APPENDIX H

Summary of Document Changes and Responses to Comments on Draft EA/EIR

Table of Contents

H.1. INTRODUCTION 1
H.1.1. Purpose and Intended Use of this Appendix 1
H.1.2. Draft EA/EIR Review Process 1
H.1.3. Organization and Format of this Document 1

H.2. REVISIONS TO THE DRAFT EA/EIR 2

H.3. RESPONSES TO COMMENTS 5
Individual Comments and Responses 7

H.1. Introduction

H.1.1. Purpose and Intended Use of this Appendix

This appendix to the Final Environmental Assessment/Environmental Impact Report (EA/EIR) for *San Francisco Bay Federal Channels Operation and Maintenance Dredging and Sediment Placement Activities, Dredging Years 2025-2034* was prepared by the US Army Corps of Engineers (USACE) and California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board), to respond to comments on the Draft EA/EIR, and to describe text changes made in response to comments and initiated by USACE and/or Regional Water Board. As required by California Environmental Quality Act (CEQA) Guidelines section 15088(c), this Final EA/EIR contains written responses to comments that raise significant environmental issues received by the Regional Water Board from agencies and the public on the Draft EA/EIR. The responses to comments clarify, amplify, and make insignificant modifications to EA/EIR and do not change the findings or conclusions of the Draft EA/EIR.

H.1.2. Draft EA/EIR Review Process

The Draft EA/EIR for *San Francisco Bay Federal Channels Operation and Maintenance Dredging and Sediment Placement Activities, Dredging Years 2025-2034* was published and made available to local, state, and federal agencies and to organizations and individuals for review and comment in accordance with NEPA and CEQA requirements. Notice of the Draft EA/EIR was also sent directly to persons and agencies that commented on the Notice of Preparation (NOP) or participated or expressed interest in the San Francisco Bay Federal Channels Regional Dredged Material Management Plan (RDMMP). The review period for the Draft EA/EIR began on October 31, 2024, and closed December 30, 2024. The Draft EA/EIR was made available at the San Francisco Bay Regional Water Quality Control Board office at 1515 Clay Street, Suite 1400, Oakland, CA, as well as on the USACE website.

The USACE and Regional Water Board held a public meeting on November 19, 2024, to explain the proposed project, answer clarifying questions on the Draft EA/EIR, and provide instructions to submit written comments on the Draft EIR.

USACE and the Water Board considered all relevant comments during preparation of this Final EA/EIR. Written comments were accepted throughout the public comment period. At the end of the public comment period for the Draft EA/EIR, a total of 11 comment letters and emails were received.

H.1.3. Organization and Format of this Document

This appendix to the Final EA/EIR is organized as follows:

- H.1, Introduction: states the purpose of this appendix and provides an overview of the Draft EA/EIR public review process.
- H.2, Revisions to the Draft EA/EIR: presents text changes to the Draft EA/EIR that have been made in response to comments and/or USACE or Regional Water Board changes that amplify, clarify, or make modifications or corrections. These non-substantive modifications to text in the Draft EA/EIR do not change the findings or conclusions of the Draft EA/EIR.

- H.3, Responses to Comments: includes a list of commenters on the Draft EIR, all written comments (including emails) received during the public review period for the Draft EIR, and responses to comments. This chapter also presents “topical responses” that have been prepared to address frequently raised comments, and to avoid repetition of responses and lengthy duplication of text.
- Attachment with all complete comments.

H.2. Revisions to the Draft EA/EIR

The USACE and the Regional Water Board revised the Draft EA/EIR to incorporate responses to public comments. A summary of clarifying, amplifying, reiterating, and other insignificant changes included in the Final EA/EIR is provided in Table H-1. In addition, throughout the document, minor content updates were made, typographical errors were corrected, and several sentences were clarified by adding more descriptive language. In particular, NEPA legal citations were updated to reflect recent changes. The description of the Tribal consultations was updated to reflect the current status. A reference to the new Biological Opinion issued by USFWS on longfin smelt was included. A new scientific reference from Lewis and colleagues on fish abundances in restored wetlands was added. In-Bay placement volumes were updated to include the last available nine years of disposal or placement of non-federal dredgers.

Table H-1. Note of insignificant changes to the EA/EIR.

EA/EIR Section or Table	EA/EIR Changes
Executive Summary, Section 1.5.2	Added that 2 to 2.5 million cubic yards is dredged in the San Francisco Bay Area annually for clarity.
Executive Summary - Alternatives	Clarified the difference between the NEPA No Action Alternative and CEQA No Project Alternative definition.
Executive Summary	Added a footnote to define transitional placement.
Executive Summary, Section 2.3.1.5, Section 3.3.1.1, Section 3.10, Section 5.5.2	Added 2025 longfin smelt USFWS biological opinion that was released since the Draft EA/EIR was posted.
Executive Summary, Section 2.3.1.5	The pilot study was updated to provide additional clarifications about the study and to state that the pilot would be revised to avoid impacts if it negatively impacts aquatic species.
Executive Summary-Alternatives	Added a footnote clarifying that if beneficial use sites are not available, USACE will place material at the Federal Standard Base Plan site(s) assigned under the No Action Alternative.
Executive Summary, Section 2.3.3	Added a footnote to clarify hopper dredge placement capabilities.
Table ES-4, Chapter 3	Replaced term No Cumulative Considerable Impacts with a term for NEPA analysis called No reasonably foreseeable impacts (NRFI)

EA/EIR Section or Table	EA/EIR Changes
Executive Summary Table ES-4, Section 2.3.1, Section 3.4.4, Section 5.3	Incorporated cultural resources mitigation measures into the Project Description under measures common to all alternatives in the ES, Section 2.3.1 as minimization and avoidance measures to more accurately reflect that they minimize, rather than mitigate potential impacts. Correspondingly, these previously described mitigation measures were removed from Section 3.4.4 because there are no significant impacts to cultural resources under NEPA or CEQA.
Executive Summary, Section 2.3.1.5	Added pacific herring spawn monitoring and beneficial use as required by NMFS 2015 to measures common to all alternatives in response to comments.
Executive Summary, Section 2.3.2.1, Section 2.3.2.2, Section 2.3.2.3, Section 3.2.3	Hopper dredging at San Bruno Shoal was incorrectly listed as SF-DODS disposal. The placement site was updated to SF-11. This minor change is insignificant since the total volumes and impacts remain the same. San Bruno Shoal is a small percentage of the total project volume and within the annual variance of other USACE channels.
Section 1.2.1.1	Revised text describing San Francisco Bay Plan LTMS history for accuracy in response to comments.
Section Heading 1.4	Heading name updated for clarity.
Section 1.4	Inadvertently included two counties in the Draft EA/EIR that were not included in the Project Area. This typo was corrected.
Section 1.6.1	Added how federal laws have changed regarding NEPA implementation since the Draft EA/EIR was released.
Section 1.6.1.2	Removed incorrect NEPA requirements and citations. Discussion added on 75 page limit and integrated NEPA EA/CEQA EIR. Changes to the text regarding the implementation of NEPA are unrelated and therefore non-substantive under CEQA.
Table 1-3	Added resources areas to CZMA.
Section 2.3.1.2	Clarified that the months in which dredging takes place may vary in accordance with biological opinions.
Section 2.3.1.5	Added detail about Columbia River dredging assumptions for clarity.
Section 2.3.2.1	Clarified that the months in which dredging takes place may vary within work windows.
Section 2.3.2.1	Added further context for Alameda Island predator management.
Section 3.2	Tables 3-3 and 3-4 were removed from section 3.2. Text was changed to reference that the information is in Appendix D in order to remove non-essential information from the main document. All subsequent Chapter 3 tables were renumbered accordingly.
Section 3.3.2.2	Added white sturgeon federal listing update since Draft EA/EIR.
Section 3.3.2.2	Added additional information on longfin smelt locations.
Section 3.3.2.2	Added text on life history of Lamprey.
Section 3.3.4.1	Added details about pacific herring observances and impacts.

EA/EIR Section or Table	EA/EIR Changes
Section 3.3.4.1	Updated the status of approved mitigation banks.
Section 3.4	Added details about the rights of tribes.
Section 3.4.2	Added text to clarify the list of tribes that have occupied the region is a non-conclusive list.
Section 3.4.2	Text regarding shipwrecks was removed.
Section 3.4.2	Clarified native versus colonial history.
Section 3.5.1	Added reference to Suisun Marsh Protection Plan.
Section 3.5.4.3	DMMO dredging volumes, which include federal and non-federal (small and medium) dredging from 2015 through 2023 were updated in Section 3.5.4.3. and Table 3.-21 was updated. Note that Table 3-23 in the Draft EA/EIR was renumbered to Table 3-21. This minor change is insignificant since the small change in volumes did not change results or conclusions.
Section 3.7	Added BCDC to agencies with environmental justice practices.
Table 3-7	Removed No Project Alternative from the title as it was inadvertently included in the NEPA analysis.
Table 3-11	The total reduction for Alternative 2 was $2,536,913. However, based on other minor edits to the air quality analysis, the value has since been updated to $2,148,311. The EA/EIR has been updated to reflect this value.
Table 3-5, Table 3-9, Table 3-11, Table 3-12, and Table 3-13, Appendix D	Change in values: The emissions estimates in the table (3-5, 3-9, 3-11, 3-12, 3-13) and associated text changed to reflect the adjusted baseline.
Table 4-1	Added California Ocean Protection Council.
Throughout Text	The term “upland direct placement” was replaced with “non-aquatic direct placement” for clarity.
Throughout Text	Lewis et al. 2024 was a pre-print paper and has been updated to Lewis et al. 2025.
Appendix D	The formatting on the Baseline Alternative-No Action table has been updated to include the "Baseline Alternative-No Action" in the cell below "Placement Sites," as seen in the Alternative 1-4 tables in response to comments.
Appendix D	To clarify, “(range)” has been added after the alternative name in the second row of the Alternatives Calculations tables in Tab C.
Appendix D	The Tab D tables are designed to show a high-level overview of the annual dredged material for all channels. The reported volume for San Francisco Harbor has been combined into one value: 345,000 cy for clarity.
Appendix D	The title for Tab E of Appendix D has been updated to "Beneficial Use - Diversion from Deep Ocean Disposal Summary" for consistency throughout the document.

EA/EIR Section or Table	EA/EIR Changes
Appendix D	The tables stating the percent information regarding use of dredging equipment have been added to Tab D (Baseline-No Action) Summary and Tab E (Alternative 1 – Beneficial Use – Diversion from Deep Ocean Disposal Summary).
Appendix D	Added the information that was previously in Tables 3-3 and 3-4 in the Draft EA/EIR.
Appendices G and H	New appendices added.

H.3. Responses to Comments

This section contains the comment letters (including emails) received on the Draft EA/EIR. Responses are provided for each individual comment received. Where applicable, the response identifies text changes that were made in the Final EA/EIR in response to the comment.

Each letter and transcript, as well as each individual comment within the letter or transcript, was given a number for purposes of cross-referencing. Each of the comment submissions is included in its entirety in the attachment to this Appendix. However, the full text for each individual comment, along with response to the comments, is shown under Individual Comments and Responses below. Some text in the EA/EIR was modified in response to comments. These changes amplify, clarify, or make modifications or corrections but do not change the results or conclusions of the Draft EA/EIR.

All parties who submitted comments on the Draft EA/EIR during the public review period are listed in Table H-2. The commenting parties are organized into five entity types: federal agencies, State of California agencies, local agencies, organizations, and individuals. Each commenter was assigned a commenter identification code, or Commenter ID, as shown in Table H-2 (e.g., for Bay Planning Commission, the code is BPC). In addition, each individual comment made by the commenter was assigned a number. Therefore, each individual comment received has a commenter ID and comment number (e.g., BPC-1, BPC-2, etc.).

Table H-2. Written Comments Received on the Draft EA/EIR

Entity Type	Organization/Commenter	Commenter ID
Federal Agency	United States Environmental Protection Agency, Region IX	EPA
State Agency	California Department of Fish and Wildlife	CDFW
State Agency	San Francisco Bay Conservation and Development Commission	BCDC
Local Agency	County of Solano	SC
Organization	Bay Planning Coalition	BPC
Organization	Citizens for East Shore Parks	CESP
Organization	California Marine Affairs and Navigation Conference	CMANC
Organization	Richmond Southeast Shoreline Area Community Advisory Group	RSSA CAG
Organization	San Francisco Baykeeper, Clean Water Action	BK-CWA
Organization	State Water Contractors and San Luis & Delta-Mendota Water Authority	SWC-SLDMWA
Individual	Julie Groves	JG

The attendees of the November 19, 2024, public meeting and their respective affiliations (entity type and organization) are listed in Table H-3. At the meeting, attendees were urged to provide written comments for official documentation and responses in this Final EA/EIR.

Table H-3. November 19, 2024 Public Meeting Participants

Name	Entity Type (Organization)
Brenda Goeden	State Agency (San Francisco Bay and Conservation and Development Commission)
Robert Liu	Local Agency (County of Solano)
Dick Tzou	Local Agency (County of Solano)
Darren Garza	Local/Regional Agency (East Bay Municipal Utility District)
Khamly Chuop	Local Agency (Port of Oakland)
Justin Taschek	Local Agency (Port of Oakland)
Allison Chan	Local Agency (San Francisco Public Utilities Commission)
Jim Haussener	Organization (California Marine Affairs and Navigation Conference)
Kerry Guerin	Organization (Communities for a Better Environment)
Tonia Randell	Organization (Marie Harrison Community Foundation)
Nicole Sasaki	Organization (San Franciso Baykeeper)
Manny Bahia	Organization (State Water Contractors)
Julius Burton	Individual/Public
Ellen Johnck	Individual/Public
Unknown Phone-In Participant	Unknown

Individual Comments and Responses

Comments from Federal Agency

US Environmental Protection Agency

EPA-1

Comment:

EPA is a committed partner agency on the San Francisco Bay Long Term Management Strategy (LTMS), as promulgated in the 1998 LTMS Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) and release of the 2001 LTMS Management Plan. The LTMS Program was designed to minimize in-Bay disposal, maximize beneficial reuse, and use ocean disposal as a "safety valve" when beneficial reuse is not feasible. Those goals are still relevant to the Bay today and critical in supporting shoreline resiliency of human communities, infrastructure, and natural habitats in response to rising sea and groundwater levels. The LTMS Programmatic structure inherently provides the ability to accommodate and evaluate changing conditions in the Bay such as reduced baseline sediment conditions. Further, the LTMS has previously demonstrated this ability by instituting multiple measures to provide reasonable flexibility in achieving program goals including work windows, usage of in-Bay contingency volumes, and flexible volume averaging periods (LTMS Memorandum, Feb 27, 2014, Implementation of the LTMS Management Plan Following the 12-year Program Review). Therefore, we do not believe that the LTMS Program needs to be re-opened to accommodate the Proposed Action (NEPA)/Proposed Project (CEQA) Alternative. The EPA supports the action in that it provides a paradigm shift to realign the Federal Standard to support federal and regional goals for increased and sustained beneficial reuse of material in SF Bay.

Response:

Thank you for sharing the LTMS history and noting the flexibility in achieving LTMS goals. We agree the LTMS EIS/ EIR and Management Plan do not need to be re-opened to accommodate the Proposed Project. We appreciate United States Environmental Protection Agency's (EPA) support for the current Federal Standard to include a minimum amount of beneficial use.

EPA-2

Comment:

The document employs a new term, 'transitional placement', for disposal location. This terminology is not used in the LTMS program, and should be further differentiated as an internal USACE term of art.

Response:

Terminology, including "transitional placement," used in the Draft EA/EIR for placement site types is consistent with USACE's 28-August 2023 memorandum on Expanding Beneficial Use of Dredged Material in the USACE (2023 Memorandum). Transitional placement is defined in Draft EA/EIR section 1.5.2.2, Description of Placement Sites, as keeping sediment in the riverine or coastal system as a part of a management process or in a period of transition. In preparation of the Regional Dredge Materials

Management Plan (RDMMP) and EA/EIR, USACE determined that sites referred to as in-Bay disposal sites by the LTMS meet the definition of transitional placement. Specific types of transitional placement and example sites are also provided in section 1.5.2.2. Additionally, please see Table 3 in the RDMMP for definitions, including Transitional Placement. In response to this comment, Section 1.5.2.2 was updated to clarify that transitional placement is a new term not used within LTMS documents, and text was added to Section 1.5.2.2 in the EA/EIR to state that "Descriptions of the various placement site types are provided in subsections below and defined in Table 2 of the RDMMP." We recognize that the LTMS refers to placement of dredged sediment within San Francisco Bay to be disposal. However, USACE is obligated to use the current terminology defined in the 2023 Memorandum. The LTMS Program Managers and Management Committee can decide if it is necessary to update the LTMS terminology.

EPA-3

Comment:

Water column seeding is a form of strategic sediment placement that can occur in the nearshore; therefore, it is not distinct from nearshore strategic placement as the document seems to indicate.

Response:

We agree. Text in Section 1.5.2.2 has been revised to indicate that water column seeding is a form of nearshore strategic placement.

EPA-4

Comment:

Language on adherence to dredging work windows is unclear and conflicting in the document. For the Proposed Action/Project, there is a high likelihood that hydraulic dredging of Oakland and Richmond Inner channels would occur December-February, and outside of established environmental work windows.

Response:

Text has been added to Section 2.3.4 Beneficial Use: Regional Optimization, Leverage Hopper Dredging (Alternative 2) to describe how the additional hopper dredging outside the work window would comply with the existing NMFS Biological Opinion's requirements. Dredging work windows are provided in Table 2-3. Dredging work windows have been established for the LTMS by resources agencies to protect state and federally-listed species. Additional clarity is provided in Impact BI-1, Table 3-15, where the timing of hopper dredging for all alternatives is identified. For all alternatives the remaining sites will be dredged when the vessels are available with the intent of dredging during the approved work windows between June and November. However, USACE can and does dredge outside the typical June through November work window. When that occurs, USACE will comply with the notification, monitoring, and conservation measures as noted in the appropriate Biological Opinions. The Suisun Bay Channel and Napa River Channel will only be dredged during the August to November work window, as required by the USFWS Biological Opinion, unless shoaling occurs that causes an imminent safety hazard necessitating emergency dredging.

EPA-5

Comment:

We recommend explaining the calculation of only 20% of suitable sand from Suisun Bay channel can be used beneficially due to UXOs *[unexploded ordinance]*.

Response:

Approximately 4.7 miles of the Suisun Bay Channel passes through the military munition response site boundaries from the 1944 Explosion at the Port of Chicago, now known as Military Ocean Terminal Concord (MOTCO). While no unexploded ordinances have been discovered in or near navigation channels from modern dredging activities or sampling, the Army has prohibited removal of this material from within the site boundary since MOTCO dredging site investigations in 2023. The DMMO determined that the material is consistently suitable for placement for beneficial use and poses no risks to the environment or human health. Sediment dredged from the channel remains subject to federal regulations which require special consideration to the possibility of remaining munitions. While the risk of retrieval of munitions from the federal channel remains low, out of an abundance of caution, USACE has determined that dredged material removed from portions of the channel within the response site is not suitable for upland placement without first screening for potential munitions. On average, this equates to approximately 70 percent of the material removed annually from the Suisun Bay Channel. There have been no impacts or incidents from unexploded ordinance related to USACE navigational dredging and USACE requires contractors to provide extra safety measures, such as blast shields on the dredge, maintaining safe distances, and approved PPE for the plant operators when dredging this channel. USACE recognizes that the DMMO determined that the material is consistently suitable for placement for beneficial use and poses no risks to the environment or human health.

EPA-6

Comment:

Section 3.3.4.1 provides the basis for calculations of mitigation to minimize impacts from hopper dredging. One approach increases acres of restored habitat through increased volume of dredged sediment material to restoring sites. We recommend an evaluation of the multiplier of 2 within the 10-yr permit to allow for assessment of the time horizon at restoring sites where reuse was employed. The SF Wetland Regional Monitoring Program could assist with monitoring data at sites to promote adaptive management and higher certainty on ecosystem targets.

Response:

The mitigation ratio and multiplier were determined by USACE and EPA to be sufficient and are included in USFWS' February 7, 2025, longfin smelt Biological Opinion (USFWS 2025 BiOp), which concludes that USACE's proposal does not jeopardize the continued existence of longfin smelt.

USACE and the Water Board used the multiplier of two in the calculation as a safety factor to account for uncertainty in the timing of restoration, likely distance of the impact sites from the beneficial use site(s), temporal losses in aquatic resource functions, and the likelihood of success of the restoration activities at the beneficial use site(s). The USFWS endorsed the calculation, including the multiplier, in the USFWS 2025 BiOp. The project has temporary reoccurring impacts for approximately 57 days for Alternative 2 with the most hopper dredging. Impacts to populations and habitat of the species would cease once

dredging is completed, and food and other habitat resources are expected to recover relatively quickly. Therefore, the impacts to longfin smelt are short-term recurring temporal losses in ecological functions with no permanent loss of functions or acres. The multiplier of two is consistent with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Dredge and Fill Procedures). Further, the multiplier is consistent with mitigation required for previous projects with permanent dredge and fill impacts where the mitigation is completed offsite and is in kind. We also considered the benefits to the species from increasing the speed of tidal wetland restoration in the San Francisco Bay that would result from USACE providing a consistent baseline amount of dredge sediment for beneficial use. Historically, restoration sites, such as the Cullinan Ranch Restoration Project (Cullinan Ranch) and Montezuma Wetlands Restoration Project (Montezuma), have taken a decade or more to obtain the sediment needed before benefits to species would begin to be realized. Speeding up this process will result in a temporal gain in functions that benefit longfin smelt and appropriately offset temporal impacts to this species.

Comments from State Agencies

California Department of Fish and Wildlife

CDFW-1

Comment:

The San Francisco Bay-Delta is the second largest estuary in the United States and supports numerous aquatic habitats and biological communities. It encompasses 479 square miles, including shallow mudflats. This ecologically significant ecosystem supports both state and federally threatened and endangered species and sustains important commercial and recreational fisheries.

STATE AND FEDERALLY LISTED AND MANAGED SPECIES
Protected species under the State and Federal Endangered Species Acts that could potentially be present near Project activities include:

- Longfin smelt (*Spirinchus thaleichthys*), state threatened, federally endangered,
- Delta smelt (*Hypomesus transpacificus*), state and federally endangered,
- Chinook salmon (*Oncorhynchus tshawytscha*), state and federally threatened (Central Valley Spring-run), state and federally endangered (Sacramento River Winter-run), state species of special concern (Central Valley Late Fall Run, Central Valley Fall Run),
- Steelhead (*Oncorhynchus mykiss*), federally threatened (Central California Coast and Central Valley evolutionary significant units),
- Green sturgeon (*Acipenser medirostris*), federally threatened (Southern Distinct Population Segment),
- White sturgeon (*Acipenser transmontanus*), state candidate threatened,
- California least tern (*Sternula antillarum browni*), state and federally endangered, state fully protected,
- Wester snowy plover (*Charadrius nivosus*), federally threatened
- California Ridgeway's rail (*Rallus obsoletus obsoletus*), state and federally endangered, state fully protected,
- Salt marsh harvest mouse (*Reithrodontomys raviventris*), state and federally endangered, state fully protected,
- Pacific lamprey (*Entosphenus tridentatus*), state species of special concern, and
- Western river lamprey (*Lampetra ayresii*), state species of special concern.

Several species with important commercial/recreational fisheries value and habitat value for spawning and rearing could potentially be present near Project activities. These include:

- Dungeness crab (*Metacarcinus magister*),
- Pacific herring (*Clupea pallasii*),

- Rockfish (*Sebastes* spp.),
- California halibut (*Paralichthys californicus*)
- Surfperches (*Embiotocidae*), and
- Eelgrass (*Zostera marina*).

Response:

Comment noted on the protected and important species. NEPA does not require an analysis of potential impacts to species that are not federally listed, proposed for listing, or a candidate for listing as threatened and endangered. CEQA, however, requires analyses of potential impacts on all species and their habitat.

All federally and state listed, proposed, and candidate species mentioned by CDFW are described and impacts to these species are analyzed in the Draft EA/EIR. However, descriptions and analyses of potential impacts to two species of special concern, the Pacific lamprey and western river lamprey, were not included in the Draft EA/EIR. To remedy this, descriptions and analyses of potential impacts to the Pacific and western river lamprey will be added to Section 3.3.2.2 of the Final EA/EIR. Specifically, life history information will be added to the affected environment. Specific information on abundance and distribution will not be added because of the lack of information. Regarding the assessment of potential impacts, Pacific lamprey has not been observed during 8 years of entrainment monitoring, and only 8 western river lamprey were reported as entrained (4 in 2011 and 4 in 2016). Moreover, standard practices are in place to minimize their entrainment. The Project will not substantially reduce their habitat, populations to drop below self-sustaining levels, threaten their elimination, or substantially reduce their numbers or restrict their range. Accordingly, impacts to Pacific or western river lamprey would be less than significant. The commercial/recreational fisheries mentioned by CDFW, except Surfperches, are described in section 3.3.2.3. Although Surfperches are not explicitly mentioned, impacts to these species and other commercially and recreationally important species and their habitat are analyzed as a group in section 3.3.4. These species have not been observed in entrainment monitoring and occupy shallow water habitats nearby but away from navigation channels dredged by USACE. As such, addressing these species in the analysis of commercial and recreational fish species as a group is appropriate. This analysis found that the project would not have a significant effect on commercial or recreational fish species because these species are abundant and the analyses of effects on more sensitive state and federally listed, proposed, and candidate species found that the project would have a less-than-significant effect on these environmental resources. Similarly, the analysis of potential effects on sensitive shallow water habitats occupied by Surfperches, such as eelgrass habitat, found that the project would have less than significant effects on these environmental resources.

CDFW-2

Comment:

Comment: The Department does not support an increase in suction dredging episodes in channels that have documented entrainment of state and federally listed species. However, the Department does support maximizing beneficial reuse of dredging material within San Francisco Bay. The Department has identified project alternatives that are not currently in the Draft EA/EIR that would further minimize and potentially avoid impacts to listed and managed species as well as address cost concerns with beneficially reusing more dredged material. Oakland Inner and Outer Harbors would be a preferred

channel to move the majority of suction dredging operations within San Francisco Bay to minimize impacts to listed and managed species. The volume of dredged material from Oakland in average dredging episodes is a higher volume than Richmond Inner/Outer and Pinole Shoals (San Pablo Bay) channels combined. If all suction dredging were to be transitioned to Oakland, while prioritizing mechanical dredging in Richmond and San Pablo Bay, the impacts to listed and managed species from suction dredging may be substantially reduced. Additional consideration could include maintaining the current bi-yearly suction dredge schedule within Richmond Outer and San Pablo Bay channels but only with a commitment from USACE to remain within the Department recommended suction dredge work window of August 1 through November 30 to reduce impacts to listed species. If suction dredging is to continue in Richmond and San Pablo Bay, it is essential that suction dredging remain within the protective work window to ensure minimized impacts to listed and managed species. This option could further address the need for additional beneficial reuse of dredged material in San Francisco Bay and further reduce USACE cost concerns associated with maximizing beneficial reuse

Recommendation: The Department recommends the preferred project alternative to minimize or potentially avoid impacts to listed and managed species is to transition all suction dredging to Oakland Inner and Outer Harbors.

Recommendation: The Department recommends that if a commitment can be made to remain within the August 1 through November 30 suction dredging work window, Richmond Outer Harbor and San Pablo Bay channels continue suction dredging bi-yearly to increase the total beneficial reuse of dredged material in San Francisco Bay.

Response:

We appreciate the suggestion to move all hopper dredging to the Oakland Harbor Channel. Alternative 2 has the flexibility to allow for all hopper dredging in Oakland Harbor. However, USACE cannot commit to this alternative because dredging needs and scheduling conflicts necessitate that the decision on which specific channels are hopper dredged be made on a year-by-year basis as stated in Sections 2.3.1.2 and 2.4 in the EA/EIR.

Similarly, as described in section 2.3.1.2 of the EA/EIR, it is not feasible for the USACE to hopper dredge only in the August 1 to November 30 window. USACE San Francisco District coordinates with all other USACE West Coast Districts to schedule the *Essayons* and West Coast hopper contract well in advance. From late June through mid-November, the *Essayons* and West Coast hopper contract priority is dredging the Columbia River to address severe and rapid shoaling associated with high flows during spring snowmelt. Portland District is limited to dredging July through mid-November by weather conditions that become prohibitive to dredging. Even with prioritized dredging consisting of multiple episodes and two hopper dredges, there are still two to three bar closures a year at the mouth of the Columbia River due to hazardous conditions. In 2024, USACE coordinated with other West Coast districts to explore flexibility in the regional dredging schedule and verified that the above prioritization of the Columbia River remains true and the driving factor of the regional dredging schedule, including San Francisco District. Please see the discussion of scheduling constraints on the use of hydraulic dredges as described in section 2.3.1.2 of the EA/EIR and Regional Dredged Material Management Plan.

These scheduling constraints along with a flat Operation and Maintenance budget also make it infeasible to dredge Richmond Outer Harbor and San Pablo Bay (Pinole Shoal) channels every other year while

also increasing the total beneficial use of dredged sediment in San Francisco Bay. Moreover, alternating hopper dredging of these channels every other year has not minimized the entrainment impacts to species because the timing and duration of hopper dredging in San Pablo Bay remain the same regardless of whether one or both channels are dredged each year. As stated in section 3.3.4.1 in the EA/EIR, the *Essayons* is only available for about 20 days to dredge within San Francisco Bay because it is needed elsewhere as described in the previous paragraph. During this period, USACE uses the *Essayons* to dredge either the Richmond Outer Harbor or Pinole Shoals, which are both in San Pablo Bay. If USACE dredged both the Richmond Outer Harbor and Pinole Shoals each year, the amount of hopper dredging performed within San Pablo Bay would be similar because USACE would still only have the *Essayons* for 20 days. As a result, entrainment impacts from hopper dredging in San Pablo Bay are equivalent regardless of whether USACE hopper dredges one or both channels within San Pablo Bay per year. Therefore, alternating hopper dredging of Richmond Outer Harbor and San Pablo Bay channels every other year is an ineffective minimization measure that has been removed from all alternatives, except for the No Project Alternative under CEQA.

CDFW-3

Comment:

Comment: The Draft EA/EIR identifies the CEQA determination for Impact BI-1: Potential Effects on Fish and Benthic Invertebrate Survival Caused by Entrainment under Alternative 1 and Alternative 2 as less than significant because dredged material will be placed at a beneficial reuse site. However, the placement of dredged material at a beneficial reuse site does not offset the impacts caused by entrainment to listed species under CESA and the Draft EA/EIR did not include any other proposed mitigation for the entrainment impacts to listed species.

Recommendation: The Department recommends the Final EA/EIR be revised and include other mitigation options, such as compensatory mitigation from a mitigation bank or a USACE specific restoration project, to support the less than signification determination of BI-1.

Response:

As further explained below, beneficial use of dredged sediment to expedite tidal marsh restoration minimizes/mitigates Impact BI-1: Potential Effects on Fish and Benthic Invertebrate Survival Caused by Entrainment under Alternatives 1 and 2 to less than significant under CEQA. Accordingly, we did not make the recommended change to the EA/EIR.

Infeasibility of Purchasing Mitigation Bank Credits and Establishing a USACE-Sponsored Mitigation Bank

Purchasing species credits from a mitigation bank alone to mitigate and compensate for entrainment impacts is infeasible because as acknowledged in CDFW's own letter (see response to CDFW-4 below), there is currently a shortage of species credits for purchase from mitigation banks. This shortage stems from there being only one mitigation bank in operation and the high demand for species credits. Purchasing mitigation credits has proven to be uncertain, unpredictable, and unreliable. Further, there is no indication that another mitigation bank for longfin smelt will become available or that demand will lessen within the next 10 years. As a result, purchasing species credits from a mitigation bank for the Proposed Project is infeasible and would not provide the mitigation needed to mitigate impacts over the

entire 10-year project period. Under CEQA's requirement for no project alternatives, there is no choice in the No Project Alternative other than to continue existing operations of purchasing mitigation credits and allowing for the beneficial use of sediment; however, given the lack of mitigation bank credits, beneficial use mitigation will have to occur in the No Project Alternative. The Proposed Project (after the initial phase) bypasses the uncertainty, unpredictability, unreliability, and infeasibility of purchasing mitigation bank credits when needed and instead provides superior beneficial reuse minimization/mitigation measures for the longfin smelt as part of the project, as further explained below. Because beneficial reuse has been incorporated into the Proposed Project, it is unnecessary to require additional mitigation beyond what is required for the No Project Alternative.

A permittee-responsible mitigation project or a USACE-specific mitigation bank is infeasible. USACE is required to have specific congressional authorization to undertake large scale restoration projects and it lacks that authority. In contrast, USACE may use funding under its navigation authority to place dredged sediment at existing beneficial use sites or, if available, purchase mitigation credits from a bank. This authority is not broad enough to include the ability to purchase real estate and construct large scale mitigation project or mitigation bank.

Appropriateness of Beneficial Use of Sediment as Minimization/Mitigation Measure

Providing sediment for beneficial use (also referred to as beneficial reuse) to restore tidal marshes minimizes/mitigates entrainment impacts from hopper dredging in Alternative 1 and Alternative 2 to a less than significant level because:

1. It is consistent with the State Dredge and Fill Procedures.
2. It will facilitate restoration of tidal wetlands that supports longfin smelt in a similar manner as restored tidal wetlands at mitigation banks in the Delta and other approved mitigation projects, while providing the additional benefit of being located in and around San Francisco Bay.
3. It is based on a formula that will result in ***more*** acres of longfin smelt habitat being restored than was required to mitigate impacts to less than significant under the 2015-2024 EA/EIR.
4. It was accepted by USFWS as mitigation (USFWS 2025 BiOp).

On the first point, under the section B.1.a of State Dredge and Fill Procedures, mitigation for impacts from dredge and fill projects must be sequenced to "first avoid, then minimize, and lastly compensate for adverse impacts that cannot be practicably avoided or minimized to waters of the state." As such, compensatory mitigation is only allowed for impacts that cannot be practicably avoided and minimized. Further, under Alternatives 1 and 2, beneficial use of sediment to restore habitat that will benefit the longfin smelt is an inherent part of the project thereby making it a minimization mitigation measure under sections 230.75(d) and 230.77(d) of Subpart H – Actions to Minimize Effects in Appendix A of the Dredge and Fill Procedures. As such, beneficial use of sediment must be implemented to minimize entrainment impacts to longfin smelt before compensatory mitigation can be considered by the Water Board. The alternatives developed and evaluated in the EA/EIR factor in these requirements.

On the second point, providing sediment for beneficial use to restore tidal wetlands under Alternatives 1 and 2 not only provides similar benefits to longfin smelt (and other estuarine fish species) as mitigation

banks in the Delta and other special status species impact mitigation projects, but is superior because the restoration sites are located in and around San Francisco Bay, not upstream in the Delta.

For background, longfin smelt are a formerly abundant small forage fish whose population in San Francisco Bay/Estuary has plummeted to less than 1 percent of its historic (pre-1980) abundance (Noriga and Rosenfeld 2016). This species spawns in freshwater and brackish habitats and then migrates to marine habitats as older juveniles and adults. Like many other estuarine fish species in the San Francisco Bay/Estuary, population declines of longfin smelt are attributed to numerous factors including declines in freshwater flow entering the San Francisco Bay/Estuary, habitat loss, increased water temperatures, declines in food resources, predation, entrainment, and contaminants (USFWS 2024). The USFWS considers reduced freshwater inputs due to human activities and climate change to be the primary threat facing the species. Conservation efforts aimed at supporting the recovery of longfin smelt have primarily focused on improving the magnitude, duration, and reliability of freshwater flows into San Francisco Estuary, and conserving and restoring tidal habitats (including tidal wetlands) to increase the amount of spawning/rearing habitat and estuarine food web resources.

Previously scientists thought longfin smelt were limited to tidal freshwater habitat in the Delta, but work since the 2010s (Grimaldo et al. 2017, Lewis et al. 2020, Lewis et al. 2024a) has indicated that longfin smelt are in fact distributed and reproduce throughout the San Francisco Bay, including in tidal freshwater/brackish baylands of the North Bay (e.g. Napa River, Sonoma Creek, Petaluma River) and Lower South Bay (e.g. Alviso Slough, Coyote Creek). This research has demonstrated that longfin smelt broadly utilize a range of bayland habitat types, including large subtidal sloughs, smaller intertidal channels, mudflats/shoals, and shallow subtidal open water. However, like many estuarine fish species in the San Francisco Bay, the precise habitat types and configurations that support optimal longfin smelt reproduction, growth, and dispersion are an area of active research and monitoring. For example, the relative contributions of marsh-, benthic- and pelagic-derived primary and secondary productivity to the food webs that support longfin smelt and other estuarine fish species are a primary focus of the research implemented by the Interagency Ecological Program (IEP) and Fish Restoration Monitoring Program (FRMP).

Nonetheless there is broad scientific consensus that conserving and restoring tidal habitats, including tidal marshes, is an important factor in restoring populations of native and special-status species, including longfin smelt. This consensus is reflected in abundant literature, including regulatory agreements related to State Water Project and Central Valley Project operations that require the restoration of intertidal and associated subtidal habitat in the Delta as compensatory mitigation for impacts to special status fish species, including brackish intertidal wetland and associated subtidal habitat as mitigation and compensation for impacts to longfin smelt, as described below.

In general, the regulatory processes that guide the development, implementation, and accreditation of these mitigation banks and restoration projects broadly define tidal habitat that is appropriate compensatory mitigation for impacts to special status fish species, but do not prescribe precise design approaches or landscape metrics (e.g. marsh patch size/connectivity/compactness, marsh/mudflat elevations, channel morphology/density, adjacency to upland and floodplain habitats, etc.). As a result, the habitat restoration projects implemented to fulfill these CDFW mitigation obligations have taken many forms, and include the restoration of a variety of tidal habitats, including broad, shallow tidal embayments (e.g. Wings Landing, Bradmoor Island), vegetated tidal marsh with channel networks (e.g. Arnold Slough, Lookout Slough), and tidal-upland transition zone/floodplain habitat (e.g. Lower Yolo Ranch, Liberty

Island). This diversity of habitats is thought to support a range of native and special-status estuarine fish species, including the longfin smelt, as well as other wildlife species that are dependent on tidal wetlands and associated habitats.

The tidal wetland restoration projects that will receive dredged sediment for beneficial use under the Proposed Project (i.e., Cullinan Ranch, Montezuma Wetlands, and Bel Marin Keys Unit V Restoration Projects) will create a variety of habitats similar to the mitigation banks and restoration projects described above. As such, these habitat restoration sites are expected to be functionally equivalent to and provide similar habitat benefits as mitigation banks and other CDFW-approved mitigation restoration projects for longfin smelt. This is further supported by the abundance of longfin smelt in a variety of restored wetland habitats in the San Francisco Bay/Estuary, including those that beneficially use dredged sediment. In addition, the restoration projects proposed for beneficial use are adjacent to known habitat for longfin smelt, so they are situated at locations already known to be used by longfin smelt. In summary, beneficial use of dredged sediment will facilitate restoration of tidal habitats that benefit longfin smelt in the San Francisco Bay/Estuary in a similar manner as CDFW-approved mitigation banks and restoration projects in the Delta.

For minimizing/mitigating impacts to longfin smelt, Alternative 1's and 2's proposed beneficial use of sediment in San Francisco Bay/Estuary is superior to buying mitigating credits at banks located in another geographic area. A concern with purchasing mitigation bank credits is that the past and current mitigation banks for longfin smelt are outside of the San Francisco Bay/Estuary. Purchasing credits outside of the area of impact translocates benefits to another geographic area (Delta) rather than providing benefits to longfin smelt in the geographic location where the impacts are expected (San Francisco Bay/Estuary). This is especially important considering that beneficial use of sediment increases the likelihood that tidal restoration sites will support marsh-derived food webs in addition to benthic- and pelagic-derived food webs by developing and maintaining vegetated tidal marsh. Translocating these food web support benefits from a geographic region in the center of the longfin smelt range to a geographic region at the edge of the range of the species reduces the benefits to the species as a whole.

On the third point, the amount of beneficial use under Alternatives 1 and 2 will minimize/mitigate entrainment impacts to longfin smelt to less than significant levels. To ensure this, USACE and the Water Board developed a formula to convert the acres of mitigation owed for entrainment impacts to an equivalent volume of sediment to be placed at a site for beneficial use in a tidal wetland restoration project, as described in detail in Mitigation Measure BI-1: Compensatory Mitigation for Longfin Smelt of the EA/EIR. The formula derives acres of mitigation from an equation provided by CDFW in 2014 and used in the 2015-2024 EA/EIR for mitigation to determine acres of mitigation credits needed to mitigate and compensate for entrainment impacts. The formula then converts the acres of mitigation credits into a dollar value based on the cost of credits from three representative mitigation banks. Next, the formula converts the dollar amount into a volume of sediment using the incremental cost between the current federal standard placement site and a beneficial use site. Even though the CDFW's 2014 mitigation equation has been deemed adequate to mitigate special status species impacts to less than significant levels, the EA/EIR formula goes above and beyond what would be required under the 2014 mitigation equation. For example, it includes a multiplier of two as a safety factor to additionally account for uncertainty in the placement location, timing of restoration, and success of restoration activities at the placement site and to further ensure that short term entrainment impacts to longfin smelt from hopper dredging will be minimized to less than significant levels (see response to EPA-6 for a more detailed discussion of the safety factor). The net result is that the amount of beneficial use that is part of

Alternatives 1 and 2 will result in ***more*** acres restored for longfin smelt than would be achieved by the amount of mitigation credits purchased under the requirements in the 2015-2024 EA/EIR to mitigate impacts to longfin smelt to less than significant levels. This is illustrated in Table H-4 below.

Table H-4. Alternative 1 Average Volume of Restoration Mitigation/Minimization in Acres

2014 CDFW Mitigation Formula	USFWS 2025 BiOp	EA/EIR Formula	USACE Actual Planned Volume
0.59	1.18	5.09	14.39

Note: Table H-4 uses the ratio of beneficial use to acres of restored habitat at four restoration sites: Montezuma Wetlands Restoration Project, Cullinan Ranch Restoration Project, Bair Island Restoration Project, and Hamilton Airfield Wetland Restoration Project. These projects ranged from 6,061 (Bair Island) to 10,749 (Montezuma) cubic yards per acre. The average of 9,411 cubic yards per acre was used for this calculation.

Finally, on the last point, USFWS has accepted beneficial use at tidal restoration sites as adequate minimization/mitigation for longfin smelt. Moreover, the EA/EIR formula used to calculate the amount of beneficial use of sediment needed to minimize impacts results in more acres of restored habitat for longfin smelt than what was evaluated in the USFWS Biological Opinion issued on February 7, 2025, to protect longfin smelt from dredging impacts in San Francsico Bay (USFWS 2025 BiOp). Even considering less beneficial use at tidal wetland restoration sites than is proposed under Alternatives 1 to 3, the USFWS 2025 BiOp concludes that the Proposed Project would <u>not</u> jeopardize the continued existence of the species.

