

ATTACHMENT A

CERTIFICATION OF THE FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR THE LOWER SAN JOAQUIN RIVER REACH TS_30_L LEVEE IMPROVEMENT PROJECT (TS_30_L)

AND

SJAFCA'S FINDINGS OF FACT AND STATEMENT OF OVERRIDING CONSIDERATIONS FOR THE APPROVAL OF TS_30_L

I. INTRODUCTION

The City of Stockton and surrounding areas rely upon the Lower San Joaquin River (LSJR) levee system to prevent flooding during high-water events. The 2018 San Joaquin River Basin, Lower San Joaquin River Integrated Interim Feasibility Report/Environmental Impact Statement/Environmental Impact Report (2018 LSJR FR/EIS/EIR) was prepared by SJAFCA, Central Valley Flood Protection Board (CVFPB), and U.S. Army Corps of Engineers (USACE) and was certified by the SJAFCA Board of Directors on November 8, 2018. The 2018 LSJR FR/EIS/EIR considered in detail seven alternative plans aimed at reducing flood risk in the City of Stockton and surrounding urbanizing areas by describing the environmental resources in the original study area; evaluating the direct, indirect, and cumulative environmental effects of the seven alternative plans; and identifying avoidance, minimization, and compensatory mitigation measures. The 2018 LSJR FR/EIS/EIR identified Alternative 7a as the recommended alternative.

Alternative 7a proposed to improve flood risk management in the Stockton area by repairing and enhancing the levees that surround Stockton (mitigating flood risk from the Delta Front, the Calaveras River, and the San Joaquin River), and by constructing and operating closure structures on Fourteenmile Slough and Smith Canal. Alternative 7a was divided into five major levee reaches for construction sequencing:

- Calaveras River (Right Bank)
- Calaveras River (Left Bank) and San Joaquin River (Right Bank, North Port)
- Delta Front and Fourteenmile Slough Control Structure
- North Stockton
- Smith Canal Control Structure

The Delta Front represents the greatest risk; therefore, USACE, SJAFCA, and CVFPB determined that the Delta Front levee improvements would be constructed first. Six sub-reaches were identified within the Delta Front reach, with one of the sub-reaches being the LSJR Reach TS_30_L Levee Improvement Project (TS_30_L or Modified Project).

SJAFCA, as lead agency under the California Environmental Quality Act (Pub. Res. Act § 21000 et seq.) and the CEQA Guidelines (14 Cal. Code Regs. §§ 15000- 15387)

(collectively, “CEQA”), has completed the Final Supplemental Environmental Impact Report (Final SEIR) for TS_30_L, in coordination with the USACE’s preparation of a Supplemental Environmental Assessment as the federal lead agency under the National Environmental Protection Act (NEPA). The following contents of this document incorporate SJAFCA’s “Findings of Fact and Statement of Overriding Considerations for the Approval of the LSJRFS,” (2018 LSJR FR/EIS/EIR Findings, Exhibit A) which were certified at the same time as the 2018 LSJR FR/EIS/EIR, on November 8, 2018. This document pertains to SJAFCA’s lead agency responsibilities and requirements pursuant to CEQA only and is organized into the following sections:

- Section I, “Introduction,” provides an introduction to the Document.
- Section II, “Project Description,” provides background on Alternative 7a and TS_30_L, the project purpose and objectives, a summary of alternatives considered in the 2018 LSJR FR/EIS/EIR and Draft SEIR, and an overview of the Record of Proceedings.
- Section III, “Certification of the Final SEIR,” sets forth SJAFCA’s findings in support of certification of the Final SEIR.
- Section IV sets forth the Findings required under CEQA, as follows:
 - Part IV.A: Findings regarding the environmental review process and the contents of the Final SEIR.
 - Part IV.B: Findings regarding the environmental impacts of TS_30_L and the mitigation measures for those impacts identified in the Final SEIR and adopted as conditions of approval. As described in Part IV.B, SJAFCA hereby adopts the impact findings as set forth in Exhibit B to these findings.
 - Part IV.C: Findings regarding alternatives discussed in the 2018 LSJR FR/EIS/EIR.
 - Part IV.D: Description of the Mitigation Monitoring or Reporting Program (MMRP) for TS_30_L.
 - Part IV.E: Summary of the findings and determinations regarding the TS_30_L.
- Section V, “Statement of Overriding Considerations,” sets forth the substantial benefits of TS_30_L that outweigh and override the TS_30_L’s significant and unavoidable impacts, such that the impacts are considered acceptable.

II. PROJECT INFORMATION

A. Background

The USACE initiated a Feasibility Study in 2009 at the request of SJAFCA, the NFS for the study, through the execution of a Feasibility Cost Sharing Agreement (FCSA). CVFPB also entered the study as a signatory of the FCSA in 2010. This Feasibility Study concluded with certification of the 2018 LSJR FR/EIS/EIR, which identified Alternative 7a as the recommended alternative.

The study area (including the cities of Stockton, Lathrop, Manteca and surrounding urbanizing areas) has a history of experiencing flood events, with major floods occurring in 1955, 1958, and 1997, resulting in varying degrees of damage. The 1955 event had the highest flows recorded on the Calaveras River at Bellota, and approximately 1,500

acres of Stockton were inundated to depths of 6 feet for as long as 8 days. The 1958 event inundated approximately 8,500 acres between Bellota and the Diverting Canal, with flood waters up to 2 feet deep and inundation durations from 2 to 10 days. The 1955 and 1958 floods occurred prior to completion of New Hogan Dam and Reservoir and improvements to the Calaveras River and Stockton Diverting Canal. The 1997 event resulted in the evacuation of the Weston Ranch area of Stockton at the north end of Reclamation District (RD) 17 (RD 17). While the 1997 event did not directly damage areas of Stockton, Lathrop or Manteca, there were approximately 1,842 residences and businesses affected in San Joaquin County. There were also significant flood-fighting efforts conducted during the 1997 event in RDs 404 and 17. Between the 2 RDs, flood-fights were required at 37 sites. Of interest to this study were breaches upstream of RD 17 along the San Joaquin and Stanislaus Rivers, resulting in the non-Federal tieback levee being highly stressed, but preventing flooding of urban areas in RD 17 and potentially central Stockton. Estimated damages in San Joaquin County for the 1997 event were approximately \$80 million.

The study area is challenged by the presence of three sources of flooding: the Delta Front, Calaveras River, and San Joaquin River. This results in commingled floodplains for the North and Central Stockton areas. The distributary nature of the Delta also affects Delta water levels, because high flows from the Sacramento River may “fill” the Delta prior to a peak inflow on the San Joaquin River, as occurred in 1997, raising water levels on the Delta front levees.

B. Project Description

The 2018 LSJR FR/EIS/EIR evaluated the environmental impacts of seven alternative plans aimed at reducing flood risk in the Stockton area and ultimately identified Alternative 7a as the recommended alternative, which would repair and enhance the levees that surround Stockton (mitigating flood risk from the Delta Front, the Calaveras River, and the San Joaquin River). Alternative 7a was divided into sub-reaches, with one of the sub-reaches being the TS_30_L evaluated in the Final SEIR.

The 2018 LSJR FR/EIS/EIR evaluated the components of Alternative 7a (referred to as structural measures) and construction methods. Alternative 7a includes a suite of structural levee improvement measures, and those relevant to TS_30_L (i.e., cutoff wall construction, levee reshaping, and erosion protection installation) are described in Chapter 2 of the Draft SEIR, *Project Description*, Section 2.3.3, *Alternative 7a Structural Measures and Construction Methods*.

TS_30_L includes approximately 1 mile of cutoff wall construction, levee reshaping, and runoff erosion protection of the TS_30_L levee, as well as development of a borrow site, barge off-haul site, two co-located staging and stockpile areas, and haul routes. As described in the 2018 LSJR FR/EIS/EIR, initial site preparation would require clearing and grubbing of vegetation and stripping of topsoil along the TS_30_L Levee. The levee would be degraded to provide a sufficient working surface, and then the 5,850-linear-foot soil bentonite slurry cutoff wall would be constructed using an open slurry trench with a

maximum depth of 42 feet below sea level. Also as described in the 2018 LSJR FR/EIS/EIR, levee reshaping would take place over the cutoff wall installation areas to provide the minimum slope and required height and crest width to meet USACE levee design criteria. In order to attain the required slopes and levee configuration, the levee centerline must be shifted approximately 20 feet toward the waterside (due to the presence of homes directly adjacent to the TS_30_L site on the landside). The 2018 LSJR FR/EIS/EIR described levee reshaping activities as occurring mainly on the landside of levees (e.g., topsoil stripping, fill placement), but the local context for the TS_30_L reach requires these activities to occur on the waterside. However, as TS_30_L is a dry land levee, these changes to the levee configuration would not change the construction footprint, intensity or methods of construction, or equipment as analyzed in the 2018 LSJR FR/EIS/EIR. Finally, similar to what is described in the 2018 LSJR FR/EIS/EIR, rock riprap would be placed to a thickness of 2 feet and crushed rock would be placed to a thickness of 3 inches along the waterside and landside of the levee, respectively, to act as erosion control.

The 2018 LSJR FR/EIS/EIR stated that if Alternative 7a were to be authorized and funded, detailed evaluation of staging areas and borrow requirements, and identification and detailed technical evaluation of potential materials sources, would be completed during preconstruction engineering and design. Two staging and stockpile areas for the TS_30_L Project are to be co-located adjacent to the northern and southern portions of the site. Haul routes to and from the staging/stockpile areas for the levee degrade and cutoff wall construction would use West March Lane as an access point to the TS_30_L levee road (Brookside Road) and the parallel agricultural road on the west side of the waterside levee toe.

There are three potential borrow sites under consideration for TS_30_L, based on proximity and availability of appropriate materials. One is at the SEWD property located approximately 9 miles east of TS_30_L. The haul route from the SEWD property would follow a private road on the west side of the SEWD property to either State Route (SR) 26 or East Main Street in order to cross the Stockton Diverting Canal, and then follows one of these roads to SR 99 until its interchange with SR 4. SR 4 leads to Interstate 5 (I-5), which would be followed north and west to West March Lane, which leads directly onto the south end of the TS_30_L Levee site.

Two commercial borrow sources are under consideration as well. One is Dutra Materials at Decker Island, located approximately 20 miles northwest of the Modified Project site. For this option, materials would be delivered via barge to a site just southwest of TS_30_L. The other commercial option is Brown Sand Incorporated, located approximately 20 miles south of TS_30_L in Lathrop.

TS_30_L requires mitigation for impacts to certain biological resources via the creation of habitat to compensate for habitat loss caused by the Modified Project, as discussed in Draft SEIR Chapter 3, Section 3.6, *Biological Resources*. The 2018 LSJR FR/EIS/EIR evaluated Alternative 7a based on the assumption that a combination of on-site mitigation and purchase of credits at local mitigation banks would fulfill this obligation.

However, the 2018 LSJR FR/EIS/EIR did not evaluate potential impacts associated with the development of biological mitigation sites at a project-level of detail, and mitigation bank credits for certain habitats impacted by TS_30_L are not currently available for purchase. Therefore, the Draft SEIR evaluates five potential biological mitigation sites to fulfill TS_30_L's compensatory mitigation requirements; three sites are evaluated at a project-level of detail (14-Mile Slough Pump Station, San Joaquin River (SJR) West Site, and SJR East Site), and two sites are evaluated at a program-level of detail (SJR South Site and Van Buskirk Park). If one of the program-level sites (or an alternative biological mitigation site not evaluated in this SEIR) is chosen for development, additional environmental review under CEQA at a project-level of detail would be required prior to construction.

Operation of TS_30_L would require levee and levee road maintenance and repair and post-seismic event inspection. These activities are consistent with existing operations of the TS_30_L Levee. Operation would also consist of monitoring and adaptively managing the chosen mitigation site until success criteria are met.

C. Project Purpose and Objectives

The purpose of the 2018 LSJR FS/EIS/EIR, of which Alternative 7a was the preferred alternative, was to investigate the extent of federal interest in a range of alternative plans to reduce flood risk in the cities of Stockton, Lathrop, and Manteca and in surrounding urbanizing areas. The objectives were to meet the requirements of California Senate Bill (SB) 5 of 2007, the Central Valley Flood Improvement Act, to achieve a 200-year level of protection for urban and urbanizing areas, focusing on a reduction of flood risk in the City of Stockton. The Modified Project's goals and objectives are the same as those described for Alternative 7a.

D. Summary of Alternatives in the Final SEIR

TS_30_L would entail constructing and operating levee improvements along the TS_30_L Levee similar to those described under Alternative 7a in the 2018 LSJR FR/EIS/EIR. Therefore, the alternatives evaluated and conclusions regarding the alternatives' ability to meet project objectives, the consistency of the alternatives with local, state, and federal plans and policies, and their impacts compared to Alternative 7a impacts, as described in the 2018 LSJR FR/EIS/EIR, are still applicable for TS_30_L.

Therefore, no additional analysis was warranted in the Draft SEIR, as the analysis of Alternatives 1, 7a, 7b, 8a, 8b, 9a, and 9b presented in the 2018 LSJR FR/EIS/EIR was adequate.

F. Record of Proceedings

Various documents and other materials constitute the record upon which SJAFCA bases these findings and approvals contained herein. The custodian of these documents and materials is SJAFCA. The documents and materials are available for review upon

request at 22 East Weber Avenue, Suite 301, Stockton, CA 95202, during normal business hours.

III. CERTIFICATION OF THE FINAL SEIR

The Final SEIR comprises a program-level and project-level analysis and contains environmental review evaluating the impacts of TS_30_L. The Final SEIR (State Clearinghouse No. 2010012027) was prepared in the manner specified in Section IV.A.1, and is incorporated here by reference. The Final SEIR includes:

- The Draft EIR, dated February 2015, which assesses the potential environmental effects of implementation of Alternative 7a and identifies means to eliminate or reduce potential adverse impacts, and evaluates a reasonable range of alternatives.
- The Final EIR, certified November 8, 2018, which contains comments on the Draft EIR submitted by interested public agencies, organizations, and members of the public; written responses to the environmental issues raised in those comments; revisions to the text of the Draft EIR reflecting changes made in response to comments and other information; Fish and Wildlife Coordination Act documents; the Biological Opinions of the U.S. Fish and Wildlife Service and the National Marine Fisheries Service; and, Section 106 Programmatic Agreement between the State Historic Preservation Officer and USACE, and state and local partners. The Draft EIR is considered part of the Final EIR and is incorporated into the Final EIR by reference.
- The Draft SEIR, dated May 2023, which assess the potential environmental effects of implementation of TS_30_L, a sub-reach of Alternative 7a, and identifies means to eliminate or reduce potential adverse impacts.

The SJAFCA Board of Directors hereby certifies as follows:

1. That it has been presented with the Final SEIR and that it has reviewed and considered the information contained in the Final SEIR prior to making the following certification and the findings in Section IV, below;
2. That, pursuant to CEQA Guidelines Section 15090 (Title 14 of the California Code of Regulations, Section 15090), the Final SEIR has been completed in compliance with CEQA and the State CEQA Guidelines; and
3. That the Final SEIR reflects the SJAFCA Board of Directors' independent judgment and analysis.

IV. CEQA FINDINGS

Having received, reviewed, and considered the Final SEIR and other information in the record of proceedings, the SJAFCA Board of Directors hereby adopts the following findings in compliance with CEQA and the CEQA Guidelines:

- Part IV.A: Findings regarding the environmental review process and the contents of the Final SEIR.
- Part IV.B: Findings regarding the environmental impacts of TS_30_L and the mitigation measures for those impacts identified in the Final SEIR and adopted as conditions of approval. As described in Part IV.B, SJAFCA hereby adopts the impact findings as set forth in Exhibit B to these findings.
- Part IV.C: Findings regarding alternatives discussed in the 2018 LSJR FR/EIS/EIR.
- Part IV.D: Description of the MMRP for TS_30_L.
- Part IV.E: Summary of the findings and determinations regarding the TS_30_L.

In addition, these findings incorporate by reference Section V of this document, which includes the Statement of Overriding Considerations and determines that the benefits of implementing TS_30_L outweigh the significant and unavoidable environmental impacts that will result, and therefore justifies approval of TS_30_L despite those impacts. The Final SEIR (including the 2018 LSJR FR/EIS/EIR and 2018 LSJR FR/EIS/EIR Findings of Fact and Statement of Overriding Considerations) is hereby incorporated in this document by reference. The SJAFCA Board of Directors certifies that these findings are based on full appraisal of all viewpoints, including all comments received up to the date of close of the hearing prior to approval of TS_30_L.

A. Environmental Review Process and Contents of the SEIR

1. Preparation of the SEIR:

- c. *Comment Period on Draft SEIR.* The Draft SEIR was made available to federal, state, and local agencies and interested organizations and individuals. Publication of the Draft SEIR marked the beginning of a 45-day public review period, which extended from May 31, 2023, through July 17, 2023, ending at 5 p.m. A Notice of Completion (NOC) was filed with the State Clearinghouse and a Notice of Availability was posted with the San Joaquin County Clerk on May 31, 2023, as well as publication in the Stockton Record on May 31, 2023.
- d. *Copies of the Draft SEIR.* Copies were made available for public review at the following locations:
- SJAFCA website – electronic copy available at <https://www.sjafca.org/maps/lower-san-joaquin-river-project>
 - SJAFCA offices – hard copy available at 22 E. Weber Avenue, Suite 301, Stockton, California 95202
 - Cesar Chavez Central Library, 605 N. El Dorado Street, Stockton, California 95202 – USB drive with electronic copy
- e. *Response to Comments:* After the close of the public review period, SJAFCA prepared responses to the written comments contained in the five comment letters that were received on the Draft SEIR. As required by CEQA Guidelines,

15088(b), responses to comments were sent to public agencies that submitted comments at least 10 days prior to SJAFCA's consideration. Those public agencies and other entities and individuals that commented on the Draft SEIR were notified by SJAFCA on September 18, 2023 of the availability of responses to comments and the publication of the Final SEIR.

- f. *Final SEIR*. The Final SEIR was completed and made available to public agencies and members of the public on September 29, 2023. The Final SEIR is comprised of the Draft SEIR plus all of the comments received during the public comment period, together with written responses to those comments that raised environmental issues, which were prepared in accordance with CEQA and the CEQA Guidelines. The Final SEIR also includes refinements to mitigation measures and clarifications to text in the Draft SEIR.
- g. The Final SEIR was made available electronically via posting on SJAFCA's website on September 29, 2023 at <https://www.sjafca.org/maps/lower-san-joaquin-river-project>.

The SJAFCA Board finds and determines there was procedural compliance with the mandates of CEQA and that the Final SEIR provides adequate, good faith, and reasoned responses to all comments raising significant environmental issues.

2. Absence of Significant New Information

CEQA Guidelines Section 15088.5 requires a lead agency to re-circulate an EIR for further review and comment when significant new information is added to the EIR after public notice is given of the availability of the Draft EIR, but before certification of the Final EIR. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect that the project proponent declines to implement. The CEQA Guidelines provide examples of significant new information under this standard.

SJAFCA recognizes that the Final SEIR incorporates information obtained since the Draft SEIR was completed, and contains additions, clarifications, modifications, and other changes. With respect to this information, SJAFCA approves of the incorporation of these clarifications into the Modified Project and finds that the clarifications do not cause the Modified Project to result in new or substantially more severe adverse environmental effects, or otherwise require recirculation of the SEIR. Various minor changes and edits have been made to the text of the Draft SEIR, as set forth in the Final SEIR.

SJAFCA finds that this additional information does not constitute significant new information requiring recirculation, and that the additional information merely clarifies or amplifies or makes insignificant modifications in an adequate EIR.

In addition to the changes and corrections described above, the Final SEIR provides additional information in response to comments and questions from agencies and the public.

SJAFCA finds that the information added in the Final SEIR does not constitute significant new information requiring recirculation, and that the additional information clarifies or amplifies an adequate EIR. Specifically, SJAFCA finds that the additional information, including the changes described above, does not show that:

- (1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
- (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
- (3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it.
- (4) The Draft SEIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

Based on the foregoing, and having reviewed the information contained in the Final SEIR and in the record of SJAFCA's proceedings, including the comments on the Draft SEIR and the responses thereto, and the above-described information, SJAFCA finds that no significant new information has been added to the Final SEIR since public notice was given of the availability of the Draft SEIR that would require recirculation of the Final SEIR.

3. Differences of Opinion Regarding the Impacts of the Modified Project

In making its decision to certify the Final SEIR and its determination to approve the Modified Project, SJAFCA recognizes that the Modified Project may involve several controversial environmental issues and that a range of technical and scientific opinion exists with respect to those issues. SJAFCA has acquired an understanding of the range of this technical and scientific opinion by its review of the Draft SEIR, the comments received on the Draft SEIR and the responses to those comments in the Final SEIR, and its own experience and expertise in assessing those issues. SJAFCA has reviewed and considered, as a whole, the evidence and analysis presented in the Draft SEIR, the information and analysis presented in the comments on the Draft SEIR, the evidence and analysis presented in the Final SEIR, the information submitted on the Final SEIR, and the reports prepared by the experts who prepared the SEIR (USACE technical experts, DWR technical experts, SJAFCA's consultants), and by staff, addressing those comments. SJAFCA has gained a comprehensive and well-rounded understanding of the environmental issues presented by the Modified Project. In turn, this understanding has enabled SJAFCA to make its decisions after weighing and considering the various viewpoints on these important issues.

Accordingly, SJAFCA certifies that its findings are based on a full appraisal of all of the evidence contained in the Final SEIR, as well as the evidence and other information contained in the record.

B. Impacts and Mitigation Measures

1. These findings provide the written analysis and conclusions of SJAFCA regarding the environmental impacts of the Modified Project and the mitigation measures identified in the Final SEIR. In making these findings, SJAFCA has considered the opinions of other agencies and members of the public.

SJAFCA finds that the analysis and determination of significance thresholds are judgments within the discretion of SJAFCA; the analysis and significance thresholds used in the Final SEIR are supported by substantial evidence in the record, including the expert opinion of the Final SEIR preparers and SJAFCA consultants and staff; and the significance thresholds used in the Final SEIR provide reasonable and appropriate means of assessing the significance of the adverse environmental effects of the Modified Project.

2. Exhibit B attached to these findings and incorporated herein by reference is the Mitigation Monitoring and Reporting Program, which reflects the Summary of Impacts and Mitigation Measures Table contained in the Draft SEIR Executive Summary Table ES-1 and summarizes the environmental determinations of the Final SEIR about the Modified Project's and alternatives' environmental impacts before and after mitigation. This exhibit does not attempt to describe the full analysis or details of each environmental impact and mitigation measures contained in the Final SEIR. Instead, Exhibit B provides a summary description of each environmental impact, a summary of the applicable mitigation measures described in the Final SEIR, and states the findings on the significance of each environmental impact after imposition of the applicable mitigation measures. A full explanation of these environmental findings and conclusions can be found in the resource sections contained in Chapter 3 of the Draft SEIR, as modified in the Final SEIR, and these findings hereby incorporate by reference the discussion and analysis in the Final SEIR supporting the Final SEIR's determinations regarding the Project's environmental impacts and mitigation measures designed to address those impacts.

SJAFCA approves the findings set forth in Exhibit B as its findings regarding the Project's environmental impacts before and after mitigation. In making these findings, SJAFCA ratifies, adopts, and incorporates the analysis and explanation in the Final SEIR, and ratifies, adopts, and incorporates in these findings the determinations and conclusions of the Final SEIR relating to environmental impacts and mitigation measures, and environmental commitments, except to the extent any such determinations and conclusions are specifically and expressly modified by these findings.

SJAFCA adopts, and incorporates as conditions of approval of the Modified Project, the mitigation measures set forth in the MMRP attached to these

findings as Exhibit B to reduce or avoid the potentially significant impacts of the Project, as well as certain less-than-significant impacts.

3. In the event a mitigation measure or environmental commitment recommended in the Final SEIR has inadvertently been omitted from Exhibit B, such mitigation measure is hereby adopted and incorporated in the findings below by reference. In addition, in the event the language describing a mitigation measure set forth in Exhibit B fails to accurately reflect the mitigation measures in the Final SEIR due to a clerical error, the language of the mitigation measure as set forth in the Final SEIR shall control, unless the language of the mitigation measure has been specifically and expressly modified by these findings.

C. SJAFCA's Findings Related to Alternatives

The 2018 LSJR FR/EIS/EIR evaluated a range of potential alternatives to Alternative 7a, as described in Section II.E of the 2018 LSJR RF/EIS/EIR Findings (Exhibit A) which is incorporated here by reference.

TS_30_L would entail constructing and operating levee improvements along the TS_30_L Levee similar to those described under Alternative 7a in the 2018 LSJR FR/EIS/EIR. Therefore, the alternatives evaluated and conclusions regarding the alternatives' ability to meet project objectives, the consistency of the alternatives with local, state, and federal plans and policies, and their impacts compared to the Modified Project impacts, as described in the 2018 LSJR FR/EIS/EIR, are still applicable for TS_30_L.

Sections IV.C, IV.D, IV.E, and IV.F of SJAFCA's 2018 LSJR FR/EIS/EIR Findings presented the Basis for SJAFCA's Decision to Approve the Modified Project and Reject Other Alternatives, SJAFCA's Findings Relating to Alternatives, Findings Regarding Project Alternatives Scoped-out of 2018 LSJR FR/EIS/EIR, and Findings Regarding Adequacy of Range of Alternatives, respectively.

Additional findings related to the analysis, consideration, rejection, dismissal, and/or adequacy of Alternatives 1, 7a, 7b, 8a, 8b, 9a, and 9b as presented in the 2018 LSJR FR/EIS/EIR and outlined in the 2018 LSJR FR/EIS/EIR Findings are not necessary, as the 2018 LSJR FR/EIS/EIR Findings are adequate and incorporated here by reference.

D. Mitigation Monitoring and Reporting Program

In accordance with CEQA and the CEQA Guidelines, SJAFCA must adopt a mitigation monitoring and reporting program to ensure that the mitigation measures adopted herein are implemented. **SJAFCA hereby adopts the MMRP for the Modified Project attached to these findings as Exhibit B.**

E. Summary

1. Based on the foregoing findings and the information contained in the administrative record of proceedings, SJAFCA has made one or more of the following findings with

respect to each of the significant environmental effects of the Modified Project identified in the Final SEIR:

- a. Changes or alterations have been required in, or incorporated into the Project, which avoid or substantially lessen most of the significant environmental effects on the environment.

2. Based on the foregoing findings and information contained in the record, it is hereby determined that:

- a. With respect to most significant effects on the environment due to approval of the Modified Project, mitigation measures have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the SEIR, and those measures are within the responsibility and jurisdiction of the USACE, and can and should be adopted by USACE. Resource areas where mitigation measures avoid or substantially lessen the significant environmental effects as identified in the SEIR are:
 - a. Air Quality and Greenhouse Gases
 - b. Hazards, Hazardous Materials and Public Safety
 - c. Water Quality
 - d. Groundwater
 - e. Utilities, Service Systems, and Public Services
 - f. Paleontological Resources
- b. Any remaining significant effects on the environment found unavoidable are acceptable due to the factors described in the Statement of Overriding Considerations in Section V, below. Resource areas where mitigation measures don't avoid or substantially lessen the significant environmental effects as identified in the SEIR are:
 - a. Aesthetics
 - b. Recreation
 - c. Agriculture and Forestry Resources
 - d. Biological Resources
 - e. Cultural Resources
 - f. Noise and Vibration
 - g. Transportation
 - h. Tribal Cultural Resources

V. STATEMENT OF OVERRIDING CONSIDERATION

A. Impacts That Remain Significant and Unavoidable After Incorporation of Mitigation

SJAFCA has found that some impacts related to construction remain significant following adoption and implementation of all feasible mitigation measures, as described in the 2018 FR/EIS/EIR and Final SEIR. Certain adverse impacts cannot be avoided with the application of mitigation measures. State CEQA Guidelines CCR Section 21100(b)(2)(A) provides that an EIR shall include a detailed statement setting forth "any significant effect on the environment that cannot be avoided if the project is implemented."

