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## **EXECUTIVE SUMMARY**

The U.S. Army Corps of Engineers (USACE) and the Port of West Sacramento (Port) prepared this Draft Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report (SEIS/SEIR) to assess the environmental impacts of deepening the Sacramento River Deep Water Ship Channel (SRDWSC) to its Congressionally authorized depth of 35 feet as well as the impacts of alternatives to this project. This Draft SEIS/SEIR is a supplement to a previous Environmental Impact Statement (EIS) in 1980 and Supplemental Environmental Impact Statement (SEIS) in 1986. This executive summary provides a brief overview of the proposed project, purpose and need, alternatives, major conclusions, mitigation measures, and unresolved issues.

### **Project Overview**

The Port has historically served the agricultural industry, particularly imports and exports of commodities including rice, fertilizer, grains, and lumber. The Port has since expanded its business to include additional commodities such as cement and “green” commodities, including biofuels and wood pellets. Due to the current channel configuration, vessels laden with some cargos must “light-load” (travel less than fully loaded) to safely navigate the SRDWSC with sufficient under-keel clearance. Light-loading increases the cost of transportation due to reduced economies of scale, and this cost is passed on to the consumer. In addition, the existing widths of sections of the SRDWSC can make navigating to the Port difficult, particularly in inclement weather.

To improve economies of scale and overall navigation safety, the Port and USACE propose deepening to -35 feet mean lower low water (MLLW) and selective widening of portions of the SRDWSC. With a 35-foot-deep channel, approximately 100 vessels could carry the same amount of cargo as approximately 143 vessels could assuming deepening of the SRDWSC did not occur. This project was partially completed in 1990, but was suspended due to lack of funding. Thus, the Channel Deepening to -35 Feet MLLW and Selective Widening Alternative (Proposed Project—the agency proposed alternative) involves reinitiating the previously approved dredging from river miles (RMs) 0.0 to 35.0 and completing the construction that was suspended. The total volume of dredged material is estimated to be approximately 8.1 million cubic yards (cy) including a 1-foot paid overdepth, and approximately 10 million cy including a 2-foot overdepth.

A detailed analysis of potential dredged material placement areas in the Sacramento-San Joaquin River Delta (Delta), with particular emphasis on beneficial use and avoidance and minimization of impacts, guided the placement site selection process. Dredged material is proposed to be placed at ten upland sites adjacent to the SRDWSC, which would either permanently accommodate or temporarily stockpile the material for later beneficial reuse.

Dredging would occur during project-specific work windows designed to reduce potential impact to sensitive aquatic species including salmonids, delta smelt (*Hypomesus transpacificus*), and longfin smelt (*Spirinchus thaleichthys*). The USACE and the Port are pursuing 6-month work windows through an ongoing consultation with U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS). If these work windows are permitted, the Proposed Project could be constructed in approximately 4 years.

Because a significant amount of time has passed since the initial EIS/EIR was completed for the Proposed Project, USACE and the Port completed this SEIS/SEIR to re-analyze the potential effects pursuant to the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). This Draft SEIS/SEIR was prepared in accordance with applicable federal and state environmental statutes, regulations, and policies to inform federal, state, and local decision-makers regarding the potential environmental impacts of the viable alternatives for the Proposed Project.

### **Location and Scope of Analysis**

The 43.4-mile-long SRDWSC is located in the Delta and comprises an approximately 17-mile section of the Sacramento River (from New York Slough to approximately 2 miles north of Rio Vista) and the entire length of the 29-mile navigation channel (from approximately 2 miles north of Rio Vista to the Port). The upper approximately 25 miles of the navigation channel is man-made, and the 8.4 miles of the navigation channel nearest the Port comprise the portion that was previously dredged to -35 feet MLLW.

The scope of analysis for the Proposed Project includes the Port, the proposed dredging footprint (for deepening and widening activities) within the SRDWSC, and the proposed dredged material placement sites. The study area for the Proposed Project is defined as all areas within the scope of analysis.