CDFW-4

Comment:

Comment: Compensatory mitigation for listed species impacts should continue as a method to offset impacts from suction dredging occurring in San Francisco Bay and its tributaries. Given the continued level of take being documented and nonadherence to some minimization measures such as work windows, compensatory mitigation to fully offset the impacts of the Project is necessary.

The mitigation options described in the Draft EA/EIR include purchase of mitigation bank credits, providing funding to an in-lieu fee program, or taking dredging material to beneficial reuse. The Department agrees that these are three potential mitigation options currently available to offset impacts caused by suction dredging to listed species. However, some of these mitigation options also have considerable downsides that should be considered.

Beneficial reuse of dredged material is not something the Department finds an appropriate option to offset impacts to listed species. Not all beneficial reuse sites are equal in terms of benefits to listed species nor are the timelines in which the created habitat will be available to the impacted species. Though there are indications that listed species may be using habitats within wetlands created using beneficially reused dredged material, there would have to be more specificity in choosing where the dredged material is going to offset the known impacts to listed species caused by suction dredging.

The purchase of mitigation credits from a mitigation bank may also not be a viable long term mitigation option. Given the current shortage of mitigation credits at only one currently operating bank, the amount of species credits that would be needed over time may not consistently be available to purchase. This could leave USACE with a large sum of undelivered mitigation acreage at times when credits are not available, as we saw within the 2015-2024 time period.

A fourth option, that the Draft EA/EIR did not consider, is a permittee responsible mitigation project. Given the acreage that may be needed over time if suction dredging is to increase during the next ten years, a larger restoration project to provide specific habitat for listed species would be consistent with CDFW CESA recommendations for non-federal projects seeking CESA authorization. A large scale, long term, restoration project, or USACE specific mitigation bank, should be considered as a mitigation option that can be implemented in the future.

Recommendation: The Department recommends that the Final EA/EIR consider permittee responsible mitigation or a USACE specific mitigation bank as another viable, long-term, and consistent mitigation option to offset impacts from USACE suction dredging operations in San Francisco Bay.

Response:

As described in response to CDFW-3 above, beneficial use of dredged sediment to expedite tidal marsh restoration is the only reliable, predictable, certain, and feasible means of minimizing/mitigating entrainment impacts from the project and alternatives to less than significant. Accordingly, we did not make the recommended change to the EA/EIR.

The concept that the location of the mitigation site is important. As described in the response to CDFW-3 above, it is superior for restoration sites to be located within the San Francisco Bay/Estuary and not located far away in the Delta. In addition, where these beneficial use sites will be located is known: Montezuma is still in need of 10,000,000 cy of sediment and Bel Marin Keys V is the only other restoration site that will use dredged sediment in the near future. Both these locations are within the known areas used by longfin smelt, and longfin smelt were encountered in recent fish surveys undertaken to determine the ecological benefits of wetland restoration to longfin smelt. Longfin smelt is the listed species of greatest concern for dredging impacts and focus for the mitigation as described in response to CDFW-3.

The comment also includes a statement about USACE “non-adherence to some minimization measures such as work windows”. As of the release of the Draft EIR/EA, there were no established work windows for longfin smelt. Because CDFW does not directly regulate actions of USACE, CDFW suggested a work window to the Water Board in 2014. The Water Board incorporated text into its prior permit for USACE “to hopper dredge between Aug 1 and Nov 30, *if feasible*” (emphasis added). Due to limited availability of the *Essayons* to dredge within San Francisco Bay, USACE is unable to adhere to the CDFW’s suggestion/request and instead hopper dredges within the San Francisco Bay in the June/July time frame (see response to CDFW-2). The longfin smelt was recently listed as federally endangered, and the ensuing Biological Opinion issued by USFWS, contains no work window for this species. Therefore, there is no feasible work window for longfin smelt that is applicable to the Proposed Project or its alternatives.

CDFW-5

Comment:

Comment: A citation referenced on p. 3.56 (pers. Comm., Arn Arberg, CDFW, 2024) incorrectly describes what was stated. There is currently one approved bank available, approved by the Department and other state and federal agencies, but credits are purchased quickly making availability limited. Currently, the one mitigation bank offering species credits, the North Delta Fish Conservation Bank, is operational and offers credit purchases or credit reservations as credits become available.

Response:

Thank you for the correction. The text in Section 3.3.4.1 was updated to say “There is currently one bank available that is approved by CDFW and other state and federal agencies: the North Delta Fish Conservation Bank. This mitigation bank is operational and offers credit purchases or credit reservations as credits become available. However, credits are purchased quickly, making availability limited.”

CDFW-6

Comment:

Additionally, the reference has misspelled the CDFW staff person name in this citation.
Recommendation: The Department recommends the CDFW personal communication citation be revised and the CDFW staff person name be spelled as follows: Arn Aarreberg.

Response:

Thank you. The text has been updated as requested.

CDFW-7

Comment:

Comment: Entrainment monitoring, and some additional detection surveys, have continued during hopper dredging episodes since 2014 with only a brief interruption due to the COVID-19 pandemic. The Draft EA/EIR does not discuss whether entrainment monitoring will continue. Entrainment monitoring, in some form, should continue in order to assist with making informed decisions and to be the foundation of an actionable plan to reduce impacts to listed and managed species.

Entrainment monitoring will continue to be a valuable tool in determining potential for take and the amount of take associated with this Project. This monitoring will be especially important for locations in which suction dredging has not occurred previously. If channels like Oakland, San Bruno, and Redwood City were to implement suction dredging methods, these channels will also benefit from entrainment monitoring data to determine presence of species and further refine potential avoidance and minimization measures such as work windows.

Comment: As described in the Draft EA/EIR, the proposed eDNA monitoring is an inappropriate approach for this monitoring technique and should not be used to replace traditional monitoring approaches at this time. The Draft EA/EIR describes a process in which eDNA samples would be collected from two potential dredging locations, the samples would then be processed that day, the results would be used to determine the order of dredging based on the presence or absence of longfin smelt. eDNA monitoring could be conducted in conjunction with traditional entrainment monitoring to further refine detection of listed species during suction dredging episodes. However, positive or negative detection of longfin smelt through eDNA monitoring alone would not guarantee that longfin smelt have moved into or out of the dredge footprint and relying on eDNA data alone could result in a false positive or negative test.

Recommendation: The Department recommends the Final EA/EIR include traditional entrainment monitoring, in addition to the proposed eDNA and echosounder monitoring, for the next ten-year period of dredging for all channels dredged with a suction dredge. Using all methods available for monitoring listed

species will assist in obtaining information on entrainment potential within channels that have not previously been dredged with a suction dredge. Additionally, having multiple methods of species detection will provide more certainty in the monitoring results.

Response:

The EA/EIR includes traditional entrainment monitoring following all existing protocols as described in section 3.3.4.1. We agree it is important to use traditional entrainment monitoring to gain an understanding of entrainment impacts. However, as explained in the EA/EIR in Section 3.3.4.1, the entrainment data cannot be translated into a reliable species-level take estimate. Instead, it is informative when evaluating seasonal effects, interannual effects, or other factors affecting entrainment.

The eDNA samples are not intended to replace entrainment monitoring, they are just intended to assist with selecting the sequence of channels dredged in a particular year.

Echosounding is a potential method to be used in conjunction with eDNA sampling but not guaranteed at this point. Echosounding has been used in the past in conjunction with trawling as a fish presence verification method. However, the effectiveness is still in analysis. An additional analysis would need to be conducted to determine if there are impacts to other fish and wildlife. Minor revisions were made to clarify the text in the Executive Summary and section 2.3.1.5.

Using multiple methods of monitoring will allow for cross method validation, and we agree that it will provide more certainty in monitoring results.

CDFW-8

Comment:

Pacific Herring

Comment: The Department has concerns with the amount of dredging that is occurring each year outside of the San Francisco Bay Long Term Management Strategy environmental work windows, and specifically during the winter Pacific herring spawning season. Dredging in Oakland Inner Harbor occurs yearly outside of the work window through the entirety of the spawning season each year. Whereas dredging channels such as Richmond Inner Harbor seems to occur on a frequent basis and often enough, that conflicts between dredging and spawning Pacific herring have occurred, causing dredging to be halted and delayed until after spawning events have concluded. These locations are within the core spawning areas of Pacific herring in San Francisco Bay, identified in the Departments Pacific Herring Fishery Management Plan, and dredging during the spawning season may be having impacts to fish each winter dredging occurs (CDFW 2019).

The Draft EA/EIR did not include any discussion on continued Pacific herring monitoring for dredging occurring outside of the March 16 through November 30 Pacific herring work window. The continued coordination between USACE and the Department on monitoring dredging episodes during the winter months to ensure impacts to spawning herring are avoided is vital. The Department anticipates that this coordination will continue for all channels that may be dredged outside of the Pacific herring work window.

Recommendation: The Department recommends that the Final EA/EIR include discussion on continued monitoring for herring during dredging episodes occurring outside of Pacific herring work window. The Final EA/EIR should also include a mitigation measure that specifies if dredging occurs outside of the Pacific herring work window, monitoring for spawning herring and coordination with the Department will continue.

Response:

The EA/EIR in Section 2.3.1.5 has been revised to say: "*USACE will conduct pacific herring spawn monitoring during all dredge events in potential spawning habitat between December 1 and March 15. USACE will contact CDFW and coordinate to secure a herring monitor to identify spawns. If observed, USACE will avoid the spawn area until hatch out is complete (14 to 21 days) and CDFW gives approval to restart.*" Since this avoidance and minimization measure was added to the standard measures common to all alternatives in Section 2.3.1.5, no additional mitigation measures are necessary and impacts to Pacific herring remain less than significant. See response to CDFW-9.

CDFW-9

Comment:

Richmond Inner Harbor Winter Dredging

Comment: Richmond Inner Harbor has shown that potential conflicts with spawning Pacific herring have occurred when mechanical dredging takes place during the winter spawning months. The addition of suction dredging as a dredging method, during this sensitive spawning season for herring, could have a substantial impact to any spawning event if it were to coincide with suction dredging. Although spawning is occurring on the fringes of the channel, Pacific herring are using the deeper channels to stage in very high densities prior to spawning, making the species susceptible to entrainment when dredging. Additionally, after hatching larval herring would be vulnerable to suction dredging as they do not have the swimming ability in this life stage to avoid being entrained. Suction dredging during the winter should not occur in areas known to have spawning habitat for herring. Other channels that are being considered to add suction dredging are far more appropriate options for winter dredging to avoid listed and managed species.

Recommendation: The Department recommends removing the alternative for suction dredging during the winter in Richmond Inner Harbor from the Final EA/EIR.

Response:

Under Alternative 2, it is only feasible to hopper dredge Oakland Harbor and Richmond Inner Harbor during the winter due to the timing of the availability of equipment as described in response to CDFW-2.

In regard to impacts to the population of Pacific herring in the San Francisco Bay, the EA/EIR in Section 3.3.4.1 has been revised to include the following additional information. Pacific herring spawn have only been observed 3 out of 15 times when USACE has dredged in Oakland Harbor, Richmond Inner Harbor, or Redwood City Harbor during the November 30 through March 16 time frame since 2015. Despite USACE dredging during the spawning period, including more frequently in recent years, the occurrence of observed spawning in the dredge footprint is still rare. This is because the preferred spawning location for herring are eel grass or rocky substrate which are not commonly found in or near dredging channels. In

addition, the decision by USACE to stop dredging near observed herring spawn will protect eggs from entrainment as well as turbidity impacts. The egg stage has been shown to be sensitive to turbidity impacts, however, CDFW notes in the Pacific herring management Plan (2019) that “survival of eggs is highly variable, and thus a large number of eggs laid in a given year does not necessarily correlate with a strong year class”. In addition, hopper dredging would be for a much shorter duration than clamshell dredging in the Richmond Inner Harbor under Alternative 2 thereby reducing the likelihood of occurring during a herring spawning event. Herring monitoring described in response to CDFW-8 along with other standard practices, such as beginning and ending each hopper load, priming pumps, and clearing drag heads within 3 feet of the seafloor, described in Section 2.3.1.5 of the EA/EIR will minimize impacts by reducing the period in which fish in the water column can be entrained. Lastly, there is no indication or evidence of population level impacts on this mass commercially-harvested species. For instance, CDFW (2019) estimates that 50 to 100 tons of herring are harvested annually. Therefore, impacts to Pacific Herring would be less than significant under all alternatives including alternatives that hopper dredge in the winter.

CDFW-10

Comment:

Species Avoidance Pilot Study

Comment: The proposed pilot study will test deterrent methods such as light, sound, and air on the drag head to trigger an avoidance response and move aquatic species away from dredging activities. The pilot study is proposed for two years. The Department fully supports the proposed pilot study and the initial deterrent methods chosen to test. The Department would appreciate the opportunity to be involved in the development of the study and discussion on the deterrent methods being considered.

Recommendation: The Department recommends USACE engage all of the state and federal permitting and wildlife agencies as the pilot study is being formed. Inclusion of the agencies can bring different expertise into the pilot study formulation and assist with creating measures that will maximize the potential for finding a successful deterrent method.

Recommendation: The Department recommends USACE consult with the Department regarding the potential need for a Scientific Collection Permit and related 2081(a) Memorandum of Understanding for the potential collection or unintentional take of aquatic species for research purposes during the pilot study.

Response:

Thanks for your support of this pilot study. USACE will obtain permits, if required, from federal resource agencies to conduct any pilot studies. However, as a federal agency, USACE is not subject to the California Fish and Game Code and therefore will not seek permits from CDFW. Nonetheless, USACE will engage with CDFW along with NOAA and USFWS in the planning and implementation of the pilot study by sharing the draft pilot proposal to NOAA, USFWS, and CDFW to invite comments on the proposed pilot study.

CDFW-11

Comment:

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, §21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be found at the following link: https://wildlife.ca.gov/Data/CNDDB/SubmittingData#44524420-pdf-field-survey-form. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: https://wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by the Department. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

Response:

No new fish or wildlife surveys were conducted as part of the development of this EA/EIR. Therefore, no new information was submitted to CNDDB in compliance with Pub. Resources Code, §21003, subd. (e). USACE is already required by USFWS in the 2004 and 2025 biological opinions to report sightings of any listed or sensitive animal species to USFWS and the CNDDB.

Thank you for the notice that filing fees for this project will be required. The Water Board will pay the appropriate fees when filing the Notice of Determination.

San Francisco Bay Conservation and Development Commission

BCDC-1

Comment:

The Commission commends the USACE and the Water Board in their forward-looking effort to support beneficial reuse of sediment and its innovative regional approach to its program and the effort that has gone into the development of the Regional Dredged Material Management Plan (RDMMP) and this document. We believe these efforts can go a long way to support the regional Long Term Management Strategy for the Placement of Dredged Material (LTMS) goal of maximizing beneficial reuse of dredged sediment and continued implementation of the LTMS Management Plan. Further, the Commission supports the USACE in reducing its reliance on the San Francisco Deep Ocean Disposal Site (SFDODS) in support of beneficial reuse. We agree with the CEQA finding that Alternative 4, Beneficial Use Maximized is the environmentally superior alternative and support the efforts to implement it. The Commission staff also notes that there has been and likely will be continued federal funding to support

additional beneficial reuse of dredged sediment as occurred in 2023 and 2024 as a result of the State Coastal Conservancy and the Commission's efforts on the Water Resources and Development Act (WRDA) 2016, Section 1122 program, which authorizes $51 million of beneficial reuse over ten years.

Response:

As stated in the EA/EIR, Alternative 4 is the environmentally superior alternative and we appreciate the commenter's support for implementing this alternative. Alternative 4, however, is not a candidate to be the Federal Standard Base Plan because it is not the least-cost alternative and would require non-federal funding for the full incremental cost above the Base Plan, or for 35 percent of the incremental cost in accordance with the WRDA 2020 Section 125a cost-sharing authority. Accordingly, Alternative 4 does not further the project objective of dredging within the constraints of the Federal Standard Base Plan. It is included as an alternative because there may be opportunities to implement it on an opportunistic basis with additional funding. We appreciate the role BCDC and California Coastal Conservancy have played in securing external funding for USACE to divert sediment to beneficial use, but continued funding is not guaranteed and, therefore, cannot be relied upon. As such, this alternative will be implemented only when funding is available. A footnote was added to Table 2-6, No Project Alternative Placement Volume Summary, and Table 2-7, No Project Alternative Summary, to address Congressional funding appropriations in fiscal year 2022 for non-aquatic direct placement of dredged sediment to cover the costs above the federal standard placement costs for any contributing projects, which USACE utilized for non-aquatic direct placement of sediment from Richmond and Oakland dredging episodes in fiscal year 2023 and fiscal year 2024.

BCDC-2

Comment:

While the Commission understands USACE's position that the chosen alternative, described as Alternative 2, would increase beneficial reuse within the federal standard, we disagree that there is no significant impact, based on the "take" of listed species via hopper dredging and will discuss this further below. The Commission notes that NEPA allows for a mitigated Finding of No Significant Impact (FONSI) in cases where an action may pose some significant effects, but where mitigation measures will be adopted to reduce these effects to a level where they are no longer significant (CEQ and CalOPR 2014). Proposed Alternative 2 includes mitigation for impacts to listed species from hopper dredging and therefore would meet the definition of a mitigated FONSI. We believe this is the approach USACE should take when evaluating its preferred alternative and developing the FONSI.

Response:

We did not make the recommended change to the EA/EIR because the analysis indicates that the impacts described in BI-1 are less than significant under both NEPA and CEQA. See also response to CDFW-3. Alternatives 1, 2, and 3 incorporate operational measures and beneficial use of sediment as part of the alternatives that when combined minimize entrainment impacts to less than significant levels. Further, the project will conform to the biological opinions issued by the USFWS and NMFS thereby ensuring that the project will not jeopardize listed species, including those most susceptible to entrainment impacts. Therefore, a FONSI, not a mitigated FONSI, is appropriate.

BCDC-3

Comment:

Plain Language Standard. As the Water Board is likely aware, California Government Code section 6219 requires "[e]ach department, commission, office, or other administrative agency of state government [to] write each document that it produces in plain, straightforward language, avoiding technical terms as much as possible, and using a coherent and easily readable style." Contrary to this standard, the DEA/EIR uses a significant amount of jargon and technical terms that limit the reader's understanding of what is being proposed and the potential impacts of the alternatives. Specifically, rather than using the regionally established and recognized terminology for dredged sediment disposal -- "beneficial reuse of sediment" -- new, undefined terms are introduced such as "transitional sites." Rather than using clear, established language for disposal of dredged sediment at authorized disposals sites, which have been classified as such for over thirty years, the document uses the term "placement sites," which has been used as standard language for beneficial reuse of dredged sediment at restoration sites or levee maintenance. This conflates disposal of dredged sediment with beneficial reuse, making it more difficult for the public to differentiate between the two.

Like Government Code section 6219, the Federal Plain Writing Act of 2010 (P.L. No. 111-274) requires federal agencies "to use plain writing" in every document an agency issues. Contrary to this requirement and to further confuse issues, the USACE recently introduced the term "transitional placement sites" and includes in-Bay disposal sites, upland disposal sites, and ocean disposal sites in this category. Commission staff requested from USACE the basis for this new terminology and was provided with a guidance document from the USACE Headquarters dated August 28, 2023, with the subject line: "Expanding Beneficial Reuse of Dredged Material in the USACE" directed to Commanders and District Commands. According to the document, it is intended "to encourage robust innovation, planning, and categorization of dredged material for beneficial use. Additionally, this policy memorandum clarifies which dredged material placement activities shall be classified as beneficial use and how to capture this information in the USACE data systems. Finally, this memorandum introduces transitional placement as a third description for dredged material." As described later in the document, "Transitional placement is keeping sediment in the riverine or coastal system as a part of a management process or in a period of transition. Generally, this material will be managed or dredged again and is considered neither beneficial use nor disposal." After reviewing this document, it appears that it was created for internal USACE use for consistent classification and reporting and is not responsive regional differences.

While the Commission appreciates USACE's desire to be consistent in naming with its data systems, the characterization of in-Bay, deep ocean, and upland as "transitional placement sites" is not appropriate in this context. First, the in-bay disposal sites are dispersive sites that are designed to move dredged sediment into deep water channels to continue transport downstream. This sediment is not managed, other than to limit the volumes placed at the site to prevent mounding, and there is no plan to dredge it again for future use. The best available science does not support the concept that the sediment disposed of at these sites would reach tidal flats or wetlands over time due to deep water transport patterns. Similarly, sediment disposed of at the San Francisco Deep Ocean Disposal Site by design is completely outside the San Francisco Bay system, and while upland disposal sites have the potential to be beneficially reused, the sediment from these sites is generally dried and disposed of…

...**Recommendation:** Revise the document to reduce jargon and confusing terminology and use plain English. Specifically, use the terms in-bay disposal, beneficial reuse, ocean disposal, which are the regionally accepted terminology and consistent with the current naming conventions of the different

disposal sites. Remove the term transitional placement as it only confuses how the sites are used and function.

Response:

We have endeavored to use plain language in the EA/EIR so that the public can understand it. As commentor states, the terminology used in the EA/EIR, including use of “transitional placement sites” as a placement site type, is consistent USACE’s August 28, 2023, memorandum on Expanding Beneficial Use of Dredged Material in the USACE. The terminology used in the EA/EIR is also consistent with the RDMMP, a companion document to this EA/EIR. Changing specific terminology as recommended would create confusion in reviewing both documents. The EA/EIR provides plain, straightforward definitions for terms used to describe dredged sediment placement or disposal operations and placement or disposal site types. Specific types of transitional placement and example sites are also provided in section 1.5.2.2. Additionally, please see Table 3 in the RDMMP for definitions, including Transitional Placement. Text was added to Section 1.5.2.2 in the EA/EIR to state that “Descriptions of the various placement site types are provided in subsections below and defined in Table 2 of the RDMMP.” Lastly, the terminology recommended in the comment is jargon used in implementing the Long-Term Management Strategy for the Placement of Dredged Material in the San Francisco Bay Region (LTMS). As such, it would need to be defined in plain language for the uninitiated reader in a similar fashion to the language used in the EA/EIR.

BCDC-4

Comment:

Providing summary tables that compare alternatives outcomes would greatly increase the ability to compare and contrast benefits and impacts of the alternatives. The tables included currently provide a lot of information, but additional tables should be created to show the differences between the alternatives…

…**Recommendation:** Include summary charts that provide comparisons between the alternatives, such as and including a summary table that shows how much beneficial reuse, ocean disposal and in-Bay disposal would occur under each alternative.

Response:

Summary table ES-3 was added, as suggested.

BCDC-5

Comment:

Transparency and the No Action/No Project Alterative. While the Commission understands the USACE and Water Board’s explanations as to how the NEPA and CEQA regulations call for describing the No Action and No Project Alternative, the document lacks transparency throughout its sections, making it difficult, if not impossible, for the public to understand the context of the USACE Operations and Maintenance Dredging Program. Specifically, the document does not include any reference to the actions regularly associated with the USACE’s execution of its dredging program over the last ten years but instead asserts that it performs dredging and does not currently beneficially reuse some or any of its dredged sediment. For example, the USACE regularly dredges some of its projects outside the

environmental work window of June 1 to November 30th including Richmond Inner Harbor, Oakland Harbor, and Redwood City by several weeks to months depending on the year. The DE/EIR does not note that when USACE dredges outside the environmental work window, it mitigates for impacts to listed salmonids per NOAA's National Marine Fisheries Service (NMFS) LTMS Amended Biological Opinion (July 2015) and the Commission's Letter of Agreement (LOA) by beneficially reusing dredged sediment at its own cost. Further, there is no acknowledgment in the document that the USACE has received significant federal funding to beneficially reuse dredged sediment through the Water Resources Development Act (WRDA) 2016 Section 1122 Pilot Program and is anticipated to receive additional federal funding through this program. As an example, in 2023, the USACE beneficially reused nearly 2 million cubic yards of sediment with this funding. Taken together, and without context, the document misleads the public in believing that only additional in-bay disposal or increased hopper dredging can provide beneficial reuse which is clearly not the case.

In other places, the document states that there has been no interest in cost sharing the incremental cost of beneficial reuse (that amount above the proposed disposal site use needed for beneficial reuse). In fact, $6 million dollars was provided by the State of California specifically to cover the incremental cost of beneficial reuse for the Redwood City Project. The State Coastal Conservancy (SCC) repeatedly offered to share the incremental cost when working with USACE on the Section 1122 award and management plan. In addition, SCC worked with the USACE in 2024 on the Petaluma River Project to share the incremental cost as described in WRDA 2020, Section 125, and has expressed interest in working together again in 2025. SCC is also cost sharing the development of Bel Marin Keys V expansion as the local project sponsor, a significant commitment to beneficial use by the State.

Recommendation: Add context to the document so that the public can understand how USACE has operates its program, including recent and expected federal funding. Include discussions about the environmental work windows in the description of the current mitigation activities, explaining when and how the USACE has used beneficial reuse to mitigate for impacts to listed salmonids with existing equipment (clamshell) as part of the federal standard least cost alternative in accord with NMFS 2015 Amended LTMS Programmatic Biological Opinion. Revise sections of the document that state there has been no interest in cost sharing to reflect the State's interest in cost sharing, both from the legislature and the State Coastal Commission.

Response:

A footnote was added to Table 2-6, No Project Alternative Placement Volume Summary, and Table 2-7, No Project Alternative Summary, to address Congressional funding appropriations in fiscal year 2022 for beneficial use/non-aquatic direct placement of dredged sediment to cover the costs above the federal standard placement costs. USACE utilized this funding for beneficial use/non-aquatic direct placement of sediment from Richmond and Oakland dredging episodes in fiscal years 2023 and 2024, and USACE utilized recent funding provided by the California Coastal Conservancy to cover the incremental cost for placement of dredged sediment from Petaluma River and Redwood City Harbor at beneficial use/non-aquatic direct placement sites. Also, a footnote was added to text in Section 2.3.2.2, No Project Alternative (California Environmental Quality Act Baseline), to state:

> *In recent years, supplemental funding provided by Congress and/or the State of California Coastal Conservancy to cover the costs above the federal standard disposal costs for*

contributing projects enabled placement of dredge material from Oakland Harbor, Petaluma River, Redwood City, and Richmond Inner Harbor at non-aquatic direct placement sites.

However, relying on Congressional and State appropriations to provide the supplemental funding needed to cover costs above the federal standard has not been reliable or consistent over the history of the program and cannot be guaranteed in the future. Therefore, the Proposed Project only includes the reliable and consistent funding under the Federal Standard. Increasing beneficial use within the Federal Standard does not preclude USACE from using supplemental funds to divert additional sediment to beneficial use and is included in Alternatives 3 and 4. Similarly, historic dredging outside work windows was not specifically planned for by USACE and only occurred incidental to unanticipated delays in dredging. Under the No Project Alternative, this approach cannot reliably and consistently be used to increase beneficial use within the Federal Standard.

BCDC-6

Comment:

Proposed Project. Throughout the document, there are inconsistent descriptions of the Proposed Project, with the executive summary (p. 37), providing the clearest statement with proposed timing for implementation:

"The proposed phased implementation of the Proposed Action/Proposed Project is:

- 2025, No Project Alternative: Continuing the No Project Alternative allows USACE the time necessary to appropriately plan for and implement the changes required for Alternatives 1 and eventually 2.
- 2026–2027, Alternative 1: The earliest USACE would be able to implement Alternative 1 would be in 2026.
- 2027–2034, Alternative 2: The earliest USACE would be able to implement Alternative 2 would be in 2027. This time is necessary to allow USACE to work to expand the capacity of its hopper dredges, including utilizing the West Coast Hopper Dredging contract."

In the Executive Summary, it states "Under CEQA, a detailed and stable project description is fundamental to the purpose of the study, which is to identify and analyze impacts from the Proposed Project." As described in the Executive Summary and throughout the document, the Proposed Project appears to be aspirational rather than a concrete, definite proposal. The proposed project reflects a hope and expectation to transition to Alternatives 1 and 2 but not a firm commitment or proposal to do so. Further, in Section 5.7, it states "If at the conclusion of agency consultation, it is determined that additional mitigation is required, this would make Alternative 2 economically infeasible for consideration as the Federal Standard Base Plan…" Thus, the environmental document itself reflects that the USACE and the Water Board may decide later, based on the results of further consultations, that they will not transition to Alternative 1 or 2. On page 1 of the Findings of No Significant Impact the USACE states "the specific placement location and dredging method will be determined during the contracting process based on cost." This adds further uncertainty regarding the definitiveness of Proposed Project.

As described above, it appears that per CEQA, the Proposed Project does not meet the standard of "a detailed and stable project description." This may be in part due to the document's lack of explicit

discussion of how the USACE proposes to balance the cost beyond general statements that one method of dredging a channel may be less expensive than others. For example, how would the USACE ensure that funds saved on one project be transferred to another project to cover the cost of beneficial reuse. Similarly, what contract solicitation and contract requirements would be incorporated to provide the balanced least cost across the program?

More uncertainty is created by the statements noting that alternatives may not be feasible if additional mitigation is required through consultation with the Resource Agencies. It is our understanding that USACE has considered mitigation part of project costs in the past and has provided beneficial reuse for working outside the work windows, so how would additional mitigation when using potentially lower cost dredge equipment make the proposed project infeasible?

These statements demonstrate that the USACE does not and cannot know anything definitive about future costs associated with implementing increased beneficial under Alternatives 1 and 2. And therefore, there is no factual basis for the conclusory statements about cost in the EA/EIR.

Recommendation: Provide a more stable and definitive project description, per both CEQA and NEPA, by providing documentation of the cost analysis associated with the conclusionary statements. Provide clear information on how the USACE plans to allocate funding to beneficial reuse from project savings to other projects. Explain the measures the USACE would develop for bid solicitations and contracting measures that would ensure the necessary cost savings and volume of beneficial reuse when working within the work windows. Provide additional mitigation measures to ensure implementation of the proposed project while mitigating for impacts where they cannot be avoided or minimized.

Response:

The project description adequately provides all the information required in CEQA Guidelines section 15124 needed for evaluation and review of environmental impacts. The Proposed Project, as described in the Executive Summary, describes a phased implementation approach, with Alternative 1 being implemented in 2026 and 2027 and Alternative 2 being implemented from 2027 through 2034. The phased and flexible nature of the project does not render its description aspirational or indefinite. In accordance with CEQA and NEPA, the Proposed Project description provides a clear description of the proposed actions, including the phased implementation approach, the use of hopper dredges, and the potential for beneficial use. The document also acknowledges the need for ongoing consultation and adaptation to ensure that the Proposed Project is implemented in a manner that minimizes environmental impacts and as analyzed in the EA/EIR.

The Proposed Project's phased approach is as definitive as possible given the well communicated variables of hopper dredge coordination with various USACE districts (i.e., Los Angeles, Portland, Seattle, Honolulu, and Alaska Districts) and environmental coordination with resource and regulatory agencies. The phased approach provides flexibility given these uncertainties, while disclosing how USACE would transition from its current Federal Standard Base Plan to a future Federal Standard Base Plan that includes beneficial use of dredged sediment at 100 percent federal cost. Further, with standard practices and beneficial use incorporated, Alternatives, 1, 2, and 3 are appropriate and adequate to minimize the recurring short-term entrainment impacts from hopper dredging to a less than significant level and additional mitigation would not be required. As such, the Proposed Project would be implemented as planned.

However, the USACE navigation program's primary mission is to keep the channels clear of sediment to sustain the marine transportation system. Should the hopper dredge fleet be unavailable due to uncontrollable factors, such as equipment malfunctions, Alternative 2 might not be able to be executed in a given year, in which case USACE would need revert to Alternative 1 or possibly even the No Project Alternative. While the likelihood of these situations occurring in the future are low, if they occurred, they would be outside USACE's control, and thus flexibility is required. Flexibility in the project to account for future unknown conditions is not the same as an unstable project description. Sufficient project information has been provided to analyze environmental impacts.

The discussion in Section 5.7 of additional mitigation resulting in economic infeasibility has been deleted to avoid confusion. It was intended to be centered on mitigation beyond the beneficial use included in the description of the Proposed Project and did not apply to the requirement to direct dredged sediment to beneficial use for dredging conducted outside the environmental work window. Also, the discussion was not intended to suggest that USACE is not committed to implementing the Proposed Project. Rather, it reflected the need for ongoing consultation and adaptation to ensure that the Proposed Project is implemented in a manner that is environmentally and economically sustainable.

Regarding cost analysis, the document provides a general discussion of the potential cost savings associated with Alternative 1 and Alternative 2. As communicated to BCDC at LTMS Program Manager meetings on numerous occasions, as well as at numerous public meetings with stakeholders and interested parties, USACE's specific cost estimate data cannot be disclosed per their procurement policy. The cost engineering was conducted in a robust manner following all USACE cost engineering policies and guidelines, including estimating future costs for each channel under each alternative, calculating contingency, and conducting a Cost and Schedule Risk Analysis. The cost data is explicit in providing lower costs for dredging in certain channels (i.e., Richmond Inner Harbor and a portion of Oakland Harbor) via the expanded use of hopper dredging and in-bay placement. Programmatically, this allows for the designation of beneficial use sites in other channels (i.e., Suisun Bay Channel and a portion of Oakland Harbor) by taking advantage of the cost savings from the lower cost channels, with the programmatic cost being equal to the No Action/No Project Alternative cost. As stated in several public and interagency meetings, USACE is not "transferring" funds between projects. USACE will simply adjust its budget requests for each channel based on the new placement site(s). That would mean Richmond Inner Harbor's budget request would be lower in future years, while Oakland Harbor's and Suisun Bay Channel's budget requests would be higher in future years. Importantly, however, the total budget request amount for the USACE San Francisco Bay navigation program would be the same as the No Action/Project Alternative navigation program cost. In the contracting process, the only difference would be what placement site is listed as the Federal Standard Base Plan placement site in the bid abstract. There would not be any special requirements needed in the contract solicitation or award process to ensure execution of the Proposed Project. As such, beneficial use is achieved at full federal cost without requiring transferring of funds between projects.

Minimization/mitigation measures are included in the EA/EIR (see Section 2.3.3 for Alternative 1, and corresponding sections for Alternatives 2 through 4). These minimization/mitigation measures will ensure that impacts from the Proposed Project are less than significant.

BCDC-7

Comment:

LTMS Program and Increased In-Bay Disposal (Alternatives 1, 2 and 3). In several areas of the document, it states “Where applicable, the project would be aligned with the goals of the Long Term Management Strategy for the Placement of Dredged Material in the San Francisco Bay Region (LTMS) program, as described in the 1998 LTMS Final Environmental Impact Statement/EIR (USACE et al. 1998) and the 2001 Long Term Management Strategy for the Placement of Dredged Material in San Francisco Bay (LTMS) Management Plan (USACE et al. 2001)” but nowhere in the document does it describe how future dredging would be aligned with the LTMS goals and Program. As described for Alternatives 1, 2 and 3, the USACE proposes to exceed the in-bay target limits, which is inconsistent with the LTMS program. In its analysis, it relies on dredging and disposal volumes from the 1970’s through the 1990’s, prior to the LTMS and when there was significantly more dredging in the region due to the presence of large military bases that no longer exist. The result of the USACE proposed action would likely push the region into potential allocations due to its lack of consideration for other dredging projects in the region.

In evaluating each of these alternatives, and the potential impact of additional in-bay disposal, the CEQA and NEPA review appear to completely ignore the existence of other medium and large dredgers and their use of in-bay disposal under the LTMS program. The analysis includes the 250,000 cubic yard set aside for small dredgers but does not mention or account for in-bay disposal volumes of the regions five ports, seven oil terminals, the US Coast Guard, MARAD, or the ferry terminals. This omission substantially underestimates the amount of in-bay disposal that may occur on an annual and semi-annual basis.

In the Areas of Known Controversy section, it states that the LTMS partner agencies have different interpretations of the LTMS trigger to consider mandatory allocations. While this may be true, there is no written interpretation from any of these agencies to compare for inconsistencies, so this statement represents nothing more than an unsupported assumption. This section goes on to assert that increasing in-bay disposal can help the entire bay system, specifically the Bay bottom keep up with rising seas. This assertion is not supported by any evidence and ignores the fact that the sediment being dredged is from within the Bay, and by the very act of dredging it, the bay must work to refill the areas dredged with sediment in suspension. USACE studied the Carquinez and San Pablo Bay disposal sites in 2012 through modeling exercises (Delta Modeling Associates, McWilliams, et.al.,) and found that most of the sediment disposed at these dispersive sites moved into the deep water channels rather than disperse more broadly as the document appears to be asserting. Further, the aquatic disposal makes the sediment far more erosive by placing it in dispersive sites.

In Section 3.5.4, it states that recent studies (SFEI and Battalio, et.al.) developing the Bay sediment budget for 2001 – 2021 found an overall loss of sediment of 2.0 million metric tons and rightly notes that continuing ocean disposal further exacerbates this issue. What the document does not note, is the net loss over the past 20 years is in large part due to ocean disposal and mining activities that remove sediment from the system entirely. Also of interest, is there is an update to this budget coming out in 2025. Based on the best available science, the USACE should cease using the ocean disposal site in favor of beneficial reuse rather than on a least cost basis. Based on this information, and the Sediment for Survival Report (SFEI 2021) not mentioned in this review, sediment should be maximized at beneficial reuse sites that provide sea level rise resilience and ecological benefits based on the superior use of the sediment, and the USACE should focus this analysis on the WRDA 2020, Section 125 language that allows balancing of costs with benefits provided through The Beneficial Use Decision Document Integration (BUDDI), rather than focusing on increasing in-Bay disposal.

Lastly, while the Commission acknowledges it is working towards a potential Bay Plan amendment that is focused on increasing beneficial reuse, the Commission has not yet voted to initiate that process and it is presumptuous to assert that amending it to increase in Bay disposal is the focus.

Recommendation: Clearly describe how and when the various alternatives would be aligned with the LTMS goals and program for clarity and transparency. Revise the analysis to include estimates of the in-bay disposal annually and semiannually that includes small dredgers, federal and non-federal medium and large dredging projects, and the USACE so that the full in-bay disposal volumes can be clearly understood.

Response:

In response to this comment, Table 3-23 and text in Section 3.5.4.3 GE-3 Potential for Dredging, Transport, and Placement Activities to Result in Substantial In-Bay Sediment Mounding were updated. DMMO dredging volumes, which include federal and non-federal (small and medium) dredging from 2015 through 2023, are now incorporated in Section 3.5.4.3, and in a revised version of Table 3-23. These sections needed to be updated to include the previous nine years of non-federal dredging, which are the baseline conditions for an ongoing project under CEQA. The average non-federal in-Bay disposal over the last nine-year period was used for this impact analysis since the average is the best representation of probable future conditions and this period captured a range of past environmental conditions. The updates to values in Table 3-23, did not change results or conclusions from the GE-3 impact analysis or any mitigation measure or overall conclusion elsewhere in the EA/EIR.

In sum, in-Bay placement of non-federal dredgers between 2015 and 2023 ranged from 143 to 470 thousand CY, with an average of 299,600 CY. During this time total in-Bay placement of all dredged sediment (federal + non-federal) peaked at 1.285 million CY in 2022 and dropped to a low of 833 thousand CY in 2023. Table 3-23 includes the USACE projected in-Bay placement volumes under each alternative, with the added average annual volume of 299,600 CY from non-federal dredgers. Table 3-23 volumes increased from the Draft EA/EIR by about 7 percent for the proposed project assuming average in Bay disposal from USACE, and by 3.5 percent when looking at the largest possible in-Bay disposal from USACE Alternative 2, which is the alternative with the largest USACE in-Bay placement volumes, the revised calculations increased only 1 percent, which is within the noise of the total calculation. Alternative 2, which has the greatest cumulative in-Bay placement volume, was the most important component of this evaluation. The maximum in-Bay estimates in Table 3-23 are the most relevant when assessing impacts from GE-3 since it provides a worst case scenario for evaluating impacts. There are no known environmental impacts from sediment accrual rates that will occur considering the slightly higher cumulative in-Bay disposal volumes in Table 3-23.

The small increases in maximum cumulative in-Bay disposal in Table 3-23 still do not exceed any monthly or annual capacity limits for In Bay disposal sites. These capacity limits are specified in the LTMS Management Plan and are the thresholds of significance used to assess impacts in the EA/EIR. In addition, these recalculations do not affect any other resource impact categories since the impacts from these small changes of cumulative in-Bay placement volumes do not affect water quality or biological resources. For example, the increase in 16,000 cy under the maximum estimate from Alternative 2 would only have insignificant short-term impacts to turbidity at the placement site. Turbidity is known to only be elevated for short time frames during dredging and placement activities and turbidity increases from dredging are within the range of natural variation in the San Francisco Bay. Similarly, this change did not

result in a need to modify impact analyses to other resource categories, such as fish entrainment of listed species, since the inclusion of higher volumes of non-federal dredgers does not affect how USACE hopper dredging can entrain fish. The modifications to the EA/EIR merely make clarifications and insignificant modifications to the EA/EIR

In-Bay monthly and annual site capacities were considered in the development of the alternatives and none of the alternatives would place more sediment at the in-Bay sites than their current capacity limits, as shown in Table 3-25, despite the potential for the total in-Bay target of 1.25 million CY being exceeded in a given year. The No Action Alternative/No Project Alternative, and Alternatives 1 to 3 include potential maximum in-Bay placement to be greater than 1.05 million CY and, therefore, have the potential to exceed the in-Bay placement target in a given year if non-federal dredgers place dredged sediment in-Bay near their maximum historic volumes. However, none of the alternatives exceed the capacity limits for the specific placement sites and the capacity limits are the only specific permitting limits specified in the LTMS Management Plan. Alternatives 1 and 2 have the most potential amount of in-Bay sediment placement in comparison to the other alternatives.

The project aligns with the revised LTMS program goals included in the 2001 LTMS Management Plan.

- Maintain in an economically and environmentally sound manner those channels necessary for navigation in San Francisco Bay and Estuary and eliminate unnecessary dredging activities in the Bay and Estuary;
- Conduct dredged material disposal in the most environmentally sound manner;
- Maximize the use of dredged material as a resource; and
- Maintain the cooperative permitting framework for dredging and disposal applications.

The in-Bay volume target was not one of the objective goals but is the target from the chosen alternative in the 50-year EIS/EIR for the LTMS program. This project is consistent with the four LTMS goals above, particularly goal three, maximize the use of dredged sediment as a resource. Any increase in in-Bay placement will be associated with increased beneficial use of dredged sediment. The volumetric goal is not required to consistently be met by the LTMS, as there is the allocations process in place. Should total in-Bay placement, federal and non-federal dredgers, exceed the 1.25 million CY per year target volume over the three-year averaging period, LTMS agencies will initiate consideration of allocations. Per the LTMS Management Plan section 6.5.2, agencies will not rely solely on a comparison of in-Bay placement volumes to target volumes. Agencies have flexibility within the LTMS to consider the trends of placement and the demonstrated efforts to support beneficial use.