Chapter 3 of the Draft SEIR provides a detailed analysis of all potentially significant direct and indirect environmental impacts of the Modified Project, feasible mitigation measures that could reduce or avoid the project's significant impacts and whether these mitigation measures would reduce these impacts to less than significant levels. The Modified Project's significant cumulative impacts are discussed by resource throughout Chapter 3 of the Final SEIR. If a specific impact cannot be reduced to a less than significant level, it is considered a significant and unavoidable impact.

Feasibility Findings

The 2018 LSJR FR/EIS/EIR Findings (Exhibit A) which were certified at the same time as the 2018 LSJR FR/EIS/EIR on November 8, 2018, and provided the rationale why mitigation measures would not be feasible, separately and independently, to reduce impacts to less-than-significant levels for several resource areas. The 2018 LSJR FR/EIS/EIR Findings are still applicable to and incorporated by reference for the following resource area impacts under TS_30_L: vegetation, wildlife, fisheries, and special status species (biological resources), recreation, aesthetics, transportation, noise and vibration, and cultural resources. In addition, the Draft SEIR identified significant and unavoidable impacts for two other resource areas for the Modified Project: agricultural and forestry resources and tribal cultural resources. SJAFCA finds that mitigation measures would not be feasible, separately and independently, to reduce impacts to less-than-significant levels for the following reasons:

- a. Agricultural and Forestry Resources:** Development of biological mitigation sites at the SJR West Site, SJR East, and SJR South Site would result in Prime and Unique Farmland and Farmland of Statewide Importance being converted from Special Designated Farmland to wetland and riparian habitat, a non-agricultural use. The SJR West Site currently contains approximately 49 acres of Prime Farmland; the SJR East Site currently contains approximately 3.1 acres of Prime Farmland; and the SJR South Site currently contains approximately 159 acres of Prime Farmland, 0.1 acre of Unique Farmland, and 16.5 acres of Farmland of Statewide Importance.

TS_30_L would support flood control, which would provide significant additional protection to agricultural lands in the region; however, because it would convert Special Designated Farmland to non-agricultural use, this impact would be potentially significant.

There are certain mitigating circumstances related to TS_30_L that would lessen this impact. For instance, development of biological mitigation sites under TS_30_L would not impact the underlying soil quality or characteristics that are considered when designating Prime or Unique Farmland or Farmland of Statewide Importance. Accordingly, unlike a conversion to commercial or residential development, TS_30_L would not affect the site's potential quality as an agricultural site. In addition, development of the biological mitigation sites would not fragment surrounding agricultural lands or disrupt drainage or irrigation of surrounding agricultural lands. To the contrary, TS_30_L, including the creation of biological mitigation sites, would

improve the productivity, quality, and resiliency of surrounding farmland by facilitating drainage and flood control on a regional basis and by improving the ecological quality and biodiversity of surrounding habitats.

However, the prescribed mitigation measure (Mitigation Measure 3.5-1) improves the quality and productivity of land that is already in agricultural use and would not create new farmland; therefore, the mitigation measure does not fully offset the conversion of Special Designated Farmland to a nonagricultural use. Fully offsetting the conversion of agricultural land in San Joaquin County is not feasible. The supply of land in the region that is suitable for agricultural use but not currently being used for agriculture and commercially available is extremely limited. SJAFCA was not able to locate a property (or properties) to accomplish the required offset.

Therefore, despite the significant regional benefits associated with TS_30_L, the permanent conversion of Special Designated Farmland from its would be significant and unavoidable.

- b. Tribal Cultural Resources.** The USACE and SJAFCA have been consulting with a number of Tribes, including in accordance with the 2013 *Programmatic Agreement between the U.S. Army Corps of Engineers and the California State Historic Preservation Officer regarding the Lower San Joaquin River Feasibility Study Project, San Joaquin County, California* (PA) and Public Resources Code (PRC) Section 21080.3.1(b), on the TS_30_L since 2021; this consultation has included all five mitigation sites. Based on the background research and consultation with Tribes, no tribal cultural resources, as defined in PRC Section 21074, have been identified that could be impacted by TS_30_L. Therefore, it does not appear that TS_30_L would impact tribal cultural resources.

However, the program-level environmental mitigation sites (Van Buskirk Park and SJR South Site) are not fully developed, and construction details are not known, so there is the potential that construction activities could unearth, expose, or disturb subsurface archaeological resources that have not been previously recorded. If such archaeological resources were encountered and found to qualify as tribal cultural resources, pursuant to PRC Section 21074, any impacts of the program-level biological mitigation sites on the resources would be potentially significant. Such potentially significant impacts would be reduced with implementation of the PA, as required by the 2018 LSJR FR/EIS/EIR. However, the level of impact would still be potentially significant for program-level biological mitigation sites because the characteristics of any previously unidentified tribal cultural resources that may be present remains unknown.

Therefore, despite the significant regional benefits associated with TS_30_L, the potential impacts to Tribal cultural resources would be significant and unavoidable.

B. Overriding Considerations Justifying Project Approval

As described in the Findings of Fact and Statement of Overriding Considerations for the Approval of the LSJRFS,” (Exhibit A) and, in accordance with CEQA Guidelines Section 15093, SJAFCA has, in determining whether or not to approve the Modified Project, balanced the economic, social, technological, and other Project benefits against its unavoidable environmental risks, and finds that each of the benefits of Alternative 7a (of which the Modified Project one of the sub-reaches of Alternative 7a) set forth below outweigh the significant adverse environmental effects that are not mitigated to less-than-significant levels.

This statement of overriding considerations is based on SJAFCA’s review of the Final SEIR and other information in the administrative record. Each of the benefits identified below provides a separate and independent basis for overriding the significant environmental effects of the Modified Project. The benefits of the Alternative 7a (of which the Modified Project is a sub-reach) are as follows:

1. *Increase in the flood risk management safety levels will provide economic benefits.* Implementation of the Project will result in a benefit to cost ratio of 7.0 to 1.0 and provides a net flood risk management benefit of \$295,730,000 per year.
2. *Increase in the flood risk management safety levels will reduce risk to people and property.* The Project greatly reduces flood risk to people and property in the city of Stockton and surrounding areas. The Project provides benefits to 162,000 residents by improving Federal and local levees that provide flood risk management. The Project also offers the area an estimated 83 percent reduction in expected annual property damage, while enhancing security at 486 critical infrastructure sites – 23 of which are essential to life-safety.
3. *Project will provide mitigation and conservation land.* Mitigation includes all measures that would avoid, minimize, offset or compensate for potential environmental effects. When considered under the Federal Endangered Species Act, these measures may be referred to as conservation measures. Project mitigation assumes the levees will be determined to be suitable that will allow 25% of the trees and shrubs on the lower levee slope and within the waterside easement to remain.
4. *The Project will meet federal and State flood risk management criteria.* This plan would allow the local community to continue to meet both FEMA certification requirements and at least a portion of the State of California’s criteria for funding of FRM projects, allowing for potential reduction in National Flood Insurance Program costs to the community and leveraging State bond funds for project implementation.
5. *The Project includes environmental commitments.* The Project Environmental commitments are relatively standardized and compulsory best practices that represent sound and proven methods to avoid or reduce potential effects. Although environmental commitments fall within the NEPA definition of mitigation

through avoidance and minimization, these measures were discussed in Chapter 5 of the 2018 LJSR Final FR/EIS/EIR and Chapter 3 of the Final SEIR. The environmental commitments identified would be implemented to avoid or reduce short-term, construction-related effects.

Exhibit A

Findings of Fact and Statement of Overriding Considerations for the Approval of the LSJRFS

ATTACHMENT A

CERTIFICATION OF THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE SAN JOAQUIN AREA FLOOD CONTROL AGENCY (SJAFCA) LOWER SAN JOAQUIN RIVER FEASIBILITY STUDY (LSJRFS) AND SJAFCA'S FINDINGS OF FACT AND STATEMENT OF OVERRIDING CONSIDERATIONS FOR THE APPROVAL OF THE LSJRFS

I. INTRODUCTION

SJAFCA and the U.S. Army Corps of Engineers, Sacramento District (USACE) prepared the integrated Feasibility Report/Environmental Impact Statement/Environmental Impact Report (FR/EIS/EIR) for the LSJRFS to identify the Recommended Plan (RP). The Final FR/EIS/EIR: (1) describes the flood risk to the cities of Stockton, Lathrop, Manteca and surrounding unincorporated areas; (2) evaluates a range of alternatives to reduce flood risk, including potential environmental impacts; (3) describes measures to minimize or mitigate for potential environmental impacts; (4) identifies a RP for implementation; (5) describes coordination, consultation and public involvement; (6) describes compliance with Federal and State laws, Executive Orders and other requirements; and (7) provides SJAFCA with a Final EIR for certification and adoption of the LSJRFS (or Project) under CEQA.

SJAFCA, as lead agency under the California Environmental Quality Act (Pub. Res. Act § 21000 et seq.) and the CEQA Guidelines (14 Cal. Code Regs. §§ 15000- 15387) (collectively, "CEQA"), has completed the Final Environmental Impact Report ("Final EIR" or "EIR") for the LSJRFS in coordination with the USACE; the federal lead agency under the National Environmental Protection Act (NEPA). The following contents of this document pertain to SJAFCA's lead agency responsibilities and requirement pursuant to CEQA only, and this Document is organized into the following sections:

- Section I, "Introduction," provides an Introduction to the Document.
- Section II, "Project Description," provides background, a project purpose, a summary of the Project, a statement of the Project Objectives, a description of the alternatives considered in the EIR, and an overview of the Record of Proceedings for approval of the Project.
- Section III, "Certification of the Final EIR," sets forth SJAFCA's findings in support of certification of the Final EIR.
- Section IV sets forth the Findings required under CEQA, as follows:
 - Part IV.A: Findings regarding the environmental review process and the contents of the Final EIR.
 - Part IV.B: Findings regarding the environmental impacts of the Project and the mitigation measures for those impacts identified in the Final EIR and adopted as conditions of approval.
 - Parts IV.C and IV.D: Findings regarding alternatives discussed in the Final EIR and the reasons that such alternatives to the Project are not approved.

- Part IV.E: Findings Regarding Project Alternatives Scoped-Out of the EIR.
- Part IV.F: Findings Regarding Adequacy of Range of Alternatives.
- Part IV.G: Description of the Mitigation Monitoring and Reporting Program (“MMRP”) for the Project.
- Part IV.H: Summary of the findings and determinations regarding the Project.
- Section V, “Statement of Overriding Considerations,” sets forth the substantial benefits of the Project that outweigh and override the Project’s significant and unavoidable impacts, such that the impacts are considered acceptable.

II. PROJECT DESCRIPTION

The U.S. Army Corps of Engineers and its non-Federal sponsors, the San Joaquin Area Flood Control Agency (SJAFCA) and the State of California Central Valley Flood Protection Board (CVFPB), propose to improve flood risk management in North and Central Stockton by repairing and enhancing the levees that surround the city, and by constructing and operating closure structures on Fourteenmile Slough and Smith Canal.

A. Background

The USACE initiated a Feasibility Study in 2009 at the request of SJAFCA, the NFS for the study, through the execution of a Feasibility Cost Sharing Agreement (FCSA). CVFPB also entered the study as a signatory of the FCSA in 2010.

The study area (including the cities of Stockton, Lathrop, Manteca and surrounding urbanizing areas) has a history of experiencing flood events, with major floods occurring in 1955, 1958, and 1997, resulting in varying degrees of damage. The 1955 event had the highest flows recorded on the Calaveras River at Bellota, and approximately 1,500 acres of Stockton were inundated to depths of 6 feet for as long as 8 days. The 1958 event inundated approximately 8,500 acres between Bellota and the Diverting Canal, with flood waters up to 2 feet deep and inundation durations from 2 to 10 days. The 1955 and 1958 floods occurred prior to completion of New Hogan Dam and Reservoir and improvements to the Calaveras River and Stockton Diverting Canal. The 1997 event resulted in the evacuation of the Weston Ranch area of Stockton at the north end of Reclamation District (RD) 17 (RD 17). While the 1997 event did not directly damage areas of Stockton, Lathrop or Manteca, there were approximately 1,842 residences and businesses affected in San Joaquin County. There were also significant flood-fighting efforts conducted during the 1997 event in RDs 404 and 17. Between the 2 RDs, flood-fights were required at 37 sites. Of interest to this study were breaches upstream of RD 17 along the San Joaquin and Stanislaus Rivers, resulting in the non-Federal tieback levee being highly stressed, but preventing flooding of urban areas in RD 17 and potentially central Stockton. Estimated damages in San Joaquin County for the 1997 event were approximately \$80 million.

Analysis of the study area is challenged by the presence of three sources of flooding, the Delta Front, Calaveras River and San Joaquin River. This results in commingled

floodplains for the North and Central Stockton areas. The distributary nature of the Delta also affects Delta water levels, because high flows from the Sacramento River may “fill” the Delta prior to a peak inflow on the San Joaquin River as occurred in 1997, raising water levels on the Delta front levees.

B. Project Purpose

SJAFCA is responsible for meeting the requirements of California Senate Bill 5 (SB 5) of 2007, the Central Valley Flood Improvement Act, to achieve a 200-year level of protection for urban and urbanizing areas, and for demonstrating compliance under CEQA with State of California requirements for any proposed project resulting from this study. The study area experienced major floods in 1955, 1958, and 1997, resulting in varying degrees of damage and modeling of climate change for the Central Valley forecasts more frequent, short duration, high flow events that could potentially increase future flood risk. The existing levee system protects over 71,000 acres of mixed-use land, about 235,000 people and an estimated \$28.7 billion in damageable property.

C. Project Objectives

The Federal and non-Federal objectives for the study are discussed in Chapter 2, Sections 2.2.1 and 2.2.2, respectively in the Final EIR.

Federal Objectives

In the Flood Control Act of 1970, Congress identified four equal national objectives in water resources development planning. These objectives are: National Economic Development (NED), Regional Economic Development (RED), Environmental Equality (EQ) and Social Wellbeing and Other Social Effects (OSE). These four categories are known as the System of Accounts, whereby each proposed plan can be easily compared to the no action plan and other alternatives. The Federal objective identified in the Economic and Environmental Principles for Water and Related Land Resources Implementation Studies (Principles and Guidelines) of February 3, 1983 (42 U.S.C. 1962 a-2 and d-1), is: “The Federal objective of water and related land resources planning is to contribute to national economic development consistent with protecting the Nation’s environment, pursuant to national environmental statutes, applicable Executive Orders and other Federal planning requirements.”

Non-Federal Objectives

SJAFCA’s objective is to identify and evaluate flood risk management alternatives to determine an implementable plan, in cooperation with USACE, to reduce the flood risk to people, property and infrastructure. SB 5 requires SJAFCA to identify, develop, and construct a plan that will perform at a level sufficient to withstand flooding that has a 1-in-200 chance of occurring in any given year using criteria consistent with, or developed by, the Department of Water Resources (DWR).

Planning Objectives

The national objective to contribute to NED is a general statement and not specific enough for direct use in plan formulation. The water and related land resource problems and opportunities identified are refined and stated as specific planning objectives to provide focus for the formulation of alternatives. These planning objectives reflect the problems and opportunities and represent desired positive changes in the without project conditions. Each of the planning objectives applies to the study area for the 50-year period of analysis, except where stated otherwise. The planning objectives are as follows:

- Reduce risk to property and infrastructure due to flooding in Stockton, Lathrop and Manteca;
- Reduce flood risk to public health, safety and life in Stockton, Lathrop and Manteca;
- Minimize residual flood risks to the extent justified; and
- Incorporate environmentally sustainable design principles during development and analysis of flood risk management plan components

D. Summary of Recommended Project

Alternative 7a (North and Central Stockton, Delta Front, Lower Calaveras River, and San Joaquin River Levee Improvements excluding RD 17) if the Recommended Project and would implement levee improvements around North and Central Stockton and two closure structures; one on Fourteenmile Slough and one on Smith Canal. The alternative would combine the levee improvement measures of cutoff wall, deep soil mixing (seismic), and levee geometry improvements, and would address projected sea level change by including raising the levee height where needed. There would be an additional levee extension on Duck Creek to prevent flanking.

E. Summary of Alternatives in the Final EIR

The Final EIR evaluates the following alternatives to the Project, including the No Action (equivalent to No Project under CEQA) Alternative:

1. **Alternative 1 (No Action):** Under the No Action Alternative, USACE or SJAFCA would not conduct any additional work to address seepage, slope stability, overtopping, or erosion concerns in the Stockton metropolitan area and RD 17. As a result, if a flood event were to occur, the Cities of Stockton, Lathrop, and Manteca, and surrounding agricultural and open space lands, would remain at risk of a possible levee failure and flooding. In addition, the associated risk to human health and safety, property, and the adverse economic impact that serious flooding could cause would continue, and the risk of a catastrophic flood would remain high. Regular operations and maintenance of the levee system would continue as presently executed by the local maintaining entities.

- 2. Alternative 7a (North and Central Stockton, Delta Front, Lower Calaveras River, and San Joaquin River Levee Improvements excluding RD 17):** This alternative would implement levee improvements around North and Central Stockton and two closure structures; one on Fourteenmile Slough and one on Smith Canal. The alternative would combine the levee improvement measures of cutoff wall, deep soil mixing (seismic), and levee geometry improvements, and would address projected sea level change by including raising the levee height where needed. There would be an additional levee extension on Duck Creek to prevent flanking.
- 3. Alternative 7b (North and Central Stockton, Delta Front, Lower Calaveras River, and San Joaquin River Levee Improvements including RD 17):** This alternative would implement the same levee improvements and closure structures as Alternative 7a, but would also implement levee improvements and about 2.2 miles of new levees at the Old River flow split and a tie-back levee in RD 17. The new levees would include a cutoff wall to address potential seepage issues.
- 4. Alternative 8a (North and Central Stockton, Delta Front, Lower Calaveras River, San Joaquin River, and Stockton Diverting Canal Levee Improvements excluding RD 17):** This alternative would implement levee improvements and two closure structures in North and Central Stockton. The alternative would combine the levee improvement measures of cutoff wall, deep soil mixing (seismic), and levee geometry improvements, and would address projected sea level change by including raises in levee height where needed. There would be an additional levee extension on Duck Creek to prevent flanking.
- 5. Alternative 8b (North and Central Stockton, Delta Front, Lower Calaveras River, San Joaquin River, and Stockton Diverting Canal Levee Improvements including RD 17):** This alternative would implement levee improvements without including the Mormon Channel bypass. The alternative would combine the levee improvement measures of cutoff wall, deep soil mixing (seismic), seepage berm, and levee geometry improvements, and would address projected sea level change by including raising the levee height where needed. There would also be approximately 2.2 miles of new levee constructed to extend the RD 17 tieback levee and the secondary levee at the Old River flow split. The new levees would include a cutoff wall to address potential seepage issues.
- 6. Alternative 9a (North and Central Stockton, Delta Front, Lower Calaveras River, San Joaquin River Levee Improvements and Mormon Channel Bypass excluding RD 17):** This alternative would implement levee improvements, as well as channel improvements within the Mormon Channel Bypass to increase capacity, and create a diversion control structure on the Stockton Diverting Canal that would restore flood flows to the Mormon Channel. The alternative would combine the levee improvement measures of cutoff wall, deep soil mixing (seismic), and levee geometry improvements, and would

address projected sea level change by including raising the levee height where needed. There would be an additional levee extension on Duck Creek to prevent flanking. The diversion control structure at the Stockton Diverting Canal would consist of pipe culverts with gates that control releases to a maximum flow of approximately 1,200 cubic feet per second (cfs). Constructing the improvements to the Mormon Channel would require removal of much of the existing vegetation, yet the restoration of flood flows to the Mormon Channel would provide multiple benefits. These benefits could include establishment of native vegetation, improved wetlands, and opportunities for passive recreation.

- 7. Alternative 9b (North and Central Stockton, Delta Front, Lower Calaveras River, San Joaquin River Levee Improvements and Mormon Channel Bypass including RD 17):** This alternative would implement levee improvements along with restoration of the Mormon Channel, including a diversion control structure at the Stockton Diverting Canal. The alternative would combine the levee improvement measures of cutoff wall, deep soil mixing (seismic), seepage berm, and levee geometry improvements, and would address projected sea level change by including raising the levee height where needed. There would also be approximately 2.2 miles of new levee constructed to extend the RD17 tie-back levee and the secondary levee at the Old River flow split. The new levees would include a cutoff wall to address potential seepage issues. The diversion control structure at the Stockton Diverting Canal would consist of pipe culverts with gates that control releases to a maximum flow of approximately 1,200 cfs. The restoration of flood flows to the Mormon Channel would serve multiple public needs, including flood risk reduction, habitat restoration, and recreation.

F. Record of Proceedings

Various documents and other materials constitute the record upon which SJAFCA bases these findings and approvals contained herein. The custodian of these documents and materials is SJAFCA. The documents and materials are available for review upon request at 22 East Weber Avenue, Suite 301, Stockton, CA 95202, during normal business hours.

III. CERTIFICATION OF THE FINAL EIR

The Final EIR comprises a program-level and project-level analysis and contains the environmental review evaluating the impacts of the Project. The Final EIR (State Clearinghouse No. 2010012027) was prepared in the manner specified in Section IV.A.1, and is incorporated here by reference. The Final EIR includes:

- A.** The Draft EIR, dated February, 2015, assesses the potential environmental effects of implementation of the Project, identifies means to eliminate or reduce potential adverse impacts, and evaluates a reasonable range of alternatives. The Draft EIR includes one volume and 7 appendices referred to in the Draft EIR text

The Final EIR contains comments on the Draft EIR submitted by interested public agencies, organizations, and members of the public; written responses to the environmental issues raised in those comments; revisions to the text of the Draft EIR reflecting changes made in response to comments and other information; Fish and Wildlife Coordination Act documents; the Biological Opinions of the U.S. Fish and Wildlife Service and the National Marine Fisheries Service; and, Section 106 Programmatic Agreement between the State Historic Preservation Officer and USACE, and state and local partners. The Draft EIR is considered part of the Final EIR and is incorporated into the Final EIR by reference. Therefore, the Final EIR consists of the Draft EIR as well as one additional volume and 8 appendices.

B. The SJAFCA Board of Directors hereby certifies as follows:

1. That it has been presented with the Final EIR and that it has reviewed and considered the information contained in the Final EIR prior to making the following certification and the findings in Section IV, below;
2. That, pursuant to CEQA Guidelines Section 15090 (Title 14 of the California Code of Regulations, Section 15090), the Final EIR has been completed in compliance with CEQA and the State CEQA Guidelines; and
3. That the Final EIR reflects the SJAFCA Board of Directors' independent judgment and analysis.

IV. CEQA FINDINGS

Having received, reviewed, and considered the Final EIR and other information in the record of proceedings, the SJAFCA Board of Directors hereby adopts the following findings in compliance with CEQA and the CEQA Guidelines:

- Part IV.A: Findings regarding the environmental review process and the contents of the Final EIR.
- Part IV.B: Findings regarding the environmental impacts of the Project and the mitigation measures for those impacts identified in the Final EIR and adopted as conditions of approval. As described in Part III.B, SJAFCA hereby adopts the impact findings as set forth in Exhibit A to these findings.
- Parts IV.C&D: Findings regarding alternatives discussed in the Final EIR and the reasons that such alternatives to the Project are not approved.
- Part IV.E: Findings Regarding Project Alternatives Scoped-Out of the EIR.
- Part IV.F: Findings Regarding Adequacy of Range of Alternatives.
- Part IV.G: Description of the MMRP for the Project.
- Part IV.H: Summary of the findings and determinations regarding the Project.

In addition, these findings incorporate by reference Section V of this document, which includes the Statement of Overriding Considerations and determines that the benefits of

implementing the Project outweigh the significant and unavoidable environmental impacts that will result, and therefore justifies approval of the Project despite those impacts. The Final EIR is hereby incorporated in this document by reference. The SJAFCA Board of Directors certifies that these findings are based on full appraisal of all viewpoints, including all comments received up to the date of close of the hearing prior to approval of the Project.

A. Environmental Review Process and Contents of the EIR

1. Preparation of the EIR:

- a. *Notice of Preparation.* In coordination with USACE, the NEPA lead agency, SJAFCA as the CEQA lead agency filed a Notice of Preparation (“NOP”) with the SCH that was made available to the public and public agencies to solicit input on issues of concern that should be addressed in the EIR. The NOP was issued on January 15, 2010 for a 30-day comment period that closed on February 16, 2010. The NOP included a project description, project location, and a brief overview of the topics to be covered in the Draft EIR. Comment letters were received from public agencies and were incorporated in an appendix to the Draft EIR.
- b. *Public Scoping Meeting.* On January 27, 2010, the USACE and SJAFCA held a public scoping meeting to which the responsible and trustee agencies and interested members of the public were invited, and which had been duly advertised in advance. Scoping comments were received and documented in Appendix A of the Draft EIR.
- c. *Comment Period on Draft EIR.* The USACE and SJAFCA finished preparation of the Draft EIR and published a Notice of Completion (“NOC”) with the SCH OPR, and a Notice of Availability (“NOA”) was mailed on February 27, 2015 to public agencies and interested individuals who previously requested such notice, as well as publication in the Stockton Record on February 27, 2015 which started the 45-day public review period that closed on April 13, 2015.
- d. *Copies of the Draft EIR.* Copies were made available for public review at the following locations:
 - USACE website - www.spk.usace.army.mil
 - SJAFCA website – www.sjafca.com
 - Cesar Chavez Central Library, 605 N. El Dorado Street, Stockton, California 95202
 - Manteca Public Library, 320 W. Center Street, Manteca, California 95336
 - Lathrop Branch Library, 15461 Seventh Street, Lathrop, California 95330
 - CDs were available by request.

- e. *Response to Comments:* After the close of the public review period, the USACE and SJAFCA prepared responses to the written comments contained in the 60 comment letters that were received on the Draft EIR. As required by CEQA Guidelines, 15088(b), responses to comments were sent to public agencies that submitted comments at least 10 days prior to SJAFCA's consideration. Those public agencies and other entities and individuals that commented on the Draft EIR were notified by the USACE on February 2, 2018, of the availability of responses to comments and the publication of the Final EIR.
- f. *Final EIR.* The Final EIR was completed and made available to public agencies and members of the public in January 2018. The Final EIR comprises the Draft EIR plus all of the comments received during the public comment period, together with written responses to those comments that raised environmental issues, which were prepared in accordance with CEQA and the CEQA Guidelines. The Final EIR also includes refinements to mitigation measures and clarifications to text in the Draft EIR.
- g. The Final EIR was made available electronically via posting on the USACE's website on February 2, 2018 at http://www.spk.usace.army.mil/lower_sj_

The SJAFCA Board finds and determines there was procedural compliance with the mandates of CEQA and that the Final EIR provides adequate, good faith, and reasoned responses to all comments raising significant environmental issues.

