FLOOD
EMERGENCY RESPONSE

Initial Study/Proposed Mitigated Negative Declaration, Mitigation Monitoring and Reporting Program

Delta Flood Emergency Facilities Improvement Project Refinements

State Clearinghouse (SCH) No 2014112056

A Component of the Delta Flood Emergency Preparedness, Response, and Recovery Program

November 2014

FloodSAFE CALIFORNIA DEPARTMENT OF WATER RESOURCES

Date: November 24, 2014

To: Responsible and Trustee Agencies, Interested Parties, and Organizations

Subject: Notice of Intent to Adopt an Initial Study/Mitigated Negative Declaration for the Delta Emergency Rock and Transfer Facilities Project Refinements

The California Department of Water Resources (DWR) has directed the preparation of and intends to adopt a Mitigated Negative Declaration (MND) for the proposed project in compliance with the California Environmental Quality Act (CEQA) and State CEQA Guidelines.

Project Title: Delta Emergency Rock and Transfer Facilities Project Refinements

Lead Agency: Department of Water Resources, Division of Flood Management

Project Location: The Stockton West Weber Avenue site is located near the Port of Stockton, which is located along the eastern edge of the Sacramento-San Joaquin Delta (Delta) approximately 50 miles south of Sacramento. It is located between the East Complex of the Port of Stockton and near the intersections of Interstate 5 (I-5) and State Route 4 (SR-4), and just south of the Stockton Deep Water Ship Channel. The Rio Vista site is strategically located in the West Delta, readily accessible from the I-80 corridor via Highway 12 and Highway 113, and accessible from I-680 via Highway 160 to the south, and from I-5 via Highway 12 and Highway 160.

Project Description: Under the facilities implementation component of the Delta Flood Emergency Preparedness, Response, and Recovery Program, the California Department of Water Resources proposes to acquire long-term access and improve up to three sites in the Delta; these sites are located in Stockton, Rio Vista, and Brannan-Andrus. The purpose of the proposed project is to ensure that the State has the appropriate infrastructure and supplies in the Delta to respond to and recover quickly and effectively from major flood or earthquake disasters in the Delta. The primary objective of the proposed project is to improve three transfer facilities sites where quarry rock, sand, soil, and other flood-fight materials can be efficiently transferred from trucks to barges to expedite levee repairs and facilitate channel closures in the event of Delta levee breaches. In addition, the proposed project sites would serve other emergency response functions needed by DWR to respond rapidly and effectively to significant emergencies in the Delta, including storage of repair materials and flood-fight supplies, and Incident Command Posts. DWR would use existing improvements and construct additional improvements as needed to support the proposed emergency response functions. DWR completed CEQA compliance and approved the proposed project in June 2013 (State Clearinghouse No. 2013042015).

Minor refinements to the proposed project have been made since June 2013 and are the focus of this subsequent Initial Study/subsequent proposed MND (IS/MND). Proposed project refinements at the Stockton West Weber site include site clearing, grubbing, and removal of organic material including at least 14 and potentially up to approximately 20 trees during project construction; grading including importing backfill material; constructing 12-inch aggregate base all-weather surfaces above the 100-year flood elevation; improving, extending, or abandoning existing utilities services where required; constructing a new 7,000 square foot steel frame building with concrete foundation for warehouse use; constructing new concrete foundations for two rock conveyors; constructing a 6,500 square foot asphalt foundation/pad for four temporary office trailers and a pre-fabricated restroom facility; construct 4,600 square-foot asphalt ADA parking stalls and pathways for building accessibility;

establishing a quarry rock stockpile of up to 150,000 tons of various rock gradations (an increase from 40,000 tons in original project description); installing an additional two spud piles (for a total of eight spud piles) near the toe of bank along the Stockton Deep Water Ship Channel to support two conveyor support barge structures; and installing up to 11 dolphin pile clusters for mooring of up to three transport barges during rock-loading operations.

Proposed project refinements at the Rio Vista site include: site clearing, grubbing, and removal of organic material including approximately 4.0 acres of trees as necessary during project construction; decreasing the acreage for vehicle parking from 1.25 acres to 0.75 acre; providing new water and electrical connections; and widening the existing access road from about 20 feet to 28 feet, including removing at least two and up to approximately 15 trees along the existing access road.

No project refinements are proposed for the Brannan-Andrus site.

Environmental Review Process: DWR has directed the preparation of an IS/MND on the proposed project refinements in accordance with the requirements of CEQA. The IS/MND describes the proposed Delta Flood Emergency Facilities Improvement Project Refinements and provides an assessment of the undertaking's potential impacts on the environment. The IS/MND concludes that any potentially significant impacts that may result from the proposed project refinements can be avoided, eliminated, or reduced to a level that is less than significant by the adoption and implementation of specified mitigation measures.

Public Review Period: The IS/MND is being circulated for public review and comment for a review period of at least 30 days starting November 24, 2014. Written comments should be submitted and received at the following address, fax, or email no later than close of business (5:00 p.m.) on December 26, 2014.

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To Review or Obtain a Copy of the Environmental Document: Copies of the draft IS/MND may be reviewed at the following locations:

- Port of Stockton Administration Building, at 2203 W. Washington Street Stockton, California
- Sacramento County, County Clerk's Office, 600 8th Street, Sacramento, California
- Rio Vista City Hall, One Main Street, Rio Vista, California.

Copies of this document are also available for download and review from the Department of Water Resources' website at http://www.water.ca.gov/floodmgmt/hafoo/fob/dfeprrp/facilities.cfm.

Your views and comments on how the project may affect the environment will be welcomed.

PROPOSED MITIGATED NEGATIVE DECLARATION

Project: Delta Flood Emergency Facilities Improvement Project Refinements, a Component of the Delta Flood Emergency Preparedness, Response, and Recovery Program

Lead Agency: Department of Water Resources, Division of Flood Management (DWR)

PROJECT DESCRIPTION AND REFINEMENTS

The California Environmental Quality Act (CEQA) requires that state agencies consider the environmental consequences of projects over which they have discretionary authority before taking action on those projects. The California Department of Water Resources (DWR) has complied with CEQA by approving an Initial Study (IS), adopting a Mitigated Negative Declaration (MND) and Mitigation Monitoring and Reporting Program (MMRP), and approving the proposed Delta Flood Emergency Facilities Improvement Project (proposed project), a component of the Delta Flood Emergency Preparedness, Response, and Recovery Program (DFEPRRP). These actions were taken by DWR on June 3, 2013, and a Notice of Determination was filed by DWR on June 5, 2013. The State Clearinghouse number for the proposed project was No. 2013042015.

Minor refinements to the proposed project have been made since DWR adopted the MND and MMRP, approved the proposed project, and filed the Notice of Determination in June 2013. As a result, DWR has prepared this new IS/MND to evaluate the potential impacts on the environment from these project refinements. While typically an addendum is completed to cover minor project refinements (CEQA Guidelines Section 15164), DWR chose to prepare this new IS/MND to evaluate the proposed project refinements in the context of the original proposed project evaluated by DWR in June 2013 (DWR 2013). The information contained herein focuses primarily on project refinements and supplements the IS/MND and MMRP that were completed for the proposed project in June 2013 (DWR 2013). Information from the original IS/MND is included in this subsequent IS/MND when necessary to provide context and evaluate the full project impacts of the whole of the action.

Project Purpose: The purpose of the Delta Flood Emergency Facilities Improvement Project, a Component of the Delta Flood Emergency Preparedness, Response, and Recovery Program (DFEPRRP) http://www.water.ca.gov/floodmgmt/hafoo/fob/dfeprrp/ is to ensure that the State has the appropriate infrastructure and supplies in the Delta to respond to and recover quickly and effectively from major flood or earthquake disasters in the Sacramento-San Joaquin River Delta.

The primary objective of the proposed project is to improve three transfer facilities sites where quarry rock, sand, soil, and other flood-fight materials can be efficiently transferred from trucks to barges to expedite levee repairs and facilitate channel closures in the event of Delta levee breaches. In addition, the proposed project sites would serve other emergency response functions needed by DWR to respond rapidly and effectively to significant emergencies in the Delta, including storage of repair materials and flood-fight supplies, and Incident Command Posts (ICPs).

Original Project Locations and Site-Specific Improvements: To accomplish its purpose, the proposed project will establish two new material storage and transfer facility sites, one at Stockton West Weber Avenue and another at Brannan Island State Park; modify an existing material storage facility at Rio Vista; establish new flood fight supply facilities at all three locations; and make site preparations to support ICPs at the Stockton West

Weber Avenue site (Stockton West Weber site) and Brannan Island State Recreation Area site (BISRA site). In addition to approximately 223,000 tons of quarry rock stockpiled by DWR at Rio Vista and within the Port of Stockton, DWR would also stockpile up to 40,000 tons of levee repair material each at Stockton West Weber site and at the BISRA site, and 20,000 tons of sand at the Rio Vista site for a total increment of 100,000 tons. Additional information on the proposed project is presented in the original IS/MND (DWR 2013).

Project Refinements: No project refinements have been made at this time for Site 3, the BISRA site; therefore, this site is not addressed further. Project refinements at the other two sites are summarized below.

Proposed project refinements at the **Stockton West Weber site**, which consists of a north and south parcel at the westerly terminus of West Weber Avenue, are as follows:

- Clear, grub, and grade the site to the following specifications (site clearing, grubbing, and organic material removal planned but not specified in original project description, and tree removal and sea-level rise actions are added project refinements):
  - Clear, grub, and remove approximately 30,000 cubic yards (cy) of organic material including top soil material from approximately 20 acres, including at least 14 and potentially up to approximately 20 trees, as well as shrubs as necessary during project construction.
  - Grade the site with approximately 30,000 cy of imported backfill material to bring the north parcel to an elevation of approximately 10-11 feet and provide structural fill for the building foundation on the south parcel.
  - Construct 12-inch aggregate base all-weather surfaces on the north parcel (approximately 26,000 cy on approximately 12 acres) to a finished grade of approximately 11-12 feet, above the 100-year flood elevation plus free board to anticipate approximated 18 inches of sea level rise; grade and add approximately 2 inches to the existing aggregate base surface on the south parcel (approximately 4,000 cy on about 8 acres).
- Improve, extend, or abandon existing utilities services where required. Specific work will be identified during final design.
- Construct a new 7,000 square foot steel frame building with concrete foundation for warehouse use on the south parcel.
- Construct two new approximately 600-square-foot concrete foundations supported by piles for two rock conveyors (concrete foundation planned but not specified in original IS).
- Construct two new approximately 100-square-foot concrete foundations for a transformer, one on each parcel.
- Install a pre-fabricated restroom facility including an approximate 200-square-foot concrete foundation and a possible concrete waste vault.

- Construct 6,500 square-foot asphalt foundation/pad for four approximately 8-foot by 40-foot temporary office trailers for use as an ICP during flood emergencies and a pre-fabricated restroom facility. The asphalt pad would also encompass American Disabilities Act (ADA) compliant parking stall(s) as required.

- Construct 4,600 square-foot asphalt ADA parking stalls and pathways for building accessibility.

- Properly grade and construct surface for areas designated for rock stockpiles; surface would include 12-inch aggregate base consistent with the rest of the site and geogrid/geotextile fabric (planned but not specified in original project description).

- Establish a quarry rock stockpile of up to 150,000 tons of various rock gradations below 24-inch-minus at two locations on the north parcel and one location on the south parcel, totaling approximately 6 acres (an increase from 40,000 tons in original project description but accounted for in the 2007 IS/MND [DWR 2007]).

- Remove 12 existing wooden piles, in two clusters of six piles each, which are obstructing the foundation and alignment at one of the conveyor locations along the site's north shoreline fronting the Stockton Deep Water Ship Channel.

- Install up to eight spud piles (an increase of two spud piles from the original project description) near the toe of bank along the Stockton Deep Water Ship Channel to support two conveyor support barge structures; spud piles would be steel pipes or H piles of 4 square feet each.

- Install up to 11 dolphin pile clusters for mooring of up to three transport barges during rock-loading operations. The dolphin pile clusters would likely be constructed with three 24-inch-diameter steel pipe piles each (one vertical and two battered) for a total of about 33 piles in the Stockton Deep Water Ship Channel. Each dolphin pile cluster affects approximately 12 square feet at the bottom of the channel. Pile driving would be conducted with an impact hammer and is anticipated to occur from a barge.

- Clear vegetation from up to approximately 700 linear feet along the ship channel, including a minimum of 100 feet upstream and downstream of each conveyor foundation (about 400 linear feet total) and potentially the 300 linear feet between the conveyor foundations.

- Place approximately 13,000 square feet of rip rap along the ship channel, extending about 100 feet upstream and downstream of each conveyor foundation (total of about 400 linear feet) to protect the slope from wave action; approximately 9,900 square feet would be above the Ordinary High Water mark (OHWM) and approximately 3,600 square feet would be below the OHWM.

Proposed project refinements at the **Rio Vista site** are as follows:

- Site clearing, grubbing, and removal of organic material including approximately 4.0 acres of trees as necessary during project construction (site clearing, grubbing, and organic material removal planned but not specified in original project description, and tree removal is a project refinement).

- Construct 6,000 square-foot asphalt foundation/pad for two approximately 8-foot by 40-foot temporary office trailers for use as an ICP during flood emergencies and a pre-fabricated restroom facility. The asphalt pad would also encompass ADA compliant parking stall(s) as required.

- Establish a 0.75-acre area for vehicle parking (a decrease from a 1.25-acre area specified in original project description).
- Provide new water connection for the Central Valley Flood Protection Board (CVFPB) lease of the remaining property and develop electrical connections to the site for future temporary office trailers.
- Widen existing access road(s) from about 20 feet to 28 feet. This project refinement would remove at least two and up to approximately 15 trees along the existing access road, as well as numerous woody shrubs.

FINDINGS

A subsequent IS has been prepared to assess the potential effects of the proposed project refinements specified above on the environment and the significance of those effects. Based on the subsequent IS, it has been determined that the proposed project refinements would not have any significant effects on the environment with mitigation incorporated. This conclusion is supported by the following findings:

1. The proposed project refinements would have **no impacts** related to Agriculture and Forestry Resources, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Recreation, and Utilities and Service Systems.

2a. The proposed project refinements would have **less-than-significant impacts** on Aesthetics and Air Quality.

2b. The proposed project refinements would have **less-than-significant impacts** on Climate Change, and the project's incremental contribution to the cumulative impact of increasing atmospheric levels of Greenhouse Gases (GHGs) is less than cumulatively considerable and, therefore, **less-than-significant**. Please refer to Section 4.8 of the original IS which highlights DWR's efforts to reduce its GHG emissions consistent with Executive Order S-3-05 and the Global Warming Solutions Act of 2006 (Assembly Bill (AB) 32). Section 3.8 of the IS also includes how GHG emissions were analyzed and addressed, inclusive of a Greenhouse Gas Emissions Reduction Plan (GGERP) Consistency Determination Checklist, developed and executed specifically for the subject Delta Flood Emergency Facilities Improvement Project and project refinements.

3. The proposed project refinements would have **potentially significant impacts** related to Biological Resources, Cultural and Paleontological Resources, Hydrology and Water Quality, Geology and Soils, Hazards and Hazardous Materials, Noise, Transportation/Traffic, and Mandatory Findings of Significance, but **mitigation measures are proposed that would reduce these effects to less-than-significant levels**.

Table B-1 in the IS presents the Mitigation Monitoring and Reporting Program (MMRP) for the proposed project and project refinements. This MMRP updates and replaces the MMRP adopted by DWR in June 2013 for the original proposed project. All mitigation measures remain the same as in the *Delta Flood Emergency Facility Improvement Project* IS/MND (DWR 2013), with the exception of Mitigation Measure BIO-2, which now only applies to the BISRA site; Mitigation Measures BIO-4 and BIO-5, which has been modified for clarity and maintains essential terms to protect wetland and riparian habitats, and two new mitigation measures: Mitigation

Measure BIO-7, which applies only to the Stockton West Weber site; and Mitigation Measure BIO-8, which applies only to the Stockton West Weber and Rio Vista sites.

After further evaluation in the IS, it was determined that Mitigation Measure BIO-2 was unnecessary as a mitigation measure for the proposed project and project refinements at the Stockton West Weber and Rio Vista sites because the impacts to trees were less than significant without mitigation. Furthermore, Mitigation Measure BIO-2 is not a feasible mitigation measure at the Stockton West Weber and Rio Vista sites as some tree removal is required to construct the proposed project and project refinements, and meet most of the project objectives. Mitigation Measure BIO-2 is hereby modified to be specific to the BISRA site only.

After further evaluation in the IS, it was determined that Mitigation Measures BIO-4 and BIO-5 had unnecessary language and was henceforth clarified by deleting these terms but maintaining essential components that restrict project activities from wetland and riparian habitats. Mitigation Measures BIO-4 and BIO-5 are hereby modified.

Mitigation Measures BIO-7 and BIO-8 are new mitigation measures proposed to minimize impacts to biological resources as discussed in Section 3.5, “Biological Resources,” in Chapter 3, “Environmental Checklist,” of the IS.

Mitigation Measure HAZ-1 has been modified to reflect the progress of the DWR and State Department of Toxic Substances Control (DTSC) interagency agreement since the publication of the 2013 IS/MND, specifying that Soil Management Plans (SMPs) and Health and Safety Plans (HASPs) have been prepared since the publication of the 2013 IS/MND.

Following are the specific mitigation measures that would be implemented by DWR to avoid or minimize environmental impacts from the proposed project and project refinements. Implementation of these mitigation measures would reduce the environmental impacts of the proposed project and project refinements to a less-than-significant level.

AESTHETICS

AES-1: Design BISRA Joint Use Facility with DPR Incorporating Architectural and Landscaping Technics to Minimize Impacts to Scenic Vistas and Visual Resources.

DWR will consult and coordinate with DPR staff and architect to facilitate the location and design of the joint use facility and steel warehouse within the BISRA so as not to harm the natural aesthetics, scenic vistas, and visual character available within the BISRA and from the nearby Scenic SR 160. Potential design measures may include utilizing natural earth tones for building exteriors, incorporating earthen berms and planting native plants to help screen project building features from recreational areas and from Scenic SR 160.

AES-2: Locate and Design Quarry Rock Stockpile(s) at BISRA to Minimize Impacts to Scenic Vistas and Visual Resources.

DWR will consult and coordinate with DPR staff to facilitate the location, placement, shape, and visual treatment of quarry rock stockpile(s) that will be located near the southern tip of the BISRA peninsula. The quarry rock stockpiles will be located and configured so as not to harm the natural aesthetics, scenic vistas, and visual character available within and adjacent to the BISRA and from the nearby river, sloughs

and Scenic SR 160. Potential visual treatments may include screening by natural, native vegetation of trees and shrubs, utilizing natural berms, or covering the rock stockpiles with a layer of native soil and sand materials from nearby within the BISRA.

AES-3: Locate and Treat Exterior of Warehouse and Cargo Storage Containers at BISRA to Minimize Light and Glare Impacts to Day and Nighttime Views.

DWR will consult and coordinate with DPR staff to facilitate the location and exterior visual treatment of the project warehouse on BISRA to minimize light and glare impacts to day and nighttime views, and not to harm the natural aesthetics, scenic vistas, and visual character available within and adjacent to the BISRA and from Scenic SR 160. Potential visual treatments may include treating the exterior of the warehouse walls and roof in natural earth tones and screening by natural, native vegetation of trees and shrubs.

BIOLOGICAL RESOURCES

BIO-1: Conduct Burrowing Owl Surveys at all Three of the Project Sites Prior to Development.

Prior to any land clearing operations, a burrowing owl survey following standard guidelines (The California Burrowing Owl Consortium, CBOC, 1993) shall be conducted by a qualified biologist. The survey shall entail walking throughout the entire site, including a 500-foot buffer, to identify adjacent suitable habitat that could be affected by noise and vibration from heavy equipment operation. If no burrows are observed, no impact is expected and results of the survey shall be submitted to the California Department of Fish and Wildlife (DFW). If burrows or owls are observed, a nesting season (15 April – 15 July) survey shall also be conducted, the results of which shall determine whether a winter survey will be further required or whether the results of the survey can be submitted to the DFW following the nesting survey. If the surveys confirm occupied burrowing owl habitat, the Incidental Take Minimization Measure for Burrowing Owls (Measure 5.2.4.15) in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (November 14, 2000) will be implemented.

BIO-2: Retain all Mature Trees at the ~~on the~~ Proposed Brannon Island State Recreation Area Project Site~~s~~.

Mature trees that are potential nest trees and native oak trees greater than 8 inches diameter at breast height~~"dbh~~ will not be removed at the proposed Brannon Island State Recreation Area project site ~~from any of the project sites~~. If a nest tree becomes occupied during stockpiling and site development activities, then depending upon the bird species involved, appropriate monitoring and mitigation measures as specified by the California Department of Fish and Wildlife~~DFW~~ will be instituted. At a minimum, all construction activities shall remain a distance of at least two times the drip line radius of active nest trees, as measured from the nest.

BIO-3: Conduct Special-Status Surveys.

DWR will consult with DFW prior to project construction to determine the extent for pre-construction sensitive species survey on the proposed project sites. For those sites determined for specific surveys, a qualified biologist shall conduct the sensitive species survey on the sites and within buffer areas of the

sites. Special status bird species that could potentially nest in trees in or near the project area include Swainson's hawk, tricolored blackbird, white-tailed kite, double-crested cormorant, California black rail, saltmarsh common yellowthroat, song sparrow, Cooper's hawk, ferruginous hawk, merlin, yellow-headed blackbird, and western yellow-billed cuckoo. Potential habitat for special status reptiles/amphibians including the giant garter snake (GGS) and the western pond turtle exists at all three sites necessitating the need to conduct pre-construction surveys at all three sites. In addition, the western red bat could potentially roost in trees in or near the Rio Vista site and the Brannan Island site. The surveys shall be conducted no more than two weeks prior to the start of operations and depending on the expected duration of the activities a follow-up survey may also be required. All observed sensitive species shall be reported to the DFW. The proposed project will be adjusted to avoid impacting these species, or to relocate the individuals under the guidance of the DFW. Preconstruction surveys will also include a botanical survey to identify the presence of elderberry shrubs and Antioch dunes evening primrose.

BIO-4: Conduct Pre-Construction Riparian Habitat Surveys at All Three of the Project Sites Prior to Development.

Prior to any land clearing operations, riparian habitat surveys shall be conducted by a qualified biologist. ~~to confirm that construction activities will not impact riparian habitat.~~ The survey shall entail walking throughout the entire site, including a 100-foot buffer, to identify ~~adjacent suitable~~ riparian habitat that could be affected by construction activities, particularly along the top of waterside banks or slopes. ~~or low-lying areas.~~ Riparian habitat shall be avoided, if feasible. If it is determined that construction would result in the removal of ~~The~~ riparian habitat, surveys shall be submitted to DFW, along with ~~each of~~ the site development plan.~~s to confirm that isolated project activities, inclusive of piling installations, utility installations and road/ramp improvements near or adjacent to riparian habitat or other sensitive natural communities will not result in a significant impact to riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service.~~ DWR will mitigate for impacts through restoration of riparian habitat on the Brennan Island, or ~~similar of~~ other state-owned property based on a replacement ratio of 1:1.

BIO-5: Conduct Pre-Design Wetlands and Riparian Habitat Surveys for each of the Sites and Install and Maintain Exclusionary Fencing at the Sites to Ensure Full Avoidance of Seasonal and Permanent Wetlands and Jurisdictional Riparian Habitat.

a) DWR shall retain a qualified biologist to conduct a wetland delineation of the project sites. This delineation shall be submitted to the Corps, and verification received prior to any ground disturbing activities beyond the existing on-site roadways.

b) DWR, will preserve, and not disturb the existing wetlands, and wherever possible, establish 25-foot minimum buffers around all sides of these features. In addition, the final project design shall not cause significant changes to the pre-project hydrology, water quality or water quantity in any wetland that is to be retained on site~~. This shall be accomplished by avoiding or repairing any disturbance to the hydrologic conditions supporting these wetlands, as verified through wetland protection plans~~.

c) DWR, prior to construction activities, shall install ~~conduct an updated wetland delineation for its potential disturbance area, install orange exclusion fencing on T-posts (or equivalent), with~~ silt fence or exclusion fencing around wetlands to be retained on-site where wetlands are adjacent to construction activities. ~~material installed along the bottom, and w~~Wherever possible, a 25-foot buffer adjacent to seasonal and permanent wetlands shall be established.~~identified within and adjacent to the proposed site work.~~ The fencing shall be maintained for the duration of the site work. ~~, and the DWR Operations and Maintenance Manual for the Rio Vista site shall include the pre-construction delineation of jurisdictional wetlands and riparian habitat and note that all future traffic within the project site is limited to improved surface areas and stockpile areas, and all other areas are deemed off-limits to vehicular and construction equipment.~~

BIO-6: Secure Section 1600 Lake or Streambed Alteration (LSA) Agreement from DFW.

Prior to any ground-disturbing site improvements, DWR shall consult with DFW and secure any applicable Section 1600 Lake or Streambed Alteration (LSA) agreement(s) for any permanent site improvements waterward of the top of bank at Three-Mile Slough for the BISRA site or at the Stockton Deep Water Ship Channel or Mormon Slough at the Stockton West Weber Avenue site.

BIO-7: Avoid and Minimize Underwater Sound Pressure due to Pile Driving.

Underwater sound monitoring shall be performed during pile-driving activities. A qualified biologist/natural resource specialist shall be present during such work to monitor construction activities and compliance with terms and conditions of permits.

Underwater sound reduction measures shall be employed, as needed, to ensure that levels do not exceed the threshold levels established by USFWS and NMFS (for fish greater than 2 grams):

- Peak Pressure – 206 decibels
- Accumulated Sound Exposure Level (SEL) – 187 decibels

These underwater sound reduction measures shall include use of an impact hammer cushion block. Additionally, hammers shall be used only during daylight hours and initially shall be used at low energy levels and reduced impact frequency. Applied energy and frequency shall be gradually increased until necessary full force and frequency are achieved.

If necessary, one or more of the following shall be implemented to further reduce sound:

- Pipe caissons shall be used to isolate the piles from waters to buffer underwater sound pressure levels if underwater sound monitoring indicates that underwater sound levels exceed threshold levels. The caissons shall be driven below the mud line using vibratory or hydraulic methods and the interior area dewatered before pipe piles are installed using impact methods.
- The use of a bubble curtain surrounding the pile to be driven.

Bio-8: Ensure No Net Loss of Functions and Values of Wetlands, other Waters of the United States, and Waters of the State at the Stockton West Weber and Rio Vista Sites.

Before the start of any ground-disturbing activity associated with the construction of any project feature that would affect waters of the United States, including wetlands, or waters of the State, DWR will obtain all necessary permits under Sections 404 and 401 of the Clean Water Act or the State's Porter-Cologne Act for the proposed project and project refinements at the Stockton West Weber and Rio Vista sites, and Section 10 authorization under Rivers and Harbors Act for work within the Stockton Deep Water Ship Channel at the Stockton West Weber site.

All permits, regulatory approvals, and permit conditions for impacts on wetland habitats shall be secured before implementation of any construction activities within waters of the United States or wetland habitats, including waters of the State. DWR will commit to replace, restore, or enhance on a "no net loss" basis, in accordance with U.S. Army Corps of Engineers (USACE) and the Central Valley Regional Water Quality Control Board (RWQCB), the acreage of all wetlands and other waters of the United States that would be removed, lost, and/or degraded with implementation of project plans. Wetland habitat shall be restored, enhanced, and/or replaced at an acreage and location and by methods agreeable to USACE and the Central Valley RWQCB, as determined during the Section 404 and Section 401 permitting processes. Final mitigation ratios will be determined during the permitting process.

CULTURAL AND PALEONTOLOGICAL RESOURCES

CUL-1: Pre-construction Field Survey.

Prior to ground disturbing activities, a field survey will be conducted by a qualified archeologist to identify any prehistoric or historic cultural resources within the project site areas. The survey may reveal a lack of resources. No further identification effort will need to be made. If resources are found in one of the selected sites during the survey, it will be necessary to determine whether the resource is an important resource. This determination will be made by a qualified archeologist based upon surface evidence, if possible. If surface evidence is not conclusive, additional studies, including archival research or subsurface testing, will be conducted. If the additional studies are undertaken and a resource is found to be important under the criteria of the California Register of Historical Resources (CRHR), avoidance will be the preferred method of mitigation. The use of the site with the significant resource might need to be limited to a smaller portion of the site, with protective measures designed for the resource, such as fencing or monitoring site use. The determination of appropriate mitigation will be made by DWR.

CUL-2: Worker Cultural Resource Awareness.

Construction personnel will be informed of the potential for encountering significant archaeological resources and instructed in the identification of artifacts, bone, and other potential resources. All construction personnel will be informed of the need to stop work on the project site if cultural resources are found, and until a qualified archaeologist has been provided the opportunity to assess the significance of the find and implement appropriate measures to protect or scientifically remove the find. Construction personnel will also be informed of the requirement that unauthorized collection of cultural resources is prohibited.

CUL-3: Immediately Halt Construction if any Cultural Resources are Discovered.

DWR shall implement the following mitigation measure to reduce the potential impacts to buried historic cultural resources to a less-than-significant level. If cultural materials (e.g., unusual amounts of shell, animal bone, glass, ceramics, etc.) are discovered during project-related construction activities, ground disturbances in the area of the find shall be halted and a qualified professional archaeologist shall be notified regarding the discovery. The archaeologist, to be retained by DWR, shall determine whether the resource is potentially significant per the CRHR and develop appropriate mitigation. Mitigation may include, but not be limited to, in-field documentation, archival research, archaeological testing, data recovery excavations, or recordation, and shall be implemented before resuming construction in the immediate vicinity.

CUL-4: Immediately Halt Construction if any Human Remains are Discovered.

DWR shall implement the following mitigation measure to reduce the potential impacts to human remains to a less-than-significant level. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, the contractor and/or DWR shall immediately halt potentially damaging excavation in the area of the burial and notify the County Coroner and a professional archaeologist to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5[b]).

If the coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). Following the coroner's findings, DWR, an archaeologist, and the NAHC designated Most Likely Descendent (MLD) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code Section (PRC) 5097.9.

CUL-5: Determination of Significance of Cultural Resources.

If previously unknown cultural resources are discovered during project construction, all work in the area of the find should cease and a qualified archaeologist should be retained by DWR or consultant to assess the significance of the find, make recommendations on its disposition, and prepare appropriate field documentation, including verification of the completion of required mitigation. If archaeological or paleontological resources are discovered during earth moving activities, all construction activities within 50 feet of the find should cease until the archaeologist evaluates the significance of the resource. In the absence of a determination, all archaeological and paleontological resources should be considered significant.

If the resource is determined to be significant, the archaeologist, as appropriate, should prepare a research design for recovery of the resources in consultation with the State Office of Historic Preservation that satisfies the requirements of Public Resources Code, Section 21083.2. The archaeologist should complete

a report of the excavations and findings. Upon approval of the report, the project proponent should submit the report to the regional office of the California Historic Resources Information System.

HYDROLOGY AND WATER QUALITY

HYD-1: Institute Construction Best Management Practices (BMPs) for the Prevention of Erosion and Transport of Soil, Sand, and Silt Offsite during Runoff Events.

DWR shall implement construction Best Management Practices (BMPs) for all land clearing, land leveling, excavation, and fill operations associated with site preparations at the three sites. These measures will be incorporated into the construction plans and specifications. They include avoidance of existing wetlands, including placement of exclusion fencing, creating on site catchments for surface runoff, using coir logs to intercept drainage, and hydroseeding slopes, as appropriate.

Before the start of any construction work, clearing, or site grading associated with preparation, or any stockpiling activities at the sites, measures to control soil erosion and waste discharges will be prepared in accordance with BMPs. DWR will require all contractors conducting work at the sites to implement BMPs to control soil erosion and waste discharges of other construction-related contaminants. The general contractor(s) and subcontractor(s) conducting the work will be responsible for constructing or implementing, regularly inspecting, and maintaining the BMPs in good working order. In addition, the contractors will be required to submit and adhere to the applicable Storm Water Pollution Prevention Plan (SWPPP) associated with site development, preparation, and improvements.

Sufficient buffers from wetlands, riparian habitat, and/or other sensitive areas shall be maintained throughout the construction improvement period(s) of the project.

The plans developed by DWR or its contractor(s) will identify the grading, erosion, and tracking control BMPs and specifications that are necessary to avoid and minimize water quality impacts to the extent practicable. Standard erosion control measures (e.g., management, structural, and vegetative controls) will be implemented for all construction activities that expose soil. Grading operations will be conducted to eliminate direct routes for conveying potentially contaminated runoff to drainage channels. Erosion control barriers such as silt fences and mulching material will be installed, and disturbed areas will be reseeded with native grasses or other plants where necessary. Tracking controls shall be required throughout the construction period, as needed, to reduce the tracking of sediment and debris from the construction site.

At a minimum, entrances and exits shall be inspected daily, and controls implemented as needed.

The following specific BMPs will be implemented, as described in the California BMP Handbook (www.cabmphandbook.com:)

- Conduct all work according to site-specific construction plans that identify areas for clearing and grading so that ground disturbance is minimized.

- Avoid riparian vegetation, cover cleared areas with mulches, and install silt fences near riparian areas or streams to control erosion and trap sediment, and reseed cleared areas with native vegetation. Sufficient buffers (minimum 20 feet when possible) from wetlands and/or other sensitive areas shall be maintained throughout the life of the project.

- Stabilize disturbed soils before the onset of the winter rainfall season.

- Stabilize and protect stockpiles from exposure to erosion and flooding.

- Stabilize all construction access by providing a point of entrance/exit to the construction sites that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles.

- Grade each construction entrance/exit to prevent runoff from leaving the construction site, and ensure that all runoff from the stabilized entrances/exits are routed through a sediment-trapping device before discharge.

- Ensure that entry/exit ways are able to support the heaviest vehicles and equipment that will use them.

BMPs will also specify appropriate hazardous materials handling, storage, and spill response practices to reduce the possibility of adverse impacts from use or accidental spills or releases of contaminants. Specific measures applicable to the project include, but are not limited to, the following:

- Develop and implement strict onsite handling rules to keep construction and maintenance materials out of drainages and waterways.

- Conduct all refueling and servicing of equipment with absorbent material or drip pans underneath to contain spilled fuel. Collect any fluid drained from machinery during servicing in leak-proof containers and deliver to an appropriate disposal or recycling facility.

- Maintain controlled construction staging, site entrance, concrete washout, and fueling areas at least 100 feet away from stream channels or wetlands to minimize accidental spills and runoff of contaminants in storm water.

- Prevent raw cement; concrete or concrete washings; asphalt, paint, or other coating material; oil or other petroleum products; or any other substances that could be hazardous to aquatic life from contaminating the soil or entering watercourses.

Maintain spill cleanup equipment in proper working condition. Clean up all spills immediately according to the spill prevention and response plan, and immediately notify DFW and the Regional Water Quality Control Board (RWQCB) of any spills and cleanup procedures.

HAZARDS AND HAZARDOUS MATERIALS

HAZ-1: Develop and Implement Environmental Remediation Plans.