While it is possible the target volume could be exceeded, BCDC and the California Coastal Conservancy have been very successful in obtaining additional funding for USACE to divert sediment to beneficial use. The practice is encouraged to continue and in no way limited by the alternatives in the EA/EIR. The additional funding could reduce in-Bay placement to keep the in-Bay placement volumes below the 1.25 mcy target volume.

The LTMS has been successful in reducing in-Bay placement, encouraging beneficial use, and maintaining the cooperative permitting framework. The DMMO and LTMS Program Managers regularly meet and have continued to manage projects to stay within in-Bay site capacities in Table 3-25. When

site capacities are nearing the limit LTMS agencies have diverted placement to other in-Bay sites with capacity or non-aquatic beneficial use. For example, in 2022 sediment was successfully diverted from SF-10 to remain below the 500,000 CY annual capacity limit.

BCDC-8

Comment:

Increased Hopper Dredging and Listed Species (No Action Alternatives 1 2, and 3). In 1993, the US Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) listed the Delta smelt as a threatened species under the Federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA) respectively. In 2009, CDFW increased protections for Delta smelt and changed its status to endangered under (CESA). Delta smelt make limited use of the lower estuary and are found more readily east of the Carquinez Bridge due to salinity and spawning habitat upstream. During wet years, they may be found in areas west of Carquinez Strait. As a result, the USFWS has limited dredging activities in Suisun Bay to clamshell dredging through multiple biological opinions issued on the project, and the USACE has complied. Similarly, in 2009, CDFW listed longfin smelt as threatened under CESA, and in July of 2024, the USFWS listed longfin smelt in San Franisco Bay as threatened under ESA, noting its rapid population decline. Unlike Delta smelt, longfin smelt are present year round in the Bay, with different life stages inhabiting different areas of the Bay during different times of the year, though the full span of its distribution and timing is not yet well understood. The USACE and the US Environmental Protection Agency (EPA) have initiated but not yet completed consultation with USFWS for the LTMS program's compliant dredging project and its potential impacts to longfin smelt.

Prior to 2015, the USACE dredged two channels (Richmond Outer and Pinole Shoal) per year when the hopper dredge *Essayons* or *Yaquina* was available, and as a backup during high seas at the Main Ship Channel. In 2015, through the NEPA/CEQA review, the Water Board and the Commission recognized that hopper dredging entrains listed longfin smelt and responded by limiting the use of hopper dredges in the Bay to one channel per year as the preferred alternative and included it in the regulatory actions.

In 2017, rather than dredge one in-Bay channel with a hopper dredge and the other with a clamshell dredge as anticipated, USACE decided to comply with the requirement by dredging only one channel with a hopper dredge annually and defer dredging of the other channel to the following year, effectively alternating dredging of Pinole Shoal and Richmond Outer Channel each year. The oil terminals and refineries raised concerns regarding this approach, as did the Commission and Water Board, but the USACE maintained its position. This is important because in describing the No Action Alternative, the USACE includes dredging both channels annually with a hopper dredge, thereby increasing the amount of hopper dredging and entrainment of listed and native species while not accounting for this change in the analysis. The CEQA review properly notes the No Project Alternative includes hopper dredging in only one channel as has occurred over the last seven years.

Response:

This comment focused on confusion about the terms used for No Action and No Project, item 2 and item 3. The No Action Alternative under NEPA represents "'no change' from a current management direction or level of management intensity" (*Am. Rivers v. FERC*, 201 F.3d 1186, 1201 (9th Cir. 1999)), see Section 2.1.2. The No Project Alternative defined under CEQA for an ongoing project is based on past practices. Therefore, these two alternatives do not need to be identical. Although the No Action and No

Project Alternatives differ in the frequency of hopper dredging two channels (every year vs every other year), the total number of days per year that dredging would occur within the Bay would be the same under both alternatives and would therefore have similar species impacts. The availability of the *Essayons* hopper dredge for the two channels is limited by the prioritization of channels outside of this project, and aging equipment, as described in response to CDFW-2 and Section 2.3.1.2 of the EA/EIR. Clarifying text has been added to the document in the Executive Summary.

BCDC-9

Comment:

In addition to reducing the use of a hopper dredge in 2015, the Commission and the Water Board required monitoring of the hopper dredge, which has verified that take of longfin smelt regularly occurs, though it is not feasible to fully quantify the number of smelt entrained due to the limited ability to fully monitor dredging episodes of tens or hundreds of thousands cubic yards of sediment. Further the Water Board and BCDC required the USACE to mitigate for take of longfin and Delta smelt when using hopper dredges. The previously implemented mitigation required for hopper dredging was calculated using an equation based on the amount of water pumped through the dredge suggested by and agreed to by CDFW. The USACE would then purchase mitigation credits from a mitigation bank, Liberty Island, designed to provide smelt habitat. Liberty Island sold all available credits, and no additional mitigation banks have come online since that closure (approximately 2020). As an alternative to lack of mitigation credits, the Commission and the Water Board have worked with the USACE to accept funding beneficial reuse of more dredged sediment, anticipating additional mitigation banks being created.

In Alternatives 2 and 3 (as described as building on Alternative 2), the USACE proposes to increase hopper dredging to reduce costs of dredging, with the assertion that it would use the cost savings from the program to support beneficial reuse and provides a range of beneficial reuse that may occur. Further, the No Project Alternative includes “emergency” or “navigation safety” dredging with a hopper dredge. In multiple areas of the document, its states that impacts of increased hopper dredging, i.e., entrainment of native and listed species, would be minimized by increasing beneficial reuse of dredged sediment. The assertion made is that increasing beneficial reuse of dredged sediment would increase restoration of tidal marshes and thereby provide more habitat for longfin smelt. Recent monitoring has identified that longfin smelt are found in and adjacent to wetlands, and restoration projects, including those that used dredged sediment to raise elevations, thus precipitating the more rapid breaching and restoration of subsided baylands. Some of this research is still in preparation and recommend further investigation to better understand lifecycle and usage of different areas, including smaller tributaries.

While the Commission absolutely supports increasing beneficial reuse and recognizes the connection between smelt and tidal channels of wetlands and restoring marshes, clarity is needed in these descriptions. It is important to be clear in language. Increasing beneficial reuse of dredged sediment does not minimize impacts from hopper dredges. Per the Draft EA/EIR, hopper dredging increases entrainment over clamshell dredging. Increasing hopper dredging increases impacts to listed and native fish. Beneficial reuse may be considered a form of mitigation for this impact, but it is not a minimization measure.

The Commission does not agree with the USACE finding of no significant impact to longfin smelt from Alternatives 2 and 3. USACE makes the NEPA finding for the No Action Alternative that “impacts on fish caused by entrainment would be considered less than significant through the implementation of the LTMS

windows and other Standard Practices intended to reduce the potential for entrainment." As noted above, USACE regularly dredges several channels outside the LTMS environmental work windows, so this assertion is inconsistent with how the USACE conducts dredging in the region. Similarly, the NEPA finding asserts that beneficial reuse would further reduce impacts, which is clearly not the case. As described above, we suggest that the USACE adopt a mitigated finding of no significant impact.

Response:

We did not make the recommended change to the EA/EIR because analysis of the evidence indicates that the entrainment impacts are less than significant under both NEPA and CEQA for Alternatives 1, 2, and 3. While it is true that hopper dredging has increased entrainment over clamshell dredging, Alternatives 2 and 3 minimize/mitigate these impacts to a less than significant level as described in response to CDFW-3.

BCDC-10

Comment:

The Commission agrees with the Water Board's finding that mitigation for hopper dredging is required to reduce the impacts to longfin smelt. That said the Commission disagrees with the amount of mitigation required for this impact, as it is simply too little beneficial and will take too long to provide the benefit of restored wetlands as currently proposed. In its assessment, the Water Board uses an equation similar to one previously agreed to by the Commission and CDFW in order to calculate the amount of mitigation credit the USACE should purchase from Liberty Island mitigation bank. It then back calculates the cost of creating wetlands using dredged sediment into cubic yards of dredged sediment, and then multiples the volume by 2. The Water Board finds this meets both its Dredge and Fill policies and its Mitigation policies. The examples provided equate to 35,000 cubic yards of sediment to 45,000 cubic yards of sediment beneficially reused based on volume of water pumped. What does not appear to be accounted for is the difference between purchasing credits of fully developed wetlands and the use of a nominal amount of dredged sediment at a wetland restoration project that will be dependent on others contributing significant amounts of sediment, variation in depths of subsided sites, and that it may be years or decades before a site is breached. Only when the site is breached would it provide additional habitat for smelt and other fish species. Further, the evaluation does not appear account for the volume of sediment already required as mitigation for salmonids when working outside the work window. In addition, some of the hopper dredging in the alternatives is proposed to occur in the restricted period.

Response:

We did not make the requested revisions because as discussed in the responses to CDFW-3, beneficial use of sediment is an appropriate and feasible minimization/mitigation measure that accounts for the difference between purchasing mitigation credits and the use of dredged sediment to restore tidal wetlands. Further, the use of the CDFW equation to calculate the amount of mitigation credits needed to mitigate for entrainment impacts is not predicated on the mitigation bank selling credits for a fully functioning tidal wetlands.

BCDC-11

Comment:

RECOMMENDATION: Clarify the language throughout the document that states hopper dredging minimizes impacts to listed species, specifically, change minimize to mitigates. Change the USACE finding of no significant impacts to a mitigated finding of no significant impacts.

Response:

We did not incorporate the recommended changes. Minimization/mitigation of impacts to listed species has been incorporated into the Proposed Project such that additional mitigation is unnecessary. See responses to CDFW-3 and BCDC-2 related to use of minimization terminology in alternatives.

BCDC-12

Comment:

For the CEQA document mitigation requirement, increase the multiplier for cubic yards of beneficially reused sediment from 2 to 5 to provide a significant volume of sediment to address the entrainment of smelt, as well as the time it will take to achieve additional habitat benefits for the smelt through this mitigation.

Response:

The change has not been made. See response to EPA-6 on why the multiplier of two is appropriate

BCDC-13

Comment:

Explicitly state that when dredging outside the environmental work windows, USACE will mitigate for take of listed species by taking the sediment dredged outside the work window to beneficial reuse or an equivalent volume in the following year as required by the NMFS' 2015 LTMS Amended Programmatic Biological Opinion.

Response:

Beneficial use as mitigation for work outside the work window is stated in multiple places in the EA/EIR, including in footnotes for Table ES-2, Table 2-2, Table 2-3, in Section 1.5.2.1. Text has been added to indicated that this may occur as equivalent volume in the following year in Section 2.3.1.5.

BCDC-14

Comment:

Lastly, explicitly state in the document that this mitigation will not be double counted as sediment that would be beneficially reused as part of the regional optimization of the dredging program.

Response:

There is not and will not be any double counting of mitigation. Beneficial use will fully minimize/mitigate entrainment impacts from the proposed project to less than significant levels. Beneficial use will be achieved through regional optimization of the USACE dredging program and is an inherent part of the proposed project.

BCDC-15

Comment:

For further consideration, noted in this review, the USACE would consider beneficial reuse of dredged sediment at Bel Marin Keys Unit V when it is permitted. As the Commission understands the project, it is a joint effort between USACE and the SCC, and due to potential funding constraints, the project is considering accepting less dredged sediment to restore the subsided baylands to tidal wetlands. USACE and the Water Board may want to consider targeted beneficial reuse at this site for mitigation purposes for dredging outside the work window and for entrainment of listed species from hopper dredging. This approach would restore additional wetlands, support a USACE project, reduce costs of that project, and provide a mitigation option for this USACE program.

Response:

USACE will be able to provide sediment to Bel Marin Keys V for beneficial use as minimization/mitigation for entrainment impacts. However, Bel Marin Keys V will not be targeted for beneficial use over the Montezuma Wetland Restoration Project because as described in the response to CDFW-3, mitigation for longfin smelt has been accomplished through a variety of restoration designs including designs that would be similar to a design for Bel Marin Keys V that required less beneficial use of sediment. In fact, under this scenario, Bel Marin Keys V would consist of a shallow tidal embayment, vegetated tidal marsh plain, and tidal-upland transition zone, which are all habitat features of projects used as mitigation for impacts to special status fish species, including longfin smelt, in the Delta.

BCDC-16

Comment:

Longfin Smelt. The DEA/EIR provides several potential minimization measures to reduce impact to the newly federally listed longfin smelt. The primary assertion is that the hopper dredging only affects a small portion of its habitat but does not include an analysis of the entrainment monitoring that has occurred since 2017. The monitoring as described above found that longfin smelt are entrained along with several other native fish by hopper dredges. While the available data is limited, *it [sic]* could be pro-rated to assess potential entrainment based on the amount of time that dredging occurs. It appears to assert that longfin smelt may not be present in different embayments during different times of year rather than noting that the available science for this species is limited. From meetings that the Commission attended with USACE, US Environmental Protection Agency (EPA), and the Water Board, the following table better describes the current understanding of longfin smelt's use of the Bay. While eggs and larvae are present in limited areas and months, juvenile and adult fish are potentially present year around throughout the estuary, with peak periods identified below.

> *The BCDC comment letter provides an image of Table 5-1, which shows Periods of Occurrence and Peak Abundance of Longfin Smelt in San Francisco Estuary. Table depicts the following information:*
>
> - *Life stage: Egg – Potentially occur in shallows of Suisun and San Pablo Bays from November through May, with peak abundance from January through April*

- *Life stage: Larvae – Potentially occur in shallows of Suisun and San Pablo bays from December through August, with peak abundance February through March*
- *Life stage: Juvenile – Potentially occur throughout San Francisco Estuary from November through October, with peak abundance June through August*
- *Life stage: Adult – Potentially occur throughout San Francisco Estuary from November through October, with peak abundance December through August*

Given the challenges of working with a listed species that occurs year-round where dredging occurs, we appreciate the efforts to identify techniques that may lessen the impacts of hydraulic dredging. That said, additional information to further explain the applicability of the proposed minimization measures would be useful. One proposed method includes using eDNA to identify whether smelt are present in the area prior to dredging. Some questions come to mind when considering this measure, including: How can eDNA be used for areas that are not in wetlands, such as the dredging channels, and what strategies will be used to determine if the sample contains eDNA from the area or interest or from another area. Further, given the schedules of hopper dredges and contract dredges, how would the USACE redirect the equipment should smelt be detected, and would repeat sampling be conducted to determine the fish are no longer present?

Regarding the potential use of noise and light to deter smelt from hopper dredging, we appreciate effort to describe potential measures. However, as noted these are experimental and have not yet been shown to cause smelt to leave an area. The Commission would be interested in learning more about these potential studies and how USACE would determine smelt have avoided the area. We note that to reduce confounding factors, the studies should first evaluate smelt responses to deterrents and once that is understood, evaluate the same in combination with hydraulic dredging. In addition, noise and light may have affects on other species such as marine mammals that should be taken into consideration when designing such deterrents.

Recommendation: Provide analysis of potential entrainment of longfin smelt based on the entrainment data that currently exists. Include the above table and information regarding the use of the estuary by longfin smelt rather than just a percentage of habitat used, which is unknown at this time. Acknowledge that these measures are experimental and that other species may be affected by deterrent methods. If these measures are used, commit to an open and transparent process with the regulatory and resource agencies and include an analysis of potential effects to other species.

Response:

A multiple line of evidence approach was used to analyze entrainment impact to longfin smelt because a single determinative line of evidence was not available. It is difficult to apply the entrainment results because not all fish entrained are observed. The USFWS 2025 BiOp acknowledges the complexity and difficulty of estimating take of longfin smelt from the Proposed Project, and assumes that up to two percent of the population may be subject to incidental take. Additionally, fish move throughout the system, but habitat does not move. Therefore, it was more consistent to assess the impacts to the habitat area and assume fish presence based on information presented by Tobias and Baxter (2023), which shows the general distribution of longfin smelt within the Estuary by life stage and month. Entrainment data is included in the EA/EIR on page 3.48. For many entrainment monitoring samples, often for entire hopper loads, the count of special status species collected, including longfin smelt, is zero. This results in a non-

normal data distribution, therefore, scaling the data using simple percentages would not provide statistically valid results.

Using eDNA sampling to avoid entrainment impacts are included as a pilot study, meant to be tested to determine whether it would provide protection. This is not considered mitigation to the project. If it is feasible and would protect fish from entrainment impacts, then USACE will implement for the long-term, see response to CDFW-7. The protocol for eDNA sampling in the Estuary established by Bowen and Genidaqs would be followed, and would likely be improved over time. Effects to marine mammals and other species of the pilot study measures are unknown but will be considered during the pilot study design.

Lastly, USACE is committed to an open and transparent process for undertaking the pilot project. As such, USACE will coordinate with all necessary agencies and interested parties to create and implement the pilot project and will share the results with the public.

BCDC-17

Comment:

Environmental and Social Justice and Tribal and Cultural Resources. In 2019, the Commission adopted Environmental Justice and Social Justice policies, which are appliable to the DEA/EIR. There is potential for the proposed project to affect these communities as well as tribes that reside within or adjacent to the project area. Rather than include comments specific to these issues in the body of this letter, we are including several comments that we believe will improve the analysis and clarify work that was done to engage these communities, as well as both federal and state policies that should be applied. These specific comments are attached to this letter and are hereby referenced as included in the Commission's comments.

RECOMMENDATION: Please review the attached comments and address them within the DEA/EIR and further engage these communities as suggested. Include comments and concerns of these communities in the DEA/EIR and how they were responded to.

Response:

Comment responses to BCDC-18 through BCDC-44 address this comment.

BCDC-18

Comment:

3.4, The entire section would benefit from a revision where the differences between how USACE handles cultural and tribal cultural resources is more clearly defined and separated.

Response:

We revised the text based on specific comments provided in BCDC-19 through BCDC-44.

BCDC-19

Comment:

3.4.2, 3.81, Text: “Nonetheless, there is evidence for human occupation of the region as early as 11,700 years ago through to the present, where the Ohlone, Coast Miwok, Bay Miwok, Plains Miwok, and Patwin communities continue to live today.” The list provided in the sentence is not a comprehensive list of all the Native American peoples whose ancestral territories encompass the present-day Bay area. Additional language should be added to the sentence to clarify that the list is not exhaustive to avoid active and continuing erasure of Native American peoples.

Response:

The text referenced in the comment has been updated to add the phrase, “*and other Native American communities*” in Section 4.4.2.

BCDC-20

Comment:

3.4.2, 3.82, Text: “Of particular interest are the hundreds of shipwrecks recorded in the region, as well as those that have not yet been identified.” The sentence cited implies that shipwrecks and other maritime artifacts, hold a higher value than tribal cultural resources to the agency. The sentence is unnecessary and should be considered for removal to eliminate any potential misinterpretation. Tribal cultural resources and maritime artifacts should receive equal attention and protections through the National Historic Preservation Act.

Response:

The text reading, “*Of particular interest are the hundreds of shipwrecks recorded in the region, as well as those that have not yet been identified*,” has been removed.

BCDC-21

Comment:

3.4.2.3, 3.90, Sending an email and letter to contact tribes is the bare minimum required for consultation. USACE needs to conduct additional outreach to engage with tribes, including phone calls, visitation to tribal offices, outreach with indigenous-led organizations. (pg. 16)

Response:

USACE has initiated, and is continuing to participate in, extensive Tribal outreach and consultation. The results are summarized in the final version of the EA/EIR.

BCDC-22

Comment:

3.4.2 , 3.81, “Deep time Native American presence” sounds strange. Suggest rewording. “Time immemorial” is commonly used in this context. (pg. 16)

Response:

The sentence containing the phrase "*deep time Native American presence*" has been updated to clarify that the extensive maritime history in the region began with these communities and continues to define the region today.

BCDC-23

Comment:

3.42, 3.81, The last paragraph on this page provides a beautiful visualizing of the history of the earth in the Bay Area, and the development and roles of Tribes of the area, and then the last sentence cuts all of that to say that Euroamerican colonial based lay alongside tribal cultural resources. I think it's written awkwardly and seems to be dancing around the actual history. Even just a sentence about the history of how colonialism reshaped the Bay Area would be useful (pg. 16)

Response:

The last sentences of the paragraph have been updated to note that Euroamerican colonialism reshaped the region, and that evidence of the resulting maritime economy developed during the Historic Era lies alongside and, in some cases, obscures the indigenous foundations of the region.

BCDC-24

Comment:

3.4.2.1 , 3.83 – 3.88, These sections often say, "the majority of the APE has no recorded cultural resource investigations." What about the rest of the APE/the recorded ones? Why are they irrelevant? (pg. 16)

Response:

This passage is intended to emphasize that the majority of the APE has had no investigations; thus, the potential presence of cultural resources in these un-surveyed areas is unknown. See Sections 3.4.2.1 and 3.4.2.2 for details on the recorded cultural resources located within the APE.

BCDC-25

Comment:

3.4.2.2 , 3.89, Again, SF-10 says "many of the investigations… are not in response to regulatory requirements." – What are the other ones? (pg. 16)

Response:

This is intended to provide background information on the nature of the 15 cultural resources investigations that have intersected the SF-10 APE. The broad investigations were mostly academic, but not all. Some investigations were in response to regulatory requirements.

BCDC-26

Comment:

3.4.2.2, 3.90, Confusing to say “USACE and Regional Water Board reached out to the following tribes” and then not list the tribes. Makes it sounds like the agencies only reached out to the three tribes that are discussed later in the paragraph.

Response:

Text revised in Section 3.4.2.2 to say “*USACE and the Regional Water Board reached out to the tribes listed in Appendix E…”.*

BCDC-27

Comment:

3.4.4.1, 3.95, Is the “usual amount of bone” defined? (pg. 17)

Response:

The document includes the term “*unusual amount of bone*”. This is not specifically defined, as this EA/EIR covers a broad region, and each area is different. An unusual amount of bone for a specific area would be determined by the cultural resources and tribal resources experts developing the monitoring program.

BCDC-28

Comment:

4.3, 4.3, Consider adding Ocean Protection Council to list of agencies to contact regarding this project.

Response:

Ocean Protection Council was added to Table 4-1 as requested.

BCDC-29

Comment:

4.4, 4.4, “Tribes located in the study area are considered rightsholders.” It would help for USACE to spell this out a bit more. For example, “Tribes located in the study area are rightsholders, meaning they have an inherent right to steward and protect the land.” Increase transparency and provide/serve as a model for others.

Response:

Text expanded in Section 4.4 to read, "*Tribes located in the study area are considered rightsholders, as they possess inherent rights and a political relationship with governments, including the right to self-determination and the preservation of their culture and resources.*"

BCDC-30

Comment:

4.4, 4.4, “USACE has since developed a suite of mitigation measures aimed at minimizing impacts to cultural and tribal resources.” – if they’re mitigation measures and not elimination measures, they don’t minimize impacts, but rather they offset impacts. Do Tribes accept the mitigation measures?

Response:

Document revised to clarify that these are minimization and avoidance measures. USACE and the Regional Water Board consulted with tribes and discussed impacts to cultural resources and measures to avoid and minimize these impacts. The cultural resources monitoring program has been developed through these consultations.

BCDC-31

Comment:

4.4 , 4.4, The list of counties was listed previously in the document as also including San Joaquin and Sacramento. Why aren’t these Tribes listed/why weren’t Tribes in these counties included in the outreach list?

Response:

Those counties are not included in the study area and were included in error. The document has been revised to remove them.

BCDC-32

Comment:

4.5 , 4.7, Add BCDC to list of California regulatory agencies that have specific EJ guidelines.

Response:

Text in Section 4.5 has been revised to say “*…several California regulatory agencies, including the State Water Board, the Regional Water Board, and the San Francisco Bay Conservation and Development Commission (BCDC) have developed environmental justice practices…*” as requested.

BCDC-33

Comment:

4.5.1 , 4.7, Bay Plan EJ&SE Policy #4 seems applicable to this project, unless it has been determined that no dredging will occur within an underrepresented and/or identified vulnerable and/or disadvantaged community. Pollution and noise from dredging and trucking/training dredged material through communities would be an indirect environmental impact of ongoing maintenance dredging.

Response:

It is not expected that the Proposed Project will have cumulative effects that would disproportionately impact any populations with environmental justice concerns identified through existing database research and outreach described in section 4.5 because the amount of pollution and noise for all alternatives would be similar to baseline conditions.

BCDC-34

Comment:

4.5.2 , 4.8, Provide the communications plan created by the USACE and Water Board for communities with environmental justice concerns to increase transparency and provide strong models for other agencies to learn from.

Response:

USACE and the Regional Water Board contacted 105 community-based organizations in advance of the release of the draft EA/EIR and held a public meeting focused on community-based organization on October 15, 2024, in advance of release of the draft EA/EIR, see Appendix G. In addition, USACE conducted additional communication regarding the 20-year Regional Dredged Material Management Plan and future potential placement sites. Please see the Regional Dredged Material Management Plan's Appendix B Public Engagement and Environmental Justice Outreach.

BCDC-35

Comment:

4.5.2 , 4.8, Provide the list of community organizations identified and contacted in the final version of the draft EA/EIR including the feedback received, and how they were incorporated into the final version to increase transparency.

Response:

Information is provided in Appendix G.

BCDC-36

Comment:

4.5.3 , 4.11, The USACE utilized BCDC's Community Vulnerability Mapping Tool yet only focused on communities with social vulnerability and not contamination vulnerability despite the tool offering data on both types of vulnerability. (commenter goes on to quote directly from EO 14096). It is unclear why the USACE decided to ignore communities experiencing contamination vulnerability within its analysis to identify EJ communities that may be impacted by USACE activities. It is a missed opportunity and a critical gap in the USCAE efforts to reduce direct and indirect impacts on communities already experiencing disproportionate environmental burden.

Response:

The analysis to identify socially vulnerable communities utilized Climate and Economic Justice Screening Tool (CEJST) data, which considers burdens related to legacy pollution when identifying disadvantaged communities. In addition to the CEJST data, BCDC's Community Vulnerability Mapping Tool was utilized to identify additional socially vulnerable communities. In conjunction, both datasets identify socially vulnerable communities that are disadvantaged and/or exposed to environmental contamination. The results of both datasets were compared. The BCDC tool overlapped with all but one CEJST Census tract in San Francisco. This community within this census tract is unlikely to be impacted by USACE's

maintenance dredging because it is nearly one mile from the outer coast and not within the potential area affected by the project, see section 4.5.3.

Communities that were identified as vulnerable to contamination were included in the screening. These were not identified separately from the vulnerable community list because the screening was intended to include all proposed dredging and placement sites, and did not separately identify populations in contaminated areas.

BCDC-37

Comment:

4.5.2 , 4.9, For impacts to water recreation and fishing in vulnerable communities, consider the potential need for measures to offset these negative impacts to public access in environmental justice communities.

Response:

For the purpose of NEPA and CEQA, there would be no impacts to water recreation and fishing relative to baseline condition. This is because industrial activity and dredging disturbances that affect water recreation and fishing are not uncommon for the navigation channels included in the proposed project, and would not be greater than under the No Action and No Project Alternatives. Potential measures for BCDC policies will be included in the Consistency Determination and will be addressed during permitting phase. Specifics will be developed in coordination with permitting agencies.

BCDC-38

Comment:

4.5.3 , 4.9, Should the second sentence in the section be reworded to say, “For this analysis, socially vulnerable communities were defined as US Census block groups with high concentrations of one or a combination of the following socioeconomic indicators:”? The way it’s worded now means that a US Census block group with one person meeting the indicators would qualify as socially vulnerable, which doesn’t make sense.

Response:

Change has been made, adding text as requested in section 4.5.3.

BCDC-39

Comment:

4.5.3 , 4.9, The name of the tool referenced in the last sentence on page 4.9 is BCDC’s “Community Vulnerability and Community Based Organization Directory Map”. Was the CBO Directory part of the tool used to determine group to reach out to? If not, why? This seems like a missed opportunity.

Response:

The Community Based Organization (CBO) Directory part of the tool was used to determine groups to contact.

BCDC-40

Comment:

4.5.3, 4.10, Figure 4.1: How was 1.5 miles chosen? This area excludes the Bayview-Hunters Point community by a hair. Is it realistic to expect that dredging the San Bruno Shoal will not have impacts on water recreation and fishing in Bayview-Hunters Point?

Response:

It is realistic that dredging in San Bruno Shoal will not have impacts on water recreation and fishing in Bayview-Hunters Point relative to baseline conditions under NEPA/CEQA (see also response to BCDC-37). 1.5 miles was assumed to be an appropriate buffer for identifying potential impacts based on the localized nature of potential disturbance from dredging and placement activities.

BCDC-41

Comment:

4.5.3, 4.10, It appears that all of Yerba Buena Island and part of Treasure Island are included in the 1.5-mile radius of the dredging area. Were any community groups from these areas consulted or reached out to?

Response:

Appendix G includes a list of community based organization invitees by region. Organizations in the BCDC CBO Directory Map for Yerba Buena Island and Treasure Island are included in Appendix G.

BCDC-42

Comment:

4.5.3 , 4.11, First paragraph, third sentence: Tract is one mile east of the outer coast, not one mile east of SF Bay.

Response:

Text in section 4.5.3 has been revised for clarity.

BCDC-43

Comment:

4.5.4 , 4.12, Last paragraph: If Sacramento and San Joaquin counties were also included in the project scope area, why were these counties excluded from EJ analysis?

Response:

Those counties are not included in the study area and were included in error. The EA/EIR has been revised to remove them.

BCDC-44

Comment:

4.5.5 , 4.15, What were the results of the meeting with EJ community representatives on 10/15? How many attendees showed? What counties were they from? What concerns did they express and how will those concerns be addressed? Please include this information in the final EA/EIR.

Response:

A summary of this is provided in Appendix G. No concerns were identified during this meeting.

BCDC-45

Comment:

Commission Authority and Policy. In a few areas, the DEA/EIR misstates information about the Commission's authority or omits information. Please consider and include the following information.

1.2.1.1 San Francisco Bay Plan – the statement "The Bay Plan was amended in 2019 and included a policy for BCDC to continue to participate in the LTMS, the Dredged Material Management Office (DMMO), and other initiatives conducting research on Bay sediment movement, the effects of dredging and disposal/placement on Bay natural resources, alternatives to in-Bay aquatic disposal, and funding additional costs of transporting dredged material to upland and ocean disposal sites (BCDC 2020)" is incorrect. These policies were included in the Bay Plan amendment of 2000, which incorporated the LTMS Program into the Bay Plan Dredging Policies. The 2019 amendment was focused on Dredging Policy 11 and 12. In addition, please include the Suisun Marsh Preservation Act and the Suisun Marsh Protection Plan in this section.

Table 1-3. please include Fish and Wildlife, as well as Tidal Marshes, Tidal Flats, and Subtidal Areas in the Relevant Resources column associated with the CZMA Consistency Determination.

Section 3.5.1.1 – Federal, Coastal Zone Management Act discussion, please add Suisun Marsh Protection Plan to the description of documents that specify the goals, objectives, and policies for BCDC jurisdictional areas Section 3.8.1.2 – State and Regional discussion, please include the Suisun Marsh Preservation Act and the Suisun Marsh Protection Plan to this section and applicable policies.

Response:

Change has been made as requested.

BCDC-46

Comment:

Air Quality Analysis. While the Commission acknowledges it does not have authority over air quality impacts that do not affect the Bay or its resources, we completed a comprehensive review of the DEA/EIR. Rather than include the specific comments in the body of this letter, we have attached a series of specific comments and concerns regarding the air quality assessment that should be addressed for the USACE and Water Board consideration.

Response:

Comment responses to BCDC-47 through BCDC-61 address this comment.

BCDC-47

Comment:

Air Quality Analysis. The Commission is providing the following comments on air quality for USACE and Water Board consideration.

> 1. Page 155, Section 3.2.3 Methodology and Thresholds of Significance, second paragraph states “The average dredging volume for each location was used for the one-year envelope (Appendix D, Baseline Alternative Tab), which represents a total dredge volume of 2,650,000 cy.”
>
> 2. While this clarifies the average dredging volume for one year, the document would benefit in having this information mentioned in the text sooner, such as the Executive Summary’s Project Purpose, Need, and Objectives and Section 2.3 Project Description and Alternatives. Both recommended sections currently include a table with volumes under different scenarios (i.e., average volume per episode, maximum volume per episode, and average annual volume over 10-year cycle) that make it difficult to understand the projects overall dredging volume.

Response:

While 2.65 million CY of dredge sediment was used in the Air Quality analysis, the probable average for the federal maintenance dredging program is within a typical range of 2.0 to 2.5 million CY. This latter average is now included in the Executive Summary and Section 1.5.2 of the EA/EIR.

BCDC-48

Comment:

Pages 156 and 159, Section 3.2.3, Tables 3-5 and 3-9 need further information to understand the difference of what is being shown. Additionally, what is the difference between the No Action Alternative on Table 3-5 and No Action Alternative/No Project Alternative? With the information provided it seems like these two tables should be combined as they both are related to emissions for dredging and placement site transit. (pg. 20)

Response:

Table 3-5 presents air emissions of criteria pollutants, while Table 3-9 presents greenhouse gas emissions. These are evaluated separately because the region of influence for air emissions of criteria pollutants is regional, while the region of influence for greenhouse gases is global. The original title for Table 3-5 was, "Annual Emission Estimates for Dredging and Placement Site Transit, All Sites Dredging in One-Year Envelope for the No Action Alternative." To clarify the content of the table the word "Air" was added to the title to read, "Annual Air Emission Estimates for Dredging and Placement Site Transit, All Sites Dredging in One-Year Envelope for the No Action Alternative.”

The Air Quality analysis defines the emissions envelope as "a year when every site would be dredged." Because the principal difference in the No Action Alternative and No Project Alternative is based on select locations being dredged every year versus every two years at two sites, the air quality analysis has

adopted the No Action Alternative as the baseline against which Proposed Project alternatives are compared. For CEQA analysis, the No Project Alternative remains the same as the No Action Alternative. The portion of the title reading "and No Project Alternative" was removed from Table 3-9 for consistency.

BCDC-49

Comment:

Page 156, Section 3.2.3, Table 3-6 state the following “Clamshell dredging was used to represent both clamshell and cutterhead dredging.” And “As a result, substituting with clamshell dredging provides a reasonable estimation of total cutterhead dredging emission.” The document specifically states in section 2.3.1.1 what is considered mechanical and hydraulic dredging. Please provide further clarification as to why clamshell dredging is a surrogate to cutterhead. (pg. 20) Furthermore, Table 3-6 focuses specifically on the use of dredge equipment by alternative. Currently, it is difficult to see and understand the correlation between the percent change in dredging equipment and alternatives. Please provide further details to understand this correlation. (pg. 20)

Response:

The emissions associated with cutterhead dredging, which includes a pipeline and pumps to near/shore locations, are minimal in comparison to clamshell operations, which include tow boats pushing/pulling scows to/from more distant placement sites. Cutterhead dredges are limited in use to Napa (dredged once every 6 to 11 years) and Petaluma (dredged every 4 to 7 years) for the Proposed Action/Project. The volume of dredged sediment represents approximately 0.2 to 0.4 percent of the total maintenance dredged sediment over the course of the 10-year program. The amount of proposed cutterhead dredging does not represent a significant factor and using clamshell operations as a surrogate for air emission totals results in a higher and more conservative estimate of air quality impacts.

Table 3-6 describes the percentage of dredged sediment attributed to mechanical and hydraulic dredging that was used for the analysis. For example, under Alternative 1, mechanical dredging would account for 71 percent of the maintenance dredged sediment, while hydraulic dredging would account for the remaining 29 percent of maintenance dredged sediment volume.

BCDC-50

Comment:

Page 157, Section 3.2.3, Table 3-7 indicates that clamshell and hoppers are to be used for various placement locations, particularly in-Bay and deep ocean disposal. It is our understanding that the hopper does not transit to the deep ocean site. Also, the hopper has no offloading capabilities and places sediment via bottom release. Please clarify how this dredging equipment are to be used at the placement locations.

Response:

RDMMP and EA/EIR have been revised to avoid any instances of hopper dredges transporting sediment to SF-DODS. While USACE hopper dredges do not have pumpoff capability, private hopper dredges do have pumpoff capability. We do not specify the hopper type (federal vs. contracted) to allow for potential

hopper dredge pumpoff via the West Coast Regional Hopper Contract. That said, the Proposed Project and associated alternatives do not rely on hopper dredge pumpoff capability.

BCDC-51

Comment:

Page 158, Section 3.2.3, Table 3-8 shows the average daily and maximum annual threshold for various pollutants. Is this table representative of thresholds for dredging and transit regarding the proposed action/proposed project? Or does the table represent a general overview of the bay area pollutant threshold?

Response:

Table 3-8 presents an overview of the average daily and annual thresholds of criteria pollutants (volatile organic compounds/reactive organic gas, nitrogen oxides, PM10 and PM2.5) as these criteria pollutants are classified as nonattainment or maintenance by the Bay Area Air Quality Management District.

BCDC-52

Comment:

Page 160, Table 3-10 states the percent distribution of sediment at different placement sites. However, there seems to be a few additional categories/column or data points missing as the total percentage does not sum up to 100 percent. In the text above Table 3-10, it states “Material volume would remain the same across all alternatives for nearshore strategic placement and upland (sponsor provided) site placements.” Furthermore, the table in Appendix D for the Baseline: No Action Alternative/No Project Alternative seem to have these additional two categories (i.e., Nearshore Strategic Placement and Upland (sponsor provided) included into their calculations. Comparing the values in Appendix D, the percentage data under the Nearshore Strategic Placement and Upland (sponsor provided) sum up the missing percentage, which is approximately 13 percent. Please clarify why these two additional categories were not included in Table 3-10.

Response:

Nearshore strategic placement and upland (sponsor-provided) placement were not included in the table because the average volume percentage remains the same under all alternatives. This is noted in the paragraph preceding the table, which reads, "*The net change in the percent of material volume per placement type by alternative is presented in Table 3-10. Material volume percentage would remain the same across all alternatives for nearshore strategic placement and upland (sponsor-provided) site placements.*" A footnote has been added to the table reiterating the reason for omitting nearshore strategic placement and upland (sponsor-provided) placement.

BCDC-53

Comment:

Page 163, Section 3.2.4.2, the last paragraph states “Alternative 2 was used to quantify the reductions as the reductions would be lowest for this alternative. Table 3-13 presents the reduction ($2,585,800) for Alternative 2.” Please provide additional information in the text to further understand this statement and

how this quantification was used for the other alternatives in an appendix. Additionally, Table 3-13 seems to be inconsistent with the dollar amount reported in Appendix D – SCC GHG Alternative 2. Please verify there is consistency within the values.

Response:

Social cost of greenhouse gases is a metric set by the EPA to estimate the cost of damages from climate change, in relation to carbon, methane, and nitrous oxide emissions. These costs are attributed to a variety of sources, including property damage from increase flood risk, human health effects, changes in net agricultural productivity, and energy system disruptions. See Appendix D for a detailed calculation of the social cost of greenhouse gases for Alternative 1 (representing the greatest reduction in greenhouse gases among the alternatives) and Alternative 2 (representing the lowest reduction in greenhouse gases among the alternatives). The reduction in the social cost of greenhouse gases for Alternative 2 was described in the EA/EIR because it represents the most conservative reduction estimate among the alternatives when compared to the Baseline Alternative.

Text revised with the correct dollar amount. The total reduction for Alternative 2 was $2,536,913. However, based on other edits to the air quality analysis, the value has since been updated to $2,148,311. The EA/EIR has been updated to reflect this value.

BCDC-54

Comment:

Page 246, Section 3.5.3, the last paragraph states an average volume of dredge sediment to be from 2.13 million cy to 2.73 million cy. This is inconsistent and the end range should be changed to 2.815 million cy as this is the actual maximum that could occur, particularly the no action alternative/no project alternative.

Response:

Text has been revised as follows for clarity and consistency.

> *In any given year, the average volume of dredge sediment could range from 2.13 million CY to ~~2.73~~ 2.815 million CY. ~~Therefore~~ For all alternatives except the No Project Alternative, the maximum amount of dredged sediment that could occur in one year is 2.73 million CY ~~for all alternatives except the No Project Alternative~~. In the No Project Alternative, the maximum amount of dredged sediment that could occur in one year is 2.815 million CY due to increased volume at Richmond Outer Harbor. This represents a scenario where all channels are dredged within the same year and will be used to conduct the impact analysis.*

BCDC-55

Comment:

Appendix D - Air Quality Calculations

Table formatting is inconsistent across the Baseline Alternative-No Action and Alternative(s) 1-4 with potential information missing (see below for example). Please revise the tables so they are all formatted the sample. (Commenter has provided examples of tables.)

Response:

The formatting on the Baseline Alternative-No Action table has been updated to include the "Baseline Alternative-No Action" in the cell below "Placement Sites," as seen in the Alternative 1 through 4 tables.

BCDC-56

Comment:

Page 11, Tab D, has a table in which the proposed volume to be dredged at the San Francisco Harbor is separated into two, while the data table for the alternatives are reported as one. Please clarify if this is a typo or if there is reason why this volume was broken down into two.

Response:

Text has been revised. The Tab D tables are designed to show a high-level overview of the annual volume of dredged sediment for all channels. The reported volume for San Francisco Harbor has been combined into one value: 345,000 cy.

BCDC-57

Comment:

Page 12, Tab E, there is inconsistency between the title of the alternative(s) within the appendix and the main document. For example, Alternative 1 in the appendix is switches between “Beneficial Use – Diversion from Deep Ocean Disposal” and “Beneficial Use – Richmond Inner Split Summary” Whereas the main document details Alternative 1 as “Beneficial Use – Diversion from Deep Ocean Disposal”. Please clarify why “Richmond Inner Split Summary” was included as the title or if this is also a typo.

Response:

The title for Tab E of Appendix D has been updated to replace "Beneficial Use - Richmond Inner Split Summary" with "Beneficial Use - Diversion from Deep Ocean Disposal Summary."

BCDC-58

Comment:

Pages 11-12, Tab D and E, a table stating the percent information regarding use of dredging equipment is missing. Please include the additional tables for these two categories.

Response:

The tables stating the percent information regarding use of dredging equipment have been added to Tab D (Baseline-No Action) Summary and Tab E (Alternative 1 – Beneficial Use – Diversion from Deep Ocean Disposal Summary).

BCDC-59

Comment:

The volume reported under the “analyzed dredged cy for this alternative: 2,650,000 cy” seems to be inconsistent with what is provided in tables one and three for this category. For example, the volumes reported under the first table add up to 2,570,000 cy. This is roughly a 80,000 cy difference between the two values. Please clarify which is the correct volume being considered for this environmental impact report.

Response:

The analyzed dredged volume for this alternative is correct at 2,650,000 cy. The average volumes for each placement site have been updated to reflect the total volume for the Baseline – No Action Alternative. The volumes have been adjusted.

