Complex, is a two-lane truss swing-bridge, consisting of two side trusses connected across the top and bottom, with a reinforced concrete swing pier and seat abutments. The bridge is 271.3 feet long and 26 feet wide. The roadway is 24 feet wide and provides two 12-foot-wide lanes of traffic. There are no shoulders and there is a narrow sidewalk on the east side of the bridge.

3. Under the California Department of Transportation (Caltrans) Local Agency Bridge Program, the Navy Drive Bridge was determined to be structurally deficient and functionally obsolete. The existing bridge does not provide standard vertical clearance for interstate highway facilities and limits access to the West Complex. The bridge design makes retrofitting cost prohibitive. The bridge was also found to have areas of rust and section loss. Replacement of the existing bridge would eliminate these structural and functional deficiencies.

4. The proposed project involves replacing the existing Navy Drive Bridge with a new four-lane concrete construction removable span bridge that would be 302 feet long and 80 feet wide. The new bridge will be constructed approximately 80 feet upstream and to the west of the existing Navy Drive Bridge. This will improve the alignment with Navy Drive and allow a higher design speed than is available on the current bridge. The new bridge will provide four 12-foot-wide traffic lanes, a four-foot-wide median, two 8-foot-wide shoulders, two in-channel bents made of five 48-inch-diameter Cast-In-Steel-Shell (CISS) piles, abutments supported by four 48-inch-diameter CISS piles, wingwalls that extend 20 feet behind the abutments, and light standards located on the bridge railing. The new bridge abutments would be located slightly behind the existing riverbanks to minimize disturbance, since the riverbanks form flood control levees,

resulting in an increase of 31 feet in length as compared to the existing structure.

5. Following the events of Hurricane Katrina in August 2005, the U.S. Coast Guard (USCG) reconsidered the approval of new fixed-span bridges on navigable waterways nationwide, including the San Joaquin River. The USCG is requiring the new Navy Drive Bridge to have a center span that is able to open in an emergency. The proposed replacement bridge will incorporate a center navigation channel that provides 80 feet of horizontal clearance and 15 feet of vertical clearance at Mean High Water, when closed, and unlimited vertical clearance in the open position. The center span will be removable in multiple sections, preferably by a marine crane to provide the least structural impact.

6. Construction of the project will be completed in four phases: site preparation, installation of the upstream half of the bridge (two lanes of travel), removal of the old bridge, and installation of the downstream half of the bridge (two lanes of travel). This sequence of construction and demolition will allow traffic to use the two lanes of the upstream half of the new bridge (one lane in each direction) during the demolition of the existing bridge and construction of the downstream half of the new bridge. Project construction is expected to begin in the Spring of 2015. Per the biological opinions issued by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, in-water work will be limited to August 1 through October 31. To accommodate this work window, and dependent on the preferred construction methods(s), the in-water work would occur over two to three seasons.

7. At the construction contractor's preference, the CISS piles supporting the new bridge piers would be installed by either the use of a barge or two temporary trestle bridges. For the method utilizing the barge, a barge would either be floated down the San Joaquin River to the site of the new bridge, or it would be assembled from Flexi-Floats trucked to the site. A crane would work off the barge to drive the steel shells into the riverbed and construct the piles. Installation using temporary trestle bridges would require two approximately 96 feet long by 60 feet wide trestle bridges with six temporary steel pile bents in the channel. There would be 42 temporary 14-inch-diameter steel piles supporting the temporary trestle bridges. The temporary steel piles would be either driven or vibrated into the bottom of the river channel to support the anticipated construction loads. A temporary deck structure would be constructed above the bents to support cranes and concrete trucks needed for the CISS pile construction and bent caps. The timeframe required to construct the

bridge may require that the trestle bridges remain in the channel year-round. Upon completion of the new bridge, the trestle bridges will be removed.

8. A Mitigated Negative Declaration, State Clearinghouse No. 2013042040, was prepared by the Port of Stockton and adopted on September 19, 2013, for this project. The California State Lands Commission staff has reviewed such document.

   A Mitigation Monitoring Program was adopted by the Port of Stockton.

9. This activity involves lands identified as possessing significant environmental values pursuant to Public Resources Code sections 6370, et seq. Based upon the staff's consultation with the persons nominating such lands and through the California Environmental Quality Act (CEQA) review process, it is the staff's opinion that the project, as proposed, is consistent with its use classification.

APPROVALS REQUIRED:

U.S. Army Corps of Engineers; U.S. Coast Guard, U.S. Fish and Wildlife Service; California Department of Fish and Wildlife; Regional Water Quality Control Board; Central Valley Flood Protection Board.

EXHIBITS:

A. Land Description
B. Site and Location Map
C. Mitigation Monitoring Program

RECOMMENDED ACTION:

It is recommended that the Commission:

CEQA FINDING:

Find that a Mitigated Negative Declaration, State Clearinghouse No. 2013042040, and a Mitigation Monitoring Program were prepared by the Port of Stockton and adopted on September 19, 2013, for this Project and that the Commission has reviewed and considered the information contained therein.

Adopt the Mitigation Monitoring Program, as contained in Exhibit C, attached hereto.

SIGNIFICANT LANDS INVENTORY FINDING:

Find that this activity is consistent with the use classification designated by the Commission for the land pursuant to Public Resources Code section 6370 et seq.

AUTHORIZATION:

Authorize issuance of a General Lease – Public Agency Use to the Port of Stockton beginning April 23, 2015, for a term of 25 years, for the demolition and removal of the existing two-lane bridge, and the construction, use, and maintenance of two temporary trestle bridges and a new four-lane removable span bridge, as described on Exhibit A and shown on Exhibit B (for reference purposes only), attached and by this reference made a part hereof; consideration for the demolition and removal of the existing two-lane bridge, and the construction, use, and maintenance of two temporary trestle bridges and a new four-lane removable span bridge; consideration to be the public use and benefit, with the State reserving the right at any time to set a monetary rent if the Commission finds such action to be in the State's best interests.

EXHIBIT A

W 26823

STATE LANDS LEASE DESCRIPTION
NAVY DRIVE BRIDGE – PORT OF STOCKTON

That certain real property situate in the City of Stockton, County of San Joaquin, State of California, being a portion of Section 8, Township 1 North, Range 6 East, Mount Diablo Base and Meridian, and also being a portion of the San Joaquin River as shown in Book 36 of Surveys, at Page 53 file on August 18, 2006, San Joaquin County Records and as shown in Book 15 of Parcel Maps at Page 142 filed on February 29, 1988, San Joaquin County Records, more particularly described as follows:

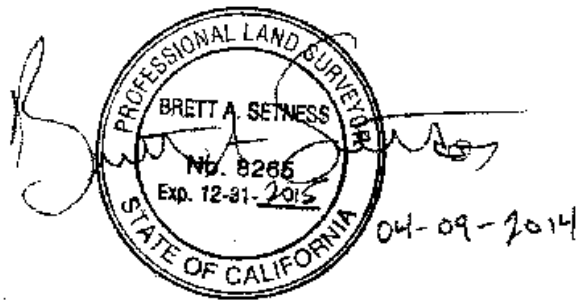
COMMENCING at the City of Stockton (COS) survey control point number 306 marked with a brass disk in monument box stamped "10S-2" on the west side of a traffic island at Navy Drive and Washington Street, as shown in Book 35 of Surveys, at Page 5 filed on December 3, 2001, San Joaquin County Records, which bears North 40°58'24" West 3064.68 feet from City of Stockton (COS) survey control point number 307 marked with a brass disk stamped "10S-3" +/- 15' south of centerline of B.N.S.F. Railroad tracks at the west end of the Navy Drive underpass, also as shown in said Book 35 of Surveys, at Page 5; thence North 30°31'34" West 856.00 feet to KSN control point 503, being a set rebar and yellow plastic cap stamped "KSN CONTROL" used as local control, set 4' east of Navy Drive across from the Stockton Police Department Gun Range; thence northwesterly, North 50°10'08" West 143.36 feet, to the most southerly corner of herein described State Lands description being on the right bank of the San Joaquin River, said point also being the **TRUE POINT OF BEGINNING** of herein described State Lands description; thence northwesterly crossing the said San Joaquin River, North 28°14'49" West 285.00 feet, to a point on the left bank San Joaquin River, said point also being on Rough and Ready Island; thence northeasterly along the northerly line of herein described State Lands description, North 61°45'11" East 70.83 feet, to the most northerly corner of herein described State Lands description; thence southeasterly crossing the San Joaquin River, along the easterly line of herein described State Lands description, South 28°14'49" East 285.00 feet to a point in the Navy Drive Abandonment (Parcel 4B) as described in the Stockton City Council Resolution No. 08-0174 recorded as Doc # 2008-078565 on May 12, 2008, San Joaquin County Records; thence southwesterly along the southerly line of herein described State Lands description, South 61°45'11" West 70.83 feet to the most southerly corner of herein described State Lands description, said point also being the **TRUE POINT OF BEGINNING** of herein described State Lands description, containing 0.46 acres, more or less.

EXCEPTING THEREFROM any portion lying landward of the ordinary high water mark of the San Joaquin River.

SUBJECT TO special assessments, if any, restrictions, reservations and easements of record.