DWR has entered into an interagency agreement with the State Department of Toxic Substances Control (DTSC) and has conducted ~~to conduct~~ applicable supplemental site investigations (SSIs), and has developed Soil Management Plans (SMPs) and Health and Safety Plans (HASPs) approved by DTSC for the Stockton West Weber site parcels. The noted SMPs and HASPs must be implemented ~~shall develop environmental remediation plans that will be incorporated into the site plans and improvements proposed for the Stockton West Weber Avenue parcel(s)~~ prior to and during any ground-disturbing activities that may pose a toxic substance hazardous risk during construction of site improvements and subsequent ground-disturbing operations ~~facility operations~~ that will remain ~~be~~ consistent with current commercial and industrial zoning land uses.

NOISE

NOI-1: Implement Measures to Control Construction Equipment Noise Levels.

The contractor and/or DWR shall properly maintain construction equipment and equip it with noise control devices, such as exhaust mufflers or engine shrouds, in accordance with manufacturers' specifications. For non-emergency activities such as site construction and stockpiling quarry rock, operations will be limited to the periods 7:00 AM to 7:00 PM, Mondays through Saturdays.

RECREATION

REC-1: Implement Measures to Minimize Impacts on Recreation within Brannan Island State Recreation Area (BISRA).

DWR shall ~~i~~enter into a Memorandum of Understanding with the State Department of Parks and Recreation (DPR) to design project elements in coordination with DPR to minimize impacts on recreational quality and visual resources within the BISRA, and to improve facilities that could jointly benefit recreational services and emergency response capabilities. These include potential features such as developing architectural treatments to blend new structures (multi-use and warehouse facilities) within the park setting, screening the placement and storage of quarry rock stockpiles with vegetation, earthen berms, and/or placing a layer of sand over the quarry rock stockpile, planting native plants to help screen project features, improving service facilities such as restrooms and roads, and collectively implement a 2,500-5,000 square foot joint use facility within the BISRA that could serve as Multi-Agency Center (MAC).

TRANSPORTATION/TRAFFIC

TRANS-1: DWR, in consultation with Caltrans regional offices, will prepare a Traffic Management Plan (TMP) to guide activities during construction phase and restocking phase of the proposed project.

This plan will be prepared and support procurement of necessary Caltrans permits for the transport of heavy construction equipment and/or materials to/from the projects site, or any movement of oversized or

excessive lad vehicles on the State Highway System. At a minimum this plan shall define how to minimize the amount of time spent on construction transportation activities; how to minimize disruption of vehicle and alternative modes of traffic at all times, but particularly during periods of high traffic volumes; adequate signage and other controls, including flag persons, to ensure that traffic can flow adequately during construction; the identification of alternative routes that can meet the traffic flow requirements of a specific area, including communication (signs, webpages, etc.) with drivers and neighborhoods where construction activities will occur; and at the end of each construction day roadways shall be prepared for continued utilization without any significant roadway hazards remaining.

CONTACT INFORMATION

Questions or comments regarding this subsequent Initial Study and Proposed Mitigated Negative Declaration may be addressed to:

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INITIAL STUDY
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ACRONYMS AND OTHER ABBREVIATIONS

AAD	Amador Air District
AB	Assembly Bill
ADA	American Disabilities Act
BCAQMD	Butte County Air Quality Management District
BDCP	Bay Delta Conservation Plan
BISRA	Brannan Island State Recreation Area
BISRA site	Brannan Island State Recreation Area site
BMPs	Best Management Practices
CARB	California Air Resources Board
CBC	California Building Standards Code
CCAPCD	Calaveras County Air Pollution Control District
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CG	Commercial, General
CGS	California Geological Survey
CH_4	methane
CNPS	California Native Plant Society
CO_2	Carbon Monoxide
CVFPB	California Central Valley Flood Protection Board
CWA	Clean Water Act
Delta	Sacramento-San Joaquin Delta
DFEPRRP	Delta Flood Emergency Preparedness, Response, and Recovery Program
DFW	Department of Fish and Wildlife
DOC's	Department of Conservation's
DPC	Delta Protection Commission
DPR	Department of Parks and Recreation
DRMS	Delta Risk Management Strategy
DSC	Delta Stewardship Council
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EFH	essential fish habitat
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FRAQMD	Feather River Air Quality Management District
FTA	Federal Transit Administration
GHGs	Greenhouse Gases
GGERP	Greenhouse Gas Emissions Reduction Plan
GGS	giant garter snake
GHG	greenhouse gases
HASP	Health and Safety Plan
HFCs	hydrofluorocarbons
I-5	Interstate 5
ICPs	Incident Command Posts
IG	Industrial, General

in/sec	inch per second
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
LSA	Lake or Streambed Alteration
MAC	Multi-Agency Center
MBUAPCD	Monterey Bay Unified Air Pollution Control District
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
MRZ	mineral resource zone
N_2O	nitrous oxide
NCSC	Natural Communities of Special Concern
NMFS	National Marine Fisheries Service
NOx	Nitrogen Oxides
NRCS	Natural Resources Conservation Service
NSAQMD	Northern Sierra Air Quality Management District
OHWM	Ordinary High Water Mark
PAHs	polynuclear aromatic hydrocarbons
PCAPCD	Placer County Air Pollution Control District
PEA	Preliminary Endangerment Assessment report
PFCs	perfluorocarbons
PM	Particulate Matter
PPV	peak particle velocity
proposed project	Delta Flood Emergency Facilities Improvement Project
RMS	root mean square
ROG	reactive organic gases
RPR	Rare Plant Rank
RWQCB	Regional Water Quality Control Board
SCH	State Clearinghouse
SF_6	sulfur hexafluoride
SJMSCP	Joaquin County Multi-Species Habitat Conservation and Open Space Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLIC	Spills, Leaks, Investigations, and Cleanups
SMAQMD	Sacramento-Metro Air Quality Management District
SMP	Soil Management Plan
SR-4	State Route 4
SRA	shaded riparian aquatic
SSIs	supplemental site investigations
Stockton West Weber site	Stockton West Weber Avenue site
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCAPCD	Tehama County Air Pollution Control District
USACE	U.S. Army Corps of Engineers
USFWS	Fish and Wildlife Service
VOC	volatile organic compound
YSAQMD	Yolo Solano Air Quality Management District

1 INTRODUCTION

1.1 PURPOSE OF THIS INITIAL STUDY

The California Environmental Quality Act (CEQA) requires that state agencies consider the environmental consequences of projects over which they have discretionary authority before taking action on those projects. The California Department of Water Resources (DWR) has complied with CEQA by approving an Initial Study (IS), adopting a Mitigated Negative Declaration (MND) and Mitigation Monitoring and Reporting Program (MMRP), and approving the proposed Delta Flood Emergency Facilities Improvement Project (proposed project), a component of the Delta Flood Emergency Preparedness, Response, and Recovery Program (DFEPRRP). These actions were taken by DWR on June 3, 2013, and a Notice of Determination was filed by DWR on June 5, 2013. The State Clearinghouse number for the proposed project was No. 2013042015.

The relevant CEQA information for the proposed project, which is hereby incorporated by reference per CEQA Guidelines Section 15150, is available at the following DWR website: http://www.water.ca.gov/floodmgmt/hafoo/fob/dfeprrp/facilities.cfm. The full citation is as follows:

- Notice of Determination, Initial Study/Mitigated Negative Declaration, Mitigation Monitoring and Reporting Program, and Response to Comments, Delta Flood Emergency Facilities Improvement Project, State Clearinghouse (SCH) No. 2013042015, A component of the Delta Flood Emergency Preparedness, Response, and Recovery Program (California Department of Water Resources 2013).

Minor refinements to the proposed project have been made since DWR adopted the MND and MMRP, approved the proposed project, and filed the Notice of Determination in June 2013. As a result, DWR has prepared this new subsequent Initial Study and proposed subsequent Mitigated Negative Declaration (IS/MND) to evaluate the potential impacts on the environment from these project refinements. While typically an addendum is completed to cover minor project refinements (CEQA Guidelines Section 15164), DWR chose to prepare this new IS/MND to evaluate the proposed project refinements in the context of the original proposed project evaluated by DWR in June 2013 (DWR 2013). The information contained herein focuses primarily on project refinements and supplements the already completed IS/MND and MMRP that were completed for the proposed project in June 2013 (DWR 2013. Information from the original IS/MND is included in this subsequent IS/MND when necessary to provide context and evaluate the full project impacts of the whole of the action.

No project refinements are proposed at this time for Site 3, the Brannan Island State Recreation Area (BISRA) site; therefore, this site is not addressed further because all environmental impacts of the BISRA site have been fully disclosed in the June 2013 IS/MND (DWR 2013). This subsequent IS evaluates project refinements associated with Site 1 - Stockton West Weber Avenue site (called “Stockton West Weber site” hereafter) and Site 2 - Rio Vista site.

1.2 SUMMARY OF ORIGINAL PROPOSED PROJECT DESCRIPTION, PURPOSE, AND OBJECTIVES

Under the facilities implementation component of the DFEPRRP, DWR proposes to acquire long-term access and improve up to three sites in the Sacramento-San Joaquin Delta (Delta); these sites are located in Stockton, Rio

Vista, and Brannan-Andrus. The purpose of the proposed project is to ensure that the State has the appropriate infrastructure and supplies in the Delta to respond to and recover quickly and effectively from major flood or earthquake disasters in the Delta. The primary objective of the proposed project is to improve three transfer facilities sites where quarry rock, sand, soil, and other flood-fight materials can be efficiently transferred from trucks to barges to expedite levee repairs and facilitate channel closures in the event of Delta levee breaches. In addition, the proposed project sites would serve other emergency response functions needed by DWR to respond rapidly and effectively to significant emergencies in the Delta, including storage of repair materials and flood-fight supplies, and Incident Command Posts (ICPs).

DWR proposes to acquire the needed sites through purchase from willing private sellers or through long-term lease arrangements with other governmental agencies. DWR would utilize existing improvements and construct additional improvements as needed to support the proposed emergency response functions. Such improvements are likely to include site grading, fencing, barge docking and loading facilities, new buildings, parking, temporary office trailers, utilities (water, power, communications, and wastewater), lighting, and security improvements.

1.3 ADDITIONAL INFORMATION IN ORIGINAL INITIAL STUDY

The original IS included extensive information on the background to the proposed project, the proposed project itself, and the development of the proposed project and alternatives. This information is incorporated by reference and is available at the following DWR website: http://www.water.ca.gov/floodmgmt/hafoo/fob/dfeprrp/facilities.cfm, and includes detailed information on the following subjects (pages 1-28 in original IS/MND):

- Relationship to previous DWR flood preparedness actions in the Delta;
- Relationship of the proposed project to the DFEPRRP;
- Purpose and need for proposed project;
- Location and setting, Delta geography, resources, and resources at risk;
- Delta levees, flooding, and authority;
- Related programs, entities, and initiatives in the Delta such as the Delta Levees Maintenance Subvention Program, Delta Levee Special Flood Control Projects, and implementation of the Central Valley Flood Protection Plan;
- Information on other nearby projects such as the DWR Temporary/Seasonal Delta Barriers Project, Franks Tract Project, Bay Delta Conservation Plan (BDCP), Ecosystem Restoration Programs, Delta Stewardship Council (DSC), Delta Protection Commission (DPC), Local Agency activities; Delta Risk Management Strategy (DRMS), and previous DWR efforts to improve Delta flood emergency response and recovery capabilities; and
- Information on project alternatives including the range of alternatives considered, no-project alternative, site characteristics, routine operations and maintenance, emergency operations, environmental considerations, and alternatives screening criteria and results.

1.4 SUMMARY OF IMPACTS AND MITIGATION MEASURES FROM ORIGINAL PROJECT IS/MND

The impacts from the original IS/MND are easily scanned in the Environmental Checklist presented on pages 74 – 179 of the original IS/MND (DWR 2013) and located at http://www.water.ca.gov/floodmgmt/docs/Delta-FIP-IS-MND-8-15-2013_FINAL-June2013.pdf. The conclusions for each impact in the Environmental Checklist (less than significant with mitigation incorporated, less-than-significant impact, or no impact) are essential the same as those presented in this document's Environmental Checklist in Chapter 3, "Environmental Checklist." Consequently, they are not repeated herein.

Appendix B, "Mitigation Monitoring and Reporting Program," of this IS/MND contains the full suite of mitigation measures presented in the 2013 IS/MND (DWR 2013). In addition, three original biological mitigation measures (BIO-2, BIO-4, and BIO-5) have been modified and two new biological mitigation measures (BIO-7 and BIO-8) have been added in this IS/MND to address the proposed project and project refinements. The mitigation measure for hazards and hazardous materials, HAZ-1, has also been modified to reflect the progress of the DWR and State Department of Toxic Substances Control (DTSC) interagency agreement since the publication of the 2013 IS/MND.

1.5 DOCUMENT ORGANIZATION

This IS is organized as follows:

- Chapter 1 provides an overview of the purpose of this subsequent IS/MND and its relationship with the original 2013 IS/MND for the original project; the original project description, purpose, and objectives; additional information in the original IS/MND; summary of impacts and mitigation measures from the original project IS/MND; and document organization;
- Chapter 2 describes the proposed project and especially the project refinements evaluated in this IS;
- Chapter 3 provides a brief summary of the environmental setting, describes the environmental effects of the proposed project and project refinements, and identifies appropriate mitigation measures;
- Chapter 4 lists references cited; and
- Chapter 5 lists preparers of this IS.

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2 PROJECT DESCRIPTION

The original project description for the proposed project is summarized in Section 1.2, "Summary of Original Proposed Project Description, Purpose, and Objectives," and presented in the 2013 IS/MND on pages 32 – 61. This chapter focuses on the proposed project refinements at the Stockton West Weber site and the Rio Vista site. No project refinements are proposed at this time for Site 3, the BISRA site; therefore, this site is not addressed further. The locations of the Stockton West Weber, Rio Vista, and BISRA sites are depicted in Figure 2-1.

2.1 STOCKTON WEST WEBER SITE

2.1.1 SITE DESCRIPTION

This site is near the Port of Stockton, which is located along the eastern edge of the Delta, approximately 50 miles south of Sacramento. It is located between the East Complex of the Port of Stockton and near the intersections of Interstate 5 (I-5) and State Route 4 (SR-4), and just south of the Stockton Deep Water Ship Channel.

The current zoning for all three parcels comprising this site of up to 22.6 acres is Industrial, General (IG). This site is currently adjacent to industrial sites. All of the parcels along West Weber Avenue west of Interstate 5 (I-5) are designated IG, as are the parcels on the east and south of Old Mormon Slough. On the north bank of the Stockton Deep Water Ship Channel, directly across from the site, the parcels are designated Commercial General (CG), and the 2035 General Plan Land Use/Circulation Diagram designation is Commercial. The parcels to the west and south are designated as Industrial in the 2035 General Plan, while the parcels to the north and east are proposed as Commercial (City of Stockton 2007).

The property of interest to DWR consists of three parcels, totaling approximately 22.6 acres. This property was formally privately owned and was recently purchased by DWR . It has dock facilities to support at least two barge-loading operations and additional water frontage to add two or three more additional barge-loading facilities. The site has previously been used for construction purposes and as a barging facility. It has power and communication utilities including yard lighting, and has chain link fencing around portions of its perimeter.

There are two metal buildings on the site. The largest building is north of and adjacent to West Weber Avenue, with approximate dimensions of 200 feet by 80 feet (16,000 square feet). The smaller building is located adjacent to the north Bank of Old Mormon Slough, with approximate dimensions of 100 feet by 70 feet (7,000 square feet).

The two parcels of interest on the Stockton West Weber site have undergone environmental clean-up efforts in the past and under the proposed improvements will be developed in conformance with DWR's Soil Management Plans (SMPs) and Health and Safety Plans (HASPs) approved by the Department of Toxic Substances Control (DTSC). These plans provide direction and guidance to DWR designers and construction contractors on how to operate and work around possible in-ground contaminates.

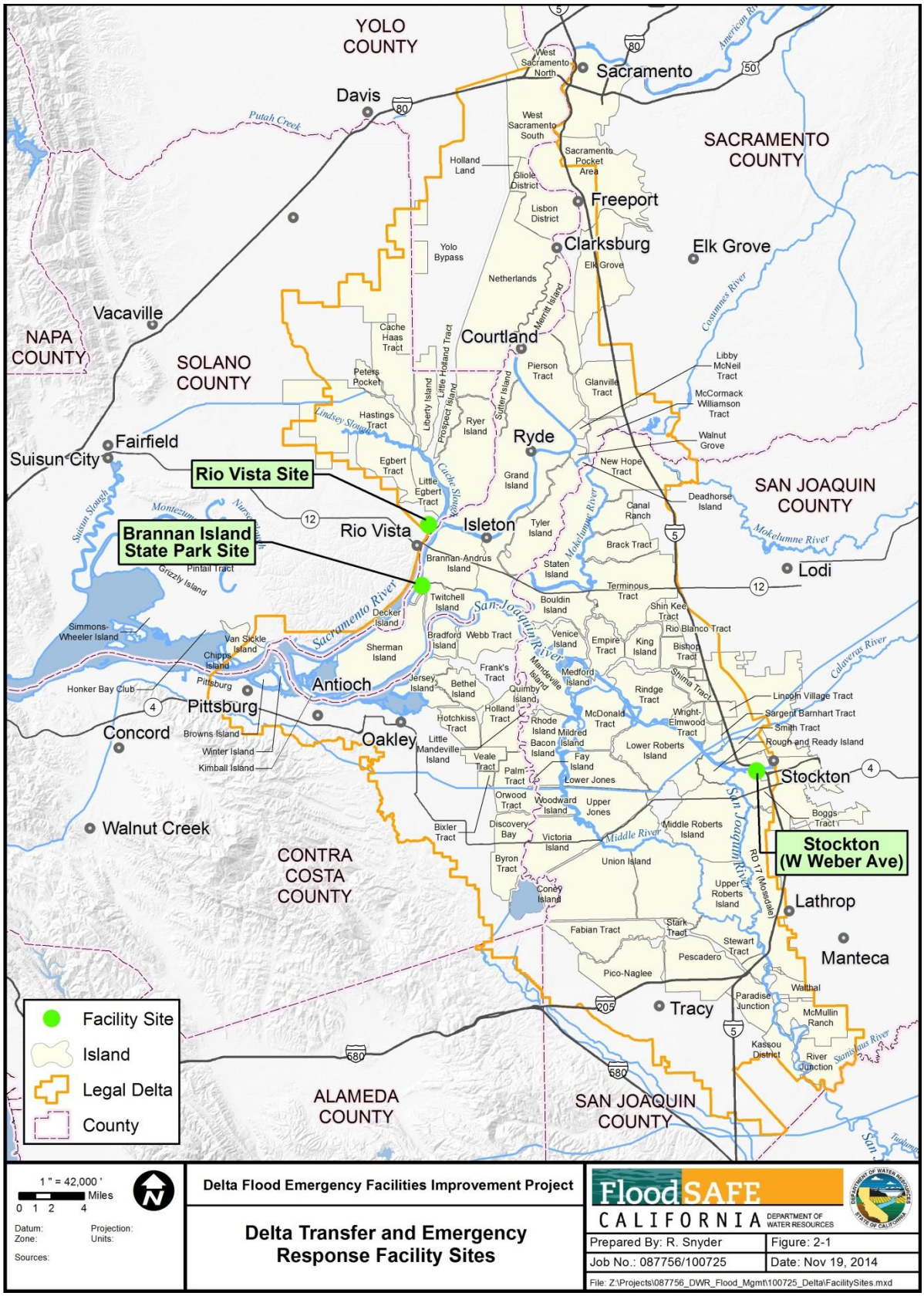


Figure 2-1. Proposed Sites for the Delta Flood Emergency Facilities Improvement Project

Included in the SMP is the HASP to provide guidance to DWR personnel and construction contractors on best practices while working around possible low levels of containments.

The property located across on the south and east bank of Old Mormon Slough is a U.S. Environmental Protection Agency (EPA) Superfund site, formerly a factory for producing pressure treated wood. McCormick & Baxter, the former operator of the site, went bankrupt and ceased operation on or before 1991. Under an EPA Record of Decision (R09-99/044) issued in 1999, the site was cleaned up and stabilized to minimize the transport of pollutants off the site. Remediation included the placement of a 2-foot deep layer of sand in the Old Mormon Slough channel and the closing off of the southeastern portion of the channel from any kind of boat traffic. As a result, access to a portion of the channel is restricted by means of a log boom for an indefinite period to prevent mobilization of contaminated sediments in the channel. The southeastern portion of the log boom is located about 600 feet from the mouth of the channel, allowing approximately 265 feet of existing dock footage along the Slough to be used for loading one or two barges at a time.

This site is zoned for industrial use and has historically been used for construction purposes. It offers sufficient space for barge loading, materials storage, an ICP, and parking. It offers egress to the central Delta via the Stockton Deep Water Channel. It is readily accessible from major highways in the Stockton area, including I-5, SR-99, SR-4, and SR-12.

2.1.2 PROPOSED PROJECT REFINEMENTS

Proposed project refinements are described below. Similar types of construction equipment and number of construction workers used to construct and operate the proposed project would also be used for the project refinements. All proposed project refinements are within the project footprint identified in the original 2013 IS/MND. All proposed project refinements are within the construction and operations schedules identified in the original 2013 IS/MND. All proposed project refinements would use staging areas and haul routes already identified and evaluated in the original 2013 IS/MND. Consequently, the construction approach for the proposed project refinements is generally the same as that identified in the 2013 IS/MND, with any modifications described below.

Proposed project refinements at the **Stockton West Weber site**, which consists of a north and south parcel at the westerly terminus of West Weber Avenue, are as follows:

- Clear, grub, and grade the site to the following specifications (site clearing, grubbing, and organic material removal planned but not specified in original project description, and tree removal and sea-level rise actions are added project refinements):
    - Clear, grub, and remove approximately 30,000 cubic yards (cy) of organic material including top soil material from approximately 20 acres, including at least 14 and potentially up to approximately 20 trees, as well as shrubs as necessary during project construction.
    - Grade the site with approximately 30,000 cy of imported backfill material to bring the north parcel to an elevation of approximately 10-11 feet and provide structural fill for the building foundation on the south parcel.

- Construct 12-inch aggregate base all-weather surfaces on the north parcel (approximately 26,000 cy on approximately 12 acres) to a finished grade of approximately 11-12 feet, above the 100-year flood elevation plus free board to anticipate approximated 18 inches of sea level rise; grade and add approximately 2 inches to the existing aggregate base surface on the south parcel (approximately 4,000 cy on about 8 acres).

- Improve, extend, or abandon existing utilities services where required. Specific work will be identified during final design.
- Construct a new 7,000 square foot steel frame building with concrete foundation for warehouse use on the south parcel.
- Construct two new approximately 600-square-foot concrete foundations supported by piles for two rock conveyors (concrete foundation planned but not specified in original IS).
- Construct two new approximately 100-square-foot concrete foundations for an electrical transformer, one on each parcel.
- Install a pre-fabricated restroom facility including an approximate 200-square-foot concrete foundation and a possible concrete waste vault.
- Construct 6,500 square-foot asphalt foundation/pad for four approximately 8-foot by 40-foot temporary office trailers for use as an ICP during flood emergencies. The asphalt pad will also encompass American Disabilities Act (ADA) compliant parking stall(s) as required.
- Construct 4,600 square-foot asphalt ADA parking stalls and pathways for building accessibility.
- Install about 550 linear feet of metal beam guardrail along a new ramp to be constructed.
- Properly grade and construct surface for areas designated for rock stockpiles; surface would include 12-inch aggregate base consistent with the rest of the site and geogrid/geotextile fabric (planned but not specified in original project description).
- Establish a quarry rock stockpile of up to 150,000 tons of various rock gradations below 24-inch-minus at two locations on the north parcel and one location on the south parcel, totaling approximately 6 acres (an increase from 40,000 tons in original project description but accounted for in the 2007 IS/MND [DWR 2007]).
- Remove 12 existing wooden piles, in two clusters of six piles each, which are obstructing the foundation and alignment at one of the conveyor locations along the site's north shoreline fronting the Stockton Deep Water Ship Channel.
- Install up to eight spud piles near the toe of bank along the Stockton Deep Water Ship Channel to support two conveyor support barge structures; spud piles would be steel pipes or H piles of 4 square feet each.
- Install up to 11 dolphin pile clusters for mooring of up to three transport barges during rock-loading operations. The dolphin pile clusters would likely be constructed with three 24-inch-diameter steel pipe piles

each (one vertical and two battered) for a total of about 33 piles in the Stockton Deep Water Ship Channel. Each dolphin pile cluster affects approximately 12 square feet at the bottom of the channel. Pile driving would be conducted with an impact hammer and is anticipated to occur from a barge.

- Clear vegetation from up to approximately 700 linear feet along the Stockton Deep Water Ship Channel, including a minimum of 100 feet upstream and downstream of each conveyor foundation (about 400 linear feet total) and potentially the 300 linear feet between the conveyor foundations.
- Place approximately 13,000 square feet of rip rap along the Stockton Deep Water Ship Channel, extending about 100 feet upstream and downstream of each conveyor foundation (total of about 400 linear feet) to protect the slope from wave action; approximately 9,900 square feet would be above the Ordinary High Water mark (OHWM) and approximately 3,600 square feet would be below the OHWM.

The south parcel on this site has been used for loading barges in the past and has fully functional berthing areas with vertical walls comprised of sheet piles. It can accommodate loading of at least two barges at once at the existing berthing areas. Two additional barges could be simultaneously loaded on the northern parcel of the site, using structures near shore to support conveyors to load the transport barges. The conveyor support structures would require the placement of two sets or a total of eight pilings to be driven along the toe of bank below the OHWM fronting the Stockton Deep Water Ship Channel.

This site is also expected to be an effective location for the stockpiling of approximately 150,000 tons of various repair materials, including quarry rock gradations below 24-inch-minus rock. In preparation for a flood emergency, DWR may acquire various repair materials and stockpile these materials on this site. This material would be trucked in from various quarries or other material sources and stockpiled using earth-moving equipment. This preparatory stockpiling operation would generally be conducted during normal workdays Monday through Saturday, under daylight conditions from 7:00 AM to 7:00 PM.

This site is expected to support the installation of the temporary office space needed for a major Delta ICP. Up to 4 temporary office trailers would be placed on a 6,500 square foot asphalt foundation/pad. The location of this trailer pad would require the site improvements of various utilities such as power, telephone, internet, and water. The construction of the utility services would require excavation of trenches approximately 24 to 30 inches deep from the nearest available source. Overhead utility lines would be removed and relocated to prevent obstruction of large equipment that might be needed for the emergency. Aggregate base access roads may be constructed or improved for trucks and heavy equipment. Additional gates may be needed for improved truck routing. Existing lighting and fencing would be improved to support 24-7 emergency operations and to provide site security.

There are portions of the site where the elevation is above the estimated 100-year flood elevation, but the overall elevation of the site would be increased above the 100-year flood elevation plus (NAVD88) 1.5 feet to accommodate future sea level rise.

Figure 2-2 presents specific Stockton West Weber site improvements with proposed project refinements.

During construction, a variety of equipment is anticipated to be used. Dozers, graders, and compactors may be required for moderate earthwork. Rubber tired backhoes and trenchers would be used to prepare the foundations for concrete foundations. Compactors would compact the backfill material for the foundations and trenches.

Concrete trucks would deliver concrete to the site. Loaders and trucks would move soil materials. Cranes and rough terrain forklifts would hoist construction materials from delivery trucks and place them into the work area. Highway trucks would be used to deliver construction materials to the site. Generators would be used to power the construction field office and electric powered tools as needed. Air compressors would be needed for air powered tools.

A barge, or several barges, equipped with a crane and a pile driver or drilling equipment would be needed for the in-water piling operations. The work window for in-water construction would be August 1 – November 30 to minimize impacts to special-status fish species, which would not be expected to be present at the site during this period.

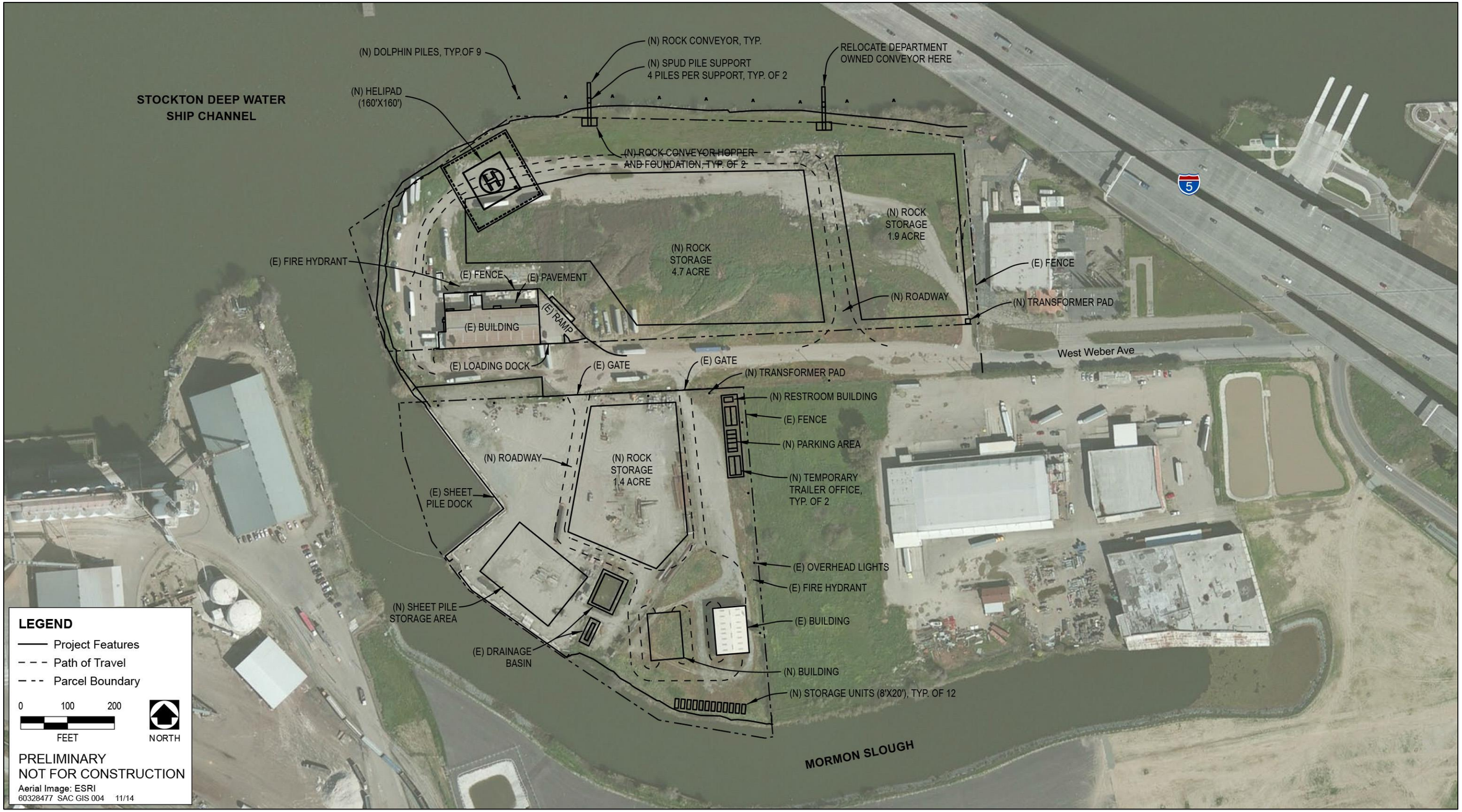
2.2 RIO VISTA SITE

2.2.1 SITE DESCRIPTION

In Rio Vista, DWR established a rock stockpile of approximately 113,000 tons on approximately 3.4 acres of land owned by the Sacramento-San Joaquin Drainage District through the State of California Central Valley Flood Protection Board (CVFPB) along Airport Road. A portion of the CVFPB property is currently under lease to ASTA Construction, Inc. This property is accessed from the south-west via Airport Road. In order to transfer stored quarry rock to barges, DWR would need to contract with the Dutra Group for barge-loading services at its established barge-loading facility located along SR-84/River Road, which is approximately 1,000 feet southeast of the existing stockpile area. The Dutra Group's facility includes business offices, space for unloading trucks, and a barge-loading facility that is capable of docking and loading several barges concurrently. The site is readily accessible from I-80 via Highway 12 and Highway 113. It is also accessible from I-680 via Highway 160 to the south, and from I-5 via Highway 12 and Highway 160.

According to the Solano County General Plan (November 4, 2008), land use zoning for Rio Vista along Airport Road, west of the Rio Vista Site, is urban industrial. East of the City Limit, including the southern portion of the Sacramento-San Joaquin Drainage District CVFPB property where the existing quarry rock stockpile is located, the land is designated as agricultural. Along the waterfront where the Dutra Group has its docking and barge facilities, the designation is urban industrial and water-dependent industrial. The site of interest is currently owned by the Sacramento-San Joaquin Drainage District acting through the CVFPB, and it is currently used by DWR to store quarry rock and is partially leased by a third party, ASTA Construction, Inc., for sand mining purposes.

The Dutra Group used its facility for loading barges in support of DWR's 2007-2008 Emergency Levee Repair Project, as well as other levee repair projects. The property managed by the CVFPB has a significant amount of storage capability for repair material, but much of the property is within the 100-year flood zone. The property has established aggregate base roads on the property to the stockpile area. During low-flow conditions, trucks have access from the CVFPB property to the Dutra Group barge facility. Material would be loaded onto barges with the use of earth-moving equipment. DWR can reasonably anticipate that the Dutra Group's barge-loading facility would be available under contract to DWR for emergency repair work in the event of a major disaster; a standby contract would be executed to provide assurances regarding the availability and cost of such services.



Source: DWR 2014 adapted by AECOM 2014

Figure 2-2. Stockton West Weber Site Improvements

The site topography is variable due to the historic deposition and removal of dredged materials, but the general slope is toward the northeast. It lies generally 10 to 15 feet below Airport Road, with a steep embankment at the road shoulder. The base of the embankment is at an elevation of approximately 20 feet. From there, the elevation drops gradually to approximately 6.5 feet (NAVD88) in the vicinity of the quarry rock storage area. An embankment separates the property from the waterfront to the southeast and from the farmland on the northeast. These embankments are approximately 10 to 15 feet high.

Consistent with this topography, the Federal Emergency Management Agency (FEMA) flood map for this area indicates that the rock stockpile and the Dutra Group's barge-loading facility are at risk of flooding in a 100-year flood event. In such a flooding event, low-lying portions of this site may not be operable until the water recedes. In the aftermath of a seismic event, this site is expected to be operable.

This Rio Vista site is already in State ownership, with a large quarry rock stockpile in place, immediately adjacent to the Dutra Group's dock facilities. The site is strategically located in the West Delta, readily accessible from the I-80 corridor via Highway 12 and Highway 113. It will require relatively modest road improvements to improve the accessibility of the existing quarry rock stockpile under high-water conditions, and to shorten the haul route to the Dutra Group dock area. There are no significant space limitations. It is anticipated that this site can be substantially improved in terms of the efficiency of barge-loading operations with a modest investment in road construction on site. The State investment in this site is already significant, given the CVFPB ownership of the site and the existing stockpile of quarry rock.

2.2.2 PROPOSED PROJECT REFINEMENTS

Proposed project refinements are described below. The same types of construction equipment and number of construction workers used to construct and operate the proposed project would be used for the project refinements; there would be no change. All proposed project refinements are within the project footprint identified in the original 2013 IS/MND. All proposed project refinements are within the construction and operations schedules identified in the original 2013 IS/MND. All proposed project refinements would use staging areas and haul routes already identified and evaluated in the original 2013 IS/MND. Consequently, the construction approach for the proposed project refinements is generally the same as that identified in the 2013 IS/MND, with any modifications described below.