This change resulted in a very slight increase in transit emissions for the Baseline Alternative. These values were updated in Tabs A, C, J, and K. The corresponding tables and descriptive text in the EA/EIR were updated as well. See Table 3-5, Table 3-9, Table 3-11, Table 3-12, and Table 3-13 and associated text.

These minor changes did not affect the impact conclusion–impacts would remain less than significant. This adjustment does not change the findings of the air quality analysis.

BCDC-60

Comment:

Pages 6 through 10, Alternative 2-4 calculations, the reported percentage for the equipment contribution seem to be inconsistent. For example, on page 8, Alternative 1, it states that 71% of 2,570,000 cy is 1,835,000 cy. This is not correct as it should be 1,824,000 cy. Please confirm that these values are correct. If there is some piece of the data that is missing, please do let us know so there is no confusion.

Response:

The calculated volumes for Alternatives 1 through 4 on Tab C have been updated to reflect a total dredge sediment volume of 2,650,000 cy for consistent comparison with the Baseline Alternative (see Section 3.2.3). As a result, the volumes representing the percentages for equipment contribution have been updated.

Previously, the anticipated volumes of clamshell and hopper dredging were divided into the annual cubic yards dredged for each alternative. The resulting percentages were rounded to the nearest whole number. Rounding to two decimal places, the volume referenced in the comment from the Alternative 1 table (1,835,000 cy) was equal to 71.40 percent of the total annual dredged volume. Thus, 1,835,000 cy was correctly rounded to 71 percent under the original total dredge sediment volume of 2,570,000 cy.

BCDC-61

Comment:

Continuing the focus on the tables on pages 6-10, there is confusion on the significance of the reported percentages that are included in the “average row.” For example, the Alternative 1 table has an average

of 35% with a 42% underneath. However, under the average of 55%, there is a volume of 1,079,400 cy (see below for example). It is our understanding, based on the information from Section 2.3.3 Diversion from Deep Ocean Disposal, that Alternative 1 proposes to increase in-Bay placement by 35% to 55% from the No Action Alternative/No Project Alternative (i.e., 30% and 40%). Does the 1,079,400 cy signify that it is 55% of the analyzed dredged cy for this alternative, which is 2,570,000 cy? Please clarify what is the meaning of these percentages and verify that the values are also correct. (Commenter provides a table).

Response:

The values in the first row represent the percentage range for each placement site, while the second row presents the annual average percentage and volume in cy. For example, for the Baseline Alternative, 35 percent represents the average in-bay placement and 927,500 cy represents 35 percent of the total annual volume. Meanwhile, 30 percent and 40 percent represent the range of expected in-bay placement dredged volume for the alternative. To clarify, "(range)" has been added after the alternative name in the second row of the Alternatives Calculations tables in Tab C.

BCDC-62

Comment:

This concludes the Commission's comments regarding the DEA/EIR. The Commission and its staff appreciate the work that went into this document's preparation and the opportunity to comment. Please note, the analysis should include information sufficient to evaluate consistency with the San Francisco Bay Coastal Zone Management Program if the USACE intends to rely on this document for its federal consistency determination. If so, when submitting the consistency determination, please reference specific sections for ease of reference and efficient review. If you have questions or would like additional information, please feel free to contact me at 415.352.3623 or via email at brenda.goeden@bcdc.ca.gov.

Response:

USACE intends to refer to this EA/EIR in the preparation of the federal Consistency Determination (CD) for the SF Bay Maintenance Dredging Program (2025-2034). The USACE will submit the completed federal CD to BCDC for concurrence. As recommended, the CD, when referencing the EA/EIR, will refer to specific sections, as appropriate.

Comments from Local Agencies

County of Solano

SC-1

Comment:

The report highlights continued entrainment risks to sensitive species such as longfin smelt and white sturgeon during hopper dredging activities. We recommend additional evaluation of measures, such as fish deterrent technologies (bubble curtains or other such deterrent measures) and adherence to dredging windows that minimize impacts on these species, as described in the Long-Term Management Strategy (LTMS) recommendations.

Response:

As discussed in response to CDFW-3, there are no other feasible minimization/mitigation measures at present. Bubble curtains as a minimization measure are not feasible in deep water navigation channels because currents are too strong. A pilot study has been described in Section 2.3.1.5 that includes potential deterrent methods that could include lights, sound, or air jets. These methods will be tested for their ability to deter fish from the hopper dredge and thus reduce entrainment risks. Studies will be refined to improve success rates as needed. There are also no LTMS work windows to protect longfin smelt or white sturgeon. USACE will follow the National Marine Fisheries 2015 Biological Opinion that includes a work window and mitigation for work outside of the window to protect salmonids and green sturgeon, which also benefits white sturgeon.

SC-2

Comment:

Consideration of alternatives to hopper dredging in sensitive areas, including the Suisun Bay and nearby waterways, would help mitigate potential impacts on state species of special concern.

Response:

USACE is not proposing hopper dredging in Suisun Bay. To this end, USACE has requested approval to increase advance maintenance dredging by two feet in depth in Suisun Bay Bulls Head Reach to reduce emergency hopper dredging episodes. We are coordinating hopper dredging with the appropriate resource agencies, including adhering to existing biological opinions and environmental work windows (and associated requirements when dredging outside the work windows) and coordinating with USFWS on offsetting impacts to the recently listed longfin smelt. We have had numerous coordination meetings with CDFW, and while CDFW does not have jurisdiction over federal agencies and USACE associated actions (i.e., navigation dredging), USACE continues its coordination to avoid, minimize, and mitigate impacts to sensitive species.

SC-3

Comment:

The proposed increase in beneficial use of dredged material under Alternative 2 is a positive step toward sustainability. We encourage prioritizing upland beneficial use sites, such as habitat restoration projects in

the Suisun Marsh and Montezuma Wetlands, as they provide ecological benefits, provide for sea level rise adaptation, and align with regional restoration goals.

Response:

Comment acknowledged. Beneficial use to minimize entrainment impacts will place dredged sediment at non-aquatic sites such as Montezuma Wetlands Restoration Project. This comment does not raise a significant environmental issue relating to the Proposed Project or address the adequacy, accuracy, or completeness of the Draft EA/EIR.

SC-4

Comment:

Emission estimates from dredging activities, including transit emissions, require further analysis to ensure compliance with Bay Area Air Quality Management District (BAAQMD) standards. Additional mitigation measures to minimize greenhouse gas emissions, such as transitioning to low-emission dredging equipment, should be explored.

Response:

Emissions from dredging, transits, and placement activities of the USACE SF Bay Maintenance Dredging Program are presented and analyzed in Section 3.2 of the EA/EIR. Section 3.2 also provides the compliance of these maintenance activities with the annual thresholds of criteria air pollutants per the air quality standards of the Bay Area Air Quality Management District. Annual emissions of the proposed action alternatives are compared to a baseline pursuant to the methodology contained in the California Environmental Quality Act Air Quality Guidelines. The calculated net changes in emissions of each of the alternatives would be minor and have less than significant air quality impacts. The detailed analyses of air emissions of the proposed maintenance dredging program are included in Appendix D: Air Quality Calculations.

There are on-going efforts to upgrade the engines of tow boats and dredgers with diesel particulate filters in the SF Bay maintenance dredging program. These upgrades would lessen problematic emissions including greenhouse gases. These improvements are documented in Section 3.2 of the EA/EIR.

SC-5

Comment:

The County urges adherence to cultural preservation protocols when dredging near known resources, such as the Napa and Petaluma River Channels, to prevent damage to historically significant sites.

Response:

USACE will address Tribal Cultural Resources through adherence to their Tribal Consultation Policy, which mandates that USACE protect cultural resources important to Tribes. Additionally, if a Tribal Cultural Resource is identified during dredging, USACE would stop work and have the resource identified by an archaeologist and Tribal representative. See 3.4.4 for measures to protect Tribal Cultural Resources.

SC-6

Comment:

Ensure alignment of project activities with regional efforts under the LTMS to minimize cumulative impacts.

Response:

USACE and the Regional Water Board will continue to align project activities with the LTMS to the maximum extent practicable. The Proposed Project, in increasing the minimum amount of volume directed to beneficial use sites, makes it easier for USACE to reach LTMS goals and targets for beneficial use percentages. The Proposed Project provides a starting point that is higher than the previous dredging program's beneficial use percentage within the Federal Standard Base Plan, which reduces the amount of additional funding needed to reach and/or exceed the LTMS target beneficial use percentage.

SC-7

Comment:

Expand public outreach and interagency collaboration during the planning and implementation phases.

Response:

Outreach information is provided in Appendix G. USACE will continue to conduct outreach during the planning and implementation of future beneficial use sites.

SC-8

Comment:

Provide clarity on the proposed monitoring framework for adaptive management and post-project evaluation to ensure intended environmental outcomes are met.

Response:

USACE conducts post-dredge surveys that are submitted to LTMS agencies and publicly available at https://www.spn.usace.army.mil/Missions/Surveys-Studies-Strategy/Hydro-Survey/. USACE is a participant in the SF Bay Regional Monitoring Program for trace substances, and funds USGS to monitor suspended sediments at an array of locations in the Bay, see sections 3.3.4.2, 3.5.2.2, and 3.7.2.2. USACE provides annual reports to the Water Board and LTMS partners detailing the final dredge volumes and placement locations, including the volume of sediment sent to beneficial use.

Comments from Organizations

Bay Planning Coalition

BPC-1

Comment:

On behalf of the Bay Planning Coalition (BPC), a membership-based nonprofit organization advocating for robust economic growth while protecting the environmental sustainability of the San Francisco Bay, I am pleased to offer comments on the Draft Regional Dredged Material Management Plan (RDMMP). The RDMMP is an important blueprint for San Francisco Bay's future. It will impact navigation, dredging, the placement of sediment, and with increased beneficial reuse of that sediment it will increase the persistence of wetlands and habitats over the next 20 years and beyond. BPC has actively participated in the development of the RDMMP since at least 2019 by engaging in stakeholder workshops and hosting USACE staff at our Dredging and Beneficial Reuse Committee quarterly meetings and annual workshops. We are pleased to see that the draft document supports maximizing beneficial use opportunities for dredged sediment in the Bay, over and above the current navigation dredging program/no-project alternative. Reuse rather than disposal of sediment is critical to sustaining the region's marshes and beaches, habitat connectivity, and flood protection in the face of rising sea levels.

Response:

Comment acknowledged. This comment does not raise a significant environmental issue relating to the Proposed Project or address the adequacy, accuracy, or completeness of the Draft EA/EIR.

BPC-2

Comment:

Leverage hopper and hydraulic dredging to increase flexibility with dredging operations. We support Action Alternative 2: Regional Optimization through Leveraging of Hopper Dredging. We recommend collaborating with regional agencies to identify opportunities to leverage hydraulic dredging to increase flexibility with dredging operations. We recently recommended to BCDC that it should assess if the net benefits of hydraulic dredging and pumping of sediments from navigation channels (especially those near beneficial reuse sites) outweigh previously identified constraints. Resolving these constraints will enhance efficiency and thus reduce the overall operational costs of dredging and sediment delivery, allowing cost savings to be redirected towards beneficial reuse at no additional overall project costs.

Response:

See response to BPC-1.

BPC-3

Comment:

Fund new studies of in-Bay disposal site capacity. As a step toward potentially reopening the LTMS in-Bay disposal limits in the future, USACE and partners could fund new studies, to help determine the capacity of in-Bay disposal sites to handle additional sediment annually. As a result, we support Action Alternative 1: Diversion from Deep Ocean Disposal as adjustments to in-Bay disposal could reduce

overall operational costs, allowing cost savings to be redirected towards increasing beneficial reuse at no additional overall project costs. For example, a 50% in-Bay/50% beneficial reuse option, which was selected for the Oakland Navigation Channel Beneficial Use Pilot Project in 2022, demonstrates how such an approach can provide an interim solution while long-term funding and reuse strategies are developed.

Response:

Comment noted. As part of the Gaps Analyses performed by USACE to support development of the RDMMP, USACE funded an investigation of the in-bay placement site volumes associated with the RDMMP's alternatives, which included placing more sediment at in-bay sites than under the No Action or No Project Alternatives. It is not proposed at this time to re-open the LTMS, all alternatives analyzed in the EA/EIR are feasible within the constraints of the LTMS.

BPC-4

Comment:

Evaluate new placement sites. We support USACE's national goal of 70% beneficial use (BU) by 2030 and encourage the San Francisco District and partners to look for opportunities to exceed this goal in our region through efficiencies or additional funding/cost sharing, while ensuring completion of planned operation and maintenance dredging projects. There are numerous placement sites that have been studied, but have not been prepared, for taking sediment, including the Alviso Complex of the South Bay Salt Pond Restoration Project (as identified in the 2015 Moffatt & Nichol study), the Skaggs Island Restoration Project, and other low-lying areas of the Bay. These sites should be evaluated for feasibility of constructing and maintaining a deeper draft access channel and if feasible, considered as an amendment to or implementation of the RDMMP in future years.

Response:

Comment noted. As described in the EA/EIR, section 1.5.2.2, Description of Placement Sites: "*there is insufficient information available to fully analyze the potential impacts of placing dredged material at these locations in this EA/EIR. Potential impacts related to use of these sites are disclosed on a broad level in Chapter 3 because these sites may become authorized placement sites within the 10-year planning horizon for this document. Use of these sites by USACE would be conditioned upon the completion of supplemental environmental review under NEPA and/or CEQA, and upon acquisition of required environmental approvals from resource and regulatory agencies. The ability of USACE to use a given site for placement would be dependent on the accessibility of the site to different dredge equipment, types of dredged material authorized for placement at the site, cost, and other parameters.*"

BPC-5

Comment:

Seek new funding and prioritize existing sources to maximize beneficial reuse. San Francisco Bay dredging costs are among the highest in the nation. We encourage agency partners, and others named in the draft Plan alongside BPC, to actively seek funding sources to offset incremental costs. We are encouraged and optimistic that WRDA Section 125a now enables an even greater federal cost share for the incremental cost, enabling the non-federal cost to be as low as 35% (as opposed to 100%). However,

dedicated new funding streams are essential to support these costs and maximize beneficial use. BPC is deeply committed to seeking new funding from federal, state, and local sources as the new RDMMP launches with higher beneficial targets than ever before. For example, we recently urged BCDC to consider coordinating with the SFBRA to prioritize grant applications that include the use of funds for compensating the USACE and other dredgers for the incremental unit cost of beneficial reuse over ocean disposal. Measure AA funding has been used for this purpose in the past. Dedicating a greater share of regional resources to offsetting incremental costs, until other sources of funding are identified, could allow for a significantly larger share of dredged material to be beneficially reused within the Bay each year. As an illustrative example, $25 million (annual Measure AA funding) could compensate for the incremental cost above the Federal Standard (ocean disposal) for 80% of all annual federal and medium-sized dredgers' maintenance dredging, yielding approximately 2.4M cubic yards of sediment. In addition, Californians just passed Proposition 4, a $10 billion climate bond which contains dedicated funding for San Francisco Bay; BPC will explore opportunities for this funding to potentially support moving sediment to restoration and flood protection projects.

We encourage USACE and the Water Board to continue meaningful collaboration with the private sector and with other public agencies to implement the RDMMP, including adapting it over time as funding partnerships, placement opportunities, and sea levels evolve. BPC is eager to continue partnering with you in support of cost-effective sustainable dredging and beneficial use in San Francisco Bay.

Response:

Comment acknowledged. USACE will continue to coordinate amongst the dredging community to obtain additional funding and implement projects to maximize beneficial use.

Citizens for East Shore Parks

CESP-1

Comment:

This letter recognizes the important role of USACE in maintaining federal navigational channels and the role of the Water Board's review of this application. However, this application, as written, has defects and needs modifications to protect public health and the biological environment. Richmond community advocates argue strongly for testing of sediment before approval of any plans to relocate sediment from the Richmond Inner Harbor or the Richmond Outer Harbor.

Response:

As described in section 1.2.2.2, USACE conducts sediment testing prior to dredging and placement at ocean, in-Bay or beneficial use sites to ensure that the sediment will not contaminate the placement site. Testing follows the tiered framework described in the USACE and EPA Ocean Testing Manual, Inland Testing Manual, and Upland Testing Manual, with additional state and local guidance. Testing may include physical and chemical analysis, and biological evaluations as described in the EA/EIR. Tier III testing includes physical and chemical analysis (total solids, total organic carbon, grain size, metals, butyltins, pesticides, polychlorinated biphenyls, and polycyclic aromatic hydrocarbons), and may also require biological evaluations, such as water column toxicity, benthic toxicity, and benthic bioaccumulation tests. Testing results are reviewed by the Dredged Material Management Office (DMMO), described in section 3.5.1.3, made up of representatives from USACE, EPA, the Regional

Water Board, BCDC, and California State Lands Commission. The placement locations that the sediment is suitable for based on testing are determined by the DMMO. In addition, permitting agencies including the Regional Water Board and BCDC have the authority to direct sediment to the appropriate placement site through the episode approval process each year.

Testing at Richmond Inner Harbor areas to be dredged has been done three times over the last several years with little change in the results. Future testing for the Richmond Inner Harbor will be conducted according to the 2025–2030 Annual Sampling and Testing Schedule, shown in Table 3-22 of the EA/EIR. Tier III testing has been conducted in 2025. The DMMO determined that a portion of the dredged sediment is suitable for disposal in the deep ocean, and for placement in the Bay or as surface sediment at a tidal wetland restoration site. Some of the sediment is suitable for placement beneath 3 feet of surface sediment at the Montezuma Wetland Restoration Project. Richmond Outer Harbor was tested in 2024, and the DMMO determined that all sediment was suitable for disposal in the deep ocean, and for placement in the Bay or as surface sediment at a tidal wetland restoration site. The full 2024 and 2025 Sampling and Analysis Report (SAR) and all prior SARs for Richmond Harbor can be found here: https://www.dmmosfbay.org/site/alias___8955/171020/default.aspx. These reports also show the testing locations, extents of dredging, and channel stationing values.

CESP-2

Comment:

Modification Requested: Institute a dedicated sediment testing protocol for contamination by DDT, its derivatives, and other organochlorines, so that sediment from the Richmond Inner Harbor and the Richmond Outer harbor is not relocated for shoreline use until areas proposed for dredging have been cleared by testing for contamination.

Response:

As described in section 1.2.2.2 and above in response to CESP-1, all sediment dredged by USACE undergoes testing and review by the DMMO. USACE institutes a sediment testing protocol that analyzes a whole suite of organochlorine pesticides, including DDT and its derivatives. Please see the Richmond SARs on the DMMO Website for testing procedures, methods and analyses at https://www.dmmosfbay.org/site/alias___8955/0/default.aspx. As there is already a testing protocol, no revisions were made to the EA/EIR in response to this comment.

CESP-3

Comment:

Modification Requested: Either develop a detailed description of a proposed Stege Marsh sediment deposition plan or institute a complete exclusion of Stege Marsh from this application as a prospective recipient of sediment. Stege Marsh can be addressed more effectively in a future document that deals with all the challenges of that location and includes community outreach.

Response:

Stege Marsh and all potential future placement sites were included in the EA/EIR for informational purposes to provide examples of the types of sites USACE is considering. There is insufficient information

available to fully analyze the potential environmental impacts of placing sediment at all these potential placement sites under NEPA and CEQA. Use of Stege Marsh and/or any potential future site for placement of dredged sediment by USACE would require a separate, site-specific environmental review under the NEPA and/or CEQA, and acquisition of required environmental approvals from resource and regulatory agencies. No revisions were made to the description or inclusion of Stege Marsh in the EA/EIR, this does not preclude it from being addressed in future documents in more detail.

CESP-4

Comment:

Modification Requested: In addition, because of the application's incomplete proposals relevant to the Richmond shoreline, a public comment period is requested to review the final draft of the EA/EIR.

Response:

See response to CESP-3. Future environmental review of placement sites when known will follow all public comment requirements. No revisions were made to placement sites and testing associated with Richmond Harbor. In addition, no significant new information was added to the EA/EIR; therefore, it does not need to be recirculated for an additional comment period.

CESP-5

Comment:

There are apparent inconsistencies between the USACE characterization of sediment contamination levels in the Richmond Inner Harbor (no concerns are noted) and the USEPA's findings of contaminated sediment near the United Heckathorn Superfund site. The United Heckathorn Superfund site is located between the Lauritzen and Parr Channels as they open into the Richmond Inner Harbor and includes five acres of land and about 15 acres of marine sediments. The USEPA is in charge of cleaning up the United Heckathorn Superfund site. There are also inconsistencies in results of contamination testing throughout the entire process of cleaning up the United Heckathorn site (see below). The draft EIR (San Francisco Bay Federal Channels Operation and Maintenance Dredging and Sediment Placement Activities, Dredging Years 2025-2034, dated October 2024) for this proposed project does not resolve this discrepancy, and the community is concerned that reuse of sediment from the Richmond Inner and Outer Harbors will spread contamination. We note that there may be sources of contamination yet to be identified

Response:

At the Richmond Inner Harbor, USACE dredges up to the entrance of Parr Canal, though not Parr Canal itself (up to Stationing 217+00). This area dredged by USACE does not overlap with designated sites under Superfund, the EPA's nationwide program to identify, clean up, and return contaminated sites to productive use. The extent of the Superfund sites, as shown by the EPA (https://map22.epa.gov/cimc/) fall within Lauritzen and Parr Canal and do not extend into Santa Fe Channel. The areas which would be dredged under the Proposed Action/Proposed Project, including those abutting the Superfund sites, are tested regularly and the DMMO has determined over the last 10 years that these areas are deemed suitable for disposal in the deep ocean, and for placement in the Bay or under 3 feet of surface sediment at the Montezuma Wetlands Restoration Project. USACE does not dredge the Superfund sites, nor is

USACE responsible for performing remediation at these locations. It is the responsibility of the current landowner and other parties responsible for the contamination to remediate these areas with oversight by the EPA. There are no inconsistencies between USACE dredging sediment characterization results and EPA findings of contaminated sediment because the areas do not overlap.

Jennifer Siu of the Wetlands Section, Water Division, EPA, Region 9 reviewed comments received on the Draft EA/EIR and provided the following additional clarifying information via email to Jazzy Graham-Davis of the Regional Water Board on February 7, 2025:

> *Dear Jazzy,*
>
> *The EPA reviewed the Draft Environmental Assessment/Environmental Impact Report (DEA/EIR) jointly prepared by the United States Army Corps of Engineers, San Francisco District (USACE) and the San Francisco Bay Regional Water Quality Control Board (RWQCB), dated October 31, 2024, regarding the San Francisco Bay Federal Channels Operation and Maintenance Dredging and Sediment Placement Activities, Dredging Years 2025-2034. We provided our formal comments on December 30, 2024. Subsequently, as part of the San Francisco Bay Long Term Management Strategy (LTMS), we have reviewed comments made on the DEA/EIR concerning contamination in the Richmond Channels from the Citizens for East Shore Parks, Richmond Southeast Shoreline Area Community Advisory Group, and an individual named Julie Groves. In response to those comments, we offer the following clarifications prepared under the authority of, and in accordance with, the provisions of the Federal Guidelines promulgated under section 404(b)(1) of the CWA, section 103 of the Marine Protection Research and Sanctuaries Act (MPRSA), and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).*
>
> *EPA's authorities under MPRSA and CERCLA ensure protection of human health and the environment from chemical contaminants of concern. While these two authorities are distinct from each other, technical experts in our Water and Superfund Divisions actively collaborate and coordinate regarding contaminant concerns in sediments and the water column when there is spatial overlap of our authorities at specific locations. In this case, various federal and non-federal entities conduct routine navigational dredging in the Richmond Channels and Harbor. EPA listed the United Heckathorn Co. Richmond site on the National Priorities List in 1990 to address DDT and Dieldrin contamination into upland and in-water resources. The site includes 5 acres of land (the upland area) and 15 acres of marine sediments in the Lauritzen Channel and Parr Canal of Richmond Harbor (Figure 1). Through CERCLA, EPA has jurisdiction over cleanup related to the source of the contamination and where the contamination has come to be located. EPA defines its cleanup footprint using a risk-based approach to human and ecological receptors. Under CWA 404 and the MPRSA, EPA oversees the sampling and testing for proposed navigation dredging to characterize sediment for appropriate disposal, including the USACE Richmond Inner Federal Navigation Channel (RIH) (Figure 2). Superfund and Water Division staff collaborate on the sediment testing for RIH to guide sampling efforts and share testing results for appropriate management decisions.*
>
> *EPA Water Division requires robust characterization of any material dredged from navigation channels, according to standard testing protocols and regionally-based ecological thresholds (Table 1). These protocols are designed to consider: 1) sediment accretion patterns and*

movement from year to year (via bathymetry surveys), and 2) known and suspected sources of contaminants (e.g., stormwater outfalls, CERCLA sites, significant marine and/or upland spills). Testing is conducted at depth, spatially representative across a polygon area, and in consideration of sediment volumes proposed to be removed. Testing occurs on a frequent basis and ensures the ability to make distinctions on whether sediment can be placed in the ocean, for wetland reuse, or requires upland disposal. It is critical to note that established ecological thresholds for dredged sediment testing are low (Table 1) in comparison to Superfund clean-up levels; a conservative approach to ensuring any proposed placement of material in aquatic environments is protective of human health and the environment.

Testing has shown that while the United Heckathorn Co. Richmond site is a source of contamination to the bay, there is a clear reduction in contamination (DDT, Dieldrin) as you move downstream into the RIH away from the site. The Superfund Division collected sediment samples in the Santa Fe Channel and Richmond Inner Channel, as part of monitoring of the effectiveness of the original Superfund remedy in the Lauritzen Channel and Parr Canal, as well as to evaluate the footprint of any additional cleanup. The concentrations of DDT and Dieldrin at all sediment depths at sample points within the Santa Fe Channel were below CERCLA cleanup goals. Likewise, samples downstream from the Santa Fe Channel within RIH found DDT concentrations not only below cleanup goals, but close to ambient concentrations for fine-grained sediments in the San Francisco Bay.

Over the last two decades, frequent testing of sediments in the RIH for dredging purposes has yielded similar results as Superfund monitoring. USACE testing for navigation dredging in the RIH occurs on a 1–3-year basis depending on sediment accretion patterns and adjacency to potential or known contamination. Test results indicate that the contamination gradient in RIH consistently occurs within Reach 11 (Figure 2) where the sediment drops to thresholds that are closer to ambient SF Bay levels and below established ecological triggers (Table 1) for potential bioaccumulation into wildlife. Conversely, as based on testing, sediments from Reach 12 and the upstream Santa Fe reach do not and have not been determined suitable for open aquatic disposal or wetland reuse due to sediment contaminant loads exceeding ecological thresholds (Table 1). RIH Reach 12 and the Santa Fe reach have not been dredged in many years, whereas reaches 10 and 11 have been approved for reuse as "foundation" material (i.e., requires burial of material to 3ft below ground surface at minimum to avoid contact with ecological receptors) at the Montezuma Wetlands Restoration Project. RIH reaches 1-9 are regularly approved for unrestricted wetland reuse as the sediment contaminant levels are below ecological risk thresholds.

In summary, rigorous sediment monitoring conducted by the Superfund and Water programs in the RIH and the Santa Fe channels allows EPA to track and understand areas where there would or could be contaminants of concern in relation to areas where USACE regularly dredges. To the best of our knowledge, those areas are generally north of RIH Reach 11.

Thank you for the opportunity to provide clarifying comments. Please continue to coordinate with myself or Sahrye Cohen as this process moves forward. Specific questions concerning the United Heckathorn Co. Site should be directed to Karen Jurist, Remedial Project Manager, and Hiruni Jayasekera, Community Involvement Coordinator.

Best,
Jen
Jennifer D. Siu (she/her)
Wetlands Section, WTR 2-2
Water Division
USEPA, Region 9
(415) 972-3983
Siu.Jennifer@epa.gov

CESP-6

Comment:

The United Heckathorn site is designated as a Superfund site because it is massively contaminated with DDT (and its derivatives), plus dieldrin and BHC (lindane). These contaminants are toxic to humans and other animals and persist in aquatic ecosystems with a half-life estimated at 150 years. The site was used to process, package, and load chlorinated pesticides onto ships for transport, and apparently spills were common from the 1940s to 1960s. DDT is especially “sticky” to sediment, and is “mostly found in the sediment on the bottom of bodies of water” (1, 2). Shorebirds ingest sediment as they hunt for food, so deposition of DDT contaminated sediment in marshes or similar areas can contribute to reproductive failure due to weakened eggshells. Fish and shellfish also ingest sediment, and shorebirds and humans ingest fish and shellfish. The site was first placed on the US EPA National Priorities List in 1990. Since the first cleanup of the United Heckathorn site was designed in 1994, there have been many USEPA tests of contamination at the site, along the Lauritzen Channel, Santa Fe Channel, Parr Canal, and into the Richmond Inner Harbor.

Response:

USACE has coordinated with EPA regarding sediment quality as a result of the United Heckathorn Superfund site. See response to CESP-5. EPA is a participating agency in the Dredged Material Management Office that oversees dredging testing and sediment suitability described in section 1.2.2.2, see response to CESP-1.

CESP-7

Comment:

The variability in testing results through the decades and the proposal statement that testing is unnecessary are very concerning because contamination is a sensitive issue for City of Richmond residents. Testing is an appropriate step in evaluating disposition of sediment, and it is possible that licensed contaminated waste landfills may be required for sediments from some areas. In addition to its toxicity to humans, DDT is perhaps most widely known for its effects on the thickness of eggshells, making any deposition of DDT-contaminated sediment for marsh 3 restorations completely inappropriate. Given the variations in locations and levels of contamination in and around the United Heckathorn site, testing of sediment is of critical importance, and the best science must guide comprehensive sampling and site characterization. In its comments on this application, the Bay Conservation and Development Commission (BCDC) estimates that “less than 5% of the sediment has contaminate levels that prevent some form of beneficial re-use.” Then the important question is where these contaminated sediments might be located, and that would seem to require testing. High levels of contamination would trigger transport to an appropriate secure and licensed waste facility. Ideally, the USACE and the USEPA would

confer to resolve discrepancies in data and develop a coordinated plan that will be released to the public. How can USACE fulfill its stated goal that “levels of contamination are substantially similar at the extraction and disposal sites” without testing? A scientifically validated testing program needs to be integrated into plans for dredging the Richmond Inner Harbor and the Richmond Outer Harbor.

Response:

The EA/EIR includes information in section 1.2.2.2 about the tiered testing protocol and Dredged Material Management Office (DMMO) that determines sediment placement suitability. The EA/EIR does not state that testing is unnecessary. As described in section 1.5.2.1, sediment from USACE maintenance dredging in Richmond Inner Harbor does not need to be disposed of at a landfill, and the DMMO determined in 2025 that all sediment from the Richmond Inner Harbor dredge footprint included in the EA/EIR is suitable for some form of beneficial use. See response to CESP-1 for more on testing protocol and results. A portion of San Rafael Creek is the only channel segment dredged by USACE that contains sediment that has been found to be unsuitable for beneficial use based on test results. Further, EPA does not concur that there are discrepancies in data, see response to CESP-5**.**

CESP-8

Comment:

The application proposes that sediment is to be moved to a location called “Stege Marsh Nearshore,” but Stege Marsh itself has two components, and the map does not delineate the exact location. The Stege Marsh area is relevant to the Superfund qualified Zeneca site nearby, as well as to potential habitat damage during deposition.

Response:

The use of Stege Marsh as a dredged sediment placement site has not been decided. See response to CESP-3 related to sediment placement at Stege Marsh.

CESP-9

Comment:

Richmond’s Superfund-qualified Zeneca Site is contaminated with heavy metals like arsenic, radioactive materials, volatile organic compounds, and agricultural products. It is called a Superfund-qualified site because the US EPA allowed the Responsible Party to enlist in a Voluntary Cleanup Agreement (VCA) as an alternative to the US EPA Superfund List program. A previous City Council approved the construction of 4000 residential units on the site following an incomplete cleanup. The Stege Marsh area is very controversial due to the level of community concern (3), documentation of the toxic materials at the Zeneca site and other contaminated sites nearby (4), scientific reports of developmental abnormalities in mudsuckers (5), and silverside fish data showing elevated levels of PCBs (6). Stege Marsh is also identified as a toxic hot spot in the SWRCB Consolidated Toxic Hot Spot Cleanup Plan, due to contamination with dieldrin (7). It is critical for the application to provide more exact information on the targeted locations so that the community can comment. Alternatively, all references to Stege Marsh Inshore could be removed from this application and addressed in a future application that provides the community with adequate information and outreach.

Response:

The use of Stege Marsh as a dredged sediment placement site has not been decided. If it is, there will be additional environmental review and community engagement. USACE will coordinate with all necessary agencies and the public regarding the Zeneca Site in future environmental review and permitting actions that will focus on the impacts of sediment placement at Stege Marsh. See response to CESP-3 related to sediment placement at Stege Marsh.

CESP-10

Comment:

The sediment relocation at Stege Marsh Nearshore is described as potentially providing "additional habitat" for the salt marsh harvest mouse and Ridgway's rail. Community advocates request additional detailed information on how these shy animals will be protected during the proposed sediment deposition. Ridgway's rail and the salt marsh harvest mouse are both endangered species, fully protected under California and federal law. Two breeding pair territories of Ridgway's rail were observed in West Stege Marsh, as noted by DTSC in a monitoring report for the USEPA in 2021, and juveniles have also been seen. We were not able to find a report of sighting the salt marsh harvest mouse in Stege Marsh, though they are found in similar marshes elsewhere along the Bayshore. While it makes good sense to plan for additional habitat for both species (as the application states), the community needs to review specific plans that avoid disturbing these rare animals during sediment deposition or similar activities.

Response:

USACE will coordinate with resources agencies as required for the protection of listed species to place sediment at Stege Marsh. USACE and permitting agencies will follow all public notice and comment requirements when considering approval of the use of this placement site. There is currently insufficient information to analyze the impacts of sediment placement on or near Stege Marsh in the EA/EIR because the specifics of the placement are unknown. However, nearshore strategic placement is designed to mimic natural sediment accretion during high tide and storm events that would potentially be less impactful to species using the marsh habitat than direct sediment placement on the marsh surface. See response to CESP-3 related to sediment placement at Stege Marsh.

CESP-11

Comment:

Certainly, the decline in numbers for both of these endangered species correlates with loss of habitat. Perhaps there is also a correlation with exposure to contamination. It would be advantageous to involve scientists and the local community in looking at options for protecting rare species while assessing current contamination levels in Stege Marsh and planning for cleanup of Stege Marsh before approving a plan to deposit sediment from an unknown location into an area that cannot be identified from the information supplied in the application materials.

Response:

Comment noted. The EA/EIR does not approve a plan to deposit sediment from USACE navigational dredging channels to Stege Marsh. See responses to CESP-10 for protection of listed species and CESP-3 related to sediment placement at Stege Marsh.

CESP-12

Comment:

Richmond is an environmental justice city with a substantial legacy of industrial contamination, much of which is along the shoreline, including a coal shipping terminal, the United Heckathorn Superfund site, the Zeneca site (a Superfund qualified site), the Liquid Gold Superfund site, and the Chevron refinery. This situation is now complicated by sea level rise, which threatens to spread shoreline contamination both inland and into the Bay. While the community recognizes the positive aspects of sediment relocation programs, they have extreme concerns about how shoreline contamination is handled to protect public health and living Bay ecosystems. In addition, the community is very protective of the existing biodiversity along the 32-mile Richmond shoreline and seeks to have it enhanced, rather than exposed to risk.

Response:

Comment acknowledged. Please see responses to CESP-1 through CESP-11 above.

California Marine Affairs and Navigation Conference

CMANC Comments on Regional Dredge Material Management Plan (RDMMP)

The majority of comments from CMANC were on the RDMMP. Specific responses to these comments are not provided because they do not pertain to the EA/EIR. These comments have been noted, however, and USACE will follow up with CMANC to discuss these comments. The response to the CMANC comment that is relevant to the EA/EIR is provided below.

CMANC-1

Comment:

While USACE has not shared the data, they now have a project-by-project cost, except for MCS *[Main Ship Channel - sic]* and Petaluma and Napa rivers, for placement of dredge material at in-bay placement sites. As such, this should be Alternative X, which meets the criteria for the Federal Standard, which is a regulation.

Response:

The proposed alternative where dredged sediment from all channels, except the Main Ship Channel, and Petaluma and Napa rivers, is placed in-Bay was not added to the EA/EIR because it would not meet the following project objectives:

- Align, where applicable, with the goals of the LTMS program as described in the 1998 LTMS Final EIS/EIR and the 2001 LTMS Management Plan, within the constraints of the Federal Standard Base Plan.

- Increase the minimum amount of dredged material beneficially used by USACE for wetland restoration and conservation within the constraints of the Federal Standard Base Plan.

Richmond Southeast Shoreline Area Community Advisory Group

RSSA CAG-1

Comment:

The United Heckathorn US EPA Superfund Site including Lauritzen Channel and Parr Channel sampling data confirm presence of USEPA banned compounds far beyond acceptable levels for marine wildlife. The channel fish are so contaminated (poisoned) with bioaccumulated chemicals, they are not edible by humans.

The Lauritzen Channel and Parr Channel are contiguous to the Santa Fe Channel and Richmond Inner Channel waterway. Sediments and tidal waters mix and create an extremely complex environment of contamination and re-contamination aka residuals. The EA/EIR omits more sophisticated and responsive plans for comprehensive sampling and site characterization of the Richmond Inner Channel and Santa Fe Channel prior to scheduled dredging, which are critical for success, given the proximity of confirmed contamination from Lauritzen Channel at United Heckathorn, Richmond CA, US EPA Superfund Site.

Comment: More sophisticated multi-federal/state/regional/local agency coordination and zone-wide planning for comprehensive characterization and disposal of contaminated sediment is required to prevent unintentional spread through unwitting dredging and relocation of contaminated sediments.

Recommendation: For suggestions on contaminated post-dredge sediments, aka residual management, see “Environmental Dredging Residual Generation and Management”, Integrated Environmental Assessment and Management, Volume 14, Number 3 – pp 335- 343, 2/2/2018. https://setac.onlinelibrary.wiley.com/doi/pdf/10.1002/ieam.4032

Response:

As described in section 1.2.2.2, USACE has a robust sediment testing protocol to ensure that USACE assesses the quality of the dredged sediment prior to disposal or placement. This testing protocol ensures that disposal and placement of sediment will not contaminate other sites. Please see response to CESP-1.

RSSA CAG-2

Comment:

The US Army Corps of Engineers (USACE) EA/EIR describes Richmond Inner Channel sediment quality and contamination impacts based on sparse and infrequent sampling data. The most recent data collected by the USACE in the Richmond Inner Channel appears to be 2012, which confirmed presence of Total DDT, Dieldrin and PCBs.

The United Heckathorn US EPA Superfund Site drains directly into Richmond Inner Harbor and Santa Fe Channel. The Superfund channel cleanup continues to stump regulators as it passes through its fifth 5-

year review documenting the 25-year-old failure and 40-years of extreme contamination of the San Francisco Bay Waters. The status isn't rare or unusual, as significant percentages of sediment and dredging failures at SuperFund MegaSites nationwide garnered attention and focused study by the National Research Council. Recommendations provided in the Sediment Dredging at Superfund Megasites Assessing Effectiveness appear to be tailor-made for the Richmond Inner Channel proposed dredging plans.

Comment: More sophisticated multi-federal/state/regional/local agency coordination and zone-wide planning for comprehensive characterization and disposal of contaminated sediment is required to prevent unintentional spread through unwitting dredging and relocation of contaminated sediments.

Recommendation: For descriptive recommendations and a comprehensive review of complex site conditions, aka dredging contaminated sediment in the Richmond Inner Channel, see "Sediment Dredging at Superfund Megasites, Assessing Effectiveness", National Research Council, Committee on Sediment Dredging at Superfund Megasites, Board on Environmental Studies and Toxicology, Division on Earth and Life Studies, National Academies Press, Washington DC, 2007.
https://semspub.epa.gov/work/HQ/174467.pdf

Response:

The channels dredged by USACE are outside the footprint of the United Heckathorn and other EPA Superfund sites in Richmond. Based on the results of repeated testing of the USACE navigation channels, there is no indication that contaminated sediment has been transported from the nearby Superfund sites to the navigation channels. Therefore, guidance on dredging at Superfund Megasites is not applicable. Please also see responses to CESP-1 and CESP-5..

RSSA CAG-3

Comment:

Sample sediment data were collected in the Richmond Inner Harbor, at the direction of USACE SF in 2012. The data, measured in ug/kg (micrograms/kg aka parts per billion), confirmed presence of Total DDT, Dieldrin and Total PCBs at sample locations RIH-6A-1, RIH-6A-2, RIH-6B-1 and RIH-6B-2.

- Data were reported in the Port of Richmond Inner Harbor 2012 Maintenance Dredging Higher Resolution Sediment Testing – Sampling and Analytical Results, prepared for the USACE, SF, prepared by Kinnetic Laboratories, Inc., Santa Cruz, CA.
- The same data were included in the Source Identification Study Report, United Heckathorn Site, for US EPA Region 9, by CH2MHill, March 2014, as Table 7-1 "Sediment Chemistry Data Collected by SF USACE – Richmond Inner Harbor". Table 7-1, pdf page 64 of 97 https://www.envirostor.dtsc.ca.gov/getfile filename=/public%2Fdeliverable_documents%2F6690434098%2FFinal_UH_SourceID_report.pdf

Separately, sample sediment data was collected in Lauritzen Channel (United Heckathorn Superfund Site), and Parr Channel, at the direction of the Bay Area Stormwater Management Agencies Association (BASMAA) in collaboration with USEPA and the City of Richmond.
The data measured PCBs in ng/kg.

- Geosyntec collected samples and reviewed records starting in 2000, 2001, 2002, 2005- 2007, 2010, 2011 and 2013. The Clean Watersheds for a Clean Bay (CW4CB) Task 3 Source Property Identification and Referral Pilot Study Lauritzen Channel and Parr Channel Watersheds, Richmond, CA, was prepared by Geosyntec, July 2016.
- PCB Aroclor congeners in Harbor Lauritzen Channel and Parr Channel are significantly correlated to Aroclors 1254 and moderately correlated to Aroclor 1248. No samples significantly correlated to Aroclors 1016 or 1242. Per the CW4CB Study, because weathering can affect homolog profiles, significant and moderate correlations alone are not sufficient to identify source. PCBs Figures A-2, A-4, A-5, A-6, A-8, A-10, A-11, Table B-2 Soil/Sediment, B4, B5, B6 Appendix D: PCB Referral Site Forms and Figure 1 https://basmaa.org/wp-content/uploads/2021/01/final-cw4cb-task-3-cccwp-report.pdf

  Comment: Standard coordinated multi-agency federal, state, regional, local annual analysis of PCB congeners throughout the Richmond Inner Channel zone is overdue.