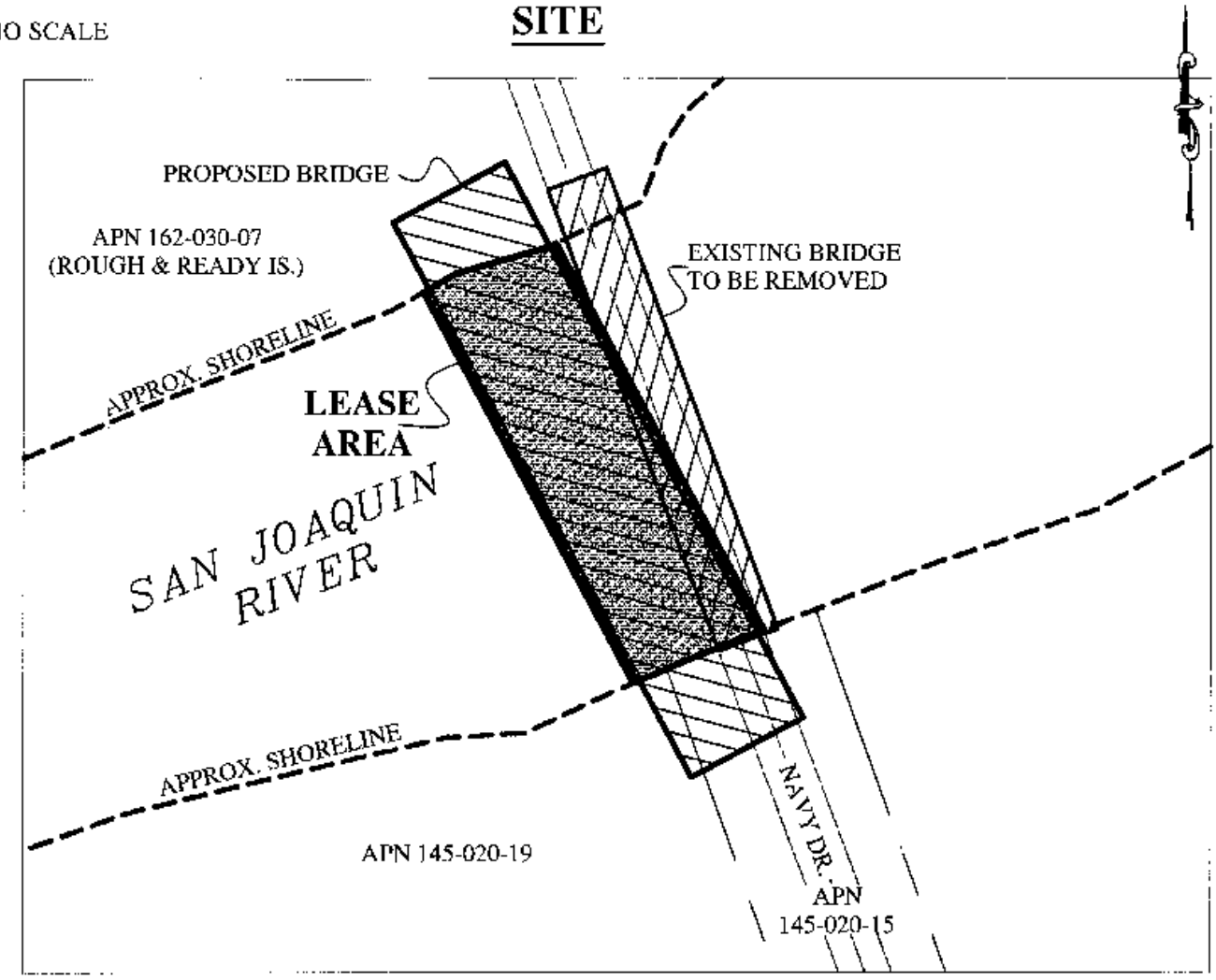
Bearings and distances are based on the North American Datum of 1983 (NAD83) converted to the California Coordinate System of 1983, Zone 3 (CCS83-III) as referenced by the City of Stockton Horizontal Control System. Grid distances shown must be multiplied by 1.000060564 to obtain ground distances. Units shown are based on the U.S. survey foot, 1991.35 epoch date adjustment.

End of Description.



NO SCALE

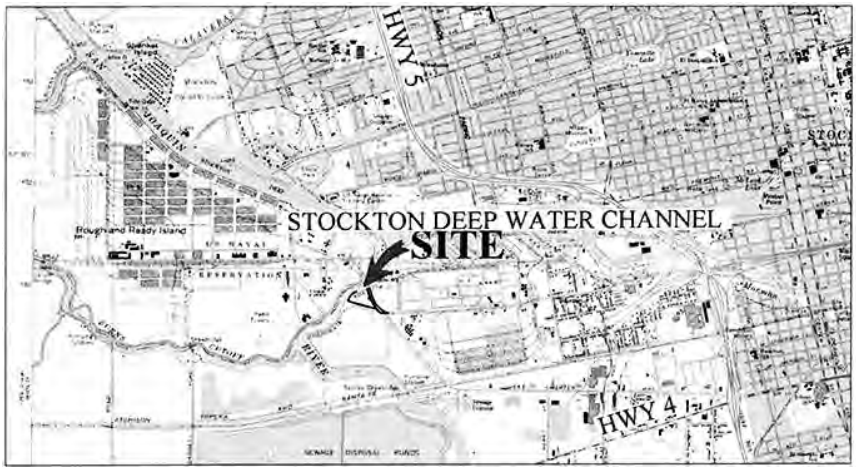
SITE



Navy Drive Bridge - San Joaquin River, Stockton

NO SCALE

LOCATION



MAP SOURCE: USGS QUAD

This Exhibit is solely for purposes of generally defining the lease premises, is based on unverified information provided by the Lessee or other parties and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or any other property.

Exhibit B

W 26823
PORT OF STOCKTON
APNS 162-030-07, 145-020-15,19
GENERAL LEASE -
PUBLIC AGENCY USE
SAN JOAQUIN COUNTY

MJF 3/10/15

EXHIBIT C
CALIFORNIA STATE LANDS COMMISSION
MITIGATION MONITORING PROGRAM

NAVY DRIVE BRIDGE REPLACEMENT PROJECT
(State Clearinghouse No.2013042040)

The California State Lands Commission (Commission) is a responsible agency under the California Environmental Quality Act (CEQA) for the Navy Drive Bridge Replacement Project (Project). The CEQA lead agency for the Project is the Port of Stockton.

In conjunction with approval of this Project, the Commission adopts this Mitigation Monitoring Program (MMP) for the implementation of mitigation measures for the portion(s) of the Project located on Commission lands. The purpose of a MMP is to discuss feasible measures to avoid or substantially reduce the significant environmental impacts from a project identified in an Environmental Impact Report (EIR) or a Mitigated Negative Declaration. State CEQA Guidelines section 15097, subdivision (a), states in part:[1]

> *In order to ensure that the mitigation measures and project revisions identified in the EIR or negative declaration are implemented, the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program.*

The lead agency has adopted a MMP for the whole of the Project (see Exhibit C, Attachment C-1) and remains responsible for ensuring that implementation of the avoidance, minimization, and mitigation measures required by the lead agency occurs in accordance with its program. The Commission's action and authority as a responsible agency apply only to the avoidance, minimization, and mitigation measures listed in Table C-1 below. A mitigation number has been assigned to each measure (as shown in Table C-1).

[1] The State CEQA Guidelines are found at California Code of Regulations, Title 14, section 15000 et seq.

Table C-1. Project Impacts and Applicable Mitigation Measures.

Potential Impact	Mitigation Measure (MM)[2]
Air Quality	AIR-1 (see pages 10-12 of Attachment C-1)
Biological Resources	
Biological Environment	BIO-1 (see page 13 of Attachment C-1)
Wetlands and Other Waters	BIO-2 (see pages 13 and 14 of Attachment C-1)
Plant Species	BIO-3 (see page 14 of Attachment C-1)
Animal Species (Pacific Pond Turtle)	BIO-4 (see pages 14 and 15 of Attachment C-1)
Nesting Songbirds	BIO-5 (see page 19 of Attachment C-1)
Threatened and Endangered Species (Special-Status Fish)	BIO-6 (see pages 19-29 of Attachment C-1)
Invasive Species	BIO-7 (see page 29 of Attachment C-1)
Cultural	
Historical	CR-2 (see pages 3 and 4 of Attachment C-1)
Archeological	CR-1 (see page 2 and 3 of Attachment C-1)
Paleontological	CR-3 (see pages 7 and 8 of Attachment C-1)
Geology	WQ-1 (see pages 4 and 5 of Attachment C-1)
	WQ-2 (see pages 5-7 of Attachment C-1)
Hazardous Materials	HAZ-1 (see pages 8-10 of Attachment C-1)
Hydrology/Water Quality	WQ-1 (see pages 4 and 5 of Attachment C-1)
	WQ-2 (see pages 5-7 of Attachment C-1)

[2] See Attachment C-1 for the full text of each MM taken from the MMP prepared by the CEQA lead agency.

ATTACHMENT C-1

Avoidance, Minimization, and Mitigation Summary

Adopted by the Port of Stockton

Avoidance, Minimization, and Mitigation as listed in the IS/EA

UTILITIES/EMERGENCY SERVICES

The following measure will be required to reduce utility impacts to a less than significant level:

Avoidance: None

Minimization:

- As part of the development of the final construction drawings, a utility relocation plan shall be developed that identifies all existing and proposed water lines, sewer lines, telephone, cable, gas, electric, and other services in the project area. Utility and service operators shall be notified in writing of any utility or service relocations to ensure minimum disruption between the removal or relocation of existing lines and the installation of new lines.