Proposed project refinements at the **Rio Vista site** are as follows:

- Site clearing, grubbing, and removal of organic material including approximately 4.0 acres of trees as necessary during project construction (site clearing, grubbing, and organic material removal planned but not specified in original project description, and tree removal is a project refinement).
- Construct 6,000 square-foot asphalt foundation/pad for two approximately 8-foot by 40-foot temporary office trailers for use as an ICP during flood emergencies and a pre-fabricated restroom facility. The pad will also encompass ADA compliant parking stall(s) as required.
- Establish a 0.75-acre area for vehicle parking (a decrease from a 1.25-acre area specified in original project description).

- Provide new water connection for the Central Valley Flood Protection Board (CVFPB) lease of the remaining property and develop electrical connections to the site for future temporary office trailers.
- Widen existing access road(s) from about 20 feet to 28 feet. This project refinement would remove at least two and up to approximately 15 trees along the existing access road, as well as numerous woody shrubs.

The proposed project refinements focus primarily on improving access to the rock stockpile and the Dutra Group's dock facilities, stockpiling of 20,000 tons of sand, and developing site improvements to accommodate storage containers and parking for site personnel.

The existing stockpile of quarry rock already has adequate dry weather access, but the stockpile is located well within the 100-year floodplain and could be temporarily inaccessible during a major flood event. Wet weather and flood water would have a deleterious effect on the access road, particularly under heavy truck traffic. In addition, the existing haul road is long and inefficient from the perspective of transferring rock to the Dutra Group's dock. To best address these drawbacks, the proposed project involves constructing a haul road at the site. The haul road would access the levee road on the northeastern boundary of the property via a ramp. Similarly, the haul road near the property's southerly boundary would be improved with a new ramp from Airport Road near its intersection with St. Francis Way. The proposed haul road would be constructed to drain quickly and to tolerate the heavy truck traffic envisioned during an emergency barge-loading scenario. It is recommended that the emergency contractor utilizing the site be given the responsibility for maintenance of the roads on the property if any problems occur. The Dutra Group facility has all the necessary improvements at their waterside barging facility to operate under an emergency situation in conjunction with the proposed project and project refinements.

Site improvements would also include placement of storage containers to store flood-fight supplies, including bulk bags near the southwestern corner of the property. This portion of the property is at an elevation above the 100-year floodplain and would be readily accessible from Airport Road. An existing access ramp at the southwest corner of the property would be improved to facilitate access to the Dutra Group's Dock and the steel storage containers. In the event of an emergency, sand for filling the bulk bags could be obtained on site.

Figure 2-3 presents specific Rio Vista site improvements with proposed project refinements.

Source: DWR 2014 adapted by AECOM 2014

Figure 2-3. Rio Vista Site Improvements

3 ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION	
1. Project Title:	Delta Flood Emergency Facilities Improvement Project Refinements
2. Lead Agency Name and Address:	California Department of Water Resources 1416 9th Street, Sacramento, CA 95814
3. Contact Person and Phone Number:	John Paasch, Division of Flood Management Phone: (916) 574-2611
4. Project Location:	Stockton West Weber Avenue site: The project site is located between the East Complex of the Port of Stockton and near the intersections of Interstate 5 (I-5) and State Route 4 (SR-4), and just south of the Stockton Deep Water Ship Channel. Rio Vista site: The project site is located in the West Delta, readily accessible from the I-80 corridor via Highway 12 and Highway 113.
5. Project Sponsor's Name and Address:	California Department of Water Resources 1416 9th Street, Sacramento, CA 95814
6. General Plan Designation:	Stockton West Weber Avenue site: Commercial Rio Vista site: Agricultural, Urban Industrial, Water-Dependent Industrial
7. Zoning:	Stockton West Weber Avenue site: Industrial General Rio Vista site: Urban Industrial
8. Description of Project:	Please refer to Chapter 2, "Project Description"
9. Surrounding Land Uses and Setting:	Please refer to Chapter 2, "Project Description"
10: Other public agencies whose approval is required:	CDFW, CDPR, Central Valley RWQCB, CVFPB, DTSC, DSC, SHPO, SLC, SJVAPCD, USACE, USFWS, NMFS, USCG, San Joaquin and Solano Counties

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☐ Transportation/Traffic	☐ Utilities/Service Systems	☐ Mandatory Findings of Significance
☐ Wind/Comfort		☒ None With Mitigation

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation:

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

☒ I find that although the proposed project **COULD** have a significant effect on the environment, there **WILL NOT** be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

☐ I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

☐ I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **EIR** or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Keith Swanson
Signature

2/11/15
Date

Keith Swanson
Printed Name

Chief, Division of Flood Management
Title

California Department of Water Resources
Agency

EVALUATION OF ENVIRONMENTAL IMPACTS

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

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

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

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

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

   - the significance criteria or threshold, if any, used to evaluate each question; and
   - the mitigation measure identified, if any, to reduce the impact to less than significance.

3.1 AESTHETICS

3.1.1 ENVIRONMENTAL SETTING

STOCKTON WEST WEBER SITE

The Port of Stockton is a heavily industrialized area that is densely populated with warehouses and industrial facilities as well as over 40 miles of railroad tracks (DWR 2007). The Stockton West Weber site currently consists of three parcels containing up to 22.6 acres, all of which are currently zoned Industrial, General (IG). All of the parcels along West Weber Avenue west of Interstate 5 are designated IG, as are the parcels on the east and south of Old Mormon Slough. On the north bank of the Stockton Deep Water Ship Channel, directly across from the site, the parcels are designated Commercial, General (CG) and the 2035 General Plan Land Use/Circulation Diagram designation is Commercial. The parcels to the west and south are designated as Industrial in the 2035 General Plan, while the parcels to the north and east are proposed as commercially zoned (City of Stockton 2007).

The Stockton West Weber site contains areas in both pavement and in open space with two steel structures, yard lighting, and concrete dock access. The southwest parcel contains one steel warehouse and includes about 8 acres of mostly aggregate base and asphalt covered areas; the two northern parcels are primarily unimproved dirt and aggregate base. All three parcels are accessible from West Weber Avenue from the east. The adjacent properties include a vacant lot to the east and parcels with warehouses to the south and west.

RIO VISTA SITE

The Rio Vista site is located northeast of the town of Rio Vista (estimated population 7,400, US Census Bureau 2012). The site is on the southern portion of a large property owned by the Sacramento San Joaquin Drainage District acting through the CVFPB, with a portion leased by ASTA Construction, Inc. The site is located northwest of River Road, northeast of Airport Road, and west of the Sacramento River. According to the Solano County General Plan (November 4, 2008), land use zoning for Rio Vista along Airport Road, west of the Rio Vista site, is urban industrial. East of the City Limit, including the southern portion of the Sacramento San Joaquin Drainage District property managed by CVFPB where the existing quarry rock stockpile is located, the land is designated as agricultural. Along the waterfront where the Dutra Group has its docking and barge facilities, the designation is urban industrial and water-dependent industrial. The adjacent area to the northeast is part of the lower Yolo Bypass, in agricultural use, and is separated from the property by a levee. The site has been previously disturbed (as recently as 2007 per aerial photography provided by Google Earth 2012) and contains dredge spoils. Currently, it is used for surface mining operations by extracting sand and clay from the dredge spoils. The site contains mounds of dirt and scattered areas of ruderal vegetation, as well as some notable habitat areas. The proposed project and project refinements would be confined to the southern portion of the property, comprising approximately 15 acres bounded on the southwest by Airport Road; on the southeast by an embankment that separates the property from commercial, industrial, and residential development along Highway 84 (River Road); on the northeast by the Yolo Bypass west levee; and on the north by a line drawn parallel with the southern boundary, approximately 2,500 feet north of it.

3.1.2 ENVIRONMENTAL EFFECTS

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

This analysis focuses on the proposed project refinements and their related effects associated with emergency response activities, including the development of the aforementioned sites as material stockpile and transfer sites, and some of the sites as construction offices and incident command posts. By implementing the proposed project and project refinements, which involve developing these sites and preparing storage sites, these actions would ultimately contribute to the reduction in cumulative environmental impacts associated with a levee breach or failure. It is unknown specifically when and where flooding could occur or the extent of that flooding. Also, because the operations-related impacts to visual effects will be essentially the same with or without the proposed project and project refinements (i.e., emergency rock will be loaded on barges and/or trucks and transported to and placed at the flood site), impacts to visual resources associated with emergency response operations as part of the proposed project and project refinements are not discussed further.

a) Will the proposed Project have a substantial adverse effect on a scenic vista?

A scenic vista is defined as an expansive view of a highly valued landscape from a publicly accessible viewpoint (DWR 2007).

The Stockton West Weber site is located in close proximity to the Port of Stockton, which is a heavily industrialized area where large freight ships regularly dock and trains and trucks pass by. The development of the Stockton West Weber site as a transfer facility would not significantly alter the visual character of the area. The proposed project refinements include a 7,000 square foot steel frame building that would not cause an adverse effect to the heavily industrialized area. Due to the context and intensity of ongoing commercial activities, visual resources are substantially impaired under existing conditions, and the proposed project and project refinements would not substantially affect a scenic vista. There would be **no impact**.

The Rio Vista site has historically been used as a dredged materials disposal area, beginning with the Sacramento River Minor Project in 1913. A portion of the site is currently operated by a private sand and gravel contractor under lease with the CVFPB. Portions of the site have become forested over time, and portions are designated wetlands. Approximately 113,000 tons of rock were placed on the site under the DEFPRRP, where they currently

remain. Most of the properties south and southeast of the site are currently devoted to heavy industrial use, including metal storage and recycling, barge docking facilities, apartments, a mobile home park, and several single family residences. The proposed project improvements, including road improvements, clearing and leveling storage, and parking areas in the southwestern portion of the property, and placement of steel storage containers, would be consistent with previous uses of the property and surrounding land uses. Therefore, the planned development of the Rio Vista site as a transfer facility would not significantly alter the visual character of the area, and impacts from the proposed project and project refinements would be **less than significant**.

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

The Stockton West Weber site is not located on or near a state-designated scenic highway and does not contain rock outcroppings or historic buildings that would constitute a scenic resource. There are few trees at the Stockton West Weber site near proposed project and project refinement facilities. The proposed project refinements at the Stockton West Weber site, however, would potentially result in the removal of up to approximately 20 trees, but this is not considered to substantially damage scenic resources at or in the vicinity of this site.

The Rio Vista site also does not contain trees, rock outcroppings, or historic buildings that would constitute a significant scenic resource.

Impacts from the proposed project and project refinements, therefore, would be **less than significant**.

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

The proposed project sites are previously disturbed sites containing past and existing industrial or agricultural uses, including crop production, barge loading, material storage and transport, concrete recycling, and soil salvaging. The Stockton West Weber Avenue site currently has a few stockpiles of materials including soil and rock. The Rio Vista site has been used for dredged materials disposal and mining for nearly 90 years, and the proposed use is consistent with this historical use and the visual character of the site. Consequently, impacts related to the proposed project and project refinements on the visual character or quality of the site and its surroundings would be **less than significant**.

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

The proposed project sites would initially be improved to accommodate emergency transfer facilities during regular business hours, primarily during daylight hours. This would include installation of any needed utilities and asphalt covering, as well as initial stockpiling of levee repair materials. The site development activities would be temporary and, once developed, the sites would be largely inactive until they are needed for emergency response. The project improvements would not add or improve permanent outdoor lighting, except at the Stockton West Weber site where permanent outdoor lighting already exists on the southwest parcel.

During emergency operations, truck traffic and barge loading could occur around the clock. Lights would be used to safely extend operation through the nighttime hours with existing overhead lights and portable light towers. Barges may transit the Delta at night during emergency response operations, depending on the timing and scale of the emergency. Barge loading areas may operate during nighttime hours, but this is considered to be a less-than-

significant impact because emergency operations would be infrequent and temporary. The Stockton West Weber site is already in an area that is well lit at night. Rock transport by truck from nearby quarry sites also would occur during a flood with or without the proposed project and project refinements. Consequently, light or glare impacts related to the proposed project and project refinements on the day or nighttime views in the area would be **less than significant**.

3.1.3 MITIGATION MEASURES

No significant impacts are anticipated; therefore, no mitigation measures are needed to address impacts to aesthetics.

3.2 AIR QUALITY

3.2.1 ENVIRONMENTAL SETTING

As required by the Clean Air Act, the United States Environmental Protection Agency (EPA) sets National Ambient Air Quality Standards for six common air pollutants, also known as "criteria pollutants":

- Ozone
- Particulate Matter (PM)
- Carbon Monoxide (CO_2)
- Nitrogen Oxides (NOx)
- Sulfur Dioxide
- Lead (EPA 2010 http://www.epa.gov/air/urbanair/)

The criteria pollutants are regulated by permissible levels based on human health (primary) and/or environmental (secondary) criteria. The most widespread of these pollutants are particulate matter and ground-level ozone. The Clean Air Act requires individual states to develop State Implementation Plans for attainment and maintenance of National Ambient Air Quality Standards. As such, the California Air Resources Board (CARB) provides leadership to air management districts in the implementation and enforcement of air pollution control rules and regulations.

The proposed project activities that would result in additional air quality emissions include truck transport of rock from quarries and from the Port of Stockton to proposed project sites and development of proposed project sites as transfer, stockpile, and Incident Command Post facilities including establishment of stockpiles, as well as project refinements presented in Chapter 2, "Project Description."

The proposed stockpiling and barge loading sites and the truck routes between the quarries, the Port of Stockton, and the project sites fall under the jurisdiction of several air districts, as illustrated in Figure 3.2-1. Several quarries have been identified as potential resources to supply materials at the proposed project sites. There are 17 potential quarry sites. The air basins and applicable air districts that would be impacted by the proposed project and project refinements are summarized in Table 3.2-1.

Figure 3.2-1. Air Basins and Air Districts

Table 3.2-1. Impacted Air Basins and Air Districts with Jurisdiction for Proposed Project Locations and Quarry Locations	
Air Basin	**Air District (s)**
Sacramento Valley	Tehama County Air Pollution Control District (TCAPCD) Butte County Air Quality Management District (BCAQMD) Feather River Air Quality Management District (FRAQMD) Sacramento-Metro Air Quality Management District (SMAQMD) Yolo Solano Air Quality Management District (YSAQMD)
San Francisco Bay Area	Bay Area Air Quality Management District (BAAQMD)
North Central Coast	Monterey Bay Unified Air Pollution Control District (MBUAPCD)
San Joaquin Valley	San Joaquin Valley Air Pollution Control District (SJVAPCD)
Mountain Counties	Northern Sierra Air Quality Management District (NSAQMD) Placer County Air Pollution Control District (PCAPCD) Amador Air District (AAD) Calaveras County Air Pollution Control District (CCAPCD) Tuolumne County Air Pollution Control District (TCAPCD)
Source: CARB: http://www.arb.ca.gov/capcoa/dismap.htm	

CARB and EPA designate areas according to attainment status for criteria pollutants based on air quality monitoring data gathered from air stations located throughout the Sacramento Valley, San Francisco Bay Area, North Central Coast, San Joaquin Valley, and Mountain counties Air Basins. The areas can be designated as:

- Nonattainment (not meeting standards)
- Attainment (meeting)
- Unclassified

The most current attainment designations for all the counties applicable to the proposed project, with respect to both the national and state standards, are shown in Table 3.2-2 for ozone, PM_{10}, and $PM_{2.5}$.

Table 3.2-2. Summary of Attainment Status Designations for Ozone, PM_{10}, and $PM_{2.5}$						
County	**National**			**State**		
	Ozone (8-hour Standard)	**PM_{10}[1]**	**$PM_{2.5}$[2]**	**Ozone (1-hour Standard)**	**PM_{10}[1]**	**$PM_{2.5}$[2]**
Sacramento Valley Air Basin						
Sacramento	Nonattainment	Nonattainment	Nonattainment	Nonattainment	Nonattainment	Nonattainment
Yuba	Unclassified/ Attainment	Unclassified	Partial Nonattainment	Nonattainment/ Transitional	Nonattainment	Attainment
Butte	Nonattainment	Unclassified	Partial Nonattainment	Nonattainment	Nonattainment	Nonattainment

Table 3.2-2. Summary of Attainment Status Designations for Ozone, PM_{10}, and $PM_{2.5}$						
County	National			State		
	Ozone (8-hour Standard)	PM_{10}[1]	$PM_{2.5}$[2]	Ozone (1-hour Standard)	PM_{10}[1]	$PM_{2.5}$[2]
Tehama	Unclassified/ Attainment	Unclassified	Unclassified/ Attainment	Nonattainment	Nonattainment	Unclassified
Solano	Nonattainment	Unclassified	Nonattainment	Nonattainment	Nonattainment	Unclassified
Yolo	Nonattainment	Unclassified	Partial Nonattainment	Nonattainment	Nonattainment	Unclassified
San Francisco Bay Area						
Marin	Nonattainment	Unclassified	Nonattainment	Nonattainment	Nonattainment	Nonattainment
Napa	Nonattainment	Unclassified	Nonattainment	Nonattainment	Nonattainment	Nonattainment
Contra Costa	Nonattainment	Unclassified	Nonattainment	Nonattainment	Nonattainment	Nonattainment
North Central Coast						
Santa Clara	Nonattainment	Unclassified	Nonattainment	Nonattainment	Nonattainment	Nonattainment
San Joaquin Valley						
San Joaquin	Nonattainment	Attainment	Nonattainment	Nonattainment	Nonattainment	Nonattainment
Mountain Counties						
Nevada	Nonattainment	Unclassified	Unclassified/ Attainment	Nonattainment	Nonattainment	Unclassified
Placer	Nonattainment	Unclassified	Unclassified/ Attainment	Nonattainment	Nonattainment	Unclassified
Amador	Nonattainment	Unclassified	Unclassified/ Attainment	Nonattainment	Unclassified	Unclassified
Calaveras	Nonattainment	Unclassified	Unclassified/ Attainment	Nonattainment	Nonattainment	Unclassified
Tuolumne	Nonattainment	Unclassified	Unclassified/ Attainment	Nonattainment	Unclassified	Unclassified

Notes:
[1] Particulate matter with a diameter of 10 microns or less.
[2] Fine particulate matter with a diameter of 2.5 microns or less.
Sources: CARB Area Designation Maps – February 2011: http://www.arb.ca.gov/desig/adm/adm.htm

3.2.2 ENVIRONMENTAL EFFECTS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Air Quality.				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations.				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

The California Clean Air Act enacted in 1988 requires the preparation of Air Quality Attainment Plans for nonattainment areas. In addition, nonattainment areas are required to triennially assess the extent of air quality improvements and emission reductions achieved through the use of control measures.

Because of the cumulative nature of air quality impacts, the information contained in DWR (2013) is applicable to the project refinements and incorporated herein in its entirety. Project refinements would involve several activities that could result in fewer or additional air quality impacts that were not analyzed in DWR (2013) such as removing organic material after site clearing and grubbing, constructing a new 7,000 square foot steel frame building, constructing new concrete foundations, installing dolphin pile clusters and spud piles, and stockpiling 150,000 tons of rock at the Stockton West Weber site. Stockpiling of rock at the Stockton West Weber site could be accomplished by relocating up to 110,000 tons of rock from the nearby Port of Stockton versus a longer haul distance from the foothill rock quarries 30 miles to the east. However, the air quality analysis in DWR (2013) encompasses these project refinements and additional air quality analysis is not necessary for the following two primary reasons:

- Substantially longer haul routes to and from quarry sites were assumed in previous air quality modeling for the project, and the source of rock for the Stockton West Weber site would now be only approximately 3 miles away at the Port of Stockton; and

- The additional 70,000 tons of quarry rock as part of project refinements on top of the 40,000 tons of quarry rock proposed at the Stockton West Weber Site; 40,000 tons of quarry rock and 20,000 tons of sand at the Rio Vista site; and 40,000 tons of quarry rock at the BISRA site all total 210,000 tons, which is within the total rock stockpiling of 240,000 tons used in the air quality modeling conducted in DWR (2007) and DWR (2013), which resulted in less-than-significant impacts to air quality.

For the 2007 DWR Initial Study, *Delta Emergency Rock and Transfer Facilities Initial Study/ Mitigated Negative Declaration*, (DWR 2007) a detailed analysis of the air quality impacts for two potential quarry sites and the three existing sites was performed. This analysis included modeling with URBEMIS 9.2.2 and the use of EMFAC2007 and OFFROAD2007 emission factors. The DWR modeling assumed 130,000 tons of rock would be stockpiled at the Port of Stockton and 100,000 tons at Rio Vista for a total of 230,000 tons. Under the current project, it is assumed that up to 40,000 tons of rock would be stockpiled at both the Stockton West Weber Avenue site and at the BISRA site (with an additional 110,000 tons relocated from the Stockton West Weber Site as a project refinement), and 20,000 tons of sand would be stockpiled at Rio Vista for a combined total of 210,000 tons of additional material. This would be a sufficient supply in each location to supply one barge-loading operation for about one week. The duration of stockpiling activities was based on the assumption that no more than 100 truckloads would occur on a daily basis. The DWR 2007 modeling was used to estimate the potential environmental impact on air quality of the waterside transfer facilities sites' development for this Initial Study. The 2007 modeling is considered conservative, as it was based on assumed stockpiles larger than considered for the current project with refinements (and therefore more truck trips). The applicable emissions analysis is summarized below for the site preparation and stockpiling of new materials at each of the preferred sites.

However, the following uncertainties preclude more specific detailed analysis of all the possible flood emergency response situations:

- Timing and location of levee breaches
- Specific location of quarries to be used
- Quantities of material needed
- The possibility of roads being unserviceable during a flood emergency situation

Therefore, the emissions related to emergency response activities are considered exempt from CEQA per CEQA Guidelines, Section 15269[c], and are not the primary focus of this analysis.

SITE PREPARATION/CONSTRUCTION EMISSIONS

The site preparation improvements at each of the sites are summarized in Table 3.2-3. Site preparation and construction emissions would be temporary in duration. The proposed project with project refinements would require limited ground-disturbing activities at all of the sites where aggregate base would be installed.

The Stockton West Weber site would require minimal additional ground disturbance for the installation of utilities. The Rio Vista site would require minimal grading and surfacing to improve the existing road system and construct an earthen ramp in the southwestern corner of the site to improve access to Airport Road.

DWR (2013) assumed the transportation of stockpile material from the Sierra Nevada foothill quarries would be a source of on-road emissions. Thus, the proposed project would result in temporary generation of reactive organic gases (ROG), NO_x, and PM_{10} emissions from stockpiling and site preparation activities. However, the source of

Table 3.2-3. Site Improvements Related to Construction Emissions		
Site	**Site Improvements**	**Tons of Material to Stockpile**
Stockton (W. Weber Ave)	Site preparation including clearing, grubbing and grading; utility installation and aggregate base road installation; improve fencing and lighting; place up to 12 steel storage containers; modify existing buildings; remove existing wood piles and install spud piles and dolphin pile clusters; place rip rap along the ship channel; place pre-fabricated restroom facility and temporary office trailers; and construct new steel frame building, asphalt foundation/pad, and concrete foundation and waste vault.	40,000 collective tons quarry rock and sand plus an additional 110,000 tons of quarry rock from the Port of Stockton as a new project refinement
Rio Vista	Construct new and improve existing all-weather access roads and ramps for existing rock stockpile and new sand stockpile. Place up to five steel storage containers; create staging and parking areas. Stockpile 20,000 tons of sand for potential levee repairs.	20,000 tons of sand (in addition to existing quarry stockpile of 110,000 tons)
Brannan Island	South end of BISRA: Construct new and improve existing all-weather access roads. Create new quarry rock stockpile and all weather surface roads and place pilings for loading two barges. Boat launch and boat launch parking area: stub out utilities for temporary office trailers and improve area for up to two barge loading operations. Area between boat launch and Group picnic area: improve area to accommodate single temporary barge loading operation; Develop 2,500 to 5,000 sf. joint use facility to serve as Multi-Agency Center (MAC) either near BISRA visitor center trailer or near BISRA administration offices and maintenance shop. At north end of BISRA or near BISRA administration offices and maintenance shop: Relocate 10,000 sf. warehouse from Twitchell Island and place up to 5 steel storage containers.	40,000 collective tons of quarry rock, sand and soil

110,000 tons of quarry rock would now be moved from the Port of Stockton site only 3 miles away from the Stockton Weber site, which is substantially closer than the 30 miles that were initially anticipated from foothill rock quarries during the previous air quality analysis. Consequently, the previous air quality analyses in DWR (2007) and DWR (2013) substantially overestimate the distance that quarry rock would need to be hauled.

Table 3.2-4 summarizes applicable thresholds of significance for construction-related emissions in the air quality management districts for the proposed project area. The San Joaquin Valley Air Pollution Control District (SJVAPCD) has the most stringent significance thresholds for construction-related emissions of criteria pollutants. If the proposed project and project refinements comply with the SJVAPCD emissions criteria, then it is unlikely that implementation of the proposed project and project refinements would conflict with air quality plans in any of the other applicable jurisdictions.

The analysis performed by DWR (Table 3.2-5) found that proposed project-generated construction emissions would be less than the significance thresholds for ROG, NO_x, and PM_{10}, in all affected air quality districts. The calculated values in the table were based on the DWR (2007) analysis performed for the Delta Emergency Rock and Transfer Facilities Project by reducing the calculated project pollutant loads in proportion to the ratio of quarry rock in the current project (DWR 2013) versus the 2007 project.

Table 3.2-4. Summary of Significance Thresholds for Construction-Related Emissions for Criteria Pollutants			
Air Quality District	Pollutant		
	ROG	NOx	PM10
Tehama County APCD (lb./day)	25	25	80
Butte County AQMD (lb./day)	25	25	80
Feather River AQMD (lb./day)	25	25	80
Sacramento-Metro AQMD (lb./day)	-	85	-
Yolo Solano AQMD tons/year (lb./day)	10	10	80
Monterey Bay Unified APCD (lb./day)	-	-	82
San Joaquin Valley APCD (tons/year)	10	10	15

Table 3.2-5. Summary of Modeled Project-Generated Construction-Related Emissions of Criteria Air Pollutants and Precursors[1] NO_x Emissions			
Sites and Parameters	Pollutant		
	ROG	NO_X	PM_{10}
Emissions in San Joaquin Valley-SJVAPCD (Tons/Year)			
Stockton West Weber Avenue			
Site Preparation Emissions	0.01	0.14	0.01
Stockpiling On-Site Emissions	0.01	0.08	0.21
On-road Emissions - Rock delivered from Jackson Valley Quarry	0.17	2.73	0.12
On-road Emissions - Rock delivered from Hogan Quarry	0.19	2.97	0.13
Rio Vista			
None	0.00	0.00	0
Brannan Island			
On-road Emissions - Rock delivered from Jackson Valley Quarry	0.14	1.85	0.09
On-road Emissions - Rock delivered from Hogan Quarry	0.15	1.99	0.10
Total Unmitigated (Tons/Year)-Worst Case	**0.36**	**5.18**	**0.44**
SJVAPCD Thresholds (Tons/Year)	**10**	**10**	**-**
Significant?	**No**	**No**	**No**
Emissions in Sacramento Valley-SMAQMD(lb./day)			
Rio Vista			
None	0.00	0.00	0.00
Brannan Island			
Site Preparation Emissions	0.22	2.41	45.16
Stockpiling On-Site Emissions	0.07	0.35	11.31
On-road Emissions - Rock delivered from Jackson Valley Quarry	1.45	18.80	0.94

Table 3.2-5. Summary of Modeled Project-Generated Construction-Related Emissions of Criteria Air Pollutants and Precursors[1] NO_x Emissions			
	Pollutant		
Sites and Parameters	ROG	NO_X	PM_{10}
On-road Emissions - Rock delivered from Hogan Quarry	1.29	16.70	0.83
Total Unmitigated (Tons/Year)-Worst Case	**1.45**	**18.80**	**45.16**
SMAQMD Thresholds(lb./day)	**-**	**85**	**-**
Significant?	**No**	**No**	**No**
Emissions in Solano County-YSAQMD			
Rio Vista	**ROG(tons/year)**	**NO_X(tons/year)**	**PM_{10}(lb./day)**
Site Preparation Emissions	0.04	0.44	45.16
Total Unmitigated (Tons/Year)-Worst Case	**0.04**	**0.44**	**45.16**
YSAQMD Thresholds(tons/year and lb./day)	**10**	**10**	**80**
Significant?	**No**	**No**	**No**
Emissions in Amador County-ACAPCD (lb./day)			
Stockton West Weber Avenue			
On-Road Emissions-Rock Delivered from Jackson Valley Quarry	1.25	19.73	0.87
Brannan Island			
On-Road Emissions-Rock Delivered from Jackson Valley Quarry	1.45	18.80	0.94
Total Unmitigated (Tons/Year)-Worst Case	**1.45**	**19.73**	**0.94**
ACAPCD Thresholds(lb./day)	**274**	**274**	**383**
Significant?	**No**	**No**	**No**
Emissions in Calaveras County - CCAPCD (Tons/Year)			
Stockton West Weber Avenue			
On-Road Emissions-Rock Delivered from Hogan Quarry	0.19	2.97	0.13
Brannan Island			
On-Road Emissions-Rock Delivered from Hogan Quarry	0.15	1.99	0.10
Total Unmitigated (Tons/Year)-Worst Case	**0.34**	**4.96**	**0.23**
CCAPCD Thresholds (Tons/Year)	**10**	**10**	**-**
Significant?	**No**	**No**	**No**

Notes:
[1] Based on EMFAC2007 and OFFROAD2007 emission factors contained in URBEMIS V. 9.2.2, using general information provided in the project description (e.g., equipment list, stockpiling volumes and area, number of truck trips), and default model settings and parameters. Stockpiling is assumed to take place at one site at a time, i.e., trucks deliver the rock to only one site at a given time.

OPERATION-RELATED EMISSIONS OF CRITERIA AIR POLLUTANTS AND PRECURSORS

Once the proposed project sites are prepared as discussed above, the operation-related emissions would only occur during emergency flood-fighting operations. The long-term operation of the proposed project and project

refinements would not require any additional employees. Therefore, there would be no employee commute emissions associated with the operation of the proposed project and project refinements. The long-term operation of the proposed project and project refinements would not include any major stationary emission sources. Landscaping and maintenance activities at the proposed project sites would be similar to the activities that currently take place at the sites; therefore, there would be no additional emissions related to landscaping and maintenance. Implementation of the proposed project and project refinements would not result in a net increase in long-term operation-related criteria pollutant emissions from mobile and stationary sources. Project operation-related emissions would not conflict with or obstruct implementation of the applicable air quality plans.

The proposed project operations would result in temporary increases in emissions during declared emergency responses. This would include the use of construction equipment at the proposed project sites, worker commutes, and the transport of stockpiled materials to levee repair locations. The timing and location of levee breaches that would be repaired with the stockpiled material is highly unpredictable. Because the specific emissions could be highly variable depending on the size and location(s) of levee breaches and failures, modeling project-generated emissions associated with emergency operations would be too speculative at this time. Because the transport of rock from quarries and stockpiles to barge loading facilities and then to levee breach locations in the Delta would occur under a declared emergency, they are considered exempt from CEQA per CEQA Guidelines, Section 15269[c]. Moreover, these activities would occur with or without the proposed project and project refinements.

a) Does the proposed Project conflict with or obstruct implementation of the applicable air quality plan?

It is estimated that construction-related emissions would be short term and temporary in nature and would not represent a significant impact to air quality. This determination is based on the Modeled Project-Generated Construction-Related Emissions of Criteria Air Pollutants and Precursors (DWR, 2007). The Model evaluates three criteria pollutants—ROG, NOx, and PM_{10}. None of the three pollutants exceed the threshold limits for the applicable air quality management district. Therefore, the proposed project and project refinement activities would be unlikely to conflict with applicable air quality management plans in the proposed project area. This impact would be **less than significant**.

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

As discussed in part a), the proposed project and project refinements' construction and site development activities would not result in project-generated construction emissions that would exceed the significance thresholds for ROG, NO_x, and PM_{10}, in all applicable air quality management districts. The project would not contribute to an existing or projected air quality violation for a nonattainment status area. This impact would be **less than significant**.

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

As indicated in the response for part a), the proposed project and project refinements would not result in a cumulatively considerable net increase in criteria pollutants for regions that are designated as nonattainment under applicable federal and state ambient air quality standards. This impact would be **less than significant**.

d) Expose sensitive receptors to substantial pollutant concentrations?

The Stockton West Weber site is located in a highly industrialized area and there are no sensitive receptors in the immediate vicinity.

Project construction, including site preparation and establishment of rock stockpiles, would result in short-term generation of diesel exhaust emissions from construction equipment and trucks used for hauling stockpile material. These activities would expose any sensitive receptors in the area to diesel particulate matter, which is considered a Toxic Air Contaminant. The duration of mobilized equipment used on proposed project sites would be a maximum of 3 months on each site. When hauling trucks make trips to and from the sites to and from the quarries they would not operate within 500 feet of any particular sensitive receptor for more than a few minutes per day. In addition, diesel particulate matter concentrations have been shown to decrease dramatically within approximately 300 feet of the source vehicle (DWR, 2007). Thus, the exposure of sensitive receptors to a toxic air contaminant would be temporary and very limited since sensitive receptors would not be within 300 feet of mobilized equipment for more than a few minutes at a time, if at all.

Operations of the proposed project and project refinements would not result in any new permanent sources of emissions due to stationary emission sources on the sites nor due to commuter trips. Once the sites are developed as emergency response sites, there would be no further activity except for basic maintenance of the sites until such time as a flood fight emergency is declared. The proposed project and project refinements are not intended to be operated frequently or for long periods of time over the long term. This impact would be **less than significant**.

Operations of the proposed project and project refinements would result in temporary increases in emissions during declared emergency responses. This would include the use of construction equipment at the proposed project sites, worker commutes, and the transport of stockpiled materials to levee repair locations. The timing and location of levee breaches that would be repaired with the stockpiled material is highly unpredictable. Because the specific emissions could be highly variable depending on the size and location(s) of levee breaches and failures, modeling project-generated emissions associated with emergency operations would be too speculative at this time. Because the transport of rock from quarries and stockpiles to barge loading facilities and then to levee breach locations in the Delta would occur under a declared emergency, they are considered exempt from CEQA per CEQA Guidelines, Section 15269[c]. Moreover, these activities would occur with or without the proposed project and project refinements.

e) Create objectionable odors affecting a substantial number of people?

The potential odors associated with the proposed project and project refinement activities include diesel exhaust emissions from on-site construction equipment at the sites during site preparation phases, from trucks hauling stockpile materials to the proposed project sites, and from establishment of stockpiles at the sites. The activities resulting in diesel exhaust emissions would be temporary and would be limited to regular business hours.

The Stockton West Weber Avenue site is surrounded by industrial properties and the proposed project would not result in significant increases in odors in and around the proposed project sites.

The Rio Vista site is surrounded by agricultural, commercial, industrial, and limited residential properties. No residential properties are closer than 500 feet from any proposed work areas.

Project refinements would result in no additional effects at the Brannan Island site that were not disclosed in DWR (2013).

The proposed project and project refinements do not include long-term operation of any new sources of odor. Thus, the proposed project and project refinements would not create objectionable odors affecting a substantial number of people. The impact would be **less than significant**.