### **Purpose and Need and Project Objectives**

The NEPA “need,” CEQA “purpose,” and Clean Water Act (CWA) Section 404 “overall project purpose” of the Proposed Project is to resume deepening of the SRDWSC to its Congressionally authorized depth to realize increased economic benefits associated with a reduced transportation cost of moving goods to the Port, and provide safe navigation for commercial marine traffic. With regard to CWA Section 404, the basic project purpose, as previously approved by Congress, is safe and efficient commercial marine navigation, which is a water-dependent purpose.

To meet the need, the Proposed Project must meet the following objectives:

- Effectively and efficiently accommodate existing and likely future vessel traffic to the Port
- Improve the cost-efficiency of vessel transits through the SRDWSC, while providing suitable conditions in the SRDWSC for current and future classes of ships to access the Port safely, in an environmentally acceptable and sustainable manner
- Reduce current and expected future light-loading requirements for vessels calling at the Port
- Reduce current and expected future maneuvering access problems in the SRDWSC
- Maximize the potential for beneficial use of dredged material as practicable

### **Alternatives**

The USACE policy compliance review of the Draft Limited Reevaluation Report (LRR; a USACE planning document) and the accompanying With-Project Economic Analysis (Appendix D) is in progress. As such, the alternatives evaluated in this Draft SEIS/SEIR, including the Proposed Project, are provisional pending completion of the LRR. It is unlikely that completion of this review will result in any changes to the alternatives or additional potential environmental impacts not already covered in this Draft SEIS/SEIR.

NEPA and the Council on Environmental Quality (CEQ) NEPA implementing regulations (40 CFR 1500 et seq.) require federal agencies to "include the alternative of no action" in an EIS alternatives analysis. The no federal action alternative, or NEPA baseline, is presented in this SEIS/SEIR as Future without Project Conditions, which forecasts the estimated physical, biological, and human environmental conditions likely to be present within the SRDWSC study area over the next 50 years in the absence of the Proposed Project. Similar to a no federal action alternative under NEPA, CEQA requires the consideration of a no project alternative (14 CCR 15126.6[e]). In accordance with Section 15125 of the CEQA Guidelines, the CEQA baseline is represented by the environmental operational, physical, and economic conditions, ongoing maintenance dredging, and shipping practices in 2008, the year that the Notice of Preparation (NOP) for the SEIR was issued. For purposes of the evaluations in this Draft SEIS/SEIR, the NEPA and CEQA baselines are considered equivalent because both cases represent a continuation of present shipping and maintenance practices on the SRDWSC. Thus, a single assessment of impacts and their significance is presented.

A number of alternatives to the Proposed Project were considered. Alternatives considered that would not involve deepening included intermodal transportation (i.e., using rail and/or truck), use of Lighter Aboard Ship (LASH; transferring material to barges), and constructing locks on the SRDWSC. These alternatives were eliminated from detailed study because their costs were too high (intermodal and locks) or facilities were not available (LASH). Deepening to depths other than 35 feet was also considered. Depths greater than 35 feet

were eliminated because Reach 5 was already deepened to that depth and because a re-evaluation of the previously authorized project would be required. The USACE and the Port also considered deepening to -31, -32, -33, and -34 feet MLLW. It was determined that deepening to -33 feet MLLW would be evaluated in the Draft SEIS/SEIR as the Channel Deepening to -33 Feet MLLW and Selective Widening Alternative (-33 Feet MLLW Alternative) in addition to the Proposed Project. Depths of 31 and 32 feet are too shallow to meet project objectives and in addition, the other depths considered (-31, -32, or -34 feet MLLW) would result in similar dredging footprints and placement site needs as those of the -33 Feet MLLW Alternative and the Proposed Project.