2. Absence of Significant New Information

CEQA Guidelines Section 15088.5 requires a lead agency to re-circulate an EIR for further review and comment when significant new information is added to the EIR after public notice is given of the availability of the Draft EIR, but before certification of the Final EIR. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the Project or a feasible way to mitigate or avoid such an effect that the project proponent declines to implement. The CEQA Guidelines provide examples of significant new information under this standard.

SJAFCA recognizes that the Final EIR incorporates information obtained since the Draft EIR was completed, and contains additions, clarifications, modifications, and other changes. With respect to this information, SJAFCA approves of the incorporation of these clarifications into the Project and finds that the clarifications do not cause the Project to result in new or substantially more severe adverse environmental effects, or otherwise require recirculation of the EIR. Various minor changes and edits have been made to the text of the Draft EIR, as set forth in the Final EIR. These changes are generally of an administrative nature such as correcting typographical errors, making minor adjustments to the data, and adding or changing certain phrases to improve readability.

SJAFCA finds that this additional information does not constitute significant new information requiring recirculation, and that the additional information merely clarifies or amplifies or makes insignificant modifications in an adequate EIR.

In addition to the changes and corrections described above, the Final EIR provides additional information in response to comments and questions from agencies and the public.

SJAFCA finds that the information added in the Final EIR does not constitute significant new information requiring recirculation, and that the additional information clarifies or amplifies an adequate EIR. Specifically, SJAFCA finds that the additional information, including the changes described above, does not show that:

- (1) A new significant environmental impact would result from the Project or from a new mitigation measure proposed to be implemented.
- (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
- (3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it.
- (4) The Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

Based on the foregoing, and having reviewed the information contained in the Final EIR and in the record of SJAFCA's proceedings, including the comments on the Draft EIR and the responses thereto, and the above-described information, SJAFCA finds that no significant new information has been added to the Final EIR since public notice was given of the availability of the Draft EIR that would require recirculation of the Final EIR.

3. Differences of Opinion Regarding the Impacts of the Project

In making its decision to certify the Final EIR and its determination to approve the Project, SJAFCA recognizes that the Project may involve several controversial environmental issues and that a range of technical and scientific opinion exists with respect to those issues. SJAFCA has acquired an understanding of the range of this technical and scientific opinion by its review of the Draft EIR, the comments received on the Draft EIR and the responses to those comments in the Final EIR, as well as public testimony, letters, and reports regarding the Final EIR and the Project, and its own experience and expertise in assessing those issues. SJAFCA has reviewed and considered, as a whole, the evidence and analysis presented in the Draft EIR, the information and analysis presented in the comments on the Draft EIR, the evidence

and analysis presented in the Final EIR, the information submitted on the Final EIR, the testimony and comments presented at the NOP scoping meeting, and the reports prepared by the experts who prepared the EIR, USACE technical experts, DWR technical experts, SJAFCA's consultants, and by staff, addressing those comments. SJAFCA has gained a comprehensive and well-rounded understanding of the environmental issues presented by the Project. In turn, this understanding has enabled SJAFCA to make its decisions after weighing and considering the various viewpoints on these important issues.

Accordingly, SJAFCA certifies that its findings are based on a full appraisal of all of the evidence contained in the Final EIR, as well as the evidence and other information contained in the record.

B. Impacts and Mitigation Measures

1. These findings provide the written analysis and conclusions of SJAFCA regarding the environmental impacts of the Project and the mitigation measures identified in the Final EIR that are adopted by SJAFCA as conditions of approval for the Project. In making these findings, SJAFCA has considered the opinions of other agencies and members of the public, including opinions that disagree with some of the analysis and thresholds of significance used in the Final EIR.

SJAFCA finds that the analysis and determination of significance thresholds are judgments within the discretion of SJAFCA; the analysis and significance thresholds used in the Final EIR are supported by substantial evidence in the record, including the expert opinion of the Final EIR preparers and SJAFCA consultants and staff; and the significance thresholds used in the Final EIR provide reasonable and appropriate means of assessing the significance of the adverse environmental effects of the Project.

2. Exhibit A attached to these findings and incorporated herein by reference is the Summary of Impacts and Mitigation Measures Table contained in the Draft EIR Executive Summary Table ES-5 that summarizes the environmental determinations of the Final EIR about the Project's and alternatives' environmental impacts before and after mitigation. This exhibit does not attempt to describe the full analysis or details of each environmental impact and mitigation measures contained in the Final EIR. Instead, Exhibit A provides a summary description of each environmental impact, a summary of the applicable mitigation measures described in the Final EIR, and states the findings on the significance of each environmental impact after imposition of the applicable mitigation measures. A full explanation of these environmental findings and conclusions can be found in the resource sections contained in Chapter 5 of the Draft EIR, as modified in the Final EIR, and these findings hereby incorporate by reference the discussion and analysis in the Final EIR supporting the Final EIR's determinations regarding the Project's environmental impacts and mitigation measures designed to address those impacts.

SJAFCA approves the findings set forth in Exhibit A as its findings regarding the Project's environmental impacts before and after mitigation. In making these findings, SJAFCA ratifies, adopts, and incorporates the analysis and explanation in the Final EIR, and ratifies, adopts, and incorporates in these findings the determinations and conclusions of the Final EIR relating to environmental impacts and mitigation measures, and environmental commitments, except to the extent any such determinations and conclusions are specifically and expressly modified by these findings.

SJAFCA adopts, and incorporates as conditions of approval of the Project, the mitigation measures set forth in the MMRP attached to these findings as Exhibit B to reduce or avoid the potentially significant impacts of the Project, as well as certain less-than-significant impacts.

3. In the event a mitigation measure or environmental commitment recommended in the Final EIR has inadvertently been omitted from Exhibit B, such mitigation measure is hereby adopted and incorporated in the findings below by reference. In addition, in the event the language describing a mitigation measure set forth in Exhibit B fails to accurately reflect the mitigation measures in the Final EIR due to a clerical error, the language of the mitigation measure as set forth in the Final EIR shall control, unless the language of the mitigation measure has been specifically and expressly modified by these findings.

C. Basis for SJAFCA's Decision to Approve the Project and Reject Other Alternatives

The Final EIR evaluates a range of potential alternatives to the Project, as described in Section II.C., above, which is incorporated here by reference. The Final EIR examines the environmental impacts of each alternative in comparison with the Project and the relative ability of each alternative to satisfy the Project Objectives.

The Final EIR also summarizes the criteria used to identify a reasonable range of alternatives for review in the EIR and describes options that did not merit additional, more-detailed review either because they do not present viable alternatives to the Project or they are variations on the alternatives that are evaluated in detail. The findings supporting rejection of these alternatives are discussed below in Section IV.E.

D. SJAFCA's Findings Relating to Alternatives

In making these findings, SJAFCA certifies that it has independently reviewed and considered the information on alternatives provided in the Final EIR, including the information provided in comments on the Draft EIR and the responses to those comments in the Final EIR. The Final EIR's discussion and analysis of these alternatives is not repeated in total in these findings, but the discussion and analysis of the alternatives in the Final EIR are incorporated in these findings by reference to supplement the analysis here. SJAFCA also certifies that it has independently reviewed and considered all other information in the administrative record.

SJAFCA finds that the range of alternatives studied in the Final EIR reflects a reasonable attempt to identify and evaluate various types of alternatives that would potentially be capable of reducing the Project's environmental effects, while accomplishing most of the Project Objectives. SJAFCA finds that the alternatives analysis is sufficient to inform SJAFCA, agencies, and the public regarding the tradeoffs between the degrees to which alternatives to the Project could reduce environmental impacts and the corresponding degree to which the alternatives would hinder the achievement of the Project Objectives and other economic, environmental, social, technological, and legal considerations.

SJAFCA finds the Project would satisfy the Project Objectives, and is more desirable than the other alternatives. As set forth in Section IV.B above, SJAFCA has adopted mitigation measures that avoid or reduce, to the extent feasible, the significant environmental effects of the Project. As explained in Section V, which is incorporated by reference into the CEQA findings, while these mitigation measures will not mitigate all project impacts to a less- than-significant level, they will mitigate those impacts to a level that SJAFCA finds acceptable. SJAFCA finds the remaining alternatives infeasible. Accordingly, SJAFCA has determined to approve the Project (Alternative 7a) instead of approving one of the other alternatives.

In making this determination, SJAFCA finds that when compared to the other alternatives described and evaluated in the Final EIR, the Project, as mitigated, provides a reasonable balance between satisfying the Project Objectives and reducing potential environmental impacts to an acceptable level. SJAFCA further finds and determines that the Project should be approved, rather than one of the other alternatives, for the reasons set forth below and in the Final EIR.

1. No Project Alternative

According to Section 15126.6(e) of the CEQA Guidelines, discussion of the No Project Alternative must include a description of existing conditions and reasonably-foreseeable future conditions that would exist if the Project were not approved. The No Project Alternative would result if SJAFCA took no action to improve flood risk management through updated flood control infrastructure in its service areas.

Under this alternative, none of the Project's near- and future-term flood risk management improvements would be constructed or operated. As a result, none of the environmental impacts identified in Chapter 5 would occur. Unlike the Project, the ongoing dependence on the current flood control system to manage the more frequent, short duration, high flow events that have been modeled to result from climate change, would further exacerbate flooding of urban areas in the Stockton region, resulting in significant impacts not identified with implementation of the Project, including ongoing economic effects on the residents and businesses in the region.

The No Project Alternative would not meet the overall objectives SJAFCA of providing updated flood control facilities to protect people and infrastructure in the near- and long-term. Specifically, this alternative would not meet Project objectives to address seepage, slope stability, overtopping, or erosion concerns in the Stockton metropolitan area and RD 17. As a result, if a flood event were to occur, the Cities of Stockton, Lathrop, and Manteca, and surrounding agricultural and open space lands, would remain at risk of a possible levee failure and flooding. In addition, the associated risk to human health and safety, property, and the adverse economic impact that serious flooding could cause would continue, and the risk of a catastrophic flood would remain high. Regular operations and maintenance of the levee system would continue as presently executed by SJAFCA.

SJAFCA Hereby Rejects the No Project Alternative as Infeasible: SJAFCA finds, separately and independently, that the No Project Alternative would not meet any of the Project objectives presented herein and in the Final EIR. Further, this alternative is not desirable to SJAFCA, as set forth below.

- (a) It would exacerbate flood damage in the Stockton region in the future.
- (b) This alternative would not facilitate the goals set forth in the SJAFCA's or the State's objectives of improving flood risk management in the Stockton region and the Central Valley.
- (c) It would continue to increase economic effects of flood damage on the region.

While this alternative could eliminate most of the significant and unavoidable impacts and the less-than-significant impacts in many of the resource areas evaluated in the Final EIR, on balance, the environmental benefits that might be achieved with this alternative are outweighed, independently and separately, by the alternative's failure to achieve any of the Project Objectives, and its failure to effect the other beneficial attributes of the Project identified above and in Section V, below.

2. **Alternative 7b (North and Central Stockton, Delta Front, Lower Calaveras River, and San Joaquin River Levee Improvements including RD 17):** This alternative would implement the same levee improvements and closure structures as Alternative 7a, but would also implement levee improvements and about 2.2 miles of new levees at the Old River flow split and a tie-back levee in RD 17. The new levees would include a cutoff wall to address potential seepage issues. Alternative 7b would result in more construction than the Project resulting in greater levels of construction-related impacts, such as those on air quality, noise, biological resources, land use and aesthetics. Although implementation of Alternative 7b would meet all of the Project objectives, the increase in severity of impacts make this alternative less environmentally superior and would result in greater economic effects.

SJAFCA Hereby Rejects Alternative 7b as Infeasible: SJAFCA finds, separately and independently, that Alternative 7b would meet the proposed Project objectives, but this alternative is less desirable to SJAFCA, because it would result in: a) increased severity of environmental impacts; and, b) increased economic effects on real estate.

While this alternative would achieve the beneficial attributes of the Project identified above and in Section V, below, it would increase the magnitude of the significant and mitigable, and significant and unavoidable impacts related to construction phase air quality, land use, aesthetics, biological and cultural resources, and on balance, the environmental benefits that might be achieved with this alternative are outweighed by the increase in impact severity and associated economic effects.

3. **Alternative 8a (North and Central Stockton, Delta Front, Lower Calaveras River, San Joaquin River, and Stockton Diverting Canal Levee Improvements excluding RD 17):** This alternative would implement levee improvements and two closure structures in North and Central Stockton. The alternative would combine the levee improvement measures of cutoff wall, deep soil mixing (seismic), and levee geometry improvements, and would address projected sea level change by including raises in levee height where needed. There would be an additional levee extension on Duck Creek to prevent flanking. Compared to the Project, the extra length of the reaches in Alternative 8a totals approximately 55,500 feet (10.5 miles) of additional levee. Although implementation of Alternative 8a would meet all of the Project objectives, the increase in severity of impacts make this alternative less environmentally superior and would result in greater economic effects.

SJAFCA Hereby Rejects Alternative 8a as Infeasible: SJAFCA finds, separately and independently, that Alternative 8a would meet the proposed Project objectives, but this alternative is less desirable to SJAFCA, because it would result in: a) increased severity of environmental impacts; and, b) increased economic effects on real estate.

While this alternative would achieve the beneficial attributes of the Project identified above and in Section V, below, it would increase the magnitude of the significant and mitigable, and significant and unavoidable impacts related to construction phase air quality, land use, aesthetics, biological and cultural resources, and on balance, the environmental benefits that might be achieved with this alternative are outweighed by the increase in impact severity and associated economic effects.

4. **Alternative 8b (North and Central Stockton, Delta Front, Lower Calaveras River, San Joaquin River, and Stockton Diverting Canal Levee Improvements including RD 17):** This alternative would implement levee improvements without including the Mormon Channel bypass. The alternative

would combine the levee improvement measures of cutoff wall, deep soil mixing (seismic), seepage berm, and levee geometry improvements, and would address projected sea level change by including raising the levee height where needed. There would also be approximately 2.2 miles of new levee constructed to extend the RD 17 tieback levee and the secondary levee at the Old River flow split. The new levees would include a cutoff wall to address potential seepage issues. Compared to the Project, the extra length of the reaches in Alternative 8b totals approximately 55,500 feet (10.5 miles) of additional levee. Although implementation of Alternative 8b would meet all of the Project objectives, the increase in severity of impacts make this alternative less environmentally superior and would result in greater economic effects.

SJAFCA Hereby Rejects Alternative 8b as Infeasible: SJAFCA finds, separately and independently, that Alternative 8b would meet the proposed Project objectives, but this alternative is less desirable to SJAFCA, because it would result in: a) increased severity of environmental impacts; and, b) increased economic effects on real estate.

While this alternative would achieve the beneficial attributes of the Project identified above and in Section V, below, it would increase the magnitude of the significant and mitigable, and significant and unavoidable impacts related to construction phase air quality, land use, aesthetics, biological and cultural resources, and on balance, the environmental benefits that might be achieved with this alternative are outweighed by the increase in impact severity and associated economic effects.

- 5. Alternative 9a (North and Central Stockton, Delta Front, Lower Calaveras River, San Joaquin River Levee Improvements and Mormon Channel Bypass excluding RD 17):** This alternative would implement levee improvements, as well as channel improvements within the Mormon Channel Bypass to increase capacity, and create a diversion control structure on the Stockton Diverting Canal that would restore flood flows to the Mormon Channel. The alternative would combine the levee improvement measures of cutoff wall, deep soil mixing (seismic), and levee geometry improvements, and would address projected sea level change by including raising the levee height where needed. There would be an additional levee extension on Duck Creek to prevent flanking. The diversion control structure at the Stockton Diverting Canal would consist of pipe culverts with gates that control releases to a maximum flow of approximately 1,200 cubic feet per second (cfs). Constructing the improvements to the Mormon Channel would require removal of much of the existing vegetation, yet the restoration of flood flows to the Mormon Channel would provide multiple benefits. These benefits could include establishment of native vegetation, improved wetlands, and opportunities for passive recreation. Alternative 9a differ from the Project by the addition of 33,400 feet (6.3 miles) of improvements along Mormon Channel, and inclusion of a diversion structure to divert flows from the Stockton Diverting Canal into Mormon Channel. Although

implementation of Alternative 9a would meet all of the Project objectives, the increase in severity of impacts make this alternative less environmentally superior and would result in greater economic effects.

SJAFCA Hereby Rejects Alternative 9a as Infeasible: SJAFCA finds, separately and independently, that Alternative 9a would meet the proposed Project objectives, but this alternative is less desirable to SJAFCA, because it would result in: a) increased severity of environmental impacts; and, b) increased economic effects on real estate.

While this alternative would achieve the beneficial attributes of the Project identified above and in Section V, below, it would increase the magnitude of the significant and mitigable, and unavoidable impacts related to construction phase air quality, land use, aesthetics, biological and cultural resources, and on balance, the environmental benefits that might be achieved with this alternative are outweighed by the increase in impact severity and associated economic effects.

- 6. Alternative 9b (North and Central Stockton, Delta Front, Lower Calaveras River, San Joaquin River Levee Improvements and Mormon Channel Bypass including RD 17):** This alternative would implement levee improvements along with restoration of the Mormon Channel, including a diversion control structure at the Stockton Diverting Canal. The alternative would combine the levee improvement measures of cutoff wall, deep soil mixing (seismic), seepage berm, and levee geometry improvements, and would address projected sea level change by including raising the levee height where needed. There would also be approximately 2.2 miles of new levee constructed to extend the RD17 tie-back levee and the secondary levee at the Old River flow split. The new levees would include a cutoff wall to address potential seepage issues. The diversion control structure at the Stockton Diverting Canal would consist of pipe culverts with gates that control releases to a maximum flow of approximately 1,200 cfs. The restoration of flood flows to the Mormon Channel would serve multiple public needs, including flood risk reduction, habitat restoration, and recreation. Alternative 9b differs from the Project by the addition of 33,400 feet (6.3 miles) of improvements along Mormon Channel, and inclusion of a diversion structure to divert flows from the Stockton Diverting Canal into Mormon Channel. Although implementation of Alternative 9b would meet all of the Project objectives, the increase in severity of impacts make this alternative less environmentally superior and would result in greater economic effects.

While this alternative would achieve the beneficial attributes of the Project identified above and in Section V, below, it would increase the magnitude of the significant and mitigable, and unavoidable impacts related to construction phase air quality, land use, aesthetics, biological and cultural resources, and on balance, the environmental benefits that might be

achieved with this alternative are outweighed by the increase in impact severity and associated economic effects.

SJAFCA Hereby Rejects Alternative 9b as Infeasible: SJAFCA finds, separately and independently, that Alternative 9b would meet the proposed Project objectives, but this alternative is less desirable to SJAFCA, because it would result in: a) increased severity of environmental impacts; and, b) increased economic effects on real estate.

E. Findings Regarding Project Alternatives Scoped out of EIR

The Final EIR considered other alternatives to the Project that were rejected from further consideration, separately and independently, because they would not achieve stated Project Objectives and/or did not meet the screening process completed by SJAFCA and USACE during the planning stages.

- 1. Process:** Alternatives for each area were analyzed by using a modification of the Parametric Cost Estimation Tool (PCET) developed for the Sutter Basin Feasibility Study for USACE. The PCET was proven as a reliable estimator for the costs of levee construction and repairs. Potential environmental mitigation costs for each reach were included in the estimates, as well as potential real estate acquisition costs for landside right-of-way or easement from the existing levee landside toe. This allowed use of inventory data for the areas including population, number of structures, and counts of critical infrastructure for comparisons. Critical infrastructure is defined as public structures where any risk of flooding is too great, such as hospitals, nursing homes, jails, fire and police stations and schools. Residual floodplains were modeled to determine effect of the alternatives.

Using the information described above, USACE and SJAFCA determined the annual and net benefits effectively representing economic performance of an alternative. Life safety or the ability of an alternative to reduce risk to population from residual flood damages was ranked on a scale ranging from poor to excellent. Alternatives were briefly analyzed relative to compliance with Executive Order (EO) 11988. Floodplain Management and the North and Central Stockton areas were preliminarily determined to have met the intent of EO 11988 due to the built-out nature of the areas; RD 17 has planned development which makes it difficult to comply with the EO 11988 guidance; Mormon Channel meets goals of EO 11988 through the environmental benefits that could be realized. See Section 3.6 in the Final EIR for the detailed EO 11988 analysis.

- 2. Paradise Cut Setback Alternatives:** The USACE, SJAFCA, and DWR team used existing information to evaluate the economic benefits of the Paradise Cut setback alternatives. The observed decrease in efficiency as the project size increases is consistent with the hydraulic limitations presented by the downstream stage boundary being within the tidal region of the Delta. To develop a reasonable range of alternatives to be carried forward into a focused array, only the two alternatives for each area that best maximized net benefits were carried forward. For RD 17, only

one alternative, RD17-E, was shown to have positive net benefits and provide reduced flood risk. Of the bypass alternatives, Mormon Channel has positive net benefits and was carried forward. The Paradise Cut Bypass alternative was not carried forward, as it is not cost effective and brings about concerns regarding downstream hydraulic and hydrologic impacts of widening the bypass.

- 3. Composite Alternatives:** USACE and SJAFCA used the initial alternatives array in order to develop composite alternatives to be analyzed and identify a recommended plan or Project (see Table 3-4 in the Final EIR for a summary). The strategy to move the initial array of alternative plans forward included: (1) applying metrics to the initial array of alternatives; (2) selecting the best alternatives for each separable area or levee reach based on parametric cost and benefit analysis; (3) and combining the best alternatives into an alternative to be carried forward. Alternatives were formulated using USACE Engineer Regulation 1100-2-8162, Incorporating Sea Level Changes in Civil Works Programs, curve two to account for sea-level change over the design life of a project. A sensitivity analysis was also conducted. Using the nomenclature and basic alternatives presented in the Alternatives Milestone meeting, USACE, SJAFCA and DWR developed a focused array of alternatives.

All of the original composed alternatives, except Alternative 10, include an extension of the RD 17 tie-back levee and were designed to pass a 0.5% Annual Chance Event (ACE) flood with 90% assurance. It was estimated that only a few short reaches of levee required height increases to pass a 0.5% ACE event with 90% assurance and incremental benefits would exceed the incremental cost. Therefore, alternatives attaining lower levels of performance were not formulated. Levels of performance greater than the 90% assurance of passing a 0.5% ACE flood were not developed due to a lack of sponsor interest in a more expensive plan. The performance of Alternative 10 was not able to obtain the same performance of the other alternatives because the existing RD 17 tie-back levee was found to be outflanked for floods larger than 1% ACE. The floodwaters that outflanked the tieback levee would result in higher stages (relative to the other alternatives) along the right bank of French Camp Slough. The following summarizes those alternatives rejected from further consideration and analysis in the EIR.

Alternative 2A: It would implement levee improvements without implementing Mormon Channel bypass. Levee improvements would be to the authorized design flow and the extent of levee repairs would be approximately 53.1 miles (280,600 feet).

Alternative 2B: It would implement levee improvements without implementing Mormon Channel bypass. Levee improvements would be to the authorized design flow and the extent of levee repairs would be approximately 42.5 miles (224,400 feet).

Alternative 4: This includes levee raises to meet SB 5 height requirements. It would also implement levee improvements along with restoration of the Mormon

Channel, including a diversion control structure at the Stockton Diverting Canal. The estimated extent of levee repairs would be 42.5 miles (224,400 feet) plus 6.3 miles (33,400 feet) of channel work for the Mormon Channel portion.

Alternative 10: North and Central Stockton: It would implement levee improvements without implementing Mormon Channel bypass. This alternative combines the levee improvement measures of cutoff wall, deep soil mixing (seismic), seepage berm and levee geometry improvements. It would address projected SLC by raising levee height where needed. The proposed levee improvements are comparable to Alternative 8, with the exception of the RD 17 components, which are not included.

- 4. Modified Alternatives:** In addition to refining the alternatives, modified versions of Alternatives 7 and 9 were added to the final array for compliance with EO 11988. These modified alternatives did not include improvements in RD 17. The alternatives previously referred to as Alternatives 7 and 9 were reclassified as Alternatives 7b and 9b, respectively. The modified versions with RD 17 removed were classified as Alternatives 7a and 9a. For consistency in nomenclature, Alternative 8 was reclassified as Alternative 8b, and Alternative 10 (Alternative 8 without RD 17 improvements) was reclassified as Alternative 8a.
- 5. Sea Level Change:** During further analysis of the focused array of alternatives, analysis for potential relative Sea Level Change (SLC), was conducted, in accordance with USACE ER 1100-2-8162, Incorporating Sea Level Changes in Civil Works Programs. The alternatives were compared following the method described in Section 6.d (1). Curve 2 under the cited guidance was used in the future hydrology to account for estimated SLC. The alternatives include a subset that was scaled to provide a 0.5% level of performance without SLC (2A, 2B, 4) and a paired subset that was scaled to account for estimated SLC (7a, 8a, 9a, 7b, 8b, 9b). The alternatives were otherwise equivalent.

The alternatives that were scaled to provide 0.5% ACE, including future SLC, provided greater net benefits than alternatives scaled to provide a 0.5% level of performance under existing conditions. Alternatives 2A, 2B and 4 were removed from further consideration, based on this information. The last step of the method in Section 6.d (1) of ER 1100-2-8162 is to evaluate the performance of the selected alternative to other rates of SLC. This evaluation was conducted after selection of the Recommended Plan (RP or Project).

With respect to these alternatives, SJAFCA hereby adopts and incorporates by reference information set forth in the Final EIR analysis as grounds for finding these alternatives infeasible and rejecting these alternatives. SJAFCA further finds infeasible and rejects these alternatives for each of the reasons set forth above.

F. Findings Regarding Adequacy of Range of Alternatives.

SJAFCA finds that the range of alternatives evaluated in the EIR reflects a reasonable attempt to identify and evaluate various types of alternatives that would potentially be capable of reducing the Project's environmental effects, while accomplishing most if not all of the Project Objectives. SJAFCA finds that the alternatives analysis is sufficient to inform the SJAFCA Board of Directors and the public regarding the tradeoffs between the degree to which alternatives to the Project could reduce environmental impacts and the corresponding degree to which the alternatives would hinder SJAFCA's ability to achieve most or all of its Project objectives.

G. Mitigation Monitoring and Reporting Program

In accordance with CEQA and the CEQA Guidelines, SJAFCA must adopt a mitigation monitoring and reporting program to ensure that the mitigation measures adopted herein are implemented. **SJAFCA hereby adopts the Mitigation Monitoring and Reporting Program for the Project attached to these findings as Exhibit B.**

H. Summary

1. Based on the foregoing findings and the information contained in the administrative record of proceedings, SJAFCA has made one or more of the following findings with respect to each of the significant environmental effects of the Project identified in the Final EIR:
 - a. Changes or alterations have been required in, or incorporated into the Project, which avoid or substantially lessen most of the significant environmental effects on the environment.
2. **Based on the foregoing findings and information contained in the record, it is hereby determined that:**
 - a. Most significant effects on the environment due to approval of the Project have been eliminated or substantially lessened where feasible.
 - b. Any remaining significant effects on the environment found unavoidable are acceptable due to the factors described in the Statement of Overriding Considerations in Section V, below.