Operations of the proposed project and project refinements would result in temporary increases in emissions during declared emergency responses. This would include the use of construction equipment at the proposed project sites, worker commutes, and the transport of stockpiled materials to levee repair locations. The timing and location of levee breaches that would be repaired with the stockpiled material are highly unpredictable. Because the specific emissions could be highly variable depending on the size and location(s) of levee breaches and failures, modeling project-generated emissions associated with emergency operations would be too speculative at this time. Because the transport of rock from quarries and stockpiles to barge loading facilities and then to levee breach locations in the Delta would occur under a declared emergency, they are considered exempt from CEQA per CEQA Guidelines, Section 15269[c]. Moreover, these activities would occur with or without the proposed project and project refinements.

3.2.3 MITIGATION MEASURES

No significant impacts are anticipated; therefore, no mitigation measures are needed to address impacts to air quality.

3.3 AGRICULTURE AND FORESTRY RESOURCES

3.3.1 ENVIRONMENTAL SETTING

All of the proposed project sites are previously disturbed sites. These project sites were previously used for activities such as barge loading, material storage, concrete recycling, and soil salvaging. No agricultural activities currently take place on the project sites and the project sites are not designated or zoned for agricultural use.

3.3.2 ENVIRONMENTAL EFFECTS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Agriculture and Forestry Resources. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest				

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

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

According to the San Joaquin County Important Farmland map, published by California Department of Conservation's (DOC's) Division of Land Resource Protection, the Stockton West Weber site is designated as Urban and Built-Up Land (i.e., land that is used for residential, industrial, commercial, institutional, and public utility structures and for other developed purposes). The Solano County Important Farmland map designates the Rio Vista site is designated as Other Land (i.e., land that generally includes low-density rural developments, vegetative and riparian areas not suitable for livestock grazing, confined-animal agriculture facilities, and vacant and nonagricultural land surrounded on all sides by urban development). (DOC 2008a, 2008b, 2006.)

These land use designations are not considered by DOC to be Important Farmland. Therefore, implementing the proposed project and project refinements would not convert Important Farmland to nonagricultural uses. The proposed project and project refinements would have **no impact**.

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

No portions of the project sites are zoned for agricultural use or held under Williamson Act contracts. Therefore, the proposed project and project refinements would have **no impact**.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220 (g)), timberland (as defined by Public Resources Code § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?

The project sites are not zoned as forestland, timberland, or a Timberland Production Zone. Therefore, implementing the proposed project and project refinements would not conflict with existing zoning for, or cause rezoning of, forestry resources. The proposed project and project refinements would have **no impact**.
Result in the loss of forest land or conversion of forest land to non-forest use?

Section 12220(g) of the California Public Resources Code defines forestland as land that can support 10% native tree cover and woodland vegetation of any species (including hardwoods) under natural conditions, and that allows for management of one or more forest resources (timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation) and other public benefits. The project sites do not contain forestland as defined by Section 12220(g). Therefore, implementing the proposed project and project refinements would not result in the loss of forestland or conversion of forestland to nonforest uses. The proposed project and project refinements would have **no impact**.

d) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use?

Implementation of the proposed project and project refinements would include site grading and clearing; fencing; barge docking and loading facilities; new buildings, including a 7,000-square-foot steel framed building for warehouse use; parking; temporary office trailers; utilities (water, power, communications, and wastewater); lighting; and security improvements. The Stockton West Weber site and Rio Vista site have been uses for industrial-related uses and no active agricultural uses are located on or adjacent to the project sites.

In addition, by preparing and responding more quickly and effectively to an emergency response in the event of a levee breach or failure in the Delta, the proposed project and project refinements would reduce the effects of water inundation to the existing land uses, including agricultural land uses; therefore, the proposed project and project refinements would potentially provide beneficial impacts to existing agricultural land uses located in the vicinity of a levee failure. Therefore, the proposed project and project refinements would not result in other changes in the physical environment that could result in the conversion of agricultural land, including Important Farmland, to nonagricultural uses. Furthermore, for the reasons described in response to question (d) above, implementing the proposed project and project refinements would not result in the conversion of forestland to non-forest uses. Therefore, the proposed project and project refinements would have **no impact**.

3.3.3 MITIGATION MEASURES

No significant impacts are anticipated; therefore, no mitigation measures for agriculture and forestry resources are needed or proposed.

3.4 BIOLOGICAL RESOURCES

This section describes biological resources at the Stockton West Weber Avenue and Rio Vista sites and identifies potential impacts to habitats and species that could result from project refinements, which only would affect these two project sites. While the proposed project and project refinements would result in certain potentially significant environmental impacts, those impacts would be reduced to a less-than-significant level by implementation of biological mitigation measures presented in Appendix B, "Mitigation Monitoring and Reporting Program."

3.4.1 ENVIRONMENTAL SETTING

STOCKTON WEST WEBER AVENUE SITE

The Stockton West Weber site is located near the Port of Stockton along the San Joaquin River in San Joaquin County. The site is an infill area within a well-developed urban center with extensive ground disturbance and extensive paving. This site is currently used for storage and light industrial uses in a highly industrialized area. Large portions of the site are covered with concrete and/or gravel. Portions of the site surrounding buildings are not presently developed and are vegetated. Few trees are present at this site, a result of the past industrial use of this site. Barge-loading would occur along a bulk headed dock on Old Mormon Slough and along the north bank of the property adjoining the Stockton Deep Water Ship Channel, which is entirely armored with rip-rap. Project refinements include development of the north bank of the Stockton Deep Water Ship Channel to facilitate loading two barges simultaneously, if needed during an emergency situation. Development of the north bank of the Stockton Deep Water Ship Channel would result in the removal of small trees and shrubs growing sparsely along the north bank (i.e., SRA habitat) and removal of 12 existing wooden piles that are obstructing the foundation and alignment at one of the conveyor locations. Many of the fish species in the vicinity of this project site use the San Joaquin River to some degree, even if only as a migratory pathway to and from upstream spawning and rearing areas. The ship channel is also used by certain fish species (e.g., delta smelt) that make little to no use of areas in the upper segment of the San Joaquin River.

Wildlife use of the site is expected to be minimal given the significantly disturbed environmental setting. Wildlife use is expected to be limited to common species such as black rat (*Rattus rattus*), rock pigeon (*Columba livia*), and house sparrow (*Passer domesticus*). Trees in the general vicinity provide potential nesting habitat for tree-nesting raptors such as red-tailed hawk (*Buteo jamaicensis*), Swainson's hawk (*Buteo swainsoni*), and red-shouldered hawk (*Buteo lineatus*). A detailed list of special-status species with potential to occur within the Stockton West Weber site is provided in Chapter 4 of the *Delta Flood Emergency Facility Improvement Project* IS/MND (DWR 2013).

RIO VISTA SITE

The Rio Vista site is located on the southernmost 150 acres of a large dredged material disposal site owned by the Sacramento San Joaquin Drainage District and managed by the CVFPB. It consists of silty and sandy dredge spoils that support several types of vegetation. Disturbed ruderal vegetation covers most of the site and is composed of common tarweed (*Hemizonia pugens*), Great Valley gumweed (*Grindelia camporum*), birds-foot trefoil (*Lotus carniculatus*), common knotweed (*Polygonum arenastrum*), prickly lettuce (*Lactuca serriola*), ripgut brome (*Bromus diandrus*), and wild oat. Seasonal wetlands and remnant riparian forest habitats also occur

at the site. Patches of willow scrub are also present, comprising a mix of tree and shrub species, with narrow-leaved willow (*Salix exigua*) being the most common plant. Willow scrub has an understory of nonnative grasses including ripgut brome and wild oat.

A remnant riparian forest comprising approximately 6.75 acres lies southwest of the existing rock stockpile. The canopy is dominated by Fremont's cottonwood (*Populus fremontii*), Oregon ash (*Fraxinus latifolia*), Gooding's black willow (*Salix gooddingii*), and valley oak (*Quercus lobata*). Himalayan blackberry (*Rubus discolor*) and California grape (*Vitis californica*) are a prevalent species in the shrub and vine strata, respectively. The understory is dominated by mugwort (*Artemisia douglasiana*), western ragweed (*Ambrosia psilostachya*), and horseweed (*Conyza canadensis*). Topographic depressions in the forest floor are dominated by broadleaved cattail (*Typha latifolia*) (DWR 2011). Potentially jurisdictional riparian forest and seasonal wetlands on portions of the Rio Vista site are presented in Figure 3.4-1.

Wildlife expected at the Rio Vista site include common species that use disturbed grasslands. Western fence lizard (*Sceloporus occidentalis*), western meadowlark (*Sturnella neglecta*), savannah sparrow (*Passerculus sandwichensis*), and black-tailed jackrabbit (*Lepus californicus*) have been observed at the Rio Vista site. No evidence of use by burrowing mammals was documented at the site. A detailed list of special-status species with potential to occur within the Rio Vista site is provided in Chapter 4 of the *Delta Flood Emergency Facility Improvement Project* IS/MND (DWR 2013).

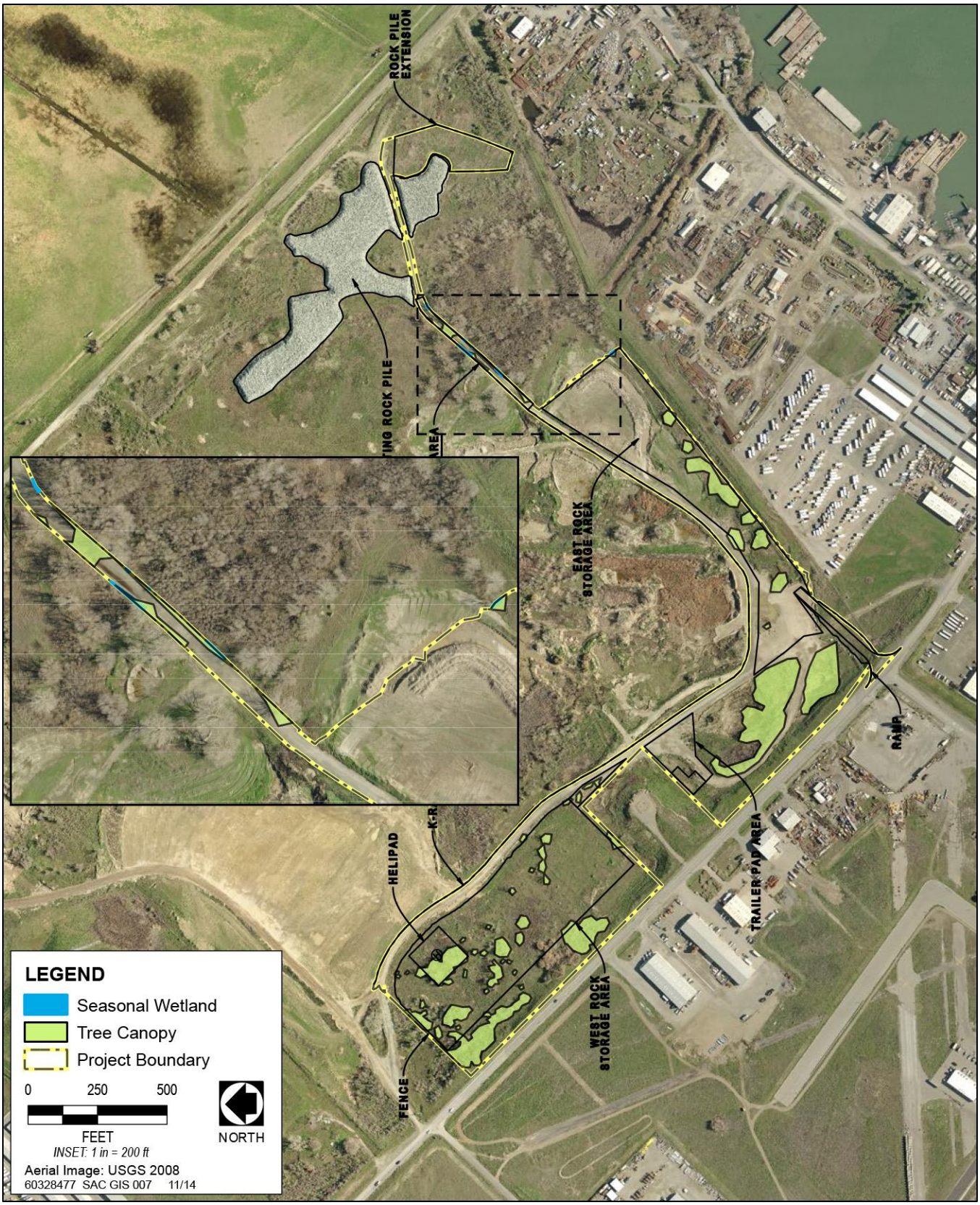
SPECIAL-STATUS SPECIES

Special-status species include plants and animals in the following categories:

- Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA).
- Species considered as candidates for listing as threatened or endangered under the ESA or CESA.
- Species identified by the California Department of Fish and Wildlife (DFW) as California Species of Special Concern.
- Plants listed as endangered or rare under the California Native Plant Protection Act.
- Animals fully protected under the California Fish and Game Code.
- Taxa considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" (Rare Plant Rank [RPR] 1B and 2).

Special-Status Plants

Over 50 species of rare plants occur within the Delta (DWR 2007); however, it was determined that no habitat for special-status plants occurs at the sites considered in the *Delta Flood Emergency Facility Improvement Project* IS/MND (DWR 2013). The project refinements have physical overlap with the area previously evaluated (DWR 2013), and therefore project refinements will have no impact on sensitive plant species since it was previously determined that suitable habitat for sensitive plant species is not present.



Source: DWR 2014 adapted by AECOM 2014

Figure 3.4-1. Tree Canopy and Potentially Jurisdictional Wetlands on Rio Vista Site

Special-Status Wildlife

Overall, the Delta provides habitat for several special-status species, including nine mammals, six reptiles and amphibians, 10 birds, and over 20 invertebrates (DWR 2007). Most special-status wildlife species do not have potential to occur within the project sites under evaluation because the sites have been substantially degraded due to past land use. This section focuses on project refinements not addressed in the *Delta Flood Emergency Facility Improvement Project* IS/MND (DWR 2013). Species addressed in this section are restricted to special-status birds and fish species that have potential to be affected by implementation of project refinements. A complete list of wildlife evaluated is presented in DWR (2013).

Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies, or that are afforded specific consideration through CEQA, Section 1600 of the California Fish and Game Code, and/or Section 404 of the federal Clean Water Act (CWA). The seasonal wetland habitat at the Rio Vista site may be protected under Section 404 of CWA. The Stockton Deep Water Ship Channel is a Section 10, tidally influenced, navigable in-fact waterway that may also be regulated under Section 404 of CWA. In addition, the sparse riparian vegetation growing along the north bank of the Stockton Deep Water Ship Channel is considered riparian and shaded riparian aquatic (SRA). For the purpose of this analysis, the habitats identified above are considered sensitive habitats.

3.4.2 ENVIRONMENTAL EFFECTS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

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

SPECIAL-STATUS BIRDS

Swainson's hawk is a California threatened species, and white-tailed kite is fully protected under the California Fish and Game Code. All raptors and their active nests are protected under Section 3503.5 of the California Fish and Game Code and the Migratory Bird Treaty Act. Tree-nesting raptors such as Swainson's hawk, white-tailed kite, and more common species such as red-tailed hawk, red-shouldered hawk, and American kestrel may use trees within and near the Stockton West Weber and Rio Vista sites for nesting.

Implementation of the proposed project and project refinements at the Stockton West Weber site would result in the removal of at least 14 trees, with the possibility of removing up to approximately 20 trees. Tree removal within the interior portion of the site would result in the loss of 10 Siberian elm (*Ulmus pumlia*), three pecan (*Carya illinoinensis*), and one California black walnut (*Juglans hindsii*). A grove of Chinaberry (*Melia azedarach*) trees would also be removed along the northeastern portion of the project site. With the exception of the California black walnut, all trees proposed for removal within the interior portion of the site are not native. Tree removal within the interior portion of the project site is required for the placement of the rock stockpile and haul road.

The banks of the Stockton Deep Water Ship Channel are colonized by scattered shrubs, primarily narrowleaf willow (*Salix exigua*). In addition, a few scattered immature trees including Siberian elm, California black walnut, and one valley oak (*Quercus lobata*) measuring less than 4 inches at diameter breast height may require removal for the installation of spud piles and concrete foundations that would support the rock conveyors during barge loading in an emergency situation.

Approximately 13.37 acres of trees are present within the Rio Vista project site. Tree species common within the Rio Vista site include valley oak, Fremont's cottonwood (*Populus fremontii*), Oregon ash (*Fraxinus latifolia*), Gooding's black willow (*Salix gooddingii*), and red willow (*S. laevigata*). Shrubs including arroyo willow (*S. lasiolepis*) and narrowleaf willow are common at the site. Implementation of the proposed project and project refinements at the Rio Vista site would result in the removal of up to approximately 4.0 acres of trees. Tree

removal would be required for project refinements such as the expansion of the rock stockpile, and widening the access road to 28 feet.

This level of impact to trees at both the Stockton West Weber and Rio Vista sites is not a substantial adverse impact and therefore is a less-than-significant impact that does not require mitigation.

Mature trees can provide nesting habitat for raptors and other species protected under the Migratory Bird Treaty Act. Shrubs primarily provide nesting habitat for songbirds protected under the Migratory Bird Treaty Act. The loss of an active nest due to tree removal would constitute a significant impact. However, implementation of mitigation measure BIO-3 described in Appendix B, "Mitigation Monitoring and Reporting Program," would reduce the impact on special-status birds to ensure that active nests are not impacted if vegetation removal occurs during the active nesting season (typically considered to be February 1—September 15). The impact to special-status birds at the Stockton West Weber and Rio Vista sites would be **less than significant with mitigation incorporated.**

SPECIAL-STATUS FISH SPECIES

The Stockton Deep Water Ship Channel and Mormon Slough are Delta waterways. The waterways that surround the Stockton West Weber site are designated as critical habitat for steelhead and delta smelt under the federal ESA and as essential fish habitat (EFH) for Pacific salmon under the Magnuson-Stevens Fishery Conservation and Management Act (as amended). Implementation of the proposed project and project refinements would result in impacts to special-status fish habitat by removal of vegetation along the banks, placement of eight spud piles near the toe of the bank, and installation of up to 11 dolphin pile clusters for mooring of up to three transport barges during rock loading operations, and the removal of 12 existing wooden piles that are obstructing the foundation and alignment at one of the conveyor locations. The installation of in-water piling structures using impact hammers or vibratory hammers could adversely impact special-status fish species, resulting in a significant impact. However, implementation of BIO-7 described in Appendix B, "Mitigation Monitoring and Reporting Program," would reduce the impact on special-status fish species to a less-than-significant level by restricting all in-water work to occur between July 1 and October 31, when special-status fish species are unlikely to be present at the project site and vicinity, and requiring BMPs for noise attenuation. The impact to special-status fish would be **less than significant with mitigation incorporated.**

Proposed project refinements at the Rio Vista site are restricted to upland habitats and therefore have no ability to result in impacts to special-status fish species. Therefore, **no impacts** to special-status fish species would occur at the Rio Vista site.

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

Implementation of the proposed project at the Stockton West Weber site would result in the need to remove scattered trees and shrubs along the bank of the Stockton Deep Water Ship Channel. Removal of woody vegetation along the bank would constitute a loss of riparian vegetation, which is regulated by CDFW under the Lake and Streambed Alteration Program. Because the Stockton Deep Water Ship Channel provides habitat for listed fish species, removal of any woody riparian vegetation would result in a loss of shaded riverine aquatic (SRA) habitat. Removal of riparian vegetation would be a significant impact. Implementation of BIO-4 described

in Appendix B, "Mitigation Monitoring and Reporting Program," would reduce the loss of riparian vegetation to a **less than significant with mitigation incorporated**.

CDFW maintains a list of Natural Communities of Special Concern (NCSC) (CDFW 2010). The forested communities at the Rio Vista site are best characterized as a combination of Valley Oak Woodland Alliance and Fremont Cottonwood Forest Alliance (Sawyer et al. 2009). Both of these forest alliances are designated as NCSC. The proposed project and project refinements at the Rio Vista site would result in the loss of up to approximately 4.0 acres of tree canopy at the Rio Vista site. However, tree removal on the Rio Vista site does not constitute a significant impact because the site has been subject to a high level of disturbance associated with past mining operations and current use as an emergency rock stock pile location. The loss of NCSC vegetation communities is significant only in high-quality stands. Because the forest communities present at the Rio Vista site do not meet the criteria of high-quality stands, the loss of up to approximately 4.0 acres of trees is **less than significant**.

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

Implementation of the proposed project at the Stockton West Weber site would result in the installation of a total of eight spud piles near the toe of the bank, below the ordinary high water mark (OHWM), to support two conveyor support barge structures and up to 11 dolphin pile clusters within the Stockton Deep Water Ship Channel. The Stockton Deep Water Ship Channel is a tidally influenced waterway, subject to Section 404 of the CWA and Section 10 of the Rivers and Harbors Act of 1899. Installation of the spud and dolphin piles would result in the placement of structures (i.e., piles) below the OHWM of the Stockton Deep Water Ship Channel on the north shore of the Stockton West Weber site. Approximately 13,000 square feet of rip-rap would be placed along the north shore. Approximately 9,900 square feet would be above the OHWM and approximately 3,600 square feet of rip rap would be placed below the OHWM to stabilize the bank during barge loading during emergency events. Alteration of a waterway regulated under Sections 404 and 401 of the CWA, Section 10 of the Rivers and Harbors Act, and Section 1600 of the California Fish and Game Code would be a significant impact. However, impacts would be reduced with implementation of Mitigation Measures BIO-6 and BIO-8 in Appendix B, "Mitigation and Monitoring Program," to **less than significant with mitigation incorporated**. Wetlands are present within the Rio Vista site. It is anticipated that at least 0.1 acre but up to 0.4 acre of wetland habitats would be directly impacted with implementation of the proposed project refinements at the Rio Vista site due to access road widening. The loss of wetland habitat would be considered to be a significant impact. However, wetland impacts would be reduced with implementation of Mitigation Measure BIO-8 in Appendix B, "Mitigation and Monitoring Program," to **less than significant with mitigation incorporated**.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Proposed project refinements are not expected to interfere significantly with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Upland sites provide marginal habitat for common wildlife species and impacts to sensitive species would be avoided per the mitigation measures discussed below (and included in Appendix B, "Mitigation Monitoring and Reporting Program." Native and non-native migratory fish species are

present in the Delta and surrounding waterways; however, proposed project refinements such as in-water spud and dolphin pilings would not substantially interfere with fish movements due to the small size (maximum footprint is 6 square feet), wide spacing, and limited number of in-water structures. This impact would be **less than significant**.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Stockton West Weber site is located within the incorporated limits of the City of Stockton. The City of Stockton regulates removal of native trees only within city rights-of-way. The Stockton West Weber site is not located within city rights-of-way and therefore tree removal at this site would not be in conflict with any local ordinance. Therefore, there is **no impact**.

The Rio Vista site is located in unincorporated Solano County. Solano County does not have a tree ordinance regulating tree removal. Therefore, there is **no impact**.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The proposed project refinements would not conflict with any adopted Habitat Conservation Plan, Natural Communities Conservation Plan; other approved local, regional, or state habitat conservation plans or General Plans, or local policies or ordinances.

The Delta Reform Act requires State and local actions that fit the legal definition of a "covered action" to be consistent with the policies included in the Delta Plan. The project refinements are likely to achieve the definition of a covered action because the proposed action is 1) located in the Delta, 2) is being implemented and approved by a state agency, and 3) has a significant impact on the achievement of the goal to implement flood-sponsored flood control programs and reduce risks to people, property, and state interests in the Delta. The mechanism for determining consistency is filing a certification of consistency with the Delta Stewardship Council. Both the Stockton West Weber and Rio Vista sites fall within the legal Delta and are likely to achieve the criteria of a covered project. DWR will file a consistency determination with the Delta Stewardship Council. Thus, there is **no impact**.

3.4.3 MITIGATION MEASURES

Mitigation Measures BIO-1, BIO-3, and BIO-6 presented below are included in the *Delta Flood Emergency Facility Improvement Project* IS/MND (DWR 2013), remain unchanged, and apply to proposed project refinements.

After further evaluation in this IS/MND, it was determined that Mitigation Measure BIO-2 was unnecessary as a mitigation measure for the proposed project and project refinements at the Stockton West Weber and Rio Vista sites because the impacts to trees were less than significant without mitigation, i.e., see "a)" above. Furthermore, Mitigation Measure BIO-2 is not a feasible mitigation measure as some tree removal is required to construct the proposed project and project refinements at the Stockton West Weber and Rio Vista sites, and meet most of the project objectives. Mitigation Measure BIO-2 is hereby retained at this time only for the BISRA site.

After further evaluation in the IS, it was determined that Mitigation Measures BIO-4 and BIO-5 had unnecessary language and was henceforth clarified by deleting these terms but maintaining essential components that restrict project activities from wetland and riparian habitats. Mitigation Measures BIO-4 and BIO-5 are hereby modified.

Mitigation Measures BIO-7 and BIO-8 are new mitigation measures proposed to minimize environmental impacts as discussed above related to the proposed project and project refinements at the Stockton West Weber site and the Stockton West Weber and Rio Vista sites, respectively.

Mitigation Measure BIO-1: Conduct Burrowing Owl Surveys at all Three Project Sites Prior to Development. Prior to any land-clearing operations, a burrowing owl survey following standard guidelines (The California Burrowing Owl Consortium, CBOC, 1993) shall be conducted by a qualified biologist. The survey shall entail walking throughout the entire site, including a 500-foot buffer, to identify adjacent suitable habitat that could be affected by noise and vibration from heavy equipment operation. If no burrows are observed, no impact is expected and results of the survey shall be submitted to the California Department of Fish and Wildlife (DFW). If burrows or owls are observed, a nesting season (15 April – 15 July) survey shall also be conducted, the results of which shall determine whether a winter survey will be further required or whether survey results can be submitted to the DFW following the nesting survey. If the surveys confirm occupied burrowing owl habitat, the Incidental Take Minimization Measure for Burrowing Owls (Measure 5.2.4.15) in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (November 14, 2000) will be implemented.

Mitigation Measure BIO-2: Retain all Mature Trees at~~on~~ the Proposed Brannon Island State Recreation Area Project Site~~s~~.

Mature trees that are potential nest trees and native oak trees greater than 8 inches diameter at breast height~~"dbh~~ will not be removed at the proposed Brannon Island State Recreation Area project site~~from any of the project sites~~. If a nest tree becomes occupied during stockpiling and site development activities, then depending upon the bird species involved, appropriate monitoring and mitigation measures as specified by the California Department of Fish and Wildlife~~(DFW)~~ will be instituted. At a minimum, all construction activities shall remain a distance of at least two times the drip line radius of active nest trees, as measured from the nest.

Mitigation Measure BIO-3: Conduct Special-Status Surveys.

DWR will consult with DFW prior to project construction to determine the extent for pre-construction sensitive species survey on the proposed project sites. For those sites determined for specific surveys, a qualified biologist shall conduct the sensitive species survey on the sites and within buffer areas of the sites. Special status bird species that could potentially nest in trees in or near the project area include Swainson's hawk, tricolored blackbird, white-tailed kite, double-crested cormorant, California black rail, saltmarsh common yellowthroat, song sparrow, Cooper's hawk, ferruginous hawk, merlin, yellow-headed blackbird, and western yellow-billed cuckoo. Potential habitat for special status reptiles/amphibians including the giant garter snake (GGS) and the western pond turtle exists at all three sites necessitating the need to conduct pre-construction surveys at all three sites. In addition, the western red bat could potentially roost in trees in or near the Rio Vista site and the Brannan Island site. The surveys shall be conducted no more than two weeks prior to the start of operations and depending on the expected duration

of the activities a follow-up survey may also be required. All observed sensitive species shall be reported to the DFW. The proposed project will be adjusted to avoid impacting these species, or to relocate the individuals under the guidance of the DFW. Preconstruction surveys will also include a botanical survey to identify the presence of elderberry shrubs and Antioch dunes evening primrose.

Mitigation Measure BIO-4: Conduct Pre-Construction Riparian Habitat Surveys at All Three of the Project Sites Prior to Development.

Prior to any land clearing operations, riparian habitat surveys shall be conducted by a qualified biologist. ~~to confirm that construction activities will not impact riparian habitat.~~ The survey shall entail walking throughout the entire site, including a 100-foot buffer, to identify ~~adjacent suitable~~ riparian habitat that could be affected by construction activities, particularly along the top of waterside banks or slopes. ~~or low-lying areas~~. Riparian habitat shall be avoided, if feasible. If it is determined that construction would result in the removal of ~~The~~ riparian habitat, surveys shall be submitted to DFW, along with ~~each of~~ the site development plan.~~s to confirm that isolated project activities, inclusive of piling installations, utility installations and road/ramp improvements near or adjacent to riparian habitat or other sensitive natural communities will not result in a significant impact to riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service.~~ DWR will mitigate for impacts through restoration of riparian habitat on the Brennan Island, or ~~similar of~~ other state-owned property based on a replacement ratio of 1:1.

Mitigation Measure BIO-5: Conduct Pre-Design Wetlands and Riparian Habitat Surveys for each of the Sites and Install and Maintain Exclusionary Fencing at the Sites to Ensure Full Avoidance of Seasonal and Permanent Wetlands and Jurisdictional Riparian Habitat.

a) DWR shall retain a qualified biologist to conduct a wetland delineation of the project sites. This delineation shall be submitted to the Corps, and verification received prior to any ground disturbing activities beyond the existing on-site roadways.

b) DWR, will preserve, and not disturb the existing wetlands, and wherever possible, establish 25-foot minimum buffers around all sides of these features. In addition, the final project design shall not cause significant changes to the pre-project hydrology, water quality or water quantity in any wetland that is to be retained on site. ~~This shall be accomplished by avoiding or repairing any disturbance to the hydrologic conditions supporting these wetlands, as verified through wetland protection plans.~~

c) DWR, prior to construction activities, shall install~~conduct an updated wetland delineation for its potential disturbance area, install orange exclusion fencing on T-posts (or equivalent), with~~ silt fence or exclusion fencing around wetlands to be retained on-site where wetlands are adjacent to construction activities. ~~material installed along the bottom, and w~~Wherever possible, a 25-foot buffer adjacent to seasonal and permanent wetlands shall be established.~~identified within and adjacent to the proposed site work.~~ The fencing shall be maintained for the duration of the site work.~~, and the DWR Operations and Maintenance Manual for the Rio Vista site shall include the pre-construction delineation of jurisdictional wetlands and riparian habitat and note that all future traffic within the project site is limited to improved~~

~~surface areas and stockpile areas, and all other areas are deemed off-limits to vehicular and construction equipment.~~

Mitigation Measure BIO-6: Secure Section 1600 Lake or Streambed Alteration (LSA) Agreement from DFW

Prior to any ground-disturbing site improvements, DWR shall consult with DFW and secure any applicable Section 1600 Lake or Streambed Alteration (LSA) agreement(s) for any permanent site improvements waterward of the top of bank at Three-Mile Slough for the BISRA site or at the Stockton Deep Water Ship Channel or Mormon Slough at the Stockton West Weber Avenue site.

Mitigation Measure BIO-7: Avoid and Minimize Underwater Sound Pressure due to Pile Driving

Underwater sound monitoring shall be performed during pile-driving activities. A qualified biologist/natural resource specialist shall be present during such work to monitor construction activities and compliance with terms and conditions of permits.

Underwater sound reduction measures shall be employed, as needed, to ensure that levels do not exceed the threshold levels established by USFWS and NMFS (for fish greater than 2 grams):

- Peak Pressure – 206 decibels
- Accumulated Sound Exposure Level (SEL) – 187 decibels

These underwater sound reduction measures shall include use of an impact hammer cushion block. Additionally, hammers shall be used only during daylight hours and initially shall be used at low energy levels and reduced impact frequency. Applied energy and frequency shall be gradually increased until necessary full force and frequency are achieved.

If necessary, one or more of the following shall be implemented to further reduced sound:

- Pipe caissons shall be used to isolate the piles from waters to buffer underwater sound pressure levels if underwater sound monitoring indicates that underwater sound levels exceed threshold levels. The caissons shall be driven below the mud line using vibratory or hydraulic methods and the interior area dewatered before pipe piles are installed using impact methods.

- The use of a bubble curtain surrounding the pile to be driven.

Mitigation Measure BIO-8: Ensure No Net Loss of Functions and Values of Wetlands, Other Waters of the United States, and Waters of the State at the Stockton West Weber and Rio Vista Sites

Before the start of any ground-disturbing activity associated with the construction of any project feature that would affect waters of the United States, including wetlands, or waters of the State, DWR will obtain all necessary permits under Sections 404 and 401 of the Clean Water Act or the State's Porter-Cologne Act for the proposed project and project refinements at the Stockton West Weber and Rio Vista sites, and Section 10 authorization under Rivers and Harbors Act for work within the Stockton Deep Water Ship Channel at the Stockton West Weber site.

All permits, regulatory approvals, and permit conditions for impacts on wetland habitats shall be secured before implementation of any construction activities within waters of the United States or wetland habitats, including waters of the State. DWR will commit to replace, restore, or enhance on a "no net loss" basis, in accordance with U.S. Army Corps of Engineers (USACE) and the Central Valley Regional Water Quality Control Board (RWQCB), the acreage of all wetlands and other waters of the United States that would be removed, lost, and/or degraded with implementation of project plans. Wetland habitat shall be restored, enhanced, and/or replaced at an acreage and location and by methods agreeable to USACE and the Central Valley RWQCB, as determined during the Section 404 and Section 401 permitting processes. Final mitigation ratios will be determined during the permitting process.

3.4.4 IMPACTS AFTER APPLICATION OF MITIGATION MEASURES

As previously discussed, mitigation measures were designed to reduce potentially significant impacts to a less-than-significant level. Consequently, all biological impacts are **less than significant with mitigation incorporated**.

3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

3.5.1 ENVIRONMENTAL SETTING

CULTURAL RESOURCES

Stockton West Weber Site

The entire site has been subjected to heavy industrial use and has been heavily disturbed, including grading, construction of docks, placement of concrete foundations, trenching for utilities, paving, and placement of aggregate base. There are no prehistoric sites or historic period resources recorded in or immediately adjacent to this site. Additional environmental setting information is presented in DWR (2013).

Rio Vista Site

The historic excavation of materials from the Sacramento River, combined with artificial levees and berms, has created a depressed area, or pit, approximately 6 feet deep and suitable for spoiling of suction dredge materials. Sand removal activities occurred on the site to maintain the permanent structural features of the site, including berms, levees, access roads, and the discharge spillway (State of California et al., 1993).

The site has been subject to two archeological survey efforts, which include the areas of proposed ground disturbance activities, except for the immediate vicinity of the existing quarry rock stockpile. The surveys resulted in no cultural resources being discovered. There are no prehistoric sites or historic period resources recorded in or immediately adjacent to this site. It is extremely unlikely that the site contains any cultural resources, as the entire site is composed of fill from dredging the Sacramento River. The site has also been periodically excavated for the removal and beneficial re-use of dredged materials. Proposed project facility construction include fill with aggregate base to improve upon and extend the access roads to the quarry stockpile site, shallow excavation of 3 acres or less of sand to create a sand stockpile and concrete pads for several facilities.