The -33 Feet MLLW Alternative involves deepening the SRDWSC to a depth of 33 feet within the same dredging footprint as the Proposed Project and includes maintenance dredging of the SRDWSC within the northernmost 8 miles of the channel nearest the Port. The total dredged material volume for this alternative is anticipated to be 4 million cy with a 1-foot overdepth or 5.2 million cy with a 2-foot overdepth (approximately half the volume of the Proposed Project). The -33 Feet MLLW Alternative also includes the upland placement of material dredged from the SRDWSC. For this alternative, seven dredged material placement sites would be used to either permanently accommodate or temporarily stockpile dredged material. Assuming construction occurs during 6-month windows, the -33 Feet MLLW Alternative could be constructed in approximately 2 to 3 years. Under this alternative, approximately 114 vessels would carry the same amount of cargo as approximately 143 vessels under Future without Project Conditions.

## **Major Conclusions and Findings**

The USACE and the Port identified a range of dredged material placement site options and then screened them, emphasizing avoidance and minimization of impacts, and beneficial reuse<sup>1</sup> where practicable. The placement site screening analysis identified ten sites to be practicable in terms of cost, logistics, and technology for evaluation in the Draft SEIS/SEIR. These ten sites were further screened using the results of habitat and vegetation and surveys completed by USACE, which identified sensitive habitat areas including wetlands, riparian areas, and oak woodlands. The USACE and the Port designed “usable portions” within the previously-defined boundaries of each placement site to avoid impacting sensitive habitat areas to the maximum extent practicable. Impacts would be further avoided or minimized by constructing berms to prevent dredged material from entering the sensitive habitat areas.

With one exception, impacts of the Proposed Project and -33 Feet MLLW Alternative are determined to be less than significant as compared to Future without Project Conditions.

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<sup>1</sup> Beneficial reuse refers to any use of the material that provides for some purpose other than disposal (ocean or landfill).

The only potentially significant residual impact of the Proposed Project and -33 Feet MLLW Alternative is associated with loss of delta smelt critical habitat. The USACE and the Port are in early coordination with the USFWS and the California Department of Fish and Game (CDFG) regarding potential effects to delta smelt critical habitat. As part of this coordination and subsequent Section 7 consultation, mitigation and compensation measures will be developed and incorporated into the Proposed Project and the -33 Feet MLLW Alternative. Until such coordination and consultation is completed, no mitigation measures are proposed to mitigate for these impacts.

Project impacts associated with dredging will be minimized through implementation of mitigation measures, including but not limited to adherence to established construction best management practices (BMPs), use of modern technologies and least environmentally damaging construction techniques, and adherence to local ordinances and regulatory agency requirements. The USACE and the Port undertook a sequenced, iterative planning process to avoid and minimize impacts to placement sites to the maximum extent practicable. Remaining impacts would be mitigated through agency consultations, pre-construction surveys, and mitigation for sensitive habitats impacted at placement sites by a wetland preservation on Prospect Island.

A summary of the impact analysis for all alternatives is presented at the end of this section in Table ES-1.

### ***Cumulative Impacts***

The USACE and the Port evaluated potential cumulative impacts of the Proposed Project and -33 Feet MLLW Alternative in the Draft SEIS/SEIR. After implementation of mitigation measures, it was determined that any cumulative impacts of the alternatives would be less than significant. The following potential cumulative impacts were considered:

- *An approximately 10% increase in the sedimentation rate in the SRDWSC caused by increasing the channel's side slope (from construction of either alternative) combined with the potential for sea levels to rise up to 2 feet over the next 50 years.* The USACE and the Port are preparing a draft 20-year Plan for the ongoing navigational maintenance of the SRDWSC and long-term maintenance of the dredged material placement sites, which will take into consideration the remaining capacities of the placement sites after construction and identify methods for recovering capacity at sites proposed for maintenance dredging use in the future.
- *Regular maintenance dredging of the SRDWSC and upland dredged material placement.* Based on historic volumes and the above-noted predicted sedimentation increases, an average of 209,500 cy of material would need to be dredged from the SRDWSC annually under the Proposed Project. The average maintenance dredging

volume under the -33 Feet MLLW Alternative is expected to be less than that of the Proposed Project. Although these alternatives would result in short-term, intensive dredging and use of the dredged material placement sites that would last longer and involve slightly larger volumes than Future without Project Conditions, the impacts of the alternatives' future maintenance dredging activities on localized and downstream water quality would be consistent with those of the environmental baseline.