  Recommendation: For relevant case study insights, plan recommendations, and a comprehensive literature review – "Sediment Remedy Effectiveness and Recontamination: Selected Case Studies", Association of State and Territorial Solid Waste Management Officials (ASTSWMO), CERCLA and Brownfields Research Center, Sediment Focus Group, Washington, DC, April 2013. https://cluin.org/download/contaminantfocus/sediments/2013-04-Sediment_Remedy_Effectiveness_and_Recontamination.pdf

  Recommendation: Develop GIS-based standards to document, track and map sample data. Coordinate and lead state, regional and local agencies toward solutions based on comprehensive, coordinated and shared data collection.

Response:

Developing a standard coordinated multi-agency analysis of contamination at the Richmond Inner Channel is unnecessary for this project. Testing is done according to a tiered sampling framework as described in Section 1.2.2.2 and overseen by the DMMO, and the results of repeated testing of the USACE navigation channels indicate that contaminated sediment has not been transported from the nearby Superfund sites to the navigation channels. Please see responses to CESP-1 and CESP-5.

San Francisco Baykeeper, Clean Water Action

BK/CWA-1

Comment:

Section 2.3.2 of the Draft EIR evaluates the No Action Alternative under NEPA and the No Project Alternative under CEQA. Both analyses are flawed. Both alternatives appear to rely on the assumption that during the last dredging period of 2015-2024, the Richmond Outer Harbor and the Pinole Shoal Channel were dredged annually, alternating between hopper dredges and clamshell dredges beginning in 2017. While this fact pattern was analyzed in the EIR for the 2015-2024 dredging period, this is not how the Corps actually proceeded between 2017 and 2024. Instead, the Corps unilaterally decided to dredge both the Richmond Outer Harbor and the Pinole Shoal Channel with a hopper dredge in alternating years, reducing the dredging schedule for these channels from annual to every other year, and relying on emergency dredging during off-years to maintain both channels. The Corps changed the dredging

schedule for these two channels mid-dredging term and did not conduct any supplemental environmental impact analysis.

Now, the Draft EIR describes the No Action Alternative under NEPA as including dredging the Richmond Outer Harbor and Pinole Shoal Channel annually, alternating between hopper and clamshell dredges. (Draft EIR at 2.23-2.24). As discussed above, this description does not represent "no action," because it is not how the Corps proceeded during the last dredging term. Under NEPA, the No Action Alternative would continue the Corps' dredging program "in the same way as it has been done in the past, as authorized." (Draft EIR at 2.21). The No Action Alternative in the Draft EIR must be revised to accurately reflect the last dredging period. It must clarify whether the No Action Alternative actually means the Corps will dredge both channels annually, alternating between hopper and clamshell dredges or continue with their previous dredging strategy.

Response:

The commenter is incorrect about how the NEPA No Action Alternative should be described. Additionally, the commenter incorrectly interpreted the dredging frequency for the No Project Alternative.

As stated in section 2.3.2:

"Under NEPA, in cases where the project involves modification of an existing program or management plan, the No Action Alternative may be defined as no change from the current authorized program, or no change in management direction or intensity (43 CRF Part 46.30[1]). The No Action Alternative includes activities that may not be necessarily implemented in the current program, but are authorized to occur, such as more frequent dredging.

Section 15126.6 (e)(3)(A) of the CEQA Guidelines states that "when the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the No Project Alternative will be the continuation of the existing plan, policy or operation into the future." Therefore, under CEQA, the No Project Alternative is a continuation of existing dredging activities. USACE would continue current maintenance dredging practices for the projects it maintains in SF Bay, and the Regional Water Board would consider issuing a WQC/WDR based on USACE's current dredging practices.

The No Action Alternative and No Project Alternative differ in that the No Action Alternative represents the current authorized dredging program, regardless of current implementation, given that past implementation is different than current implementation due to recent restrictions (Regional Water Board 2020) placed on hydraulic dredging in SF Bay. The No Project Alternative, by contrast, represents the current, ongoing dredging operation as implemented over the last permit period per CEQA Guidelines Section 15126.6(e)(3)(A)."

Distinctions between the No Action Alternative and No Project Alternative are clearly described in EA/EIR section 2.3.2, including subsections 2.3.2.1, No Action Alternative (National Environmental Policy Act Baseline), and 2.3.2.2, No Project Alternative (California Environmental Quality Act Baseline).

Specifically, under the No Action Alternative, section 2.3.2.1 describes the dredging frequency for Richmond Outer Harbor and Pinole Shoal:

- Richmond Harbor – Outer Harbor: "*The Long Wharf and Southampton Shoal portions of the Outer Harbor would be dredged annually, alternating between using a hopper dredge or clamshell*."
- San Pablo Bay (Pinole Shoal): "*The Pinole Shoal Channel would be dredged annually, alternating between a hopper dredge or clamshell.*"

Under the No Project Alternative, section 2.3.2.2 describes the dredging frequency for Richmond Outer Harbor and Pinole Shoal Channel (San Pablo Bay/Mare Island Strait) as being dredged every two years using a hopper dredge. This approach is the alternating of hopper dredging described by the commenter as USACE's past practice since 2017.

No changes were made to the EA/EIR No Action or No Project Alternative in response to this comment.

BK/CWA-2

Comment:

Similarly, the Draft EIR describes the No Project Alternative as "a continuation of existing dredging activities and is the current dredging program as implemented by [the Corps] irrespective of current federally authorized dredging frequencies for channels." (Draft EIR at 2.26). Under this alternative, the Corps claims that "dredging in Richmond Outer Harbor and Pinole Shoal Channel occurs every other year." (Id.). Again, this assertion is factually inaccurate. In reality, the Corps did not comply with a 2-year dredging schedule for these channels. Rather, as discussed in Baykeeper's comments regarding the Notice of Preparation for the Project, the Port Captain for the Marathon Refinery in Martinez, whose tankers access the refinery via the Pinole Shoal Channel, contacted the US Coast Guard (USCG) in 2020 and 2022 to request emergency dredging. The Corps conducted emergency dredging in Pinole Shoal Channel in 2020. The No Project Alternative in the Draft EIR must be revised to account for the Corps' actual implementation of its operations and maintenance dredging program during the last dredging term.

Response:

As the commenter noted, emergency dredging occurred in Pinole Shoal in 2020. However, the USCG did not declare a navigation emergency in Pinole Shoal in 2022 so no emergency dredging occurred. Therefore, one episode of emergency dredging in the last ten years does not invalidate the description that the Richmond Outer Harbor or Pinole Shoal were hopper dredged every other year during the last permit cycle. Emergency dredging was anticipated and authorized in the Regional Water Board's Certification of USACE's navigational dredging program for the San Francsico Bay (Order No. R2-2020-0011). The impacts of emergency dredging are negligible compared to impacts from dredging a full channel because of the small volume, timing, and acres impacted. The volumes of sediment dredged during emergency dredging episodes in Pinole Shoals and Suisun Channel ranged from 10,000 to 40,000 cubic yards, which is more than an order of magnitude less than the volumes dredged during planned episodes for Pinole Shoals, which ranged from 150,000 to 560,000 cubic yards. In addition, emergency dredging only occurred in about 8 percent of the footprint that is typically dredged within the Pinol Shoal channel during a planned episode. Last, the duration of the impacts of emergency dredging is between 2 and 4 days as compared to 19 days for the full dredging duration of a planned episode for Pinole Shoal. Thus, the inclusion of this negligible volume would have no material effect on the environmental impact analysis. No changes were made to the EA/EIR No Project Alternative in response to this comment.

Under CEQA, the No Project Alternative is a continuation of the existing project, as described in response to BK/CWA-1. This does not represent a change from the current dredging schedule or in additional impacts.

BK/CWA-3

Comment:

In response to Baykeeper's comments regarding the Notice of Preparation for the Project, the Corps and Regional Board asserted "[e]ffects of the reduced, or lack of, annual maintenance of dredging for Richmond Outer Harbor and Pinole Shoal channels on navigation will be described in this EA/EIR." (Appendix F at C-15). Instead, the Draft EIR glosses over this change in the dredging schedule and its impacts. The only reference to navigation impacts from reduced dredging in these channels is as follows:

> The reduced annual maintenance, or entire lack [sic] annual maintenance of dredging for Richmond Outer Harbor and Pinole Shoal channels ***would potentially increase the risk of a navigational hazard*** that would result in vessel groundings, allisions, or collisions, as well as oil spills that could result from such incidents. However, under this alternative, similar to other alternatives evaluated in this Draft EA/EIR, emergency dredging would be performed by [the Corps] to address navigation hazards if the depth of a channel becomes a concern for navigation, as reported by the San Francisco Bay Pilots, then subject to issuance of an emergency declaration by the USCG, then review and action by [the Corps].

(Draft EIR at 3.151) (emphasis added). Although this paragraph in the Draft EIR acknowledges the likelihood of adverse impacts from reduced dredging in the Richmond Outer Harbor and Pinole Shoal Channel, the Draft EIR fails to analyze this impact anywhere else.

Response:

Under CEQA the No Project Alternative is a continuation of the existing project, as described in response to BK/CWA-1. This does not represent a change from the current dredging schedule or additional impacts.

The No Project Alternative did not result in significant impacts to navigation since implementation in 2017, as Pinole Shoal and Richmond Outer Harbor have remained open to vessel traffic at all times and only needed emergency dredging on one occasion. As stated, there is a potential for an increased risk of a navigational hazard; however, as emergency dredging is allowed, USACE maintains navigation by removing hazardous shoals to prevent this potential increased risk. USACE has been able to promptly dredge the navigation hazard, so the duration of any navigation hazard is short. Moreover, if navigation hazards are encountered, then ships reduce the risk by taking on less cargo in an established practice known as "light loading." Ships also pass through the navigation hazard area during high tide to allow greater clearance. Finally, the Proposed Project will move away from the No Project Alternative to include annual dredging of Pinole Shoal and Richmond Outer Harbor in Alternatives 1 and 2, further minimizing any potential risk.

BK/CWA-4

Comment:

In comparison, emergency dredging in Bulls Head Reach, a section of Suisun Bay Channel, is consistently included in the Corps' Project alternatives analyses. Table 2-5, No Action Alternative Summary, Table 2-7, No Project Alternative Summary, Table 2-9, Alternative 1 Example Implementation Summary, Table 2-11, Alternative 2 Example Implementation Summary, Table 2-13, Alternative 3 Example Implementation Summary, and Table 2-15, Alternative 4 Example Implementation Summary, in the Draft EIR include a repeating footnote stating the Corps "does not anticipate performing more than three emergency dredging episodes consisting of less than 30,000 cy each per year."

The Draft EIR must be revised to include additional analysis regarding emergency dredging in Richmond Outer Harbor and Pinole Shoal Channel, on par with the analysis conducted for emergency dredging at Bulls Head Reach. Can the Corps estimate how frequently it will need to conduct emergency dredging in Richmond Outer Harbor and/or Pinole Shoal Channel? If yes, how frequently will these channels be emergency dredged; if no, why not? Can the Corps estimate the amount of dredged material that will need to be removed from these channels via emergency dredging? If yes, how much; if no, why not? Without the answers to these questions, the Draft EIR's analysis remains unacceptably speculative as to these impacts.

Response:

Unlike in Bulls Head Reach, which needs to be emergency dredged on a fairly regular basis, the Richmond Outer Harbor and Pinole Shoal channels have not needed emergency dredging on a regular basis. In the last 10 years, the Richmond Outer Harbor channel has not been emergency dredged, and the Pinole Shoal channel has only been emergency dredged once. Emergency dredging in these areas cannot be predicted. It is infrequent and variable in nature. Further, as described in response to BK/CWA-2, any effect from emergency dredging would be insignificant in light of the overall project. Thus, no change was made to the EA/EIR project description for emergency dredging in response to this comment.

BK/CWA-5

Comment:

Section 2.3.3 of the Draft EIR analyzes Alternative 1 (Beneficial Use: Diversion from Deep Ocean Disposal), Section 2.3.4 of the Draft EIR analyzes Alternative 2 (Beneficial Use: Regional Optimization, Leverage Hopper Dredging), Section 2.3.5 of the Draft EIR analyzes Alternative 3 (Beneficial Use: Cost Share Opportunity), and Section 2.3.6 of the Draft EIR analyzes Alternative 4 (Beneficial Use: Maximized). While we support increasing the beneficial use of dredged material as part of the Project, the Corps views most of these alternatives as cost effective only if the Corps increases hopper dredging in the navigation channels. It is the Corps' desire to include the Project in its West Coast regional dredging schedule that results in the Corps' inability to schedule around all threatened and endangered species work windows in the Bay. (Draft EIR at 2.13). This is a policy choice by the Corps, not an issue of infeasibility.

Response:

For any navigation project or program, USACE must identify the Federal Standard (least cost dredging and placement option that is compliant with all federal environmental laws and regulations and consistent with sound engineering). The No Project Alternative, Alternative 1, and Alternative 2 all satisfy these thresholds, thus the Proposed Project that includes all three in a phased approach. Alternative 2 is the

only proposed alternative that relies on expanded hopper dredging and more in-bay placement to reduce navigation programmatic costs to balance the higher cost of beneficial use from other portions of the navigation program. USACE has coordinated extensively with relevant federal resource agencies for expanding hopper dredging within the navigation program to achieve beneficial use for wetlands restoration. This beneficial use for wetlands restoration is part of the Proposed Project, and the resultant volume slated for restoration within the Proposed Project is higher than the required volume to offset the acute impact to individual fish by providing long-term habitat benefits for the species under consideration. The constraint on hopper dredge scheduling is not a policy choice because hopper dredges (federal and contract) are a shared resource with all other USACE districts in the Pacific Ocean (Alaska, Seattle, Portland, Los Angeles, and Honolulu). As a result, the schedule must be coordinated with environmental work windows (and associated mitigation outside the work windows), safety considerations, and dredging needs across these districts (see also response to CDFW-2).

BK/CWA-6

Comment:

The Federal Standard for Suisun Bay Channel includes a strict work window and prohibits hopper dredging, which would harm Delta Smelt. The Corps could and should adopt similar limitations in Richmond Outer Harbor and Pinole Shoal Channel to protect Longfin Smelt, but has chosen not to revise the Federal Standard for these channels. The primary condition the Regional Board added to the Clean Water Act section 401 Water Quality Certification for the last dredging period was to reduce hopper dredging in the navigation channels to protect Longfin Smelt under state law. Now that the Longfin Smelt has been listed as endangered under federal law, it is reasonable to expect hopper dredging will be further restricted, rather than allowed to increase. When the federal consultation for Longfin Smelt is completed, the Alternatives in the Draft EIR will likely need to be revised significantly. As discussed in detail below, increasing beneficial use to create new habitat does not justify the taking of these endangered species.

Response:

The alternatives in the Regional Dredged Material Management Plan and the associated joint Environmental Assessment/Environmental Impact Report does not need to be revised. USACE will continue to dredge Suisun Bay Channel with a clamshell dredge as part of the Federal Standard Base Plan, as has been implemented in the past. The USFWS 2025 BiOp does not restrict hopper dredging in other channels within the San Francisco Bay and includes beneficial use of sediment as a measure to minimize/mitigate for entrainment impacts to longfin smelt. As discussed in response to CDFW-3, the proposed minimization/mitigation of potential hopper dredge entrainment impacts by providing sediment for beneficial use in wetland restoration projects will minimize any impacts to less than significant levels. Indeed, the amount of beneficial use exceeds what is minimally required and will benefit the species.

BK/CWA-7

Comment:

The Draft EIR adequately incorporates the Corps Headquarters' newly adopted policies: 1) increase the beneficial use of dredged material to 70% by 2030, and 2) increase flexibility, including cost sharing, in determining the "Federal Standard" for the Corps' dredging programs. If the Corps implements its

operations and maintenance dredging program as projected, increasing beneficial use throughout the dredging term, the percentage of beneficial use should be well beyond the Long-Term Management Strategy's (LTMS) goal of 40% for dredged sediment. The Bay is continuing to experience a severe sediment deficiency (Draft EIR at 3.113), which, combined with rising sea levels, puts the remaining wetlands around the Bay's perimeter at risk of submersion.

Section 5.7.1 of the Draft EIR identifies the placement of dredged material in Bay as an area of known controversy. The LTMS and its limitations on in-Bay disposal were developed in the late-1990's, and it is likely there is new information from the past thirty years that could impact the program's initial underlying assumptions. However, the Corps cannot unilaterally modify the LTMS. Both the Regional Board and the San Francisco Bay Conservation and Development Commission (BCDC) have incorporated elements of the LTMS into their planning documents – the Basin Plan and the Bay Plan, respectively. Any modifications to the LTMS goals must be grounded in the current science and be thoroughly analyzed by the agencies in the LTMS management committee — activities which are outside the scope of the Project. In the meantime, the existing LTMS goals continue to control the placement of dredged sediment in and around the Bay.

Response:

USACE is not proposing unilaterally modifying the LTMS as part of the Proposed Project and works within the four program goals, see responses to EPA-1 and BCDC-7. In fact, LTMS partners (e.g., US Environmental Protection Agency and the San Francisco Regional Water Quality Control Board) have expressed support for flexibility within the LTMS program to allow for an increase in the beneficial use volume from the USACE navigation program within the Federal Standard Base Plan at 100 percent federal cost. Note that the identification of the Federal Standard Base Plan is a distinct objective from the goal of increasing beneficial use of dredged sediment within the Base Plan per the USACE Chief of Engineers' 2023 Command Philosophy to strive for 70 percent beneficial use by volume nationally by 2030. Importantly, this 70 percent goal is a national target; thus, it is a shared goal across all USACE districts' navigation programs. In addition, cost-sharing of the incremental cost above the Federal Standard Base Plan requires additional funding from USACE to be approved and additional external funding from non-federal partners.

Per the USACE's policy guidance promulgated on August 28, 2023 (Expanding Beneficial Use of Dredged Material in the USACE), USACE considers the following three categories of dredged sediment placement: disposal, transitional placement, and beneficial use. Transitional placement is defined as keeping sediment in the riverine or coastal system as a part of a management process or in a period of transition. Transitional placement is considered a null value in the percentage calculation of beneficial use and disposal. USACE considers in-bay placement to be transitional placement since sediment placed at these sites is maintained within an estuarine system at the confluence of a coastal and riverine system. It is anticipated that this sediment is subject to the natural sediment transport processes within this system, and its placement at the in-bay sites is a period of transition within these system process. As such, in-bay placement is neither counted toward beneficial use nor toward disposal. In an alternative such as Alternative 2, which is comprised of over 500,000 cubic yards of beneficial use volume and no disposal at the San Francisco Deep Ocean Disposal Site, the beneficial use percentage would be 100 percent because the sediment placed at transitional sites is not counted towards either beneficial use or disposal. Therefore, Alternative 2 exceeds the San Francisco District's contribution to the 70 percent target at the national level and helps balance other districts that might have a lower beneficial use volume. This

category of placement and the resultant beneficial use percentage calculation does not preclude the San Francisco District from pursuing additional beneficial use opportunities beyond the Federal Standard Base Plan, namely through cost-sharing and/or cost analysis of new beneficial use sites. In fact, USACE San Francisco District has stood up a Beneficial Use of Dredged Material Program to prepare Beneficial Use Decision Document Integrators and annual 5-year Regional Dredged Material Management Plan spreadsheet analyses under WRDA 2020's Section 125 authorities. Please see the Regional Dredged Material Management Plan's Existing Placement Sites and Transitional Placement sections for more information on the definition of transitional placement.

BK/CWA-8

Comment:

Section 3.3 of the Draft EIR must be revised to adequately describe the legal status for special status species. First, the Corps is in the process of consulting with the US Fish and Wildlife Service (USFWS) regarding impacts of the proposed dredging operations on the San Francisco Estuary distinct population segment of Longfin Smelt (Draft EIR at 3.29) and expects a biological opinion in early 2025. Second, the Draft EIR incorrectly describes the White Sturgeon's federal and state status.

Response:

The commentor is correct. Section 7 consultation has been completed for longfin smelt, with a biological opinion issued February 7, 2025, from USFWS (USFWS 2025 BiOp). This has been changed throughout the EA/EIR. White sturgeon currently have no federal special status, in October 2024, USFWS published a 90-day finding indicating that the petition to list white sturgeon warranted further investigation and will be presented in a 12-month finding in 2025. The state status of white sturgeon is correctly described in the EA/EIR. The CA Fish and Game commission voted to approve white sturgeon as a candidate species on June 19, 2024, which affords them full protection starting on July 12, 2024. Text has been revised in section 3.3.1.1 to include an update on the federal process for white sturgeon.

BK/CWA-9

Comment:

On October 8, 2024, USFWS published its 90-day finding under the federal Endangered Species Act (ESA), finding the petition to list the White Sturgeon as threatened presents substantial scientific or commercial information indicating the listing may be warranted. USFWS missed its 12-month deadline to publish a proposed listing for White Sturgeon, and litigation to enforce that deadline is imminent. In the meantime, the Corps should obtain a conference opinion from USFWS regarding White Sturgeon to fully mitigate potential impacts to this species – relying on the old analysis for Green Sturgeon is not a substitute for this analysis. We recommend any future conference opinion, biological opinion, or incidental take statement specify that "no more than 1 Green Sturgeon or White Sturgeon may be taken by dredging," since that is what the Draft EIR's analysis implies as the maximum impact. (Draft EIR at 3.50). White Sturgeon have the potential to be in the Bay and Estuary year-round, so a work window will not provide adequate protection from entrainment. Ship strikes are another cause of White Sturgeon mortality, so their status as "strong swimmers" (Id.) does not indicate they can avoid dredging equipment. Additionally, in June 2024, the California Fish & Game Commission determined that listing White Sturgeon as threatened may be warranted and declared White Sturgeon a candidate species for listing

under the California Endangered Species Act (CESA). Candidate species are protected during the remainder of the listing process pursuant to Cal. Fish & Game Code section 2085.

We expect the Corps and the Regional Board to revise the Draft EIR in accordance with the forthcoming LTMS biological opinion for Longfin Smelt and in accordance with the conference opinion under the ESA and CESA for White Sturgeon. It is our understanding that the Corps and the Regional Board anticipate releasing the Final EIR in fall 2025; thus, there should be adequate time for these processes to conclude and be incorporated into the Final EIR.

Response:

Updates on the white sturgeon federal status have been added to section 3.3.1.1. Under the guidelines of the Federal ESA, conferencing for white sturgeon cannot begin until they have been proposed for listing, which, to-date, has not occurred. During preparation of the EA/EIR, the Water Board met with CDFW to discuss the scope of the environmental analysis. CDFW recommended that the analysis of impacts to the green sturgeon be used as a proxy for the analysis of impacts to white sturgeon because white sturgeon behavior is very similar to green sturgeon in the San Francisco Bay/Estuary and BMPs to protect green sturgeon would also protect white sturgeon. Therefore, the analysis of impacts to white sturgeon was performed in accordance with recommendations by CDFW and is included in section 3.3 of the EA/EIR. Further, the project includes measures that would protect both species, see also responses to CDFW-1 and SC-1.

In regard to take of green sturgeon, USACE has been following the Amount and Extent of Take established in the NMFS 2015 BiOp, which, because it is virtually impossible to establish the exact number of fish that could be entrained or incidentally taken as a result of the proposed action, take is considered exceeded if in-Bay placement of dredged sediment exceeds 1.5 million cubic yards per year. However, because only one green sturgeon has been identified in the multiple years of monitoring, there is no indication that entrainment would be high, nor increase through the Proposed Project. Additionally, there has only been a single observation of a sturgeon strike by a ship in the San Francisco Estuary (Demetras et al 2020). If mortality from ship strikes was a common occurrence, carcasses would likely be observed more frequently.

The USFWS 2025 BiOp for longfin smelt was incorporated throughout the EA/EIR. The project, as described in the draft and final EA/EIR is in conformance with the USFWS 2025 BiOp.

BK/CWA-10

Comment:

Section 3.3.4 of the Draft EIR significantly understates the Project's adverse impacts on Longfin Smelt and also overstates the effectiveness of the proposed mitigation measures. The Draft EIR estimates that less than 8% of the Longfin Smelt population could be affected by the Project. (Draft EIR at 3.45). Contrary to the suggestion that 8% is of limited concern, in its recent status review of the San Francisco Bay-Estuary distinct population segment of Longfin Smelt, which supported a federal ESA listing as "endangered," the USFWS found: "it is likely that Longfin Smelt population sizes will dip below recoverable levels within a decade if these recent levels of reproduction and survival continue." (USFWS. 2024. Longfin Smelt Species Status Assessment at p. 195.) Given its precarious status, harm to up to 8%

of the population of Longfin Smelt on an annual or semi-annual basis may result in the accelerated loss of this species and would also limit options for recovery of this unique population.

Response:

Section 3.3.4 of the EA/EIR uses multiple lines of evidence to assess entrainment impacts from hopper dredging since it is infeasible to calculate an exact number of fish entrained. USACE's entrainment monitoring protocol is only able to inspect a subsample of the total volume of dredged sediment and using results from these subsamples to calculate an estimated number of fish entrained for to the entire dredging episode has been shown to be erroneous, see section 3.3.4.1. Therefore, the EA/EIR employs two lines of evidence to assess entrainment impacts to longfin smelt. The first line of evidence uses the percent of longfin smelt habitat within the relevant San Francisco Bay segment being impacted by hopper dredging to gain an understanding of the magnitude of entrainment impacts in each of the segments. The percent of longfin smelt habitat where hopper dredging would occur ranges from 1.4 percent in the South San Francisco Bay to 8.2 percent in San Pablo Bay. We note that these percentages are much lower than the total fraction of the longfin smelt habitat since the information in Table 3-15 intentionally does not include large areas of longfin smelt range in the Delta and shallow water habitats. If that habitat was used, the percent of longfin smelt habitat impacted by dredging would be less than 1 percent. Baykeeper incorrectly interpreted Section 3.3.4 to indicate that 8 percent of the total longfin smelt population would be affected by hopper dredging. The EA/EIR also states that this percent of the habitat would only be affected for a few days of the year, ranging from 0.5 percent to 10 percent of the year depending on the specific alternative and dredging volume evaluated. Therefore, the total species impacts to longfin smelt are a combination of the percent of habitat affected and fraction of time that habitat is impacted. Given that only a small percentage of longfin smelt habitat will be affected by hopper dredging each year and this effect would be for a small portion of the year, the magnitude of entrainment is expected to be relatively low when factoring in standard practices, such as beginning and ending each hopper load, priming pumps, and clearing drag heads within 3 feet of the seafloor, described in Section 2.3.1.5. Therefore, the impact is less than significant with Mitigation Measure BI-1: Compensatory Mitigation for Longfin Smelt applied to the No Project Alternative, the minimization/mitigation measure of beneficial use to restore tidal wetlands incorporated into Alternatives 1, 2, and 3, and the standard measures specified in Section 2.3.1.5 for all projects. Additionally, according to the USFWS 2025 BiOp, the LTMS, including dredging by USACE, is not likely to jeopardize the continued of existence of longfin smelt. Please also see response to CDFW-3. None of the Alternatives will accelerate the loss of longfin smelt or limit options for recovery of this species.

BK/CWA-11

Comment:

Furthermore, the Corps' and Regional Board's method for estimating potential loss by substituting the area impacted for the proportion of the population impacted (Draft EIR at 3.45) incorrectly assumes that the fish do not move into the zone of dredging operations while dredging is occurring. In fact, Longfin Smelt tend to aggregate in deep channel environments (Rosenfield and Baxter 2007; Rosenfield 2010) and move/swim. Even a stationary dredging operation could impact more than 8% of the population if Longfin Smelt continue to swim into the area of the dredging operations. Thus, the assumption that the proportion of the channel area dredged can be translated to show the proportion of the Longfin Smelt population impacted is not scientifically accurate and likely understates the real adverse impacts that

dredging operations have on Longfin Smelt. The Draft EIR must be revised to accurately characterize Longfin Smelt behavior and accordingly adjust the Project's estimated population take.

Response:

As stated in response to BK/CWA-10, there is not a scientifically valid approach to estimate the exact number of longfin smelt entrained from the Project's. Therefore, the percent of longfin smelt habitat hopper dredged and duration of hopper dredging was used in a multiple line of evidence approach to evaluate longfin smelt entrainment impacts. A similar method of dredged area and duration of impact was described by USFWS in the 2025 BiOp. Furthermore, there is no scientific evidence to indicate that fish will move towards a dredging disturbance as indicated by the commenter. The fish could just as likely move away from the hopper dredge and disturbance area. The assumption in the analysis was that the fish were uniformly distributed in the deeper habitats, which could overestimate the portion of the population affected. Some longfin smelt are known to occupy the shallower habitats, including within tidal wetlands and slough channels as found by Lewis et al. 2025 that will not be affected by the dredging activities. No revisions were made in response to this comment.

BK/CWA-12

Comment:

Additionally, the Draft EIR artificially reduces the adverse impacts to Longfin Smelt by inaccurately describing their life stages. For example, the Draft EIR states: "Longfin smelt larvae are most abundant in the water column usually from January through April (Reclamation 2008)." (Draft EIR at 3.34). However, Longfin Smelt larvae are present in the Bay and Delta through June (CDFW 2010 at 36; Rosenfield 2010 at 26), i.e., into the work window. Late-stage larvae (a.k.a., "pre-juveniles" 20-30 mm in length) are present in the work area into August (Lewis, L. UC Davis, personal communication). Whether they are present in San Pablo Bay, Central, or South Bay depends on Delta outflow hydrology. The distribution of larvae and early juveniles (Age 0) tracks the salinity field (Dege and Brown 2004); thus, during years with high Delta outflow, one would expect these age classes to be present in both San Pablo Bay and South Bay.

Response:

Prior to the commenters quoted text from draft EA/EIR page 3.34, the EA/EIR states "*Some longfin smelt remain in the Estuary for their entire life cycle (Merz et al. 2013; Rosenfield and Baxter 2007), while an unknown portion make their way to the ocean sometime during the late spring or summer of their first year of life (age 0), and may remain there for 18 months or longer before returning to the Estuary and Delta to spawn (77 FR 197566)*." The EA/EIR acknowledges the presence of longfin smelt larvae into June, while stating they are most abundant usually from January through April.

Text has been added to section 3.3.2.2 to state: "*Longfin smelt presence in San Pablo Bay, Central Bay and South Bay is dependent on Delta outflow/hydrology as well as life history stage. The distribution of larvae and early juveniles (age 0) tracks salinity field when present (Dege and Brown 2004). Therefore, in high delta outflow years, longfin smelt would be expected to be farther downstream*."

Additionally, according to the USFWS 2025 BiOp, the LTMS is not likely to jeopardize the continued existence of longfin smelt.

BK/CWA-13

Comment:

The Corps' attempt to connect increases in Longfin Smelt taken with water year type is misleading and must be revised. (Draft EIR at 3.49). The data do not reveal the relative number of fish caught in wet versus drier years and, in any case, there is no indication that the proportion of Longfin Smelt killed by current dredging operations is consistent with conservation of this endangered population in any year type. Evidence of "less" take in wet years does not indicate that Project-related mortality in those years has no impact on species viability. Longfin Smelt are on the brink of extinction so that no a priori amount of biologically acceptable take for this species has been defined.

Response:

Water year type is not included to indicate that project related mortality in wet years has no impact. This information is presented as a variable that affects the population of longfin smelt. The analysis and conclusion that impacts are less than significant does not rely on the water year type during entrainment monitoring. Given that hopper dredging farthest upstream is in San Pablo Bay, it follows that juvenile and larval longfin smelt would be entrained in years with higher delta outflow (see response to BK/CWA-11). The USFWS 2025 BiOp for longfin smelt provides an extent of incidental take estimated at up to 2 percent of the annual population, with a reasonable and prudent measure to minimize adverse effects to longfin smelt by the project. The USACE will take all precautionary measures to ensure adverse effects are minimized.

BK/CWA-14

Comment:

Moreover, although Longfin Smelt that are spawning or incubating as eggs are the least likely to be able to avoid being entrained by hopper dredging, (Draft EIR at 3.49), it is unclear whether Longfin Smelt are capable of escaping entrainment at any life stage. Their ability to evade harm from hopper dredging would depend on how fast the dredge head moves and how much suction is created by the hopper dredger relative to local currents. Such modifications to hopper dredging operations have not been considered by the Corps. The Draft EIR's risk of exposure calculations (Draft EIR at 3.50) are incorrect, as they rely on otter trawl data, effectively ignoring larval and early juvenile Longfin Smelt that are not surveyed by the otter trawl. The Draft EIR's reasoning (that protecting Longfin Smelt larvae is unimportant because of their higher relative abundance) does not avail; the fact that larvae generally outnumber juveniles does not mean that the take of larvae cannot compromise population viability. The Draft EIR must be revised to correct these inaccuracies and flawed assumptions regarding Longfin Smelt.

Response:

Modification to the suction created by the hopper dredge is already included through the measure to keep drag head water intake doors closed to the maximum extent possible described in section 2.3.1.5. Doors are opened and closed based on the particle size of the sediment being dredged to alleviate clogs. Any additional modifications to suction or equipment are infeasible with the current *Essayons* hopper dredge.

Otter trawl date is one line of evidence used in the longfin smelt analysis. The percent of longfin smelt habitat and amount of time each channel is dredged in table 3-15 show that dredging is not a significant

impact to longfin smelt. While it is true the otter trawl data does not capture results for larval and early juvenile longfin smelt, this life stage was accounted for in the analysis through the inclusion of other studies such as Robinson and Greenfield 2011 and Rosenfield and Baxter 2007. Dredging activities do not occur in areas of spawning, so spawning adults or eggs are unlikely to be entrained. Additionally, according to the USFWS 2025 BiOp, USACE dredging will not jeopardize the species.

BK/CWA-15

Comment:

Section 2.3.1.5 of the Draft EIR describes several mitigation measures that the Corps would implement in all alternatives to protect Longfin Smelt and Delta Smelt from hopper dredging; however, these measures are unlikely to be effective. First, the Corps plans to implement a pilot study to assess the potential for directing fish away from hopper dredging operations to reduce entrainment by installing and operating fish deterrent equipment (i.e., lights, sound speakers, and/or air jets) to trigger avoidance response in fish (Draft EIR at 2.17). As stated in the Draft EIR:

"There is [sic] no data on avoidance or attraction for longfin smelt." (Id.) Where light and pressure barriers have been tried in the past (e.g., for salmonids in the Delta), the results have been equivocal and varied depending on the specific geographical context. Also, there is no guarantee or reason to believe that Delta Smelt and/or Longfin Smelt will respond in the same way salmonids do to these disturbances. For example, it is unlikely lights will deter Longfin Smelt, because these fish live in very turbid environments where artificial light stimuli would be expected to attenuate quickly.

Even if the mix of light, sound, and water pressure could effectively move the fish away from the dredging operations, the pilot study must be designed to monitor the fate of the fish that are dispersed by the proposed mitigation measures. Longfin Smelt more than likely aggregate in deep water because it benefits them ecologically; therefore, moving them out of these environments, into less suitable habitats and potentially into the mouths of predators, could harm these imperiled fish. The pilot study must be revised to investigate the effect on Longfin Smelt of any displacement by the fish deterrent equipment; simply showing that they moved away from the dredging equipment is not enough. For example, the Corps would need to provide some assurance that other predator fish would not become trained to respond to the sound and pick off displaced Longfin Smelt (or other prey species). There is evidence, including from within this ecosystem, that Striped Bass can be trained to respond to an anthropogenic disturbance that makes prey fish more susceptible. The Corps must make the findings from this pilot project available for public comment and review prior to any decision to continue the pilot project past the initial 2-year term.

Response:

None of the pilot projects described in the EA/EIR are mitigation or minimization measures (see also response to CDFW-10). These projects were included to provide additional information on efforts by USACE to investigate potential measures that further protect listed species including longfin smelt. Pilot projects will be designed to avoid indirect as well as the direct effects. As described in response to BCDC-16, USACE will coordinate with all necessary agencies and interested public to create and implement the pilot projects and will share the results with the public.

BK/CWA-16

Comment:

Second, the Corps intends to implement environmental DNA (eDNA) testing to detect Longfin Smelt during hopper dredging activities. (Draft EIR at 2.17). This approach has been shown to be ineffective at protecting Longfin Smelt from entrainment. As stated in the Draft EIR: From July 21 through July 31, 2023, during hopper dredging by the *Essayons* at Pinole Shoal Channel, six eDNA sampling events with three replicates per sample occurred. These samples later were assessed for the presence of longfin smelt. Despite being repeatedly observed during the physical entrainment monitoring aboard the *Essayons*, no longfin smelt were detected in the eDNA samples (ICF 2023). (emphasis added).(Draft EIR at 2.17). The Corps' proposal to test water for eDNA prior to dredging is unlikely to protect Longfin Smelt, as fish swim. Moreover, in a tidal environment, the distances fish travel can be great. So, an area that has no Longfin Smelt in the morning, could easily host an abundance of Longfin Smelt in the afternoon. Thus, if the Corps chooses to proceed with eDNA testing, genetic detection must be measured in real time (which is not yet possible for eDNA) and the monitoring (eDNA) and visual observations should occur within 1000 feet of active dredging. If the eDNA monitoring and/or visual observations indicate the presence of Longfin Smelt, then dredging operations must be delayed and/or cease immediately until monitoring and/or visual observations no longer indicate the presence of Longfin Smelt in the dredging area.

Response:

The eDNA samples are not intended to replace actual dredge entrainment monitoring, but is just intended to assist with site selection, for example, if longfin smelt are found at one site and not another. Methods of eDNA collections have significantly improved in the last few years (Elizabeth Bowen 2024), and will be continually refined if methods are improved. While there may be some change in the distribution during the time between sampling and dredging, this is an added bonus layer of monitoring to potentially reduce the risks to special status fish.

BK/CWA-17

Comment:

Third, the Draft EIR states the Corps has been testing the use of an echosounder in conjunction with dredging activities. (Draft EIR at 2.17). However, given the lack of additional analysis for this technology, it is unclear whether the Corps proposes to implement this measure as part of the Project. The Draft EIR must be revised to clarify what the "echosounder" technology entails, and whether it will be used in conjunction with other technologies (i.e., with eDNA testing). How will sediment disturbance caused by dredging activities impact the accuracy of this technology? Will this technology have adverse impacts on other wildlife in the Project area? Given the unproven nature of these proposed mitigation measures, they cannot be relied upon to mitigate adverse impacts to special status fish. Furthermore, a pilot project to explore the value of fish deterrent equipment would not amount to avoidance and full mitigation, as required under CESA. Simply detecting these fish using eDNA testing or dispersing them using an echosounder also do not amount to avoidance and full mitigation. We recommend the Corps not implement these so-called mitigation measures, and instead use the cost-savings to fund additional clamshell dredging in the channels.

Response:

Echosounding is identified as a potential method that can be applied with eDNA, but use of echosounders is not guaranteed at this point in time. Echosounding has been used in the past in conjunction with trawling as a verification method. This data is still in the process of being analyzed for its effectiveness of use and/or next steps. Turbidity and suspended sediment does impact echosounder as a sampling method. USACE found that echosounder data was more useful at Pinole Shoal and Suisun Bay than at Richmond Outer Harbor because the sediment is sandier in Pinole Shoal. Neither the pilot study, eDNA, nor echosounding sampling are mitigation for this project, but are actions USACE will take to further the knowledge for protecting special status species. USACE will conduct tests or analyze existing data (e.g., echosounder) as to whether the deterrent methods, eDNA, and/or echosounders would be an effective means for reducing entrainment risks. Echosounding was not relied upon to minimize or mitigate for impacts in the EA/EIR. See response to BK/CWA-15.

BK/CWA-18

Comment:

Finally, these mitigation measures appear to be targeted to only Delta Smelt and Longfin Smelt, but these are not the only special status fish species adversely impacted by the Project. The Draft EIR must be revised to explain whether these mitigation measures apply to other fish in addition to Delta Smelt and Longfin Smelt. The Draft EIR must also be revised to document whether these measures harm or mitigate impacts to the sturgeon species, salmonids, etc.

Response:

These pilot projects were not relied upon to minimize or mitigate for impacts in the EA/EIR, see response to BK/CWA-15. Entrainment of Chinook and sturgeon are very low, and they are stronger swimmers than small fish such as smelt; therefore, the highest risk of the Proposed Project is to the two smelt species. However, these deterrent methods, if successful, will also provide a measure of protection for other fish species, such as sturgeon and Chinook. USACE will follow all USFWS and NMFS biological opinions to protect listed species.

BK/CWA-19

Comment:

The Draft EIR makes vague references to unexploded ordnances in Suisun Bay that must be further analyzed. The Executive Summary notes that dredged material from Suisun Bay Channel is not suitable for beneficial use because of the “possibility of unexploded ordnances in the sediment” from the historical Port Chicago explosion. (Draft EIR at ES-XVI). This note is repeated in section 2.3.4 of the Draft EIR, describing limitations on Alternative 2 (Beneficial Use: Regional Optimization, Leverage Hopper Dredging) (Id. at 2.35). The Introduction to the Draft EIR states: “As of 2023, USACE Suisun Bay Main Channel material upstream of Station 200+00 must be disposed at Suisun Bay placement site (SF-16). This material must stay within proximity of the channel because of the non-zero chance of containing remnants from the Port Chicago explosion on July 17, 1944.” (Id. at 1.28).This hazard was not addressed in any of the documentation for the 2015-2024 dredging term, and it must be fully analyzed now. The Draft EIR must be revised to include discussion of the following questions: What is the evidence of unexploded ordnances in dredged material (i.e., is the presence of ordnance presumed, or has it actually

been observed)? What agencies (federal, state, and local) are involved in the decision-making process for how to handle unexploded ordnances in dredged material? What is the rationale for leaving unexploded ordnances in Suisun Bay, versus removing the ordnances? Can unexploded ordnances be detected in dredged material and removed for proper disposal prior to in-Bay placement? What is the safety risk to mechanical dredger contractors who dredge Suisun Bay Channel? What safety measures are implemented to avoid detonating the unexploded ordnance during dredging activities? The Corps and the Regional Board must revise the Draft EIR to include a robust analysis of the hazard posed by unexploded ordnances in Suisun Bay.

Response:

While there have been no impacts or incidents from unexploded ordinance related to USACE navigational dredging, the Army has prohibited disposal and placement of this sediment outside the site boundary since Marine Ocean Terminal Concord dredging site investigations in 2023. The DMMO determined that the sediment is consistently suitable for placement for beneficial use and poses no risks to the environment or human health. To date, unexploded ordinance has not been detected in sediment dredge by USACE from Suisun Bay. Nonetheless, unexploded ordinance may be in the sediment. Further, it is not possible to detect all unexploded ordinance in dredged sediment given the volumes of sediment dredged from the Suisun Bay Channel. Therefore, to protect human life, the Army has prohibited disposal and placement of dredged sediment at locations outside the explosive arc of the 1944 explosion at the Port of Chicago Port Chicago.

Lastly, USACE uses blast shields and other protective equipment to ensure worker safety while dredging the Suisun Channel. For additional information see response to EPA-5.