V. STATEMENT OF OVERRIDING CONSIDERATION

A. Impacts That Remain Significant and Unavoidable After Incorporation of Mitigation

As discussed in Exhibit A and the Final EIR, SJAFCA has found that some impacts related to construction remain significant following adoption and implementation of all feasible mitigation measures, as described in the Final EIR. Certain adverse impacts cannot be avoided with the application of mitigation measures. State CEQA Guidelines CCR Section 21100(b)(2)(A) provides that an EIR shall include a detailed statement

setting forth “any significant effect on the environment that cannot be avoided if the project is implemented.”

Sections 5.1 to 5.21 of the Final EIR provide a detailed analysis of all potentially significant direct and indirect environmental impacts of the Project, feasible mitigation measures that could reduce or avoid the project’s significant impacts and whether these mitigation measures would reduce these impacts to less than significant levels. The Project’s significant cumulative impacts are discussed in Section 5.23 of the Final EIR. If a specific impact cannot be reduced to a less than significant level, it is considered a significant and unavoidable impact. The significant and unavoidable environmental impacts (direct, indirect and/or cumulative) of the Project, Alternative 7a, are summarized in the following table.

Resource	Effect
<i>Vegetation</i>	Short- and long-term loss of trees, shrubs and wetlands in the project area.
<i>Wildlife</i>	Short- and long-term loss of habitat and movement corridors in the project area.
<i>Fisheries</i>	Indirect effects to fish habitat from the removal of some vegetation from the levee slopes and from vibration during construction. Direct effects from the construction and operation of closure structures on Fourteenmile Slough and Smith Canal. Indirect effects of the closure structures due to the potential to attract non-native predators.
<i>Special Status Species</i>	Local loss of riparian, wetland and shaded riverine aquatic habitat.
<i>Recreation</i>	Impacts on the recreational experience due to vegetation removal and the resulting changes in the visual quality, microclimate and reduced opportunities for bird watching and wildlife viewing.
<i>Aesthetics</i>	Loss of visual character and loss of visual quality of the site and surroundings. Removal of trees and shrubs for compliance with the Vegetation ETL would unavoidably impact aesthetics. If a variance to the vegetation ETL is approved, this impact would be reduced but not to less than significant. The Smith Canal closure structure and the wall along Dad’s Point would also be a significant and unavoidable impact.
<i>Transportation</i>	Because haul routes are unknown at this time, the magnitude of impacts on transportation and circulation during construction activities cannot be quantified; therefore, impacts would remain significant and unavoidable even with mitigation measures.
<i>Noise</i>	Short-term construction impacts related to noise and vibration may affect sensitive receptors in and adjacent to the construction sites and haul routes. Also, predicted construction noise levels may not meet the applicable standards for local exterior noise for residential land uses.
<i>Cultural Resources</i>	Short- and long-term construction impacts on cultural resources and historic properties from construction of levee improvements, new levees, seepage berms and closure structures.

Feasibility Findings

SJAFCA finds that mitigation measures would not be feasible, separately and independently, to reduce impacts to less-than-significant levels for the following reasons:

- a. Vegetation:** Overall, the following vegetation could be removed or directly affected by implementation of Alternative 7a: 19,630 linear feet (lf) of Shaded Riverine Aquatic (SRA) habitat, 139 acres of riparian trees and shrubs, and 10.75 acres of wetlands. All woody riparian vegetation not removed for construction of the structural FRM features would be removed to achieve compliance with the federal Vegetation Engineer Technical Letter (ETL), with the exception of approximately 25 percent of the waterside vegetation, which is assumed to remain under a vegetation variance. The levee slopes and 15 to 20 feet landward of the levee would be permanently maintained free of trees and shrubs. Once construction is complete, the landside levees and easements would be maintained free of woody vegetation. This impact is significant and unavoidable because it would eliminate, in perpetuity, nearly all remaining landside trees and shrubs throughout the project footprint.
- b. Wildlife:** Because vegetation cover is a general indicator of terrestrial habitat, the potential impacts on vegetation described in Section 5.9 of the Final EIR provide a measure of impacts on wildlife. Vegetation would be removed from the construction footprint at the time each reach is constructed. Potential impacts on wildlife would be similar throughout the project area. North and central Stockton and the northern and southern portions of RD 17 are developed urban areas adjacent to agricultural lands. Because this area is very urbanized, the primary effects to wildlife would be to avian species. Trees in the project area, including riparian trees on and adjacent to the levees, provide nesting habitat for many avian species in the area. Construction would likely occur from May through October when birds commonly nest in the area. These disturbances could cause nest abandonment and subsequent loss of eggs or developing young in the project area. All migratory birds and raptors are protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Wildlife Code Sections 3503 and 3503.5. Although urban lands do not provide high value wildlife habitat, some species are found in and adjacent to these areas. Common wildlife at the urban-agriculture interface includes birds, raccoons, possums, skunks and squirrels. Where riparian vegetation abuts agricultural lands, raptors may be common, along with jack rabbits and occasionally coyotes. Project construction and long-term operations and maintenance would result in significant short- and long-term effects to these species.

Short-term significant impacts on birds and other wildlife could be experienced in areas adjacent to the construction footprint but within the impact area for noise, vibration and dust. Potential conversion of agricultural land as a result of the Project would reduce foraging habitat for migratory birds. The Project would have short- and long-term impacts on resident and migratory birds because of the loss of nesting, resting and foraging habitat and impacts on commonly occurring wildlife. This is based upon the loss of migratory and movement corridors that would result from

vegetation removal required for construction of structural flood risk reduction features, Vegetation ETL and maintenance of the easement. Mitigation measures to avoid and minimize short-term construction impacts are described below.

Compensatory mitigation measures to off-set impacts on habitat are described in Section 5.9, VEGETATION of the Final EIR. Although mitigation would reduce short- and long-term impacts on wildlife, impacts would remain significant and unavoidable.

- c. **Fisheries:** As described in Chapter 4 of the Final EIR, Alternative 7a would include the construction of levee remediation measures to address: (1) Under and through seepage, (2) restoration to USACE levee design criteria, (3) erosion, (4) geometry, (5) ETL VFZ requirements, (6) seismic stability and (7) FRM identified for Mosher Slough, Shima Tract, Fivemile Slough, Fourteenmile Slough and Tenmile Slough.

Construction activities, which include erosion protection, would be placed on the landside (in what is currently agricultural land) of Shima Tract, Fivemile Slough, Fourteenmile Slough and Tenmile Slough; this work would have no effect on existing waterside habitat conditions. Therefore, the construction of erosion protection measures would not affect resident native fish population abundance, movement and distribution. Increases in turbidity and suspended sediment associated with ground-disturbing activities during Project construction are likely to extend beyond the immediate construction area and could result in short- to long-term effects of fish and aquatic resources depending on the effectiveness of the proposed erosion control measures. Under Alternative 7a, activities that are most likely to increase turbidity and sedimentation are those that disturb shoreline sediments or soils on the adjacent bank or levee where they can be carried by surface runoff to the river (e.g., clearing and grubbing of vegetation). Elevated concentrations of fine sediment and turbidity in the aquatic environment can have both direct and indirect effects on fish. The severity of these effects depends on the concentration and duration of exposure and the sensitivity of the species and life stage. Juvenile Chinook salmon, steelhead and green sturgeon are expected to be the most sensitive species and life stage in the project area. For most activities, noise-related direct effects on fish would be limited to avoidance behavior in response to movements, noises and shadows caused by construction personnel and equipment operating in or adjacent to the water body. Resident fish would likely move upstream, downstream or laterally to an unaffected portion of the river in response to noise or disturbance and would therefore, be unaffected. The North Stockton reach would be required to establish compliance with the Vegetation ETL, as explained in detail in Section 4.6 of the Final EIR; however, subsequent to release of the Draft EIR, additional investigation and coordination with the NMFS's lead senior fisheries biologist responsible for the project area resulted in the conclusion that the full suite of characteristics that comprise SRA are not present in Mosher, Fivemile, Fourteenmile and Tenmile sloughs and no SRA is actually present in these areas.

A permanent closure on Fourteenmile Slough could have indirect effects on native fish populations due to an increase of predatory species attracted to structure and shade for hiding, increasing the predation on native fish species. During non-

operational conditions, overwater and in water structures can alter underwater light conditions and provide potentially favorable holding conditions for adult fish, including species that prey on juvenile fishes. Permanent shading from the installation of piles and other structures in Fourteenmile Slough could increase the number of predatory fish (e.g., striped bass, largemouth bass) holding in the study area and their ability to prey on resident native fish species. Construction design and sequencing of the closure structure would have in water habitat disturbance and affect SRA, resulting in short and long term impacts on fish, including the potential for entrainment during gate closure. Final design and operational strategies would be coordinated with the resource agencies to minimize or avoid long term effects on fish species in the project area.

Therefore, direct and indirect effects would be significant and unavoidable due to the permanent closure structure on Fourteenmile Slough, which could have indirect effects on native fish populations due to an increase of predatory species attracted to structure and shade for hiding, increasing the predation on native fish species and the potential for entrainment during gate closure.

Construction and operational effects of the Smith Canal closure structure would be the same as those described above for the Fourteenmile Slough closure structure except for the duration and timing of gate closure. The purpose of the closure structure would be to cut off high water levels during high flow events. Operation of the closure structure would limit the water saturation levels in Smith Canal, which would reduce the risk of levee damage during flood events. The closure structure gates would be closed during high water levels on the SJR, typically during a flood event. Due to the tidal influence of the Delta region, there is the potential that these high water events could last from a few hours to a few weeks, depending on river conditions. However, the gate could be open once the water elevation in the Delta side is lower than the elevation in Smith Canal side. Construction design and sequencing of the closure structure would have in water habitat disturbance, affect SRA and result in short- and long-term impacts on fish including potential entrainment during gate closure. Final design and operational strategies would be coordinated with the resource agencies to minimize or avoid long-term effects on fish species in the project area.

The Central Stockton reach would also be required to establish compliance with USACE ETL vegetation requirements, as explained in detail in Section 4.7. A total of 19,630 lf of SRA habitat located on the Calaveras River, SJR, French Camp Slough and Duck Creek would be removed. Therefore, there would be significant direct effects by reducing the available areas for shade and possible food sources available to the existing native and nonnative fish species present in the study area. Direct and indirect effects due to loss of SRA habitat including potential entrainment during gate closure would be significant and unavoidable even with mitigation that included a variance to the Vegetation ETL and on-site compensation plantings. This is because of the temporal impacts that would occur between the time vegetation was removed and the time that new vegetation matured to a point that it provided off-setting

ecosystem services. There would be permanent impacts where constructed features preclude revegetation after construction is complete resulting in significant and unavoidable impacts.

- d. Special Status Species:** Overwater and in water structures can alter underwater light conditions and provide potentially favorable holding conditions for adult fish, including species that prey on juvenile fishes. Permanent shading from installation of piles and other structures in the Fourteenmile Slough after the closure structure construction could increase the number of predatory fish (e.g., striped bass, largemouth bass) holding in the study area and their ability to prey on juvenile salmonids and other native and nonnative fish species. When the closure structure on Fourteenmile Slough needs to be operated, native fish species would not have the option of passing upstream or downstream of the structure. This would not be considered a significant direct effect due to the large amount of available habitat that would still exist above and below the closure structure that can be utilized until non-operational conditions resume. Construction of this structure has the potential to disturb benthic communities from disturbance of sediment. This could disrupt food sources for certain species.

Following BMPs for construction activities described above, this would result in less than significant effects on special status aquatic species. However, direct and indirect effects would be significant and unavoidable due to the permanent closure structure on Fourteenmile Slough which could have indirect effects on native fish populations due to an increase of predatory species attracted to structure and shade for hiding, increasing the predation on native fish species and the potential for entrainment during gate closure. While the impacts from proposed actions will be avoided and minimized where possible, it has been determined that the project actions may affect and are likely to adversely affect Delta smelt, Central Valley steelhead and green sturgeon. Proposed appropriate compensation for habitat impacts that could not be addressed through avoidance, minimization and conservation measures.

The Central Stockton reach would be required to establish compliance with the Vegetation ETL. Due to SRA habitat located on the Calaveras River, SJR, Duck Creek and French Camp Slough, there would be significant direct effects by reducing the available areas for shade and possible food sources available to special status fish species present in the study area. Implementation of mitigation, including receipt of a vegetation variance, would reduce direct and indirect effects from loss of SRA habitat; however, impacts on SRA, including potential entrainment during gate closure, would remain significant and unavoidable

as discussed in detail in Sections 5.9 and 5.10. While the impacts from proposed actions will be avoided and minimized where possible, it was determined that the project actions may affect and are likely to adversely affect Delta smelt, Central Valley steelhead and green sturgeon.

- e. **Recreation:** Removal of trees and shrubs to construct structural project features and to establish compliance with the Vegetation ETL could adversely affect the recreational experience by changing the view-shed and the microclimate (i.e., reducing the amount of shade available). Vegetation removal would also reduce habitat for wildlife, such as birds, thereby reducing their presence on or adjacent to the levees in the project area. There are many recreation facilities in the study area that would not be affected by project construction and would continue to provide recreation opportunities. Detour routes and alternative access would allow recreation activities to continue during the construction season. The project would not generate the need for additional recreation facilities or generate additional recreation needs.

Although a limited number of people would be affected by the project and additional recreational facilities would not be required as a result of the project, the effects to recreation would be significant and unavoidable because of short and long term impacts on the visual quality of the experience and the reduced shade, resulting in reduced opportunities for bird watching and wildlife viewing.

- f. **Aesthetics:** Installation of the closure structure at Smith Canal would result in a large wall across most of the opening. The wall would degrade the physical appearance of open water features which contribute to scenic vistas. Additionally, the floodwall along Dad's Point would become a physical barrier to the view of the open waters from the park area and some homes. Project improvements with full vegetation removal would not create any new sources of light or glare. However, removal of trees and shrubs would reduce shade and expose the area to sunlight throughout the day and to glare and light at sunrise and sunset. Complete removal of waterside vegetation would also alter the experience and the quality of views for nearby sensitive receptors. Vegetation removal would greatly reduce or eliminate riparian habitat, which contributes to scenic vistas and the existing visual character of the site. Post project foreground views would be drastically different from pre-project foreground views. Since no mitigation would be feasible for the complete removal of waterside vegetation or from effects on views from the Smith Canal and floodwall, these impacts would be permanent, significant and unavoidable.
- g. **Transportation:** The proposed levee repairs under Alternative 7a would cross 2 railroad bridges. Freight and passenger service could be disrupted for a day or more if necessary to complete cutoff wall construction beneath these bridges. In some cases, levee height fixes are proposed as well, which may require modifications to the existing railway over the levee, but the extent of these modifications is not known at this time. Detailed designs of railway crossings would be completed in the design phase of the project. Effects associated with service disruption would be temporary and the railways would be reconstructed in their current alignment.

In addition, the proposed levee repairs under Alternative 7a would cross 27 roadway bridges. Construction of slurry walls could require drilling through the roadway, which would require road or lane closures and temporary disruptions of service. In some locations, there may be a levee height fix required at the roadway crossings. Levee

height fixes may require modifications to the existing roadway. However, the extent of these modifications is not known at this time. Detailed designs of roadway crossings would be completed in the design phase of the project. Effects associated with service disruption would be temporary and the roadways would be reconstructed in their current alignment.

Because implementation of Alternative 7a could result in temporary delays in emergency response time, temporary railroad service disruptions, hauling materials through residential neighborhoods and school zones and potential interference with evacuation routes during construction, this impact would be significant and unavoidable.

- h. Noise:** Residences are dense throughout many of the areas in which construction would occur. Those residences adjacent to the construction footprint and haul routes would experience noise levels of 55 dB Leq or greater. Individual sensitive receptors would be exposed to construction noise for several weeks to a full construction season, depending on the extent to which construction activities are staggered. Since short term, construction-related noise levels for Alternative 7a would exceed the applicable daytime standards of San Joaquin County (50 dBA Leq during daytime for outdoor activity areas), City of Stockton (55 dBA Leq during daytime for outdoor activity areas) and City of Manteca (50 dBA Leq during daytime for outdoor activity areas), impacts would be significant. The use of noise-reducing construction practices would reduce noise levels, but impacts would remain significant and unavoidable.

Construction of the closure structure at Smith Canal would require pile drivers. Whether vibratory pile drivers or impact pile drivers are used, the vibrations would not typically exceed the FTA standard (80 VdB for residential land uses) for any nearby sensitive receptors. However, the upper range for pile drivers could infrequently affect residences (i.e., sensitive receptors) which are within 625 feet of the closure structure construction. Because construction activities would be conducted only during the day time and because the vibration events in the upper range would likely occur infrequently, groundborne vibration from sheetpiling is unlikely to cause annoyance.

Equipment required for conventional and deep soil mixing cutoff wall construction would include truckmounted augers, excavators, backhoes, bulldozers, scrapers, rollers, graders, loaders, compactors and various trucks. Ground vibration would also be generated by haul trucks on area haul routes. The most intense generation of ground vibration would be associated with large bulldozers, which generate levels of 87 VdB at a distance of 25 feet. These levels would attenuate to 80 VdB at a distance of 90 feet. Vibration sensitive receptors (i.e., residences) are located adjacent to haul routes and adjacent to the levee within 90 feet of the maximum construction limit areas. Vibration could exceed the FTA standard (80 VdB) for human annoyance at these receptors, although no nighttime hauling or construction activities would occur and sleep would not be disturbed. For Alternative 7a, the

vibration impacts associated with levee construction and material hauling would thus be significant. The use of vibration-reducing construction practices would reduce vibration levels impacts would remain significant and unavoidable.

- i. **Cultural Resources:** Alternative 7a has the potential to adversely affect cultural resources during placement of cutoff walls, seepage berms, deep soil mixing, levee raises and closure structures. The records and literature search, reconnaissance survey and the regional history of the area indicate that there are at least 30 previously recorded cultural resources and high potential for additional unknown historic properties within the study area. In particular, the prehistoric overview and previously recorded prehistoric sites suggests that there is a high probability that multiple prehistoric villages on the SJR and tributaries would be affected. The likelihood is also high for additional historic-era structures and features within the project. It is likely that historic properties will be adversely affected by this alternative. Effects to cultural resources under the Project would be significant and unavoidable.

Therefore, the residual significance of these impacts is considered significant and unavoidable.

B. Overriding Considerations Justifying Project Approval

In accordance with CEQA Guidelines Section 15093, SJAFCA has, in determining whether or not to approve the Project, balanced the economic, social, technological, and other Project benefits against its unavoidable environmental risks, and finds that each of the benefits of the Project set forth below outweigh the significant adverse environmental effects that are not mitigated to less-than-significant levels.

This statement of overriding considerations is based on SJAFCA's review of the Final EIR and other information in the administrative record. Each of the benefits identified below provides a separate and independent basis for overriding the significant environmental effects of the Project. The benefits of the Project are as follows:

1. *Increase in the flood risk management safety levels will provide economic benefits.* Implementation of the Project will result in a benefit to cost ratio of 7.0 to 1.0 and provides a net flood risk management benefit of \$295,730,000 per year.
2. *Increase in the flood risk management safety levels will reduce risk to people and property.* The Project greatly reduces flood risk to people and property in the city of Stockton and surrounding areas. The Project provides benefits to 162,000 residents by improving Federal and local levees that provide flood risk management. The Project also offers the area an estimated 83 percent reduction in expected annual property damage, while enhancing security at 486 critical infrastructure sites – 23 of which are essential to life-safety.
3. *Project will provide mitigation and conservation land.* Mitigation includes all measures that would avoid, minimize, offset or compensate for potential environmental effects. When considered under the Federal Endangered Species

Act, these measures may be referred to as conservation measures. Project mitigation assumes the levees will be determined to be suitable for a variance to USACE ETL 1110-2-583 that will allow 25% of the trees and shrubs on the lower levee slope and within the waterside easement to remain.

4. *The Project will meet federal and State flood risk management criteria.* This plan would allow the local community to continue to meet both FEMA certification requirements and at least a portion of the State of California's criteria for funding of FRM projects, allowing for potential reduction in National Flood Insurance Program costs to the community and leveraging State bond funds for project implementation.
5. *The Project includes environmental commitments.* The Project Environmental commitments are relatively standardized and compulsory best practices that represent sound and proven methods to avoid or reduce potential effects. Although environmental commitments fall within the NEPA definition of mitigation through avoidance and minimization, these measures were discussed in Chapter 5 of the Final EIR. The environmental commitments identified would be implemented to avoid or reduce short-term, construction-related effects.

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Table ES-5: Comparative Summary of Environmental Effects, Mitigation, and Levels of Significance

Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Geology and Geomorphology							
Effect	No effect.	No effect.	No effect.	No effect.	No effect.	No effect.	No effect.
Significance	Too speculative for meaningful consideration.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.
Mitigation	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
Effect With Mitigation	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
Seismicity							
Effect	The structural integrity of existing levees, berms, and bridges would remain at risk from high magnitude seismic events on active faults. Some levees in tidally influenced areas would remain at risk from seismically induced structural instability and/or failure due to liquefaction.	Levee improvements would reduce the vulnerability to structural failure due to seismic events.	Levee improvements would reduce the vulnerability to structural failure due to seismic events.	Levee improvements would reduce the vulnerability to structural failure due to seismic events.	Levee improvements would reduce the vulnerability to structural failure due to seismic events.	Levee improvements would reduce the vulnerability to structural failure due to seismic events.	Levee improvements would reduce the vulnerability to structural failure due to seismic events.
Significance	Too speculative for meaningful consideration.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.
Mitigation	Incorporate seismic design elements into the FRM system.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
Effect With Mitigation	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.

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Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Soils and Mineral Resources							
Effect	A flood event could mobilize soils and transport and deposit them elsewhere in the system. Mining operations would continue to be at risk from flooding.	Short term soil disturbance due to construction activities.	Short term soil disturbance due to construction activities.	Short term soil disturbance due to construction activities.	Short term soil disturbance due to construction activities.	Short term soil disturbance due to construction activities.	Short term soil disturbance due to construction activities.
Significance	Too speculative for meaningful consideration.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.
Mitigation	None possible.	Implement BMPs during construction. At the end of construction, reseed disturbed areas with native herbaceous species.	Implement BMPs during construction. At the end of construction, reseed disturbed areas with native herbaceous species.	Implement BMPs during construction. At the end of construction, reseed disturbed areas with native herbaceous species.	Implement BMPs during construction. At the end of construction, reseed disturbed areas with native herbaceous species.	Implement BMPs during construction. At the end of construction, reseed disturbed areas with native herbaceous species.	Implement BMPs during construction. At the end of construction, reseed disturbed areas with native herbaceous species.
Effect With Mitigation	Not applicable.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.
Hydrology and Hydraulics							
Effect	Emergency repairs during a flood event could result in loss of channel capacity and alteration of current geomorphic processes.	Closure structures would reduce riverine and tidal flow peaks to produce beneficial impacts by reducing flood risk.	Closure structures would reduce riverine and tidal flow peaks to produce beneficial impacts by reducing flood risk.	Closure structures would reduce riverine and tidal flow peaks to produce beneficial impacts by reducing flood risk.	Closure structures would reduce riverine and tidal flow peaks to produce beneficial impacts by reducing flood risk.	Closure structures would reduce riverine and tidal flow peaks to produce beneficial impacts by reducing flood risk.	Closure structures would reduce riverine and tidal flow peaks to produce beneficial impacts by reducing flood risk.
Significance	Significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.
Mitigation	None possible.	None needed.	None needed.	None needed.	None needed.	None needed.	None needed.
Effect With Mitigation	Significant.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.

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Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Water Quality							
Effect	In a flood event, there is high risk of contaminants entering the water from utilities, stored chemicals, septic systems, and flooded vehicles. Flood flows would increase turbidity in the waterways through bank erosion.	Potential impacts include increased turbidity during in-water construction; runoff of exposed soils; and cement, slurry, or fuel spills during construction. Potential long term water quality impacts from closure structures.	Potential impacts include increased turbidity during in-water construction; runoff of exposed soils; and cement, slurry, or fuel spills during construction. Potential long term water quality impacts from closure structures.	Potential impacts include increased turbidity during in-water construction; runoff of exposed soils; and cement, slurry, or fuel spills during construction. Potential long term water quality impacts from closure structures.	Potential impacts include increased turbidity during in-water construction; runoff of exposed soils; and cement, slurry, or fuel spills during construction. Potential long term water quality impacts from closure structures.	Potential impacts include increased turbidity during in-water construction; runoff of exposed soils; and cement, slurry, or fuel spills during construction. Potential long term water quality impacts from closure structures.	Potential impacts include increased turbidity during in-water construction; runoff of exposed soils; and cement, slurry, or fuel spills during construction. Potential long term water quality impacts from closure structures.
Significance	Too speculative for meaningful consideration.	Significant	Significant	Significant	Significant	Significant	Significant and unavoidable.
Mitigation	Construct levee improvements and related FRM measures.	Preparation of a Stormwater Pollution Prevention Plan, Spill Prevention Control and Countermeasures Plan, and a Bentonite Slurry Spill Contingency Plan and implementation of BMPs. Develop design and operation refinements in coordination with the Regional Water Quality Control Board (RWQCB).	Preparation of a Stormwater Pollution Prevention Plan, Spill Prevention Control and Countermeasures Plan, and a Bentonite Slurry Spill Contingency Plan and implementation of BMPs. Develop design and operation refinements in coordination with the RWQCB.	Preparation of a Stormwater Pollution Prevention Plan, Spill Prevention Control and Countermeasures Plan, and a Bentonite Slurry Spill Contingency Plan and implementation of BMPs. Develop design and operation refinements in coordination with the RWQCB.	Preparation of a Stormwater Pollution Prevention Plan, Spill Prevention Control and Countermeasures Plan, and a Bentonite Slurry Spill Contingency Plan and implementation of BMPs. Develop design and operation refinements in coordination with the RWQCB.	Preparation of a Stormwater Pollution Prevention Plan, Spill Prevention Control and Countermeasures Plan, and a Bentonite Slurry Spill Contingency Plan and implementation of BMPs. Develop design and operation refinements in coordination with the RWQCB.	Preparation of a Stormwater Pollution Prevention Plan, Spill Prevention Control and Countermeasures Plan, and a Bentonite Slurry Spill Contingency Plan and implementation of BMPs. Develop design and operation refinements in coordination with the RWQCB.
Effect With Mitigation	Not applicable.	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant

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Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Groundwater							
Effect	Continue to implement groundwater management to ensure adequate recharge and sustainable extraction rates.	Potential construction-related impacts if cutoff walls penetrate into groundwater. Contaminants that could reach groundwater include sediment, oil and grease, and hazardous materials.	Potential construction-related impacts if cutoff walls penetrate into groundwater. Contaminants that could reach groundwater include sediment, oil and grease, and hazardous materials.	Potential construction-related impacts if cutoff walls penetrate into groundwater. Contaminants that could reach groundwater include sediment, oil and grease, and hazardous materials.	Potential construction-related impacts if cutoff walls penetrate into groundwater. Contaminants that could reach groundwater include sediment, oil and grease, and hazardous materials.	Potential construction-related impacts if cutoff walls penetrate into groundwater. Contaminants that could reach groundwater include sediment, oil and grease, and hazardous materials.	Potential construction-related impacts if cutoff walls penetrate into groundwater. Contaminants that could reach groundwater include sediment, oil and grease, and hazardous materials.
Significance	Less than significant.	Significant.	Significant.	Significant.	Significant.	Significant.	Significant.
Mitigation	Continue to update and implement groundwater management plans.	Develop and implement a Bentonite Slurry Spill Contingency Plan.	Develop and implement a Bentonite Slurry Spill Contingency Plan.	Develop and implement a Bentonite Slurry Spill Contingency Plan.	Develop and implement a Bentonite Slurry Spill Contingency Plan.	Develop and implement a Bentonite Slurry Spill Contingency Plan.	Develop and implement a Bentonite Slurry Spill Contingency Plan.
Effect With Mitigation	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.