- *Impacts due to bank stabilization activities (e.g., maintenance of armor and placement of fill).* Impacts resulting from the Proposed Project or -33 Feet MLLW Alternative would be consistent with those of the environmental baseline, which occur an average of once every 5 years.
- *An increase in commodity throughput at the Port.* All growth at the Port reflects Future without Project Conditions, not conditions resulting from the Proposed Project or -33 Feet MLLW Alternative. Under the Proposed Project and -33 Feet MLLW Alternative, the increase in vessels on the SRDWSC would be approximately 43 and 29 vessels fewer, respectively, than under Future without Project Conditions.
- *Potential effects to delta smelt critical habitat.* The USACE and the Port are coordinating with USFWS and CDFG to develop mitigation and compensation measures for incorporation into the Proposed Project and the -33 Feet MLLW Alternative to reduce residual impacts below significance.

### **Issues of Concern Raised During Scoping**

The publication of the Notice of Intent (NOI) began a public scoping period that ran from June 16 through July 22, 2008, and included a public meeting. The purpose of the meeting was to gather public input on the Proposed Project's scope and to outline a schedule for future activities and public involvement. Comments were received from members of the public, private interest groups, and agencies including USEPA, California Department of Water Resources (DWR), California Department of Transportation (Caltrans), Contra Costa Water District, Central Valley Regional Water Quality Control Board (RWQCB), Reclamation District 501, East Bay Regional Park District, and the San Francisco Bay Conservation and Development Commission. A number of comments that were received pertained to the volume of material dredged, how material is handled, the location of dredged material placement sites, and potential beneficial use opportunities. Other comments concerned project impacts on hydrology, salinity, temperature, dissolved oxygen (DO), drinking water, sea level rise, levees, special status species, pelagic organisms, essential fish habitat (EFH), resuspension of contaminated sediments, sedimentation, pollutant emissions, utilities, traffic, the Rio Vista Bridge, environmental justice communities, land use, and recreational facilities.

## Issues Pending Resolution

The following issues remain unresolved.

### Alternatives

- The alternatives described and analyzed herein are considered preliminary because USACE policy compliance review of the Draft LRR and With-Project Economic Analysis is still in progress. An LRR is a USACE post-authorization planning document undertaken when a significant amount of time has elapsed or conditions have changed significantly since the completion of a previous report. While it is expected that the Congressionally authorized project (the Proposed Project) will remain the agency proposed alternative, final confirmation of this determination remains pending.
- A new opportunity for beneficial reuse of dredged material was recently confirmed. The new upland site is near Rio Vista and owned by Asta Construction. It is approximately 43 acres in size and has a potential capacity of 1 million to 3 million cy. Dredged material placed on the site would be reused by the site owners for construction or levee reinforcement in the Delta. Thus, 10 to 30% of the Proposed Project's dredged material would be committed for reuse in addition to potential contributions to reuse from the other sites. Feasibility, effects analysis, and environmental compliance are in progress.

### Water Quality

- The USACE and the Port are continuing to assess potential methylmercury impacts of the Proposed Project and -33 Feet MLLW Alternative. Results from a pilot study are expected in spring 2011. At this time, methylmercury impacts of the Proposed Project and -33 Feet MLLW Alternative are considered to be less than significant.

### Construction Timing

- The state and federal Endangered Species Act (ESA) consultations are not yet complete. While USACE and the Port are requesting 6-month work windows falling between June 1 and December 31 each year, these windows have not yet been agreed upon. The analyses in this Draft SEIS/SEIR presume 6-month work windows.

### Utilities

- To construct the Proposed Project or the -33 Feet MLLW Alternative, Pacific Gas and Electric (PG&E) would need to relocate at least two gas pipelines. PG&E is completing vegetation and habitat surveys for the upland construction access areas required to access existing and install new pipelines. However, information on sensitive habitat present within the upland construction access areas has not been

provided to USACE or the Port. Once the information is obtained from PG&E, it will be incorporated.