Additional environmental setting information is presented in DWR (2013).

PALEONTOLOGICAL RESOURCES

Both the Stockton West Weber site and the Rio Vista site are located in a historic alluvial floodplain of the Delta, and the geologic unit overlying both sites consists of hydraulically-dredged materials that are less than 11,700 years old (i.e., Holocene age) (Atwater 1982:Plates 6 and 17). By definition, in order to be considered a unique paleontological resource, a fossil must be more than 11,700 years old. Holocene deposits contain only the remains of extant, modern taxa (if any resources are present), which are not considered "unique" paleontological resources. Therefore, the hydraulically-dredged materials are not considered to be paleontologically sensitive.

3.5.2 ENVIRONMENTAL EFFECTS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

No known significant historical resources are present at the sites. However, not all the sites have been fully surveyed and there could be a potentially significant impact. The proposed project refinements would be subject to Mitigation Measures CUL-1 through CUL-5 in Appendix B, "Mitigation Monitoring and Reporting Program." Consequently, the impacts from project refinements on historical resources would be **less than significant with mitigation incorporated.**

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

The construction of concrete foundations for a new 7,000 square foot steel frame building and two rock conveyors could result in a significant impact to previously unidentified archaeological resources. At the Rio Vista site, widening of the existing access road could also impact previously unknown archaeological resources due to the ground-disturbing activities. The proposed project refinements would be subject to Mitigation Measures CUL-1 through CUL-5 in Appendix B, "Mitigation Monitoring and Reporting Program," Consequently, the impacts from project refinements on archaeological resources would be **less than significant with mitigation incorporated.**

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

The proposed earth-moving activities at the Stockton West Weber and Rio Vista sites would primarily affect Holocene-age materials dredged from the Sacramento River, which are not considered to be paleontologically sensitive. Therefore, the project would have **no impact**.

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

Due to the disturbed nature of the sites, it is highly unlikely that human remains would be uncovered. However, disturbance of previously undiscovered human remains during ground-disturbing activities could potentially occur. The proposed project refinements would be subject to Mitigation Measures CUL-1 through CUL-5 in Appendix B, "Mitigation Monitoring and Reporting Program," Consequently, the impacts from project refinements on human remains would be **less than significant with mitigation incorporated.**

3.5.3 MITIGATION MEASURES

Mitigation Measure CUL-1: Pre-construction Field Survey.

Prior to ground disturbing activities, a field survey will be conducted by a qualified archeologist to identify any prehistoric or historic cultural resources within the project site areas. The survey may reveal a lack of resources. No further identification effort will need to be made. If resources are found in one of the selected sites during the survey, it will be necessary to determine whether the resource is an important resource. This determination will be made by a qualified archeologist based upon surface evidence, if possible. If surface evidence is not conclusive, additional studies, including archival research or subsurface testing, will be conducted. If the additional studies are undertaken and a resource is found to be important under the criteria of the California Register of Historical Resources (CRHR), avoidance will be the preferred method of mitigation. The use of the site with the significant resource might need to be limited to a smaller portion of the site, with protective measures designed for the resource, such as fencing or monitoring site use. The determination of appropriate mitigation will be made by DWR.

Mitigation Measure CUL-2: Worker Cultural Resource Awareness.

Construction personnel will be informed of the potential for encountering significant archaeological resources and instructed in the identification of artifacts, bone, and other potential resources. All construction personnel will be informed of the need to stop work on the project site if cultural resources are found, and until a qualified archaeologist has been provided the opportunity to assess the significance of the find and implement appropriate measures to protect or scientifically remove the find. Construction personnel will also be informed of the requirement that unauthorized collection of cultural resources is prohibited.

Mitigation Measure CUL-3: Immediately Halt Construction if any Cultural Resources are Discovered.

DWR shall implement the following mitigation measure to reduce the potential impacts to buried historic cultural resources to a less-than-significant level. If cultural materials (e.g., unusual amounts of shell, animal bone, glass, ceramics, etc.) are discovered during project-related construction activities, ground

disturbances in the area of the find shall be halted and a qualified professional archaeologist shall be notified regarding the discovery. The archaeologist, to be retained by DWR, shall determine whether the resource is potentially significant per the CRHR and develop appropriate mitigation. Mitigation may include, but not be limited to, in-field documentation, archival research, archaeological testing, data recovery excavations, or recordation, and shall be implemented before resuming construction in the immediate vicinity.

Mitigation Measure CUL-4: Immediately Halt Construction if any Human Remains are Discovered.

DWR shall implement the following mitigation measure to reduce the potential impacts to human remains to a less-than-significant level. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, the contractor and/or DWR shall immediately halt potentially damaging excavation in the area of the burial and notify the County Coroner and a professional archaeologist to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5[b]).

If the coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). Following the coroner's findings, DWR, an archaeologist, and the NAHC designated Most Likely Descendent (MLD) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code Section (PRC) 5097.9.

Mitigation Measure CUL-5: Determination of Significance of Cultural Resources.

If previously unknown cultural resources are discovered during project construction, all work in the area of the find should cease and a qualified archaeologist should be retained by DWR or consultant to assess the significance of the find, make recommendations on its disposition, and prepare appropriate field documentation, including verification of the completion of required mitigation. If archaeological or paleontological resources are discovered during earth moving activities, all construction activities within 50 feet of the find should cease until the archaeologist evaluates the significance of the resource. In the absence of a determination, all archaeological and paleontological resources should be considered significant.

If the resource is determined to be significant, the archaeologist, as appropriate, should prepare a research design for recovery of the resources in consultation with the State Office of Historic Preservation that satisfies the requirements of Public Resources Code, Section 21083.2. The archaeologist should complete a report of the excavations and findings. Upon approval of the report, the project proponent should submit the report to the regional office of the California Historic Resources Information System.

3.5.4 IMPACTS AFTER APPLICATION OF MITIGATION MEASURES

As previously discussed, mitigation measures were designed to reduce potentially significant impacts to a less-than-significant level. Consequently, all biological impacts are **less than significant with mitigation incorporated**.

3.6 HYDROLOGY AND WATER QUALITY

3.6.1 ENVIRONMENTAL SETTING

Both the Stockton West Weber and Rio Vista project sites are located in the Delta, which is the largest estuary on the Pacific Coast. The Delta is the hub of the State Water Project and the Central Valley Project, two of California's largest water distribution systems, which supply a portion of the drinking water for two-thirds of the State's population and irrigation water for over 7 million acres of farmland.

The Stockton West Weber site is generally flat with large areas covered in gravel base and pavement. It is located in downtown Stockton, adjacent to the Stockton Deep Water Ship Channel at its juncture with the Old Mormon Slough.

The Rio Vista site is located on the west side of the Sacramento River, just north of the town of Rio Vista. This site has been used as a hydraulic dredge disposal area and as a source of sand and aggregate since the early 1900s. A portion of the property lies within the 100-year floodplain. The site is set back from the Sacramento River a distance of 600-1500 feet. Existing waterside activities at this site consist of industrial, commercial, and residential uses, including Dutra Group's dock and corporation yard facilities, as well sand mining activities by Asta Construction.

In the event of levee failures and flooding, the potential for salt water intrusion exists in the Delta, which would compromise the imported drinking water supplies for over 20 million people and agricultural water supplies for the State's valuable farming resources in the Central Valley. The proposed project would facilitate a more rapid emergency response and recovery effort in the event of levee damage or levee breaches in the Delta.

3.6.2 ENVIRONMENTAL EFFECTS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Hydrology and Water Quality. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☒	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
f) Otherwise substantially degrade water quality?	☐	☒	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Result in inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

a) Violate any water quality standards or waste discharge requirements?

The proposed project refinements at the Rio Vista site would require additional minor clearing, grading, and application of aggregate to accommodate to the proposed facilities and site uses, along with several small concrete pads.

The proposed project refinements at the Stockton West Weber site would require additional grading, including grading to raise a portion of the site above the 100-year floodplain; installation of several small concrete pads for restroom facilities, temporary office trailers, and rock conveyors; installation of aggregate base and paved parking; and construction of a 7,000-square-foot steel framed building. The Stockton West Weber site does include existing drainage facilities including storm drain inlets and a detention pond on the parcel south of West Weber Avenue; and the parcel north of West Weber has a small network of storm drain pipes that discharge directly into the Stockton Deep Water Ship Channel. Site drainage facilities would likely require improvements on both parcels, with more drainage facility improvements likely required on the north parcel.

Construction activities associated with the proposed project and refinements would expose soils to erosive forces and could transport sediment and hazardous construction materials such as fuels, oils, and lubricants into local

river channels, increasing turbidity, degrading water quality, and resulting in siltation to local waterways. Intense rainfall and associated stormwater runoff could result in short periods of sheet erosion.

The proposed project and project refinements would be subject to Mitigation Measure HYD-1 in Appendix B, "Mitigation Monitoring and Reporting Program," which requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared and that Best Management Practices (BMPs) be used throughout site preparation. Standard erosion control measures (e.g., management, structural, and vegetative controls) would be implemented for all construction activities that expose soil. Grading operations would be conducted to eliminate direct routes for conveying potentially contaminated runoff to drainage channels. Erosion control barriers such as silt fences and mulching material would be installed, and disturbed areas would be reseeded with native grasses or other plants where necessary. Additional BMPs specifying the appropriate hazardous materials handling, storage, and spill response practices to reduce the possibility of water quality degradation from accidental spills or releases of contaminants would also be implemented. Therefore, the impact from project refinements related to violation of water quality standards or waste discharge requirements would be **less than significant with mitigation incorporated**.

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

The proposed project refinements at the Rio Vista site would require additional minor clearing, grading, and application of aggregate to accommodate the proposed facilities and site uses, along with several small concrete pads. However, the site would not be paved and the additional aggregate and rock stockpiles would allow water to infiltrate into the ground.

The proposed project refinements at the Stockton West Weber site would require additional grading, including grading to raise a portion of the site above the 100-year floodplain; installation of several small concrete pads for restroom facilities, temporary office trailers, and rock conveyors; installation of aggregate base and paved parking; and construction of a 7,000-square-foot steel framed building. Although additional impervious surfaces would be created at both sites, the majority of the sites would still consist of pervious surfaces, including the aggregate and rock stockpiles. Overall, most of the surface area at both project sites would remain covered by pervious surfaces after the project is implemented. Because of the relatively small amount of impervious surfaces being constructed in relation to the size of the project sites, the proposed project refinements would not interfere substantial with groundwater recharge. Water supply for the new restroom and the warehouse buildings would be provided via new underground piping that would connect to the existing municipal water supply. No new groundwater wells would be installed. Therefore, the project would not result in a substantial depletion of groundwater supplies. Consequently, the impacts from project refinements on depletion of groundwater supplies and interference with groundwater recharge would be **less than significant**.

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

The proposed project and project refinements, including grading, installation of concrete pads, and a 7,000-square-foot building at the Stockton West Weber site, would not result in a substantial alteration of the existing drainage patterns of either site. Furthermore, the Stockton West Weber site includes existing drainage facilities. The majority of the land area at both sites would continue to be undeveloped. The proposed project and project refinements in the river channel would include installation of dolphin and spud piles. The proposed dolphin pile structures would typically consist of a number of piles driven into the riverbed and connected above the water level to provide a platform or fixing point, in order to improve stability during the barge-loading process. The piles would be anchored to the riverbed. The spud piles would be installed to anchor the conveyor barges. These structures would have no impact on the course of the river channels.

Furthermore, the proposed project and project refinements would be subject to Mitigation Measure HYD-1 in Appendix B, "Mitigation Monitoring and Reporting Program," which requires that BMPs be used throughout site preparation. Standard erosion control measures (e.g., management, structural, and vegetative controls) would be implemented for all construction activities that expose soil. Grading operations would be conducted to eliminate direct routes for conveying potentially contaminated runoff to drainage channels. Erosion control barriers such as silt fences and mulching material would be installed, and disturbed areas would be reseeded with native grasses or other plants where necessary. Therefore, the impacts from the proposed project and project refinements related to erosion and siltation would be **less than significant impact with mitigation incorporated**.

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

As described in c) above, the proposed project and project refinements would not result in a substantial alteration of the existing drainage patterns at either site, nor would they alter the course of the river channels. Overall, most of the surface area at both project sites would remain covered by pervious surfaces after the project is implemented. The few structures that would be installed, such small concrete pads for the restrooms, transformers, and rock conveyer belts to the barges, along with the 7,000-square-foot building at the Stockton West Weber site, would not substantially increase the rate or amount of surface runoff in a manner that would result in increased on- or off-site flooding. Furthermore, the Stockton West Weber site, which would contain the majority of the proposed new facilities, already includes existing drainage facilities. Therefore, the impacts from the proposed project and project refinements would be **less than significant.**

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

The proposed project and project refinements at the Rio Vista site would require additional minor clearing, grading, and application of aggregate to accommodate to the proposed project refinements, along with several small concrete pads. However, the site would not be paved and the additional aggregate and rock stockpiles would allow water to infiltrate into the ground.

The proposed project and project refinements at the Stockton West Weber site would require additional grading, including grading to raise a portion of the site above the 100-year floodplain; installation of several small concrete pads for restroom facilities, transformers, temporary office trailers, and rock conveyors; installation of aggregate base and paved parking; and construction of a 7,000-square-foot steel framed building. Although additional impervious surfaces would be created at both sites, the majority of the sites would still consist of pervious surfaces, including the aggregate and rock stockpiles. Overall, most of the surface area at both project sites would remain covered by pervious surfaces after the project is implemented. Because of the relatively small amount of impervious surfaces being constructed in relation to the size of the project sites, increases in storm water runoff would be small.

However, the operation of equipment during the construction process could result in accidental spills of hazardous materials such as fuels, oils, lubricants, concrete, paint, and solvents. The materials could be transported into adjacent river channels via overland flow, particularly during a rain event. These construction-related wastes have the potential to degrade existing water quality and beneficial uses in the river channels. The proposed project and project refinements would be subject to Mitigation Measure HYD-1 in Appendix B, "Mitigation Monitoring and Reporting Program," which requires that a SWPPP be prepared and that BMPs be implemented to specify the appropriate hazardous materials handling, storage, and spill response practices to reduce the possibility of adverse impacts from use or accidental spills or releases of contaminants. Therefore, the impact from the proposed project and project refinements related to creation of additional sources of polluted runoff would be **less than significant impact with mitigation incorporated**.

f) Otherwise substantially degrade water quality?

As discussed in impacts a) through e) above, the proposed project and project refinements could result in erosion, sedimentation, and transport of contaminants from accidental spills into river channels. However, the proposed project and project refinements would be subject to Mitigation Measure HYD-1 in Appendix B, "Mitigation Monitoring and Reporting Program," which requires that a SWPPP be prepared and that BMPs be implemented to reduce erosion and sediment and contaminant transport. Consequently, the impact from the proposed project and project refinements on degradation of water quality would be **less than significant with mitigation incorporated.**

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

The proposed project and project refinements do not include the construction of any housing. Therefore, the proposed project and project refinements would have **no impact**.

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?

The Stockton West Weber site is not located within a 100-year flood hazard area. A portion of the Rio Vista site is located within a 100-year floodplain; however, the proposed project refinements include grading that would elevate that portion of the site such that all facilities would be installed at an elevation that would be above the 100-year floodplain (see Chapter 2, "Project Description"). Therefore, the proposed project and project refinements would not place structures within a 100-year flood hazard area, and the proposed project and project refinements would have **no impact.**

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

The proposed project and project refinements would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. As described in impact h) above, all proposed project features and elements would be installed at an elevation that would be above the 100-year floodplain. The proposed project and project refinements would provide stockpiles of flood-fight materials at three strategic locations in the Delta, all elevated above the 100-year floodplain, to expedite emergency response to levee breaches within the Delta. Therefore, the proposed project and project refinements would provide a **beneficial impact** by reducing the potential property loss and personal injury associated with flooding resulting from levee failures in the Delta. **No adverse impact** would occur**.**

j) Result in inundation by seiche, tsunami, or mudflow?

The project sites are not located in steep areas where mudflow could occur, and they are located too far from the Pacific Ocean to be affected by tsunamis. Both project sites are located adjacent to Delta river channels. The sites would only be occupied on a temporary basis during a flood emergency situation, and the probability of a seiche occurring during one of these temporary and short-term periods when personnel would be present on site is extremely low. Therefore, the impact on the proposed project and project refinements from seismic seiches is considered **less than significant.**

3.6.3 MITIGATION MEASURES

HYD-1: Institute Construction Best Management Practices (BMPs) for the Prevention of Erosion and Transport of Soil, Sand, and Silt Offsite during Runoff Events.

DWR shall implement construction Best Management Practices (BMPs) for all land clearing, land leveling, excavation, and fill operations associated with site preparations at the three sites. These measures will be incorporated into the construction plans and specifications. They include avoidance of existing wetlands, including placement of exclusion fencing, creating on site catchments for surface runoff, using coir logs to intercept drainage, and hydroseeding slopes, as appropriate.

Before the start of any construction work, clearing, or site grading associated with preparation, or any stockpiling activities at the sites, measures to control soil erosion and waste discharges will be prepared in accordance with BMPs. DWR will require all contractors conducting work at the sites to implement BMPs to control soil erosion and waste discharges of other construction-related contaminants. The general contractor(s) and subcontractor(s) conducting the work will be responsible for constructing or implementing, regularly inspecting, and maintaining the BMPs in good working order. In addition, the contractors will be required to submit and adhere to the applicable Storm Water Pollution Prevention Plan (SWPPP) associated with site development, preparation, and improvements.

Sufficient buffers from wetlands, riparian habitat, and/or other sensitive areas shall be maintained throughout the construction improvement period(s) of the project.

The plans developed by DWR or its contractor(s) will identify the grading, erosion, and tracking control BMPs and specifications that are necessary to avoid and minimize water quality impacts to the extent

practicable. Standard erosion control measures (e.g., management, structural, and vegetative controls) will be implemented for all construction activities that expose soil. Grading operations will be conducted to eliminate direct routes for conveying potentially contaminated runoff to drainage channels. Erosion control barriers such as silt fences and mulching material will be installed, and disturbed areas will be reseeded with native grasses or other plants where necessary. Tracking controls shall be required throughout the construction period, as needed, to reduce the tracking of sediment and debris from the construction site.

At a minimum, entrances and exits shall be inspected daily, and controls implemented as needed.

The following specific BMPs will be implemented, as described in the California BMP Handbook (www.cabmphandbook.com):

- Conduct all work according to site-specific construction plans that identify areas for clearing and grading so that ground disturbance is minimized.
- Avoid riparian vegetation, cover cleared areas with mulches, and install silt fences near riparian areas or streams to control erosion and trap sediment, and reseed cleared areas with native vegetation. Sufficient buffers (minimum 20 feet when possible) from wetlands and/or other sensitive areas shall be maintained throughout the life of the project.
- Stabilize disturbed soils before the onset of the winter rainfall season.
- Stabilize and protect stockpiles from exposure to erosion and flooding.
- Stabilize all construction access by providing a point of entrance/exit to the construction sites that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles.
- Grade each construction entrance/exit to prevent runoff from leaving the construction site, and ensure that all runoff from the stabilized entrances/exits are routed through a sediment-trapping device before discharge.
- Ensure that entry/exit ways are able to support the heaviest vehicles and equipment that will use them.

BMPs will also specify appropriate hazardous materials handling, storage, and spill response practices to reduce the possibility of adverse impacts from use or accidental spills or releases of contaminants. Specific measures applicable to the project include, but are not limited to, the following:

- Develop and implement strict onsite handling rules to keep construction and maintenance materials out of drainages and waterways.
- Conduct all refueling and servicing of equipment with absorbent material or drip pans underneath to contain spilled fuel. Collect any fluid drained from machinery during servicing in leak-proof containers and deliver to an appropriate disposal or recycling facility.

- Maintain controlled construction staging, site entrance, concrete washout, and fueling areas at least 100 feet away from stream channels or wetlands to minimize accidental spills and runoff of contaminants in storm water.

- Prevent raw cement; concrete or concrete washings; asphalt, paint, or other coating material; oil or other petroleum products; or any other substances that could be hazardous to aquatic life from contaminating the soil or entering watercourses.

Maintain spill cleanup equipment in proper working condition. Clean up all spills immediately according to the spill prevention and response plan, and immediately notify DFW and the Regional Water Quality Control Board (RWQCB) of any spills and cleanup procedures.

3.6.4 IMPACTS AFTER APPLICATION OF MITIGATION MEASURES

As previously discussed, a mitigation measure was designed to reduce potentially significant impacts to a less-than-significant level. Consequently, all hydrology and water quality impacts are **less than significant with mitigation incorporated**.

3.7 GEOLOGY AND SOILS

3.7.1 ENVIRONMENTAL SETTING

Both the Stockton West Weber and Rio Vista sites are located within the Delta. The Delta was formed by the co-mingling of organic matter deposited by tules and plants and sediment deposition from river transport to form thick deposits of peat capped by tidal marshes. Historically, the accumulation of sediment in the Delta corresponded with the gradual rise in mean sea level and the region was dominated by tidal marshes and meandering sloughs. Farming activity in the last 150 years has led to the alteration and drainage of those marshes and the creation of numerous islands and a levee system. As a result of exposure of peat soils from farming operations, subsidence of exposed land masses (as a result of oxidation) is ongoing throughout the Delta.

The nearest historically active (i.e., exhibiting displacement within the last 200 years) faults to the project sites consist of the Concord Fault—approximately 21 miles southwest of the Rio Vista site, and the Greenville Fault—approximately 23 miles west of the Stockton West Weber site. The Coast Ranges-Central Valley geomorphic boundary lies approximately 15 miles west of Stockton, and the Great Valley Fault (which lies beneath the surface along this boundary) is considered seismically active. Other active faults in the Coast Ranges to the west of the project sites include the Hayward, Greenville, Dunnigan Hills (Zamora), Ortigalita, Healdsburg-Rodgers Creek, West Napa, and San Andreas Faults.

STOCKTON WEST WEBER SITE

This site is located on a nearly flat-lying peninsula and has little geographic variation. It was created by material dredging and built up with imported fill material. Soils in the project vicinity are generally part of the Jacktone-Hollenbeck Stockton association. These soils are fine-grained, somewhat poorly drained to moderately well drained, with a moderately deep to deep cemented hard pan. The project site soil is classified as Urban Land

Complex (NRCS 2010b, c). Based on field investigations, the on-site soils are believed to consist of a mixture of imported fill and poorly drained Jackstone Clay, with slow permeability rates and a moderately deep hardpan.

RIO VISTA SITE

The Rio Vista site was a formerly swampy area, filled with sand and silt from the Sacramento River during hydraulic dredging and widening of the river beginning in the early 1920s. Portions of the site have been periodically excavated for the beneficial re-use of sediments deposited there by the dredging operations. Such use continues on portions of the site at present. The soils are primarily characterized as Xeropsamments, which are less than 35 percent (by volume) rock fragments and have a texture of loamy fine sand or coarser in all layers. Additional soil types that are present in small percentages consist of Fluvaquents, Gazwell, and Sailboat. The soil in the area is originally earthy fill and is characterized as somewhat excessively well drained (NRCS 2010b, c).

Additional environmental setting information is presented in DWR (2013).

3.7.2 ENVIRONMENTAL EFFECTS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Geology and Soils. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?	☐	☐	☐	☒

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

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

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

Surface ground rupture along faults is generally limited to a linear zone a few yards wide. Since neither project site is located within or adjacent to an Alquist-Priolo Earthquake Fault Zone (CGS 2012), nor is either site located within or immediately adjacent to the trace of any other known fault (Jennings 1994), surface fault rupture at either project site is unlikely. This impact is considered **less than significant**.

ii) Strong seismic ground shaking?

Active faults are located along the western margin of the Central Valley and in the Coast Ranges, approximately 15-25 miles west of the project sites. Therefore, strong seismic shaking could occur at the project sites. However, the concrete foundations that would be installed at both sites, and the new 7,000-square-foot steel frame building at the Stockton West Weber site, would be subject to the design requirements of the California Building Standards Code (CBC), which incorporates criteria that are intended to minimize structural damage and personal injury from seismic hazards (including strong seismic ground shaking), to the maximum extent practicable. Furthermore, the sites would only be occupied on a temporary basis during emergency flood situations, and the probability of a large magnitude earthquake occurring at the time when the sites would be occupied is extremely low. Therefore, this impact is considered **less than significant.**

iii) Seismic-related ground failure, including liquefaction?

Soil liquefaction most commonly occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and take on the characteristics of a fluid, thus becoming similar to quicksand. Liquefaction may also occur in the absence of a seismic event, when unconsolidated soil above a hardpan becomes saturated with water. Factors determining the liquefaction potential are the soil type, the level and duration of seismic ground motions, the type and consistency of soils, and the depth to groundwater. Loose sands, peat deposits, and unconsolidated Holocene-age sediments are the most susceptible to liquefaction, while clayey silts, silty clays, and clays deposited in freshwater environments are generally stable under the influence of seismic ground shaking.

Both of the project sites contain areas of loose, unconsolidated, Holocene-age soils that may be subject to liquefaction in the event of a large magnitude earthquake. However, the concrete foundations that would be installed at both sites, and the new 7,000-square-foot steel frame building at the Stockton West Weber site, are subject to the design requirements of the CBC, which incorporates criteria that are intended to minimize structural

damage and personal injury from seismic hazards (including liquefaction), to the maximum extent practicable. Therefore, this impact is considered **less than significant.**

iv) Landslides?

Both of the project sites are located in areas of nearly level topography, and are not located adjacent to any steep slopes where landslides would occur. Therefore, the proposed project and project refinements would have **no impact**.

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

The proposed project refinements would include additional clearing; additional grading for concrete foundations, road widening, and a smaller parking area; and construction of a 7,000- square-foot steel framed building at the Stockton West Weber site. Earth-moving activities at both project sites could cause a short-term increase in wind and water erosion, which could in turn result in sediment transport into adjacent river channels. The proposed project refinements would be subject to Mitigation Measure HYD-1 in Appendix B, "Mitigation Monitoring and Reporting Program." Consequently, the impacts from the proposed project and project refinements related to erosion and loss of topsoil would be **less than significant with mitigation incorporated.**

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

The peat soils of the Delta are subsiding at an estimated rate of slightly over 3 inches per year and, as a result, many islands that were formerly at or above sea level are now below sea level. Subsidence is a serious concern in the Delta that can lead to major flooding. As levees gradually sink and erode over time, costly maintenance is necessary to continue to protect the low lands behind them. However, neither of the project sites is subject to subsidence due to loss or compaction of peat. The Stockton West Weber site is underlain by mineral soils and fill materials used to create the present industrial site. The Rio Vista site is underlain by mineral soils, silts, and sands. The project sites would be further modified with aggregate, asphalt, and concrete bases, and stockpiles would be stored on aggregate material, which would serve to increase the stability of soils. The project consists of previously utilized industrial or dredged materials discharge areas located in relatively flat areas, and would include site preparations that would reduce the potential for soil instability. The proposed dolphin pile structures would typically consist of a number of piles driven into the riverbed and connected above the water level to provide a platform or fixing point to improve stability during the barge-loading process. The piles would be anchored to the riverbed. Therefore, the proposed project and project refinements would have a **less-than-significant** impact from construction in unstable soils.

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

Based on the Natural Resources Conservation Service (NRCS) soil survey data discussed above, none of the concrete foundations or other project facilities would be constructed in expansive soils; therefore, the proposed project and project refinements would have **no impact**.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The proposed project and project facilities would not entail the use of septic tanks or alternative wastewater disposal systems. The Stockton West Weber site would connect to the existing Stockton municipal wastewater system, and DWR may also install additional vault toilets from which the wastewater is pumped (rather than percolated through the soil) at this site. At the Rio Vista site, portable restroom facilities would be used during emergency operations. Therefore, the proposed project and project refinements would have **no impact.**

3.7.3 MITIGATION MEASURES

No significant impacts are anticipated; therefore, no mitigation measures are needed to address impacts to geology and soils.

3.8 CLIMATE CHANGE

3.8.1 ENVIRONMENTAL SETTING

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHG). This entrapment of heat in the atmosphere is believed to contribute to climate change, which is a significant change in elements of climate lasting for decades or longer. The most prominent GHGs that have been identified as contributing to climate change are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Some GHGs such as CO_2 occur naturally and are emitted to the atmosphere through natural processes and human activities. The principal greenhouse gases that enter the atmosphere because of human activities are CO_2, CH_4, N_2O, and fluorinated gases.

The recent increase in concentration of carbon dioxide in the atmosphere over the past 50 years is the result of human activities, mainly the burning of fossil fuels. As the concentration of CO_2 in the atmosphere has increased, so has the average surface temperature of the earth. The relationship between the atmospheric CO_2 concentration and surface temperature is shown in Figure 3.8-1 for the past 150 years.

Additional environmental setting information on climate change and CEQA guidelines regarding climate change are presented in DWR (2013).

3.8.2 ENVIRONMENTAL EFFECTS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Greenhouse Gas Emissions. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

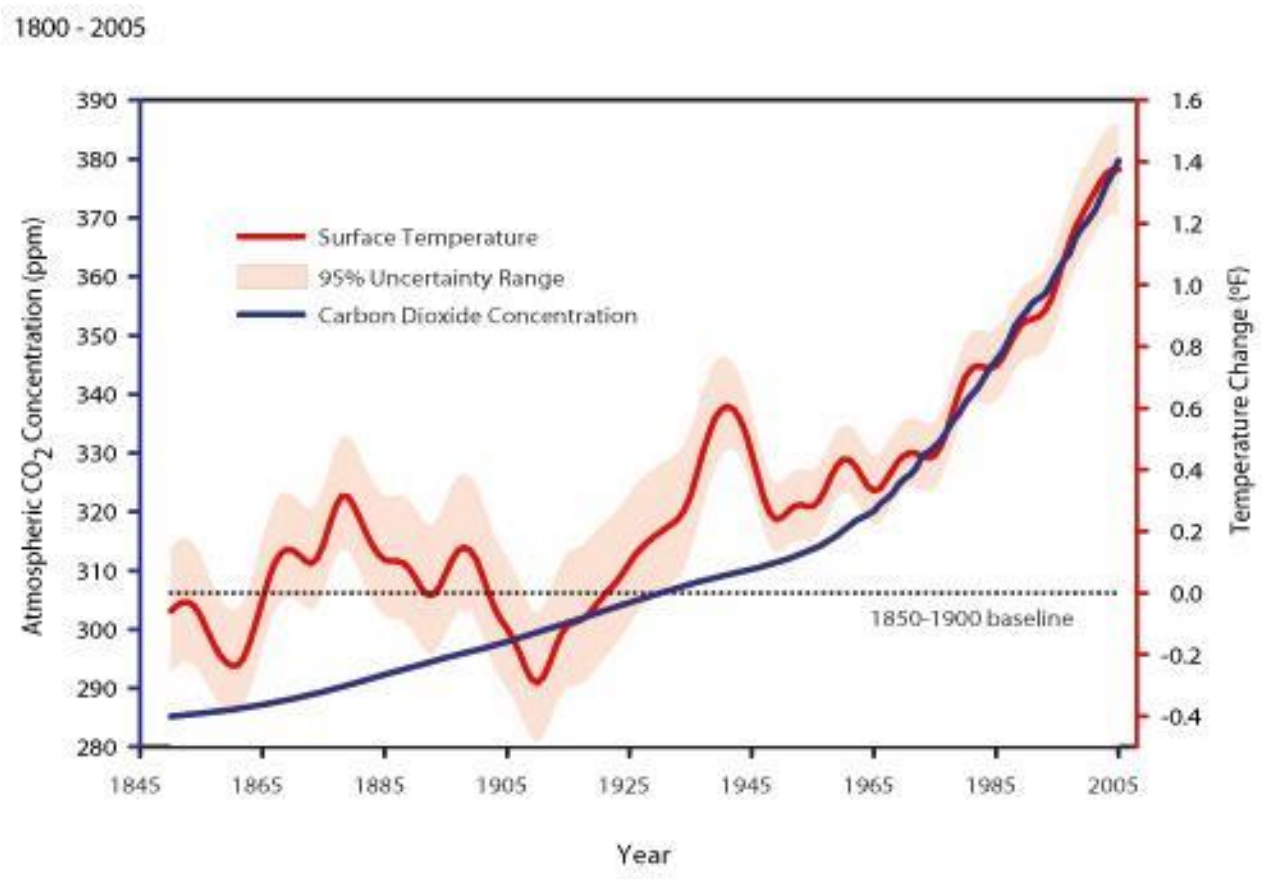


Figure 3.8-1. Atmospheric CO_2 and Global Surface Temperature Trends

The proposed project and project refinement activities would include the emission of GHGs from construction equipment and trucks hauling stockpile materials during site preparation. Once the sites are prepared there would be very little direct and indirect emissions as a result of the proposed project and project refinements. During emergency activation, the transportation of rock from quarries and stockpiles to barge-loading facilities and to levee breach locations in the Delta would occur under a declared emergency with or without the proposed project and project refinements. Furthermore, emergency activations are considered exempt from CEQA per CEQA Guidelines, Section 15269[a, b, c].

CONSTRUCTION-RELATED EMISSIONS DETERMINED BY DWR

In May 2012, DWR adopted the DWR Climate Action Plan-Phase I: Greenhouse Gas Emissions Reduction Plan (GGERP), which details DWR's efforts to reduce its GHG emissions consistent with Executive Order S-3-05 and the Global Warming Solutions Act of 2006 (Assembly Bill (AB) 32). DWR also adopted the Initial Study/Negative Declaration prepared for the GGERP in accordance with the CEQA Guidelines review and public process. Both the GGERP and Initial Study/Negative Declaration are incorporated herein by reference and are available at: http://www.water.ca.gov/climatechange/CAP.cfm. The GGERP provides estimates of historical (back to 1990), current, and future GHG emissions related to operations, construction, maintenance, and business practices (e.g., building-related energy use). The GGERP specifies aggressive 2020 and 2050 emission reduction goals and identifies a list of GHG emissions reduction measures to achieve these goals.

DWR specifically prepared its GGERP as a "Plan for the Reduction of Greenhouse Gas Emissions" for purposes of CEQA Guidelines Section 15183.5. That section provides that such a document, which must meet certain specified requirements, "may be used in the cumulative impacts analysis of later projects." Because global climate change, by its very nature, is a global cumulative impact, an individual project's compliance with a qualifying GHG Reduction Plan may suffice to mitigate the project's incremental contribution to that cumulative impact to a level that is not "cumulatively considerable." (See CEQA Guidelines § 15064, subd. (h)(3).)

More specifically, "[l]ater project-specific environmental documents may tier from and/or incorporate by reference" the "programmatic review" conducted for the GHG emissions reduction plan. "An environmental document that relies on a greenhouse gas reduction plan for a cumulative impacts analysis must identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project." (CEQA Guidelines § 15183.5, subd. (b)(2).)

Section 12 of the GGERP outlines the steps that each DWR project will take to demonstrate consistency with the GGERP. These steps include: 1) analysis of GHG emissions from construction of the proposed project , 2) determination that the construction emissions from the project do not exceed the levels of construction emissions analyzed in the GGERP, 3) incorporation into the design of the project DWR's project level GHG emissions reduction strategies, 4) determination that the project does not conflict with DWR's ability to implement any of the "Specific Action" GHG emissions reduction measures identified in the GGERP, and 5) determination that the project would not add electricity demands to the State Water Project (SWP) system that could alter DWR's emissions reduction trajectory in such a way as to impede its ability to meet its emissions reduction goals.