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Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Wetlands and Other Waters of the United States							
Effect	Stormwater runoff and erosion could introduce contaminants into receiving water. Emergency repairs could require placement of fill into open water and wetlands.	1 acre of permanent impact, and an additional 4 acres of temporary impact on open waters due to the closure structures. Ditches and toe drains adjacent to the levees would be filled and relocated due to construction of landside berms, levee reshaping, and levee height fixes.	1 acre of permanent impact, and an additional 4 acres of temporary impact on open waters due to the closure structures. Ditches and toe drains adjacent to the levees would be filled and relocated due to construction of landside berms, levee reshaping, and levee height fixes.	1 acre of permanent impact, and an additional 4 acres of temporary impact on open waters due to the closure structures. Ditches and toe drains adjacent to the levees would be filled and relocated due to construction of landside berms, levee reshaping, and levee height fixes.	1 acre of permanent impact, and an additional 4 acres of temporary impact on open waters due to the closure structures. Ditches and toe drains adjacent to the levees would be filled and relocated due to construction of landside berms, levee reshaping, and levee height fixes.	1 acre of permanent impact, and an additional 4 acres of temporary impact on open waters due to the closure structures. Ditches and toe drains adjacent to the levees would be filled and relocated due to construction of landside berms, levee reshaping, and levee height fixes.	1 acre of permanent impact, and an additional 4 acres of temporary impact on open waters due to the closure structures. Ditches and toe drains adjacent to the levees would be filled and relocated due to construction of landside berms, levee reshaping, and levee height fixes.
Significance	Too speculative for meaningful consideration.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.
Mitigation	Use BMP to the extent practicable.	Compensate for loss of open water and wetland habitat through a combination of on-site mitigation and purchase of mitigation bank credits. Relocate effected ditches and toe drains outside of the levee footprint.	Compensate for loss of open water and wetland habitat through a combination of on-site mitigation and purchase of mitigation bank credits. Relocate effected ditches and toe drains outside of the levee footprint.	Compensate for loss of open water and wetland habitat through a combination of on-site mitigation and purchase of mitigation bank credits. Relocate effected ditches and toe drains outside of the levee footprint.	Compensate for loss of open water and wetland habitat through a combination of on-site mitigation and purchase of mitigation bank credits. Relocate effected ditches and toe drains outside of the levee footprint.	Compensate for loss of open water and wetland habitat through a combination of on-site mitigation and purchase of mitigation bank credits. Relocate effected ditches and toe drains outside of the levee footprint.	Compensate for loss of open water and wetland habitat through a combination of on-site mitigation and purchase of mitigation bank credits. Relocate effected ditches and toe drains outside of the levee footprint.
Effect With Mitigation	Not applicable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.

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Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Air Quality and Climate Change							
Effect	Increased emissions during flood fighting activities without BMPs in place. Increased emissions during cleanup and reconstruction of the urban area.	Emissions of criteria pollutants from construction equipment, haul trucks, and barges.	Emissions of criteria pollutants from construction equipment, haul trucks, and barges.	Emissions of criteria pollutants from construction equipment, haul trucks, and barges.	Emissions of criteria pollutants from construction equipment, haul trucks, and barges.	Emissions of criteria pollutants from construction equipment, haul trucks, and barges.	Emissions of criteria pollutants from construction equipment, haul trucks, and barges.
Significance	Significant.	Significant.	Significant.	Significant.	Significant.	Significant.	Significant.
Mitigation	None possible.	Implement SJVAPCD construction emission control practices and BMPs.	Implement SJVAPCD construction emission control practices and BMPs.	Implement SJVAPCD construction emission control practices and BMPs.	Implement SJVAPCD construction emission control practices and BMPs.	Implement SJVAPCD construction emission control practices and BMPs.	Implement SJVAPCD construction emission control practices and BMPs.
Effect With Mitigation	Significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.
Vegetation							
Effect	Erosion during a flood event could cause significant vegetation loss. Flood fighting activities could prevent future vegetation growth on river banks.	Loss of vegetation on, and adjacent to, the levees. Removal of up to 37,820 linear feet of potential SRA and 142 acres of woody riparian vegetation.	Loss of vegetation on, and adjacent to, the levees. Removal of up to 59,898 linear feet of potential SRA and 274 acres of woody riparian vegetation.	Loss of vegetation on, and adjacent to, the levees. Removal of up to 37,986 linear feet of potential SRA and 160 acres of woody riparian vegetation.	Loss of vegetation on, and adjacent to, the levees. Removal of up to 64,297 linear feet of potential SRA and 245 acres of woody riparian vegetation.	Loss of vegetation on, and adjacent to, the levees. Removal of up to 37,820 linear feet of potential SRA and 152 acres of woody riparian vegetation.	Loss of vegetation on, and adjacent to, the levees. Removal of up to 64,131 linear feet of potential SRA and 237 acres of woody riparian vegetation.
Significance	Too speculative for meaningful consideration.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.
Mitigation	Compensation would likely occur after the fact, but there would be significant direct impacts due to the temporal loss of vegetation.	Combination of on-site and off-site plantings and/or purchase of mitigation bank credits. A vegetation variance, if approved, would allow vegetation to remain on the lower waterside levee slope and adjacent easement.	Combination of on-site and off-site plantings and/or purchase of mitigation bank credits. A vegetation variance, if approved, would allow vegetation to remain on the lower waterside levee slope and adjacent easement.	Combination of on-site and off-site plantings and/or purchase of mitigation bank credits. A vegetation variance, if approved, would allow vegetation to remain on the lower waterside levee slope and adjacent easement.	Combination of on-site and off-site plantings and/or purchase of mitigation bank credits. A vegetation variance, if approved, would allow vegetation to remain on the lower waterside levee slope and adjacent easement.	Combination of on-site and off-site plantings and/or purchase of mitigation bank credits. A vegetation variance, if approved, would allow vegetation to remain on the lower waterside levee slope and adjacent easement.	Combination of on-site and off-site plantings and/or purchase of mitigation bank credits. A vegetation variance, if approved, would allow vegetation to remain on the lower waterside levee slope and adjacent easement.
Effect With Mitigation	Not applicable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.

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Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Wildlife							
Effect	Erosion during a flood could cause significant wildlife habitat loss. Flood fighting activities could prevent future development of wildlife habitat on and adjacent to river and slough banks.	Loss of wildlife habitat and movement corridors in the project area.	Loss of wildlife habitat and movement corridors in the project area.	Loss of wildlife habitat and movement corridors in the project area.	Loss of wildlife habitat and movement corridors in the project area.	Loss of wildlife habitat and movement corridors in the project area. The Old Mormon Channel bypass would provide opportunities for a riparian corridor through Stockton.	Loss of wildlife habitat and movement corridors in the project area. The Old Mormon Channel bypass would provide opportunities for a riparian corridor through Stockton.
Significance	Too speculative for meaningful consideration.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.
Mitigation	Compensation would likely occur after the fact, but there would be significant direct impacts due to the temporal loss of habitat elements, principally vegetation.	Combination of on-site and off-site plantings and/or purchase of mitigation bank credits. BMPs implemented during construction to avoid impacts to special status species would also reduce potential impacts to common wildlife species.	Combination of on-site and off-site plantings and/or purchase of mitigation bank credits. BMPs implemented during construction to avoid impacts to special status species would also reduce potential impacts to common wildlife species.	Combination of on-site and off-site plantings and/or purchase of mitigation bank credits. BMPs implemented during construction to avoid impacts to special status species would also reduce potential impacts to common wildlife species.	Combination of on-site and off-site plantings and/or purchase of mitigation bank credits. BMPs implemented during construction to avoid impacts to special status species would also reduce potential impacts to common wildlife species.	Combination of on-site and off-site plantings and/or purchase of mitigation bank credits. BMPs implemented during construction to avoid impacts to special status species would also reduce potential impacts to common wildlife species.	Combination of on-site and off-site plantings and/or purchase of mitigation bank credits. BMPs implemented during construction to avoid impacts to special status species would also reduce potential impacts to common wildlife species.
Effect With Mitigation	Not applicable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.

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Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Fisheries							
Effect	Flood fighting could prevent growth of vegetation on levee slopes and increase turbidity, thus impacting migration, spawning or rearing habitat.	Indirect effects to fish habitat from vegetation removal and from vibration during construction. Direct effects from the closure structures, including impacts from increases in turbidity. Long-term impacts from closure structures include fish movement and increased predation.	Indirect effects to fish habitat from vegetation removal and from vibration during construction. Direct effects from the closure structures, including impacts from increases in turbidity. Long-term impacts from closure structures include fish movement and increased predation.	Indirect effects to fish habitat from vegetation removal and from vibration during construction. Direct effects from the closure structures, including impacts from increases in turbidity. Long-term impacts from closure structures include fish movement and increased predation.	Indirect effects to fish habitat from vegetation removal and from vibration during construction. Direct effects from the closure structures, including impacts from increases in turbidity. Long-term impacts from closure structures include fish movement and increased predation.	Indirect effects to fish habitat from vegetation removal and from vibration during construction. Direct effects from the closure structures, including impacts from increases in turbidity. Long-term impacts from closure structures include fish movement and increased predation. Construction of the Old Mormon Channel bypass may create a corridor for migrating adult and juvenile fish.	Indirect effects to fish habitat from vegetation removal and from vibration during construction. Direct effects from the closure structures, including impacts from increases in turbidity. Long-term impacts from closure structures include fish movement and increased predation. Construction of the Old Mormon Channel bypass may create a corridor for migrating adult and juvenile fish.
Significance	Too speculative for meaningful consideration.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.
Mitigation	Compensation would likely occur after the fact but there would still be significant direct impacts due to the loss of vegetation.	A vegetation variance, if approved, would allow vegetation to remain on the lower waterside levee slope and adjacent easement. All disturbed lands would be reseeded following construction. BMPs would be implemented to address turbidity. Design and construction of the closure structures would be closely coordinated with the resource agencies to avoid and minimize impacts to fisheries.	A vegetation variance, if approved, would allow vegetation to remain on the lower waterside levee slope and adjacent easement. All disturbed lands would be reseeded following construction. BMPs would be implemented to address turbidity. Design and construction of the closure structures would be closely coordinated with the resource agencies to avoid and minimize impacts to fisheries.	A vegetation variance, if approved, would allow vegetation to remain on the lower waterside levee slope and adjacent easement. All disturbed lands would be reseeded following construction. BMPs would be implemented to address turbidity. Design and construction of the closure structures would be closely coordinated with the resource agencies to avoid and minimize impacts to fisheries.	A vegetation variance, if approved, would allow vegetation to remain on the lower waterside levee slope and adjacent easement. All disturbed lands would be reseeded following construction. BMPs would be implemented to address turbidity. Design and construction of the closure structures would be closely coordinated with the resource agencies to avoid and minimize impacts to fisheries.	A vegetation variance, if approved, would allow vegetation to remain on the lower waterside levee slope and adjacent easement. All disturbed lands would be reseeded following construction. BMPs would be implemented to address turbidity. Design and construction of the closure structures and Old Mormon Channel bypass would be closely coordinated with the resource agencies to avoid and minimize impacts to fisheries.	A vegetation variance, if approved, would allow vegetation to remain on the lower waterside levee slope and adjacent easement. All disturbed lands would be reseeded following construction. BMPs would be implemented to address turbidity. Design and construction of the closure structures and Old Mormon Channel bypass would be closely coordinated with the resource agencies to avoid and minimize impacts to fisheries.
Effect With Mitigation	Not applicable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.

EXHIBIT A

Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Special Status Species							
Effect	Flood event or flood fight could cause loss of habitat and fatality to species.	Direct affects to GGS, VELB, fish species, and Swainson’s hawks during construction. Direct effects from construction and operation of closure structures. Indirect effects from vegetation removal and vibration during construction.	Direct affects to GGS, VELB, fish species, and Swainson’s hawks during construction. Direct effects from construction and operation of closure structures. Indirect effects from vegetation removal and vibration during construction.	Direct affects to GGS, VELB, fish species, and Swainson’s hawks during construction. Direct effects from construction and operation of closure structures. Indirect effects from vegetation removal and vibration during construction.	Direct affects to GGS, VELB, fish species, and Swainson’s hawks during construction. Direct effects from construction and operation of closure structures. Indirect effects from vegetation removal and vibration during construction.	Direct affects to GGS, VELB, fish species, and Swainson’s hawks during construction. Direct effects from construction and operation of closure structures. Indirect effects from vegetation removal and vibration during construction.	Direct affects to GGS, VELB, fish species, and Swainson’s hawks during construction. Direct effects from construction and operation of closure structures. Indirect effects from vegetation removal and vibration during construction.
Significance	Significant	VELB and GGS: Significant. CV Steelhead, Sacramento R winter-run Chinook salmon, CV spring-run Chinook salmon, Green sturgeon, Delta smelt: Significant and unavoidable.	VELB and GGS: Significant. CV Steelhead, Sacramento R winter-run Chinook salmon, CV spring-run Chinook salmon, Green sturgeon, Delta smelt: Significant and unavoidable.	VELB and GGS: Significant. CV Steelhead, Sacramento R winter-run Chinook salmon, CV spring-run Chinook salmon, Green sturgeon, Delta smelt: Significant and unavoidable.	VELB and GGS: Significant. CV Steelhead, Sacramento R winter-run Chinook salmon, CV spring-run Chinook salmon, Green sturgeon, Delta smelt: Significant and unavoidable.	VELB and GGS: Significant. CV Steelhead, Sacramento R winter-run Chinook salmon, CV spring-run Chinook salmon, Green sturgeon, Delta smelt: Significant and unavoidable.	VELB and GGS: Significant. CV Steelhead, Sacramento R winter-run Chinook salmon, CV spring-run Chinook salmon, Green sturgeon, Delta smelt: Significant and unavoidable.
Conservation/ Mitigation Measures	None available	Implement BMPs during construction. Transplant elderberry shrubs that cannot be avoided. Replace habitat for species either on-site or in close proximity to lost habitat. Work with resource agencies on design and operational criteria for the closure structures. Obtain a vegetation variance, if appropriate.	Implement BMPs during construction. Transplant elderberry shrubs that cannot be avoided. Replace habitat for species either on-site or in close proximity to lost habitat. Work with resource agencies on design and operational criteria for the closure structures. Obtain a vegetation variance, if appropriate.	Implement BMPs during construction. Transplant elderberry shrubs that cannot be avoided. Replace habitat for species either on-site or in close proximity to lost habitat. Work with resource agencies on design and operational criteria for the closure structures. Obtain a vegetation variance, if appropriate.	Implement BMPs during construction. Transplant elderberry shrubs that cannot be avoided. Replace habitat for species either on-site or in close proximity to lost habitat. Work with resource agencies on design and operational criteria for the closure structures. Obtain a vegetation variance, if appropriate.	Implement BMPs during construction. Transplant elderberry shrubs that cannot be avoided. Replace habitat for species either on-site or in close proximity to lost habitat. Work with resource agencies on design and operational criteria for the closure structures. Obtain a vegetation variance, if appropriate.	Implement BMPs during construction. Transplant elderberry shrubs that cannot be avoided. Replace habitat for species either on-site or in close proximity to lost habitat. Work with resource agencies on design and operational criteria for the closure structures. Obtain a vegetation variance, if appropriate.
Effect with Conservation and Mitigation Measures	Significant	VELB and GGS: Less than significant. CV Steelhead, Sacramento R winter-run Chinook salmon, CV spring-run Chinook salmon, Green sturgeon, Delta smelt: Significant and unavoidable.	VELB and GGS: Less than significant. CV Steelhead, Sacramento R winter-run Chinook salmon, CV spring-run Chinook salmon, Green sturgeon, Delta smelt: Significant and unavoidable.	VELB and GGS: Less than significant. CV Steelhead, Sacramento R winter-run Chinook salmon, CV spring-run Chinook salmon, Green sturgeon, Delta smelt: Significant and unavoidable.	VELB and GGS: Less than significant. CV Steelhead, Sacramento R winter-run Chinook salmon, CV spring-run Chinook salmon, Green sturgeon, Delta smelt: Significant and unavoidable.	VELB and GGS: Less than significant. CV Steelhead, Sacramento R winter-run Chinook salmon, CV spring-run Chinook salmon, Green sturgeon, Delta smelt: Significant and unavoidable.	VELB and GGS: Less than significant. CV Steelhead, Sacramento R winter-run Chinook salmon, CV spring-run Chinook salmon, Green sturgeon, Delta smelt: Significant and unavoidable.

EXHIBIT A

Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Socioeconomics and Environmental Justice							
Effect	Flooding of residential areas and displacement of populations during a flood event.	Disruption to residents alongside construction sites from traffic, noise, and dust. Acquisition of properties for construction and flood control easements.	Disruption to residents alongside construction sites from traffic, noise, and dust. Acquisition of properties for construction and flood control easements.	Disruption to residents alongside construction sites from traffic, noise, and dust. Acquisition of properties for construction and flood control easements.	Disruption to residents alongside construction sites from traffic, noise, and dust. Acquisition of properties for construction and flood control easements.	Disruption to residents alongside construction sites from traffic, noise, and dust. Acquisition of properties for construction and flood control easements.	Disruption to residents alongside construction sites from traffic, noise, and dust. Acquisition of properties for construction and flood control easements.
Significance	Too speculative for meaningful consideration.	Significant.	Significant.	Significant.	Significant.	Significant.	Significant.
Mitigation	None possible.	Federal Relocation Act compliance.	Federal Relocation Act compliance.	Federal Relocation Act compliance.	Federal Relocation Act compliance.	Federal Relocation Act compliance.	Federal Relocation Act compliance.
Effect With Mitigation	Not applicable.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.
Land Use							
Effect	Inconsistent with local land use policies requiring the protection of the existing urban area from flood damages. Potential for induced growth in RD17 consistent with future growth plans of the Cities of Stockton, Lathrop and Manteca.	Acquisition of properties for construction and flood control easements along the levees, floodwall, and closure structures in North and Central Stockton. Permanent loss of SRA.	Acquisition of properties for construction and flood control easements along the levees, floodwall, and closure structures in North and Central Stockton and in RD17. Potential for induced growth with reduction of flood risk in RD17. Permanent loss of SRA.	Acquisition of properties for construction and flood control easements along the levees, floodwall, and closure structures in North and Central Stockton. Permanent loss of SRA.	Acquisition of properties for construction and flood control easements along the levees, floodwall, and closure structures in North and Central Stockton and in RD17. Potential for induced growth with reduction of flood risk in RD17. Permanent loss of SRA.	Acquisition of properties for construction and flood control easements along the levees, floodwall, Old Mormon Channel flood bypass, and closure structures in North and Central Stockton and in RD17. Potential for induced growth with reduction of flood risk in RD17. Permanent loss of SRA.	Acquisition of properties for construction and flood control easements along the levees, floodwall, Old Mormon Channel flood bypass, and closure structures in North and Central Stockton and in RD17. Potential for induced growth with reduction of flood risk in RD17. Permanent loss of SRA.
Significance	Too speculative for meaningful consideration.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.
Mitigation	None possible.	Relocation Assistance and Real Property Acquisition Polices Act of 1970 compliance.	Relocation Assistance and Real Property Acquisition Polices Act of 1970 compliance.	Relocation Assistance and Real Property Acquisition Polices Act of 1970 compliance.	Relocation Assistance and Real Property Acquisition Polices Act of 1970 compliance.	Relocation Assistance and Real Property Acquisition Polices Act of 1970 compliance.	Relocation Assistance and Real Property Acquisition Polices Act of 1970 compliance.
Effect With Mitigation	Not applicable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.

EXHIBIT A

Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Transportation							
Effect	Potential for flooded roadways and railroad tracks in a flood event. Damage to roadways and railroad tracks from flooding and cleanup. Flood cleanup would create large volumes of truck traffic to remove flood debris.	Temporary delays in emergency response time, temporary railroad service disruptions, hauling materials through residential neighborhoods, and school zones, and potential interference with evacuation routes during construction.	Increased traffic on public roadways could potentially cause delays.	Increased traffic on public roadways could potentially cause delays.	Increased traffic on public roadways could potentially cause delays.	Increased traffic on public roadways could potentially cause delays.	Increased traffic on public roadways could potentially cause delays.
Significance	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.
Mitigation	None possible.	Notification and coordination with all potentially affected parties during PED, and again before initiating construction activities. Before the start of each construction season, the primary construction contractors would develop a coordinated construction traffic safety and control plan. The contractor would be required to avoid neighborhoods and school zones to the maximum extent feasible when determining haul routes.	Notification and coordination with all potentially affected parties during PED, and again before initiating construction activities. Before the start of each construction season, the primary construction contractors would develop a coordinated construction traffic safety and control plan. The contractor would be required to avoid neighborhoods and school zones to the maximum extent feasible when determining haul routes.	Notification and coordination with all potentially affected parties during PED, and again before initiating construction activities. Before the start of each construction season, the primary construction contractors would develop a coordinated construction traffic safety and control plan. The contractor would be required to avoid neighborhoods and school zones to the maximum extent feasible when determining haul routes.	Notification and coordination with all potentially affected parties during PED, and again before initiating construction activities. Before the start of each construction season, the primary construction contractors would develop a coordinated construction traffic safety and control plan. The contractor would be required to avoid neighborhoods and school zones to the maximum extent feasible when determining haul routes.	Notification and coordination with all potentially affected parties during PED, and again before initiating construction activities. Before the start of each construction season, the primary construction contractors would develop a coordinated construction traffic safety and control plan. The contractor would be required to avoid neighborhoods and school zones to the maximum extent feasible when determining haul routes.	Notification and coordination with all potentially affected parties during PED, and again before initiating construction activities. Before the start of each construction season, the primary construction contractors would develop a coordinated construction traffic safety and control plan. The contractor would be required to avoid neighborhoods and school zones to the maximum extent feasible when determining haul routes.
Effect With Mitigation	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.

EXHIBIT A

Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Utilities and Public Services							
Effect	In a flood event there could be significant damage to utility systems. Debris from flooded homes and properties could overwhelm solid waste disposal facilities.	Temporary disruptions to utility services possible, particularly during relocation of utilities that penetrate the levee.	Temporary disruptions to utility services possible, particularly during relocation of utilities that penetrate the levee.	Temporary disruptions to utility services possible, particularly during relocation of utilities that penetrate the levee.	Temporary disruptions to utility services possible, particularly during relocation of utilities that penetrate the levee.	Temporary disruptions to utility services possible, particularly during relocation of utilities that penetrate the levee.	Temporary disruptions to utility services possible, particularly during relocation of utilities that penetrate the levee.
Significance	Too speculative for meaningful consideration.	Significant.	Significant.	Significant.	Significant.	Significant.	Significant.
Mitigation	None possible.	Before beginning construction, coordination with utility providers to implement orderly relocation of utilities.	Before beginning construction, coordination with utility providers to implement orderly relocation of utilities.	Before beginning construction, coordination with utility providers to implement orderly relocation of utilities.	Before beginning construction, coordination with utility providers to implement orderly relocation of utilities.	Before beginning construction, coordination with utility providers to implement orderly relocation of utilities.	Before beginning construction, coordination with utility providers to implement orderly relocation of utilities.
Effect With Mitigation	Not applicable.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.

EXHIBIT A

Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Recreation							
Effect	Damage to recreation facilities during flooding and potential loss due to erosion.	Temporary closure of recreation facilities along the San Joaquin River, Calaveras River, Smith Canal, French Camp Slough, Fourteenmile Slough, Fivemile Slough, Tenmile Slough, and Mosher Creek during construction. This includes closure of bike and walking trails, and boat launches. Temporary and long term changes to recreational boating would result from the closure of structures on Smith Canal and Fourteenmile Slough. Long-term impacts to passive recreation as a result of vegetation removal.	Temporary closure of recreation facilities along the San Joaquin River, Calaveras River, Smith Canal, French Camp Slough, Fourteenmile Slough, Fivemile Slough, Tenmile Slough, and Mosher Creek during construction. This includes closure of bike and walking trails, and boat launches. Temporary and long term changes to recreational boating would result from the closure of structures on Smith Canal and Fourteenmile Slough. Long-term impacts to passive recreation as a result of vegetation removal.	Temporary closure of recreation facilities along the San Joaquin River, Calaveras River, Smith Canal, French Camp Slough, Fourteenmile Slough, Fivemile Slough, Tenmile Slough, and Mosher Creek during construction. This includes closure of bike and walking trails, and boat launches. Temporary and long term changes to recreational boating would result from the closure of structures on Smith Canal and Fourteenmile Slough. Long-term impacts to passive recreation as a result of vegetation removal.	Temporary closure of recreation facilities along the San Joaquin River, Calaveras River, Smith Canal, French Camp Slough, Fourteenmile Slough, Fivemile Slough, Tenmile Slough, and Mosher Creek during construction. This includes closure of bike and walking trails, and boat launches. Temporary and long term changes to recreational boating would result from the closure of structures on Smith Canal and Fourteenmile Slough. Long-term impacts to passive recreation as a result of vegetation removal.	Temporary closure of recreation facilities along the San Joaquin River, Calaveras River, Smith Canal, French Camp Slough, Fourteenmile Slough, Fivemile Slough, Tenmile Slough, and Mosher Creek during construction. This includes closure of bike and walking trails, and boat launches. Temporary and long term changes to recreational boating would result from the closure of structures on Smith Canal and Fourteenmile Slough. Long-term impacts to passive recreation as a result of vegetation removal.	Temporary closure of recreation facilities along the San Joaquin River, Calaveras River, Smith Canal, French Camp Slough, Fourteenmile Slough, Fivemile Slough, Tenmile Slough, and Mosher Creek during construction. This includes closure of bike and walking trails, and boat launches. Temporary and long term changes to recreational boating would result from the closure of structures on Smith Canal and Fourteenmile Slough. Long-term impacts to passive recreation as a result of vegetation removal.
Significance	Too speculative for meaningful consideration.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.
Mitigation	None possible.	Notification and coordination with recreation users, boaters, and bike groups. Flaggers, signage, detours, and fencing to notify and control recreation access and traffic around construction sites. Compensatory plantings, as feasible.	Notification and coordination with recreation users, boaters, and bike groups. Flaggers, signage, detours, and fencing to notify and control recreation access and traffic around construction sites. Compensatory plantings, as feasible.	Notification and coordination with recreation users, boaters, and bike groups. Flaggers, signage, detours, and fencing to notify and control recreation access and traffic around construction sites. Compensatory plantings, as feasible.	Notification and coordination with recreation users, boaters, and bike groups. Flaggers, signage, detours, and fencing to notify and control recreation access and traffic around construction sites. Compensatory plantings, as feasible.	Notification and coordination with recreation users, boaters, and bike groups. Flaggers, signage, detours, and fencing to notify and control recreation access and traffic around construction sites. Compensatory plantings, as feasible.	Notification and coordination with recreation users, boaters, and bike groups. Flaggers, signage, detours, and fencing to notify and control recreation access and traffic around construction sites. Compensatory plantings, as feasible.
Effect With Mitigation	Not applicable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.