**Table ES-1  
Summary of Impacts and Proposed Mitigation Measures**

<b>Impact</b>	<b>Future without Project Conditions</b>	<b>Proposed Project: Channel Deepening to -35 Feet MLLW and Selective Widening</b>	<b>Channel Deepening to -33 Feet MLLW and Selective Widening Alternative</b>
<b>Physical Characteristics</b>			
<b>Geology</b>			
G-1: Destabilize or undermine levee or berm stability from placement of dredged material	No impact	No impact	No impact
<b>Hydrology, Hydraulics, Sedimentation, and Sediment Transport</b>			
HHSST-1: Change in hydrology causing an upstream shift of X2 (indicating upstream movement of saltwater intrusion) above modeled baseline conditions	Less than significant impact	Less than significant impact	Less than significant impact
HHSST-2: Alteration of existing hydrology that would lead to erosion impacting the State Route (SR) 12/Rio Vista Bridge footings or the levees protecting Ryer and Prospect Islands that would cause flooding of those islands	No impact	No impact	No impact
HHSST-3: Substantial modification of sedimentation or sediment transport processes within the SRDWSC in a way that results in significant effects on downstream areas	No impact	Less than significant impact	Less than significant impact
HHSST-4: An increase in vessel wake force that would increase the rate of shoreline erosion, especially at Carquinez Regional Shoreline, Martinez Regional Shoreline, Bay Point Wetlands/Shoreline, and Browns Island	No impact	No impact	No impact

Impact	Future without Project Conditions	Proposed Project: Channel Deepening to -35 Feet MLLW and Selective Widening	Channel Deepening to -33 Feet MLLW and Selective Widening Alternative
<b>Sediment Quality</b>			
SQ-1: Exposure of a new surface after dredging that has chemical concentrations at levels likely to cause unacceptable additional risk over existing conditions to aquatic organisms, or likely to impair beneficial uses	No impact	Less than significant impact	Less than significant impact
SQ-2: For dredged material proposed to be placed at upland placement sites, an elevation of soil chemical concentrations above U.S. Environmental Protection Agency (USEPA) Preliminary Remediation Goals (PRGs) for ecological or residential use, or above background concentrations found in Delta soil	No impact	Less than significant impact	Less than significant impact
<b>Water Quality</b>			
WQ-1: A violation of water quality standards, including adopted Total Maximum Daily Loads (TMDLs), which would impair beneficial uses of water	Less than significant impact after mitigation <b>Mitigation Measures:</b> <b>WQ-MM-1</b>	Less than significant impact after mitigation <b>Mitigation Measures:</b> <b>WQ-MM-1</b>	Less than significant impact after mitigation <b>Mitigation Measures:</b> <b>WQ-MM-1</b>
WQ-2: Negative impact to groundwater quality from leaching of contaminants or surface water runoff from placement sites	Less than significant impact	Less than significant impact	Less than significant impact
<b>Biological Characteristics</b>			
<b>Aquatic Species and Habitat</b>			
ASH-1: Potential for fish or other aquatic organisms to be entrained by hydraulic cutterhead dredging equipment	<u>All species:</u> Less than significant impact after mitigation <b>Mitigation Measures:</b> <b>ASH-MM-1, 2, and 3<sup>1</sup></b>	<u>All species:</u> Less than significant impact after mitigation <b>Mitigation Measures:</b> <b>ASH-MM-1, 2, and 3<sup>2</sup></b>	<u>All species:</u> Less than significant impact after mitigation <b>Mitigation Measures:</b> <b>ASH-MM-1, 2, and 3<sup>2</sup></b>