State Water Contractors and San Luis & Delta-Mendota Water Authority

SWC/SLDMWA-1

Comment:

Given the SWP and CVP's reliance on water from the Sacramento-San Joaquin Delta and its water quality obligations in the Delta, SWC and SLDMWA have a strong interest in issues affecting both the quantity and quality of water supplies in the Bay-Delta. The proposed dredging will cover areas from San Francisco Bay to Suisun Bay. The Draft EA/EIS does not sufficiently evaluate potential water quality and water supply impacts of the proposed dredging. Section 3.7.4.1 of the Draft EA/EIS references studies conducted by USACE in 1976, 1977, and 1990, which suggest that salinity impacts from dredging would be localized and short-lived. However, given advances in water quality and hydrodynamic modeling technology, there is potential to better assess the magnitude and duration of these impacts, which have the potential to directly impact water supplies for the SWP, CVP, and other Delta users. These models in conjunction with water supply modeling could help determine the water quality changes from dredging and the short-term and long-term effects on salinity resulting from channel deepening. Since the D1641 Bay-Delta water quality standards require the SWP and CVP to release flows to manage salinity in the Delta, even short-lived salinity shifts to the X2 position could impact SWP and CVP operations. Additionally, the proposal to deepen dredging depths at Richmond Harbor and Napa River may increase salinity intrusion and alter the X2 position, further impacting SWP and CVP operations and water supply. We recommend that readily available and commonly used hydrodynamic modeling be conducted to evaluate potential effects on X2 and suggest appropriate mitigation or avoidance measures.

Response:

As stated in Draft EA/EIR section 1.1, Basic and Overall Project Purpose, Need, and Objectives, "*Dredging will be consistent with navigation project authorizations…*" The alternatives evaluated in the Draft EA/EIR, including the Proposed Action/Proposed Project, would maintain existing authorized depths of federally maintained navigation channels and, as such, would maintain the existing tidal prism and hydrodynamics of SF Bay. As a result, the project will not affect the position of X2 relative to baseline conditions.

SWC/SLDMWA-2

Comment:

We appreciate the Draft EA/EIS's protective measures for longfin smelt and delta smelt. Further optimization of these measures could be achieved through hydrodynamic modeling that accounts for flow and water quality conditions. This would help identify the best timing and hydrologic conditions for dredging to minimize harm to these species and SWP and CVP operations. (pg. 2)

Response:

As discussed in responses to CDFW-2 and BK/CWA-5, scheduling hopper dredging to minimize impacts to longfin smelt is infeasible because of logistical constraints. USACE limits clamshell dredges the Suisun Channel to avoid entrainment impacts to this species. Therefore, using a hydrodynamic model to time dredging to minimize impacts to longfin smelt and Delta smelt is infeasible and unnecessary.

SWC/SLDMWA-3

Comment:

SWC and SLDMWA support the increased beneficial use of dredged material (BUDM) and innovative applications, particularly in the context of anticipated sea-level rise. Although Alternatives 3 and 4 were not selected due to their higher costs related to increased BUDM placement at beneficial sites, the Draft EA/EIS mentions that cost-share partners will be considered to offset these costs in the future. We encourage USACE to seek partnerships with organizations focused on wetland and upland restoration, which could help mitigate these costs.

Response:

Comment acknowledged. USACE has and will continue to seek partnerships to offset the higher cost of beneficial use placement to restore wetlands.

SWC/SLDMWA-4

Comment:

Finally, the Draft EA/EIS does not address any evaluations or measures to reduce sediment accumulation in San Francisco Bay and the Sacramento-San Joaquin Delta. The USACE State Plan of Flood Control has altered the natural processes of rivers and floodplains that feed into the Delta. We suggest evaluating levee setbacks and floodplain bypass projects as nature-based solutions to reduce the frequency and

volume of dredging. These multi-benefit projects could provide flood protection, create floodplain habitat, and attract cost-share partners, much like BUDM placement.

Response:

Evaluating alternatives to limit sediment accumulation in San Francisco Bay and reduce the frequency and volume of dredging is out of the scope of this project. As stated in EA/EIR section 1.1, Basic and Overall Project Purpose, Need, and Objectives, "*Dredging will be consistent with navigation project authorizations…*" USACE and other entities have and continue to evaluate potential multi-benefit projects, including but not limited to levee setbacks, floodplain bypass projects, and/or other nature-based solutions that may reduce flood risks and enhance or create floodplain habitat.

Comments from Individual

Julie Groves

JG-1

Comment:

Please recognize the concerns re >>> dredging and relocation of sediment from the Richmond Inner and Outer Harbors without further testing for contamination, as well as not adequately describing the dumping site.

Response:

Please see responses to CESP-1 through CESP-11.

ATTACHMENT 1
TO APPENDIX H

Comment Letters on Draft EA/EIR

Individual Comments and Responses

Comments from Federal Agency

US Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

December 30, 2024

Jazzy Graham-Davis
Engineering Geologist
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Re: San Francisco Bay Federal Channels Operation and Maintenance Dredging and Sediment Placement Activities, Dredging Years 2025-2034 [NEPA Identification Code: EAXX-202-00-L3P172786039, State Clearinghouse No. 2024020498]

Dear Jazzy Graham-Davis:

Thank you for the opportunity to review the Draft Environmental Assessment/Environmental Impact Report (DEA/EIR) jointly prepared by the United States Army Corps of Engineers, San Francisco District (USACE) and the San Francisco Bay Regional Water Quality Control Board (RWQCB), dated October 31, 2024, regarding the San Francisco Bay Federal Channels Operation and Maintenance Dredging and Sediment Placement Activities, Dredging Years 2025-2034. We appreciate the extension of the comment period to December 30, 2024. In addition to the DEA/EIR, we have reviewed the Draft Clean Water Act (CWA) Section 404(B)(1) Evaluation (Appendix A), and USACE's Supplemental Information Report (SIR), dated December 2024, to extend the proposed action for the San Francisco Bay Dredging Program for the 2025 dredging season. The USACE proposes to continue maintenance dredging of the federal navigation channels in San Francisco Bay to maintain the navigability of the channels. The RWQCB will consider USACE's application for a CWA Section 401 water quality certification and waste discharge requirements for USACE's continued maintenance dredging operations. The following comments have been prepared under the authority of, and in accordance with, the provisions of the Federal Guidelines promulgated under section 404(b)(1) of the CWA and section 103 of the Marine Protection Research and Sanctuaries Act (MPRSA).

EPA is a committed partner agency on the San Francisco Bay Long Term Management Strategy (LTMS), as promulgated in the 1998 LTMS Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) and release of the 2001 LTMS Management Plan. The LTMS Program was designed to minimize in-Bay disposal, maximize beneficial reuse, and use ocean disposal as a "safety valve" when beneficial reuse is not feasible. Those goals are still relevant to the Bay today and critical in supporting shoreline resiliency of human communities, infrastructure, and natural habitats in response to rising sea and groundwater levels. The LTMS Programmatic structure inherently provides the ability to accommodate and evaluate changing conditions in the Bay such as reduced baseline sediment conditions. Further, the LTMS has previously demonstrated this ability by instituting multiple measures to provide reasonable flexibility in achieving program goals including work windows, usage of in-Bay contingency volumes, and flexible volume averaging periods (LTMS Memorandum, Feb 27, 2014, EPA-1

Implementation of the LTMS Management Plan Following the 12-year Program Review). Therefore, we do not believe that the LTMS Program needs to be re-opened to accommodate the Proposed Action (NEPA)/Proposed Project (CEQA) Alternative. The EPA supports the action in that it provides a paradigm shift to realign the Federal Standard to support federal and regional goals for increased and sustained beneficial reuse of material in SF Bay. EPA-1 (cont.)

Additional clarifications to the document are recommended on several items.

a. The document employs a new term, "transitional placement", for disposal location. This terminology is not used in the LTMS program, and should be further differentiated as an internal USACE term of art. EPA-2
b. Water column seeding is a form of strategic sediment placement that can occur in the nearshore; therefore, it is not distinct from nearshore strategic placement as the document seems to indicate. EPA-3
c. Language on adherence to dredging work windows is unclear and conflicting in the document. For the Proposed Action/Project, there is a high likelihood that hydraulic dredging of Oakland and Richmond Inner channels would occur December-February, and outside of established environmental work windows. EPA-4
d. We recommend explaining the calculation of only 20% of suitable sand from Suisun Bay channel can be used beneficially due to UXOs. EPA-5
e. Section 3.3.4.1 provides the basis for calculations of mitigation to minimize impacts from hopper dredging. One approach increases acres of restored habitat through increased volume of dredged sediment material to restoring sites. We recommend an evaluation of the multiplier of 2 within the 10-yr permit to allow for assessment of the time horizon at restoring sites where reuse was employed. The SF Wetland Regional Monitoring Program could assist with monitoring data at sites to promote adaptive management and higher certainty on ecosystem targets. EPA-6

Thank you for considering our comments and recommendations. Please continue to coordinate with Jennifer Siu, EPA's LTMS Program Manager, as this process moves forward.

Sincerely,

Sahrye Cohen
Manager, Wetlands and Ocean Office

Enclosures

cc: Ellie Covington, USACE SPN
Arye Janoff, USACE SPN
Jessica Vargas, USACE SPN
Xavier Fernandez, SFBRWQCB
Kevin Lunde, SFBRWQCB
Kim Squires, USFWS
Sara Azat, NMFS
Brenda Goeden, SF BCDC
Arn Aarreberg, CDFW

Comments from State Agencies

California Department of Fish and Wildlife

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Marine Region
1933 Cliff Drive, Suite 9
Santa Barbara, CA 93109
wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

December 30, 2024

Jazzy Graham-Davis
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Room 1505
Oakland, CA 94612
Jazzy.Graham-Davis@Waterboards.ca.gov

San Francisco Bay Federal Channels Operations and Maintenance Dredging and Sediment Placement Activities (Project)
Draft Environmental Assessment/Environmental Impact Report (EA/EIR)
SCH# 2024020498

Dear Jazzy Graham-Davis:

The California Department of Fish and Wildlife (Department) received a Draft EA/EIR from the San Francisco Regional Water Quality Control Board for the Project pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that the Department, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

DEPARTMENT ROLE

The Department is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the state. (Fish & G. Code, § 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) The Department, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly for purposes of CEQA, the Department is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources. The Department is also responsible for marine biodiversity protection under the Marine Life Protection Act in coastal marine waters of California, and ensuring fisheries are sustainably managed under the Marline Life Management Act. The Department is also submitting comments as a Responsible

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

Agency under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) The Department may need to exercise regulatory authority as provided by the Fish and Game Code. To the extent implementation of the Project as proposed may result in take as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & Game Code, § 2050 et seq.), related authorization of take as provided by the Fish and Game Code will be recommended. Pursuant to our jurisdiction, the Department has the following comments and recommendations regarding the Project.

PROJECT DESCRIPTION SUMMARY

Proponent: United States Army Corps of Engineers (USACE)

Objective: The objective of the Project is to maintain navigability of federal navigation channels to authorized depths in San Franciso Bay.

Location: The Project is located within Pacific Ocean and San Francisco Bay in Alameda, Contra Costa, Marin, Napa, Sacramento, San Joaquin, Santa Clara, San Francisco, San Mateo, Solano, and Sonoma counties.

Timeframe: The Project covers federal navigational dredging activities for a 10-year timeframe from 2025 to 2034.

MARINE BIOLOGICAL SIGNIFICANCE

The San Francisco Bay-Delta is the second largest estuary in the United States and supports numerous aquatic habitats and biological communities. It encompasses 479 square miles, including shallow mudflats. This ecologically significant ecosystem supports both state and federally threatened and endangered species and sustains important commercial and recreational fisheries. CDFW-01

STATE AND FEDERALLY LISTED AND MANAGED SPECIES

Protected species under the State and Federal Endangered Species Acts that could potentially be present near Project activities include:

- Longfin smelt (*Spirinchus thaleichthys*), state threatened, federally endangered,
- Delta smelt (*Hypomesus transpacificus*), state and federally endangered,
- Chinook salmon (*Oncorhynchus tshawytscha*), state and federally threatened (Central Valley Spring-run), state and federally endangered (Sacramento River Winter-run), state species of special concern (Central Valley Late Fall Run, Central Valley Fall Run),
- Steelhead (*Oncorhynchus mykiss*), federally threatened (Central California Coast and Central Valley evolutionary significant units),

- Green sturgeon (*Acipenser medirostris)*, federally threatened (Southern Distinct Population Segment),
- White sturgeon (*Acipenser transmontanus)*, state candidate threatened,
- California least tern (*Sternula antillarum browni),* state and federally endangered, state fully protected,
- Wester snowy plover (*Charadrius nivosus*), federally threatened
- California Ridgeway's rail (*Rallus obsoletus obsoletus*), state and federally endangered, state fully protected,
- Salt marsh harvest mouse (*Reithrodontomys raviventris*), state and federally endangered, state fully protected,
- Pacific lamprey (*Entosphenus tridentatus*), state species of special concern, and
- Western river lamprey (*Lampetra ayresii*), state species of special concern.

CDFW-01

Several species with important commercial/recreational fisheries value and habitat value for spawning and rearing could potentially be present near Project activities. These include:

- Dungeness crab (*Metacarcinus magister*),
- Pacific herring (*Clupea pallasii*),
- Rockfish (*Sebastes* spp.),
- California halibut (*Paralichthys californicus*)
- Surfperches (*Embiotocidae*), and
- Eelgrass (*Zostera marina*).

COMMENTS AND RECOMMENDATIONS

The Department offers the comments and recommendations below to assist the San Francisco Regional Water Quality Control Board in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

CDFW-02

I. Marine Project Level Impacts and Other Considerations

Project Alternatives

Comment: The Department does not support an increase in suction dredging episodes in channels that have documented entrainment of state and federally listed species. However, the Department does support maximizing beneficial reuse of dredging material within San Francisco Bay. The Department has identified project alternatives that are not currently in the Draft EA/EIR that would further minimize and potentially avoid impacts to listed and managed species as well as address cost concerns with beneficially reusing more dredged material.

Oakland Inner and Outer Harbors would be a preferred channel to move the majority of suction dredging operations within San Francisco Bay to minimize impacts to listed and managed species. The volume of dredged material from Oakland in average dredging episodes is a higher volume than Richmond Inner/Outer and Pinole Shoals (San Pablo Bay) channels combined. If all suction dredging were to be transitioned to Oakland, while prioritizing mechanical dredging in Richmond and San Pablo Bay, the impacts to listed and managed species from suction dredging may be substantially reduced.

Additional consideration could include maintaining the current bi-yearly suction dredge schedule within Richmond Outer and San Pablo Bay channels but only with a commitment from USACE to remain within the Department recommended suction dredge work window of August 1 through November 30 to reduce impacts to listed species. If suction dredging is to continue in Richmond and San Pablo Bay, it is essential that suction dredging remain within the protective work window to ensure minimized impacts to listed and managed species. This option could further address the need for additional beneficial reuse of dredged material in San Francisco Bay and further reduce USACE cost concerns associated with maximizing beneficial reuse.

Recommendation: The Department recommends the preferred project alternative to minimize or potentially avoid impacts to listed and managed species is to transition all suction dredging to Oakland Inner and Outer Harbors.

Recommendation: The Department recommends that if a commitment can be made to remain within the August 1 through November 30 suction dredging work window, Richmond Outer Harbor and San Pablo Bay channels continue suction dredging bi-yearly to increase the total beneficial reuse of dredged material in San Francisco Bay.

Comment: The Draft EA/EIR identifies the CEQA determination for Impact BI-1: Potential Effects on Fish and Benthic Invertebrate Survival Caused by Entrainment under Alternative 1 and Alternative 2 as less than significant because dredged material will be placed at a beneficial reuse site. However, the placement of dredged material at a beneficial reuse site does not offset the impacts caused by entrainment to listed species under CESA and the Draft EA/EIR did not include any other proposed mitigation for the entrainment impacts to listed species. CDFW-03

Recommendation: The Department recommends the Final EA/EIR be revised and include other mitigation options, such as compensatory mitigation from a mitigation bank or a USACE specific restoration project, to support the less than signification determination of BI-1.

Mitigation

Comment: Compensatory mitigation for listed species impacts should continue as a method to offset impacts from suction dredging occurring in San Francisco Bay and its tributaries. Given the continued level of take being documented and non-adherence to some minimization measures such as work windows, compensatory mitigation to fully offset the impacts of the Project is necessary. CDFW-04

The mitigation options described in the Draft EA/EIR include purchase of mitigation bank credits, providing funding to an in-lieu fee program, or taking dredging material to beneficial reuse. The Department agrees that these are three potential mitigation options currently available to offset impacts caused by suction dredging to listed species. However, some of these mitigation options also have considerable downsides that should be considered.

Beneficial reuse of dredged material is not something the Department finds an appropriate option to offset impacts to listed species. Not all beneficial reuse sites are equal in terms of benefits to listed species nor are the timelines in which the created habitat will be available to the impacted species. Though there are indications that listed species may be using habitats within wetlands created using beneficially reused dredged material, there would have to be more specificity in choosing where the dredged material is going to offset the known impacts to listed species caused by suction dredging.

The purchase of mitigation credits from a mitigation bank may also not be a viable long term mitigation option. Given the current shortage of mitigation credits at only one currently operating bank, the amount of species credits that would be needed over time may not consistently be available to purchase. This could leave USACE with a large sum of undelivered mitigation acreage at times when credits are not available, as we saw within the 2015-2024 time period.

A fourth option, that the Draft EA/EIR did not consider, is a permittee responsible mitigation project. Given the acreage that may be needed over time if suction dredging is to increase during the next ten years, a larger restoration project to provide specific habitat for listed species would be consistent with CDFW CESA recommendations for non-federal projects seeking CESA authorization. A large scale, long term, restoration project, or USACE specific mitigation bank, should be considered as a mitigation option that can be implemented in the future.

Recommendation: The Department recommends that the Final EA/EIR consider permittee responsible mitigation or a USACE specific mitigation bank as another viable, long-term, and consistent mitigation option to offset impacts from USACE suction dredging operations in San Francisco Bay.

Comment: A citation referenced on p. 3.56 (pers. Comm., Arn Arberg, CDFW, 2024) incorrectly describes what was stated. There is currently one approved bank available, approved by the Department and other state and federal agencies, but credits are purchased quickly making availability limited. Currently, the one mitigation bank offering species credits, the North Delta Fish Conservation Bank, is operational and offers credit purchases or credit reservations as credits become available. Additionally, the reference has misspelled the CDFW staff person name in this citation. CDFW-05 CDFW-06

Recommendation: The Department recommends the CDFW personal communication citation be revised and the CDFW staff person name be spelled as follows: Arn Aarreberg.

Monitoring

Comment: Entrainment monitoring, and some additional detection surveys, have continued during hopper dredging episodes since 2014 with only a brief interruption due to the COVID-19 pandemic. The Draft EA/EIR does not discuss whether entrainment monitoring will continue. Entrainment monitoring, in some form, should continue in order to assist with making informed decisions and to be the foundation of an actionable plan to reduce impacts to listed and managed species. CDFW-07

Entrainment monitoring will continue to be a valuable tool in determining potential for take and the amount of take associated with this Project. This monitoring will be especially important for locations in which suction dredging has not occurred previously. If channels like Oakland, San Bruno, and Redwood City were to implement suction dredging methods, these channels will also benefit from entrainment monitoring data to determine presence of species and further refine potential avoidance and minimization measures such as work windows.

Comment: As described in the Draft EA/EIR, the proposed eDNA monitoring is an inappropriate approach for this monitoring technique and should not be used to replace traditional monitoring approaches at this time. The Draft EA/EIR describes a process in which eDNA samples would be collected from two potential dredging locations, the samples would then be processed that day, the results would be used to determine the order of dredging based on the presence or absence of longfin smelt. eDNA monitoring could be conducted in conjunction with traditional entrainment monitoring to further refine detection of listed species during suction dredging episodes. However, positive or negative detection of longfin smelt through eDNA monitoring alone would not guarantee that longfin smelt have moved into or out of the dredge footprint and relying on eDNA data alone could result in a false positive or negative test.

Recommendation: The Department recommends the Final EA/EIR include traditional entrainment monitoring, in addition to the proposed eDNA and

echosounder monitoring, for the next ten-year period of dredging for all channels dredged with a suction dredge. Using all methods available for monitoring listed species will assist in obtaining information on entrainment potential within channels that have not previously been dredged with a suction dredge. Additionally, having multiple methods of species detection will provide more certainty in the monitoring results. CDFW--07

Pacific herring

Comment: The Department has concerns with the amount of dredging that is occurring each year outside of the San Francisco Bay Long Term Management Strategy environmental work windows, and specifically during the winter Pacific herring spawning season. Dredging in Oakland Inner Harbor occurs yearly outside of the work window through the entirety of the spawning season each year. Whereas dredging channels such as Richmond Inner Harbor seems to occur on a frequent basis and often enough, that conflicts between dredging and spawning Pacific herring have occurred, causing dredging to be halted and delayed until after spawning events have concluded. These locations are within the core spawning areas of Pacific herring in San Francisco Bay, identified in the Departments Pacific Herring Fishery Management Plan, and dredging during the spawning season may be having impacts to fish each winter dredging occurs (CDFW 2019). CDFW - 08

The Draft EA/EIR did not include any discussion on continued Pacific herring monitoring for dredging occurring outside of the March 16 through November 30 Pacific herring work window. The continued coordination between USACE and the Department on monitoring dredging episodes during the winter months to ensure impacts to spawning herring are avoided is vital. The Department anticipates that this coordination will continue for all channels that may be dredged outside of the Pacific herring work window.

Recommendation: The Department recommends that the Final EA/EIR include discussion on continued monitoring for herring during dredging episodes occurring outside of Pacific herring work window. The Final EA/EIR should also include a mitigation measure that specifies if dredging occurs outside of the Pacific herring work window, monitoring for spawning herring and coordination with the Department will continue.

Richmond Inner Harbor Winter Dredging

Comment: Richmond Inner Harbor has shown that potential conflicts with spawning Pacific herring have occurred when mechanical dredging takes place during the winter spawning months. The addition of suction dredging as a dredging method, during this sensitive spawning season for herring, could have a substantial impact to any spawning event if it were to coincide with suction dredging. Although spawning is occurring on the fringes of the channel, Pacific herring are using the deeper CDFW - 09

channels to stage in very high densities prior to spawning, making the species susceptible to entrainment when dredging. Additionally, after hatching larval herring would be vulnerable to suction dredging as they do not have the swimming ability in this life stage to avoid being entrained. Suction dredging during the winter should not occur in areas known to have spawning habitat for herring. Other channels that are being considered to add suction dredging are far more appropriate options for winter dredging to avoid listed and managed species.

Recommendation: The Department recommends removing the alternative for suction dredging during the winter in Richmond Inner Harbor from the Final EA/EIR.

Species Avoidance Pilot Study

Comment: The proposed pilot study will test deterrent methods such as light, sound, and air on the drag head to trigger an avoidance response and move aquatic species away from dredging activities. The pilot study is proposed for two years. The Department fully supports the proposed pilot study and the initial deterrent methods chosen to test. The Department would appreciate the opportunity to be involved in the development of the study and discussion on the deterrent methods being considered. CDFW-10

Recommendation: The Department recommends USACE engage all of the state and federal permitting and wildlife agencies as the pilot study is being formed. Inclusion of the agencies can bring different expertise into the pilot study formulation and assist with creating measures that will maximize the potential for finding a successful deterrent method.

Recommendation: The Department recommends USACE consult with the Department regarding the potential need for a Scientific Collection Permit and related 2081(a) Memorandum of Understanding for the potential collection or unintentional take of aquatic species for research purposes during the pilot study.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be found at the following link: https://wildlife.ca.gov/Data/CNDDB/SubmittingData#44524420-pdf-field-survey-form. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: https://wildlife.ca.gov/Data/CNDDB/Plants-and-Animals. CDFW-11

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by the Department. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

The Department appreciates the opportunity to comment on the Draft EA/EIR to assist the San Francisco Regional Water Quality Control Board in identifying and mitigating Project impacts on biological resources. Questions regarding this letter or further coordination should be directed Arn Aarreberg, Environmental Scientist, at (707) 791-4195 or R7CEQA@wildlife.ca.gov.

Sincerely,

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State Clearinghouse (SCH No. 2024020498)

REFERENCES

CDFW, 2019. California Pacific Herring Fishery Management Plan. Available from: https://wildlife.ca.gov/Fishing/Commercial/Herring/FMP.

San Francisco Bay Conservation and Development Commission

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December 30, 2024

Via Electronic Mail Only

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SUBJECT: Draft Environmental Assessment/Environmental Impact Report: San Francisco Bay Federal Channels Operation and Maintenance Dredging and Sediment Placement Activities, Dredging Years 2025-2034

Dear Mx. Graham-Davis and Ms. Covington:

Thank you for the opportunity to comment on the San Francisco Bay Regional Water Quality Control Board (Water Board) and U.S. Army USACE of Engineers (USACE) Draft Environmental Assessment and Environmental Impact Report (DEA/EIR) for USACE's 2025 through 2035 Operations and Maintenance Dredging Program for San Francisco Bay Federal Navigation Channels (USACE O&M Dredging Program), dated October 2024, released for public review on November 13, 2024. The USACE conducted its review of the proposed project per the National Environmental Policy Act (NEPA), and the Water Board conducted its review of the California Environmental Quality Act (CEQA), but provided a joint document to coordinate these reviews, which is appreciated by the San Francisco Bay Conservation and Development Commission (Commission). It is important to note that the Commission itself has not reviewed the document, but the Commission staff has done so and is providing the following comments on the Commission's behalf.

The Proposed Project includes the continued operation and maintenance dredging of 11 federal navigation channels: the deep draft channels - San Francisco Main Ship, Richmond Inner and Outer Harbor, Suisun, Pinole, Oakland, Redwood City, and San Bruno Shoal; as well as the shallow draft channels - San Rafael Creek, Petaluma River, and Napa River, exclusive of Suisun Slough and the Jack T. Maltester Channel over ten years. The dredged sediment would be

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disposed of at the state and federally authorized in-Bay disposal sites or the San Francisco Deep Ocean Disposal Site (SFDODS), and/or beneficially reused at a range of sites depending on the alternatives chosen. In addition, several potential actions, such as a variety of strategic placement pilot projects and restoration projects that would beneficially reuse dredged sediment that are in the planning stages are briefly discussed.

The proposed activities, according to the document, would begin in 2025. The USACE proposes that each federal navigation channel would continue to be dredged as needed, depending on shoaling and available funding. The frequency of dredging would range from annual activities to those that may occur only once during the 10-year planning horizon. The basic project purpose is defined in the document as: "*to provide safe, reliable, and efficient waterborne transportation systems*."

The DEA/EIR includes a detailed evaluation of six alternatives:

1. No Action Alternative (National Environmental Policy Act Baseline)
2. No Project Alternative (California Environmental Policy Act)
3. Beneficial Use: Diversion from Deep Ocean Disposal (Alternative 1)
4. Beneficial Use: Regional Optimization, Leverage Hopper Dredging (Alternative 2)
5. Beneficial Use: Cost Share Opportunity (Alternative 3)
6. Beneficial Use: Maximized (Alternative 4)

The entire proposed Operations and Maintenance (O&M) Dredging Program activities are located within the San Francisco Bay Coastal Zone, and/or have the potential to affect the San Francisco Bay Coastal Zone. Therefore, for purposes of the National Environmental Policy Act (NEPA) review, the O&M Dredging Program should be evaluated in consideration of the potential effects to the coastal zone, consistent with the federally approved San Francisco Bay Coastal Zone Management Program (SFBCZMP).

In addition, the Commission staff recognizes that the Water Board is the state lead per the California Environmental Quality Act (CEQA). As such, the CEQA portion of the review should address the McAteer-Petris Act, the Suisun Marsh Preservation Act, the San Francisco Bay Plan (Bay Plan), and the Suisun Marsh Protection Plan (Suisun Plan). The proposed project, for purposes of CEQA review, would take place in the Commission's Bay, shoreline band, certain waterways, and Suisun Marsh Primary Management Area. For the authors' convenience, we are including comments on the complete document but differentiating comments specific to NEPA and CEQA below.

General Comments

The Commission commends the USACE and the Water Board in their forward-looking effort to support beneficial reuse of sediment and its innovative regional approach to its program and the effort that has gone into the development of the Regional Dredged Material Management Plan (RDMMP) and this document. We believe these efforts can go a long way to support the BCDC -01

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regional Long Term Management Strategy for the Placement of Dredged Material (LTMS) goal of maximizing beneficial reuse of dredged sediment and continued implementation of the LTMS Management Plan. Further, the Commission supports the USACE in reducing its reliance on the San Francisco Deep Ocean Disposal Site (SFDODS) in support of beneficial reuse. We agree with the CEQA finding that Alternative 4, Beneficial Use Maximized is the environmentally superior alternative and support the efforts to implement it. The Commission staff also notes that there has been and likely will be continued federal funding to support additional beneficial reuse of dredged sediment as occurred in 2023 and 2024 as a result of the State Coastal Conservancy and the Commission's efforts on the Water Resources and Development Act (WRDA) 2016, Section 1122 program, which authorizes $51 million of beneficial reuse over ten years. BCDC -01 con't

While the Commission understands USACE's position that the chosen alternative, described as Alternative 2, would increase beneficial reuse within the federal standard, we disagree that there is no significant impact, based on the "take" of listed species via hopper dredging and will discuss this further below. The Commission notes that NEPA allows for a mitigated Finding of No Significant Impact (FONSI) in cases where an action may pose some significant effects, but where mitigation measures will be adopted to reduce these effects to a level where they are no longer significant (CEQ and CalOPR 2014). Proposed Alternative 2 includes mitigation for impacts to listed species from hopper dredging and therefore would meet the definition of a mitigated FONSI. We believe this is the approach USACE should take when evaluating its preferred alternative and developing the FONSI. BCDC-02

Overarching Comments

The analysis provided is very complex and nuanced. We provide these comments to further clarify, improve, and support the appropriate efforts described therein.

1. **Plain Language Standard**. As the Water Board is likely aware, California Government Code section 6219 requires "[e]ach department, commission, office, or other administrative agency of state government [to] write each document that it produces in plain, straightforward language, avoiding technical terms as much as possible, and using a coherent and easily readable style." Contrary to this standard, the DEA/EIR uses a significant amount of jargon and technical terms that limit the reader's understanding of what is being proposed and the potential impacts of the alternatives. Specifically, rather than using the regionally established and recognized terminology for dredged sediment disposal -- "beneficial reuse of sediment" -- new, undefined terms are introduced such as "transitional sites." Rather than using clear, established language for disposal of dredged sediment at authorized disposals sites, which have been classified as such for over thirty years, the document uses the term "placement sites," which has been used as standard language for beneficial reuse of dredged sediment at restoration sites or levee maintenance. This conflates disposal of dredged sediment with beneficial reuse, making it more difficult for the public to differentiate between the two. BCDC-03

   Like Government Code section 6219, the Federal Plain Writing Act of 2010 (P.L. No. 111-274) requires "to use plain writing" in every document an agency

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issues. Contrary to this requirement and to further confuse issues, the USACE recently introduced the term "transitional placement sites" and includes in-Bay disposal sites, upland disposal sites, and ocean disposal sites in this category. Commission staff requested from USACE the basis for this new terminology and was provided with a guidance document from the USACE Headquarters dated August 28, 2023, with the subject line: "Expanding Beneficial Reuse of Dredged Material in the USACE" directed to Commanders and District Commands. According to the document, it is intended "to encourage robust innovation, planning, *and categorization of dredged material for beneficial use*. Additionally, this policy memorandum *clarifies which dredged material placement activities shall be classified as beneficial use and how to capture this information in the USACE data systems*. Finally, this memorandum introduces transitional placement as a third description for dredged material." As described later in the document, "Transitional placement is keeping sediment in the riverine or coastal system as a part of a management process or in a period of transition. Generally, this material will be managed or dredged again and is considered neither beneficial use nor disposal." After reviewing this document, it appears that it was created for internal USACE use for consistent classification and reporting and is not responsive regional differences. BCDC-03, con't.

While the Commission appreciates USACE's desire to be consistent in naming with its data systems, the characterization of in-Bay, deep ocean, and upland as "transitional placement sites" is not appropriate in this context. First, the in-bay disposal sites are dispersive sites that are designed to move dredged sediment into deep water channels to continue transport downstream. This sediment is not managed, other than to limit the volumes placed at the site to prevent mounding, and there is no plan to dredge it again for future use. The best available science does not support the concept that the sediment disposed of at these sites would reach tidal flats or wetlands over time due to deep water transport patterns. Similarly, sediment disposed of at the San Francisco Deep Ocean Disposal Site by design is completely outside the San Francisco Bay system, and while upland disposal sites have the potential to be beneficially reused, the sediment from these sites is generally dried and disposed of.

Providing summary tables that compare alternatives outcomes would greatly increase the ability to compare and contrast benefits and impacts of the alternatives. The tables included currently provide a lot of information, but additional tables should be created to show the differences between the alternatives. BCDC-04

RECOMMENDATION: Revise the document to reduce jargon and confusing terminology and use plain English. Specifically, use the terms in-bay disposal, beneficial reuse, ocean disposal, which are the regionally accepted terminology and consistent with the current naming conventions of the different disposal sites. Remove the term transitional placement as it only confuses how the sites are used and function. Include summary charts that provide comparisons between the alternatives, such as and including a BCDC-03, con't. BCDC-04, con't.

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summary table that shows how much beneficial reuse, ocean disposal and in-Bay disposal would occur under each alternative. BCDC-04, con't.

2. **Transparency and the No Action/No Project Alterative**. While the Commission understands the USACE and Water Board's explanations as to how the NEPA and CEQA regulations call for describing the No Action and No Project Alternative, the document lacks transparency throughout its sections, making it difficult, if not impossible, for the public to understand the context of the USACE Operations and Maintenance Dredging Program. Specifically, the document does not include any reference to the actions regularly associated with the USACE's execution of its dredging program over the last ten years but instead asserts that it performs dredging and does not currently beneficially reuse some or any of its dredged sediment. For example, the USACE regularly dredges some of its projects outside the environmental work window of June 1 to November 30th including Richmond Inner Harbor, Oakland Harbor, and Redwood City by several weeks to months depending on the year. The DE/EIR does not note that when USACE dredges outside the environmental work window, it mitigates for impacts to listed salmonids per NOAA's National Marine Fisheries Service (NMFS) LTMS Amended Biological Opinion (July 2015) and the Commission's Letter of Agreement (LOA) by beneficially reusing dredged sediment at its own cost. Further, there is no acknowledgment in the document that the USACE has received significant federal funding to beneficially reuse dredged sediment through the Water Resources Development Act (WRDA) 2016 Section 1122 Pilot Program and is anticipated to receive additional federal funding through this program. As an example, in 2023, the USACE beneficially reused nearly 2 million cubic yards of sediment with this funding. Taken together, and without context, the document misleads the public in believing that only additional in-bay disposal or increased hopper dredging can provide beneficial reuse which is clearly not the case. BCDC-05

   In other places, the document states that there has been no interest in cost sharing the incremental cost of beneficial reuse (that amount above the proposed disposal site use needed for beneficial reuse). In fact, $6 million dollars was provided by the State of California specifically to cover the incremental cost of beneficial reuse for the Redwood City Project. The State Coastal Conservancy (SCC) repeatedly offered to share the incremental cost when working with USACE on the Section 1122 award and management plan. In addition, SCC worked with the USACE in 2024 on the Petaluma River Project to share the incremental cost as described in WRDA 2020, Section 125, and has expressed interest in working together again in 2025. SCC is also cost sharing the development of Bel Marin Keys V expansion as the local project sponsor, a significant commitment to beneficial reuse by the State.

   RECOMMENDATION: Add context to the document so that the public can understand how USACE has operates its program, including recent and expected federal funding. Include discussions about the environmental work windows in the description of the current mitigation activities, explaining when and how the USACE has used beneficial

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reuse to mitigate for impacts to listed salmonids with existing equipment (clamshell) as part of the federal standard least cost alternative in accord with NMFS 2015 Amended LTMS Programmatic Biological Opinion. Revise sections of the document that state there has been no interest in cost sharing to reflect the State's interest in cost sharing, both from the legislature and the State Coastal Commission. BCDC-05, con't.

3. **Proposed Project**. Throughout the document, there are inconsistent descriptions of the Proposed Project, with the executive summary (p. 37), providing the clearest statement with proposed timing for implementation: BCDC-06

"The proposed phased implementation of the Proposed Action/Proposed Project is:

- *2025, No Project Alternative: Continuing the No Project Alternative allows USACE the time necessary to appropriately plan for and implement the changes required for Alternatives 1 and eventually 2.*
- *2026–2027, Alternative 1: The earliest USACE would be able to implement Alternative 1 would be in 2026.*
- *2027–2034, Alternative 2: The earliest USACE would be able to implement Alternative 2 would be in 2027. This time is necessary to allow USACE to work to expand the capacity of its hopper dredges, including* utilizing the West Coast Hopper Dredging contract."

In the Executive Summary, it states "Under CEQA, a detailed and stable project description is fundamental to the purpose of the study, which is to identify and analyze impacts from the Proposed Project." As described in the Executive Summary and throughout the document, the Proposed Project appears to be aspirational rather than a concrete, definite proposal. The proposed project reflects a hope and expectation to transition to Alternatives 1 and 2 but not a firm commitment or proposal to do so. Further, in Section 5.7, it states "If at the conclusion of agency consultation, it is determined that additional mitigation is required, this would make Alternative 2 economically infeasible for consideration as the Federal Standard Base Plan…" Thus, the environmental document itself reflects that the USACE and the Water Board may decide later, based on the results of further consultations, that they will not transition to Alternative 1 or 2. On page 1 of the Findings of No Significant Impact the USACE states "the specific placement location and dredging method will be determined during the contracting process based on cost." This adds further uncertainty regarding the definitiveness of Proposed Project.

As described above, it appears that per CEQA, the Proposed Project does not meet the standard of "a detailed and stable project description." This may be in part due to the document's lack of explicit discussion of how the USACE proposes to balance the cost beyond general statements that one method of dredging a channel may be less

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expensive than others. For example, how would the USACE ensure that funds saved on one project be transferred to another project to cover the cost of beneficial reuse. Similarly, what contract solicitation and contract requirements would be incorporated to provide the balanced least cost across the program? BCDC-06, con't.

More uncertainty is created by the statements noting that alternatives may not be feasible if additional mitigation is required through consultation with the Resource Agencies. It is our understanding that USACE has considered mitigation part of project costs in the past and has provided beneficial reuse for working outside the work windows, so how would additional mitigation when using potentially lower cost dredge equipment make the proposed project infeasible?

These statements demonstrate that the USACE does not and cannot know anything definitive about future costs associated with implementing increased beneficial under Alternatives 1 and 2. And therefore, there is no factual basis for the conclusory statements about cost in the EA/EIR.

RECOMMENDATION: Provide a more stable and definitive project description, per both CEQA and NEPA, by providing documentation of the cost analysis associated with the conclusionary statements. Provide clear information on how the USACE plans to allocate funding to beneficial reuse from project savings to other projects. Explain the measures the USACE would develop for bid solicitations and contracting measures that would ensure the necessary cost savings and volume of beneficial reuse when working within the work windows. Provide additional mitigation measures to ensure implementation of the proposed project while mitigating for impacts where they cannot be avoided or minimized.

4. **LTMS Program and Increased In-Bay Disposal (Alternatives 1, 2 and 3).** In several areas of the document, it states "Where applicable, the project would be aligned with the goals of the Long Term Management Strategy for the Placement of Dredged Material in the San Francisco Bay Region (LTMS) program, as described in the 1998 LTMS Final Environmental Impact Statement/EIR (USACE et al. 1998) and the 2001 Long Term Management Strategy for the Placement of Dredged Material in San Francisco Bay (LTMS) Management Plan (USACE et al. 2001)" but nowhere in the document does it describe how future dredging would be aligned with the LTMS goals and Program. As described for Alternatives 1,2 and 3, the USACE proposes to exceed the in-bay target limits, which is inconsistent with the LTMS program. In its analysis, it relies on dredging and disposal volumes from the 1970's through the 1990's, prior to the LTMS and when there was significantly more dredging in the region due to the presence of large military bases that no longer exist. The result of the USACE proposed action would likely push the region into potential allocations due to its lack of consideration for other dredging projects in the region. BCDC-07

In evaluating each of these alternatives, and the potential impact of additional in-bay disposal, the CEQA and NEPA review appear to completely ignore the existence of other

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medium and large dredgers and their use of in-bay disposal under the LTMS program. The analysis includes the 250,000 cubic yard set aside for small dredgers but does not mention or account for in-bay disposal volumes of the regions five ports, seven oil terminals, the US Coast Guard, MARAD, or the ferry terminals. This omission substantially underestimates the amount of in-bay disposal that may occur on an annual and semi-annual basis.

BCDC-07 con't.

In the Areas of Known Controversy section, it states that the LTMS partner agencies have different interpretations of the LTMS trigger to consider mandatory allocations. While this may be true, there is no written interpretation from any of these agencies to compare for inconsistencies, so this statement represents nothing more than an unsupported assumption. This section goes on to assert that increasing in-bay disposal can help the entire bay system, specifically the Bay bottom keep up with rising seas. This assertion is not supported by any evidence and ignores the fact that the sediment being dredged is from within the Bay, and by the very act of dredging it, the bay must work to refill the areas dredged with sediment in suspension. USACE studied the Carquinez and San Pablo Bay disposal sites in 2012 through modeling exercises (Delta Modeling Associates, McWilliams, et.al.,) and found that most of the sediment disposed at these dispersive sites moved into the deep water channels rather than disperse more broadly as the document appears to be asserting. Further, the aquatic disposal makes the sediment far more erosive by placing it in dispersive sites.

In Section 3.5.4, it states that recent studies (SFEI and Battalio, et.al.) developing the Bay sediment budget for 2001 – 2021 found an overall loss of sediment of 2.0 million metric tons and rightly notes that continuing ocean disposal further exacerbates this issue. What the document does not note, is the net loss over the past 20 years is in large part due to ocean disposal and mining activities that remove sediment from the system entirely. Also of interest, is there is an update to this budget coming out in 2025. Based on the best available science, the USACE should cease using the ocean disposal site in favor of beneficial reuse rather than on a least cost basis. Based on this information, and the Sediment for Survival Report (SFEI 2021) not mentioned in this review, sediment should be maximized at beneficial reuse sites that provide sea level rise resilience and ecological benefits based on the superior use of the sediment, and the USACE should focus this analysis on the WRDA 2020, Section 125 language that allows balancing of costs with benefits provided through The Beneficial Use Decision Document Integration (BUDDI), rather than focusing on increasing in-Bay disposal.

BCDC-07 con't.

Lastly, while the Commission acknowledges it is working towards a potential Bay Plan amendment that is focused on increasing beneficial reuse, the Commission has not yet voted to initiate that process and its is presumptuous to assert that amending it to increase in Bay disposal is the focus.