Mitigation: None

TRAFFIC AND TRANSPORTATION/PEDESTRIAN AND BICYCLE FACILITIES

The following measure will be implemented during construction to minimize the potential congestion and delay due to construction:

Avoidance: None

Minimization:

- The Port shall require the construction contractor to prepare and implement a Traffic Control Plan during the actual construction phase of the project. The Traffic Control Plan shall include the following:
  - This plan will address appropriate vehicle size and speed, travel routes, detour or lane closure plans, flagperson requirements, location of turnouts to be constructed, coordination with law enforcement and fire control agencies, coordination with Caltrans personnel (for work affecting state road rights of way), emergency access to ensure public safety, and need for traffic and speed limit signs.
  - The proposed bridge replacement project and roadway approaches will be constructed to accommodate four lanes of traffic. To remain consistent with the project limits, and to address traffic operations at the adjacent Washington Street and West Complex entrance intersections, the lanes will be tapered and striped to conform to the existing 3-lane section at the West Complex entrance intersection and the turning movements required at the Washington Street intersection.
- The Port of Stockton will be responsible for implementing additional improvements within the Port area. These improvements are not required for the proposed project, rather are separate projects that will be implemented by the Port. With these separate projects in place, the Navy Drive component of the circulation system in the Port of Stockton will

operate with acceptable levels of service (e.g., level of service D). These improvements are as follows:

- The Navy Drive / Washington Street intersection improvements (as shown in Figure 2-3) should be constructed by Year 2015 Conditions. With these improvements, the signalized intersection would operate at acceptable level of service B Conditions from Year 2015 to beyond Year 2025 Conditions.
- By Year 2030 Conditions, the intersection would need to be re-constructed including re-alignment of Navy Drive as a through movement and Washington Street as the minor street approach. With these improvements, the signalized Navy Drive / Washington Street intersection would operate at acceptable level of service C under Year 2030 AM and PM peak hour conditions, acceptable level of service D conditions under Year 2035 AM peak hour conditions, and acceptable level of service C under Year 2035 PM peak hour conditions.

Mitigation: None

VISUAL/AESTHETICS

Due to the industrial nature of the project area, aesthetics for the new bridge and streetscape improvements are not proposed as an element of this project. The following actions have been recommended in order to minimize any minor visual impacts to landscape.

Avoidance: None

Minimization:

- Replacement of landscape screening on the eastern side of the Stockton Police Shooting Range parking lot is proposed. Trees and shrubs will be planted in front of the proposed retaining wall.
- The trees should be of sufficient size and type to also provide shade for the existing parking lot and visual screening for the shooting range from Navy Drive.

Mitigation: None

CULTURAL RESOURCES

Avoidance:

CR-1 In response to comments provided by Native American tribal organizations during consultation, the project has been modified to provide for tribal monitoring. A Native American monitor shall be present during project ground-disturbing activities to review possible archaeological materials and provide recommendations on the identification and treatment of such resources. The monitor shall provide recommendations regarding protection and ultimate disposition of the find.

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

CR-1 (cont'd)

If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Caltrans District 10 Environmental Branch so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

Minimization: None

Mitigation:

Photograph and Document the Existing Bridge

Prior to the start of any work that could adversely affect any characteristics that qualify Navy Drive Bridge as a historic property; Caltrans shall ensure that the recordation measures specified in this mitigation measure are completed.

CR-2

1. The Port shall take large-format (4 inch by 5 inch or larger negative size) photographs showing the Navy Drive Bridge in context as well as details of its historic engineering features. Photographs shall be processed for archival permanence in accordance with the Historic American Engineering Record (HAER) photographic specifications. Views of Navy Drive Bridge shall include:
   a. Contextual views showing the Bridge in its setting;
   b. Elevation views;
   c. Views of the operator house exterior and interior;
   d. Views of the Bridge approaches and abutments; and
   e. Detail views of significant engineering and design elements.
2. The Port shall make a reasonable and good faith effort to locate historic construction drawings for the Navy Drive Bridge. If these drawings are located, the Port shall photographically reproduce plans, elevations and selected details from these drawings in accordance with HAER photographic specifications. If they are legible in this format, reduced size (8 ½ inch by 11 inch) copies of construction drawings may be included as pages of the report cited in subsection 3 of this mitigation measure rather than photographed and included as photographic documentation. The Port shall promptly notify Caltrans if historic drawings for the Navy Drive Bridge cannot be located. In that event, the requirements of this paragraph shall not apply.

CR-2 (cont'd)

3. A written historical and descriptive report for the Navy Drive Bridge will be completed. This report will provide a physical description of the Navy Drive Bridge, discuss its construction and its significance under applicable National Register criteria, and address the historical context for its construction following the format and instructions in the September 1993 National Parks Service (NPS) HAER Guidelines for Preparing Written Historical and Descriptive Data guidelines for written documentation.
4. Upon completion, archival copies of the document described under subsection 3 of this mitigation measure shall be retained by Caltrans District 10 and the Port, distributed to the Caltrans Transportation History Library in Sacramento, the California Office of Historic Preservation and offered to repositories to include the San Joaquin County Historical Society and Museum in Lodi.

Identify and Implement Salvaging Bridge Parts

The Port shall offer artifacts removed from the Navy Drive Bridge during demolition to local museums such as the San Joaquin County Historical Society and Museum, or other suitable facilities to be determined by the Port, and provide for their delivery to accepting institutions.

Install Bronze Plaque on New Bridge Commemorating the Bridge

The Port shall install informative permanent metal plaques at both ends of the replacement bridge at public locations that provide a brief history of the original Navy Drive Bridge, its engineering features and characteristics, and the reasons for its replacement. The SHPO will have 30 days to review proposed plaque text before they are produced and installed.

Create a Display in the Port of Stockton Administration Building

The Port shall mount and display a representative photograph of the Navy Drive Bridge, along with accompanying text, in a public place at the Port of Stockton. The text shall provide a brief history of the Navy Drive Bridge and its relationship to the NSA Stockton historic district. The SHPO shall have 30 *days* to review proposed photograph and text before they are installed.

Water Quality and Storm Water Runoff

The proposed project will have less than significant impact on water quality with implementation of the following measures:

Avoidance:

WQ-1

Implement Best Management Practices

Preparation and implementation of temporary Construction site BMPs in compliance with the provisions of Caltrans' Statewide NPDES Permit and any subsequent permit as they

WQ-1 (cont'd)

relate to construction activities for the project. This will include submission of a Notice of Construction (NOC) to the Regional Water Quality Control Board (RWQCB) at least 30 days before the start of construction, preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP), and submission of a Notice of Construction Completion (NCC) to the RWQCB upon completion of construction and stabilization of the project site.

Implement Design Pollution Prevention (DPP)

Incorporation of Design Pollution Prevention (DPP) and Treatment Control BMPs for the project in accordance with the procedures outlined in the Stormwater Quality Handbooks, Project Planning and Design Guide will be followed. This will include coordination with the RWQCB with respect to feasibility, maintenance, and monitoring of Treatment Control BMPs as set forth in Caltrans' Statewide Stormwater Management Plan (SWMP).

Implement Drainage Report Recommendations

The Port will prepare a drainage report (also referred to as a master drainage plan or a runoff design report) for the project area and implement the measures provided in the report. The drainage report shall be prepared by a registered civil engineer prior to site development, and shall include the following items:

- An accurate calculation of pre-project runoff conditions and post-project runoff scenarios using appropriate engineering methods. This analysis will accurately evaluate potential changes to runoff through specific design criteria. The model will account for increased surface runoff.
- An assessment of any existing drainage facilities within the project area, and an inventory of necessary upgrades, replacements, redesigns, and rehabilitation.
- A description of the proposed maintenance program for the on-site drainage system.
- Standards for drainage systems to be installed on a project-specific basis.

The drainage system shall be designed in accordance with San Joaquin County and the City of Stockton's flood control design criteria.

Minimization:

WQ-2

Install Sheet-Pile Cofferdam
Under this minimization measure, construction of the bridge replacement structure and demolition of the existing bridge would be hydrologically isolated from the San Joaquin River through installation of a sheet-pile cofferdam. This would ensure that activities do not result in increased turbidity or suspended solids in the San Joaquin River. Dewatering BMPs must be followed. The Port or its contractor will monitor turbidity and suspended solids during construction activities, and if levels exceed the Basin Plan standards, the Port or its contractor will stop work until levels are within Basin Plan limits.

WQ-2
(cont'd)

Install Turbidity Curtain

A turbidity curtain is a fabric barrier that is designed to deflect and contain sediment within a limited area and provide sufficient retention time so that the soil particles will settle. A turbidity curtain does not prevent water from entering the isolated area; rather, it prevents suspended sediment from spreading beyond the immediate construction area into the receiving water. After applying the turbidity curtain, the Port or its contractor will monitor turbidity and suspended solids during construction activities, and if levels exceed the Basin Plan standards, the Port or its contractor will stop work until levels are within Basin Plan limits. Under this minimization measure, a turbidity curtain would be used to isolate the work area.

Operate Aeration Equipment

DO concentrations may be reduced temporarily during project construction and demolition activities as a result of suspension and dispersion of oxygen demanding substances into the river. The operation of aeration equipment continuously during and after construction activities should have sufficient capacity to supply oxygen into the San Joaquin River at a rate equal to or exceeding the predicted maximum rate of discharge. One option would be to use the Port's own aeration equipment.