Impact	Future without Project Conditions	Proposed Project: Channel Deepening to -35 Feet MLLW and Selective Widening	Channel Deepening to -33 Feet MLLW and Selective Widening Alternative
ASH-2: Potential for fish or other aquatic organisms to be entrained in vessel propwash or struck by vessel propellers	<u>Sturgeon</u> : Potentially significant impact after mitigation  <u>Salmonids, Mid-water Fish, Groundfish</u> : Less than significant impact after mitigation <b>Mitigation Measures:</b> <b>ASH-MM-4</b>	<u>All species</u> : Less than significant impact after mitigation <b>Mitigation Measures:</b> <b>ASH-MM-4</b>	<u>All species</u> : Less than significant impact after mitigation <b>Mitigation Measures:</b> <b>ASH-MM-4</b>
ASH-3: Potential for loss or degradation of designated critical habitat or essential fish habitat (EFH) for listed species	<u>All species</u> : Less than significant impact after mitigation <b>Mitigation Measures:</b> <b>ASH-MM-1 and 3<sup>2</sup>;</b> <b>WQ-MM-1</b>	<u>Sturgeon, Salmonids, Groundfish</u> : Less than significant impact after mitigation  <u>Mid-water Fish (Delta smelt critical habitat)</u> : Potentially significant impact after mitigation <b>Mitigation Measures:</b> <b>ASH-MM-1 and 3<sup>2</sup>;</b> <b>WQ-MM-1</b>	<u>Sturgeon, Salmonids, Groundfish</u> : Less than significant impact after mitigation  <u>Mid-water Fish (Delta smelt critical habitat)</u> : Potentially significant impact after mitigation <b>Mitigation Measures:</b> <b>ASH-MM-1 and 3<sup>2</sup>;</b> <b>WQ-MM-1</b>
<b>Terrestrial Species and Habitat</b>			
TSH-1: Disturbance to birds, amphibians, reptiles, invertebrates, plants, mammals, and their habitats, including loss of foraging habitat	<u>All placement sites (S1, S14, S16, S19, S20, and S31)</u> : Less than significant impact after mitigation <b>Mitigation Measures:</b> <b>TSH-MM-1 and 2</b>	<u>All placement sites (S1, S4, S11, S14, S16, S19, S20, S31, S32, and S35)</u> : Less than significant impact after mitigation <b>Mitigation Measures:</b> <b>TSH-MM-1 and 2</b>	<u>All placement sites (S1, S14, S16, S19, S20, S31, and S35)</u> : Less than significant impact after mitigation <b>Mitigation Measures:</b> <b>TSH-MM-1 and 2</b>

Impact	Future without Project Conditions	Proposed Project: Channel Deepening to -35 Feet MLLW and Selective Widening	Channel Deepening to -33 Feet MLLW and Selective Widening Alternative
TSH-2: Loss of special status plant species or habitat for special status plant species	<p><u>All placement sites (S1, S14, S16, S19, S20, and S31):</u> Less than significant impact after mitigation</p> <p><b>Mitigation Measures: TSH-MM-3</b></p>	<p><u>Placement Sites S4, S11, and S35:</u> No impact</p> <p><u>Placement Sites S1, S14, S16, S19, S20, S31, and S32:</u> Less than significant impact after mitigation</p> <p><b>Mitigation Measures: TSH-MM-3</b></p>	<p><u>Placement Site S35:</u> No impact</p> <p><u>Placement Sites S1, S14, S16, S19, S20, and S31:</u> Less than significant impact after mitigation</p> <p><b>Mitigation Measures: TSH-MM-3</b></p>
TSH-3: Impacts to federally protected wetlands and sensitive habitats	<p><u>Placement sites S1 and S20:</u> No impact</p> <p><u>Placement Sites S14, S16, S19, and S31:</u> Less than significant impact after mitigation</p> <p><b>Mitigation Measures: TSH-MM-4</b></p>	<p><u>Placement Sites S1, S4, S20, and S35:</u> No impact</p> <p><u>Placement Sites S11, S14, S16, S19, S31, and S32:</u> Less than significant impact after mitigation</p> <p><b>Mitigation Measures: TSH-MM-4 and 5<sup>3</sup></b></p>	<p><u>Placement Sites S1, S20, and S35:</u> No impact</p> <p><u>Placement Sites S14, S16, S19, and S31:</u> Less than significant impact after mitigation</p> <p><b>Mitigation Measures: TSH-MM-4</b></p>
TSH-4: Introduction or spread of noxious weeds	<p><u>All placement sites (S1, S14, S16, S19, S20, and S31):</u> Less than significant impact</p>	<p><u>All placement sites (S1, S4, S11, S14, S16, S19, S20, S31, S32, and S35):</u> Less than significant impact</p>	<p><u>All placement sites (S1, S14, S16, S19, S20, S31, and S35):</u> Less than significant impact</p>
TSH-5: Non-compliance with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; the provisions of an adopted habitat conservation plan; a natural community conservation plan; or other approved local, regional, or state	No impact	<p>Less than significant impact after mitigation</p> <p><b>Mitigation Measures: TSH-MM-1, 2, 3, 4, and 5</b></p>	<p>Less than significant impact after mitigation</p> <p><b>Mitigation Measures: TSH-MM-1, 2, 3, 4, and 5</b></p>