Consistent with these requirements, a GGERP Consistency Determination Checklist is attached in Section 3.8.4 documenting that the proposed project and project refinements have met each of the required elements.

DETERMINATION

Based on the analysis provided in the GGERP and the demonstration that the proposed project and project refinements are consistent with the GGERP (as shown in the attached Consistency Determination Checklist – Section 3.8.4), DWR as the lead agency has determined that the proposed project's and project refinements' incremental contribution to the cumulative impact of increasing atmospheric levels of GHGs is less than cumulatively considerable and, therefore, less than significant for project-specific construction activities. Therefore, the proposed project and project refinements would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; impacts from GHG emissions are **less than significant**. Furthermore, the proposed project and project refinements would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG; this impact would be **less than significant**.

OPERATION-RELATED EMISSIONS

Operations of the proposed project and project refinements would result in temporary increases in emissions during declared emergency responses. This would include the use of construction equipment at the proposed project sites, worker commutes, and the transport of stockpiled materials to levee repair locations. The timing and location of levee breaches that would be repaired with the stockpiled material are highly unpredictable. Because

the specific emissions could be highly variable depending on the size and location(s) of levee breaches and failures, modeling project-generated emissions associated with emergency operations would be too speculative to be quantified at this time. Because the transport of rock from quarries and stockpiles to barge-loading facilities and to levee breach locations in the Delta would occur under a declared emergency with or without the project, they are considered exempt from CEQA per CEQA Guidelines, Section 15269[a, b, c]. Based on Section 3.8.2.2, "Determination," above, and the information herein regarding operation-related emissions, the proposed project and project refinements would result in impacts that are **less than significant**.

3.8.3 MITIGATION MEASURES

No significant impacts are anticipated; therefore, no mitigation measures are needed to address impacts related to GHG emissions.

3.8.4 DWR GGERP CONSISTENCY DETERMINATION CHECKLIST AND CHG EMISSIONS INVENTORY

DWR's project-specific GGERP Consistency Determination Checklist and supporting CHG Emissions inventory is included herein on the following 10 pages. The combined site consistency determination taken from the original IS/MND (DWR 2013) is presented first followed by the site consistency determinations for the Rio Vista and West Weber sites for the project with project refinements.

3.9 HAZARDS AND HAZARDOUS MATERIALS

3.9.1 ENVIRONMENTAL SETTING

None of the levee repair materials that would be stockpiled contain hazardous materials or waste.

The State Water Resources Control Board (SWRCB) GeoTracker database (SWRCB 2010) and DTSC EnviroStor database (DTSC 2012) were reviewed for each of the project sites. The findings are summarized below.

STOCKTON WEST WEBER SITE

The Stockton West Weber site is within an area that is part of a larger voluntary cleanup site for lead, polynuclear aromatic hydrocarbons (PAHs), and volatile organic compounds (VOCs) that were released during previous land use activities, including vehicle storage and refueling and railroad use. There are also three nearby designated Spills, Leaks, Investigations, and Cleanups (SLIC) sites on the peninsula where the Stockton West Weber site is located, all of which have achieved closed status. There is also an active EPA Superfund site located south of the site across the Old Mormon Slough. The proposed project and project refinements would not disturb the toxic contaminants in that area.

According to a Preliminary Endangerment Assessment report (PEA) completed in 2008 by Geo-Phase Environmental, Inc., the areas that are proposed for this project's activities exhibited low levels of contaminants; however, none appeared to be in excess of regulatory standards for existing and planned commercial and industrial uses (Geo-Phase Environmental 2008). In 2013, DWR entered into an interagency agreement with DTSC, conducted applicable supplemental site investigations (SSIs), and developed SMPs and HASPs approved

DWR GHG Emissions Reduction Plan Consistency Determination Form

For Projects Using Contractors or Other Outside Labor

Print Form

This form is to be used by DWR project managers to document a DWR CEQA project's consistency with the DWR Greenhouse Gas Emissions Reduction Plan. This form is to be used only when DWR is the Lead Agency and when contractors or outside labor and equipment are use to implement the project.

Additional Guidance on filling out this form can be found at:
dwrclimatecange.water.ca.gov/guidance_resources.cfm

The DWR Greenhouse Gas Emissions Reduction Plan can be accessed at:
http://www.water.ca.gov/climatechange/CAP.cfm

California Department of Water Resources
1416 9th Steet
Sacramento, CA
95814
dwrclimatechange.water.ca.gov
www.water.ca.gov/climatechange

Project Name:	Delta Flood Emergency Facilities Improvement Project
Environmental Document type:	Mitigated Negative Declaration
Manager's Name:	John Paash
Manager's email:	John.Paasch@water.ca.gov
Division:	Division of Flood Management
Office, Branch, or Field Division	Hydrology & Flood Operations Office

Short Project Description: The purpose of the Delta Flood Emergency Facilities Improvement Project (FIP), a component of the Delta Flood Emergency Preparedness, Response, and Recovery Program is to ensure that the State has the appropriate infrastructure, materials and supplies in the Delta to respond to and recover quickly and effectively from major flood or earthquake disasters in the Sacramento-San Joaquin River Delta. To accomplish its purpose, the proposed project will establish material storage and transfer facility sites strategically located within the Delta.

Project GHG Emissions Summary

Total Construction Emissions	1,700	$mtCO_2e$
Maximum Annual Construction Emissions	1,500	$mtCO_2e$

☒ All other emissions from the project not accounted for above will occur as ongoing operational, maintenance, or business activity emissions and therefore have already been accounted for and analyzed in the GGERP.

Extraordinary Construction Project Determination

Do total project construction emissions exceed 25,000 $mtCO_2e$ for the entire construction phase or exceed 12,500 $mtCO_2e$ in any single year of construction.

○ Yes - Addition analysis is required, consult with C4

◉ No - Additional analysis not required

Project GHG Reduction Plan Checklist

☒ All Project Level GHG Emissions Reduction Measures have been incorporated into the design or implementation plan for the project. (Project Level GHG Emissions Reduction Measures)

Or

☐ All feasible Project Level GHG Emissions Reduction Measures have been incorporated into the design or implementation plan for the project and and Measures not incorporated have been listed and determined not be apply to the proposed project (include as an attachment)

☒ Project does not conflict with any of the Specific Action GHG Emissions Reduction Measures (Specific Action GHG Emissions Reduction Measures)

Would implementation of the project result in additional energy demands on the SWP system of 15 GWh/yr or greater?

○ Yes ◉ No

If you answered Yes, attach a Renewable Power Procurement Plan update approval letter from the DWR SWP Power and Risk Office.

Is there substantial evidence that the effects of the proposed project may be cumulatively considerable notwithstanding the proposed project's compliance with the requirements of the DWR GHG Reduction Plan?

○ Yes ◉ No

If you answered Yes, the project is not eligible for streamlined analysis of GHG emissions using the DWR GHG Emissions Reduction Plan. (See CEQA Guidelines, section 15183.5, subdivision (b)(2).)

Based on the information provided above and information provided in associated environmental documentation completed pursuant to the above referenced project, the DWR CEQA Climate Change Committee has determined that the proposed project is consistent with the DWR Greenhouse Gas Reduction Plan and the greenhouse gasses emitted by the project are covered by the plan's analysis.

Project Manager Signature:	[illegible]	Date:	[illegible]
CA Approval Signature:	[signature]	Date:	2/14/12

Attachments:

☒ GHG Emissions Inventory

☐ List and Explanation of excluded Project Level GHG Emissions Reduction Measures

☐ Plan to update Renewable Energy Procurement Plan from DWR SWP Power and Risk Office

Delta Flood Emergency Facilities Improvement Project - Inventory and Calculation of Greenhouse Gas Emissions

Emissions from Construction Equipment

Line	Type of Equipment	Maximum Number per Day	Total Operation Days	Total Operation Hours[1]	Fuel Consumption Per Hour[2]	Total Fuel Consumption (gal. diesel)	CO_2e/gal diesel[3]	Total CO_2 Equivalent Emissions (metric tons)	Sites	Max HP	Notes
1											
2	Cement and mortar mixer	3	2	48	0.29	14	0.010	0.1	All	15 HP	
3	Crane	3	10	240	8.18	1,963	0.010	20.4	All	500 HP	
4	Grader	3	15	360	5.66	2,038	0.010	21.2	All	175 HP	
5	Tractors/ Loaders/ Backhoes	6	45	2160	2.37	5,119	0.010	53.2	All (2 at each site)	120 HP	
6	Off-Highway Truck	1	5	40	7.55	302	0.010	3.1	Rio Vista	250 HP	Off-Highway truck. Used to transfer sand stockpile
7	Pump	3	15	360	1.3	468	0.010	4.9	All	50 HP	Other equip
8	Water Truck	3	15	360	7.55	2,718	0.010	28.2	All	250 HP	Off-Highway truck
9	Rubber Tired Dozer	3	15	360	8.36	3,010	0.010	31.3	All	250 HP	
10	Paver			0	3.18	-	0.010	-		120 HP	
11	Scrapper	3	15	360	9.52	3,427	0.010	35.6	All	250 HP	
12	Crane (Dredging)	1	2	16	16.28	260	0.010	2.7	Brannan	750 HP	
13	Roller	3	15	360	2.71	976	0.010	10.1	All	120 HP	
14				0		-	0.010	-			
15				0		-	0.010	-			
16				0		-	0.010	-			
17				0		-	0.010	-			
18				0		-	0.010	-			
19				0		-	0.010	-			
20				0		-	0.010	-			
21				0		-	0.010	-			
22				0		-	0.010	-			
23				0		-	0.010	-			
24				0		-	0.010	-			
25	TOTAL					**20,295**		**211**			

26 [1] An 8-hour work day is assumed.

27 [2] California Air Resource Board Offroad 2007 Emissions Inventory fuel consumption factors

28 [3] World Resources Institute-Mobile combustion CO_2 emissions tool, June 2003 Version 1.2

29

30 **Emissions from Transportation of Construction Workforce**

31	Average Number of Workers per Day	Total Number of Workdays	Average Distance Travelled (round trip)	Total Miles Travelled	Average Passenger Vehicle Fuel Efficiency[4]	Total Fuel Consumption (gal. gasoline)	CO_2e/gal Gasoline [3]	Total CO_2 Equivalent Emissions (metric tons)	
32	30	60	30	54000	20.8	**2596.2**	0.009	**23**	**All. Assumes 10 workers per day per site**

33 [4] United States Environmental Protection Agency. 2008. Light-Duty Automotive Technology and Fuel Economy Trends: 1975 through 2008. [EPA420-R-08-015]

34

35 **Emissions from Transportation of Construction Materials**

36	Trip Type	Total Number of Trips	Average Trip Distance	Total Miles Travelled	Average Semi-truck Fuel Efficiency	Total Fuel Consumption (gal. diesel)	CO_2e/gal Diesel [3]	Total CO_2 Equivalent Emissions (metric tons)	
37	Delivery (stockpile)	4000	104	416000	5	83200	0.010	865	Conservative distance assumption: Ione to Rio Vista. Shorter distance to Stockton. Assumes 20 tons/ truck haul
	Delivery (AB)	4250	60	255000	5	51000	0.010	530	
38	Spoils						0.010	0	
39	TOTAL							**1395**	

40

41 **Construction Electricity Emissions**

42		MWh of electricity	$mtCO2_e$/ MWh[5]	CO_2 e emissions
43	Electricity Needed	0	0.310	0

44 [5] eGRID2010 Version 1.0, February 2011 (Year 2007 data) *CAMX-WECC sub-region* .

45

46 **Total Construction Activity Emissions** 1,628.8 (from lines 25, 32, 39, and 43)

47 **Total Years of Construction** 2 Years

48 **Expected Start Date of Construction** July-14

49

50 **Estimated Project Useful life** 2 Years

51 **Average Annual Total GHG Emissions[7]** 814.4 **MT CO_2 equivalents**

52 [7]short-term construction emissions amortized over life of project

Site Improvements
Inventory and Calculation of Greenhouse Gas Emissions
Rio Vista

Emissions from Construction Equipment

Line	Type of Equipment	Maximum Number per Day	Total Operation Days	Total Operation Hours[1]	Fuel Consumption Per Hour[2]	Total Fuel Consumption (gal. diesel)	CO_2e/gal diesel[3]	Total CO_2 Equivalent Emissions (metric tons)
1	**CLEAR AND GRUB, REMOVE TREES**							
2	Dozers	1	20.0	160	8.00	1,280	0.010	13
3	Grader	1	20.0	160	9.00	1,440	0.010	15
4	Skid Steer Loaders	1	15.0	120	4.00	480	0.010	5
5	Service truck	1	3.0	24	3.00	72	0.010	1
6	Pickups	1	15.0	120	2.00	240	0.010	2
7	Tree chipper	1	4.0	32	3.00	96	0.010	1
8								
9	**EXCAVATION**							
10	Dozers	1	10.0	80	12.00	960	0.010	10
11	Grader	1	10.0	80	10.00	800	0.010	8
12	Loaders	1	10.0	80	3.50	280	0.010	3
13	Off road trucks	1	10.0	80	8.00	640	0.010	7
14	Scrapers	1	10.0	80	10.00	800	0.010	8
15	Service truck	1	5.0	40	3.00	120	0.010	1
16	Pickups	1	10.0	80	2.00	160	0.010	2
17								
18								
19	**BACKFILL**							
20	Dozers	1	20.0	160	12.00	1,920	0.010	20
21	Scrapers	1	20.0	160	10.00	1,600	0.010	17
22	Grader	2	30.0	480	12.00	5,760	0.010	60
23	Compactor	2	30.0	480	3.00	1,440	0.010	15
24	Service truck	1	10.0	80	3.00	240	0.010	2
25	Pickups	1	20.0	160	3.70	592	0.010	6
26								
27								
28	**SPREAD AB**							
29	Dozers	1	30.0	240	12.00	2,880	0.010	30
30	Grader	4	30.0	960	12.00	11,520	0.010	120
31	Loaders	1	10.0	80	3.50	280	0.010	3
32	Off road trucks	1	10.0	80	8.00	640	0.010	7
33	Service truck	1	10.0	80	3.00	240	0.010	2
34	Pickups	1	20.0	160	3.70	592	0.010	6
35								
36								
37	**CONCRETE**							
38	Concrete pump	1	15.0	120	5.00	600	0.010	6
39	Air compressor	2	15.0	240	3.00	720	0.010	7
40	Generator	1	15.0	120	3.00	360	0.010	4
41	Service truck	1	5.0	40	3.00	120	0.010	1
42	Pickups	1	20.0	160	3.70	592	0.010	6
43								
44	**HMA**							
45	Roller	1	3.0	24	3.00	72	0.010	1
46	Paving Equipment	1	3.0	24	3.00	72	0.010	1
47								
48								

49	**K RAIL**							
50	Rough Terrain Forklifts	1	18.0	144	3.00	432	0.010	4
51	Dozers	1	10.0	80	8.50	680	0.010	7
52	Compactor	1	10.0	80	4.00	320	0.010	3
53	Grader	1	15.0	120	12.00	1,440	0.010	15
54	Service truck	1	5.0	40	3.00	120	0.010	1
55								
56								
57	**METAL BEAM GUARDRAIL**							
58	Rough Terrain Forklifts	1	10.0	80	3.00	240	0.010	2
59	Skid Steer Loaders/auger	1	10.0	80	3.00	240	0.010	2
60	Work truck	1	10.0	80	3.00	240	0.010	2
61								
62	**FENCE**							
63	Rough Terrain Forklifts	1	8.0	64	3.00	192	0.010	2
64	Skid Steer Loaders/auger	1	8.0	64	3.00	192	0.010	2
65	Work truck	1	8.0	64	3.00	192	0.010	2
66								
67	**CMP CULVERT**							
68	Rough Terrain Forklifts	1	5.0	40	4.00	160	0.010	2
69	Skid Steer Loaders	1	5.0	40	3.00	120	0.010	1
70	Work truck	1	5.0	40	2.50	100	0.010	1
71								
72	**ELEC WORK**							
73	Trenchers	1	15.0	120	3.50	420	0.010	4
74	Work truck	1	15.0	120	2.50	300	0.010	3
75								
76	**GEOTEXTILE FABRIC**							
77	Rough Terrain Forklifts	1	15.0	120	3.00	360	0.010	4
78								-
79	TOTAL					**39,748**		**451**

80 8 Hours per work day

81 [2] California Air Resource Board Offroad 2007 Emissions Inventory fuel consumption factors

82 [3] World Resources Institute-Mobile combustion CO_2 emissions tool, June 2003 Version 1.2

83

84 **Emissions from Transportation of Construction Workforce**

85	**Average Number of Workers per Day**	**Total Number of Workdays**	**Average Distance Travelled (round trip)**	**Total Miles Travelled**	**Average Passenger Vehicle Fuel Efficiency[4]**	**Total Fuel Consumption (gal. gasoline)**	**CO_2e/gal Gasoline[3]**	**Total CO_2 Equivalent Emissions (metric tons)**
86	15	60	30	27,000	20.8	**1,298**	0.009	**12**

87 [4] United States Environmental Protection Agency. 2008. Light-Duty Automotive Technology and Fuel Economy Trends: 1975 through 2008. [EPA420-R-08-015]

88

89 **Emissions from Transportation of Construction Materials**

90	Trip Type	Total Number of Trips	Average Trip Distance	Total Miles Travelled	Average Semi-truck Fuel Efficiency	Total Fuel Consumption (gal. diesel)	CO_2e/gal Diesel [3]	Total CO_2 Equivalent Emissions (metric tons)
91	Deliver AB	1773	30.00	53,190	6	8,865	0.010	92
92	Deliver HMA	13	30.00	390	6	65	0.010	1
93	Deliver Concrete&R	110	30.00	3,300	6	550	0.010	6
94	Deliver K rail	53	30.00	1,590	6	265	0.010	3
95	CMP,guardrail, etc	50	30.00	1,500	6	250	0.010	3
96	Remove trees & grub	10	30.00	300	6	50	0.010	1
97	TOTAL	2009		60,270		10,045		**104**

98

99 **Construction Electricity Emissions**

100		MWh of electricity	$mtCO2_e$/ MWh[5]	CO_2 e emissions
101	Electricity Needed	0	0.310	0

102 [5] eGRID2010 Version 1.0, February 2011 (Year 2007 data) *CAMX-WECC sub-region* .

103

104 **Total Construction Activity Emissions** 567 (from lines 34, 41, 47, and 51)

105 **Total Years of Construction** 60 days

106 **Expected Start Date of Construction** May 1, 2015

107

108 **Estimated Project Useful life** 5 Years

109 **Average Annual Total GHG Emissions**[7] 113 **MT CO_2 equivalents**

[7]short-term construction emissions amortized over life of project

West Weber Avenue Improvements
Inventory and Calculation of Greenhouse Gas Emissions
Port of Stockton

Emissions from Construction Equipment

Line	Type of Equipment	Maximum Number per Day	Total Operation Days	Total Operation Hours[1]	Fuel Consumption Per Hour[2]	Total Fuel Consumption (gal. diesel)	CO_2e/gal diesel[3]	Total CO_2 Equivalent Emissions (metric tons)	
1	**RELOCATE ROCK FROM PORT OF STOCKTON**								
2	Loaders	4	120	3840	2.37	9,101	0.010	95	Load rock
3	Rock truck	6	120	5760	12.35	71,136	0.010	739	Transport rock
4	**CLEAR AND GRUB**								
5	Dozers	4	25	800	8.00	6,400	0.010	67	Clear ground
6	Grader	5	25	1000	9.00	9,000	0.010	94	Clear ground
7	Service truck	1	5	40	3.00	120	0.010	1	Service equipment
8	Pickups	1	20	160	2.00	320	0.010	3	Supervision
9	Loader	2	15	240	3.00	720	0.010	7	Load trucks
10	**EXCAVATION FOR BUILDINGS**								
11	Dozers	1	5	40	12.00	480	0.010	5	Excavate buildings
12	Grader	1	5	40	10.00	400	0.010	4	Grade
13	Service truck	1	1	8	3.00	24	0.010	0	Service equipment
14	Pickups	1	2	16	2.00	32	0.010	0	Supervision
15	**IMPORTED FILL, SPREAD**								
16	Dozers	2	20	320	12.00	3,840	0.010	40	Spread fill
17	Grader	3	20	480	12.00	5,760	0.010	60	Spread fill
18	Compactor	2	25	400	3.00	1,200	0.010	12	Compact backfill
19	Service truck	1	5	40	3.00	120	0.010	1	Service equipment
20	Pickups	1	25	200	3.70	740	0.010	8	Supervision
21	**GEOTEXTILE FABRIC, SPREAD**								
22	Rough Terrain Forklifts	2	15	240	2.50	600	0.010	6	Handle materials
23	**SPREAD AB**								
24	Dozers	3	20	480	12.00	5,760	0.010	60	Spread fill
25	Grader	3	25	600	12.00	7,200	0.010	75	Spread fill
26	Loaders	1	10	80	3.50	280	0.010	3	Load trucks
27	Off road trucks	1	10	80	8.00	640	0.010	7	Transport on site
28	Service truck	1	20	160	3.00	480	0.010	5	Service equipment
29	Pickups	1	30	240	3.70	888	0.010	9	Supervision
30	**CONCRETE**								
31	Concrete pump	1	10	80	5.00	400	0.010	4	Pump concrete
32	Air compressor	2	10	160	3.00	480	0.010	5	Run vibrators
33	Generator	1	10	80	3.00	240	0.010	2	Run forming saws
34	Service truck	1	5	40	3.00	120	0.010	1	Service equipment
35	Pickups	1	10	80	3.70	296	0.010	3	Supervision
36	**ELEC WORK**								
37	Trenchers	1	12	96	3.50	336	0.010	3	Trench ditches
38	Dozer	1	10	80	2.50	200	0.010	2	Backfill trenches
39	Compactors	1	10	80	1.50	120	0.010	1	Compact backfill
40	Work truck	1	10	80	2.50	200	0.010	2	Haul materials to trenches
41	**HMA**								
42	Grader	1	2	16	3.00	48	0.010	0	Spread HMA
43	Roller	1	2	16	3.00	48	0.010	0	Compact HMA
44	Paving Equipment	1	2	16	3.00	48	0.010	0	Spread HMA
45	**RIPRAP**								
46	Excavator	1	19	152	10.00	1,520	0.010	16	Place rock
47	Rubber tired loaders	1	19	152	10.00	1,520	0.010	16	Handle rock at work site
48									
49	**FENCE**								
50	Rough Terrain Forklifts	1	12	96	3.00	288	0.010	3	Handle fencing
51	Skid Steer Loaders/auger	1	12	96	3.00	288	0.010	3	Auger holes
52	Work truck	1	8	64	3.00	192	0.010	2	Distribute materials to work location:
53	**DOLPHIN PILES**								
54	Tug	1	2	16	10.00	160	0.010	2	Mobilize and demobilize
55	Tug/Crane on barge	1	25	200	3.00	600	0.010	6	Handle barge during driving

56	Crane on barge	1	25	200	12.00	2,400	0.010	25	Drive piles
57	Work truck	1	3	24	2.00	48	0.010	0	Handle piles at loading area
58	Rough Terrain Forklifts	1	5	40	2.50	100	0.010	1	Handle piles at loading area
59	**CONVEYOR PILES**								
60	Tug	1	2	16	10.00	160	0.010	2	Mobilize and demobilize
61	Tug/Crane on barge	1	6	48	3.00	144	0.010	1	Handle barge during driving
62	Crane on barge	1	6	48	12.00	576	0.010	6	Drive piles
63	Work truck	1	1	8	2.00	16	0.010	0	Handle piles at loading area
64	Rough Terrain Forklifts	1	1	8	2.50	20	0.010	0	Handle piles at loading area
65	**REMOVE WOOD PILES**								
66	Tug/Crane on barge	1	4	32	3.00	96	0.010	1	Handle barge at work site
67	Crane on barge	1	4	32	3.50	112	0.010	1	Pull piles
68	Tug	1	2	16	10.00	160	0.010	2	Mobilize and demobilize
69									
70	**METAL BEAM GUARDRAIL**								
71	Rough Terrain Forklifts	1	7	56	3.00	168	0.010	2	Handle materials
72	Skid Steer Loaders/auger	1	7	56	3.00	168	0.010	2	Auger holes
73	Work truck	1	7	56	3.00	168	0.010	2	Deliver materials to work location
74	**CMP CULVERT**								
75	Trenchers	2	13	208	3.50	728	0.010	8	Excavate trenches
76	Rough Terrain Forklifts	1	5	40	2.00	80	0.010	1	Handle CMP off trucks
77	Dozer	1	13	104	3.50	364	0.010	4	Place backfill
78	Compactors	2	13	208	2.00	416	0.010	4	Compact backfill
79	Work truck	1	5	40	2.50	100	0.010	1	Deliver CMP to work location
80	TOTAL					**138,369**		**1,438**	

81 8 Hours per work day

82 [2] California Air Resource Board Offroad 2007 Emissions Inventory fuel consumption factors

83 [3] World Resources Institute-Mobile combustion CO_2 emissions tool, June 2003 Version 1.2

84

85 **Emissions from Transportation of Construction Workforce**

86	**Average Number of Workers per Day**	**Total Number of Workdays**	**Average Distance Travelled (round trip)**	**Total Miles Travelled**	**Average Passenger Vehicle Fuel Efficiency[4]**	**Total Fuel Consumption (gal. gasoline)**	**CO_2e/gal Gasoline[3]**	**Total CO_2 Equivalent Emissions (metric tons)**	
87	10	120	20	24000	20.8	1154	0.00901	10	Transfer rock
88	20	60	20	24000	20.8	1154	0.00901	10	Weber site work
89	30	180	40	48000		2308	0.009	**21**	

90 [4] United States Environmental Protection Agency. 2008. Light-Duty Automotive Technology and Fuel Economy Trends: 1975 through 2008. [EPA420-R-08-015]

91

92 **Emissions from Transportation of Construction Materials**

93	Trip Type	Total Number of Trips	Average Trip Distance	Total Miles Travelled	Average Semi-truck Fuel Efficiency	Total Fuel Consumption (gal. diesel)	CO_2e/gal Diesel [3]	Total CO_2 Equivalent Emissions (metric tons)
94	Transfer rock	5750	5.00	28,750	6	4,792	0.010	50
95	Remove clear & grub	1,500	30.00	45,000	6	7,500	0.010	78
96	Remove wood piles	2	30.00	54	6	9	0.010	0
97	Import fill	1,500	30.00	45,000	6	7,500	0.010	78
98	Deliver geotextile	73	30.00	2,178	6	363	0.010	4
99	Deliver concrete	223	30.00	6,697	6	1,116	0.010	12
100	Deliver HMA, fence, guard rail, CMP	25	30.00	737	6	123	0.010	1
101	Deliver riprap	100	30.00	3,000	6	500	0.010	5
102	Deliver piles	12						
103	TOTAL	9,184		131,415		21,903		**228**

104

105 **Construction Electricity Emissions**

106		MWh of electricity	$mtCO2_e$/ MWh[5]	CO_2 e emissions
107	Electricity Needed	0	0.310	**0**

108 [5] eGRID2010 Version 1.0, February 2011 (Year 2007 data) *CAMX-WECC sub-region* .

109

110 **Total Construction Activity Emissions** **1,686** (from lines 99, 108, 122, and 126)

111 **Total Years of Construction** 180 days

112 **Expected Start Date of Construction** May 1, 2015

113

114 **Estimated Project Useful life** 10 Years

115 **Average Annual Total GHG Emissions[7]** **169 MT CO_2 equivalents**

116 [7]short-term construction emissions amortized over life of project

by DTSC for the Stockton West Weber site parcels. The noted SMPs and HASPs provide cautionary measures for all ground-disturbing activities and removal of excavated material. The SMPs and HASPs must be implemented prior to and during any ground-disturbing activities that may pose a toxic substance hazardous risk during construction of site improvements and subsequent ground-disturbing operations.

3.10 RIO VISTA SITE

There are no hazardous waste sites known to be present on or in the immediate vicinity of the Rio Vista site. The adjacent dock facilities owned by the Dutra Group have been in heavy industrial use and may have some unidentified contaminants. If any contaminants exist, they would not be disturbed as part of the proposed project and project refinements.

Additional environmental setting information is presented in DWR (2013).

3.10.1 ENVIRONMENTAL EFFECTS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hazards and Hazardous Materials. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction of the proposed project and project refinements, such as clearing, grading, installation of concrete pads, and the 7,000 square-foot steel framed building, would entail the routine transport, use, or disposal of small amounts of hazardous materials such as fuels, oils, and lubricants. Project-related operational activities associated with stockpiling rock and loading barges in an emergency flood situation would also entail the use of minor amounts of hazardous materials such as fuels, oils, and lubricants in order to operate necessary equipment. However, the use of these materials is heavily regulated at the local, state, and federal level, and these regulations are intended to reduce the potential hazards to human health and the environment to the maximum extent feasible. Therefore, the proposed project and project refinements would not create a significant hazard to the public or the environment through the transport, use, or disposal of hazardous materials**.** This impact would be **less than significant.**

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?

As discussed in a) above, construction and operation of the proposed project refinements would entail the routine use of small quantities of hazardous materials such as fuels, oils, and lubricants in order to operate necessary equipment. The use of these materials is heavily regulated at the local, state, and federal level, and these regulations are intended to reduce the potential hazards to human health and the environment to the maximum extent feasible. Furthermore, the proposed project and project refinements would be subject to Mitigation Measure HYD-1 in Appendix B, "Mitigation Monitoring and Reporting Program," which entails preparation and implementation of a SWPPP and BMPs designed to reduce hazards from accidental spills and procedures to clean up such spills if they do occur. Therefore, the impacts from the proposed project and project refinements related to accidental release of hazardous materials would be **less than significant with mitigation incorporated**.

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

There are no schools within one-quarter mile of either of the project sites. Furthermore, the proposed project and project refinements do not include the emission or handling of acutely hazardous substances. Therefore, the project would have **no impact.**

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

There are no known hazardous material contamination hazards on the Rio Vista site.
Although contaminants were detected in soils at the Stockton West Weber site, the contaminants have been found to be present at low levels, consistent with background levels for the area. All identified SLIC sites are closed. The nearby superfund site south of Old Mormon Slough would not be disturbed or affected by the proposed project and project refinements.

To address any outstanding hazardous materials and/or any hazardous risks associated with disturbing the existing soils at the Stockton West Weber site, DWR has consulted with DTSC and entered into an interagency agreement with DTSC to conduct applicable SSIs, and has developed SMPs and HASPs approved by DTSC for the Stockton West Weber site parcels. The noted SMPs and HASPs must be implemented prior to and during any ground-disturbing activities that may pose a toxic substance hazardous risk during construction of site improvements and subsequent ground-disturbing operations. Furthermore, the proposed project and project refinements would be subject to Mitigation Measure HAZ-1 in Appendix B, "Mitigation Monitoring and Reporting Program," which requires DWR to implement SMPs and HASPs approved by DTSC for the Stockton West Weber site parcels. The noted SMPs and HASPs must be implemented prior to and during any ground-disturbing activities that may pose a toxic substance hazardous risk during construction of site improvements and subsequent ground-disturbing operations that will remain consistent with current commercial and industrial zoning land uses. Therefore, the impacts from construction and operation of the proposed project and project refinements on a known hazardous materials contamination site would be **less than significant with mitigation incorporated**.

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

The Stockton West Weber site is not located within any airport land use plan or within 2 miles of a public airport or public use airport. The Rio Vista site is approximately 1.7 miles southeast of the Rio Vista Municipal Airport. This airport has two runways that are 2,200 feet long and 4,200 feet long, respectively. The airport accommodates general aviation and transient regional aviation, including small jet planes and helicopters. Construction of the proposed project and project refinements, such as clearing, minor grading, and construction of facilities, would not create any conflicts with the existing airport operations. None of the equipment used for project operations (e.g., transportation, storage, or transfer of quarry rock or other emergency flood-related materials) would represent a new use in the area since the Rio Vista site has been used for mining and storage of dredged materials for many decades. The Dutra Group docks have been used for barge loading operations in the past.

The proximity of the airport enhances the viability of this site as an ICP, as it includes aviation navigational aids, a heliport, and other support functions. DWR may consider locating the ICP on the airport property, subject to an agreement with the City of Rio Vista.

Because the proposed project and project refinements would not result in a safety hazard for aviation or for people residing or working in the project area, there would be **no impact.**

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

The Stockton West Weber and Rio Vista sites are not in the vicinity of any private airstrips. The proposed project and project refinements would not result in an aircraft safety hazard for people residing or working in the project area; thus, there would be **no impact.**

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

The proposed project and project refinements entail implementation of an emergency response plan for repairing levee breaks and breaches in the Delta. Constructing the proposed project and project refinements and operating the emergency flood response stockpiles would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Thus, there would be **no impact.**

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The Stockton West Weber and the Rio Vista sites are not located in the vicinity of wildlands and would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. There would be **no impact.**

3.10.2 MITIGATION MEASURES

Mitigation Measure HAZ-1: Develop and Implement Environmental Remediation Plans.

DWR has entered into an interagency agreement with the State Department of Toxic Substances Control (DTSC) and has conducted ~~to conduct~~ applicable supplemental site investigations (SSIs), and has developed Soil Management Plans (SMPs) and Health and Safety Plans (HASPs) approved by DTSC for the Stockton West Weber site parcels. The noted SMPs and HASPs must be implemented ~~shall develop environmental remediation plans that will be incorporated into the site plans and improvements proposed for the Stockton West Weber Avenue parcel(s)~~ prior to and during any ground-disturbing activities that may pose a toxic substance hazardous risk during construction of site improvements and subsequent ground-disturbing operations ~~facility operations~~ that will remain ~~be~~ consistent with current commercial and industrial zoning land uses.

3.10.3 IMPACTS AFTER APPLICATION OF MITIGATION MEASURES

As previously discussed, mitigation measures were designed to reduce potentially significant impacts to a less-than-significant level. Consequently, all hazards and hazardous materials impacts are **less than significant with mitigation incorporated**.

3.11 LAND USE AND PLANNING

3.11.1 ENVIRONMENTAL SETTING

STOCKTON WEST WEBER SITE

The Stockton West Weber site is located near the Port of Stockton in San Joaquin County and consists of three parcels, totaling approximately 22.6 acres. The site has previously been used for construction purposes and as a barging facility and contains dock facilities. There are two metal buildings on the site, one located north of and adjacent to West Weber Avenue and the other located adjacent to the north Bank of Old Mormon Slough.

The three parcels that comprise the Stockton West Weber site are zoned by San Joaquin County as Industrial, General (IG). All of the parcels along West Weber Avenue west of I-5 are designated IG, as are the parcels on the east and south of Old Mormon Slough. On the north bank of the Stockton Deep Water Ship Channel, directly across from the site the parcels are designated Commercial, General (CG) and the 2035 General Plan Land Use/Circulation Diagram designation is Commercial. The parcels to the west and south are designated as Industrial in the 2035 General Plan, while the parcels to the north and east are proposed as commercially zoned (City of Stockton 2007).

RIO VISTA SITE

The Rio Vista site is located on the west side of the Sacramento River, just north of the town of Rio Vista. The project site consists of 3.4 acres of land owned by the Sacramento-San Joaquin Drainage District through the State of California Central Valley Flood Protection Board (CVFPB) and used by DWR for rock stockpiling. A portion of the CVFPB property is currently under lease to ASTA Construction.