Install Debris-Catching Devices

To prevent construction debris from entering the receiving water, the Port or its contractor will use attachments on construction equipment and covers or platforms around the construction area. Debris-catching devices must be inspected and emptied regularly and the debris stored away from the receiving water and protected until removal.

Dewatering Activities

During dewatering activities, if necessary, the provision of Order No. R8-2003-0061, NPDES No. CAG998001, General Waste Discharge Requirements for Discharges to Surface Waters That Pose An Insignificant (De Minimus) Threat to Water Quality, as they relate to construction activities for the project, will be followed. This will include submission of an NOI to the RWQCB at least three months before the start of dewatering and compliance with all applicable provision in the de minimus permit, including water sampling, analysis, and reporting of dewatering-related discharges.

Install a Bubble Curtain

The pressure waves associated with pile driving activities are a potentially significant impact to fish in close proximity to the activity. A bubble curtain disrupts the propagation of the pressure waves to a less than significant impact to fish. Installation of a bubble curtain would reduce this impact to less than significant should construction activities ensue between December 1st and June 30th.

WQ-2 (cont'd)

Implement Permanent Best Management Practices

Development and implementation of coordinated drainage features with permanent post construction BMPs would minimize potential water quality impacts associated with highway runoff. The Port would be responsible for constructing permanent post construction stormwater BMPs, which would be identified and incorporated into the SWPPP. The SWPPP requirements would accommodate the additional drainage discharges generated by the project and avoid adverse effects such as off-site erosion, sedimentation, and water quality impairments.

Two broad categories of permanent post construction BMPs and several specific types of BMPs would be implemented.

- The first category consists of erosion control measures such as preservation of existing vegetation, concentrated flow conveyance systems (ditches, berms, drains, flared culvert end sections, outlet protection, and flow velocity dissipation), and slope protection measures. By controlling erosion, directing runoff through vegetation, or otherwise reducing the off-site discharge of particulate matter and sediment, the permanent erosion control measures would control off-site discharges of roadway pollutants that are associated with particulate matter. Stormwater management measures that result in runoff peak flows and volumes being similar to those under existing conditions should be designed and implemented. Any proposed stormwater management system should be designed to manage runoff volumes and peak flows from storm events up to and including the 25-year, 24-hour design storm.
- The second category of approved permanent post construction BMPs consists of runoff treatment measures such as detention and infiltration basins and drain filters.

The Port would be responsible for long-term inspection and maintenance of the permanent BMPs within their jurisdictional right-of-way to ensure that they are maintained in good working order.

Mitigation: None

PALEONTOLOGY

According to the Draft City of Stockton General Plan Background Report (2004), no known paleontological resources are present in the project vicinity. However, there is always the possibility that buried fossils that were not identified during field surveys could be unearthed during project activities, causing the demolition of or substantial damage to paleontological resources.

Avoidance: None

Minimization:

CR-3

- If fossils are discovered during project construction, a qualified paleontologist will recover them. Construction work in these areas will be halted or diverted to allow recovery of fossil remains in a timely manner.

Mitigation: None

HAZARDOUS WASTE/MATERIALS

Avoidance & Minimization:

HAZ-1

Measures to Avoid and Minimize the Exposure of Individuals to Contaminated Soil and/or Groundwater

There is documented soil and groundwater contamination at the location of the former gasoline station, which is within the project study area. The extent of groundwater contamination and the migration of contaminants in the groundwater have been fully defined, have been determined to be contained within the site, and contaminant concentrations have been decreasing over time. It is recommended that the Port consult with the Regional Water Quality Control Board to determine if precautions need to be taken or if state agency personnel need to be at the site when construction activities associated with ground disturbance begin. If dewatering is needed, the Regional Water Quality Control Board would need to be consulted for any special requirements. It is also recommended that before construction along the proposed roadway alignment begins, soil and groundwater samples be collected at the former gasoline station to at least the depth of the proposed excavation. These samples should be analyzed for the contaminants of concern identified for this site. A contingency plan should be developed to dispose of any contaminated soil or groundwater.

The proposed project will place the roadway approaches on new alignments and subsequent new fill. Therefore excess soil is not likely. The final roadway alignment and quantities will be determined after approval of the preferred alternative, in the final design phase. In those areas where minor excavation is required, the Port will conduct aerially deposited lead sampling to determine actual aerially deposited lead concentrations. Lead concentrations at the project site will then be compared to the California Human Health Screening Levels for lead for commercial/industrial use (3,500 milligrams per kilogram). Based on the levels of lead determined in the soil, the Port will account for all potential human exposure pathways and scenarios and the protection of nearby groundwater, terrestrial and aquatic resources, including erosion of contaminated soil and subsequent runoff. Based on the results of the lead analysis and human health risk assessments, the Port will seek the approval of California Environmental Protection Agency/Regional Water Quality Control Board for the reuse of lead-contaminated soils generated from the project within the project area in accordance with criteria that safely encapsulates the soil based on the levels of lead to preclude exposure of individuals to elevated levels of lead. Applicable requirements of California Environmental Protection Agency/Regional Water Quality Control Board will be implemented by the Port,

HAZ-1 (cont'd

particularly those relating to burial areas, soil covers, location in relation to groundwater/water table elevation, erosion control, and others.

If reuse is not possible, the Port will ensure that the lead-contaminated soil will be managed as hazardous waste and disposed in a Class 1 landfill. Detailed specifications will be included in the contractor package, specifying mitigation required to minimize and/or avoid human health risks. These specifications will support the project cost estimates and contractor's bid. If heavy metals are also found in the soils, the Port will ensure that the soils will be managed in accordance with applicable federal and state regulations for hazardous waste. As the variance only applies to lead from aerially deposited lead, burial within the project site of heavy metal-contaminated soil will not be allowed.

In addition, if contaminated soil and/or groundwater are encountered or suspected contamination is encountered in other areas of the project site during construction, it is recommended that work is suspended in the suspected area of contamination and the type and extent of the contamination be identified. If necessary, a remediation plan shall be implemented in conjunction with continued project construction.

Measures to Avoid and Minimize Exposure of Individuals to Asbestos-Containing Material and Lead-Based Paint/Other Heavy Metals

The Port shall ensure, through contract requirements, that work plans address procedures for the safe removal and proper disposal of materials contaminated with asbestos and lead-based paint. The demolition of the structures shall comply with the United States Environmental Protection Agencies National Emissions Standards for Hazardous Air Pollutants and the San Joaquin Valley Unified Air Pollution Control District rules and regulations regarding asbestos. The demolition of the structures shall also comply with the California Department of Health Services recommendations and California Occupational Safety and Health Agency requirements regarding lead-related construction work by all construction contractors and workers.

To comply with California Occupational Safety and Health Agency and Department of Health Services requirements, workers must be protected when lead is present in any concentration. A Lead Compliance Plan for worker protection shall be prepared and implemented during pavement removal, soil excavation, and/or demolition of structures containing lead-based paint. The Lead Compliance Plan will be part of construction specification requirements for the project.

To avoid generating dust containing lead-based paint and thermoplastic material from striping and markings, the Port will ensure that existing pavement will be carefully removed in large pieces to keep the striping and markings intact to the maximum extent possible.

The United States Environmental Protection Agency regulates asbestos as a hazardous air pollutant under the National Emissions Standards for Hazardous Air Pollutants. The asbestos National Emissions Standards for Hazardous Air Pollutants regulations impose

HAZ-1 (cont'd)

procedures for demolition and renovation activities involving regulated Asbestos Containing Materials (friable asbestos and forms of asbestos that may become friable during renovation and handling). The asbestos National Emissions Standards for Hazardous Air Pollutants regulations also impose additional restrictions on asbestos waste disposal, requiring generators and transporters of Asbestos Containing Materials to maintain waste shipment records. The California Air Resources Board enforces National Emissions Standards for Hazardous Air Pollutants regulations through the air districts. The San Joaquin Valley Air Pollution Control District should be contacted to obtain a copy of its rules and regulations regarding asbestos. An asbestos consultant performing asbestos-related work must have a valid license issued by the California Contractor's State License Board and be certified by the California Occupational Safety and Health Agency.

Detailed specifications will be included in the contractor package, specifying mitigation required to minimize and/or avoid human health risks. These specifications will support the project cost estimates and contractor's bid.

Measures to Avoid and Minimize Exposure of Individuals to Polychlorinated Biphenyls

The Port shall coordinate with Pacific Gas and Electric for the removal and replacement of the transformers. Pacific Gas and Electric will be responsible for complying with all applicable federal and state environmental and worker exposure regulations during the removal and replacement/relocation of the transformers.

Measures to Avoid and Minimize Exposure of Individuals to Treated Wood Waste

In July 2007, the Department of Toxic Substances Control adopted regulations that would allow flexibility in the management and disposal of treated wood waste. Treated wood waste will no longer need to be sampled and analyzed prior to disposal and may be disposed in a composite-lined portion of a solid waste landfill unit that meets all requirements applicable to disposal of municipal solid waste in California and that is regulated by waste discharge requirements issued for discharges of designated waste or treated wood waste. The Port will ensure that the demolished fender system and piles will be removed and disposed at a Regional Water Quality Control Board-certified treated wood waste landfill. The contractors bid package will include this information to adequately address the potential hazards.

Mitigation: None

AIR QUALITY

The following measures would reduce or minimize air pollutant emissions associated with construction activities:

Avoidance: None

Minimization:

AIR-1

- To reduce fugitive dust emissions the construction contractor will adhere to the requirements of SJVAPCD Regulation VIII.
- The construction contractor shall comply with Caltrans' Standard Specifications Section 7-1.01F and Section 10 of Caltrans' Standard Specifications.