<b>Impact</b>	<b>Future without Project Conditions</b>	<b>Proposed Project: Channel Deepening to -35 Feet MLLW and Selective Widening</b>	<b>Channel Deepening to -33 Feet MLLW and Selective Widening Alternative</b>
habitat conservation plan			
<b>Human Use Characteristics</b>			
<b>Land Use</b>			
LU-1: Irretrievably convert prime or unique farmland, farmland of statewide or local importance, grazing lands or Williamson Act contracted land to a non-agricultural use, or exceed loss of prime farmland limit for NRCS	No impact	Less than significant impact after mitigation <b>Mitigation Measures: LU-MM-1, 2, 3, 4, and 5</b>	Less than significant impact after mitigation <b>Mitigation Measures: LU-MM-1, 2, 3, 4, and 5</b>
<b>Aesthetics</b>			
A-1: Substantially and negatively affect the existing views for residents in the study area	No impact	Less than significant impact	Less than significant impact
A-2: Create a new source of substantial light or glare that would adversely affect day or nighttime views	No impact	Less than significant impact	Less than significant impact
A-3: Substantially and adversely affect the scenic vistas of Route 160, a state scenic highway	No impact	No impact	No impact
<b>Air Quality</b>			
AQ-1: Conflict with, or obstruct implementation of, the applicable air quality plan	No impact	No impact	No impact
AQ-2: Construction emissions would result in the violation of any air quality standard or substantial contribution to an existing or projected air quality violation, per the thresholds set forth by the Yolo Solano Air Quality Management District (YSAQMD), Sacramento Metro Air Quality Management District (SMAQMD), and	No impact	Less than significant impact after mitigation <b>Mitigation Measures: AQ-MM-1, 2, 3, 4, 5, and 6</b>	Less than significant impact after mitigation <b>Mitigation Measures: AQ-MM-1, 2, 3, 4, 5, and 6</b>

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Bay Area Air Quality Management District (BAAQMD)			
AQ-3: Operational emissions would result in the violation of any air quality standard or substantial contribution to an existing or projected air quality violation, per the thresholds set forth by YSAQMD	No impact	Less than significant impact	Less than significant impact
AQ-4: Cumulatively considerable net increase of any criteria pollutant for which the study area is non-attainment under an applicable federal or state ambient air quality standard (including releasing of emissions that exceed quantitative thresholds for ozone [O <sub>3</sub> ] precursors)	No impact	Less than significant impact after mitigation <b>Mitigation Measures: AQ-MM-1, 2, 3, 4, 5, and 6</b>	Less than significant impact after mitigation <b>Mitigation Measures: AQ-MM-1, 2, 3, 4, 5, and 6</b>
AQ-5: Creation of objectionable odors affecting a substantial number of people	Less than significant impact	Less than significant impact	Less than significant impact
AQ-6: Non-conformance to the State Implementation Plan (SIP) through annual emissions greater than 25 tons for O <sub>3</sub> precursors	No impact	No impact	No impact
AQ-7: Generation of greenhouse gases (GHGs) that may have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs	N/A	N/A	N/A