This site has been used as a hydraulic dredge disposal area and as a source of sand and aggregate since the early 1900s. Existing waterside activities at this site consist of industrial and commercial uses, including Dutra Group's dock and corporation yard facilities, as well as sand mining activities by Asta Construction.

According to the Solano County General Plan (November 4, 2008), land use zoning for Rio Vista along Airport Road, west of the Rio Vista site, is urban industrial. East of the city limit, including the southern portion of the Sacramento-San Joaquin Drainage District property managed by the CVFPB where the existing quarry rock stockpile is located, the land is designated as agricultural. Along the waterfront where the Dutra Group has its docking and barge facilities, the designation is urban industrial and water-dependent industrial.

3.11.2 ENVIRONMENTAL EFFECTS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Land Use and Planning. Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

a) Physically divide an established community?

Construction of the project and project refinements would occur on lands that are used for construction or industrial purposes. Because there are no existing residences within either of the project sites, implementation of the proposed project and project refinements would not physically divide an established community. Therefore, the proposed project and project refinements would have **no impact**.

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

Implementation of the proposed project and project refinements at the Stockton West Weber site would include construction of aggregate-based access roads, a 7,000-square-foot steel-frame building, concrete foundations for rock conveyors, and temporary office trailers; installation of a pre-fabricated restroom facility; establishment of a quarry rock stockpile and installation of spud piles and dolphin pile clusters. The site has previously been used for construction purposes. As discussed above, the Stockton Weber Avenue site is zoned as IG, and the proposed project and project refinements would not conflict with the IG zoning of the project site.

Implementation of the proposed project and project refinements at the Rio Vista site would include additional clearing, a smaller parking area, road widening, and site improvements for future temporary office trailers. As discussed above, the project site is zoned by the Solano County General Plan as urban industrial. The proposed project and project refinements would not conflict with the urban industrial zoning of the Rio Vista site. The proposed project and project refinements would occur on land used as a dredge disposal area and as a source of sand and aggregate since the early 1900s. The proposed project and project refinements would not change the overall use of the Rio Vista site and would not hinder stockpiling or dredging operations.

In addition, by preparing and responding more quickly and effectively to an emergency response in the event of a levee breach or failure in the Delta, the proposed project would reduce the effects of water inundation to the

existing land uses; therefore, the proposed project would potentially provide beneficial impacts to existing land uses located in the vicinity of a levee failure. For the reasons discussed above, the proposed project would not conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the project would have **no impact**.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan (NCCP)?

The Stockton West Weber site is within the geographic area covered by the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). This plan is designed to balance open space conservation and conversion of open space to non-open space, while protecting agricultural uses, property rights, and long-term management of plants, fish, and wildlife. Because the Stockton West Weber site does not qualify as "open space" nor does it provide connectivity to other open space, the proposed project and project refinements would not conflict with the SJMSCP. (See Section 3.4, "Biological Resources," for further discussion.) Therefore, the project would have **no impact**.

3.11.3 Mitigation Measures

No significant impacts are anticipated; therefore, no mitigation measures are needed or proposed for land use.

3.12 MINERAL RESOURCES

3.12.1 Environmental Setting

Stockton West Weber Site

The Stockton West Weber site, in San Joaquin County, is located in an area classified by the California Geological Survey (CGS) as mineral resource zone (MRZ) 1: areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence (Jensen and Silva 1988: Plate 9).

Rio Vista Site

The Rio Vista site, in eastern Solano County, is not located in an area that is included in a CGS mineral land classification report. However, the Rio Vista Sand Pit (formerly the Asta Sand Pit), operated by Asta Construction, is an existing sand and clay mining operation, a portion of which is located on part of the Rio Vista site (Larosse et al. 1999 and Chapter 2, "Project Description"). The Rio Vista site is also located within the Rio Vista Gas Field. This large natural gas field, which spans more than 29,000 acres, was discovered in 1936 and has been in continuous operation since that time. It has produced over 3.6 trillion cubic feet of natural gas so far, and contains an estimated reserve of approximately 330 billion cubic feet (California Division of Oil, Gas, and Geothermal Resources 2009).

Additional environmental setting information is presented in DWR (2013).

3.12.2 ENVIRONMENTAL EFFECTS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Mineral Resources. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

The Rio Vista site is located within the Rio Vista Gas Field, and a portion of the site is leased by Asta Construction for sand mining operations. However, the proposed project and project refinements, such as site clearing, minor grading, construction of concrete foundations, and widening of the existing access road, would have no effect on the existing Asta Construction mining operation or on the operation of the existing Rio Vista Gas Field. Furthermore, the proposed project and project refinements would entail stockpiling of sand for use in levee emergency repairs, which would be an appropriate use of the existing mineral resource at the Rio Vista site. The Stockton West Weber site is located in an area where CGS has determined that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence (Jensen and Silva 1988:Plate 9). Therefore, the proposed project and project refinements would have **no impact** on known, regionally important mineral resources.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

The Rio Vista Gas Field is discussed as an important source of natural gas and the Rio Vista Sand Pit is shown an existing source of sand in the *Solano County General Plan* (Solano County 2008: Chapter 4). However, as stated above, the proposed project and project refinements would have no effect on the existing Asta Construction mining operation or on the operation of the existing Rio Vista Gas Field. Furthermore, the proposed project and project refinements would entail stockpiling of sand for use in levee emergency repairs, which would be an appropriate use of the existing mineral resource at the Rio Vista site. The Stockton West Weber site is not located in a locally-designated important mineral resource recovery site (San Joaquin County 1992). Therefore, the proposed project and project refinements would have **no impact** on known, locally important mineral resources.

3.12.3 MITIGATION MEASURES

No significant impacts are anticipated; therefore, no mitigation measures are needed to address impacts to mineral resources.

3.13 UTILITIES AND SERVICE SYSTEMS

3.13.1 ENVIRONMENTAL SETTING

The proposed project and project refinements would be built on sites that are currently developed and have been used as industrial sites, dredged materials disposal, and storage sites. The proposed project and project refinements would not include or induce construction of new homes or extend public roadways or infrastructure.

3.13.2 ENVIRONMENTAL EFFECTS

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

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

The proposed project and project refinements would include site grading, fencing, barge docking and loading facilities, new buildings, parking, temporary office trailers, utilities (water, power, communications, and wastewater), lighting, and security improvements. None of these activities would result in the need for wastewater

service. In addition, the proposed project and project refinements would not include any new development that would require wastewater treatment.

The proposed project and project refinements at the Stockton West Weber site include installation of a pre-fabricated restroom facility with a connection to the City of Stockton sewer system or a concrete waste vault. Portable restroom facilities would be used at the Rio Vista site. These restroom facilities would not result in the need for wastewater treatment service. Therefore, the proposed project and project refinements would not result in wastewater discharges that exceed the Central Valley Regional Water Quality Control Board's requirements, and the project would have **no impact**.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Dust control during construction activities and emergency operations would require the use of water; however, the amount of water would be minimal and existing facilities would have adequate capacity for watering activities. As discussed under question a) above, the proposed project and project refinements would not require wastewater service. In addition, the proposed project and project refinements would not include any new development that would require water treatment. Because the proposed project and project refinements would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the proposed project and project refinements would have **no impact.**

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

The proposed project and project refinements at the Stockton West Weber and Rio Vista sites would create additional impervious surfaces; however, the majority of the sites would still consist of pervious surfaces, including the aggregate and rock stockpiles. Because the proposed project and project refinements would not result in significant increases in storm water runoff, and with storm drainage improvements incorporated into site plans for the Stockton West Weber to reduce direct run-off into the adjoining bodies of water, the proposed project and project refinements would have **no impact**.

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

Construction activities and movement of materials at the Stockton West Weber and Rio Vista sites could create dust, and the graveled areas would require watering during construction, stockpiling activities, barge loading, and truck hauling activities to minimize the creation of dust. Water for reducing the creation of dust is generally obtained from the site or from nearby water sources such as fire hydrants or existing water spigots. Water supply for the new restroom and the warehouse buildings would be provided via new underground piping that would connect to the existing municipal water supply. Since use of the project site would be temporary and generally in response to limited emergency situations, water use would also be temporary and existing water sources and supply would be sufficient. Therefore, the proposed project and project refinements would have a **no impact**.

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

As discussed under questions a) and b) above, the proposed project and project refinements would not generate any wastewater. Because the proposed project and project refinements would not exceed a wastewater treatment provider's capacity, the proposed project and project refinements would have **no impact**.

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

The proposed project and project refinements propose site clearing, grubbing, and the removal of organic material including trees and shrubs. The 2013 CALGreen Code (Title 24, Part 11 of the California Code of Regulations) requires that 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing be reused or recycled.

Any solid waste generated during construction activities would be incidental. Workers that would be onsite would use available refuse containers in the project vicinity for disposing of solid waste. Additional solid waste generated during stockpiling and emergency operations would be temporary and minimal. Any solid waste generated during project activities would be disposed in the Foothill Sanitary Landfill. Because the Foothill Sanitary Landfill has a permitted throughput of 1,500 tons per day and an expected closure date of 2082, it is anticipated that this facility could accommodate the small amount of solid waste that could be generated during project activities (CalRecycle 2014). Therefore, this impact is considered **less than significant.**

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

As discussed under f) above, vegetation and trees that were removed would be reused or recycled, in compliance with the 2013 California Green Building Code. Any solid waste generated during project activities would be incidental and disposed in the Foothill Sanitary Landfill. Transportation and disposal would be in accordance with all applicable federal, state, and local statutes and regulations. Therefore, the project would have **no impact**.

3.13.3 MITIGATION MEASURES

No significant impacts are anticipated; therefore, no mitigation measures are needed or proposed for utilities and service systems.

3.14 NOISE

3.14.1 ENVIRONMENTAL SETTING

CITY OF STOCKTON

General Plan: The Noise Element of the City of Stockton General Plan contains the following policies and standards applicable to the proposed project and project refinements:

HS-2.11 Limiting Construction Activities: The City shall limit construction activities to the hours of 7 a.m. to 7 p.m., Monday through Saturday. No construction shall occur on Sundays or national holidays without a written permit from the City.

Municipal Code: The City of Stockton Municipal Code contains the following standards applicable to the proposed project and project refinements:

Division 16-340 Noise Standards: 16-340.020 – Activities Exempt from Noise Regulations: The following activities shall be exempt from the provisions of this Division:

A. Emergency exemption. The emission of sound for the purpose of alerting persons to the existence of an emergency, or the emission of sound in the performance of emergency work. Does not include permanently installed emergency generators.

E. State or Federal pre-exempted activities. Any activity, to the extent the regulation of it has been preempted by State or Federal law.

F. Public health and safety activities. All transportation, flood control, and utility company maintenance and construction operations at any time on public rights-of-way, and those situations that may occur on private property deemed necessary to serve the best interest of the public and to protect the public's health and wellbeing, including, debris and limb removal, removal of damaged poles and vehicles, removal of downed wires, repairing traffic signals, repair of water hydrants and mains, gas lines, oil lines, and sewers, restoring electrical service, street sweeping, unplugging sewers, vacuuming catch basins, etc. The regular testing of motorized equipment and pumps shall not be exempt.

16-340.030 – Activities Deemed Violations of this Division: The following acts are a violation of this Division and are therefore prohibited:

16-340.030A – Construction Noise. Operating or causing the operation of tools or equipment on private property used in alteration, construction, demolition, drilling, or repair work between the hours of 10 p.m. and 7 a.m., so that the sound creates a noise disturbance across a residential property line, except for emergency work of public service utilities.

SAN JOAQUIN COUNTY

San Joaquin County has adopted a noise ordinance and noise level guidelines (San Joaquin County, 1978) for land uses within its unincorporated territory. In the Ordinance Code of San Joaquin County for Zoning and Subdivision Regulations (Ordinance Nos. 2831 and 3005), the county has set noise limits for various land uses, summarized as follows (San Joaquin County, 1988):

a) The sound level within the Commercial-Manufacturing, Restricted-Manufacturing, Manufacturing-1, and Manufacturing-2 zones must not exceed 75 dB Ldn at property lines of the property being developed.

b) No sound level must exceed 65 dB Ldn at property lines of properties that abut areas developed as residential, areas zoned residential, or areas shown for residential use on the General Plan.

c) No sound level must exceed 65 dB Ldn at the property lines of properties that abut local parks, schools, hospitals, homes for the care of the aged and infirm, and rest homes.

The county also adopted the California Airport Noise Standards, which set the 65 dB CNEL and Ldn maximum exterior noise level for residential land uses, and the California Sound Transmission Control Standards, which require developers within areas of 60 dB CNEL and Ldn to submit acoustical studies demonstrating that a 45 dB CNEL and Ldn will be achieved (San Joaquin County, 1978).

CITY OF RIO VISTA

The Rio Vista site lies outside the Rio Vista City limit line, but abuts it on the south, west, and north. Materials stockpiled on the site would be trucked to the dock facilities owned by the Dutra Group along the waterfront to the south, which lie within the City limit. Accordingly, this assessment considers the potential for impacts on sensitive receptors in the City and the thresholds for impact established by the City.

The City of Rio Vista Municipal Code establishes requirements for noise in several categories. The categories relevant to the project include highway noise and construction equipment noise. The criteria are shown below:

17.52.020 Highway noise.

Noise along the highways is to be related to the land use and distance from the highway.

A. Noise Standards. The relationship of land use on highways and noise level is established as follows:

Table 3.13-1. City of Rio Vista Design Noise Thresholds

Land Use Category	Design Noise Level	Description of Land Use Category
A	60 dBA (exterior)	Tracts of lands in which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, or open spaces which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
B	70 dBA (exterior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, picnic areas, recreation areas, playgrounds, active sports areas and parks.
C	75 dBA (exterior)	Developed lands, properties or activities not included in categories A and B above.
D	55 dBA (interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

B. Method of Application for Land Use Category D. Although State Highway 12 is planned to bypass Rio Vista in the future, applications along the now existing route through the city may be processed and noise standards may have to be verified with the State Department of Highways, Stockton. This is part of the environmental impact report to be prepared by the applicant. Noise reduction factors higher than those shown below may be used when field measurements of the structure in question indicate that a higher value is justified. In determining whether to use open or closed windows, the

choice should be governed by the normal condition of the windows. That is, any building having year round air treatment should be treated as the closed window case. Buildings not having air conditioning and which have open windows a substantial amount of time should be treated as the open window case.

Table 3.13-2. Effect of Building Type and Window Condition on Noise Thresholds

Building Type	Window Condition	Noise Reduction Due to Exterior of the Structure	Corresponding Highest Exterior Noise Level Which Would Achieve an Interior Design Noise Level of 55 dBA
All	Open	10 dBA	65 dBA
Light Frame	Ordinary sash, closed	20	75
Light Frame	Ordinary sash, with storm windows	25	80
Masonry	Single glazed	25	80
Masonry	Double glazed	35	90

Exceptions. The design noise levels set out in these standards represent the highest desirable noise level conditions. State highway departments shall endeavor to meet the design noise levels in planning, locating, and designing highway improvements. However, there may be sections of highway where it would be impracticable to apply noise abatement measures. This could occur where abatement measures would not be feasible or effective due to physical conditions, where the costs of abatement measures are high in relation to the benefits achieved or where the measures required to abate the noise condition conflict with other important values, such as desirable esthetic quality, important ecological conditions, highway safety, or air quality.

C. Noise Reducers. Highway noise can be reduced in sensitive locations by putting up noise barriers. A twelve (12) foot high wall along the route may reduce noise by about twenty (20) percent (from eighty (80) decibels to sixty-five (65) decibels), but may produce an unattractive appearance. Small artificial hills properly landscaped may provide a more attractive appearance, but that approach would need more right-of-way lands. Other effective barriers are buffer planting strips on easements along the highway.

D. Existing Structures. A structure existing prior to coming into force of this title shall not be deemed nonconforming by reason of failure to meet the noise requirements of this section.

E. Location of Noise Contours. According to State Law Title 7, Section 65302(g) the State Highway Department is to undertake any highway traffic noise measurement in order to verify exact location of the noise contours for use by applicants. Noise measurements along other roads than state highways are to be provided by the applicant as part of the environmental impact report information. (Prior code Appendix B § 513(B))

17.52.030 Construction equipment noise.

It is unlawful for any person within a residential zone, or within a radius of five hundred (500) feet therefrom to operate equipment or perform any outside construction or repair work on buildings or structures within the city between the hours of seven p.m. and seven a.m. or on Sundays. Emergency works are excepted. (Ord. 612 § 1 Exh. A (part), 2006: prior code Appendix B § 513(C)).

SOLANO COUNTY

General zoning requirements for all land uses in Solano County prohibit noise that exceeds 65dBA LDN at any property line (Solano County Code Section. 28.70.10(B)(1)(b). In addition, for "…construction storage yards, incidental to construction or public works projects, shall show that adequate controls or measures will be taken to prevent offensive noise, odor, dust, fumes, smoke or vibration; shall be so located that generated traffic will not constitute a hazard or nuisance to surrounding property (Solano County Code Section 28.78.40 (B)(2)).

Additional environmental setting information is presented in DWR (2013).

3.14.2 ENVIRONMENTAL EFFECTS

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

a) Would the proposed Project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?

Project-generated noise levels would be primarily associated with construction activities including site preparation, installation of concrete pads and foundations, material transport (e.g., hauling of riprap to the stockpile areas), stockpile construction, and other miscellaneous construction activities. These activities, including delivery of riprap to the stockpile sites, would occur during normal working hours (7 a.m. to 7 p.m., Mondays through Saturdays). Additional project-generated noise would occur temporarily during emergency events that require use of the stockpiled riprap and during replenishment of stockpiles following use of the rock during an emergency. However, as with the original stockpiling activity, delivery of riprap to replenish stockpiles following an emergency event would occur during normal working hours.

According to the Federal Highway Administration, the noise levels typically associated with the activities above can range from 79 to 91 dBA at 50 feet (Table 3.13-3). The simultaneous operation of on-site construction equipment associated with the proposed project and project refinements could result in combined intermittent noise levels higher than the noise level of the individual pieces of equipment. However, the noise levels would be expected to be below the thresholds set by both the City of Rio Vista and by Solano County for the sensitive receptors located along the waterfront south of the Dutra Group's dock facilities. Construction of site improvements and operation of the Stockton West Weber site would not increase noise levels above current uses. The Stockton West Weber site is located near the intersection of Interstate 5 and State Route 4 and near the Port of Stockton, areas of significant truck and transportation traffic within the City of Stockton, and San Joaquin County experiences significant noise levels from heavy vehicular and truck traffic passing through the Delta along Scenic SR 160.

All construction activities, including delivery of rock riprap to establish the stockpiles would occur during the daytime hours (working hours would be from 7 a.m. to 7 p.m., Monday through Saturday). Construction activities would not occur during the noise-sensitive hours (e.g., evening, nighttime, early morning, and Sunday), and construction-generated source noise would not result in the annoyance and/or sleep disruption to occupants of any existing noise-sensitive land uses in the project vicinity.

The proposed project refinements include new construction not originally identified in DWR (2013) at both the Stockton West Weber and Rio Vista sites; however, proposed project refinements are within the original project footprint and within the construction and operational schedules identified in DWR (2013). The proposed project and project refinements would not cause impacts that would expose persons to or generate noise levels in excess of standards established in local general plans; noise ordinances; or other applicable local, state, or federal standards. Therefore, the proposed project and project refinements would result in noise impacts that would be **less than significant**.

b) Result in exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?

Construction activities have the potential to result in varying degrees of temporary ground borne vibration, depending on the specific construction equipment used and operations involved. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Table 3.13-3. FHA Construction Equipment Noise Emission Levels	
Equipment	**Typical Noise Level (dBA) 50 ft. from Source***
Air Compressor	81
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane Derrick	88
Crane Mobile	83
Dozer	85
Generator	81
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	85
Paver	89
Pneumatic Tool	85
Pump	76
Rail Saw	90
Rock Drill	98
Roller	74
Saw	76
Scarifier	83
Scraper	89
Shovel	82
Spike Driver	77
Tie Cutter	84
Tie Handler	80
Tie Inserter	85
Truck	88

With respect to the proposed project and project refinements, the use of trucks at the site would generate the maximum ground borne vibration in comparison to the other equipment mentioned. According to the Federal Transit Administration (FTA), vibration levels associated with the use of trucks is 0.076 inch per second (in/sec) peak particle velocity (PPV) and 86 vibration decibels VdB referenced to 1 microinch per second (µin/sec) and based on the root mean square (RMS) velocity amplitude] at 25 feet (DWR, 2007). Vibration levels decrease with distance from the source to receptor.

These vibration levels would not exceed Caltrans' recommended standards with respect to the prevention of structural building damage (0.2 and 0.08 in/sec PPV for normal and historical buildings) or FTA's maximum

acceptable vibration standard with respect to human response (80 VdB for residential uses) at nearby existing vibration-sensitive land uses. In addition, the long-term operation of the proposed project and project refinements would not include any major sources of vibration. Thus, project implementation would not result in the exposure of persons to or generation of excessive groundborne vibration or ground borne noise levels. Therefore, vibration and noise levels from the proposed project and project refinements would be **less than significant**.

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

Normal operations of the proposed project and project refinements would be temporary in nature. All construction activities would be short-term in nature and would not cause a permanent increase in ambient noise levels. Under an emergency response situation, levee repair and flood-fight materials would be delivered to flood locations and thus increase noise levels from truck traffic and barge-loading activities. Even during these flood-fighting activities, however, increased noise levels are episodic and not permanent. Consequently, there would not be a permanent increase in noise levels in the project vicinity from the proposed project and project refinements. This impact would be **less than significant.**

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

A temporary substantial increase in ambient noise levels in the project vicinity could be expected due to on-site construction from the proposed project and project refinements. Widening of the access road at the Rio Vista location could also result in temporary substantial ambient noise impacts. Implementation of construction Best Management Practices (BMPs) described in Mitigation Measure NOI-1 in Appendix B, "Mitigation Monitoring and Reporting Program," would mitigate short-term construction noise impacts to **less than significant with mitigation incorporated.**

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

The Rio Vista site is approximately 1.7 miles south of Rio Vista Municipal Airport. It would not be anticipated that people residing near or working at the Rio Vista site would be exposed to excessive aviation noise levels. There would be **no impact.**

3.14.3 MITIGATION MEASURES

Mitigation Measure NOI-1: Implement Measures to Control Construction Equipment Noise Levels.

The contractor and/or DWR shall properly maintain construction equipment and equip it with noise control devices, such as exhaust mufflers or engine shrouds, in accordance with manufacturers' specifications. For non-emergency activities such as site construction and stockpiling quarry rock, operations will be limited to the periods 7:00 AM to 7:00 PM, Mondays through Saturdays.

3.14.4 IMPACTS AFTER APPLICATION OF MITIGATION MEASURES

As previously discussed, a mitigation measure was designed to reduce potentially significant impacts to a less-than-significant level. Consequently, all noise and vibration impacts are **less than significant with mitigation incorporated**.

3.15 POPULATION AND HOUSING

3.15.1 ENVIRONMENTAL SETTING

The population of the Delta region when the 2000 Census was conducted was 515,000, and minimal population growth has occurred since 2000. The Delta is comprised of portions of Alameda, Contra Costa, Sacramento, San Joaquin, Solano and Yolo Counties and the major cities located within the Delta area include Sacramento, Stockton, West Sacramento, and Oakley. Smaller communities such as Elk Grove, Tracy, Brentwood, and Rio Vista have seen rapid growth recently (California Water Plan, 2009). The populations of cities close to the project sites are shown in Table 3.14-1.

Table 3.14-1. Populations of Cities Close to Project Sites

Stockton	279,513[1]
Antioch	100,219[2]
Rio Vista	4,571

Notes:
[1] California Department of Finance 2009
[2] U.S. Census Bureau 2008

3.15.2 ENVIRONMENTAL EFFECTS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Population and Housing. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

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

Implementation of the proposed project refinements would include site grading and clearing; fencing; barge docking and loading facilities; new buildings, including a 7,000-square-foot steel framed building for warehouse use; parking; temporary office trailers; utilities (water, power, communications, and wastewater); lighting; and security improvements. All construction activities would be performed by DWR staff and contractors.

Any new utility infrastructure required to serve the project sites would be sized to accommodate project-related demands and would not be intended to serve any demands beyond the project needs. In addition, the proposed project and project refinements would not involve constructing new homes or businesses that could increase the population in the project vicinity. For these reasons, implementing the proposed project and project refinements would not directly or indirectly induce substantial population growth. Therefore, the proposed project and project refinements would have **no impact**.

b) Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?

There are no existing homes located on either of the project sites and implementing the proposed project and project refinements would not displace existing housing or necessitate the construction of replacement housing elsewhere. Therefore, the project would have **no impact**.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

For the reasons described in response to question 3.14(b) above, implementing the proposed project and project refinements would not displace a substantial number of people or necessitate the construction of replacement housing elsewhere. Therefore, the project would have **no impact**.

3.15.3 MITIGATION MEASURES

No significant impacts are anticipated; therefore, no mitigation measures are needed or proposed for population and housing.

3.16 PUBLIC SERVICES

3.16.1 ENVIRONMENTAL SETTING

The proposed Stockton West Weber and Rio Vista sites are previously developed industrial or industrial agricultural sites. The project activities would not result in the need for new or physically altered governmental facilities or related public services.

3.16.2 ENVIRONMENTAL EFFECTS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Public Services. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

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

The proposed project and project refinements would not result in the need for new fire and police protection services and facilities. The proposed project and project refinements would include site grading, fencing, barge docking and loading facilities, new buildings, parking, temporary office trailers, utilities (water, power, communications, and wastewater), lighting, and security improvements. Existing equipment at the project sites are in place to fight fires on-site, if needed. In the event of a fire requiring emergency response, existing public roadways and on-site access roads could be used to accommodate firefighting crews and equipment.

Implementation of the proposed project and project refinements would not provide any new housing that would generate new residents that increase demand for schools, parks, or other public services. Therefore, the proposed project and project refinements would not require the construction of new or expansion of existing government facilities that could have adverse impacts on the physical environment. The proposed project and project refinements would have **no impact.**

3.16.3 MITIGATION MEASURES

No significant impacts are anticipated; therefore, no mitigation measures are needed or proposed for public services.

3.17 RECREATION

3.17.1 ENVIRONMENTAL SETTING

The proposed project would provide stockpiles of levee repair materials, establish transfer facilities, and provide infrastructure to support emergency flood-fighting capabilities at three strategic locations in the Delta; proposed project refinements would occur at the Stockton West Weber and Rio Vista sites. Both of the proposed sites are previously disturbed and have been used in the past for industrial activities. No recreation facilities or activities are present on the Stockton West Weber or the Rio Vista sites.

3.17.2 ENVIRONMENTAL EFFECTS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Recreation. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The proposed project and project refinements would not induce population growth, and therefore would not contribute to any increased use of recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Therefore, the proposed project and project refinements would have **no impact.**

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

The proposed project and project refinements do not include or require the construction or expansion of recreational facilities, and therefore an adverse effect on the environment from such construction would not occur. By preparing and responding more quickly and effectively to an emergency response in the event of a levee breach or failure in the Delta, the proposed project and project refinements would reduce the effects of water inundation to the existing land uses; therefore, the proposed project and project refinements could potentially provide beneficial impacts to recreational resources located in the vicinity of a levee failure. Therefore, the proposed project and project refinements would have **no adverse impact.**

3.17.3 MITIGATION MEASURES

No significant impacts are anticipated at the Stockton West Weber and Rio Vista sites; therefore, no mitigation measures are needed to address impacts to recreation for these two sites. (Mitigation Measure REC-1 is presented

in Appendix B, "Mitigation Monitoring and Reporting Program," but is specific only to the BISRA site, which project refinements are not affecting.).

3.18 TRANSPORTATION/TRAFFIC

3.18.1 ENVIRONMENTAL SETTING

The proposed project activities consist of acquiring one site (Stockton West Weber site) and securing long-term use agreements with the CVFPB (Rio Vista site) and California Department of Parks and Recreation (DPR) (Brannan Island site), then constructing improvements on each site to facilitate storage and transfer of flood-fight materials, operation of Incident Command Posts, and related emergency operations. After construction, the sites would only be mobilized during emergency flood fighting activities and response. Once the project sites are prepared, no haul truck trips would be necessary and no additional traffic would be created until a flood emergency occurs. During a declared flood emergency, trucks would haul materials to the sites on an as-needed basis to support emergency operations. Following the emergency response activities, the stockpiles would be replenished to maintain the desired tonnage of material necessary at the proposed stockpile locations.

Additional environmental setting information is presented in DWR (2013).

3.18.2 ENVIRONMENTAL EFFECTS

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

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

The proposed project and project refinements could result in a slight increase of truck traffic at the Stockton West Weber and Rio Vista sites during the construction phase and during replenishment of rock during or after a flood fight. The temporary nature of stockpiling operation at the project sites would not create a permanent or significant increase in traffic in relation to traffic load and capacity of the street systems conflicting with any plans, ordinances, and policies establishing measures of effectiveness for the performance of the circulation system. The proposed project and project refinements would not result in any conflicts with applicable transportation plans. Consequently, this impact would be **less than significant**.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Congestion resulting from construction and hauling levee repair and flood-fight materials during an emergency response situation could potentially conflict with applicable congestion management programs, level of service standards, and travel demand measures, or any other standards established by the county congestion management agency. The proposed project and project refinements would result in an increase in truck traffic during the construction phase at the Stockton West Weber and Rio Vista sites that could be potentially significant during construction or flood-fighting activities. Implementation of Mitigation Measure TRANS-1 in Appendix B, "Mitigation Monitoring and Reporting Program." would ensure potentially significant impacts will be reduced to **less than significant with mitigation incorporated**.

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

Neither the Stockton West Weber or Rio Vista sites are within an airport land use zone nor would the proposed project and project refinements result in a change of air traffic patterns; therefore, there would be **no impact.**

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

The proposed project refinements include the widening of an existing access road at the Rio Vista site. The access road widening and other project features would remain compatible with surrounding land uses as evaluated in

DWR (2013) and could be deemed safer with the road widening improvements. No project design features would substantially increase transportation hazards. There would be **no impact.**

e) Result in inadequate emergency access?

The proposed project refinements could result in a slight increase of truck traffic during the construction phase at the Stockton West Weber and Rio Vista sites; however, the increase would remain limited in volume and duration as evaluated in DWR (2013). Therefore, the proposed project and project refinements would result in **no impact**.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The Stockton West Weber and Rio Vista sites are not located within the immediate vicinity of any transit, bicycle, or pedestrian facilities. Any increased truck traffic resulting from the proposed project and project refinements would continue to use haul routes identified and evaluated in DWR (2013). There would be **no impact**.

3.18.3 Mitigation Measures

TRANS-1: DWR, in Consultation with Caltrans Regional Offices, will Prepare a Traffic Management Plan (TMP) to Guide Activities during Construction Phase and Restocking Phase of the Proposed Project.

This plan will be prepared and support procurement of necessary Caltrans permits for the transport of heavy construction equipment and/or materials to/from the projects site, or any movement of oversized or excessive lad vehicles on the State Highway System. At a minimum, this plan shall define how to minimize the amount of time spent on construction transportation activities; how to minimize disruption of vehicle and alternative modes of traffic at all times, but particularly during periods of high traffic volumes; adequate signage and other controls, including flag persons, to ensure that traffic can flow adequately during construction; the identification of alternative routes that can meet the traffic flow requirements of a specific area, including communication (signs, webpages, etc.) with drivers and neighborhoods where construction activities will occur; and at the end of each construction day roadways shall be prepared for continued utilization without any significant roadway hazards remaining.

3.18.4 Impacts after Application of Mitigation Measures

As previously discussed, a mitigation measure was designed to reduce potentially significant impacts to a less-than-significant level. Consequently, all transportation impacts are **less than significant with mitigation incorporated**.

3.19 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Mandatory Findings of Significance.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☒	☐	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Authority: Public Resources Code Sections 21083 and 21083.05.

Reference: Government Code Section 65088.4; Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095 and 21151; *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors* (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

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

The proposed project and project refinements would have the potential to significantly affect the environment in the areas described above. Mitigation has been proposed, however, for aesthetics, biological resources, cultural resources, hydrology and water quality, hazards and hazardous materials, noise, and recreation for the proposed project (DWR 2013). Furthermore, the project refinements have resulted in modification of Mitigation Measures BIO-2 and BIO-5 from DWR (2013) and two additional mitigation measures for biological resources (BIO-7 and BIO-8). Implementation of mitigation measures proposed in Appendix B, "Mitigation Monitoring and Reporting Program," would reduce all adverse impacts to **less-than significant** levels. Therefore, the proposed project and

project refinements would not substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory.

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

DWR (2013) identifies project-relate impacts related to aesthetics, hydrology and water quality, and biological resources that would potentially result in cumulatively considerable impacts without mitigation. Mitigation is proposed in DWR (2013) and included in Appendix B, "Mitigation and Monitoring Program." These effects remain **less than significant with mitigation incorporated**.

Aesthetics-related cumulative impacts are specific to the BISRA site; project refinements are not proposed for the BISRA site so therefore there would be no additional adverse effects from project refinements on aesthetic effects on the BISRA site. These effects remain **less than significant with mitigation incorporated**.

Relating to hydrology and water quality, the proposed project and project refinements with site improvements taking place on three separate sites within the Delta has the potential to threaten water quality; however, mitigation measures for the proposed project and project refinements require DWR to implement construction BMPs for all land clearing, land leveling, excavation, and fill operations associated with each set of site improvements. These effects remain **less than significant with mitigation incorporated**.

Relating to biological resources, the proposed project and project refinements would potentially have an impact on several threatened and endangered species located in riparian and wetland habitat areas. However, mitigation measures in DWR (2013) would require pre-construction sensitive species surveys to take place, potential sensitive habitat areas be fenced off to protect the species within, and DWR to secure Section 1600 Lake or Streambed Alteration permits for any activities waterside of the top of banks bordering Delta waterways. Two additional mitigation measures for project refinements would further minimize impacts to biological species, including potential impacts to special-status fish species during project construction. These effects remain **less than significant with mitigation incorporated**.

DWR would replenish the proposed stockpiles following use of the materials for emergency response actions, and could use additional sites in the future for storage of additional emergency flood fight materials; however, the use of additional sites would require compliance with all relevant ordinances and codes and would be subject to CEQA and other relevant environmental review processes. It is also speculative to identify the specific need and locations of any additional sites. Therefore, the proposed project and project refinements would not create a mandatory finding of significance from cumulative impacts for these issue areas and affects from the proposed project and project refinements would not be considered cumulatively considerable. Therefore, these effects from the proposed project and project refinements remain **less than significant with mitigation incorporated**.

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

The preceding analysis clearly demonstrates that the proposed project and project refinements would have beneficial direct effects on human beings by preparing the Delta for quick response to potentially catastrophic levee failures that would potentially put lives of people within the flooded area in danger as well as cause limited to substantial property damage. The proposed project and project refinements could also have environmental effects that, without mitigation, could affect human beings. Implementing the mitigation measures proposed herein and presented in Appendix B, "Mitigation Monitoring and Reporting Program," however, reduce these impacts to **less than significant with mitigation incorporated**.