Consistent with Regulation VIII, Fugitive PM10 Prohibitions of the SJVAPCD, the following controls are required to be implemented at all construction sites and as specifications for the project:

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.)
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emission utilizing sufficient water or chemical stabilizer/suppressant.
- Within urban areas, track out shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.

Any site with 150 or more vehicle trips per day shall prevent carryout and track out.

Construction of the project requires the implementation of control measures set forth under Regulation VIII. The following additional control measures would further reduce construction emissions and should be implemented with the project:

- limit traffic speeds on unpaved roads to 15 mph;
- install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent;
- install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site;
- install wind breaks at windward side(s) of construction area;

AIR-1 (cont'd)

- suspend excavation and grading activity when winds exceed 20 mph (regardless of wind speed, an owner/operator must comply with Regulation VIII's 20 percent opacity limitation); and
- limit area excavation, grading, and other construction activity at any one time.
- the following construction equipment control measures would reduce construction exhaust emissions:
- properly and routinely maintain all construction equipment, as recommended by the manufacturer manuals, to control exhaust emissions;
- shut down equipment when not in use for extended periods of time to reduce emissions associated with idling emissions;
- limit the hours of operation of heavy duty equipment and/or the amount of equipment in use; and
- curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak-hour of vehicular traffic on adjacent roadways.

Mitigation: None

NOISE

In accordance with 23 Code of Federal Regulations 772 (13)(c), noise abatement is considered where noise impacts are predicted in areas of frequent human use that would benefit from a lowered noise level. As no traffic noise impacts are anticipated, no noise avoidance, minimization and/or abatement measures are required.

Avoidance: None

Minimization:

Construction

As discussed above, the closest sensitive receptor location is the outdoor use area of the City of Stockton Police Range located approximately 100 feet from the project construction areas. Therefore, this receptor location may be subject to short term noise reaching the maximum noise level of 84 A-weighted decibels generated by construction activities along the project alignment. Compliance with the construction hours specified in the City's Municipal Code and Caltrans' Standard Special Provisions (SSP) will be required to minimize construction noise impacts on sensitive land uses adjacent to the project site. Construction noise is regulated by Caltrans' Standard Specifications in Section 14-8.02, "Noise Control," and also by SSPs S5 310, "Noise Control." Noise control shall conform to the provisions in Section 14-8.02 and the SSP in S5-310. The noise level from the Contractor's operations, between the hours of 7:00 p.m. and 7:00 a.m., shall not exceed 86 A-weighted decibels at a distance of 50 feet. Work shall not be allowed on Sundays, unless specifically permitted by contract. The Contractor should use an alternative warning method instead of a sound signal unless required by safety laws. In addition, the Contractor shall equip all internal combustion engines with the

manufacturer-recommended muffler and shall not operate any internal combustion engine on the job site without the appropriate muffler.

Mitigation: None

BIOLOGICAL ENVIRONMENT

Avoidance: None

Minimization:

BIO-1

- The removal or disturbance of riparian vegetation will be minimized to the greatest extent practicable. Any stream banks disturbed during construction will be returned to their preconstruction conditions and lost riparian vegetation will be replaced with an appropriate assemblage of native vegetation prior to the onset of the rainy season. The implementation of best management practices (BMPs) will substantially decrease construction-related erosion and the potential for discharge of sediments into the San Joaquin River. Typical measures include erecting silt fencing and placing hay bales and straw wattles around construction areas to reduce offsite sedimentation. Implementation of the project will also require approval of a site-specific Storm Water Pollution Prevention Plan (SWPPP) that provides additional effective measures to protect water quality, including a hazardous spill prevention plan and erosion prevention techniques.
- Implementation of the project will include the placement of 10 piers within the river bed resulting in the displacement of approximately 0.003 ac of riverine habitat. However, placement of the new bridge supports would replace the concrete support structure that displaces approximately 0.016 ac of the original river bed. Thus, the project result in an overall net gain in riverine habitat of 0.013 ac compared to the existing conditions.
- During in-stream construction activities, no fill material, including concrete, will be allowed to enter the water column and channel disturbance shall be kept to a minimum.
- All in-stream work would be conducted between August 1 and October 31.

Mitigation: None

WETLANDS AND OTHER WATERS

Avoidance: None

Minimization:

BIO-2

A revegetation plan for river bank/riparian areas temporarily disturbed during construction would be prepared by a qualified restoration ecologist with input from California Department of Fish and Wildlife. Approximately 0.06 acres of the riverbank

and non-native riparian scrub temporarily impacted by construction of the new bridge shall be reseeded and replanted with native riparian vegetation.

BIO-2 (cont'd)

The willow riparian habitat adjacent to the south levee would be fenced off 10 feet beyond the trees drip line to prevent disturbance during construction.

Measures consistent with the current Caltrans' Construction Site Best Management Practices Manual (including the Storm Water Pollution Prevention Plan and Water Pollution Control Plan Manuals) shall be implemented to minimize effects to the San Joaquin River resulting from erosion, siltation, etc. during construction. The implementation of the Best Management Practices described above would substantially decrease construction-related erosion and the potential for sediments to be discharged into the San Joaquin River. These measures include erecting silt fencing and the placement of hay bales around the construction site to reduce offsite sedimentation. Implementation of the project also require the issuance of an approved Storm Water Pollution Prevention Plan.

All instream work would be conducted between August 1 and October 31.

Mitigation: None

PLANT SPECIES

Avoidance:

BIO-3

Before construction-related activities begin, a qualified botanist shall survey the Biological Study Area (San Joaquin River levee) for special-status plant species including slough thistle, Mason's lilaeopsis, and Delta mugwort during their blooming period(s) and using established California Department of Fish and Wildlife protocols. If any special-status plant species are detected within the construction zone, the Port shall develop a salvage and relocation plan for all permanently affected plants to a suitable protected area. The relocation shall occur prior to initiation of any project activities that may impact special status plants present within the construction zone. Monitoring shall be required to assure that the relocation is successful.

Minimization: None

Mitigation: None

ANIMAL SPECIES

Pacific Pond Turtle

BIO-4

Avoidance and Minimization:

Pacific pond turtles, if present in the BSA, could be adversely affected by construction activities. The following measure will reduce any potential impacts to Pacific pond turtles:

BIO-4 (cont'd)

1. Preconstruction surveys for Pacific pond turtles shall be performed by a qualified biologist within 30 days of the start of construction to identify any turtles or active nests within the BSA. If nests are found, exclusion zones shall be established (as determined by a qualified biologist in consultation with the CDFW) and construction-related activities shall be prohibited within the exclusion zones. Monitoring of any active nests once per week during construction shall be required as long as the nests are active. Any turtles found in the work area shall be relocated to an appropriate area by a qualified biologist prior to the start of construction.
2. ESA fencing shall be installed along the edge of the work limits in the California annual grassland community. ESA fencing shall consist of orange construction fencing (or equivalent) and shall be maintained in good condition until construction is complete.

Mitigation: None.

Burrowing Owl

Avoidance and Minimization:

Prior to construction, a qualified wildlife biologist shall survey suitable habitat within 500 feet of the project impact zone (the project footprint and staging areas) (CDFW 1995). Within the BSA the San Joaquin River levee and grassland areas may be habitat for burrowing owls, however survey efforts will extend beyond the BSA, where access can be obtained. Surveys for burrowing owl include a winter (non-breeding) and spring (breeding) survey, unless burrowing owl is detected on the first survey. The winter survey must be conducted between December 1 and January 31, and the spring survey between April 15 and July 15. Surveys will be conducted at dawn (one hour before sunrise and two hours after) and/or dusk (two hours before sunset and one hour after).

In addition to protocol-level surveys, the following measures will be implemented to avoid impacts:

- Pre-construction surveys of suitable habitat will be conducted within 30 days prior to construction to ensure no additional owls have begun nesting within the construction impact area or buffer zone. If ground disturbing activities are delayed or suspended for more than 30 days after the pre-construction survey, the site will be re-surveyed. Pre-construction surveys for burrowing owl may be combined with raptor surveys (see Swainson's hawk below).
- If possible, the project shall avoid impacts to burrowing owl by ensuring that no disturbance occurs within 160 ft of occupied burrows during the nonbreeding season (September 1 – January 31) or within 250 ft during the breeding season (February 1 – August 31), and that at least 6.5 acres of foraging habitat is permanently preserved around the occupied burrow for each pair or single unpaired resident bird. The configuration of the habitat preservation plan must be approved by CDFW.
- If impacts cannot be avoided, the following mitigation will be required.

Mitigation:

If, after the implementation of the avoidance and minimization measures discussed above, impacts to burrowing owl are unavoidable, burrowing owls will be passively relocated during the non-breeding season prior to construction and foraging habitat will be permanently preserved off-site and adjacent to occupied habitat. The amount of habitat shall be 6.5 ac for every pair or single unpaired owls that are removed, or other amount as determined through consultation with CDFW. If destruction of occupied burrows cannot be avoided, then existing burrows shall be enhanced or new burrows created on the protected lands site at a rate per CDFW guidelines. CDFW shall be contacted prior to passive removal and requested to approve compensatory mitigation. Further details regarding burrowing owl mitigation and protective measures can be found in the CDFW guidelines.