EXHIBIT A

Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Aesthetics							
Effect	A flood event would damage the visual character in the study area.	Vegetation loss and construction activities would disrupt the existing visual conditions along the levees in North and Central Stockton. Floodwall and closure structure at Smith Canal in Central Stockton.	Vegetation loss and construction activities would disrupt the existing visual conditions along the levees in North and Central Stockton and in RD17. Floodwall and closure structure at Smith Canal in Central Stockton.	Vegetation loss and construction activities would disrupt the existing visual conditions along the levees in North and Central Stockton. Floodwall and closure structure at Smith Canal in Central Stockton.	Vegetation loss and construction activities would disrupt the existing visual conditions along the levees in North and Central Stockton and in RD17. Floodwall and closure structure at Smith Canal in Central Stockton.	Vegetation loss and construction activities would disrupt the existing visual conditions along the levees in North and Central Stockton. Floodwall and closure structure at Smith Canal in Central Stockton.	Vegetation loss and construction activities would disrupt the existing visual conditions along the levees in North and Central Stockton and in RD17. Floodwall and closure structure at Smith Canal in Central Stockton.
Significance	Less than significant.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.
Mitigation	None possible.	If a variance to the Vegetation ETL is approved, fewer trees and shrubs would be removed and some replacement plantings could be provided on-site. Where feasible, appropriate trees and shrubs would be planted on the landside of the levees outside of the 15 foot no vegetation zone. Disturbed areas would be reseeded with native grasses.	If a variance to the Vegetation ETL is approved, fewer trees and shrubs would be removed and some replacement plantings could be provided on-site. Where feasible, appropriate trees and shrubs would be planted on the landside of the levees outside of the 15 foot no vegetation zone. Disturbed areas would be reseeded with native grasses.	If a variance to the Vegetation ETL is approved, fewer trees and shrubs would be removed and some replacement plantings could be provided on-site. Where feasible, appropriate trees and shrubs would be planted on the landside of the levees outside of the 15 foot no vegetation zone. Disturbed areas would be reseeded with native grasses.	If a variance to the Vegetation ETL is approved, fewer trees and shrubs would be removed and some replacement plantings could be provided on-site. Where feasible, appropriate trees and shrubs would be planted on the landside of the levees outside of the 15 foot no vegetation zone. Disturbed areas would be reseeded with native grasses.	If a variance to the Vegetation ETL is approved, fewer trees and shrubs would be removed and some replacement plantings could be provided on-site. Where feasible, appropriate trees and shrubs would be planted on the landside of the levees outside of the 15 foot no vegetation zone. Disturbed areas would be reseeded with native grasses.	If a variance to the Vegetation ETL is approved, fewer trees and shrubs would be removed and some replacement plantings could be provided on-site. Where feasible, appropriate trees and shrubs would be planted on the landside of the levees outside of the 15 foot no vegetation zone. Disturbed areas would be reseeded with native grasses.
Effect With Mitigation	Less than significant.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.

EXHIBIT A

Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Noise							
Effect	Increased noise during flood fighting and reconstruction.	Increased noise and vibration in proximity to sensitive receptors due to construction activities.	Increased noise and vibration in proximity to sensitive receptors due to construction activities.	Increased noise and vibration in proximity to sensitive receptors due to construction activities.	Increased noise and vibration in proximity to sensitive receptors due to construction activities.	Increased noise and vibration in proximity to sensitive receptors due to construction activities.	Increased noise and vibration in proximity to sensitive receptors due to construction activities.
Significance	Less than significant.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.
Mitigation	Not applicable.	Coordination with local residents, compliance with noise ordinances, and BMPs.	Coordination with local residents, compliance with noise ordinances, and BMPs.	Coordination with local residents, compliance with noise ordinances, and BMPs.	Coordination with local residents, compliance with noise ordinances, and BMPs.	Coordination with local residents, compliance with noise ordinances, and BMPs.	Coordination with local residents, compliance with noise ordinances, and BMPs.
Effect With Mitigation	Not applicable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.

EXHIBIT A

Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Public Health and Environmental Hazards							
Effect	Flooding could release potential household and industrial chemicals and cause damage to sewage treatment plants.	Potential release of hazardous chemicals used on the construction site. Encountering HTRW sites during construction.	Potential release of hazardous chemicals used on the construction site. Encountering HTRW sites during construction.	Potential release of hazardous chemicals used on the construction site. Encountering HTRW sites during construction.	Potential release of hazardous chemicals used on the construction site. Encountering HTRW sites during construction.	Potential release of hazardous chemicals used on the construction site. Encountering HTRW sites during construction.	Potential release of hazardous chemicals used on the construction site. Encountering HTRW sites during construction.
Significance	Too speculative for meaningful consideration.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.
Mitigation	None possible.	Implement a SWPPP, BSSCP, and SPCCP to avoid accidental spills and releases into the environment. Known HTRW sites within the construction footprint would be removed and properly disposed of prior to construction. HTRW sites encountered during construction would be removed and properly disposed of. Borrow material would be tested prior to use to ensure that no contaminated soils are used for this project.	Implement a SWPPP, BSSCP, and SPCCP to avoid accidental spills and releases into the environment. Known HTRW sites within the construction footprint would be removed and properly disposed of prior to construction. HTRW sites encountered during construction would be removed and properly disposed of. Borrow material would be tested prior to use to ensure that no contaminated soils are used for this project.	Implement a SWPPP, BSSCP, and SPCCP to avoid accidental spills and releases into the environment. Known HTRW sites within the construction footprint would be removed and properly disposed of prior to construction. HTRW sites encountered during construction would be removed and properly disposed of. Borrow material would be tested prior to use to ensure that no contaminated soils are used for this project.	Implement a SWPPP, BSSCP, and SPCCP to avoid accidental spills and releases into the environment. Known HTRW sites within the construction footprint would be removed and properly disposed of prior to construction. HTRW sites encountered during construction would be removed and properly disposed of. Borrow material would be tested prior to use to ensure that no contaminated soils are used for this project.	Implement a SWPPP, BSSCP, and SPCCP to avoid accidental spills and releases into the environment. Known HTRW sites within the construction footprint would be removed and properly disposed of prior to construction. HTRW sites encountered during construction would be removed and properly disposed of. Borrow material would be tested prior to use to ensure that no contaminated soils are used for this project.	Implement a SWPPP, BSSCP, and SPCCP to avoid accidental spills and releases into the environment. Known HTRW sites within the construction footprint would be removed and properly disposed of prior to construction. HTRW sites encountered during construction would be removed and properly disposed of. Borrow material would be tested prior to use to ensure that no contaminated soils are used for this project.
Effect With Mitigation	Not applicable.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.	Less than significant.

EXHIBIT A

Resource	Alternative 1 No Action	Alternative 7a	Alternative 7b	Alternative 8a	Alternative 8b	Alternative 9a	Alternative 9b
Cultural Resources							
Effect	Damage to historic and prehistoric resources during a flood event.	Adverse effects to cultural resource and to historic properties from construction of levee improvements, new levees, seepage berms, and closure structures.	Adverse effects to cultural resource and to historic properties from construction of levee improvements, new levees, seepage berms, and closure structures.	Adverse effects to cultural resource and to historic properties from construction of levee improvements, new levees, seepage berms, and closure structures.	Adverse effects to cultural resource and to historic properties from construction of levee improvements, new levees, seepage berms, and closure structures.	Adverse effects to cultural resource and to historic properties from construction of levee improvements, new levees, seepage berms, closure structures, and a flood bypass.	Adverse effects to cultural resource and to historic properties from construction of levee improvements, new levees, seepage berms, closure structures, and a flood bypass.
Significance	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.
Mitigation	None possible.	Preparation and implementation of a Programmatic Agreement, Historic Properties Management Plan, and Historic Properties Treatment Plans.	Preparation and implementation of a Programmatic Agreement, Historic Properties Management Plan, and Historic Properties Treatment Plans.	Preparation and implementation of a Programmatic Agreement, Historic Properties Management Plan, and Historic Properties Treatment Plans.	Preparation and implementation of a Programmatic Agreement, Historic Properties Management Plan, and Historic Properties Treatment Plans.	Preparation and implementation of a Programmatic Agreement, Historic Properties Management Plan, and Historic Properties Treatment Plans.	Preparation and implementation of a Programmatic Agreement, Historic Properties Management Plan, and Historic Properties Treatment Plans.
Effect With Mitigation	Not applicable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.	Significant and unavoidable.

Exhibit B

Exhibit B

Mitigation Monitoring and Reporting Program

This chapter is prepared in accordance with CEQA Guidelines Section 15097, which requires adoption of a program for monitoring or reporting on the project revisions and measures imposed to mitigate or avoid significant environmental effects.

This chapter summarizes in tabular format the mitigation measures that would be integrated into the Lower San Joaquin River Final Feasibility Report Final EIR/EIS to reduce the severity of potentially significant impacts. The chapter also describes the party responsible for mitigation measure implementation, timing of implementation, and the party responsible for ensuring compliance. The table that follows consists of four column headings which are defined as follows:

- **Mitigation Measure:** This column contains the mitigation measures to be implemented.
- **Implementation Responsibility:** This column contains an assignment of responsibility for implementing the mitigation measures.
- **Implementation Timing:** This column provides a general schedule for conducting each monitoring and reporting task, identifying where appropriate both the timing and the frequency of the action.
- **Monitoring/Oversight Responsibility:** This column contains an assignment of responsibility for the monitoring and reporting tasks

Mitigation Measure	Implementation Responsibility	Implementation Timing	Monitoring/Oversight Responsibility
5.5 Water Quality			
<p>Avoidance and Minimization Measures (BMPs)</p> <ul style="list-style-type: none"> • The contractor would prepare a spill control plan and a SWPPP prior to initiation of construction in accordance with guidance from the RWQCB, Central Valley Region. These plans would be reviewed and approved by USACE before construction begins. • Implement appropriate measures to prevent debris, soil, rock or other material from entering the water. Use a water truck or other appropriate measures to control dust on haul roads, construction areas and stockpiles. • Implement appropriate measures for handling and disposing of concrete and concrete washout water. • Properly dispose of oil or other liquids. • Fuel and maintain vehicles in a specified area that is designed to capture spills. This area cannot be near any ditch, stream or other body of water or feature that may convey water. • Fuels and hazardous materials would not be stored on site. • Inspect and maintain vehicles and equipment to prevent dripping oil and other fluids. • Schedule construction to avoid the rainy season as much as possible. If rains are forecasted during construction, erosion control measures would be implemented as described in the RWQCB Erosion and Sediment Control Field Manual. • Maintain sediment and erosion control measures during construction. Inspect the control measures before, during and after a rain event. • Train construction workers in SWPPP and how to respond to, control, contain and clean up spills. • Revegetate disturbed areas in a timely manner to control erosion. • Materials will be covered and protected from wind, rain and runoff to avoid unwarranted dispersal. • Construct culverts at Moreing Road to slightly reduce residence time at the upstream end of Atherton Cove (by approximately 0.2 days). • Refine operational criteria to ensure that desired FRM benefits are achieved while avoiding degradation of water quality behind the closure structures. 	<p>The project sponsor or its contractor</p>	<p>Prior to, during, and following construction; and During PED</p>	<p>Project sponsor or its contractor, and USACE</p>
5.6 Groundwater			
<p>Potential impacts to groundwater that could result from construction of the cutoff wall would be mitigated through development and implementation of a BSSCP, also known as a frac-out plan. A BSSCP is typically developed for activities that involve the use of bentonite materials. It is intended to minimize the potential for a frac-out associated with excavation and tunneling activities, provide for timely detection of frac-outs and ensure a "minimum-effect" response in the event of a frac-out and release of excavation fluid.</p>	<p>The project sponsor or its contractor</p>	<p>Prior to and during construction</p>	<p>Project sponsor or its contractor</p>

Mitigation Measure	Implementation Responsibility	Implementation Timing	Monitoring/Oversight Responsibility
5.7 Wetlands and Other Waters of the United States			
<p>Before construction, a qualified biologist would survey the project area and all wetlands and other waters of the U.S. would be subject to a formal jurisdictional determination and delineation to determine the extent and value of the wetlands affected. All delineated areas would be clearly marked and, to the extent feasible, avoided. Impacts would be minimized by establishing a buffer around wetlands and waterways. Construction worker awareness training would be conducted to ensure that personnel working the site know the location of and protocols for, working around sensitive habitat. Toe drains and local irrigation and drainage ditches would be relocated and restored with similar wetland habitat functions. Compensation for permanent impacts to wetland and open water habitats would include the purchase of credits from an approved mitigation bank. The USACE is proposing to purchase 2 acres of bank credits for permanent impacts to open water habitat and 21.5 acres of bank credits for permanent impacts to wetland habitats. In addition, relocated landside levee toe drains and drainage ditches would be restored following construction to their pre-project condition.</p>	<p>The project sponsor's qualified biologist, or its qualified biologist contractor</p>	<p>Prior to and during construction</p>	<p>Project sponsor or its contractor</p>
5.8 Air Quality			
<p>The Lead Agencies shall either:</p> <ul style="list-style-type: none"> Require the use of off-road equipment that meets or exceeds USEPA or California Air Resources Board (CARB) Tier 3 off-road emission standards for all off-road vehicles greater than 25 horsepower and operating for more than 20 total hours over the entire duration of construction activities. Prior to issuance of a construction permit, the prime contractor(s) shall prepare and submit a Construction Emissions Minimization Plan (Plan) to the Lead Agencies for review and approval. The Plan shall include estimates of the construction timeline by phase with a description of each piece of equipment required for every construction phase. Equipment descriptions and information shall include: equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, engine serial number and expected fuel usage and hours of operation. The Plan shall be kept by the Lead Agencies and made available for review by any persons requesting it. Quarterly reports shall be submitted by the prime contractor(s) to the Lead Agencies indicating the construction phase and equipment information used during each phase for the previous quarter; <p><u>or</u></p> <ul style="list-style-type: none"> Enter into a Verified Emissions Reduction Agreement (VERA) with SJVAPCD. The VERA would require payment of a fee to SJVAPCD that would be used to purchase NOx emission reductions to offset all NOx emissions during years when the Project's unmitigated NOx emissions exceed 10 tons. The VERA will be entered into prior to initiating the project and posted on the Lead Agencies website. The NOx offsets developed by the fee will be provided to the Lead Agencies and posted on the Lead Agencies website. The information shall be posted in a location that is easy to access by the public and must remain on the website for 1 full year after all construction in completed. 	<p>The project sponsor or its contractor responsible for plan development and implementation; the lead agencies responsible for plan review and approval</p> <p>Project sponsor and SJVAPDC enter into agreement. Lead agencies post agreement on their respective websites.</p>	<p>Prior to and during construction</p> <p>Prior to project initiation</p>	<p>The project sponsor or its contractor</p> <p><u>or</u></p> <p>San Joaquin Area Flood Control Agency</p> <p>Project sponsor and SJVAPDC</p>

Mitigation Measure	Implementation Responsibility	Implementation Timing	Monitoring/Oversight Responsibility
5.9 Vegetation			
<p><u>Retain a Biological Monitor</u></p> <p>A qualified biologist would monitor construction activities adjacent to sensitive biological resources (e.g., special-status species, riparian habitat, wetlands, elderberry shrubs), as needed. The biologist would assist the construction crew, as needed, to comply with all project implementation restrictions and guidelines. In addition, the biologist would be responsible for ensuring that construction barriers fencing is maintained adjacent to sensitive biological resources.</p>	Project sponsor	Prior to construction	Project sponsor, USFWS, CDFW, and NMFS
<p><u>Install Exclusion Fencing along the Construction Work Area Perimeter and Implement General Measures to Avoid Effects on Sensitive Natural Communities and Special-Status Species</u></p> <p>To clearly demarcate the project boundary and protect sensitive natural communities, temporary exclusion fencing would be installed around the project boundaries (including access roads, staging areas, etc.) 1 week prior to the start of construction activities. The temporary fencing would be continuously maintenance until all construction activities were completed so that construction equipment would be confined to the designated work areas, including any off site mitigation areas and access thereto. The exclusion fencing would be removed only after construction for the year is entirely completed.</p> <p>Exclusionary construction fencing and explanatory signage would be placed around the perimeter of sensitive vegetation communities that could be affected by construction activities throughout the period during which such effects occur. Signage would explain the nature of the sensitive resource and warn that no effect on the community is allowed. Where feasible, the fencing would include a buffer zone of at least 20 feet between the resource and construction activities. All exclusionary fencing would be maintained in good condition throughout the construction period.</p>	The project sponsor's qualified biologist, or its qualified biologist contractor	1 week prior to construction	Project sponsor
<p><u>Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel</u></p> <p>Before initiating any work in the project area, including grading, a qualified biologist would conduct mandatory contractor/worker awareness training for all construction personnel. It would be provided to brief them on the need to avoid effects on sensitive biological resources (e.g., riparian habitat, special-status species, wetlands and other sensitive biological communities) and the penalties for not complying with permit requirements. The biologist would inform all construction personnel about the life history of special status species with potential for occurrence on the site, the importance of maintaining habitat and the terms and conditions of the BO or other authorizing document. Proof of this instruction would be submitted to USFWS and CDFW.</p> <p>The training would also cover the restrictions and guidelines that must be followed by all construction personnel to reduce or avoid effects on sensitive biological communities and special-status species during project construction. The crew leader would be responsible for ensuring that crew members adhere to the guidelines and restrictions. Educational training would be conducted for new personnel as they are brought on the job. General</p>	The project sponsor's qualified biologist, or its qualified biologist contractor	Prior to construction	USFWS and CDFW

Mitigation Measure	Implementation Responsibility	Implementation Timing	Monitoring/Oversight Responsibility
5.9 Vegetation (continued)			
<p>restrictions and guidelines for vegetation and wildlife that must be followed by construction personnel are listed.</p> <ul style="list-style-type: none"> Project-related vehicles would observe the posted speed limit on hard-surfaced roads and a 10-mile-per-hour speed limit on unpaved roads during travel in the project site. Project-related vehicles and construction equipment would restrict off-road travel to the designated construction area. To prevent possible resource damage from hazardous materials such as motor oil or gasoline, construction personnel would not service vehicles or construction equipment outside designated staging areas <p>Remediation After construction, structural FRM features and easement areas would be reseeded with native grasses and herbs and/or planted with appropriate herbaceous riparian and wetland species.</p> <p>Compensation Vegetation impacts that cannot be mitigated through avoidance, minimization or remediation will be mitigated through compensation. A 14-acre mitigation site has been identified at the setback area in the Delta Front portion of the study area. This site would be planted with primarily VELB compensation (as discussed in Section 5.12) and associated riparian habitat. Additional compensation required for riparian, SRA, wetland and open water habitats would be accomplished through the purchase of credits at a mitigation bank. More information regarding proposed compensation can be found in the Habitat Mitigation, Monitoring and Adaptive Management Plan (Environmental Addendum). Where possible, on site mitigation areas would be the preferred action. USACE would seek opportunities to increase on site mitigation options during the design phase of the project, in accordance with the terms and conditions of the NMFS BO. Mitigation site selection would avoid areas where future disturbance or maintenance is likely. A revegetation plan would be prepared by a qualified biologist or landscape architect and reviewed by the appropriate agencies. The revegetation plan would specify the planting stock appropriate for each riparian cover type and each mitigation site, ensuring the use of genetic stock from the project area and would employ the most successful techniques available at the time of planting. The plantings would be maintained and monitored, as necessary, for 3 to 5 years, including weed removal, irrigation and herbivory protection. USACE would submit annual monitoring reports of survival to the regulatory agencies including USFWS, NMFS and CDFW. Replanting would be necessary if success criteria are not met and replacement plants would subsequently be monitored and maintained to meet the success criteria. The mitigation would be considered successful when the plants meet the success criteria, the vegetation no longer requires active management and is arranged in groups that, when mature, replicate the area, natural structure and species composition of similar plant communities in the region.</p>	<p>The project sponsor's qualified biologist, or its qualified biologist contractor responsible for revegetation plan</p>	<p>3 to 5 years following construction</p>	<p>USACE would submit annual reports to USFWS, NMFS, and CDFW</p>

Mitigation Measure	Implementation Responsibility	Implementation Timing	Monitoring/Oversight Responsibility
5.10 Wildlife			
<p>The same mitigation measures apply to all of the action alternatives, although the amount of compensatory mitigation would vary based upon the amount and quality of habitat temporarily and permanently affected by the project. Measures to avoid potential impacts to special status species are described in Section 5.12 and would also benefit more common wildlife. Mitigation described in Section 5.9, VEGETATION, would also avoid, minimize, rectify and/or compensate for potential impacts to wildlife. If a vegetation variance was approved and some compensatory mitigation was accomplished on site, then short- and long-term impacts to wildlife habitat would be greatly reduced. However, because new plantings would take many years to establish, a temporal loss would remain. In addition, even with a vegetation variance, some areas that currently support trees and shrubs would be maintained permanently in herbaceous vegetation after construction.</p>	<p>The project sponsor's qualified biologist, or its qualified biologist contractor</p>	<p>Prior to, during, and following construction</p>	<p>USACE, USFWS, CDFW, and NMFS</p>
5.11 Fisheries			
<p>Additional mitigation associated with impacts to fisheries is identified:</p> <ul style="list-style-type: none"> In-water construction not associated with the closure structures would be restricted to the August 1 through November 30 work window, during periods of low fish abundance and outside the principal spawning and migration season. The typical construction season would generally correspond to the dry season, but construction may occur outside the limits of the dry season, only as allowed by applicable permit conditions. Due to the deleterious effects of numerous chemicals on native resident fish used in construction, if a hazardous materials spill does occur, a detailed analysis will be performed immediately by a registered environmental assessor or professional engineer to identify the likely cause and extent of contamination. This analysis will conform to American Society for Testing and Materials standards and will include recommendations for reducing or eliminating the source or mechanisms of contamination. Based on this analysis, USACE and its contractors would select and implement measures to control contamination, with a performance standard that surface water quality and groundwater quality must be returned to baseline conditions. During design feasibility studies for the operation and maintenance of the Mormon Channel bypass, the parameters would be to avoid or minimize stranding in the channel after flow events and flushing of upstream migrating adult fish down the channel from the Stockton Diverting Canal. Designs would include but not be limited to either an adult fish passage barrier at the confluence of the Stockton DWSC or for fish passage facilities at the Stockton Diverting Canal. <p>The following measures would be implemented during construction of the proposed Fourteen-mile Slough and Smith Canal closure structures to reduce potential adverse effects on ESA listed species, other native fish species and their habitats.</p> <ul style="list-style-type: none"> All in water construction activities would be limited to the period of June 1 through October 31 to avoid the primary migration periods of listed salmonids. 	<p>The project sponsor or its contractor</p>	<p>Prior to, during and following construction</p>	<p>The project sponsor or its contractor</p>

Mitigation Measure	Implementation Responsibility	Implementation Timing	Monitoring/Oversight Responsibility
5.11 Fisheries (cont.)			
<ul style="list-style-type: none"> In-water pile driving would be restricted to the period of July 1 through September 30 to avoid or minimize exposure of adults and juvenile salmonids to underwater pile-driving sounds. All pile driving would be conducted by a vibratory pile driver to minimize underwater sound levels during pile driving operations. Pile driving would be conducted by barge to minimize disturbance of riparian habitat. 			
5.13 Socioeconomic and Environmental Justice			
<p>Project planning for all of the action alternatives has included attention to avoiding and minimizing potential impacts to adjacent properties to the extent feasible in consideration of the FRM goals of the study. Potential significant adverse impacts to adjacent properties would be mitigated through appropriate compensation. If relocation of people or their homes are required, they would be compensated under the Federal Relocation Act.</p>	The project sponsor and its contractors	Prior to and during construction.	SJAFCA
5.15 Transportation			
<p>Before the start of each construction season, the primary contractors for engineering and construction shall develop a coordinated construction traffic safety and control plan to minimize the simultaneous use of roadways by different construction contractors for material hauling and equipment delivery to the extent feasible and to avoid and minimize potential traffic hazards on local roadways during construction. Items (a) through (f) of this mitigation measure shall be integrated as terms of the construction contracts.</p> <p>a) The plan shall outline phasing of activities and the use of multiple routes to and from offsite locations to minimize the daily amount of traffic on individual roadways.</p> <p>b) The construction contractors shall develop traffic safety and control plans for the local roadways that would be affected by construction traffic. Before the initiation of construction-related activity involving high volumes of traffic, the plan shall be submitted for review by the agency of local jurisdiction (San Joaquin County, City of Stockton or Caltrans [if applicable]) that has responsibility for roadway safety at and between project sites. The contractor would train construction personnel in appropriate safety measures as described in the plan and shall implement the plan. The plan would include the prescribed locations for staging equipment and parking trucks and vehicles. Provisions would be made for overnight parking of haul trucks to avoid causing traffic or circulation congestion. The plan shall call for the following elements:</p> <ul style="list-style-type: none"> posting warnings about the potential presence of slow-moving vehicles; using traffic control personnel when appropriate; and placing and maintaining barriers and installing traffic control devices necessary for safety, as specified in Caltrans's Manual of Traffic Controls for Construction and Maintenance Work Zones and in accordance with city/county requirements. 	The project sponsor and its contractors for engineering and construction	Prior to, and during construction.	The project sponsor and the agency of local jurisdiction (i.e., San Joaquin County, City of Stockton, or Caltrans [if applicable])

Mitigation Measure	Implementation Responsibility	Implementation Timing	Monitoring/Oversight Responsibility
5.15 Transportation (cont.)			
<p>c) All operations would limit and expeditiously remove, as necessary, the accumulation of project generated mud or dirt from adjacent public streets at least once every 24 hours if substantial volumes of soil are carried onto adjacent paved public roadways during construction.</p> <p>d) If needed to comply with Caltrans requirements, a transportation management plan would be prepared and submitted to Caltrans to cover any points of access from the State highway system for haul trucks and other construction equipment.</p> <p>e) Before the start of the first construction season, the project proponent would enter into maintenance agreements with San Joaquin County and the City of Stockton to address maintenance and repair of affected roadways resulting from increased truck traffic. The agreements would ensure that the affected roadways are repaired to a level that is equivalent to their pre-project condition.</p> <p>f) Before project construction begins, the contractor would provide notification of project construction to all appropriate emergency service providers in San Joaquin County, Stockton, Lathrop and Manteca and shall coordinate with providers throughout the construction period to ensure that emergency access through construction areas is maintained.</p> <p>The contractor would be required to avoid neighborhoods and school zones to the maximum extent feasible when determining haul routes. When possible, hauling in school zones would be limited to the period of summer breaks to avoid noise and traffic impacts to the schools. Any damage to residential roadways during construction would be mitigated per the requirements outlined in the traffic safety and control plan.</p> <p>Alternatives 8a and 8b mitigation measures shall be implemented as described for Alternatives 7a and 7b, except that they would be expanded to include additional lands and the jurisdictions along the Stockton Diverting Canal. During preliminary engineering and design, the project proponent shall provide notification of project construction to all appropriate railroads in the project area, and shall coordinate with all railroads to minimize freight and passenger service disruptions.</p> <p>Alternatives 9a and 9b mitigation measures shall be implemented as described for Alternative 7a and Alternative 7b, except that they would be expanded to include additional lands and the jurisdictions along the Old Mormon Slough. Prior to construction, USACE would coordinate with Caltrans and the City of Stockton to determine detour routes for all proposed bridge replacements. Public notification would occur prior to all bridge closures during construction.</p>			