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*Reclamation District 999 (Netherlands)
38563 Netherlands Road
Clarksburg, CA 95612-5003

*Reclamation District 1007 (Pico and Nagle)
P. O. Box 1129
Tracy, CA 95378

*Reclamation District 1601 (Twitchell Island)
2360 West Twitchell Island Road
Rio Vista, CA 94571

*Reclamation District 1607 (Van Sickle Island)
P. O. Box 350
Pittsburg, CA 94565

*Reclamation District 1608 (Smith Tract)
P. O. Box 4857
Stockton, CA 95204

*Reclamation District 1614 (Smith Tract)
ML Office
P. O. Box 4807
Stockton, CA 95204

*Reclamation District 1667 (Prospect Island)
3310 El Camino Avenue, Suite 300
Sacramento, CA 95821

*Reclamation District 2023 (Venice Island)
1440 Arundel Court
Lodi, CA 95242

*Reclamation District 2024 (Orwood and Palm Tracts)
P.O. Box 1461
Stockton, CA 95201

*Reclamation District 2025 (Holland Tract)
311 East Main Street, Suite 504
Stockton, CA 95202

*Reclamation District 2026 (Webb Tract)
311 East Main Street, Suite 504
Stockton, CA 95202

*Reclamation District 2027 (Mandeville Island)
P. O. Box 248
Holt, CA 95234

*Reclamation District 2028 (Bacon Island)
311 East Main Street, Suite 504
Stockton, CA 95202

*Reclamation District 2029 (Empire Tract)
421 South El Dorado Street, Suite E
Stockton, CA 95203

*Reclamation District 2030 (McDonald Island)
3425 Brookside Road, Suite A
Stockton, CA 95219

*Reclamation District 2033 (Brack Tract)
165 West Cleveland Street
Stockton, CA 95204

*Reclamation District 2037 (Rindge Tract)
P. O. Box 7424
Stockton, CA 95267

*Reclamation District 2038 (Lower Jones Tract)
P.O. Box 1461
Stockton, CA 95201

*Reclamation District 2039 (Upper Jones Tract)
221 Tuxedo Court, Suite F
Stockton, CA 95204

*Reclamation District 2040 (Victoria Island)
P. O. Box 1461
Stockton, CA 95201-1461

*Reclamation District 2041 (Medford Island)
P. O. Box 1461
Stockton, CA 95201

*Reclamation District 2042 (Bishop Tract)
10100 Trinity Parkway, 5th Floor
Stockton, CA 95219

*Reclamation District 2044 (King Island)
421 South El Dorado Street, Suite E
Stockton, CA 95203

*Reclamation District 2058 (Pescadero District)
3650 West Canal Boulevard
Tracy, CA 95304

*Reclamation District 2059 (Bradford Island)
P. O. Box 34
Bethel Island, CA 94511

*Reclamation District 2060 (Hastings Tract)
1143 Crane Street, Suite 200
Menlo Park, CA 94025

*Reclamation District 2062 (Stewart Tract)
73 West Stewart Road
Lathrop, CA 95330

*Reclamation District 2064 (River Junction)
P. O. Box 690695
Stockton, CA 95269

*Reclamation District 2065 (Veale Tract)
P. O. Box 1461
Stockton, CA 95201

*Reclamation District 2067 (Brannan Island)
P. O. Box 338
Walnut Grove, CA 95690

*Reclamation District 2068 (Yolano)
7178 Yolano Road
Dixon, CA 95620-9621

*Reclamation District 2072 (Woodward Island)
P. O. Box 1461
Stockton, CA 95201-1461

*Reclamation District 2074 (Sargent-Barnhart Tract)
P. O. Box 7576
Stockton, CA 95267

*Reclamation District 2085 (Kasson District)
2291 West March Lane
Stockton, CA 95207

*Reclamation District 2086 (Canal Ranch)
11292 N. Alpine Road
Stockton, CA 95212

*Reclamation District 2089 (Stark Tract)
311 East Main Street, Suite 504
Stockton, CA 95202

*Reclamation District 2090 (Quimby Island)
311 East Main Street, Suite 504
Stockton, CA 95202

*Reclamation District 2095 (Paradise Junction)
7541 West Rena Drive
Tracy, CA 95304

*Reclamation District 2096 (Wetherbee Lake)
P. O. Box 909
Manteca, CA 95337

*Reclamation District 2098 (Cache Haas Area)
7178 Yolano Road
Dixon, CA 95620

*Reclamation District 2110 (McCormack Williamson Tract)
P. O. Box 408
Walnut Grove, CA 95690

*Reclamation District 2111 (Deadhorse Island)
P. O. Box 248
Walnut Grove, CA 95690

*Reclamation District 2113 (Fay Island)
P. O. Box 1461
Stockton, CA 95201

*Reclamation District 2114 (Rio Blanco Tract)
10100 Trinity Parkway, 5th Floor
Stockton, CA 95219

*Reclamation District 2115 (Shima Tract)
P. O. Box 20
Stockton, CA 95201-3020

*Reclamation District 2116 (Holt Station)
P. O. Box 1461
Stockton, CA 95201

*Reclamation District 2117 (Coney Island)
P. O. Box 1461
Stockton, CA 95201-1461

*Reclamation District 2118 (Little Mandeville Island)
P. O. Box 1267
Hollister, CA 95024

*Reclamation District 2119 (Wright-Elmwood Tract)
P. O. Box 1461
Stockton, CA 95201

*Reclamation District 2121 (Bixler Tract)
2030 Newton Drive
Brentwood, CA 94513

*Reclamation District 2122 (Winter Island)
293 Pueblo Drive
Pittsburg, CA 94565

*Reclamation District 2126 (Atlas Tract)
P. O. Box 4776
Stockton, CA 95204

*Reclamation District 2127 (Simmons/Wheeler)
P. O. Box 2207
Walnut Creek, CA 94595

*Reclamation District 2130 (Honker Bay)
2146 Colfax Street
Concord, CA 94520

*Reclamation District 2137
311 East Main Street, Suite 504
Stockton, CA 95202

*Reclamation District 2136 (Grizzly West)
P. O. Box 33
Suisun City, CA 9458

*Brannan-Andrus Levee Maintenance District (BALMD)
P. O. Box 338
Walnut Grove, CA 95690

*Bethel Island Municipal Improvement District (BIMID)
P. O. Box 244
Bethel Island, CA 94511-0244

*Parties only receiving notification of IS/MND; not direct recipient of IS/MND.

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APPENDIX B

Mitigation Monitoring and Reporting Program

B.1 INTRODUCTION

In accordance with the California Environmental Quality Act (CEQA), the California Department of Water Resources (DWR) has prepared an initial study/proposed mitigated negative declaration (IS/MND) that identifies adverse environmental impacts related to the Delta Flood Emergency Facilities Improvement Project (proposed project) and project refinements. The IS/MND also identifies mitigation measures that would be implemented to reduce potential significant impacts to a less-than-significant level.

Section 21081.6 of the California Public Resources Code, and Sections 15091(d) and 15097 of the State CEQA Guidelines, require public agencies "to adopt a reporting and monitoring program for changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." A Mitigation Monitoring and Reporting Program (MMRP) is required for the proposed project refinements because the IS/MND identifies potentially significant adverse impacts related to the proposed project refinements, and mitigation measures have been identified to mitigate those impacts.

DWR is the lead agency that must adopt the MMRP for the proposed project refinements. Adoption of this MMRP would occur along with approval of the proposed project refinements.

B.2 PURPOSE OF MITIGATION MONITORING AND REPORTING PROGRAM

This MMRP has been prepared to ensure that all required mitigation measures are implemented and completed according to schedule and maintained in a satisfactory manner during implementation of the proposed project and project refinements. The MMRP may be modified by DWR during project implementation, as necessary, in response to permit conditions by regulatory and permitting agencies, changing conditions, or other refinements. Table B-1 has been prepared to assist the responsible parties in implementing the MMRP. The table identifies individual mitigation measures, the person and/or agency responsible for implementing the measure, and monitoring and mitigation timing.

B.3 ROLES AND RESPONSIBILITIES

DWR is responsible for taking all actions necessary to implement the mitigation measures according to the specifications provided for each measure and for demonstrating that the action has been successfully completed. DWR, at its discretion, may delegate implementation responsibility or portions thereof to a licensed contractor or other designated agent as long as DWR maintains final responsibility for ensuring that the actions are taken.

DWR will be responsible for overall administration of the MMRP and for verifying that DWR staff members and/or the construction contractor has completed the necessary actions for each measure.

B.4 REPORTING

DWR staff or assigned personnel shall prepare monitoring report on completing construction of the proposed project and project refinements addressing compliance with the required mitigation measures. Information regarding inspections and other requirements shall be compiled and explained in the report. The report shall be designed to simply and clearly describe whether mitigation measures have been adequately implemented. At a minimum, the report shall identify the mitigation measures or conditions to be monitored for implementation,

whether compliance with the mitigation measures or conditions has occurred, the procedures used to assess compliance, and whether further action is required.

B.5 MITIGATION MONITORING AND REPORTING PROGRAM

Table B-1 presents the Mitigation Monitoring and Reporting Program (MMRP) for the Delta Flood Emergency Facilities Improvement Project and project refinements. This MMRP updates and replaces the MMRP adopted by the California Department of Water Resources (DWR) in June 2013 for the original proposed project. All mitigation measures remain the same as in the *Delta Flood Emergency Facility Improvement Project* Initial Study/Mitigated Negative Declaration (IS/MND) (DWR 2013), with the exception of Mitigation Measures BIO-2, BIO-4, and BIO-5, which are modified, and Mitigation Measures BIO-7 and BIO-8, which are added.

After further evaluation in the IS, it was determined that Mitigation Measure BIO-2 was unnecessary as a mitigation measure for the proposed project and project refinements at the Stockton West Weber and Rio Vista sites because the impacts to trees were less than significant without mitigation. Furthermore, Mitigation Measure BIO-2 is not a feasible mitigation measure at the Stockton West Weber and Rio Vista sites as some tree removal is required to construct the proposed project and project refinements, and meet most of the project objectives. Mitigation Measure BIO-2 is hereby modified to be specific to the BISRA site only.

After further evaluation in the IS, it was determined that Mitigation Measures BIO-4 and BIO-5 had unnecessary language and was henceforth clarified by deleting these terms but maintaining essential components that restrict project activities from wetland and riparian habitats. Mitigation Measures BIO-4 and BIO-5 are hereby modified.

Mitigation Measures BIO-7 and BIO-8 are new mitigation measures proposed to minimize impacts to biological resources as discussed in Section 3.5, “Biological Resources,” in Chapter 3, “Environmental Checklist,” of the 2014 IS.

Mitigation Measure HAZ-1 has been modified to reflect the progress of the DWR and State Department of Toxic Substances Control (DTSC) interagency agreement since the publication of the 2013 IS/MND, specifying that Soil Management Plans (SMPs) and Health and Safety Plans (HASPs) have been prepared since the publication of the 2013 IS/MND.

Table B-1. Mitigation Monitoring and Reporting Program: Delta Flood Emergency Facilities Improvement Project

Mitigation Measure(s)	Mitigation Description	Timing, Milestone	Responsible Entity	Monitoring and Enforcement Responsibility
AES-1: Design BISRA Joint Use Facility with DPR Incorporating Architectural and Landscaping Technics to Minimize Impacts to Scenic Vistas and Visual Resources.	DWR will consult and coordinate with DPR staff and architect to facilitate the location and design of the joint use facility and steel warehouse within the BISRA so as not to harm the natural aesthetics, scenic vistas, and visual character available within the BISRA and from the nearby Scenic SR 160. Potential design measures may include utilizing natural earth tones for building exteriors, incorporating earthen berms and planting native plants to help screen project building features from recreational areas and from Scenic SR 160.	Design, Pre-construction	DWR	DPR
AES-2: Locate and Design Quarry Rock Stockpile(s) at BISRA to Minimize Impacts to Scenic Vistas and Visual Resources.	DWR will consult and coordinate with DPR staff to facilitate the location, placement, shape, and visual treatment of quarry rock stockpile(s) that will be located near the southern tip of the BISRA peninsula. The quarry rock stockpiles will be located and configured so as not to harm the natural aesthetics, scenic vistas, and visual character available within and adjacent to the BISRA and from the nearby river, sloughs and Scenic SR 160. Potential visual treatments may include screening by natural, native vegetation of trees and shrubs, utilizing natural berms, or covering the rock stockpiles with a layer of native soil and sand materials from nearby within the BISRA.	Pre-construction	DWR	DPR
AES-3: Locate and Treat Exterior of Warehouse and Cargo Storage Containers at BISRA to Minimize Light and Glare Impacts to Day and Nighttime Views.	DWR will consult and coordinate with DPR staff to facilitate the location and exterior visual treatment of the project warehouse on BISRA to minimize light and glare impacts to day and nighttime views, and not to harm the natural aesthetics, scenic vistas, and visual character available within and adjacent to the BISRA and from Scenic SR 160. Potential visual treatments may include treating the exterior of the warehouse walls and roof in natural earth tones and screening by natural, native vegetation of trees and shrubs.	Design, Pre-construction	DWR	DPR
BIO-1: Conduct Burrowing Owl Surveys at all Three of the Project Sites Prior to Development.	Prior to any land clearing operations, a burrowing owl survey following standard guidelines (The California Burrowing Owl Consortium, CBOC, 1993) shall be conducted by a qualified biologist. The survey shall entail walking throughout the entire site, including a 500-foot buffer, to identify adjacent suitable habitat that could be affected by noise and vibration from heavy	Pre-construction	DWR	DFW

Table B-1. Mitigation Monitoring and Reporting Program: Delta Flood Emergency Facilities Improvement Project

Mitigation Measure(s)	Mitigation Description	Timing, Milestone	Responsible Entity	Monitoring and Enforcement Responsibility
	equipment operation. If no burrows are observed, no impact is expected and results of the survey shall be submitted to the California Department of Fish and Wildlife (DFW). If burrows or owls are observed, a nesting season (15 April – 15 July) survey shall also be conducted, the results of which shall determine whether a winter survey will be further required or whether the results of the survey can be submitted to the DFW following the nesting survey. If the surveys confirm occupied burrowing owl habitat, the Incidental Take Minimization Measure for Burrowing Owls (Measure 5.2.4.15) in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (November 14, 2000) will be implemented.			
BIO-2: Retain all Mature Trees on the Proposed Brannon Island State Recreation Area Project Site~~s~~.	Mature trees that are potential nest trees and native oak trees greater than 8 inches diameter at breast height~~"dbh~~ will not be removed at the proposed Brannon Island State Recreation Area project site~~from any of the project sites~~. If a nest tree becomes occupied during stockpiling and site development activities, then depending upon the bird species involved, appropriate monitoring and mitigation measures as specified by the California Department of Fish and Wildlife~~DFW~~ will be instituted. At a minimum, all construction activities shall remain a distance of at least two times the drip line radius of active nest trees, as measured from the nest.	Pre-construction, Construction	DWR	DFW
BIO-3: Conduct Special Status Surveys.	DWR will consult with DFW prior to project construction to determine the extent for pre-construction sensitive species survey on the proposed project sites. For those sites determined for specific surveys, a qualified biologist shall conduct the sensitive species survey on the sites and within buffer areas of the sites. Special status bird species that could potentially nest in trees in or near the project area include Swainson's hawk, tricolored blackbird, white-tailed kite, double-crested cormorant, California black rail, saltmarsh common yellowthroat, song sparrow, Cooper's hawk, ferruginous hawk, merlin, yellow-headed blackbird, and western yellow-billed cuckoo. Potential habitat for special status reptiles/amphibians including the giant garter snake (GGS) and the western pond turtle exists at all three sites necessitating the need to conduct pre-construction surveys at all	Pre-construction	DWR	DFW

Table B-1. Mitigation Monitoring and Reporting Program: Delta Flood Emergency Facilities Improvement Project

Mitigation Measure(s)	Mitigation Description	Timing, Milestone	Responsible Entity	Monitoring and Enforcement Responsibility
	three sites. In addition, the western red bat could potentially roost in trees in or near the Rio Vista site and the Brannan Island site. The surveys shall be conducted no more than two weeks prior to the start of operations and depending on the expected duration of the activities a follow-up survey may also be required. All observed sensitive species shall be reported to the DFW. The proposed project will be adjusted to avoid impacting these species, or to relocate the individuals under the guidance of the DFW. Preconstruction surveys will also include botanical survey to identify the presence of elderberry shrubs and Antioch dunes evening primrose.			
BIO-4: Conduct Pre-Construction Riparian Habitat Surveys at All Three of the Project Sites Prior to Development.	Prior to any land clearing operations, riparian habitat surveys shall be conducted by a qualified biologist. ~~to confirm that construction activities will not impact riparian habitat.~~ The survey shall entail walking throughout the entire site, including a 100-foot buffer, to identify ~~adjacent suitable~~ riparian habitat that could be affected by construction activities, particularly along the top of waterside banks or slopes. ~~or low-lying areas~~. Riparian habitat shall be avoided, if feasible. If it is determined that construction would result in the removal of ~~The~~ riparian habitat, surveys shall be submitted to DFW, along with ~~each of~~ the site development plan.~~s to confirm that isolated project activities, inclusive of piling installations, utility installations and road/ramp improvements near or adjacent to riparian habitat or other sensitive natural communities will not result in a significant impact to riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service.~~ DWR will mitigate for impacts through restoration of riparian habitat on the Brennan Island, or ~~similar of~~ other state-owned property based on a replacement ratio of 1:1.	Pre-construction	DWR	DFW
BIO-5: Conduct Pre-Design Wetlands and Riparian Habitat Surveys for each of the Sites and Install and Maintain Exclusionary Fencing at the Sites to Ensure Full Avoidance of Seasonal and	a) DWR shall retain a qualified biologist to conduct a wetland delineation of the project sites. This delineation shall be submitted to the Corps, and verification received prior to any ground disturbing activities beyond the existing on-site roadways. b) DWR, will preserve, and not disturb the existing wetlands, and	Predesign, Preconstruction	DWR	DFW

Table B-1. Mitigation Monitoring and Reporting Program: Delta Flood Emergency Facilities Improvement Project

Mitigation Measure(s)	Mitigation Description	Timing, Milestone	Responsible Entity	Monitoring and Enforcement Responsibility
Permanent Wetlands and Jurisdictional Riparian Habitat.	wherever possible, establish 25-foot minimum buffers around all sides of these features. In addition, the final project design shall not cause significant changes to the pre-project hydrology, water quality or water quantity in any wetland that is to be retained on site~~. This shall be accomplished by avoiding or repairing any disturbance to the hydrologic conditions supporting these wetlands, as verified through wetland protection plans.~~ c) DWR, prior to construction activities, shall install ~~conduct an updated wetland delineation for its potential disturbance area, install orange exclusion fencing on T-posts (or equivalent), with~~ silt fence or exclusion fencing around wetlands to be retained on-site where wetlands are adjacent to construction activities. ~~material installed along the bottom, and w~~Wherever possible, a 25-foot buffer adjacent to seasonal and permanent wetlands shall be established.~~identified within and adjacent to the proposed site work.~~ The fencing shall be maintained for the duration of the site work. ~~, and the DWR Operations and Maintenance Manual for the Rio Vista site shall include the pre-construction delineation of jurisdictional wetlands and riparian habitat and note that all future traffic within the project site is limited to improved surface areas and stockpile areas, and all other areas are deemed off-limits to vehicular and construction equipment.~~ a) DWR shall retain a qualified biologist to conduct a wetland delineation of the project sites. This delineation shall be submitted to the Corps, and verification received prior to any ground disturbing activities beyond the existing on-site roadways. b) DWR, will preserve, and not disturb the existing wetlands, and wherever possible, establish 25-foot minimum buffers around all sides of these features. In addition, the final project design shall not cause significant changes to the pre-project hydrology, water quality or water quantity in any wetland that is to be retained on site. This shall be accomplished by avoiding or repairing any disturbance to the hydrologic conditions supporting these wetlands, as verified through wetland protection plans. c) DWR, prior to construction activities, shall conduct an updated wetland delineation for its potential disturbance area, install			

Table B-1. Mitigation Monitoring and Reporting Program: Delta Flood Emergency Facilities Improvement Project

Mitigation Measure(s)	Mitigation Description	Timing, Milestone	Responsible Entity	Monitoring and Enforcement Responsibility
	orange exclusion fencing on T-posts (or equivalent), with silt fence material installed along the bottom, and wherever possible a 25-foot buffer adjacent to seasonal and permanent wetlands identified within and adjacent to the proposed site work. The fencing shall be maintained for the duration of the site work, and the DWR Operations and Maintenance Manual for the Rio Vista site shall include the pre-construction delineation of jurisdictional wetlands and riparian habitat and note that all future traffic within the project site is limited to improved surface areas and stockpile areas, and all other areas are deemed off-limits to vehicular and construction equipment.			
BIO-6: Secure Section 1600 Lake or Streambed Alteration (LSA) Agreement from DFW.	Prior to any ground-disturbing site improvements, DWR shall consult with DFW and secure any applicable Section 1600 Lake or Streambed Alteration (LSA) agreement(s) for any permanent site improvements waterward of the top of bank at Threemile Slough for the BISRA site or at the Stockton Deep Water Ship Channel or Mormon Slough at the Stockton West Weber Avenue site.	Predesign, Preconstruction,	DWR	DFW
BIO-7: Avoid and Minimize Underwater Sound Pressure due to Pile Driving	Underwater sound monitoring shall be performed during pile-driving activities. A qualified biologist/natural resource specialist shall be present during such work to monitor construction activities and compliance with terms and conditions of permits. Underwater sound reduction measures shall be employed, as needed, to ensure that levels do not exceed the threshold levels established by USFWS and NMFS (for fish greater than 2 grams): • Peak Pressure – 206 decibels • Accumulated Sound Exposure Level (SEL) – 187 decibels These underwater sound reduction measures shall include use of an impact hammer cushion block. Additionally, hammers shall be used only during daylight hours and initially shall be used at low energy levels and reduced impact frequency. Applied energy and frequency shall be gradually increased until necessary full force and frequency are achieved. If necessary, one or more of the following shall be implemented to further reduce sound:	Pre-construction	DWR	DFW

Table B-1. Mitigation Monitoring and Reporting Program: Delta Flood Emergency Facilities Improvement Project

Mitigation Measure(s)	Mitigation Description	Timing, Milestone	Responsible Entity	Monitoring and Enforcement Responsibility
	• Pipe caissons shall be used to isolate the piles from waters to buffer underwater sound pressure levels if underwater sound monitoring indicates that underwater sound levels exceed threshold levels. The caissons shall be driven below the mud line using vibratory or hydraulic methods and the interior area dewatered before pipe piles are installed using impact methods. • The use of a bubble curtain surrounding the pile to be driven.			
BIO-8: Ensure No Net Loss of Functions and Values of Wetlands, other Waters of the United States, and Waters of the State at the Stockton West Weber and Rio Vista sites.	Before the start of any ground-disturbing activity associated with the construction of any project feature that would affect waters of the United States, including wetlands, or waters of the State, DWR will obtain all necessary permits under Sections 404 and 401 of the Clean Water Act or the State's Porter-Cologne Act for the proposed project and project refinements at the Stockton West Weber and Rio Vista sites, and Section 10 authorization under Rivers and Harbors Act for work within the Stockton Deep Water Ship Channel at the Stockton West Weber site. All permits, regulatory approvals, and permit conditions for impacts on wetland habitats shall be secured before implementation of any construction activities within waters of the United States or wetland habitats, including waters of the State. DWR will commit to replace, restore, or enhance on a "no net loss" basis, in accordance with U.S. Army Corps of Engineers (USACE) and the Central Valley Regional Water Quality Control Board (RWQCB), the acreage of all wetlands and other waters of the United States that would be removed, lost, and/or degraded with implementation of project plans. Wetland habitat shall be restored, enhanced, and/or replaced at an acreage and location and by methods agreeable to USACE and the Central Valley RWQCB, as determined during the Section 404 and Section 401 permitting processes. Final mitigation ratios will be determined during the permitting process.	Pre-construction	DWR	DFW
CUL-1: Pre-construction Field Survey.	Prior to ground disturbing activities, a field survey will be conducted by a qualified archeologist to identify any prehistoric or historic cultural resources within the project site areas. The survey	Preconstruction	DWR	DWR

Table B-1. Mitigation Monitoring and Reporting Program: Delta Flood Emergency Facilities Improvement Project

Mitigation Measure(s)	Mitigation Description	Timing, Milestone	Responsible Entity	Monitoring and Enforcement Responsibility
	may reveal a lack of resources. No further identification effort will need to be made. If resources are found in one of the selected sites during the survey, it will be necessary to determine whether the resource is an important resource. This determination will be made by a qualified archeologist based upon surface evidence, if possible. If surface evidence is not conclusive, additional studies, including archival research or subsurface testing, will be conducted. If the additional studies are undertaken and a resource is found to be important under the criteria of the California Register of Historical Resources (CRHR), avoidance will be the preferred method of mitigation. The use of the site with the significant resource might need to be limited to a smaller portion of the site, with protective measures designed for the resource, such as fencing or monitoring site use. The determination of appropriate mitigation will be made by DWR.			
CUL-2: Worker Cultural Resource Awareness.	Construction personnel will be informed of the potential for encountering significant archaeological resources and instructed in the identification of artifacts, bone, and other potential resources. All construction personnel will be informed of the need to stop work on the project site if cultural resources are found, and until a qualified archaeologist has been provided the opportunity to assess the significance of the find and implement appropriate measures to protect or scientifically remove the find. Construction personnel will also be informed of the requirement that unauthorized collection of cultural resources is prohibited.	Preconstruction, Construction	DWR	DWR
CUL-3: Immediately Halt Construction if any Cultural Resources are Discovered.	DWR shall implement the following mitigation measure to reduce the potential impacts to buried historic cultural resources to a less-than-significant level. If cultural materials (e.g., unusual amounts of shell, animal bone, glass, ceramics, etc.) are discovered during project-related construction activities, ground disturbances in the area of the find shall be halted and a qualified professional archaeologist shall be notified regarding the discovery. The archaeologist, to be retained by DWR, shall determine whether the resource is potentially significant per the CRHR and develop appropriate mitigation. Mitigation may include, but not be limited to, in-field documentation, archival research, archaeological	Construction	DWR	DWR

Table B-1. Mitigation Monitoring and Reporting Program: Delta Flood Emergency Facilities Improvement Project

Mitigation Measure(s)	Mitigation Description	Timing, Milestone	Responsible Entity	Monitoring and Enforcement Responsibility
	testing, data recovery excavations, or recordation, and shall be implemented before resuming construction in the immediate vicinity.			
CUL-4: Immediately Halt Construction if any Human Remains are Discovered.	DWR shall implement the following mitigation measure to reduce the potential impacts to human remains to a less-than-significant level. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, the contractor and/or DWR shall immediately halt potentially damaging excavation in the area of the burial and notify the County Coroner and a professional archaeologist to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). Following the coroner's findings, DWR, an archaeologist, and the NAHC designated Most Likely Descendent (MLD) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code Section (PRC) 5097.9.	Construction	DWR	DWR
CUL-5: Determination of Significance of Cultural Resources.	If previously unknown cultural resources are discovered during project construction, all work in the area of the find should cease and a qualified archaeologist should be retained by DWR or consultant to assess the significance of the find, make recommendations on its disposition, and prepare appropriate field documentation, including verification of the completion of required mitigation. If archaeological or paleontological resources are discovered during earth moving activities, all construction activities within 50 feet of the find should cease until the archaeologist evaluates the significance of the resource. In the	Construction	DWR	DWR

Table B-1. Mitigation Monitoring and Reporting Program: Delta Flood Emergency Facilities Improvement Project

Mitigation Measure(s)	Mitigation Description	Timing, Milestone	Responsible Entity	Monitoring and Enforcement Responsibility
	absence of a determination, all archaeological and paleontological resources should be considered significant. If the resource is determined to be significant, the archaeologist, as appropriate, should prepare a research design for recovery of the resources in consultation with the State Office of Historic Preservation that satisfies the requirements of Public Resources Code, Section 21083.2. The archaeologist should complete a report of the excavations and findings. Upon approval of the report, the project proponent should submit the report to the regional office of the California Historic Resources Information System.			
HYD-1: Institute Construction Best Management Practices (BMPs) for the Prevention of Erosion and Transport of Soil, Sand, and Silt Offsite During Runoff Events.	DWR shall implement construction Best Management Practices (BMPs) for all land clearing, land leveling, excavation, and fill operations associated with site preparations at the three sites. These measures will be incorporated into the construction plans and specifications. They include avoidance of existing wetlands, including placement of exclusion fencing, creating on site catchments for surface runoff, using coir logs to intercept drainage, and hydroseeding slopes, as appropriate. Before the start of any construction work, clearing, or site grading associated with preparation, or any stockpiling activities at the sites, measures to control soil erosion and waste discharges will be prepared in accordance with BMPs. DWR will require all contractors conducting work at the sites to implement BMPs to control soil erosion and waste discharges of other construction-related contaminants. The general contractor(s) and subcontractor(s) conducting the work will be responsible for constructing or implementing, regularly inspecting, and maintaining the BMPs in good working order. In addition, the contractors will be required to submit and adhere to the applicable Storm Water Pollution Prevention Plan (SWPPP) associated with site development, preparation, and improvements. Sufficient buffers from wetlands, riparian habitat, and/or other sensitive areas shall be maintained throughout the construction improvement period(s) of the project. The plans developed by DWR or its contractor(s) will identify the grading, erosion, and tracking control BMPs and specifications	Preconstruction, Construction	DWR, Contractor	County of Record

Table B-1. Mitigation Monitoring and Reporting Program: Delta Flood Emergency Facilities Improvement Project

Mitigation Measure(s)	Mitigation Description	Timing, Milestone	Responsible Entity	Monitoring and Enforcement Responsibility
	that are necessary to avoid and minimize water quality impacts to the extent practicable. Standard erosion control measures (e.g., management, structural, and vegetative controls) will be implemented for all construction activities that expose soil. Grading operations will be conducted to eliminate direct routes for conveying potentially contaminated runoff to drainage channels. Erosion control barriers such as silt fences and mulching material will be installed, and disturbed areas will be reseeded with native grasses or other plants where necessary. Tracking controls shall be required throughout the construction period, as needed, to reduce the tracking of sediment and debris from the construction site. At a minimum, entrances and exits shall be inspected daily, and controls implemented as needed.The following specific BMPs will be implemented, as described in the California BMP Handbook (www.cabmphandbook.com): • Conduct all work according to site-specific construction plans that identify areas for clearing and grading so that ground disturbance is minimized. • Avoid riparian vegetation, cover cleared areas with mulches, and install silt fences near riparian areas or streams to control erosion and trap sediment, and reseed cleared areas with native vegetation. Sufficient buffers (minimum 20 feet when possible) from wetlands and/or other sensitive areas shall be maintained throughout the life of the project. • Stabilize disturbed soils before the onset of the winter rainfall season. • Stabilize and protect stockpiles from exposure to erosion and flooding. • Stabilize all construction access by providing a point of entrance/exit to the construction sites that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles. • Grade each construction entrance/exit to prevent runoff from leaving the construction site, and ensure that all runoff from the stabilized entrances/exits are routed through a sediment-			

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	trapping device before discharge. • Ensure that entry/exit ways are able to support the heaviest vehicles and equipment that will use them. BMPs will also specify appropriate hazardous materials handling, storage, and spill response practices to reduce the possibility of adverse impacts from use or accidental spills or releases of contaminants. Specific measures applicable to the project include, but are not limited to, the following: • Develop and implement strict onsite handling rules to keep construction and maintenance materials out of drainages and waterways. • Conduct all refueling and servicing of equipment with absorbent material or drip pans underneath to contain spilled fuel. Collect any fluid drained from machinery during servicing in leak-proof containers and deliver to an appropriate disposal or recycling facility. • Maintain controlled construction staging, site entrance, concrete washout, and fueling areas at least 100 feet away from stream channels or wetlands to minimize accidental spills and runoff of contaminants in storm water. • Prevent raw cement; concrete or concrete washings; asphalt, paint, or other coating material; oil or other petroleum products; or any other substances that could be hazardous to aquatic life from contaminating the soil or entering watercourses. Maintain spill cleanup equipment in proper working condition. Clean up all spills immediately according to the spill prevention and response plan, and immediately notify DFW and the Regional Water Quality Control Board (RWQCB) of any spills and cleanup procedures.			

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Mitigation Measure(s)	Mitigation Description	Timing, Milestone	Responsible Entity	Monitoring and Enforcement Responsibility
HAZ-1: Develop and Implement Environmental Remediation Plans	DWR has entered into an interagency agreement with the State Department of Toxic Substances Control (DTSC) and has conducted ~~to conduct~~ applicable supplemental site investigations (SSIs), and has developed Soil Management Plans (SMPs) and Health and Safety Plans (HASPs) approved by DTSC for the Stockton West Weber site parcels. The noted SMPs and HASPs must be implemented ~~shall develop environmental remediation plans that will be incorporated into the site plans and improvements proposed for the Stockton West Weber Avenue parcel(s)~~ prior to and during any ground-disturbing activities that may pose a toxic substance hazardous risk during construction of site improvements and subsequent ground-disturbing operations ~~facility operations~~ that will remain ~~be~~ consistent with current commercial and industrial zoning land uses.	Preconstruction	DWR	DTSC
NOI-1: Implement Measures to Control Construction Equipment Noise Levels	The contractor and/or DWR shall properly maintain construction equipment and equip it with noise control devices, such as exhaust mufflers or engine shrouds, in accordance with manufacturers' specifications. For non-emergency activities such as site construction and stockpiling quarry rock, operations will be limited to the periods 7:00 AM to 7:00 PM, Mondays through Saturdays.	Construction	Contractor	DWR
REC-1: Implement Measures to Minimize Impacts on Recreation within Brannan Island State Recreation Area (BISRA)	DWR shall inter into a Memorandum of Understanding with the State Department of Parks and Recreation (DPR) to design project elements in coordination with DPR to minimize impacts on recreational quality and visual resources within the BISRA, and to improve facilities that could jointly benefit recreational services and emergency response capabilities. These include potential features such as developing architectural treatments to blend new structures (multi-use and warehouse facilities) within the park setting, screening the placement and storage of quarry rock stockpiles with vegetation, earthen berms, and/or placing a layer of sand over the quarry rock stockpile, planting native plants to help screen project features, improving service facilities such as restrooms and roads, and collectively implement a 2,500-5,000 sf. joint use facility within the BISRA that could serve as Multi-Agency Center (MAC).	Preconstruction	DWR	DPR

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Mitigation Measure(s)	Mitigation Description	Timing, Milestone	Responsible Entity	Monitoring and Enforcement Responsibility
TRANS-1: DWR, in Consultation with Caltrans Regional Offices, will Prepare a Traffic Management Plan (TMP) to Guide Activities during Construction Phase and Restocking Phase of the Proposed Project.	This plan will be prepared and support procurement of necessary Caltrans permits for the transport of heavy construction equipment and/or materials to/from the projects site, or any movement of oversized or excessive lad vehicles on the State Highway System. At a minimum this plan shall define how to minimize the amount of time spent on construction transportation activities; how to minimize disruption of vehicle and alternative modes of traffic at all times, but particularly during periods of high traffic volumes; adequate signage and other controls, including flag persons, to ensure that traffic can flow adequately during construction; the identification of alternative routes that can meet the traffic flow requirements of a specific area, including communication (signs, webpages, etc.) with drivers and neighborhoods where construction activities will occur; and at the end of each construction day roadways shall be prepared for continued utilization without any significant roadway hazards remaining.	Preconstruction	DWR	Caltrans

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