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AQ-8: Exposure of sensitive receptors to toxic air contaminants (TACs) from stationary sources <sup>2</sup> in excess of the following thresholds: <ul style="list-style-type: none"> <li>– Probability of contracting cancer for the maximally exposed individual equals 10 in one million or more</li> <li>– Ground-level concentrations of non-carcinogenic TACs would result in a hazard index for the maximally exposed individual equal to 1 or greater</li> </ul>	No impact	No impact	No impact
<b>Noise</b>			
N-1: Non-compliance with applicable noise regulations demonstrated by exceeding a community noise equivalent level (CNEL) of 60 dBA for exterior noise while applying a 5 dB penalty for early evening activities and a 10 db penalty for evening activities, or non-compliance with existing noise conditions in communities near the Port	Less than significant impact	Less than significant impact after mitigation <b>Mitigation Measures:            N-MM-1, 2, 3, 4, and 5</b>	Less than significant impact after mitigation <b>Mitigation Measures:            N-MM-1, 2, 3, 4, and 5</b>
<b>Environmental Justice</b>			
EJ-1: Disproportionate human health, air quality, noise, or traffic impact on affected populations	No impact	No impact	No impact

<sup>2</sup> Although YSAQMD's Risk Management Policy provides a basis for a threshold for TACs from stationary sources, the policy does not cover TACs from mobile sources. As such, no specific mobile source TAC threshold is referenced in the YSAQMD Handbook, and while YSAQMD continues to evaluate a threshold of significance for mobile source TAC, no specific mobile source TAC threshold is proposed at this time.

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<b>Utilities</b>			
U-1: Substantial adverse impacts to existing water supply, wastewater, landfill capacities, energy supply, or distribution infrastructure	No impact	No impact	No impact
U-2: Potential for utility relocation-related action taken in an area with known hazardous, toxic, and radioactive waste (HTRW) sites to cause release and potential movement of HTRW	No impact	No impact	No impact
<b>Cultural and Historic Resources</b>			
CHR-1: Adverse impact (i.e., disturbance, neglect, damage, degradation, demolition, conversion, relocation, reduction in integrity, or character change) to a cultural resource during project-related construction	No impact	No impact <b>Mitigation Measures: CHR-MM-1</b>	No impact <b>Mitigation Measures: CHR-MM-1</b>
<b>Recreational Resources</b>			
R-1: Substantially change the quality or availability of, or result in the decreased use of, recreational opportunities	No impact	Less than significant impact after mitigation <b>Mitigation Measures: R-MM-1 and 2</b>	Less than significant impact after mitigation <b>Mitigation Measures: R-MM-1 and 2</b>
R-2: Conflict with federal, state, and local agency regulations and policies regarding recreational resources	No impact	No impact	No impact
<b>Commercial Fisheries</b>			
CF-1: Restrict fisher access to crayfish fishing areas	No impact	Less than significant impact	Less than significant impact
CF-2: Decrease the crayfish population as a whole	No impact	Less than significant impact	Less than significant impact



Impact	Future without Project Conditions	Proposed Project: Channel Deepening to -35 Feet MLLW and Selective Widening	Channel Deepening to -33 Feet MLLW and Selective Widening Alternative
<b>Marine Navigation and Transportation</b>			
MNT-1: Change in vessel traffic patterns resulting in unplanned or regularly occurring delays, adverse change in freedom of movement, increase in safety risks, or introduction of a safety hazard	Potentially significant impact	No impact	No impact
MNT-2: Increased traffic delays at the SR-12/Rio Vista Bridge	Potentially significant impact	No impact	No impact
<b>Hazardous, Toxic, and Radioactive Waste</b>			
HTRW-1: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	No impact	No impact	No impact

**Notes:**

Proposed mitigation measures are summarized on Table 20 in Section 3.

Impacts and mitigation measures are discussed in more detail in Section 3.

- 1 In noted instances, ASH-MM-3 applies to salmonids and mid-water fish exclusively.
- 2 In noted instances, ASH-MM-3 applies to salmonids exclusively.
- 3 In noted instances, TSH-MM-5 applies to S32 exclusively.