Mitigation Measure	Implementation Responsibility	Implementation Timing	Monitoring/Oversight Responsibility
5.16 Utilities and Public Services			
<p>Before beginning construction, coordination with utility providers to implement orderly relocation of utilities that need to be removed or relocated would occur. Coordination would include the following:</p> <ul style="list-style-type: none"> • Notification of any potential interruptions in service shall be provided to the appropriate agencies and affected landowners. • Before the start of construction, utility locations shall be verified through field surveys and the use of Underground Service Alert services. Any buried utility lines shall be clearly marked where construction activities would take place and on the construction specifications before any earthmoving activities begin. • Before the start of construction, the contractor would be required to coordinate with the local municipality and acquire any applicable permits prior to use of municipal water for construction. • Before the start of construction, a response plan shall be prepared to address potential accidental damage to a utility line. The plan shall identify chain of command rules for notification of authorities and appropriate actions and responsibilities to ensure the public and worker safety. Worker education training in response to such situations shall be conducted by the contractor. The response plan shall be implemented by the contractor during construction activities. • Utility relocations shall be staged to minimize interruptions in service. 	The project sponsor or its contractor	Prior to and during construction	The project sponsor
5.17 Recreation			
Impacts resulting from the loss of vegetation would be mitigated on site, where feasible, through additional plantings in existing parks. Approaches to mitigate for loss of vegetation are in Section 5.9, above.	The project sponsor's qualified biologist, or its qualified biologist contractor	During and following construction	USACE, USFWS, CDFW, and NMFS
5.19 Noise			
<ul style="list-style-type: none"> • The contractor shall prepare a construction noise and vibration plan prior to construction. • The contractor shall employ vibration-reducing construction practices. • The contractor shall employ noise-reducing construction practices. • All construction equipment shall be equipped with noise-reduction devices such as mufflers to minimize construction noise and all internal combustion engines shall be equipped with exhaust and intake silencers in accordance with manufacturers' specifications. • Equipment that is quieter than standard shall be used, including electrically powered equipment instead of internal combustion equipment, where use of such equipment is a readily available substitute that accomplishes project tasks in the same manner as internal combustion equipment. • The use of bells, whistles, alarms and horns shall be restricted to safety warning purposes only. 	The project sponsor or its contractor	Prior to and during construction	The project sponsor or its contractor

Mitigation Measure	Implementation Responsibility	Implementation Timing	Monitoring/Oversight Responsibility
5.19 Noise (cont.)			
<ul style="list-style-type: none"> Noise-reducing enclosures shall be used around stationary noise-generating equipment (e.g., compressors and generators at slurry pond locations). Mobile and fixed construction equipment (e.g., compressors and generators), construction staging and stockpiling areas and construction vehicle routes shall be located at the most distant point feasible from noise-sensitive receptors. When noise-sensitive uses subject to prolonged construction noise and are located within 740 feet of construction in Stockton, Lathrop or unincorporated areas of San Joaquin county or within 1140 feet of construction in Manteca, noise attenuating buffers such as structures, truck trailers or soil piles shall be located between noise generation sources and sensitive receptors. Before construction activity begins within 740 feet of one or more residences or businesses (or within 1140 feet of residences or businesses in Manteca), the local sponsors (SJAFCA) shall provide written notification to the potentially affected residents or business owners, identifying the type, duration and frequency of construction activities. A noise disturbance coordinator shall be designated and contact information shall be provided in the notices and posted near the project area in a conspicuous location that it is clearly visible to nearby receptors most likely to be disturbed. The coordinator shall manage complaints and concerns resulting from noise-generating activities. The severity of the noise concern would be assessed by the coordinator and if necessary, evaluated by a qualified noise control engineer. The project proponent (USACE, CVFPB and/or SJAFCA) shall ensure that all heavy trucks are properly maintained and equipped with noise control (e.g., muffler) devices in accordance with manufacturers' specifications at each work site during project construction to minimize construction traffic noise effects on sensitive receptors. Before haul truck trips are initiated during construction season on roads within 90 feet of residences located along haul routes, written notification shall be provided to potentially affected residents identifying the hours and frequency of haul truck trips. Notifications provide contact information for a noise disturbance coordinator identified above and also identify a mechanism for residents to register complaints with the appropriate jurisdiction if haul truck noise levels are overly intrusive or occur outside the exempt daytime hours for the applicable jurisdiction. 			
5.20 Public Health and Environmental Hazards			
<p>If significant time has elapsed between approval of this document and construction, additional investigations should be done to reduce risk. If construction activities would occur in close proximity to sites identified in the existing conditions section or in the Phase I Site Assessment, a Phase II Environmental Site Assessment should also be conducted. This would further reduce the risk of exposure to workers and the public during construction and assist in the remediation planning. If necessary, the assessment would include an analysis of soil or groundwater samples for the potential contamination sites that have not yet been covered by previous investigations before construction activities begin. Recommendations in Phase I and Phase II Environmental Site Assessments to address any contamination that is found would be implemented before initiating ground-disturbing activities.</p>	<p>The project sponsor or its contractor</p>	<p>Prior to and during construction</p>	<p>Project sponsor</p>

Mitigation Measure	Implementation Responsibility	Implementation Timing	Monitoring/Oversight Responsibility
5.20 Public Health and Environmental Hazards (cont.)			
<p>In addition, the following measures would be implemented before ground-disturbing or demolition activities begin, in order to reduce health hazards associated with potential exposure to hazardous substances:</p> <ul style="list-style-type: none"> • Complete a Phase I Site Assessment prior to completing preconstruction designs and initiating construction. • Prepare a site plan that identifies any necessary remediation activities appropriate for proposed land uses, including excavation and removal of contaminated soils and redistribution of clean fill material on the project site. The plan would include measures that ensure the safe transport, use and disposal of contaminated soil and building debris removed from the site, as well as any other hazardous materials. In the event that contaminated groundwater is encountered during site excavation activities, the contractor would report the contamination to the appropriate regulatory agencies, dewater the excavated area and treat the contaminated groundwater to remove contaminants before discharge into the sanitary sewer system. The contractor would be required to comply with the plan and applicable Federal, State and local laws. • Notify appropriate Federal, State and local agencies if evidence of previously undiscovered soil or groundwater contamination is encountered during construction. Any contaminated areas would be cleaned up in accordance with the recommendations of the Central Valley RWQCB, California DTSC or other appropriate Federal, State or local regulatory agencies. • A worker health and safety plan would be prepared before the start of construction that identifies, at a minimum, all contaminants that could be encountered during construction; all appropriate worker, public health and environmental protection equipment and procedures to be used during project activities; emergency response procedures; the most direct route to the nearest hospitals; and a Site Safety Officer. The plan would describe actions to be taken if hazardous materials are encountered on-site, including protocols for handling hazardous materials, preventing their spread and emergency procedures to be taken in the event of a spill. • Retain licensed contractors to remove all underground storage tanks. 			
5.21 Cultural Resources			
<p>USACE began consultation concerning a PA with SHPO and Native American Tribes (Environmental Addendum). A fully executed PA will be in place prior to project implementation. Specific mitigation measures would be developed in accordance with the PA to address any adverse effects on historic properties through the development of an HPTP. The HPTP would guide the level of data recovery, mitigation or actions taken to resolve adverse effects to the historic property. The main requirements of the contents of a research design and HPTP are located in the PA.</p> <p>Depending on the nature of the adverse effect, actions to protect or mitigate for adverse effects to historic properties may include the following:</p>	The project sponsor or its contractor	Prior to and during construction	Project sponsor

Mitigation Measure	Implementation Responsibility	Implementation Timing	Monitoring/Oversight Responsibility
5.21 Cultural Resources (cont.)			
<ul style="list-style-type: none"> • Redesigning the project to avoid historic properties or sensitive areas. • Conducting data recovery excavations of archaeological sites that cannot be avoided or are discovered during construction, based on an approved HPTP. • Monitoring all ground disturbing construction activities in areas where buried resources are anticipated. • Surveying and protecting exposed inundated cultural deposits. • Protecting exposed archaeological sites from vandalism and erosion with fencing and revegetation or capping sites in an approved manner with appropriate material. • Preparing and implementing an inadvertent discovery plan. • If previously undiscovered resources are identified during an undertaking, suspend work while the resource is evaluated and mitigated to avoid any further impact. 			

Exhibit B

TS_30_L Mitigation Monitoring and Reporting Program

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure	Implementing Responsibility	Monitoring Responsibility	Timing	Verification of Compliance (Initials and Date)
Aesthetics				
Mitigation Measure 3.6-16 (See text under Impact 3.6-2)	USACE	USACE	Prior to and during construction activities	
Mitigation Measure 3.6-17 (See text under Impact 3.6-2)				
Mitigation Measure 3.6-18 (See text under Impact 3.6-2)				
Mitigation Measure 3.6-19 (See text under Impact 3.6-2)				
Air Quality and Greenhouse Gas Emissions				
<p>Mitigation Measure 3.2.2-1: Reduce Construction-Related NO_x Emissions. The mitigation measure for Alternative 7a outlined in Section 5.8.10 of the 2018 LSJR FR/EIS/EIR shall be applied to the Modified Project:</p> <ul style="list-style-type: none"> USACE shall require the use of off-road equipment that meets or exceeds USEPA or California Air Resources Board CARB Tier 4 off-road emission standards for all off-road vehicles greater than 25 horsepower and operating for more than 20 total hours over the entire duration of construction activities. Prior to issuance of a construction permit, the prime contractor(s) shall prepare and submit a Construction Emissions Minimization Plan (Plan) to USACE for review and approval. The Plan shall include estimates of the construction timeline by phase with a description of each piece of equipment required for every construction phase. Equipment descriptions and information shall include: equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, engine serial number and expected fuel usage and hours of operation. The Plan shall be kept by USACE and made available for review by any persons requesting it. Quarterly reports shall be submitted by the prime contractor(s) to USACE indicating the construction phase and equipment information used during each phase for the previous quarter. <u>Prior to construction, USACE will obtain applicable permit(s) from the SJVAPCD. USACE and SJAFCA would coordinate with the SJVAPCD to ensure compliance with all District rules that may apply to the construction of TS30L and its associated mitigation site, including but not limited to District Rule 9510, District Regulation VII, and District Rule 4641.</u> 	USACE	USACE	Prior to and during construction activities	
Hazards, Hazardous Materials, and Public Safety				
<p>Mitigation Measure 3.2.4-1: Reduce Hazards Associated with Potential Exposure to Hazardous Substances. The mitigation measures for Alternative 7a outlined in Section 5.20.10 of the 2018 LSJR FR/EIS/EIR have been slightly modified and shall be applied to the Modified Project:</p> <ul style="list-style-type: none"> The following measures would be implemented before ground-disturbing or demolition activities begin, in order to reduce health hazards associated with potential exposure to hazardous substances: <ul style="list-style-type: none"> Complete a Phase I Environmental Site Assessment (ESA) prior to completing preconstruction designs and initiating construction. Where construction activities would 	USACE	USACE	Prior to construction activities	

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure	Implementing Responsibility	Monitoring Responsibility	Timing	Verification of Compliance (Initials and Date)
<p>occur in close proximity to sites identified as Recognized Environmental Conditions in the Phase I ESA, a Phase II site investigation will also be conducted.</p> <ul style="list-style-type: none"> ○ Prepare a site plan that identifies any necessary remediation activities appropriate for proposed land uses, including excavation and removal of contaminated soils and redistribution of clean fill material on the project site. The plan would include measures that ensure the safe transport, use and disposal of contaminated soil and building debris removed from the site, as well as any other hazardous materials. In the event that contaminated groundwater is encountered during site excavation activities, the 				
Hazards, Hazardous Materials, and Public Safety (cont.)				
<p>contractor would report the contamination to the appropriate regulatory agencies, dewater the excavated area and treat the contaminated groundwater to remove contaminants before discharge into the sanitary sewer system. The contractor would be required to comply with the plan and applicable Federal, State and local laws.</p> <ul style="list-style-type: none"> ○ Notify appropriate Federal, State and local agencies if evidence of previously undiscovered soil or groundwater contamination is encountered during construction. Any contaminated areas would be cleaned up in accordance with the recommendations of the Central Valley Regional Water Quality Control Board (Regional Board), California DTSC or other appropriate Federal, State or local regulatory agencies. ○ A worker health and safety plan would be prepared before the start of construction that identifies, at a minimum, all contaminants that could be encountered during construction; all appropriate worker, public health and environmental protection equipment and procedures to be used during project activities; emergency response procedures; the most direct route to the nearest hospitals; and a Site Safety Officer. The plan would describe actions to be taken if hazardous materials are encountered on-site, including protocols for handling hazardous materials, preventing their spread and emergency procedures to be taken in the event of a spill. ○ Retain licensed contractors to remove all underground storage tanks. 				
Water Quality				
<p>Mitigation Measure 3.2.6-1: Water Quality Avoidance and Minimization Measures. The mitigation measures for Alternative 7a outlined in Section 5.5.10 of the 2018 LSJR FR/EIS/EIR shall be applied to the Modified Project in addition to all requirements of the SWPPP, BSSCP, and SPCCP:</p> <ul style="list-style-type: none"> • The contractor would prepare a spill control plan and a SWPPP prior to initiation of construction in accordance with guidance from the Regional Board, Central Valley Region. These plans would be reviewed and approved by USACE before construction begins. • Implement appropriate measures to prevent debris, soil, rock, or other material from entering the water. Use vacuum sweepers or other appropriate measures to control dust on haul roads, construction areas and stockpiles. 	USACE	USACE	Prior to and during construction activities	

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Mitigation Measure	Implementing Responsibility	Monitoring Responsibility	Timing	Verification of Compliance (Initials and Date)
<ul style="list-style-type: none"> • Implement appropriate measures for handling and disposing of concrete and concrete washout water. • Properly dispose of oil or other liquids. • Fuel and maintain vehicles in a specified area that is designed to capture spills. This area cannot be near any ditch, stream or other body of water or feature that may convey water. • Fuels and hazardous materials would not be stored on site. • Inspect and maintain vehicles and equipment to prevent dripping oil and other fluids. 				
Water Quality (cont.)				
<ul style="list-style-type: none"> • Schedule construction to avoid the rainy season as much as possible. If rains are forecasted during construction, erosion control measures would be implemented as described in the Regional Board Erosion and Sediment Control Field Manual. • Maintain sediment and erosion control measures during construction. Inspect the control measures before, during and after a rain event. • Train construction workers in SWPPP and how to respond to, control, contain and clean up spills. • Revegetate disturbed areas in a timely manner to control erosion. • Materials will be covered and protected from wind, rain and runoff to avoid unwarranted dispersal. • Refine operational criteria to ensure that desired Flood Risk Management (FRM) benefits are achieved while avoiding degradation of water quality behind the closure structures. 				
Groundwater				
<p>Mitigation Measure 3.2.7-1: Bentonite Slurry Spill Contingency Plan. The mitigation measures for Alternative 7a outlined in Section 5.6.10 of the 2018 LSJR FR/EIS/EIR shall be applied to the Modified Project:</p> <ul style="list-style-type: none"> • Potential impacts to groundwater that could result from construction of the cutoff wall would be mitigated through development and implementation of a BSSCP, also known as a frac-out plan. A BSSCP is typically developed for activities that involve the use of bentonite materials. It is intended to minimize the potential for a frac-out associated with excavation and tunneling activities, provide for timely detection of frac-outs and ensure a “minimum-effect” response in the event of a frac-out and release of excavation fluid. 	USACE	USACE	Prior to construction activities	
Utilities and Service Systems				
<p>Mitigation Measure 3.2.8-1: Coordination with Utility Providers & Response Plan. The mitigation measures for Alternative 7a outlined in Section 5.16.10 of the 2018 LSJR FR/EIS/EIR shall be applied to the Modified Project:</p>	USACE	USACE	Prior to construction activities	

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Mitigation Measure	Implementing Responsibility	Monitoring Responsibility	Timing	Verification of Compliance (Initials and Date)
<ul style="list-style-type: none"> • Before beginning construction, coordination with utility providers to implement orderly relocation of utilities that need to be removed or relocated would occur. Coordination would include the following: • Notification of any potential interruptions in service shall be provided to the appropriate agencies and affected landowners. • Before the start of construction, utility locations shall be verified through field surveys and the use of Underground Service Alert services. Any buried utility lines shall be clearly marked where construction activities would take place and on the construction specifications before of any earthmoving activities begin. 				
<ul style="list-style-type: none"> • Before the start of construction, the contractor would be required to coordinate with the local municipality and acquire any applicable permits prior to use of municipal water for construction. • Before the start of construction, a response plan shall be prepared to address potential accidental damage to a utility line. The plan shall identify chain of command rules for notification of authorities and appropriate actions and responsibilities to ensure the public and worker safety. Worker education training in response to such situations shall be conducted by the contractor. The response plan shall be implemented by the contractor during construction activities. • Utility relocations shall be staged to minimize interruptions in service. 				
Agricultural and Forestry Resources				
<p>Mitigation Measure 3.5-1: Minimize and Avoid Loss of Special Designated Farmland. The following measures shall be implemented before and during construction of the Modified Project to minimize and avoid loss of Prime and Unique Farmland and Farmland of Statewide Importance.</p> <ul style="list-style-type: none"> • Biological mitigation sites shall be designed to minimize, to the greatest extent feasible, the loss of agricultural land with the highest values. • Biological mitigation sites shall be designed to minimize fragmentation or isolation of Special Designated Farmland. Where a biological mitigation site involves acquiring land or easements, any area not needed for biological habitat mitigation, <u>if applicable</u>, shall be of a size sufficient to allow viable farming operations. In such situation, USACE shall be responsible for acquiring easements, making lot line adjustments, and merging affected land parcels into units suitable for continued commercial agricultural management. • Any utility or infrastructure serving agricultural uses shall be reconnected if it is disturbed by biological mitigation site construction. If a biological mitigation site temporarily or permanently cuts off roadway access or removes utility lines, irrigation features, or other infrastructure, USACE shall be responsible for restoring access as necessary to ensure that economically viable farming operations are not interrupted. • Where applicable to a biological mitigation site, buffer areas shall be established between restoration projects and adjacent agricultural land. The buffers shall be sufficient to protect and maintain land capability and flexibility in agricultural operations. Buffers shall be 	USACE	USACE	Prior to and during construction activities	

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Mitigation Measure	Implementing Responsibility	Monitoring Responsibility	Timing	Verification of Compliance (Initials and Date)
<p>designed to protect the feasibility of ongoing agricultural operations and reduce the effects of construction-related or operational activities (including the potential to introduce special-status species in the agricultural areas) on adjacent or nearby properties. Buffers shall also serve to protect biological mitigation sites from noise, dust, and the application of agricultural chemicals. The width of each buffer shall be determined on a site-by-site basis to account for variations in prevailing winds, crop types, agricultural practices, ecological restoration, or infrastructure. Buffers can function as drainage swales, trails, roads, linear parkways, or other uses compatible with ongoing agricultural operations.</p>				
Biological Resources				
<p>Mitigation Measure 3.6-1: Special-Status Plant Surveys. Before Modified Project construction, surveys for special-status plants with potential to occur shall be conducted by a qualified botanist at the appropriate time of year when the target species would be in flower or otherwise clearly identifiable. Surveys shall be conducted in accordance with specific guidelines described by <i>Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities</i> (CDFW 2018).</p>	USACE	USACE	Prior to construction activities	
<p>Mitigation Measure 3.6-2: Special-Status Plant Measures. If special-status plants are found, the following measures shall be implemented:</p> <ul style="list-style-type: none"> • Qualified botanists shall survey the biological study area to document the presence of special-status plants before Modified Project implementation and shall conduct a floristic survey that follows the CDFW botanical survey guidelines (CDFW 2018). All plant species observed will be identified to the level necessary to determine whether they qualify as special-status plants or are plant species with unusual or significant range extensions. The guidelines also require that field surveys be conducted when special-status plants that could occur in the area are evident and identifiable, generally during the reported blooming period. To account for different special-status plant identification periods, one or more series of field surveys may be required in spring and summer. If any special-status plants are identified during the surveys, the botanist shall photograph and map locations of the plants, document the location and extent of the special-status plant population on a CNDDDB survey form, and submit the completed survey form to the CNDDDB. The amount of compensatory mitigation required will be based on the results of these surveys. • If one or more special-status plants is identified in the biological study area during preconstruction surveys, the sponsor shall redesign or modify the Modified Project, including the restoration plans for the biological mitigation site components, to avoid indirect or direct effects on special-status plants wherever feasible. If special-status plants cannot be avoided by redesigning projects, compensatory mitigation shall be implemented to avoid significant effects on special-status plants. • If complete avoidance of special-status plants is not feasible, the effects of the Modified Project on special-status plants shall be mitigated through off-site preservation at the chosen biological mitigation site at a minimum of a 1:1 ratio but shall be negotiated with the resource agencies. Suitable habitat for affected special-status plant species will occur in a conservation area, preserved and managed in perpetuity. Detailed information shall be provided to the agencies on the location and quality of the preservation area, the 	USACE	USACE	Prior to and during construction activities	

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Mitigation Measure	Implementing Responsibility	Monitoring Responsibility	Timing	Verification of Compliance (Initials and Date)
feasibility of protecting and managing the area in perpetuity, and the responsible parties. Other pertinent information also shall be provided, to be determined through future coordination with the resource agencies.				
Mitigation Measure 3.6-3: Worker Awareness Training. Before ground disturbance, all construction personnel shall participate in a CDFW-approved worker environmental awareness program. A qualified biologist shall inform all construction personnel about the life history of Swainson’s hawk and the importance of nest sites and foraging habitat.	USACE	USACE	Prior to construction activities	
Mitigation Measure 3.6-4: Breeding-Season Survey. If construction work is to occur during the Swainson’s hawk breeding season, a breeding-season survey for nesting birds shall be conducted for all trees and shrubs that would be removed or disturbed that are located within 500 feet (0.5 mile for Swainson’s hawk) of construction activities, including grading. Swainson’s hawk surveys shall be completed during at least two of the following survey periods: January 1 to March 20; March 20 to April 5; April 5 to April 20; and June 10 to July 30. No fewer than three surveys shall be completed in at least two survey periods and at least one of these surveys shall occur immediately prior to Modified Project initiation (SWHA TAC 2000). Other migratory bird nest surveys could be conducted concurrent with Swainson’s hawk surveys, with at least one survey to be conducted no more than 48 hours from the initiation of Modified Project activities to confirm the absence of nesting. If the biologist determines that the area surveyed does not contain any active nests, construction activities, including removal or pruning of trees and shrubs, could commence without any further mitigation.	USACE	USACE	Prior to construction activities	
Mitigation Measure 3.6-5: Active Nest Buffer. If active nests are found, USACE shall maintain a 0.25-mile buffer between construction activities and the active nest(s). In addition, a qualified biologist shall be present on-site during construction activities to ensure that the buffer distance is adequate and that the birds are not showing any signs of stress. If signs of stress that could cause nest abandonment are noted, construction activities shall cease until a qualified biologist determines that fledglings have left an active nest. With the written permission of the wildlife agencies and under the supervision of the qualified biologist, work within the temporary nest disturbance buffer may occur. The qualified biologist shall be on-site daily while construction-related activities are taking place within the buffer.	USACE	USACE	During construction activities	
Mitigation Measure 3.6-6: Burrowing Owl Preconstruction Surveys. Prior to initiation of any excavation activities at borrow sites, a preconstruction survey for burrowing owls shall be completed in accordance with CDFW guidelines described in the <i>Staff Report on Burrowing Owl Mitigation</i> . If no burrowing owls are located during these surveys, then effects on burrowing owls would be less than significant and no mitigation is required. If burrowing owls are located on or immediately adjacent to the site, then coordination shall occur with CDFW to determine the measures that need to be implemented to ensure that burrowing owls are not affected by the Modified Project. Potential mitigation measures that could be implemented include: <ul style="list-style-type: none"> • A qualified biologist shall conduct appropriate surveys at and around material source sites, to determine the presence/absence of burrowing owls. At least one survey shall be conducted no more than 1 week prior to the onset of any construction activity. 	USACE	USACE	Prior to construction activities	

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Mitigation Measure	Implementing Responsibility	Monitoring Responsibility	Timing	Verification of Compliance (Initials and Date)
<ul style="list-style-type: none"> A 250-foot buffer, within which no new activity would be permissible, shall be maintained between Modified Project activities and nesting burrowing owls. This protected area shall remain in effect until August 31 or at CDFW's discretion, until the young owls are foraging independently. 				
<ul style="list-style-type: none"> No burrowing owls shall be evicted from burrows during the nesting season (February 1 through August 31). Eviction outside the nesting season could be permitted pending evaluation of eviction plans and receipt of formal written approval from CDFW authorizing the eviction. Mandatory worker awareness training for construction personnel shall be conducted. 				
<p>Mitigation Measure 3.6-7: Nesting Bird Surveys. USACE shall conduct surveys in the spring of each construction year to locate nest sites of the mentioned species in suitable breeding habitats. Surveys shall be conducted by a qualified biologist using survey methods approved by USFWS. Survey results shall be submitted to USFWS before construction is initiated. If nests or young of these species are not located, construction may proceed. If nests or young are located, USACE shall coordinate with USFWS and CDFW to determine what mitigation measures could be implemented to avoid or reduce potential disturbance-related impacts on these species. Measures could include a no-disturbance buffer zone established around the nest site. The width of the buffer zone shall be determined by a qualified biologist in coordination with USFWS. No construction activities shall occur within the buffer zone, which shall be maintained until the young have fledged (as determined by a qualified biologist).</p>	USACE	USACE	Prior to construction activities	
<p>Mitigation Measure 3.6-8: Minimization of Effects on Giant Garter Snake. The following measures shall be implemented to minimize effects on giant garter snake habitat that occurs within 200 feet of any construction activity. These measures are based on USFWS guidelines for restoration and standard avoidance measures included as appendices in USFWS (1997).</p> <ul style="list-style-type: none"> Unless approved otherwise by USFWS, construction shall be initiated only during the giant garter snake active period (May 1–October 1, when they are able to move away from disturbance). All construction personnel, including workers and contractors, shall participate in a worker environmental awareness training program conducted by a USFWS-approved biologist prior to commencement of construction activities. A giant garter snake survey shall be conducted 24 hours prior to construction in potential habitat. Should there be any interruption in work for greater than 2 weeks, a biologist shall survey the Modified Project area again no later than 24 hours prior to the restart of work. Giant garter snakes encountered during construction activities shall be allowed to move away from construction activities on their own. Movement of heavy equipment to and from the construction site shall be restricted to established roadways. Giant garter snake habitat within 200 feet of construction activities shall be designated as an environmentally sensitive area and delineated with signs and high-visibility fencing. 	USACE	USACE	Prior to and during construction activities	