Nesting Raptors

Avoidance and Minimization:

A review of the bridge design drawings indicates that most mature trees found within the BSA will be avoided during the project's construction phase. Table 2-23, below, lists mature trees that will likely be removed during project construction.

Table 2-23: Mature Trees Potentially Removed During Project Construction

Species	Location	Total Number	Diameter @ Breast Height (in)	Local Tree Ordinance (Stockton General Plan)	Replacement Ratios
Poplulus fremontii (Fremont cottonwood)	Planted along east side of Navy Drive, south of the river	3	35, 20, 50	None	None, tree will not be removed during nesting season and there are no local tree ordinances for this species.
Acacia sp. (Acacia)	Ornamental established on east side of Navy Drive, in riparian zone, south of the river.	7	8, 7, 5, 5, 5, 5, 18	None	None, tree will not be removed during nesting season and there are no local tree ordinances for this species. Additionally, this tree is a non-native, invasive species.

Species	Location	Total Number	Diameter @ Breast Height (in)	Local Tree Ordinance (Stockton General Plan)	Replacement Ratios
Ailanthus altissima (Tree of heaven)	Ornamental established on east side of Navy Drive, in riparian zone south of the river.	1	10	None	None, tree will not be removed during nesting season and there are no local tree ordinances for this species. Additionally, this tree is a non-native, invasive species.
Quercus suber (Cork oak)	Planted along west side of Navy Drive in the Stockton Police Department Training Facility and farther south along edge of Biological Study Area.	3	20, 10, 14	None	None, tree will not be removed during nesting season and there are no local tree ordinances for this species.
Malus sp. (Crab apple)	Planted along west side of Navy Drive adjacent to the Stockton Police Department Training Facility	1	27	None	None, tree will not be removed during nesting season and there are no local tree ordinances for this species.
Quercus palustris (Pin oak)	Planted along west side of Navy Drive in the Stockton Police Department Training Facility.	3	25, 20, 23	None	None, tree will not be removed during nesting season and there are no local tree ordinances for this species.
Eucalyptus globulus (Eucalyptus)	Planted along west side of Navy Drive in the Stockton Police Training Center.	1	35	None	None, tree will not be removed during nesting season and there are no local tree ordinances for this species.
Unknown ornamental (no leaves or fruiting bodies present during April 2006 survey)	Ornamental established on east side of Navy Drive, near southern edge of BSA.	1 with 3 trunks	12, 1, 16	None	None, tree will not be removed during nesting season and there are no local tree ordinances for this species.

The following measures will be implemented to avoid impacts to Swainson's hawk, white-tailed kite, and other raptors:

1. If construction activities would occur between March 15 and September 1, preconstruction surveys of suitable habitat will be conducted according to the California Department of Fish and Wildlife's Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California within 30 days prior to construction to ensure no Swainson's hawks or other raptors have begun nesting within the construction impact area. The area surveyed shall include the construction impact area and a ¼-mile buffer zone for Swainson's hawk (and a 500-foot buffer zone for other raptors), where accessible. This buffer distance is appropriate for Swainson's hawk nests located in areas with urban development or where disturbance is regular. If construction activities are delayed or suspended for more than 30 days after the pre-construction survey, the site will be re-surveyed. Preconstruction surveys for raptors may be combined with burrowing owl surveys (see burrowing owl above).
2. If an active Swainson's hawk nest is found within ¼-mile of the construction impact area (or within 500 feet for other raptors) during the breeding season, then no construction activities shall be permitted within these buffers. These buffers may be reduced only by the City of Stockton, who may consult with California Department of Fish and Wildlife to make sure a reduced buffer will not harm the nest. If a buffer is reduced, then a qualified wildlife biologist (see definition in burrowing owl section) will be retained to monitor the nest and the behavior of the nesting birds. If the biologist determines that the project has potential to disturb nesting activities, then construction within the buffer shall be suspended until the young have fledged, as determined by a qualified biologist. California Department of Fish and Wildlife shall be notified if construction causes a nest to fail.
3. Trees that must be removed would be removed during the non-breeding season, between October 1 and February 1.

Mitigation:

If, after the implementation of the avoidance and minimization measures discussed above, impacts to Swainson's hawk are unavoidable, then California Department of Fish and Wildlife shall be contacted and mitigation techniques will likely be required and may include the suspension of construction activities within a certain distance of the active nest until after the young have fledged from the nest. Because less than 5 acres of Swainson's hawk foraging habitat would be permanently impacted and the habitat is surrounded by existing urban development, the loss of Swainson's hawk foraging habitat is minimal and no compensation is recommended by California Department of Fish and Wildlife unless the foraging habitat is within ¼-mile of an active nest site. If an active Swainson's hawk nest site occurs with ¼-mile of the foraging habitat, then this loss of foraging habitat must be compensated according to California Department of Fish and Wildlife guidelines. The mitigation ratio is 1:1 or 0.5:1, depending on how the land is preserved.

Nesting Songbirds

Avoidance and Minimization:

BIO-5

An assessment of existing cliff swallow nests would be conducted and the results described in the California Department of Fish and Wildlife Streambed Alteration Agreement application. All avoidance measures required as part of this permit will be implemented. Such measures may include removal of the existing nests during the non-breeding season prior to construction, and/or preventing the swallows from nesting in that location (using exclusion methods such as netting).

Prior to the arrival of migratory birds to the project area (generally between September 16 and February 1st), all swallow nests will be removed from the sides and underside of the bridge structures. High-powered water and/or a long pole can be used to remove all the nests off the bridge undercrossings.

Prior to the arrival of migratory birds to the project area (generally between September 16th and January 31st), and after the nests have been removed, exclusionary methods under the bridge structures should be implemented by a qualified contractor. The exclusion should include placing netting on the bride undercrossings that provides a physical barrier between birds and the areas of the bridge where they would like to construct new nests. The mesh size of the netting should be in the range of ½ to ¾ inch. The net should have no loose pockets or wrinkles that could trap and entangle birds. Attach netting using hooks, if possible, which will make it easier to put the netting on and off the bridge undercrossings. Exclusionary devices shall be installed for at least ten calendar days prior to bridge undercrossing demolition.

Mitigation: None.

THREATENED AND ENDANGERED SPECIES

Delta Smelt

Avoidance: None

Minimization:

BIO-6

Delta smelt could be affected by construction-related activities which result in decreased water quality, such as increased turbidity. However, the implementation of Best Management Practices will substantially decrease the potential for erosion associated with the discharge of sediments into the San Joaquin River. Typical Best Management Practices include erecting silt fencing and placing hay bales around construction areas to help contain and reduce offsite sedimentation. Implementation of the project will also require approval of a site-specific Storm Water Pollution Prevention Plan that will implement effective measures to protect water quality, which may include a hazardous spill prevention plan and additional erosion prevention techniques.

BIO-6
(cont'd)

Temporary impacts from the removal or disturbance of riparian vegetation will be kept to a feasible minimum. Any stream banks disturbed during construction will be returned to their preconstruction conditions and lost riparian vegetation will be replaced with an appropriate assemblage of native vegetation prior to the onset of the rainy season.

A revegetation plan will be prepared by a qualified restoration ecologist with input from California Department of Fish and Wildlife. Potential water-quality-related impacts during construction will be minimized through the implementation of Best Management Practices and a Storm Water Pollution Prevention Plan.

All in-stream work would be conducted between August 1 and October 31. During in stream construction activities, no fill material, including concrete, will be allowed to enter the water column and channel disturbance will be kept to a minimum. Furthermore, no portion of the existing bridge will be left in the channel. In-channel work shall not be conducted at night.

Turbidity Curtain: A turbidity curtain will be used to isolate the work area within the San Joaquin River. A turbidity curtain is a fabric barrier that is designed to deflect and contain sediment within a limited area and provide sufficient retention time so that the soil particles would settle. A turbidity curtain does not prevent water from entering the isolated area; rather, it prevents suspended sediment from spreading beyond the immediate construction area into the receiving water. When properly deployed, turbidity curtains can reduce turbidity levels immediately outside the curtain by 80% to 90% compared to levels within. Turbidity curtains are best suited for slow-moving waters; they should not be used in rivers with water moving at more than 1 knot. After applying the turbidity curtain, the Port or its contractor will monitor turbidity and suspended solids during construction activities, and if levels exceed the Basin Plan standards, the Port or its contractor will stop work until levels are within Basin Plan limits.

Aeration Equipment: Dissolved oxygen concentrations may be reduced temporarily during project construction and demolition activities as a result of suspension and dispersion of oxygen-demanding substances into the river. The Port could operate aeration equipment continuously during these activities and until such time following their cessation that potential dissolved oxygen impacts have been eliminated. The aeration equipment used will have sufficient capacity to supply oxygen into the San Joaquin River at a rate equal to or exceeding the predicted maximum rate of discharge. One option would be to use the Port's own aeration equipment (which is maintained for use during dredging operations).

The United States Fish and Wildlife Service has determined that the following reasonable and prudent measures are necessary and appropriate to minimize the effects of the proposed project on the delta smelt, as specified in the Biological Opinion dated May 12, 2008 (File # 81420-2008-F-0078-1):

1. Caltrans shall implement the project as described in the Biological Assessment and the Biological Opinion and reduce effects to delta smelt.