Docusign Envelope ID: 1F868E30-D1BB-418C-8A3B-823E827E0B43

RECOMMENDATION: Clearly describe how and when the various alternatives would be aligned with the LTMS goals and program for clarity and transparency. Revise the analysis to include estimates of the in-bay disposal annually and semiannually that includes small dredgers, federal and non-federal medium and large dredging projects, and the USACE so that the full in-bay disposal volumes can be clearly understood. Clearly describe how and where sediment disposed at in-Bay disposal sites are transported. Re-evaluate the need to further increase beneficial reuse based on the best available sediment science, impacts of ocean disposal, ecological benefits to listed species beyond fish, and sea level rise adaptation. In Chapter 5, clarify that the Commission has not yet entered into a Bay Plan Amendment process, and that the focus of the potential Bay Plan Amendment is on increasing beneficial reuse. BCDC-07 con't.

5. **Increased Hopper Dredging and Listed Species (No Action Alternatives 1 2, and 3).** In 1993, the US Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) listed the Delta smelt as a threatened species under the Federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA) respectively. In 2009, CDFW increased protections for Delta smelt and changed its status to endangered under (CESA). Delta smelt make limited use of the lower estuary and are found more readily east of the Carquinez Bridge due to salinity and spawning habitat upstream. During wet years, they may be found in areas west of Carquinez Strait. As a result, the USFWS has limited dredging activities in Suisun Bay to clamshell dredging through multiple biological opinions issued on the project, and the USACE has complied. Similarly, in 2009, CDFW listed longfin smelt as threatened under CESA, and in July of 2024, the USFWS listed longfin smelt in San Franisco Bay as threatened under ESA, noting its rapid population decline. Unlike Delta smelt, longfin smelt are present year-round in the Bay, with different life stages inhabiting different areas of the Bay during different times of the year, though the full span of its distribution and timing is not yet well understood. The USACE and the US Environmental Protection Agency (EPA) have initiated but not yet completed consultation with USFWS for the LTMS program's compliant dredging project and its potential impacts to longfin smelt. BCDC-08

   Prior to 2015, the USACE dredged two channels (Richmond Outer and Pinole Shoal) per year when the hopper dredge *Essayons* or *Yaquina* was available, and as a backup during high seas at the Main Ship Channel. In 2015, through the NEPA/CEQA review, the Water Board and the Commission recognized that hopper dredging entrains listed longfin smelt and responded by limiting the use of hopper dredges in the Bay to one channel per year as the preferred alternative and included it in the regulatory actions.

   In 2017, rather than dredge one in-Bay channel with a hopper dredge and the other with a clamshell dredge as anticipated, USACE decided to comply with the requirement by dredging only one channel with a hopper dredge annually and defer dredging of the other channel to the following year, effectively alternating dredging of Pinole Shoal and Richmond Outer Channel each year. The oil terminals and refineries raised concerns regarding this approach, as did the Commission and Water Board, but the USACE

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maintained its position. This is important because in describing the No Action Alternative, the USACE includes dredging both channels annually with a hopper dredge, thereby increasing the amount of hopper dredging and entrainment of listed and native species while not accounting for this change in the analysis. The CEQA review properly notes the No Project Alternative includes hopper dredging in only one channel as has occurred over the last seven years. BCDC-08 con't.

In addition to reducing the use of a hopper dredge in 2015, the Commission and the Water Board required monitoring of the hopper dredge, which has verified that take of longfin smelt regularly occurs, though it is not feasible to fully quantify the number of smelt entrained due to the limited ability to fully monitor dredging episodes of tens or hundreds of thousands cubic yards of sediment. Further the Water Board and BCDC required the USACE to mitigate for take of longfin and Delta smelt when using hopper dredges. The previously implemented mitigation required for hopper dredging was calculated using an equation based on the amount of water pumped through the dredge suggested by and agreed to by CDFW. The USACE would then purchase mitigation credits from a mitigation bank, Liberty Island, designed to provide smelt habitat. Liberty Island sold all available credits, and no additional mitigation banks have come online since that closure (approximately 2020). As an alternative to lack of mitigation credits, the Commission and the Water Board have worked with the USACE to accept funding beneficial reuse of more dredged sediment, anticipating additional mitigation banks being created. BCDC-09

In Alternatives 2 and 3 (as described as building on Alternative 2), the USACE proposes to increase hopper dredging to reduce costs of dredging, with the assertion that it would use the cost savings from the program to support beneficial reuse and provides a range of beneficial reuse that may occur. Further, the No Project Alternative includes "emergency" or "navigation safety" dredging with a hopper dredge. In multiple areas of the document, its states that impacts of increased hopper dredging, i.e., entrainment of native and listed species, would be minimized by increasing beneficial reuse of dredged sediment. The assertion made is that increasing beneficial reuse of dredged sediment would increase restoration of tidal marshes and thereby provide more habitat for longfin smelt. Recent monitoring has identified that longfin smelt are found in and adjacent to wetlands, and restoration projects, including those that used dredged sediment to raise elevations, thus precipitating the more rapid breaching and restoration of subsided baylands. Some of this research is still in preparation and recommend further investigation to better understand lifecycle and usage of different areas, including smaller tributaries.

While the Commission absolutely supports increasing beneficial reuse and recognizes the connection between smelt and tidal channels of wetlands and restoring marshes, clarity is needed in these descriptions. It is important to be clear in language. Increasing beneficial reuse of dredged sediment does not minimize impacts from hopper dredges. Per the Draft EA/EIR, hopper dredging increases entrainment over clamshell dredging.

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Increasing hopper dredging increases impacts to listed and native fish. Beneficial reuse may be considered a form of mitigation for this impact, but it is not a minimization measure.

BCDC -09 con't

The Commission does not agree with the USACE finding of no significant impact to longfin smelt from Alternatives 2 and 3. USACE makes the NEPA finding for the No Action Alternative that "impacts on fish caused by entrainment would be considered less than significant through the implementation of the LTMS windows and other Standard Practices intended to reduce the potential for entrainment." As noted above, USACE regularly dredges several channels outside the LTMS environmental work windows, so this assertion is inconsistent with how the USACE conducts dredging in the region. Similarly, the NEPA finding asserts that beneficial reuse would further reduce impacts, which is clearly not the case. As described above, we suggest that the USACE adopt a mitigated finding of no significant impact.

BCDC -10

The Commission agrees with the Water Board's finding that mitigation for hopper dredging is required to reduce the impacts to longfin smelt. That said the Commission disagrees with the amount of mitigation required for this impact, as it is simply too little beneficial and will take too long to provide the benefit of restored wetlands as currently proposed. In its assessment, the Water Board uses an equation similar to one previously agreed to by the Commission and CDFW in order to calculate the amount of mitigation credit the USACE should purchase from Liberty Island mitigation bank. It then back calculates the cost of creating wetlands using dredged sediment into cubic yards of dredged sediment, and then multiples the volume by 2. The Water Board finds this meets both its Dredge and Fill policies and its Mitigation policies. The examples provided equate to 35,000 cubic yards of sediment to 45,000 cubic yards of sediment beneficially reused based on volume of water pumped. What does not appear to be accounted for is the difference between purchasing credits of fully developed wetlands and the use of a nominal amount of dredged sediment at a wetland restoration project that will be dependent on others contributing significant amounts of sediment, variation in depths of subsided sites, and that it may be years or decades before a site is breached. Only when the site is breached would it provide additional habitat for smelt and other fish species. Further, the evaluation does not appear account for the volume of sediment already required as mitigation for salmonids when working outside the work window. In addition, some of the hopper dredging in the alternatives is proposed to occur in the restricted period.

BCDC -11

BCDC -12

RECOMMENDATION: Clarify the language throughout the document that states hopper dredging minimizes impacts to listed species, specifically, change minimize to mitigates for. Change the USACE finding of no significant impacts to a *mitigated* finding of no significant impacts. For the CEQA document mitigation requirement, increase the multiplier for cubic yards of beneficially reused sediment from 2 to 5 to provide a significant volume of sediment to address the entrainment of smelt, as well as the time it will take to achieve additional habitat benefits for the smelt through this mitigation.

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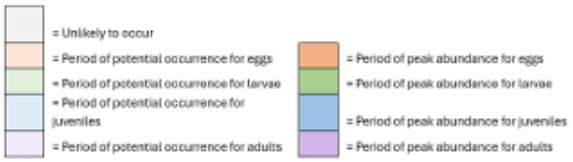
Explicitly state that when dredging outside the environmental work windows, USACE will mitigate for take of listed species by taking the sediment dredged outside the work window to beneficial reuse or an equivalent volume in the following year as required by the NMFS' 2015 LTMS Amended Programmatic Biological Opinion. Lastly, explicitly state in the document that this mitigation will not be double counted as sediment that would be beneficially reused as part of the regional optimization of the dredging program. BCDC-13 BCDC-14

For further consideration, noted in this review, the USACE would consider beneficial reuse of dredged sediment at Bel Marin Keys Unit V when it is permitted. As the Commission understands the project, it is a joint effort between USACE and the SCC, and due to potential funding constraints, the project is considering accepting less dredged sediment to restore the subsided baylands to tidal wetlands. USACE and the Water Board may want to consider targeted beneficial reuse at this site for mitigation purposes for dredging outside the work window and for entrainment of listed species from hopper dredging. This approach would restore additional wetlands, support a USACE project, reduce costs of that project, and provide a mitigation option for this USACE program. BCDC-15

6. **Longfin Smelt.** The DEA/EIR provides several potential minimization measures to reduce impact to the newly federally listed longfin smelt. The primary assertion is that the hopper dredging only affects a small portion of its habitat but does not include an analysis of the entrainment monitoring that has occurred since 2017. The monitoring as described above found that longfin smelt are entrained along with several other native fish by hopper dredges. While the available data is limited, could be pro-rated to assess potential entrainment based on the amount of time that dredging occurs. It appears to assert that longfin smelt may not be present in different embayments during different times of year rather than noting that the available science for this species is limited. From meetings that the Commission attended with USACE, US Environmental Protection Agency (EPA), and the Water Board, the following table better describes the current understanding of longfin smelt's use of the Bay. While eggs and larvae are present in limited areas and months, juvenile and adult fish are potentially present year around throughout the estuary, with peak periods identified below. BCDC-16

Table 5-1. Periods of Occurrence and Peak Abundance of Longfin Smelt in San Francisco Estuary

Life Stage	Month											
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Egg	Potentially occur in shallows of Suisun and San Pablo bays											
Larvae		Potentially occur in shallows of Suisun and San Pablo bays										
Juvenile	Potentially occur throughout San Francisco Estuary											
Adult		Potentially occur throughout San Francisco Estuary										



BCDC - 16 con't.

Given the challenges of working with a listed species that occurs year-round where dredging occurs, we appreciate the efforts to identify techniques that may lessen the impacts of hydraulic dredging. That said, additional information to further explain the applicability of the proposed minimization measures would be useful. One proposed method includes using eDNA to identify whether smelt are present in the area prior to dredging. Some questions come to mind when considering this measure, including: How can eDNA be used for areas that are not in wetlands, such as the dredging channels, and what strategies will be used to determine if the sample contains eDNA from the area or interest or from another area. Further, given the schedules of hopper dredges and contract dredges, how would the USACE redirect the equipment should smelt be detected, and would repeat sampling be conducted to determine the fish are no longer present?

Regarding the potential use of noise and light to deter smelt from hopper dredging, we appreciate effort to describe potential measures. However, as noted these are experimental and have not yet been shown to cause smelt to leave an area. The Commission would be interested in learning more about these potential studies and how USACE would determine smelt have avoided the area. We note that to reduce confounding factors, the studies should first evaluate smelt responses to deterrents and once that is understood, evaluate the same in combination with hydraulic dredging. In addition, noise and light may have affects on other species such as marine mammals that should be taken into consideration when designing such deterrents.

RECOMMENDATION: Provide analysis of potential entrainment of longfin smelt based on the entrainment data that currently exists. Include the above table and information regarding the use of the estuary by longfin smelt rather than just a percentage of habitat used, which is unknown at this time. Acknowledge that these measures are experiment and that other species may be affected by deterrent methods. If these measures are used, commit to an open and transparent process with the regulatory and resource agencies and include an analysis of potential effects to other species.

7. **Environmental and Social Justice and Tribal and Cultural Resources**. In 2019, the Commission adopted Environmental Justice and Social Justice policies, which are appliable to the DEA/EIR. There is potential for the proposed project to affect these communities as well as tribes that reside within or adjacent to the project area. Rather than include comments specific to these issues in the body of this letter, we are including several comments that we believe will improve the analysis and clarify work that was done to engage these communities, as well as both federal and state policies

BCDC -17

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that should be applied. These specific comments are attached to this letter and are hereby referenced as included in the Commission's comments. BCDC -17 con't.

RECOMMENDATION: Please review the attached comments and address them within the DEA/EIR and further engage these communities as suggested. Include comments and concerns of these communities in the DEA/EIR and how they were responded to.

8. **Commission Authority and Policy**. In a few areas, the DEA/EIR misstates information about the Commission's authority or omits information. Please consider and include the following information. BCDC -45

   1.2.1.1 San Francisco Bay Plan – the statement "The Bay Plan was amended in 2019 and included a policy for BCDC to continue to participate in the LTMS, the Dredged Material Management Office (DMMO), and other initiatives conducting research on Bay sediment movement, the effects of dredging and disposal/placement on Bay natural resources, alternatives to in-Bay aquatic disposal, and funding additional costs of transporting dredged material to upland and ocean disposal sites (BCDC 2020)" is incorrect. These policies were included in the Bay Plan amendment of 2000, which incorporated the LTMS Program into the Bay Plan Dredging Policies. The 2019 amendment was focused on Dredging Policy 11 and 12. In addition, please include the Suisun Marsh Preservation Act and the Suisun Marsh Protection Plan in this section.

   Table 1-3. please include Fish and Wildlife, as well as Tidal Marshes, Tidal Flats, and Subtidal Areas in the Relevant Resources column associated with the CZMA Consistency Determination.

   Section 3.5.1.1 – Federal, Coastal Zone Management Act discussion, please add Suisun Marsh Protection Plan to the description of documents that specify the goals, objectives, and policies for BCDC jurisdictional areas

   Section 3.8.1.2 – State and Regional discussion, please include the Suisun Marsh Preservation Act and the Suisun Marsh Protection Plan to this section and applicable policies.

9. **Air Quality Analysis**. While the Commission acknowledges it does not have authority over air quality impacts that do not affect the Bay or its resources, we completed a comprehensive review of the DEA/EIR. Rather than include the specific comments in the body of this letter, we have attached a series of specific comments and concerns regarding the air quality assessment that should be addressed for the USACE and Water Board consideration. BCDC -46

This concludes the Commission's comments regarding the DEA/EIR. The Commission and its staff appreciate the work that went into this document's preparation and the opportunity to comment. Please note, the analysis should include information sufficient to evaluate consistency with the San Francisci Bay Coastal Zone Management Program if the USACE intends to rely on this document for its federal consistency determination. If so, when submitting the BCDC-62

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consistency determination, please reference specific sections for ease of reference and efficient review. If you have questions or would like additional information, please feel free to contact me at 415.352.3623 or via email at brenda.goeden@bcdc.ca.gov. BCDC - 62 con't.

Sincerely,

DocuSigned by:
13C9E6A8DFC846D...

BRENDA GOEDEN
Sediment Program Manager

cc: CA State Clearinghouse; <state.clearinghouse@opr.ca.gov>
Mr. Christopher Eng, U.S. Army USACE of Engineers; <Christopher.K.Eng@usace.army.mil>
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Ms. Jennifer Siu, U.S. Environmental Protection Agency; <Siu.Jennifer@epa.gov>
Mr. Kevin Lunde, S.F. Bay Regional Water Quality Control Board; <Kevin.Lunde@waterboards.ca.gov>
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BG/kr

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Environmental and Social Justice/Cultural Resources Specific Comments

Chapter 3

3.4, The entire section would benefit from a revision where the differences between how USACE handles cultural and tribal cultural resources is more clearly defined and separated. BCDC-18

3.4.2, 3.81, Text: "Nonetheless, there is evidence for human occupation of the region as early as 11,700 years ago through to the present, where the Ohlone, Coast Miwok, Bay Miwok, Plains Miwok, and Patwin communities continue to live today." The list provided in the sentence is not a comprehensive list of all the Native American peoples whose ancestral territories encompass the present-day Bay area. Additional language should be added to the sentence to clarify that the list is not exhaustive to avoid active and continuing erasure of Native American peoples. BCDC-19

3.4.2, 3.82, Text: "Of particular interest are the hundreds of shipwrecks recorded in the region, as well as those that have not yet been identified." The sentence cited implies that shipwrecks and other maritime artifacts, hold a higher value than tribal cultural resources to the agency. The sentence is unnecessary and should be considered for removal to eliminate any potential misinterpretation. Tribal cultural resources and maritime artifacts should receive equal attention and protections through the National Historic Preservation Act. BCDC -20

3.4.2.3, 3.90, Sending an email and letter to contact tribes is the bare minimum required for consultation. USACE needs to conduct additional outreach to engage with tribes, including phone calls, visitation to tribal offices, outreach with indigenous-led organizations. BCDC-21

3.4.2, 3.81, "Deep time Native American presence" sounds strange. Suggest rewording. "Time immemorial" is commonly used in this context. BCDC-22

3.42, 3.81, The last paragraph on this page provides a beautiful visualizing of the history of the earth in the Bay Area, and the development and roles of Tribes of the area, and then the last sentence cuts all of that to say that Euroamerican colonial based lay alongside tribal cultural resources. I think it's written awkwardly and seems to be dancing around the actual history. Even just a sentence about the history of how colonialism reshaped the Bay Area would be useful. BCDC -23

3.4.2.1, 3.83 – 3.88, These sections often say, "the *majority* of the APE has no recorded cultural resource investigations." What about the rest of the APE/the recorded ones? Why are they irrelevant? BCDC -24

3.4.2.2, 3.89, Again, SF-10 says "many of the investigations… are not in response to regulatory requirements." – What are the other ones? BCDC-25

Docusign Envelope ID: 1F868E30-D1BB-418C-8A3B-823E827E0B43

3.4.2.2, 3.90, Confusing to say "USACE and Regional Water Board reached out to the following tribes" and then not list the tribes. Makes it sounds like the agencies only reached out to the 3 tribes that are discussed later in the paragraph. BCDC-26

3.4.4.1, 3.95, Is the "usual amount of bone" defined? BCDC-27

Chapter 4

4.3, 4.3, Consider adding Ocean Protection Council to list of agencies to contact regarding this project. BCDC-28

4.4, 4.4, "Tribes located in the study area are considered rightsholders." It would help for USACE to spell this out a bit more. For example, "Tribes located in the study area are rightsholders, meaning they have an inherent right to steward and protect the land." Increase transparency and provide/serve as a model for others. BCDC-29

4.4, 4.4, "USACE has since developed a suite of mitigation measures aimed at minimizing impacts to cultural and tribal resources." – if they're mitigation measures and not elimination measures, they don't minimize impacts, but rather they offset impacts. Do Tribes accept the mitigation measures? BCDC-30

4.4, 4.4, The list of counties was listed previously in the document as also including San Joaquin and Sacramento. Why aren't these Tribes listed/why weren't Tribes in these counties included in the outreach list? BCDC-31

4.5, 4.7, Add BCDC to list of California regulatory agencies that have specific EJ guidelines. BCDC-32

4.5.1, 4.7, Bay Plan EJ&SE Policy #4 seems applicable to this project, unless it has been determined that no dredging will occur within an underrepresented and/or identified vulnerable and/or disadvantaged community. Pollution and noise from dredging and trucking/training dredged material through communities would be an indirect environmental impact of ongoing maintenance dredging. BCDC-33

4.5.2, 4.8, Provide the communications plan created by the USACE and Water Board for communities with environmental justice concerns to increase transparency and provide strong models for other agencies to learn from. Provide the list of community organizations identified and contacted in the final version of the draft EA/EIR including the feedback received, and how they were incorporated into the final version to increase transparency. BCDC-34 BCDC-35

4.5.3, 4.11, The USACE utilized BCDC's Community Vulnerability Mapping Tool yet only focused on communities with social vulnerability and not contamination vulnerability despite the tool offering data on both types of vulnerability. The following language is pulled directly from EO 14096 which is referenced heavily in this section, "Communities with environmental justice concerns experience disproportionate and adverse human health or environmental burdens. These burdens arise from a number of causes, including inequitable access to clean water, clean air, natural places, and resources for other basic human health BCDC-36

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and environmental needs; the concentration of pollution, hazardous waste, and toxic exposures; and underinvestment in affordable housing that is safe and healthy and in basic infrastructure and services to support such housing, including safe drinking water and effective sewage management. The cumulative impacts of exposure to those types of burdens and other stressors, including those related to climate change and the environment, further disadvantage communities with environmental justice concerns. People in these communities suffer from poorer health outcomes and have lower life expectancies than those in other communities in our Nation. Moreover, gaps in environmental and human health data can conceal these harms from public view, and, in doing so, are themselves a persistent and pernicious driver of environmental injustice." It is unclear why the USACE decided to ignore communities experiencing contamination vulnerability within its analysis to identify EJ communities that may be impacted by USACE activities. It is a missed opportunity and a critical gap in the USCAE efforts to reduce direct and indirect impacts on communities already experiencing disproportionate environmental burden. BCDC-36 con't.

4.5.2, 4.9, For impacts to water recreation and fishing in vulnerable communities, consider the potential need for measures to offset these negative impacts to public access in environmental justice communities. BCDC -37

4.5.3, 4.9, Should the second sentence in the section be reworded to say, "For this analysis, socially vulnerable communities were defined as US Census block groups with high concentrations of one or a combination of the following socioeconomic indicators:"? The way it's worded now means that a US Census block group with one person meeting the indicators would qualify as socially vulnerable, which doesn't make sense. BCDC -38

4.5.3, 4.9, The name of the tool referenced in the last sentence on page 4.9 is BCDC's "Community Vulnerability and Community Based Organization Directory Map". Was the CBO Directory part of the tool used to determine group to reach out to? If not, why? This seems like a missed opportunity. BCDC -39

4.5.3, 4.10, Figure 4.1: How was 1.5 miles chosen? This area excludes the Bayview-Hunters Point community by a hair. Is it realistic to expect that dredging the San Bruno Shoal will not have impacts on water recreation and fishing in Bayview-Hunters Point? BCDC -40

4.5.3, 4.10, It appears that all of Yerba Buena Island and part of Treasure Island are included in the 1.5-mile radius of the dredging area. Were any community groups from these areas consulted or reached out to? BCDC -41

4.5.3, 4.11, First paragraph, third sentence: Tract is one-mile east of the outer coast, not one mile east of SF Bay. BCDC -42

4.5.4, 4.12, Last paragraph: If Sacramento and San Joaquin counties were also included in the project scope area, why were these counties excluded from EJ analysis? BCDC -43

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4.5.5, 4.15, What were the results of the meeting with EJ community representatives on 10/15? How many attendees showed? What counties were they from? What concerns did they express and how will those concerns be addressed? Please include this information in the final EA/EIR.

BCDC -44

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Air Quality Analysis. The Commission is providing the following comments on air quality for USACE and Water Board consideration.

BCDC-47

1. Page 155, Section 3.2.3 Methodology and Thresholds of Significance, second paragraph states "*The average dredging volume for each location was used for the one-year envelope (Appendix D, Baseline Alternative Tab), which represents a total dredge volume of 2,650,000 cy.*"

2. While this clarifies the average dredging volume for one year, the document would benefit in having this information mentioned in the text sooner, such as the Executive Summary's Project Purpose, Need, and Objectives and Section 2.3 Project Description and Alternatives. Both recommended sections currently include a table with volumes under different scenarios (i.e., average volume per episode, maximum volume per episode, and average annual volume over 10-year cycle) that make it difficult to understand the projects overall dredging volume.

BCDC-48

3. Pages 156 and 159, Section 3.2.3, Tables 3-5 and 3-9 need further information to understand the difference of what is being shown. Additionally, what is the difference between the No Action Alternative on Table 3-5 and No Action Alternative/No Project Alternative? With the information provide it seems like these two tables should be combined as they both are related to emissions for dredging and placement site transit.

BCDC-49

4. Page 156, Section 3.2.3, Table 3-6 state the following "*Clamshell dredging was used to represent both clamshell and cutterhead dredging.*" And "*As a result, substituting with clamshell dredging provides a reasonable estimation of total cutterhead dredging emission.*" The document specifically states in section 2.3.1.1 what is considered mechanical and hydraulic dredging. Please provide further clarification as to why clamshell dredging is a surrogate to cutterhead.

   Furthermore, Table 3-6 focuses specifically on the use of dredge equipment by alternative. Currently, it is difficult to see and understand the correlation between the percent change in dredging equipment and alternatives. Please provide further details to understand this correlation.

BCDC -50

5. Page 157, Section 3.2.3, Table 3-7 indicates that clamshell and hoppers are to be used for various placement locations, particularly in-Bay and deep ocean disposal. It is our understanding that the hopper does not transit to the deep ocean site. Also, the hopper has no offloading capabilities as places sediment via bottom release. Please clarify how this dredging equipment are to be used at the placement locations.

BCDC-51

6. Page 158, Section 3.2.3, Table 3-8 shows the average daily and maximum annual threshold for various pollutants. Is this table representative of thresholds for dredging and transit regarding the proposed action/proposed project? Or does the table represent a general overview of the bay area pollutant threshold?

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7. Page 160, Table 3-10 states the percent distribution of sediment at different placement sites. However, there seems to be a few additional categories/column or data points missing as the total percentage does not sum up to 100 percent. In the text above Table 3-10, it states "*Material volume would remain the same across all alternatives for nearshore strategic placement and upland (sponsor provided) site placements*." Furthermore, the table in Appendix D for the Baseline: No Action Alternative/No Project Alternative seem to have these additional two categories (i.e., Nearshore Strategic Placement and Upland (sponsor provided) included into their calculations. Comparing the values in Appendix D, the percentage data under the Nearshore Strategic Placement and Upland (sponsor provided) sum up the missing percentage, which is approximately 13 percent. Please clarify why these two additional categories were not included in Table 3-10. BCDC-52

8. Page 163, Section 3.2.4.2, the last paragraph states "*Alternative 2 was used to quantify the reductions as the reductions would be lowest for this alternative*. *Table 3-13 presents the reduction ($2,585,800) for Alternative 2*." Please provide additional information in the text to further understand this statement and how this quantification was used for the other alternatives in an appendix. Additionally, Table 3-13 seems to be inconsistent with the dollar amount reported in Appendix D – SCC GHG Alternative 2. Please verify there is consistency within the values. BCDC-53

9. Page 246, Section 3.5.3, the last paragraph states an average volume of dredge sediment to be from 2.13 million cy to 2.73 million cy. This is inconsistent and the end range should be changed to 2.815 million cy as this is the actual maximum that could occur, particularly the no action alternative/no project alternative. BCDC-54

Appendix D – Air Quality Calculations

a. Table formatting is inconsistent across the Baseline Alternative-No Action and Alternative(s) 1-4 with potential information missing (see below for example). Please revise the tables so they are all formatted the sample. BCDC-55

i. Reported table for the Baseline Alternative -No Action

Placement Sites	In Bay Placement [1]	
	30%	40%
Average	35%	899,500
Max transit distance on-way	41.2	-

ii. Reported table for Alternatives 1-4

Placement Sites	In Bay Placement [1]

Alt 1	30%	40%
Average	35%	899,500
Max transit distance on-way	41.2	-

b. Page 11, Tab D, has a table in which the proposed volume to be dredged at the San Francisco Harbor is separated into two, while the data table for the alternatives are reported as one. Please clarify if this is a typo or if there is reason why this volume was broken down into two. BCDC-56

c. Page 12, Tab E, there is inconsistency between the title of the alternative(s) within the appendix and the main document. For example, Alternative 1 in the appendix is switches between "*Beneficial Use – Diversion from Deep Ocean Disposal*" and "*Beneficial Use – Richmond Inner Split Summary*" Whereas the main document details Alternative 1 as "*Beneficial Use – Diversion from Deep Ocean Disposal*". Please clarify why "*Richmond Inner Split Summary*" was included as the title or if this is also a typo. BCDC-57

d. Pages 11-12, Tab D and E, a table stating the percent information regarding use of dredging equipment is missing. Please include the additional tables for these two categories. BCDC-58

e. The volume reported under the "*analyzed dredged cy for this alternative: 2,650,000 cy*" seems to be inconsistent with what is provided in tables one and three for this category. For example, the volumes reported under the first table add up to 2,570,000 cy. This is roughly a 80,000 cy difference between the two values. Please clarify which is the correct volume being considered for this environmental impact report. BCDC-59

f. Pages 6 through 10, Alternative 2-4 calculations, the reported percentage for the equipment contribution seem to be inconsistent. For example, on page 8, Alternative 1, it states that 71% of 2,570,000 cy is 1,835,000 cy. This is not correct as it should be 1,824,000 cy. Please confirm that these values are correct. If there is some piece of the data that is missing, please do let us know so there is no confusion. BCDC-60

g. Continuing the focus on the tables on pages 6-10, there is confusion on the significance of the reported percentages that are included in the "*average row*." For example, the Alternative 1 table has an average of 35% with a 42% underneath. However, under the average of 55%, there is a volume of 1,079,400 cy (see below for example). It is our understanding, based on the information from Section 2.3.3 Diversion from Deep Ocean Disposal, that Alternative 1 proposes to increase in-Bay placement by 35% to 55% from the No Action Alternative/No Project Alternative (i.e., 30% and 40%). Does the 1,079, 400 cy BCDC-61

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signify that it is 55% of the analyzed dredged cy for this alternative, which is 2,570,000 cy? Please clarify what is the meaning of these percentages and verify that the values are also correct.

BCDC-61, con't.

i. Alternative 1. Beneficial Use - Diversion from Deep Ocean Disposal Table

Placement Sites	In Bay Placement [1]	
Alt 1	35%	55%
Average	42%	1,079,400
Max transit distance on-way	41.2	-

Comments from Local Agencies

County of Solano

DEPARTMENT OF RESOURCE MANAGEMENT

JAMES BEZEK
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SOLANO COUNTY

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December 16, 2024

San Francisco District
U.S. Army Corps of Engineers
Attn: Environmental Resources Branch
1455 Market Street, San Francisco, CA 94103

SF-Bay-Dredging@usace.army.mil
jazzy.Graham-Davis@aterboards.ca.gov

Subject: Comments on the Draft Environmental Assessment/Environmental Impact Report for Maintenance Dredging of Federal Navigational Channels in San Francisco Bay

Dear U.S. Army Corps of Engineers,

Solano County appreciates the opportunity to comment on the Draft Environmental Assessment/Environmental Impact Report (EA/EIR) for maintenance dredging and sediment placement activities in San Francisco Bay. The County recognizes the critical importance of maintaining navigational safety and efficiency in these channels while ensuring environmental stewardship.

General Comments

Solano County supports the ongoing commitment to balancing navigational needs with environmental protection, particularly through the implementation of best management practices (BMPs) as outlined in the report. However, we request additional consideration and clarification on several issues:

1. **Impact on Aquatic Species**:

   - The report highlights continued entrainment risks to sensitive species such as longfin smelt and white sturgeon during hopper dredging activities. We recommend additional evaluation of measures, such as fish deterrent technologies (bubble curtains or other such deterrent measures) and adherence to dredging windows that minimize impacts on these species, as described in the Long-Term Management Strategy (LTMS) recommendations. SC-1

   - Consideration of alternatives to hopper dredging in sensitive areas, including the Suisun Bay and nearby waterways, would help mitigate potential impacts on state species of special concern. SC-2

2. **Sediment Management and Beneficial Use**:

   - The proposed increase in beneficial use of dredged material under Alternative 2 is a positive step toward sustainability. We encourage prioritizing upland beneficial use sites, such as habitat restoration projects in the Suisun Marsh and Montezuma Wetlands, as they provide ecological benefits, provide for sea level rise adaptation, and align with regional restoration goals. SC-3

SAEED IRAVANI Building Official Building & Safety | ALLAN CALDER Program Manager Planning Services | EDMOND STRICKLAND Manager Environmental Health | SARAH PAPPAKOSTAS Administrative Services Manager | MATT TUGGLE Engineering Manager Public Works Engineering | MATTHEW HARDY Operations Manager Public Works Operations | CHRIS DRAKE Parks Services Manager Parks | MISTY KALTREIDER Water & Natural Resources Program Manager

3. **Air Quality and Emissions:**

- Emission estimates from dredging activities, including transit emissions, require further analysis to ensure compliance with Bay Area Air Quality Management District (BAAQMD) standards. Additional mitigation measures to minimize greenhouse gas emissions, such as transitioning to low-emission dredging equipment, should be explored. SC-4

4. **Cultural and Historical Resources**:

- The County urges adherence to cultural preservation protocols when dredging near known resources, such as the Napa and Petaluma River Channels, to prevent damage to historically significant sites. SC-5

Specific Recommendations

- Ensure alignment of project activities with regional efforts under the LTMS to minimize cumulative impacts. SC-6
- Expand public outreach and interagency collaboration during the planning and implementation phases. SC-7
- Provide clarity on the proposed monitoring framework for adaptive management and post-project evaluation to ensure intended environmental outcomes are met. SC-8

Solano County remains committed to partnering with the Corps and other stakeholders to address these concerns and ensure that the final EA/EIR effectively balances project objectives with environmental sustainability.

Thank you for considering our comments. Please contact Misty Kaltreider, Water & Natural Resources Program Manager at mkaltreider@solanocounty.com for further discussion.

Sincerely,

James Bezek, Director of Resource Management
County of Solano

Cc: California State Association of Counties
Solano County Board of Supervisors
Bill Emlen, County Administrator

Comments from Organizations

Bay Planning Coalition

Bay Planning Coalition

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Laura Tam
Chief Executive Officer

December 19, 2024

TO: US Army Corps of Engineers, San Franciso District
Via Email: SF-Bay-Dredging@usace.army.mil

San Francisco Bay Regional Water Quality Control Board
Via Email: Jazzy.Graham-Davis@waterboards.ca.gov

SUBJECT: Comments on the Draft Regional Dredged Material Management Plan

To Whom It May Concern:

On behalf of the Bay Planning Coalition (BPC), a membership-based nonprofit organization advocating for robust economic growth while protecting the environmental sustainability of the San Francisco Bay, I am pleased to offer comments on the Draft Regional Dredged Material Management Plan (RDMMP). The RDMMP is an important blueprint for San Francisco Bay's future. It will impact navigation, dredging, the placement of sediment, and with increased beneficial reuse of that sediment it will increase the persistence of wetlands and habitats over the next 20 years and beyond.

BPC has actively participated in the development of the RDMMP since at least 2019 by engaging in stakeholder workshops and hosting USACE staff at our Dredging and Beneficial Reuse Committee quarterly meetings and annual workshops. We are pleased to see that the draft document supports maximizing beneficial use opportunities for dredged sediment in the Bay, over and above the current navigation dredging program/no-project alternative. Reuse rather than disposal of sediment is critical to sustaining the region's marshes and beaches, habitat connectivity, and flood protection in the face of rising sea levels. We offer the following support for the RDMMP and suggestions for successful implementation: BPC-01

1. **Leverage hopper and hydraulic dredging to increase flexibility with dredging operations.** We support *Action Alternative 2: Regional Optimization through Leveraging of Hopper Dredging*. We recommend collaborating with regional agencies to identify opportunities to leverage hydraulic dredging to increase flexibility with dredging operations. We recently recommended to BCDC that it should assess if the net benefits of hydraulic dredging and pumping of sediments from navigation channels (especially those near beneficial reuse sites) outweigh previously identified constraints. Resolving these constraints will enhance efficiency and thus reduce the overall operational costs of dredging and sediment delivery, allowing cost savings to be redirected towards beneficial reuse at no additional overall project costs. BPC-02

2. **Fund new studies of in-Bay disposal site capacity.** As a step toward potentially reopening the LTMS in-Bay disposal limits in the future, USACE and

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partners could fund new studies, to help determine the capacity of in-Bay disposal sites to handle additional sediment annually. As a result, we support *Action Alternative 1: Diversion from Deep Ocean Disposal* as adjustments to in-Bay disposal could reduce overall operational costs, allowing cost savings to be redirected towards increasing beneficial reuse at no additional overall project costs. For example, a 50% in-Bay/50% beneficial reuse option, which was selected for the Oakland Navigation Channel Beneficial Use Pilot Project in 2022, demonstrates how such an approach can provide an interim solution while long-term funding and reuse strategies are developed. BPC-03

3. **Evaluate new placement sites.** We support USACE's national goal of 70% beneficial use (BU) by 2030 and encourage the San Francisco District and partners to look for opportunities to exceed this goal in our region through efficiencies or additional funding/cost sharing, while ensuring completion of planned operation and maintenance dredging projects. There are numerous placement sites that have been studied, but have not been prepared, for taking sediment, including the Alviso Complex of the South Bay Salt Pond Restoration Project (as identified in the 2015 Moffatt & Nichol study), the Skaggs Island Restoration Project, and other low-lying areas of the Bay. These sites should be evaluated for feasibility of constructing and maintaining a deeper draft access channel and if feasible, considered as an amendment to or implementation of the RDMMP in future years. BPC-04

4. **Seek new funding and prioritize existing sources to maximize beneficial reuse.** San Francisco Bay dredging costs are among the highest in the nation. We encourage agency partners, and others named in the draft Plan alongside BPC, to actively seek funding sources to offset incremental costs. We are encouraged and optimistic that WRDA Section 125a now enables an even greater federal cost share for the incremental cost, enabling the non-federal cost to be as low as 35% (as opposed to 100%). However, dedicated new funding streams are essential to support these costs and maximize beneficial use.

   BPC is deeply committed to seeking new funding from federal, state, and local sources as the new RDMMP launches with higher beneficial targets than ever before. For example, we recently urged BCDC to consider coordinating with the SFBRA to prioritize grant applications that include the use of funds for compensating the USACE and other dredgers for the incremental unit cost of beneficial reuse over ocean disposal. Measure AA funding has been used for this purpose in the past. Dedicating a greater share of regional resources to offsetting incremental costs, until other sources of funding are identified, could allow for a significantly larger share of dredged material to be beneficially reused within the Bay each year. As an illustrative example, $25 million (annual Measure AA funding) could compensate for the incremental cost above the Federal Standard (ocean disposal) for 80% of all annual federal and medium-sized dredgers' maintenance dredging, yielding approximately 2.4M cubic yards of sediment. In addition, Californians just BPC-05

Bay Planning Coalition

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passed Proposition 4, a $10 billion climate bond which contains dedicated funding for San Francisco Bay; BPC will explore opportunities for this funding to potentially support moving sediment to restoration and flood protection projects.

We encourage USACE and the Water Board to continue meaningful collaboration with the private sector and with other public agencies to implement the RDMMP, including adapting it over time as funding partnerships, placement opportunities, and sea levels evolve. BPC is eager to continue partnering with you in support of cost-effective sustainable dredging and beneficial use in San Francisco Bay. BPC-05 (cont.)

Thank you for considering the above comments and recommendations.

Sincerely,

Laura Tam
Chief Executive Officer
Bay Planning Coalition
laura@bayplanningcoalition.org

Citizens for East Shore Parks

Citizens for East Shore Parks

PO Box 6087, Albany, CA 94706 | Office: 1604 Solano Avenue, Albany, CA 94707
Office: 510.524.5000 | www.eastshorepark.org | cespmanager@eastshorepark.org

To: United States Army Corps of Engineers, San Francisco District (USACE) and Regional Water Quality Control Board, San Francisco Bay Region

From: Sally Tobin, Vice President, Citizens for East Shore Parks (corresponding author) and cosigned by (in alphabetical order; see Signature Page): 350 Bay Area, Citizens for East Shore Parks, Extinction Rebellion San Francisco Bay Area, Golden Gate Bird Alliance, Greenaction for Health and Environmental Justice, Marie Harrison Community Foundation, Our City SF, Point Molate Alliance, San Francisco Baykeeper, Richmond Southeast Shoreline Area Community Advisory Group, Rise South City, Sierra Club Sea Level Rise Committee (Bay Alive Campaign), and Urban Tilth.

Re: Opportunity for Public Comment on Draft Environmental Assessment/Environmental Impact Report for USACE Navigational Dredging, found at:
https://www.waterboards.ca.gov/sanfranciscobay/public_notices/#section401

Date: December 30, 2024

To Whom It May Concern:

This letter recognizes the important role of USACE in maintaining federal navigational channels and the role of the Water Board's review of this application. However, this application, as written, has defects and needs modifications to protect public health and the biological environment. Richmond community advocates argue strongly for testing of sediment before approval of any plans to relocate sediment from the Richmond Inner Harbor or the Richmond Outer Harbor. CESP-1

MODIFICATIONS REQUESTED
We request two main modifications to this application:
1. Institute a dedicated sediment testing protocol for contamination by DDT, its derivatives, and other organochlorines, so that sediment from the Richmond Inner Harbor and the Richmond Outer harbor is not relocated for shoreline use until areas proposed for dredging have been cleared by testing for contamination. CESP-2
2. Either develop a detailed description of a proposed Stege Marsh sediment deposition plan or institute a complete exclusion of Stege Marsh from this application as a prospective recipient of sediment. Stege Marsh can be addressed more effectively in a future document that deals with all the challenges of that location and includes community outreach. CESP-3
3. In addition, because of the application's incomplete proposals relevant to the Richmond shoreline, a public comment period is requested to review the final draft of the EA/EIR. CESP-4

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DETAILED DISCUSSIONS

Our main concerns are listed below, and each will be explained in detail:
1. There are apparent inconsistencies between the USACE characterization of sediment contamination levels in the Richmond Inner Harbor (no concerns are noted) and the USEPA's findings of contaminated sediment near the United Heckathorn Superfund site. The United Heckathorn Superfund site is located between the Lauritzen and Parr Channels as they open into the Richmond Inner Harbor and includes five acres of land and about 15 acres of marine sediments. The USEPA is in charge of cleaning up the United Heckathorn Superfund site. There are also inconsistencies in results of contamination testing throughout the entire process of cleaning up the United Heckathorn site (see below). The draft EIR (San Francisco Bay Federal Channels Operation and Maintenance Dredging and Sediment Placement Activities, Dredging Years 2025-2034, dated October 2024) for this proposed project does not resolve this discrepancy, and the community is concerned that reuse of sediment from the Richmond Inner and Outer Harbors will spread contamination. We note that there may be sources of contamination yet to be identified. CESP-5

The United Heckathorn site is designated as a Superfund site because it is massively contaminated with DDT (and its derivatives), plus dieldrin and BHC (lindane). These contaminants are toxic to humans and other animals and persist in aquatic ecosystems with a half-life estimated at 150 years. The site was used to process, package, and load chlorinated pesticides onto ships for transport, and apparently spills were common from the 1940s to 1960s. DDT is especially "sticky" to sediment, and is "mostly found in the sediment on the bottom of bodies of water" (1, 2). Shorebirds ingest sediment as they hunt for food, so deposition of DDT-contaminated sediment in marshes or similar areas can contribute to reproductive failure due to weakened eggshells. Fish and shellfish also ingest sediment, and shorebirds and humans ingest fish and shellfish. The site was first placed on the US EPA National Priorities List in 1990. Since the first cleanup of the United Heckathorn site was designed in 1994, there have been many USEPA tests of contamination at the site, along the Lauritzen Channel, Santa Fe Channel, Parr Canal, and into the Richmond Inner Harbor. CESP-6

Please see the letter submitted by the Community Advisory Group for the Richmond Southeast Shoreline (CAG; chartered by Cal EPA Department of Toxic Substances Control (DTSC)) for a detailed historical review of highly variable testing data that consistently demonstrate levels exceeding EPA standards for health and safety in the Richmond Inner Harbor, a proposed dredging site in this application. A second cleanup of the Heckathorn site is currently being designed by the EPA, given the unfortunate failure of the first cleanup.