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Mitigation Measure	Implementing Responsibility	Monitoring Responsibility	Timing	Verification of Compliance (Initials and Date)
<p>Fencing shall be inspected and maintained as needed daily until completion of each work section of the Modified Project. This area shall be avoided by all construction personnel.</p> <ul style="list-style-type: none"> • If USACE elects to use exclusionary fencing in lieu of continuous monitoring, it shall be buried at least 6 inches below the ground to prevent snakes from burrowing and moving under the fence and shall be inspected daily. • If a frac-out is identified, all work shall stop, including the recycling of the bentonite fluid. In the event of a frac-out into water, the location and extent of the frac-out shall be determined and the frac-out shall be monitored for 4 hours to determine whether the fluid congeals (bentonite will usually harden, effectively sealing the frac-out location). • USFWS, NMFS, CDFW, and the Regional Water Quality Control Board shall be notified immediately of any spills and will be consulted regarding clean-up procedures. A Brady barrel will be on-site and shall be used if a frac-out occurs. Containment materials, such as straw bales, also will be on-site prior to and during all operations and a vacuum truck will be on retainer and available to be operational on-site within 2 hours' notice. The site supervisor shall take any necessary follow-up response actions in coordination with agency representatives. The site supervisor shall coordinate the mobilization of equipment stored at staging areas (e.g., vacuum trucks) as needed. • If the frac-out has reached the surface, any material contaminated with bentonite shall be removed by hand to a depth of 1 foot, contained, and properly disposed of, as required by law. The drilling contractor shall be responsible for ensuring that the bentonite is either properly disposed of at an approved Class II disposal facility or properly recycled in an approved manner. • Project-related vehicles shall observe a 10 mph speed limit within construction areas, except on existing paved roads where they shall adhere to the posted speed limits. • Aquatic habitat for the snake that would be affected by construction shall be inspected for the snake, then dewatered and maintained dry and absent of aquatic prey for 5 days before initiation of construction activities. This measure applies primarily to the ditches to be relocated west of the Delta front levee sections. If complete dewatering is not possible, USFWS shall be contacted to determine what additional measures, if any, may be necessary to minimize effects on the snake. 				
<p>Mitigation Measure 3.6-9: Giant Garter Snake Compensation. If giant garter snake habitat would be temporarily affected during construction, the following measures shall be implemented to compensate for the habitat loss at the selected biological mitigation site:</p> <ul style="list-style-type: none"> • Habitat (including aquatic and upland) temporarily affected for one construction season (May 1–October 1) shall be restored after construction by applying appropriate erosion control techniques and replanting/seeding with appropriate native plants. • Aquatic habitat permanently affected shall be replaced at a 3:1 ratio through the purchase of credits at a mitigation bank or the establishment of aquatic habitat at one of the mitigation sites. • Upland habitat permanently affected shall be replaced at a minimum of 1:1 ratio. 	USACE	USACE	Prior to and during construction activities	

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Mitigation Measure	Implementing Responsibility	Monitoring Responsibility	Timing	Verification of Compliance (Initials and Date)
<ul style="list-style-type: none"> USACE shall work to develop appropriate mitigation prior to or concurrent with any disturbance of giant garter snake habitat. Habitat shall be protected in perpetuity and have an endowment attached for management and maintenance. 				
<p>Mitigation Measure 3.6-10: Minimization of Any Potential Effects on VELB or Their Habitat. During construction for the Modified Project, USACE shall implement the measures included in the <i>Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle</i> (USFWS 2017b; see Appendix G) to reduce effects on valley elderberry longhorn beetle. The framework includes avoidance and minimization measures for shrubs that would not be transplanted within 50 meters of the Project, methodologies for transplanting of shrubs, and methodologies for compensatory mitigation guidance for removed habitat.</p>	USACE	USACE	Prior to and during construction activities	
<p>Mitigation Measure 3.6-11: VELB Compensation. In accordance with the USFWS 2017 <i>Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle</i> (<i>Desmocerus californicus dimorphus</i>), adverse effects on the VELB shall be compensated for by transplanting the affected elderberries with stems greater than 1 inch in diameter and by planting a mix of native suitable riparian vegetation at a 3:1 ratio. The amount of compensation for VELB shall be based on USFWS review. A suitable transplant site shall be selected and planted with transplanted shrubs and new seedlings and associated riparian habitat, in accordance with the USFWS guidelines.</p>	USACE	USACE	Prior to and during construction activities	
<p>Mitigation Measure 3.6-12: Bat and Roosting Habitat Survey.</p> <p>In advance of tree removal, a preconstruction survey for special-status bats shall be conducted by a qualified biologist to characterize potential bat habitat and identify active roost sites within the Modified Project site. Should potential roosting habitat or active bat roosts be found in trees and/or structures to be removed under the Modified Project, the following measures shall be implemented:</p> <ul style="list-style-type: none"> Removal of trees and structures shall occur when bats are active, approximately March 1–April 15 and August 15–October 15, and outside of bat maternity roosting season (approximately April 15–August 31) and months of winter torpor (approximately October 15–February 28), to the extent feasible. If removal of trees during the periods when bats are active is not feasible and active bat roosts being used for maternity or hibernation purposes are found on or in the immediate vicinity of the Modified Project where tree removal is planned, a no-disturbance buffer of 100 feet shall be established around these roost sites until they are determined to be no longer active by the qualified biologist. The qualified biologist shall be present during tree removal if active bat roosts that are not being used for maternity or hibernation purposes are present. Trees with active roosts shall be removed only when no rain is occurring or is forecast to occur for 3 days and when daytime temperatures are at least 50 degrees Fahrenheit. 	USACE	USACE	Prior to construction activities	

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Mitigation Measure	Implementing Responsibility	Monitoring Responsibility	Timing	Verification of Compliance (Initials and Date)
<ul style="list-style-type: none"> • Removal of trees with active or potentially active roost sites shall follow a two-step removal process: <ul style="list-style-type: none"> ○ On the first day of tree removal and under supervision of the qualified biologist, branches and limbs not containing cavities or fissures in which bats could roost, shall be cut only using chain saws. ○ On the following day and under the supervision of the qualified biologist, the remainder of the tree may be removed, using either chain saws or other equipment (e.g., excavator or backhoe). • Removal of structures containing or suspected to contain active bat roosts, that are not being used for maternity or hibernation purposes, shall be dismantled under the supervision of the qualified biologist in the evening and after bats have emerged from the roost to forage. Structures shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost. If deemed necessary by a qualified biologist, bat exclusion devices may be installed to prevent the re-entry of bats to a roost. 				
<p>Mitigation Measure 3.6-13: Hazardous Materials Spill Notification. Given the deleterious effects of numerous chemicals on native resident fish used in construction, if a hazardous materials spill does occur, a detailed analysis shall be performed immediately by a registered environmental assessor or professional engineer to identify the likely cause and extent of contamination. This analysis shall conform to American Society for Testing and Materials standards and shall include recommendations for reducing or eliminating the source or mechanisms of contamination. Based on this analysis, USACE and its contractors shall select and implement measures to control contamination, with a performance standard that surface water and groundwater quality must be returned to baseline conditions.</p>	USACE	USACE	During construction activities	
<p>Mitigation Measure 3.6-14: In-Water Work Windows. In-water construction for the biological mitigation sites shall be restricted to the general estimated work window required for each waterway as described in the NMFS 2016 BO or superseding BO. During preconstruction engineering and design, the work window may be adjusted on a site-specific basis, considering periods of low fish abundance, and in-water construction outside the principal spawning and migration season. The typical construction season generally corresponds to the dry season, but construction may occur outside the limits of the dry season, only as allowed by applicable permit conditions.</p>	USACE	USACE	Prior to and during construction activities	
<p>Mitigation Measure 3.6-15: Avoidance and Minimization of Effects on Listed Fish Species. In 2016, NMFS issued a BO for the LSJR Feasibility Study consultation for levee improvements. The NMFS BO evaluated impacts on Central Valley spring-run Chinook salmon, California Central Valley steelhead, and green sturgeon, as well as their critical habitat. The BO evaluated potential impacts based on rough estimates and preliminary designs for the proposed Project. To avoid and minimize effects on listed fish species, the measures from the 2016 NMFS BO or superseding BO shall be implemented.</p>	USACE	USACE	Prior to and during construction activities	

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Mitigation Measure	Implementing Responsibility	Monitoring Responsibility	Timing	Verification of Compliance (Initials and Date)
<p>Mitigation Measure 3.6-16 Temporary Fencing. To clearly demarcate the Modified Project's boundaries and protect sensitive natural communities, temporary exclusion fencing shall be installed around the Modified Project boundaries (e.g., access roads, staging areas) 1 week prior to the start of construction activities. The temporary fencing shall be continuously maintained until all construction activities are completed so that construction equipment is confined to the designated work areas, including any off-site mitigation areas and access thereto. The exclusion fencing shall be removed only after construction for the year is entirely completed. Exclusionary construction fencing and explanatory signage shall be placed around the perimeter of sensitive vegetation communities that could be affected by construction activities throughout the period during which such effects occur. The signage will explain the nature of the sensitive resource and warn that no effect on the community is allowed. Where feasible, the fencing will include a buffer zone of at least 20 feet between the resource and construction activities. All exclusionary fencing shall be maintained in good condition throughout the construction period.</p>	USACE	USACE	Prior to and during construction activities	
<p>Mitigation Measure 3.6-17 Mandatory Contractor/Worker Awareness Training. Before the initiation of any work in the Modified Project area, including grading, a qualified biologist shall conduct mandatory contractor/worker awareness training for all construction personnel. This training shall be provided to brief workers on the need to avoid effects on sensitive biological resources (e.g., riparian habitat, special-status species, wetlands, and other sensitive biological communities) and the penalties for not complying with permit requirements. The biologist shall inform all construction personnel about the life history of special-status species with potential for occurrence on the site, the importance of maintaining habitat, and the terms and conditions of the BO or other authorizing document. Proof of this instruction shall be submitted to USFWS.</p> <p>The training shall also cover the restrictions and guidelines that must be followed by all construction personnel to reduce or avoid effects on sensitive biological communities and special-status species during Modified Project construction. The crew leader shall be responsible for ensuring that crew members adhere to the guidelines and restrictions. Educational training shall be conducted for new personnel as they are brought on the job. General restrictions and guidelines for vegetation and wildlife that must be followed by construction personnel are listed below.</p> <ul style="list-style-type: none"> • Modified Project–related vehicles shall observe the posted speed limit on hard-surfaced roads and a speed limit of 10 miles per hour on unpaved roads during travel on the project site. • Modified Project–related vehicles and construction equipment shall restrict their off-road travel to the designated construction area. • To prevent possible resource damage from hazardous materials such as motor oil or gasoline, construction personnel shall not service vehicles or construction equipment outside designated staging areas. 	USACE	USACE	Prior to and during construction activities	

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Mitigation Measure	Implementing Responsibility	Monitoring Responsibility	Timing	Verification of Compliance (Initials and Date)
<p>Mitigation Measure 3.6-18 Construction Monitoring. A qualified biologist shall monitor construction activities adjacent to sensitive biological resources (e.g., special-status species, riparian habitat, wetlands, elderberry shrubs), as needed. The biologist shall assist the construction crew, as needed, to comply with all Modified Project implementation restrictions and guidelines. In addition, the biologist shall be responsible for ensuring that construction barrier fencing is maintained adjacent to sensitive biological resources.</p>	USACE	USACE	During construction activities	
<p>Mitigation Measure 3.6-19: Riparian Compensation. Vegetation impacts that cannot be mitigated through avoidance, minimization, or remediation shall be mitigated through restoration at the selected biological mitigation site. A revegetation plan for the biological mitigation site shall be prepared by a qualified biologist or landscape architect and reviewed by the appropriate agencies. The revegetation plan shall specify the planting stock appropriate for each riparian cover type and each mitigation site, ensuring the use of genetic stock from the Modified Project area, and shall employ the most successful techniques available at the time of planting. The plantings shall be maintained and monitored as necessary for 3–5 years, including weed removal, irrigation, and herbivory protection. For this establishment period, USACE shall submit annual monitoring reports of survival to the regulatory agencies including USFWS, NMFS, and CDFW. Replanting will be necessary if success criteria are not met, with replacement plants subsequently monitored and maintained to meet the success criteria. The mitigation will be considered successful when the plants meet the success criteria and the vegetation no longer requires active management and is arranged in groups that, when mature, replicate the area, natural structure, and species composition of similar plant communities in the region.</p> <p>If mitigation at the selected biological mitigation site is inadequate to fully compensate for the vegetation impacts, the remaining balance of compensation required for riparian, shaded riverine aquatic, wetland, and open water habitats shall be accomplished through the purchase of credits at a mitigation bank or the construction of additional mitigation sites. If an alternative biological mitigation site not evaluated in this SEIR is chosen for development, additional environmental review under CEQA will be required prior to construction.</p>	USACE	USACE	Prior to and during construction activities	
<p>Mitigation Measure 3.6-20: No Net Loss of Wetlands/Waters. SJAFCA shall conduct an aquatic resources delineation to identify potential wetlands and other waters that fall under state and federal jurisdiction within mitigation sites and borrow sites.</p> <p>Temporary and permanent impacts on riparian habitat and wetland/waters that cannot be mitigated through avoidance, minimization, or remediation shall be mitigated to ensure no net loss through compensation, by restoring riparian and wetlands/waters habitat at one of the proposed biological mitigation sites or an approved off-site location, mitigation bank, or in-lieu fee program. Riparian and wetlands/waters habitat shall not be restored where it would be removed by future maintenance activities. A revegetation plan shall be prepared by a qualified biologist or landscape architect and reviewed by the appropriate agencies. The revegetation plan will specify the use of beneficial native plants appropriate for each area that provide a diverse variety of grasses and forbs that support native wildlife species.</p>	USACE	USACE	Prior to and during construction activities	

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Mitigation Measure	Implementing Responsibility	Monitoring Responsibility	Timing	Verification of Compliance (Initials and Date)
Cultural and Paleontological Resources				
<p>Mitigation Measure 3.7-1: Cultural Resources Awareness Training. USACE in consultation with SJAFCA and other interested parties shall provide a cultural resources and tribal cultural resources sensitivity and awareness training program for all personnel involved in Modified Project construction, including field consultants and construction workers. The training shall be developed in coordination with an archaeologist meeting the Secretary of the Interior’s Professional Qualifications Standards for Archeology, as well as culturally and geographically affiliated Native American tribes. SJAFCA may invite Native American representatives from interested culturally and geographically affiliated Native American Tribes to participate. The training shall be conducted before any Modified Project–related construction activities begin and shall include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating federal and state laws and regulations.</p> <p>The training shall also describe appropriate avoidance and impact minimization measures for cultural resources and tribal cultural resources that could be located on the Modified Project site and shall outline what to do and whom to contact if any potential cultural resources or tribal cultural resources are encountered. The training shall emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native American Tribes and shall discuss appropriate behaviors and responsive actions, consistent with Native American tribal values.</p>	USACE	USACE	Prior to construction activities	
<p>Mitigation Measure 3.7-2: Inadvertent Discovery of Cultural Materials. If an inadvertent discovery of cultural materials (e.g., unusual amounts of shell, animal bone, any human remains, bottle glass, ceramics, building remains), tribal cultural resources, sacred sites, or landscapes is made at any time during Project-related construction activities, USACE in consultation with SJAFCA and other interested parties, and in coordination with an archaeologist meeting the Secretary of the Interior’s Professional Qualifications Standards for Archeology and culturally and geographically affiliated Native American tribes, shall develop appropriate protection and avoidance measures where feasible. These procedures shall be developed in accordance with the Lower San Joaquin River Feasibility Study Project PA and associated HPMP, which specifies procedures for post-review discoveries. Additional measures, such as development of a Historic Properties Treatment Plan prepared in accordance with the PA and HPMP, may be necessary if avoidance or protection is not possible.</p>	USACE	USACE	During construction activities	
<p>Mitigation Measure 3.7-3: Inadvertent Discovery of Human Remains. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, USACE shall immediately halt potentially damaging excavation in the area of the burial and notify the County coroner and an archaeologist meeting the Secretary of the Interior’s Professional Qualifications Standards for Archeology 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 (HSC Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, they must contact the NAHC by phone within 24 hours of making that determination (HSC Section 7050[c]). After the</p>	USACE	USACE	During construction activities	

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<p>coroner’s findings have been made, the archaeologist and the NAHC-designated Most Likely Descendant (MLD), in consultation with USACE and SJAFCA, shall determine the ultimate treatment and disposition of the remains.</p> <p>Upon the discovery of Native American human remains, USACE in coordination with SJAFCA, shall require that all construction work stop within 100 feet of the discovery until consultation with the MLD has taken place. The MLD shall have 48 hours to complete a site inspection and make recommendations to the USACE and SJAFCA after being granted access to the site. A range of possible treatments for the remains, including nondestructive removal and analysis, preservation in place, relinquishment of the remains and associated items to the descendants, or other culturally appropriate treatment may be discussed. PRC Section 5097.98(b)(2) suggests that the concerned parties may mutually agree to extend discussions beyond the initial 48 hours to allow for the discovery of additional remains. If agreed to by the MLD, SJAFCA or SJAFCA’s authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. Construction work in the vicinity of the burials shall not resume until the mitigation is completed.</p>				
<p>Mitigation Measure 3.7-4: Preconstruction Training and Paleontological Monitoring. Prior to the start of construction activities, USACE shall retain a Qualified Paleontologist who meets the standards of the Society for Vertebrate Paleontology (SVP 2010) to carry out all mitigation measures related to paleontological resources. Prior to the start of any ground-disturbing activities, an Archaeologist (with experience in paleontological resources) the Qualified Paleontologist shall conduct preconstruction worker paleontological resources sensitivity training. The training shall include information on what types of paleontological resources could be encountered during excavations, what to do in case an unanticipated discovery is made by a worker, and laws protecting paleontological resources. All construction personnel shall be informed of the possibility of encountering fossils and instructed to immediately inform the construction foreman or supervisor if any bones or other potential fossils are unexpectedly unearthed in an area where a paleontological monitor is not present. The Applicant shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.</p> <p><u>If paleontological resources are unearthed, a</u> The Qualified Paleontologist <u>and/or</u> shall supervise a paleontological monitor meeting the Society for Vertebrate Paleontology standards (SVP 2010) who shall be present during all excavations in the Modesto Formation. Monitoring shall consist of visually inspecting fresh exposures of rock for larger fossil remains and, where appropriate, collecting wet or dry screened standard sediment samples (up to 4.0 cubic yards) of promising horizons for smaller fossil remains (SVP 2010). Depending on the conditions encountered, full-time monitoring can be reduced to part-time inspections or ceased entirely if determined adequate by the Qualified Paleontologist. The Qualified Paleontologist may spot check the excavation on an intermittent basis and recommend whether the depth of required monitoring should be revised based on</p>	USACE	USACE	Prior to and during construction activities	

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<p>his/her observations. Monitoring activities shall be documented in a Paleontological Resources Monitoring Report to be prepared by the Qualified Paleontologist at the completion of construction.</p> <p>If a paleontological resource is discovered during construction, the <u>Qualified Paleontologist and/or</u> paleontological monitor shall be empowered to temporarily divert or redirect grading and excavation activities in the area of the exposed resource to facilitate evaluation of the discovery. An appropriate buffer area shall be established by the Qualified Paleontologist and/or paleontological monitor around the find where construction activities shall not be allowed to continue. Work shall be allowed to continue outside of the buffer area. All significant fossils shall be collected by the paleontological monitor and/or the Qualified Paleontologist. Collected fossils shall be prepared to the point of identification and catalogued before they are submitted to their final repository. Any fossils collected shall be curated at a public, non-profit institution with a research interest in the materials, such as the University of California Museum of Paleontology at Berkeley, if such an institution agrees to accept the fossils. If no institution accepts the fossil collection, they shall be donated to a local school in the area for educational purposes. Accompanying notes, maps, photographs, and a technical report shall also be filed at the repository and/or school.</p>				
Noise and Vibration				
<p>Mitigation Measure 3.10-1: Construction Noise Reduction.</p> <p>The following measures shall be implemented to reduce the effects of construction under the Modified Project:</p> <ul style="list-style-type: none"> • The contractor shall prepare a construction noise and vibration plan prior to construction. • The contractor shall employ vibration-reducing construction practices. • The contractor shall employ noise-reducing construction practices. • All construction equipment shall be equipped with noise-reduction devices such as mufflers to minimize construction noise and all internal combustion engines shall be equipped with exhaust and intake silencers in accordance with manufacturers' specifications. • Equipment that is quieter than standard shall be used, including electrically powered equipment instead of internal combustion equipment, where use of such equipment is a readily available substitute that accomplishes project tasks in the same manner as internal combustion equipment. • The use of bells, whistles, alarms, and horns shall be restricted to safety warning purposes only. • Noise-reducing enclosures shall be used around stationary noise-generating equipment (e.g., compressors and generators at slurry pond locations). 	USACE	USACE	Prior to and during construction activities	
<ul style="list-style-type: none"> • Mobile and fixed construction equipment (e.g., compressors and generators), construction staging and stockpiling areas and construction vehicle routes shall be located at the most distant point feasible from noise-sensitive receptors. 				

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<ul style="list-style-type: none"> When noise-sensitive uses subject to prolonged construction noise are located within 740 feet of construction in Stockton or unincorporated areas of San Joaquin County, noise-attenuating buffers such as structures, truck trailers, or soil piles shall be located between noise-generation sources and sensitive receptors. Before construction activity begins within 740 feet of one or more residences or businesses, the project proponent shall provide written notification to the potentially affected residents or business owners, identifying the type, duration, and frequency of construction activities. The USACE resident engineer and contractor's project manager shall be designated and contact information shall be provided in the notices and posted near the project area in a conspicuous location that it is clearly visible to nearby receptors most likely to be disturbed. The USACE resident engineer shall manage complaints and concerns resulting from noise-generating activities. The severity of the noise concern shall be assessed by the noise disturbance coordinator and, if necessary, evaluated by a qualified noise control engineer. The project proponent shall ensure that all heavy trucks are properly maintained and equipped with noise control devices (e.g., muffler) in accordance with manufacturers' specifications at each work site during project construction to minimize construction traffic noise effects on sensitive receptors. Before haul truck trips are initiated during construction season on roads within 90 feet of residences located along haul routes, written notification shall be provided to potentially affected residents identifying the hours and frequency of haul truck trips. Notifications provide contact information for the USACE resident engineer identified above and also identify a mechanism for residents to register complaints with the appropriate jurisdiction if haul truck noise levels are overly intrusive or occur outside the exempt daytime hours for the applicable jurisdiction. 				
Transportation				
<p>Mitigation Measure 3.11-1: Traffic Safety Plan. Before the start of each construction season, the primary contractors for construction shall hire a licensed traffic engineer to develop a coordinated construction traffic safety and control plan in accordance with the latest Manual on Uniform Traffic Control Devices (MUTCD) standards and requirements to minimize the simultaneous use of roadways by different construction contractors for material hauling and equipment delivery to the extent feasible and to avoid and minimize potential traffic hazards on local roadways during construction. Items (a) through (i) of this mitigation measure shall be integrated as terms of the construction contracts.</p> <p>(a) The plan shall outline phasing of activities and the use of multiple routes to and from off-site locations to minimize the daily amount of traffic on individual roadways.</p>	USACE	USACE	Prior to and during construction activities	
<p>(b) The plan shall provide bicycle and pedestrian detours to allow for continued use by bicycle and pedestrian commuters and maintain safe pedestrian and bicyclist access around the construction areas at all times. Construction areas shall be secured as required by the applicable jurisdiction to prevent pedestrians and bicyclists from entering</p>				

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<p>the work site, and all stationary equipment shall be located as far away as possible from areas where bicyclists and pedestrians are present.</p> <p>(c) The construction contractors shall develop traffic control plans (TCP) for the local roadways that would be affected by construction traffic. The TCP must be designed and stamped by a licensed traffic engineer in accordance with the latest MUTCD requirements. The TCP must be submitted by the contractor with the City's road encroachment permit application for review and approval. Before the initiation of construction-related activity involving high volumes of traffic, the plan shall be submitted for review by the agency of local jurisdiction (San Joaquin County, City of Stockton, or Caltrans [if applicable]) that has responsibility for roadway safety at and between the Modified Project sites. The contractor shall train construction personnel in appropriate safety measures as described in the plan and shall implement the plan. The plan shall include the prescribed locations for staging equipment and parking trucks and vehicles. Provisions shall be made for overnight parking of haul trucks to avoid causing traffic or circulation congestion. The plan shall call for the following elements:</p> <ul style="list-style-type: none"> • Posting warnings about the potential presence of slow-moving vehicles. • Using traffic control personnel when appropriate. • Placing and maintaining barriers and installing traffic control devices necessary for safety, as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones and in accordance with city/county requirements. • The TCP shall include signs placed on March Lane west of I-5 advising the public of traffic delays due to construction and the tentative timeline of the project. Language to be placed on the signs must be approved by the City's traffic engineer. <p>(d) All operations shall limit and expeditiously remove, as necessary, the accumulation of Modified Project-generated mud or dirt from adjacent public streets at least once every 24 hours if substantial volumes of soil are carried onto adjacent paved public roadways during construction.</p> <p>(e) If needed to comply with Caltrans requirements, a transportation management plan shall be prepared and submitted to Caltrans to cover any points of access from the state highway system for haul trucks and other construction equipment.</p>				
<p>(f) Before the start of the first construction season, the construction contractor shall obtain a road encroachment permit with San Joaquin County and the City of Stockton to address permit conditions set for the maintenance and repair of affected roadways resulting from increased truck traffic. The road encroachment permit conditions and requirements shall ensure that the affected roadways are repaired to a level that is equivalent to their pre-project condition. Such an agreement may require the contractor to take <u>dated pre-project photos and videos</u> of existing conditions. <u>A copy of the photos and videos shall be provided to SJAFCA and the City of Stockton.</u> Upon project completion, the City or County shall <u>may</u> develop a punch list of requirements to ensure that pre-project conditions are restored.</p>				

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<p>(g) Before the Modified Project construction begins, the contractor shall provide notification of Modified Project construction to all appropriate emergency service providers in San Joaquin County, and Stockton, Lathrop, and Manteca and shall coordinate with providers throughout the construction period to ensure that emergency access through construction areas is maintained.</p> <p>(h) The contractor shall avoid neighborhoods and school zones to the maximum extent feasible when determining haul routes. When possible, hauling in school zones shall be limited to the period of summer breaks to avoid noise and traffic impacts on the schools. Any damage to residential roadways during construction shall be mitigated per the requirements outlined in the traffic safety and control plan <u>road encroachment permit provisions issued by the City of Stockton</u>.</p> <p>(i) During preliminary engineering and design, the Modified Project proponent shall provide notification of Modified Project construction to all appropriate railroads in the Modified Project area and shall coordinate with all railroads to minimize freight and passenger service disruptions. Prior to the start of construction, the Modified Project Proponent's contractor shall contact the general manager of affected railroads to coordinate truck haul route traffic and schedule an on-site meeting.</p>				
Wildfire				
<p>Mitigation Measure 3.13-1: Worker Health and Safety Plan. A worker health and safety plan shall be prepared before the start of construction that identifies, at a minimum, all contaminants that could be encountered during construction; all appropriate worker, public health, and environmental protection equipment and procedures to be used during project activities; emergency response procedures; the most direct route to the nearest hospitals; and a Site Safety Officer. The plan shall describe actions to be taken if hazardous materials are encountered on-site, including protocols for handling hazardous materials, preventing their spread and emergency procedures to be taken in the event of a spill.</p>	USACE	USACE	Prior to construction activities	