BIO-6 (cont'd)

a. The Port of Stockton shall minimize the potential for harm, harassment, or killing of delta smelt resulting from project related activities by implementation of the Conservation and Minimization Measures as described in the Biological Assessment and appearing in the Project Description of the Biological Opinion.

b. The Port of Stockton shall make the terms and conditions in the Biological Opinion a required term in all contracts for the project that are issued to all contractors.

c. The Port of Stockton shall deposit money into the Delta Smelt Conservation Fund. The amount deposited shall be equivalent to the purchase price of 0.72 acres of conservation credits (for a 3:1 ratio). A copy of the Conservation Fund receipt must be provided to the ACOE and the United States Fish and Wildlife Service prior to the initial date of construction.

2. Caltrans shall ensure the Port of Stockton's compliance with this Biological Opinion:
   a. If requested, during or upon completion of construction activities, the on-site biologist, and/or the applicant's representative shall accompany the United States Fish and Wildlife Service or California Department of Fish and Wildlife personnel on an on-site inspection of the site to review project effects to the delta smelt and its habitat.

   b. Caltrans shall ensure the applicant complies with the reporting requirements of the biological opinion.

3. Depending on the results of planned geotechnical investigations, it may be possible to partially or entirely vibrate piles into the channel substrate. The contractor will used vibrational pile driving to the greatest extent feasible.
4. Pile driving activities will be designed to assure compliance with the interim criteria for Sound Exposure Levels less or equal to 187 decibels in any single strike and peak sound pressure less or equal to 208 decibels in any single strike, measured at a distance of 32.8 feet from the source.
5. To reduce sound pressure levels to the greatest extent feasible, a cushioning block between and pile will be used.
6. Bubble curtains will be used at all permanent piles driven by impact hammers. Bubble curtains disrupt the propagation of the pressure waves to reduce potential barotrauma injury and related mortality of Delta smelt.

Mitigation: None

Central Valley Steelhead

Avoidance: None

Minimization:

BIO-6 (cont'd)

Central Valley steelhead could be affected by construction-related activities, which results in decreased water quality, such as increased turbidity. However, the implementation of Best Management Practices will substantially decrease the potential for erosion associated with the discharge of sediments into the San Joaquin River. Typical Best Management Practices include erecting silt fencing and placing hay bales around construction areas to help contain and reduce offsite sedimentation. Implementation of the project will also require approval of a site-specific Storm Water Pollution Prevention Plan that will implement effective measures to protect water quality, which may include a hazardous spill prevention plan and additional erosion prevention techniques.

Temporary impacts from the removal or disturbance of riparian vegetation will be kept to a feasible minimum. Any stream banks disturbed during construction will be returned to their preconstruction conditions and lost riparian vegetation will be replaced with an appropriate assemblage of native vegetation prior to the onset of the rainy season.

A revegetation plan will be prepared by a qualified restoration ecologist with input from California Department of Fish and Wildlife. Potential water-quality-related impacts during construction will be minimized through the implementation of Best Management Practices and a Storm Water Pollution Prevention Plan.

All in-stream work would be conducted between August 1 and October 31. During in stream construction activities, no fill material, including concrete, will be allowed to enter the water column and channel disturbance will be kept to a minimum. Furthermore, no portion of the existing bridge will be left in the channel. In-channel work shall not be conducted at night.

Turbidity Curtain: A turbidity curtain will be used to isolate the work area within the San Joaquin River. A turbidity curtain is a fabric barrier that is designed to deflect and contain sediment within a limited area and provide sufficient retention time so that the soil particles would settle. A turbidity curtain does not prevent water from entering the isolated area; rather, it prevents suspended sediment from spreading beyond the immediate construction area into the receiving water. When properly deployed, turbidity curtains can reduce turbidity levels immediately outside the curtain by 80% to 90% compared to levels within. Turbidity curtains are best suited for slow-moving waters; they should not be used in rivers with water moving at more than 1 knot. After applying the turbidity curtain, the Port or its contractor will monitor turbidity and suspended solids during construction activities, and if levels exceed the Basin Plan standards, the Port or its contractor will stop work until levels are within Basin Plan limits.

Aeration Equipment: Dissolved oxygen concentrations may be reduced temporarily during project construction and demolition activities as a result of suspension and dispersion of oxygen-demanding substances into the river. The Port could operate aeration equipment continuously during these activities and until such time following their cessation that potential dissolved oxygen impacts have been eliminated. The

BIO-6 (cont'd)

aeration equipment used will have sufficient capacity to supply oxygen into the San Joaquin River at a rate equal to or exceeding the predicted maximum rate of discharge. One option would be to use the Port's own aeration equipment (which is maintained for use during dredging operations).

The following measures also shall be implemented, as specified in the National Marine Fisheries Service Biological Opinion (File #2007/06640):

1. Measures shall be taken to minimize the amount and duration of pile driving and its potential impacts on Central Valley steelhead, and to monitor the range and magnitude of compression shock waves generated by pile driving operations.
    a. Caltrans and the Port of Stockton shall conduct acoustic monitoring within the water column and substrate of the San Joaquin River to determine the range and magnitude of compression shock waves generated by pile driving operations at the Navy Drive Bridge Replacement project. Acoustic monitoring must be designed to detect if, and at what range, pile driving activities generate noise levels found to be lethal to juvenile steelhead (208 dB).

2. Measures shall be taken to maintain, monitor, and adaptively manage all conservation measures throughout the life of the project to ensure their effectiveness.
    b. Caltrans/Port of Stockton shall provide an annual report summarizing construction activities, species status within 200 yards upstream and downstream of the bridge site, avoidance and/or minimization measures taken, the results of acoustic monitoring, and any observed incidents of take of listed species. These summary reports shall be submitted to National Marine Fisheries Service by December 31 of each construction year.

    c. If steelhead are observed injured or killed by project activities, Caltrans/Port of Stockton shall contact National Marine Fisheries Service within 48 hours at 650 Capitol Mall, Suite 8-300, Sacramento, CA 95815. Notification shall include species identification, the number of fish, and a description of the action that resulted in take. If possible, dead individuals shall be collected, placed in an airtight bag, and refrigerated with the aforementioned information until further direction is received from National Marine Fisheries Service.

3. Caltrans shall ensure the applicant complies with the reporting requirements of the Biological Opinion.

4. Based on the results of geotechnical investigations, whenever possible and to the greatest extent feasible, the contractor will partially or entirely vibrate piles into the channel substrate rather than driving them by means of "hammering". Vibratory pile driving does not generate peak sound pressure levels that cause direct impacts to fish species.

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(cont'd)

5. Pile driving activities relying on impact hammers rather than vibratory techniques will be designed to assure compliance with the interim criteria for Sound Exposure Levels less or equal to 187 decibels in any single strike and peak sound pressure less or equal to 208 decibels in any single strike, measured at a distance of 32.8 feet from the source.

6. To reduce sound pressure levels to the greatest extent feasible, a cushioning block between hammer and pile will be used.

7. Bubble curtains will be used at all permanent piles driven by impact hammers. Bubble curtains disrupt the propagation of the pressure waves to reduce potential barotrauma injury and related mortality of steelhead.

Mitigation: None

Central Valley Fall/Late Fall Run Chinook Salmon

Avoidance: None

Minimization:

Pacific Chinook salmon could be affected by construction-related activities, which results in decreased water quality, such as increased turbidity. However, the implementation of Best Management Practices will substantially decrease the potential for erosion associated with the discharge of sediments into the San Joaquin River. Typical Best Management Practices include erecting silt fencing and placing hay bales around construction areas to help contain and reduce offsite sedimentation. Implementation of the project will also require approval of a site-specific Storm Water Pollution Prevention Plan that will implement effective measures to protect water quality, which may include a hazardous spill prevention plan and additional erosion prevention techniques.

Temporary impacts from the removal or disturbance of riparian vegetation will be kept to a feasible minimum. Any stream banks disturbed during construction will be returned to their preconstruction conditions and lost riparian vegetation will be replaced with an appropriate assemblage of native vegetation prior to the onset of the rainy season.

A revegetation plan will be prepared by a qualified restoration ecologist with input from California Department of Fish and Wildlife. Potential water-quality-related impacts during construction will be minimized through the implementation of Best Management Practices and a Storm Water Pollution Prevention Plan.

All in-stream work would be conducted between August 1 and October 31. During instream construction activities, no fill material, including concrete, will be allowed to enter the water column and channel disturbance will be kept to a minimum. Furthermore, no portion of the existing bridge will be left in the channel. In-channel work shall not be conducted at night.

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Turbidity Curtain: A turbidity curtain will be used to isolate the work area within the San Joaquin River. A turbidity curtain is a fabric barrier that is designed to deflect and contain sediment within a limited area and provide sufficient retention time so that the soil particles would settle. A turbidity curtain does not prevent water from entering the isolated area; rather, it prevents suspended sediment from spreading beyond the immediate construction area into the receiving water. When properly deployed, turbidity curtains can reduce turbidity levels immediately outside the curtain by 80% to 90% compared to levels within. Turbidity curtains are best suited for slow-moving waters; they should not be used in rivers with water moving at more than 1 knot. After applying the turbidity curtain, the Port or its contractor will monitor turbidity and suspended solids during construction activities, and if levels exceed the Basin Plan standards, the Port or its contractor will stop work until levels are within Basin Plan limits.

Aeration Equipment: Dissolved oxygen concentrations may be reduced temporarily during project construction and demolition activities as a result of suspension and dispersion of oxygen-demanding substances into the river. The Port could operate aeration equipment continuously during these activities and until such time following their cessation that potential dissolved oxygen impacts have been eliminated. The aeration equipment used will have sufficient capacity to supply oxygen into the San Joaquin River at a rate equal to or exceeding the predicted maximum rate of discharge. One option would be to use the Port's own aeration equipment (which is maintained for use during dredging operations).

The following measures also shall be implemented, as specified in the National Marine Fisheries Service Biological Opinion (File #2007/06640):

1. Measures shall be taken to minimize the amount and duration of pile driving and its potential impacts on Chinook salmon, and to monitor the range and magnitude of compression shock waves generated by pile driving operations.
    a. Caltrans and the Port of Stockton shall conduct acoustic monitoring within the water column and substrate of the San Joaquin River to determine the range and magnitude of compression shock waves generated by pile driving operations at the Navy Drive Bridge Replacement project. Acoustic monitoring must be designed to detect if, and at what range, pile driving activities generate noise levels found to be lethal to juvenile Chinook salmon (208 dB).

2. Measures shall be taken to maintain, monitor, and adaptively manage all conservation measures throughout the life of the project to ensure their effectiveness.
    a. Caltrans/Port of Stockton shall provide an annual report summarizing construction activities, species status within 200 yards upstream and downstream of the bridge site, avoidance and/or minimization measures taken, the results of acoustic monitoring, and any observed incidents of take of listed species. These summary reports shall be submitted to National Marine Fisheries Service by December 31 of each construction year.

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b. If Chinook salmon are observed injured or killed by project activities, Caltrans/Port of Stockton shall contact National Marine Fisheries Service within 48 hours at 650 Capitol Mall, Suite 8-300, Sacramento, CA 95815. Notification shall include species identification, the number of fish, and a description of the action that resulted in take. If possible, dead individuals shall be collected, placed in an airtight bag, and refrigerated with the aforementioned information until further direction is received from National Marine Fisheries Service.

3. Caltrans shall ensure the applicant complies with the reporting requirements of the Biological Opinion.

4. Based on the results of geotechnical investigations, whenever possible and to the greatest extent feasible, the contractor will partially or entirely vibrate piles into the channel substrate rather than driving them by means of "hammering". Vibratory pile driving does not generate peak sound pressure levels that cause direct impacts to fish species.

5. Pile driving activities relying on impact hammers rather than vibratory techniques will be designed to assure compliance with the interim criteria for Sound Exposure Levels less or equal to 187 decibels in any single strike and peak sound pressure less or equal to 208 decibels in any single strike, measured at a distance of 32.8 feet from the source.

6. To reduce sound pressure levels to the greatest extent feasible, a cushioning block between hammer and pile will be used.

7. Bubble curtains will be used at all permanent piles driven by impact hammers. Bubble curtains disrupt the propagation of the pressure waves to reduce potential barotrauma injury and related mortality of Chinook salmon.

Mitigation: None

Green Sturgeon

Avoidance: None

Minimization:

Green sturgeon could be affected by construction-related activities, which results in decreased water quality, such as increased turbidity. However, the implementation of Best Management Practices will substantially decrease the potential for erosion associated with the discharge of sediments into the San Joaquin River. Typical Best Management Practices include erecting silt fencing and placing hay bales around construction areas to help contain and reduce offsite sedimentation. Implementation of the project will also require approval of a site-specific Storm Water Pollution Prevention Plan that will implement effective measures to protect water quality, which may include a hazardous spill prevention plan and additional erosion prevention techniques.

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Temporary impacts from the removal or disturbance of riparian vegetation will be kept to a feasible minimum. Any stream banks disturbed during construction will be returned to their preconstruction conditions and lost riparian vegetation will be replaced with an appropriate assemblage of native vegetation prior to the onset of the rainy season.

A revegetation plan will be prepared by a qualified restoration ecologist with input from California Department of Fish and Wildlife. Potential water-quality-related impacts during construction will be minimized through the implementation of Best Management Practices and a Storm Water Pollution Prevention Plan.

Green sturgeon utilize the waters of the Delta for juvenile rearing, adult holding, and migratory movements to and from the upper Sacramento River spawning grounds, and their presence in the Delta is considered to be year-round. No construction work windows have been established for green sturgeon, but limiting construction to the window discussed above would avoid adverse impacts to adult green sturgeon. Instream construction activities within the Biological Study Area are considered to take place when juvenile green sturgeon are present, and the species may therefore be exposed to these activities. Measures described below are expected and intended to minimize potential adverse effects on juvenile green sturgeon. During instream construction activities, no fill material, including concrete, will be allowed to enter the water column and channel disturbance shall be kept to a minimum. Furthermore, no portion of the existing bridge shall be left in the channel.

All in-stream work would be conducted between August 1 and October 31. During instream construction activities, no fill material, including concrete, will be allowed to enter the water column and channel disturbance will be kept to a minimum. Furthermore, no portion of the existing bridge will be left in the channel. In-channel work shall not be conducted at night.

Turbidity Curtain: A turbidity curtain will be used to isolate the work area within the San Joaquin River. A turbidity curtain is a fabric barrier that is designed to deflect and contain sediment within a limited area and provide sufficient retention time so that the soil particles would settle. A turbidity curtain does not prevent water from entering the isolated area; rather, it prevents suspended sediment from spreading beyond the immediate construction area into the receiving water. When properly deployed, turbidity curtains can reduce turbidity levels immediately outside the curtain by 80% to 90% compared to levels within. Turbidity curtains are best suited for slow-moving waters; they should not be used in rivers with water moving at more than 1 knot. After applying the turbidity curtain, the Port or its contractor will monitor turbidity and suspended solids during construction activities, and if levels exceed the Basin Plan standards, the Port or its contractor will stop work until levels are within Basin Plan limits.

Aeration Equipment: Dissolved oxygen concentrations may be reduced temporarily during project construction and demolition activities as a result of suspension and dispersion of oxygen-demanding substances into the river. The Port could operate aeration equipment continuously during these activities and until such time following their cessation that potential dissolved oxygen impacts have been eliminated. The

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aeration equipment used will have sufficient capacity to supply oxygen into the San Joaquin River at a rate equal to or exceeding the predicted maximum rate of discharge. One option would be to use the Port's own aeration equipment (which is maintained for use during dredging operations).

The National Marine Fisheries Service has determined that the following reasonable and prudent measures are necessary and appropriate to minimize the effects of the proposed project on the green sturgeon, as specified in the Biological Opinion dated August 12, 2008 (File # 2007/06640):

1. Measures shall be taken to minimize the amount and duration of pile driving and its potential impacts on green sturgeon, and to monitor the range and magnitude of compression shock waves generated by pile driving operations.
    a. Caltrans and the Port of Stockton shall conduct acoustic monitoring within the water column and substrate of the San Joaquin River to determine the range and magnitude of compression shock waves generated by pile driving operations at the Navy Drive Bridge Replacement project.

2. Measures shall be taken to maintain, monitor, and adaptively manage all conservation measures throughout the life of the project to ensure their effectiveness.
    a. Caltrans/Port of Stockton shall provide an annual report summarizing construction activities, species status within 200 yards upstream and downstream of the bridge site, avoidance and/or minimization measures taken, the results of acoustic monitoring, and any observed incidents of take of listed species. These summary reports shall be submitted to National Marine Fisheries Service by December 31 of each construction year.

    b. If green sturgeon are observed injured or killed by project activities, Caltrans/Port of Stockton shall contact National Marine Fisheries Service within 48 hours at 650 Capitol Mall, Suite 8-300, Sacramento, CA 95815. Notification shall include species identification, the number of fish, and a description of the action that resulted in take. If possible, dead individuals shall be collected, placed in an airtight bag, and refrigerated with the aforementioned information until further direction is received from National Marine Fisheries Service.

3. Caltrans shall ensure the applicant complies with the reporting requirements of the Biological Opinion.
4. Based on the results of geotechnical investigations, whenever possible and to the greatest extent feasible, the contractor will partially or entirely vibrate piles into the channel substrate rather than driving them by means of "hammering". Vibratory pile driving does not generate peak sound pressure levels that cause direct impacts to fish species.
5. Pile driving activities relying on impact hammers rather than vibratory techniques will be designed to assure compliance with the interim criteria for Sound Exposure

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Levels less or equal to 187 decibels in any single strike and peak sound pressure less or equal to 208 decibels in any single strike, measured at a distance of 32.8 feet from the source.

6. To reduce sound pressure levels to the greatest extent feasible, a cushioning block between hammer and pile will be used.
7. Bubble curtains will be used at all permanent piles driven by impact hammers. Bubble curtains disrupt the propagation of the pressure waves to reduce potential barotrauma injury and related mortality of green sturgeon.

Mitigation: None

INVASIVE SPECIES

BIO-7

Avoidance:

1. Worker awareness training shall be provided to construction personnel. At a minimum, the training will inform personnel about the potential for aquatic invasive species, actions to be taken to avoid the introduction and/or spread of these species, and procedures for safe removal and disposal of any aquatic invasive species observed. All seeding equipment (i.e., hydroseed trucks) shall be thoroughly rinsed at least three times prior to beginning seeding work.
2. All earthmoving equipment to be used during project construction shall be thoroughly cleaned before arriving on the project site.
3. All seeding equipment (i.e., hydroseed trucks) shall be thoroughly rinsed at least three times prior to beginning seeding work.
4. To avoid spreading any non-native invasive species already existing on-site, to off-site areas, all equipment shall be thoroughly cleaned before leaving the site.
5. In compliance with the Executive Order on Invasive Species, EO 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project will not use species listed as invasive. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

Minimization: None

Mitigation: None