Consequently, it was a surprise to read in section 5.1 of this application that "There are no known contaminated areas within the action area." And then because USACE does not recognize the existence of contaminated areas, no testing for contamination is proposed for sediment relocation programs. The USACE above all should recognize that sediment is constantly redistributed by ship traffic, tidal currents, and wave action because that is precisely why channels become too shallow for ships and need to be dredged periodically to keep them open.

The variability in testing results through the decades and the proposal statement that testing is unnecessary are very concerning because contamination is a sensitive issue for City of Richmond residents. Testing is an appropriate step in evaluating disposition of sediment, and it is possible that licensed contaminated waste landfills may be required for sediments from some areas. In addition to its toxicity to humans, DDT is perhaps most widely known for its effects on the thickness of eggshells, making any deposition of DDT-contaminated sediment for marsh CESP-7

restorations completely inappropriate. Given the variations in locations and levels of contamination in and around the United Heckathorn site, testing of sediment is of critical importance, and the best science must guide comprehensive sampling and site characterization. In its comments on this application, the Bay Conservation and Development Commission (BCDC) estimates that "less than 5% of the sediment has contaminate levels that prevent some form of beneficial re-use." Then the important question is where these contaminated sediments might be located, and that would seem to require testing. High levels of contamination would trigger transport to an appropriate secure and licensed waste facility. Ideally, the USACE and the USEPA would confer to resolve discrepancies in data and develop a coordinated plan that will be released to the public. How can USACE fulfill its stated goal that "levels of contamination are substantially similar at the extraction and disposal sites" without testing? A scientifically validated testing program needs to be integrated into plans for dredging the Richmond Inner Harbor and the Richmond Outer Harbor. CESP-7 (cont.)

2. The application proposes that sediment is to be moved to a location called "Stege Marsh Nearshore," but Stege Marsh itself has two components, and the map does not delineate the exact location. The Stege Marsh area is relevant to the Superfund-qualified Zeneca site nearby, as well as to potential habitat damage during deposition. CESP-8

Richmond's Superfund-qualified Zeneca Site is contaminated with heavy metals like arsenic, radioactive materials, volatile organic compounds, and agricultural products. It is called a Superfund-qualified site because the US EPA allowed the Responsible Party to enlist in a Voluntary Cleanup Agreement (VCA) as an alternative to the US EPA Superfund List program. A previous City Council approved the construction of 4000 residential units on the site following an incomplete cleanup. The Stege Marsh area is very controversial due to the level of community concern (3), documentation of the toxic materials at the Zeneca site and other contaminated sites nearby (4), scientific reports of developmental abnormalities in mudsuckers (5), and silverside fish data showing elevated levels of PCBs (6). Stege Marsh is also identified as a toxic hot spot in the SWRCB Consolidated Toxic Hot Spot Cleanup Plan, due to contamination with dieldrin (7). It is critical for the application to provide more exact information on the targeted locations so that the community can comment. Alternatively, all references to Stege Marsh Inshore could be removed from this application and addressed in a future application that provides the community with adequate information and outreach. CESP-9

The sediment relocation at Stege Marsh Nearshore is described as potentially providing "additional habitat" for the salt marsh harvest mouse and Ridgway's rail. Community advocates request additional detailed information on how these shy animals will be protected during the proposed sediment deposition. Ridgway's rail and the salt marsh harvest mouse are both endangered species, fully protected under California and federal law. Two breeding pair territories of Ridgway's rail were observed in West Stege Marsh, as noted by DTSC in a monitoring report for the USEPA in 2021, and juveniles have also been seen. We were not able to find a report of sighting the salt marsh harvest mouse in Stege Marsh, though they are found in similar marshes elsewhere along the Bayshore. While it makes good sense to plan for additional habitat for both species (as the application states), the community needs to review specific plans that avoid disturbing these rare animals during sediment deposition or similar activities. CESP-10

Certainly, the decline in numbers for both of these endangered species correlates with loss of habitat. Perhaps there is also a correlation with exposure to contamination. It would be advantageous to involve scientists and the local community in looking at options for protecting rare species while assessing current contamination levels in Stege Marsh and planning for CESP-11

cleanup of Stege Marsh before approving a plan to deposit sediment from an unknown location into an area that cannot be identified from the information supplied in the application materials. CESP-11 (cont.)

LOCATION AND CONTEXT

Richmond is an environmental justice city with a substantial legacy of industrial contamination, much of which is along the shoreline, including a coal shipping terminal, the United Heckathorn Superfund site, the Zeneca site (a Superfund qualified site), the Liquid Gold Superfund site, and the Chevron refinery. This situation is now complicated by sea level rise, which threatens to spread shoreline contamination both inland and into the Bay. While the community recognizes the positive aspects of sediment relocation programs, they have extreme concerns about how shoreline contamination is handled to protect public health and living Bay ecosystems. In addition, the community is very protective of the existing biodiversity along the 32-mile Richmond shoreline and seeks to have it enhanced, rather than exposed to risk. CESP-12

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https://www.waterboards.ca.gov/water_issues/programs/tmdl/2012state_ir_reports/00110.shtml

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Arthur Feinstein, Chair
Sierra Club Sea Level Rise Committee
Bay Alive Campaign

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California Marine Affairs and Navigation Conference

From: Jim Haussener
To: Graham-Davis, Jazzy@Waterboards
Subject: San Francisco Bay Reginal Dredged Material Management Plan 2025-2044
Date: Monday, December 30, 2024 4:01:11 PM

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Thank you for allowing me to comment on this document.

I still don't understand the need for this document. In 2014 Mr. Theadore Brown did a presentation in which he stated DMMPs are to include potential beneficial use of dredged material.

This reluctance to embrace probably is from remembering the "good all days" of getting enough money for dredging or a study. Not enough funding for both and the likelihood of funding in the out years was highly unlikely.

It is stated a key driver for this process is the uncertainty over future placement site availability. The Plan states that Montezuma has 30 mcyd capacity. And this report basically lists potential new sites, although some like Bel Marin Keys have been listed since at least 2010. This report doesn't recommend action to move any of those projects forward.

Preliminary Assessments, what is meant by "near-term" for BU capacity?

What is not mentioned is the question of will navigation performance be increased because of this program?

What is probability of each site having created or restored wetlands to the SLR levels during the twenty-year horizon?

I am not aware of anyone opposed to beneficial use; it has always been a question of who pays.

If sediment is such a valuable resource at this time to create and or restore wetlands in the face of climate change and sea level rise there should be development of standards to maximize the value of beneficial use.

First should be a yes no statement of will the beneficial use site provide the benefits within the time frame of this program at the projected elevation at that time. Material that has been used to meet this criteria could be considered BU, all other material should be considered transactional.

From there an analysis should be undertaken to determine the value of each site versus the amount of sediment required. Basically, sites that require more fill compared to other sites (say 6 feet versus 2 feet) for a given amount of acreage should be lower on the priority list, all other items being equal. And material placed at these sites should be considered transactional until wetlands are created that meet the SLR levels within twenty years.

What is the total cost of dredging, transporting and rehandling the dredged material to each of these sites? It appears that the per yard cost of the strategic placement project was close to the per yard cost of taking the sediment to Montezuma. What is the difference in ecosystem benefits so that a decision can be make about where to send the limited sediment resource.

However, these points do not alleviate the Congressional mandate concerning navigation.

For these ten projects, what has been the BU percentage per year for the past five years?

Why continue to expand EWN opportunities? To quote a former SPN Commander, will the juice be worth the squeeze? Will these sites generate sufficient wetlands during the planning horizon to be worth the resources required. It appears other regions such as North Atlantic Division has more experience with EWN. Why not use their expertise to go directly to full projects. I saw where someone from the Sonoma Land Trust was quoted on Baylands as saying that if we don't get these projects started by 2030 it will be to late. Do we have time to develop an innovation lab, plan a pilot study, implement and then monitor before doing a full-size project? If there is a crisis, we need to move, if there isn't a crisis then apply limited resources in a different direction.

Is Table 2 on page 23 accurate? Pinole shoal is listed as an annual recurrence. How often between the closure of the Mare Island Naval Ship yard and today has it been dredged annually?

LTMS creation, per the ROD it was 1990 that the LTMS was first convened.

Based on the BO that allows for dredging outside of the work window if the material is BU what is the "timing of actions" issue?

Is the market limited by bidders, or by dredging projects? Richmond Outer and Pinole Shoal are one annual project, MSC is one project. These three projects are dredged by USACE fleet or the West Coast Hopper Contractor. Richmond Inner, Suisun Bay Channel and Oakland's Inner and outer are three projects dredged annually. Redwood City up until FY25 has been dredged every other year. There is a very valid argument that not enough dredging takes place to have dredge equipment kept on the West Coast by multiple contractors.

I recommend the elimination of the Integrated Alternatives Analysis for all non-federal work if Alternative 2 is approved by the agencies

Table 5, a line showing number of dredging episodes during the "time period' would be helpful.

While USACE has not shared the data, they now have a project-by-project cost, except for MCS and Petaluma and Napa rivers, for the placement of dredged material at in-bay placement sites. As such, this should be Alternative X, which meets the

criteria of the Federal Standard, which is a regulation.

The Corps needs to share the aggregate data costs for dredging and placing material using in-bay placement, SF DODS, and Montezuma. I recommend Montezuma as it has a 30 MCYC capacity compared the Cullinan Ranch's capacity of less than 1 MCYD. It may turn out that using in Bay placement sites for all dredging projects except MSC and charging a nominal tipping fee of less than $5 may have a bigger bang for the buck than the proposed alternative 2.

Sincerely,

Jim Haussener

Richmond Southeast Shoreline Area Community Advisory Group

Richmond Southeast Shoreline Area Community Advisory Group

TOXICS COMMITTEE

December 30, 2024

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San Francisco Bay Regional Water Quality Control Board
Jazzy.Graham-Davis@waterboards.ca.gov
Engineering Geologist
1515 Clay Street, Suite 1400
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Subject: San Francisco Bay Federal Channels Operation and Maintenance Dredging and Sediment Placement Activities
Draft Environmental Assessment/Environmental Impact Report

Dear US Army Corps of Engineers San Francisco District and
San Francisco Bay Regional Water Quality Control Board:

The Richmond Southeast Shoreline Area Community Advisory Group (CAG) Executive Committee is offering the following narrowly focused comments on the San Francisco Bay Federal Channels Operation and Maintenance Dredging and Sediment Placement Activities, Dredging Years 2025-2034, Draft Environmental Assessment/Environmental Impact Report, prepared by Scout-Stantec Joint Venture, dated October 2024, available at the following link:
https://www.waterboards.ca.gov/sanfranciscobay/public_notices/#section401

The CAG's comments are limited:

1. The United Heckathorn US EPA Superfund Site including Lauritzen Channel and Parr Channel sampling data confirm presence of USEPA banned compounds far beyond acceptable levels for marine wildlife. The channel fish are so contaminated (poisoned) with bioaccumulated chemicals, they are not edible by humans.

   The Lauritzen Channel and Parr Channel are contiguous to the Santa Fe Channel and Richmond Inner Channel waterway. Sediments and tidal waters mix and create an extremely complex environment of contamination and re-contamination aka residuals.

   The EA/EIR omits more sophisticated and responsive plans for comprehensive sampling and site characterization of the Richmond Inner Channel and Santa Fe Channel prior to scheduled dredging, which are critical for success, given the proximity of confirmed contamination from Lauritzen Channel at United Heckathorn, Richmond CA, US EPA Superfund Site. RSSA-CAG- 01

   Comment: More sophisticated multi-federal/state/regional/local agency coordination and zone-wide planning for comprehensive characterization and disposal of contaminated sediment is required to prevent unintentional spread through unwitting dredging and relocation of contaminated sediments.

   Recommendation: For suggestions on contaminated post-dredge sediments, aka residual management, see "Environmental Dredging Residual Generation and Management", Integrated Environmental Assessment and Management, Volume 14, Number 3 – pp 335-343, 2/2/2018. https://setac.onlinelibrary.wiley.com/doi/pdf/10.1002/ieam.4032

2. The US Army Corps of Engineers (USACE) EA/EIR describes Richmond Inner Channel sediment quality and contamination impacts based on sparse and infrequent sampling data. The most recent data collected by the USACE in the Richmond Inner Channel appears to be 2012, which confirmed presence of Total DDT, Dieldrin and PCBs.

   The United Heckathorn US EPA Superfund Site drains directly into Richmond Inner Harbor and Santa Fe Channel. The Superfund channel cleanup continues to stump regulators as it passes through its fifth 5-year review documenting the 25-year-old failure and 40-years of extreme contamination of the San Francisco Bay Waters. The status isn't rare or unusual, as significant percentages of sediment and dredging failures at SuperFund MegaSites nationwide garnered attention and focused study by the National Research Council. Recommendations provided in the Sediment Dredging at Superfund Megasites Assessing Effectiveness appear to be tailor-made for the Richmond Inner Channel proposed dredging plans. RSSA-CAG- 02

   Comment: More sophisticated multi-federal/state/regional/local agency coordination and zone-wide planning for comprehensive characterization and disposal of contaminated sediment is required to prevent unintentional spread through unwitting dredging and relocation of contaminated sediments.

   Recommendation: For descriptive recommendations and a comprehensive review of complex site conditions, aka dredging contaminated sediment in the Richmond Inner Channel, see "Sediment Dredging at Superfund Megasites, Assessing Effectiveness", National Research Council, Committee on Sediment Dredging at Superfund Megasites, Board on Environmental Studies and Toxicology, Division on Earth and Life Studies, National Academies Press, Washington DC, 2007.
   https://semspub.epa.gov/work/HQ/174467.pdf

3. Sample sediment data were collected in the Richmond Inner Harbor, at the direction of USACE SF in 2012. The data, measured in ug/kg (micrograms/kg aka parts per billion), confirmed presence of Total DDT, Dieldrin and Total PCBs at sample locations RIH-6A-1, RIH-6A-2, RIH-6B-1 and RIH-6B-2.

   - Data were reported in the Port of Richmond Inner Harbor 2012 Maintenance Dredging Higher Resolution Sediment Testing – Sampling and Analytical Results, prepared for the USACE, SF, prepared by Kinnetic Laboratories, Inc., Santa Cruz, CA.
   - The same data were included in the Source Identification Study Report, United Heckathorn Site, for US EPA Region 9, by CH2MHill, March 2014, as Table 7-1 "Sediment Chemistry Data Collected by SF USACE – Richmond Inner Harbor". RSSA-CAG- 03
     Table 7-1, pdf page 64 of 97
     https://www.envirostor.dtsc.ca.gov/getfile?filename=/public%2Fdeliverable_documents%2F6690434098%2FFinal_UH_SourceID_report.pdf

   Separately, sample sediment data was collected in Lauritzen Channel (United Heckathorn Superfund Site), and Parr Channel, at the direction of the Bay Area Stormwater Management Agencies Association (BASMAA) in collaboration with USEPA and the City of Richmond. The data measured PCBs in ng/kg.

   - Geosyntec collected samples and reviewed records starting in 2000, 2001, 2002, 2005-2007, 2010, 2011 and 2013. The Clean Watersheds for a Clean Bay (CW4CB) Task 3 Source Property Identification and Referral Pilot Study Lauritzen Channel and Parr Channel Watersheds, Richmond, CA, was prepared by Geosyntec, July 2016.

- PCB Aroclor congeners in Harbor Lauritzen Channel and Parr Channel are significantly correlated to Aroclors 1254 and moderately correlated to Aroclor 1248. No samples significantly correlated to Aroclors 1016 or 1242. Per the CW4CB Study, because weathering can affect homolog profiles, significant and moderate correlations alone are not sufficient to identify source.
  PCBs Figures A-2, A-4, A-5, A-6, A-8, A-10, A-11, Table B-2 Soil/Sediment, B4, B5, B6
  Appendix D: PCB Referral Site Forms and Figure 1
  https://basmaa.org/wp-content/uploads/2021/01/final-cw4cb-task-3-cccwp-report.pdf

Comment: Standard coordinated multi-agency federal, state, regional, local annual analysis of PCB congeners throughout the Richmond Inner Channel zone is overdue.

Recommendation: For relevant case study insights, plan recommendations, and a comprehensive literature review – "Sediment Remedy Effectiveness and Recontamination: Selected Case Studies", Association of State and Territorial Solid Waste Management Officials (ASTSWMO), CERCLA and Brownfields Research Center, Sediment Focus Group, Washington, DC, April 2013.
https://clu-in.org/download/contaminantfocus/sediments/2013-04-Sediment_Remedy_Effectiveness_and_Recontamination.pdf

Recommendation: Develop GIS-based standards to document, track and map sample data. Coordinate and lead state, regional and local agencies toward solutions based on comprehensive, coordinated and shared data collection.

Respectfully submitted,

(electronic signature)

Stephen Linsley
Chair, Toxics Committee
Richmond Southeast Shoreline Area Community Advisory Group

San Francisco Baykeeper, Clean Water Action

December 30, 2024

Transmitted via Electronic Mail

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RE: Draft EA/EIR for SF Bay Federal Channels Operations and Maintenance Dredging and Sediment Placement Activities, Dredging Years 2025-2034 (SCH #202402098)

To whom it may concern:

On behalf of San Francisco Baykeeper and Clean Water Action and our respective members who use and enjoy the environmental, recreational, and aesthetic qualities of San Francisco Bay and its surrounding tributaries and ecosystems, we respectfully submit these comments for consideration by the U.S. Army Corps of Engineers ("Corps") (lead agency under the National Environmental Policy Act, "NEPA") and the San Francisco Regional Water Quality Control Board ("Regional Board") (lead agency under the California Environmental Quality Act, "CEQA") with regard to the Draft Environmental Assessment/Environmental Impact Report ("Draft EIR") for Maintenance Dredging of the Federal Navigation Channels in San Francisco Bay, Dredging Years 2025-2034 (hereinafter, the "Project").

Baykeeper's mission is to defend San Francisco Bay from the biggest threats and hold polluters and government agencies accountable to create healthy communities and help wildlife thrive. Our team of scientists and lawyers investigate pollution via aerial and water patrols, strengthen regulations through science and policy advocacy, and enforce environmental laws on behalf of the public. Baykeeper has an ongoing history of protecting the bed and substrate of the Bay as a limited resource for the public in perpetuity. We have dedicated significant resources to ensuring navigational dredging is conducted in a manner protective of the Bay's water quality and special status species.

Clean Water Action is a million member national organization whose mission is to protect our environment, health, economic well-being, and community quality of life. We do this by organizing

strong grassroots groups and coalitions to solve environmental and community problems and establishing campaigns to elect environmental candidates. In California, we are particularly dedicated to ensuring that everyone, regardless of race, economic status, or any other factor, has access to safe, clean water to drink, fish from, and recreate or work in. As such, we take a dual approach of stopping pollution at the source and addressing the harm already done to our water resources.

1. **The Draft EIR Must Be Revised to Adequately Analyze the Project Alternatives**

Section 2.3.2 of the Draft EIR evaluates the No Action Alternative under NEPA and the No Project Alternative under CEQA. Both analyses are flawed. Both alternatives appear to rely on the assumption that during the last dredging period of 2015-2024, the Richmond Outer Harbor and the Pinole Shoal Channel were dredged annually, alternating between hopper dredges and clamshell dredges beginning in 2017. While this fact pattern was analyzed in the EIR for the 2015-2024 dredging period, this is not how the Corps actually proceeded between 2017 and 2024. Instead, the Corps unilaterally decided to dredge both the Richmond Outer Harbor and the Pinole Shoal Channel with a hopper dredge in alternating years, reducing the dredging schedule for these channels from annual to every other year, and relying on emergency dredging during off-years to maintain both channels. The Corps changed the dredging schedule for these two channels mid-dredging term and did not conduct any supplemental environmental impact analysis. BK-01

Now, the Draft EIR describes the No Action Alternative under NEPA as including dredging the Richmond Outer Harbor and Pinole Shoal Channel annually, alternating between hopper and clamshell dredges. (Draft EIR at 2.23-2.24). As discussed above, this description does not represent "no action," because it is not how the Corps proceeded during the last dredging term. Under NEPA, the No Action Alternative would continue the Corps' dredging program "in the same way as it has been done in the past, as authorized." (Draft EIR at 2.21). The No Action Alternative in the Draft EIR must be revised to accurately reflect the last dredging period. It must clarify whether the No Action Alternative actually means the Corps will dredge both channels annually, alternating between hopper and clamshell dredges or continue with their previous dredging strategy.

Similarly, the Draft EIR describes the No Project Alternative as "a continuation of existing dredging activities and is the current dredging program as implemented by [the Corps] irrespective of current federally authorized dredging frequencies for channels." (Draft EIR at 2.26). Under this alternative, the Corps claims that "dredging in Richmond Outer Harbor and Pinole Shoal Channel occurs every other year." (*Id*.). Again, this assertion is factually inaccurate. In reality, the Corps did not comply with a 2-year dredging schedule for these channels. Rather, as discussed in Baykeeper's comments regarding the Notice of Preparation for the Project, the Port Captain for the Marathon Refinery in Martinez, whose tankers access the refinery via the Pinole Shoal Channel, contacted the BK-02

U.S. Coast Guard (USCG) in 2020 and 2022 to request emergency dredging. The Corps conducted emergency dredging in Pinole Shoal Channel in 2020. The No Project Alternative in the Draft EIR must be revised to account for the Corps' actual implementation of its operations and maintenance dredging program during the last dredging term.

In response to Baykeeper's comments regarding the Notice of Preparation for the Project, the Corps and Regional Board asserted "[e]ffects of the reduced, or lack of, annual maintenance of dredging for Richmond Outer Harbor and Pinole Shoal channels on navigation will be described in this EA/EIR." (Appendix F at C-15). Instead, the Draft EIR glosses over this change in the dredging schedule and its impacts. The only reference to navigation impacts from reduced dredging in these channels is as follows:

> The reduced annual maintenance, or entire lack [sic] annual maintenance of dredging for Richmond Outer Harbor and Pinole Shoal channels ***would potentially increase the risk of a navigational hazard*** that would result in vessel groundings, allisions, or collisions, as well as oil spills that could result from such incidents. However, under this alternative, similar to other alternatives evaluated in this Draft EA/EIR, emergency dredging would be performed by [the Corps] to address navigation hazards if the depth of a channel becomes a concern for navigation, as reported by the San Francisco Bay Pilots, then subject to issuance of an emergency declaration by the USCG, then review and action by [the Corps].

BK-03

(Draft EIR at 3.151) (emphasis added). Although this paragraph in the Draft EIR acknowledges the likelihood of adverse impacts from reduced dredging in the Richmond Outer Harbor and Pinole Shoal Channel, the Draft EIR fails to analyze this impact anywhere else.

In comparison, emergency dredging in Bulls Head Reach, a section of Suisun Bay Channel, is consistently included in the Corps' Project alternatives analyses. Table 2-5, *No Action Alternative Summary*, Table 2-7, *No Project Alternative Summary*, Table 2-9, *Alternative 1 Example Implementation Summary*, Table 2-11, *Alternative 2 Example Implementation Summary*, Table 2-13, *Alternative 3 Example Implementation Summary*, and Table 2-15, *Alternative 4 Example Implementation Summary*, in the Draft EIR include a repeating footnote stating the Corps "does not anticipate performing more than three emergency dredging episodes consisting of less than 30,000 cy each per year."

BK-04

The Draft EIR must be revised to include additional analysis regarding emergency dredging in Richmond Outer Harbor and Pinole Shoal Channel, on par with the analysis conducted for emergency dredging at Bulls Head Reach. Can the Corps estimate how frequently it will need to

conduct emergency dredging in Richmond Outer Harbor and/or Pinole Shoal Channel? If yes, how frequently will these channels be emergency dredged; if no, why not? Can the Corps estimate the amount of dredged material that will need to be removed from these channels via emergency dredging? If yes, how much; if no, why not? Without the answers to these questions, the Draft EIR's analysis remains unacceptably speculative as to these impacts.

Section 2.3.3 of the Draft EIR analyzes Alternative 1 (Beneficial Use: Diversion from Deep Ocean Disposal), Section 2.3.4 of the Draft EIR analyzes Alternative 2 (Beneficial Use: Regional Optimization, Leverage Hopper Dredging), Section 2.3.5 of the Draft EIR analyzes Alternative 3 (Beneficial Use: Cost Share Opportunity), and Section 2.3.6 of the Draft EIR analyzes Alternative 4 (Beneficial Use: Maximized). While we support increasing the beneficial use of dredged material as part of the Project, the Corps views most of these alternatives as cost effective only if the Corps increases hopper dredging in the navigation channels. It is the Corps' desire to include the Project in its West Coast regional dredging schedule that results in the Corps' inability to schedule around all threatened and endangered species work windows in the Bay. (Draft EIR at 2.13). This is a policy choice by the Corps, not an issue of infeasibility. The Federal Standard for Suisun Bay Channel includes a strict work window and prohibits hopper dredging, which would harm Delta Smelt. The Corps could and should adopt similar limitations in Richmond Outer Harbor and Pinole Shoal Channel to protect Longfin Smelt, but has chosen not to revise the Federal Standard for these channels. The primary condition the Regional Board added to the Clean Water Act section 401 Water Quality Certification for the last dredging period was to reduce hopper dredging in the navigation channels to protect Longfin Smelt under state law. Now that the Longfin Smelt has been listed as endangered under federal law, it is reasonable to expect hopper dredging will be further restricted, rather than allowed to increase. When the federal consultation for Longfin Smelt is completed, the Alternatives in the Draft EIR will likely need to be revised significantly. As discussed in detail below, increasing beneficial use to create new habitat does not justify the taking of these endangered species.

BK-05

BK-06

2. The Draft EIR Must Be Revised to Adequately Analyze the Project's Impacts on Sediment

The Draft EIR adequately incorporates the Corps Headquarters' newly adopted policies: 1) increase the beneficial use of dredged material to 70% by 2030, and 2) increase flexibility, including cost-sharing, in determining the "Federal Standard" for the Corps' dredging programs. If the Corps implements its operations and maintenance dredging program as projected, increasing beneficial use throughout the dredging term, the percentage of beneficial use should be well beyond the Long-Term Management Strategy's (LTMS) goal of 40% for dredged sediment. The Bay is continuing to experience a severe sediment deficiency (Draft EIR at 3.113), which, combined with rising sea levels, puts the remaining wetlands around the Bay's perimeter at risk of submersion.

BK-07

Section 5.7.1 of the Draft EIR identifies the placement of dredged material in Bay as an area of known controversy. The LTMS and its limitations on in-Bay disposal were developed in the late-1990's, and it is likely there is new information from the past thirty years that could impact the program's initial underlying assumptions. However, the Corps cannot unilaterally modify the LTMS. Both the Regional Board and the San Francisco Bay Conservation and Development Commission (BCDC) have incorporated elements of the LTMS into their planning documents – the Basin Plan and the Bay Plan, respectively. Any modifications to the LTMS goals must be grounded in the current science and be thoroughly analyzed by the agencies in the LTMS management committee — activities which are outside the scope of the Project. In the meantime, the existing LTMS goals continue to control the placement of dredged sediment in and around the Bay.

3. **The Draft EIR Must Be Revised to Adequately Analyze the Project's Impacts on Biological Resources**

Section 3.3 of the Draft EIR must be revised to adequately describe the legal status for special status species. First, the Corps is in the process of consulting with the U.S. Fish and Wildlife Service (USFWS) regarding impacts of the proposed dredging operations on the San Francisco Estuary distinct population segment of Longfin Smelt (Draft EIR at 3.29) and expects a biological opinion in early 2025. Second, the Draft EIR incorrectly describes the White Sturgeon's federal and state status. On October 8, 2024, USFWS published its 90-day finding under the federal Endangered Species Act (ESA), finding the petition to list the White Sturgeon as threatened presents substantial scientific or commercial information indicating the listing may be warranted. USFWS missed its 12-month deadline to publish a proposed listing for White Sturgeon, and litigation to enforce that deadline is imminent. In the meantime, the Corps should obtain a conference opinion from USFWS regarding White Sturgeon to fully mitigate potential impacts to this species – relying on the old analysis for Green Sturgeon is not a substitute for this analysis. We recommend any future conference opinion, biological opinion, or incidental take statement specify that "no more than 1 Green Sturgeon or White Sturgeon may be taken by dredging," since that is what the Draft EIR's analysis implies as the maximum impact. (Draft EIR at 3.50). White Sturgeon have the potential to be in the Bay and Estuary year-round, so a work window will not provide adequate protection from entrainment. Ship strikes are another cause of White Sturgeon mortality, so their status as "strong swimmers" (*Id.*) does not indicate they can avoid dredging equipment. Additionally, in June 2024, the California Fish & Game Commission determined that listing White Sturgeon as threatened may be warranted and declared White Sturgeon a candidate species for listing under the California Endangered Species Act (CESA). Candidate species are protected during the remainder of the listing process pursuant to Cal. Fish & Game Code section 2085.

BK-08

BK-09

We expect the Corps and the Regional Board to revise the Draft EIR in accordance with the forthcoming LTMS biological opinion for Longfin Smelt and in accordance with the conference opinion under the ESA and CESA for White Sturgeon. It is our understanding that the Corps and the Regional Board anticipate releasing the Final EIR in fall 2025; thus, there should be adequate time for these processes to conclude and be incorporated into the Final EIR.

Section 3.3.4 of the Draft EIR significantly understates the Project's adverse impacts on Longfin Smelt and also overstates the effectiveness of the proposed mitigation measures. The Draft EIR estimates that less than 8% of the Longfin Smelt population could be affected by the Project. (Draft EIR at 3.45). Contrary to the suggestion that 8% is of limited concern, in its recent status review of the San Francisco Bay-Estuary distinct population segment of Longfin Smelt, which supported a federal ESA listing as "endangered," the USFWS found: "it is likely that Longfin Smelt population sizes will dip below recoverable levels within a decade if these recent levels of reproduction and survival continue." (USFWS. 2024. Longfin Smelt Species Status Assessment at p. 195.) Given its precarious status, harm to up to 8% of the population of Longfin Smelt on an annual or semi-annual basis may result in the accelerated loss of this species and would also limit options for recovery of this unique population. BK-10

Furthermore, the Corps' and Regional Board's method for estimating potential loss by substituting the area impacted for the proportion of the population impacted (Draft EIR at 3.45) incorrectly assumes that the fish do not move into the zone of dredging operations while dredging is occurring. In fact, Longfin Smelt tend to aggregate in deep channel environments (Rosenfield and Baxter 2007; Rosenfield 2010) and move/swim. Even a stationary dredging operation could impact more than 8% of the population if Longfin Smelt continue to swim into the area of the dredging operations. Thus, the assumption that the proportion of the channel area dredged can be translated to show the proportion of the Longfin Smelt population impacted is not scientifically accurate and likely understates the real adverse impacts that dredging operations have on Longfin Smelt. The Draft EIR must be revised to accurately characterize Longfin Smelt behavior and accordingly adjust the Project's estimated population take. BK-11

Additionally, the Draft EIR artificially reduces the adverse impacts to Longfin Smelt by inaccurately describing their life stages. For example, the Draft EIR states: "Longfin smelt larvae are most abundant in the water column usually from January through April (Reclamation 2008)." (Draft EIR at 3.34). However, Longfin Smelt larvae are present in the Bay and Delta through June (CDFW 2010 at 36; Rosenfield 2010 at 26), i.e., into the work window. Late-stage larvae (a.k.a., "pre-juveniles" 20-30 mm in length) are present in the work area into August (Lewis, L. UC Davis, *personal communication*). Whether they are present in San Pablo Bay, Central, or South Bay depends on Delta outflow hydrology. The distribution of larvae and early juveniles (Age 0) tracks the salinity field (Dege and Brown 2004); thus, during years with high Delta outflow, one would expect these age classes to be present in both San Pablo Bay and South Bay. BK-12

The Corps' attempt to connect increases in Longfin Smelt taken with water year type is misleading and must be revised. (Draft EIR at 3.49). The data do not reveal the relative number of fish caught in wet versus drier years and, in any case, there is no indication that the proportion of Longfin Smelt killed by current dredging operations is consistent with conservation of this endangered population in *any* year type. Evidence of "less" take in wet years does not indicate that Project-related mortality in those years has no impact on species viability. Longfin Smelt are on the brink of extinction so that no *a priori* amount of biologically acceptable take for this species has been defined. BK-13

Moreover, although Longfin Smelt that are spawning or incubating as eggs are the least likely to be able to avoid being entrained by hopper dredging, (Draft EIR at 3.49), it is unclear whether Longfin Smelt are capable of escaping entrainment at any life stage. Their ability to evade harm from hopper dredging would depend on how fast the dredge head moves and how much suction is created by the hopper dredger relative to local currents. Such modifications to hopper dredging operations have not been considered by the Corps. The Draft EIR's risk of exposure calculations (Draft EIR at 3.50) are incorrect, as they rely on otter trawl data, effectively ignoring larval and early juvenile Longfin Smelt that are not surveyed by the otter trawl. The Draft EIR's reasoning (that protecting Longfin Smelt larvae is unimportant because of their higher relative abundance) does not avail; the fact that larvae generally outnumber juveniles does not mean that the take of larvae cannot compromise population viability. The Draft EIR must be revised to correct these inaccuracies and flawed assumptions regarding Longfin Smelt. BK-14

Section 2.3.1.5 of the Draft EIR describes several mitigation measures that the Corps would implement in all alternatives to protect Longfin Smelt and Delta Smelt from hopper dredging; however, these measures are unlikely to be effective. First, the Corps plans to implement a pilot study to assess the potential for directing fish away from hopper dredging operations to reduce entrainment by installing and operating fish deterrent equipment (i.e., lights, sound speakers, and/or air jets) to trigger avoidance response in fish (Draft EIR at 2.17). As stated in the Draft EIR: "There is [sic] no data on avoidance or attraction for longfin smelt." (*Id.*) Where light and pressure barriers have been tried in the past (e.g., for salmonids in the Delta), the results have been equivocal and varied depending on the specific geographical context. Also, there is no guarantee or reason to believe that Delta Smelt and/or Longfin Smelt will respond in the same way salmonids do to these disturbances. For example, it is unlikely lights will deter Longfin Smelt, because these fish live in very turbid environments where artificial light stimuli would be expected to attenuate quickly. BK-15

Even if the mix of light, sound, and water pressure could effectively move the fish away from the dredging operations, the pilot study must be designed to monitor the fate of the fish that are dispersed by the proposed mitigation measures. Longfin Smelt more than likely aggregate in deep water because it benefits them ecologically; therefore, moving them out of these environments,

into less suitable habitats and potentially into the mouths of predators, could harm these imperiled fish. The pilot study must be revised to investigate the effect on Longfin Smelt of any displacement by the fish deterrent equipment; simply showing that they moved away from the dredging equipment is not enough. For example, the Corps would need to provide some assurance that other predator fish would not become trained to respond to the sound and pick off displaced Longfin Smelt (or other prey species). There is evidence, including from within this ecosystem, that Striped Bass can be trained to respond to an anthropogenic disturbance that makes prey fish more susceptible. The Corps must make the findings from this pilot project available for public comment and review prior to any decision to continue the pilot project past the initial 2-year term.

Second, the Corps intends to implement environmental DNA (eDNA) testing to detect Longfin Smelt during hopper dredging activities. (Draft EIR at 2.17). This approach has been shown to be ineffective at protecting Longfin Smelt from entrainment. As stated in the Draft EIR:

> From July 21 through July 31, 2023, during hopper dredging by the *Essayons* at Pinole Shoal Channel, six eDNA sampling events with three replicates per sample occurred. These samples later were assessed for the presence of longfin smelt. ***Despite being repeatedly observed during the physical entrainment monitoring*** aboard the *Essayons*, no longfin smelt were detected in the eDNA samples (ICF 2023). (emphasis added).

BK-16

(Draft EIR at 2.17). The Corps' proposal to test water for eDNA prior to dredging is unlikely to protect Longfin Smelt, as fish swim. Moreover, in a tidal environment, the distances fish travel can be great. So, an area that has no Longfin Smelt in the morning, could easily host an abundance of Longfin Smelt in the afternoon. Thus, if the Corps chooses to proceed with eDNA testing, genetic detection must be measured in real time (which is not yet possible for eDNA) and the monitoring (eDNA) and visual observations should occur within 1000 feet of active dredging. If the eDNA monitoring and/or visual observations indicate the presence of Longfin Smelt, then dredging operations must be delayed and/or cease immediately until monitoring and/or visual observations no longer indicate the presence of Longfin Smelt in the dredging area.

Third, the Draft EIR states the Corps has been testing the use of an echosounder in conjunction with dredging activities. (Draft EIR at 2.17). However, given the lack of additional analysis for this technology, it is unclear whether the Corps proposes to implement this measure as part of the Project. The Draft EIR must be revised to clarify what the "echosounder" technology entails, and whether it will be used in conjunction with other technologies (i.e., with eDNA testing). How will sediment disturbance caused by dredging activities impact the accuracy of this technology? Will this technology have adverse impacts on other wildlife in the Project area?

BK-17

Given the unproven nature of these proposed mitigation measures, they cannot be relied upon to mitigate adverse impacts to special status fish. Furthermore, a pilot project to explore the value of fish deterrent equipment would not amount to avoidance and full mitigation, as required under CESA. Simply detecting these fish using eDNA testing or dispersing them using an echosounder also

do not amount to avoidance and full mitigation. We recommend the Corps not implement these so-called mitigation measures, and instead use the cost-savings to fund additional clamshell dredging in the channels.

Finally, these mitigation measures appear to be targeted to only Delta Smelt and Longfin Smelt, but these are not the only special status fish species adversely impacted by the Project. The Draft EIR must be revised to explain whether these mitigation measures apply to other fish in addition to Delta Smelt and Longfin Smelt. The Draft EIR must also be revised to document whether these measures harm or mitigate impacts to the sturgeon species, salmonids, etc. BK-18

4. The Draft EIR Must Be Revised to Adequately Analyze Hazards and Hazardous Materials

The Draft EIR makes vague references to unexploded ordnances in Suisun Bay that must be further analyzed. The Executive Summary notes that dredged material from Suisun Bay Channel is not suitable for beneficial use because of the "possibility of unexploded ordnances in the sediment" from the historical Port Chicago explosion. (Draft EIR at ES-XVI). This note is repeated in section 2.3.4 of the Draft EIR, describing limitations on Alternative 2 (Beneficial Use: Regional Optimization, Leverage Hopper Dredging) (*Id*. at 2.35). The Introduction to the Draft EIR states: "As of 2023, USACE Suisun Bay Main Channel material upstream of Station 200+00 must be disposed at Suisun Bay placement site (SF-16). This material must stay within proximity of the channel because of the non-zero chance of containing remnants from the Port Chicago explosion on July 17, 1944." (*Id.* at 1.28).

BK-19

This hazard was not addressed in any of the documentation for the 2015-2024 dredging term, and it must be fully analyzed now. The Draft EIR must be revised to include discussion of the following questions: What is the evidence of unexploded ordnances in dredged material (i.e., is the presence of ordnance presumed, or has it actually been observed)? What agencies (federal, state, and local) are involved in the decision-making process for how to handle unexploded ordnances in dredged material? What is the rationale for leaving unexploded ordnances in Suisun Bay, versus removing the ordnances? Can unexploded ordnances be detected in dredged material and removed for proper disposal prior to in-Bay placement? What is the safety risk to mechanical dredger contractors who dredge Suisun Bay Channel? What safety measures are implemented to avoid detonating the unexploded ordnance during dredging activities? The Corps and the Regional Board must revise the Draft EIR to include a robust analysis of the hazard posed by unexploded ordnances in Suisun Bay.

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5. Conclusion

Thank you for the opportunity to provide comments regarding the Draft EIR for the Corps' operations and maintenance dredging program in the Bay for 2025-2034. Given the potentially significant revisions to the Draft EIR, we respectfully request the Corps and Regional Board solicit additional public comments regarding the Final EIR in 2025. Please feel free to contact us using the contact information below.

Sincerely,

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Attachments.

State Water Contractors and San Luis & Delta-Mendota Water Authority

December 16, 2024

Sent by email: Jazzy.Graham-Davis@waterboards.ca.gov and SF-Bay-Dredging@usace.army.mil

Jazzy Graham-Davis
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1515 Clay Street, Suite 1400
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Re: Draft Environmental Assessment/Environmental Impact Report San Francisco Bay Federal Channels Operation and Maintenance Dredging and Sediment Placement Activities, Dredging Years 2025 - 2034

The State Water Contractors (SWC) and San Luis & Delta-Mendota Water Authority (SLDMWA) submit these comments regarding the Draft Environmental Assessment/Environmental Impact Report (Draft EA/EIS) for the San Francisco Bay Federal Channels Operation and Maintenance Dredging and Sediment Placement Activities, Dredging Years 2025–2034. This report was jointly prepared by the U.S. Army Corps of Engineers (USACE) and the San Francisco Bay Regional Water Quality Control Board (Regional Water Board). As outlined in the Draft EA/EIS, USACE proposes to continue the maintenance dredging of federal navigation channels in San Francisco Bay to ensure their navigability.

SWC represents 27 of the 29 Public Water Agencies (PWAs) that hold contracts with the California Department of Water Resources (DWR) for participation in the State Water Project (SWP). Together, these agencies supply water to approximately 27 million Californians—about two-thirds of the state's population—and irrigate over 750,000 acres of agricultural land. SWC members provide water to consumers throughout the San Francisco Bay Area, the San Joaquin Valley, the Central Coast, and Southern California. The SWP's water supply delivered through the Delta is a critical source for most SWC members.

SLDMWA represents 27 member agencies, most of which hold contracts with the U.S. Bureau of Reclamation for water from the Central Valley Project (CVP), and which depend on CVP water as the principal source of water they provide to users within their service areas. That water supply serves approximately 1.2 million acres of agricultural lands within the San Joaquin, Santa Clara, and San Benito Valleys, a portion of the water supply for nearly 2 million people in the Silicon Valley, and millions of waterfowl that depend upon nearly 200,000 acres of managed wetlands and other critical habitat within the largest contiguous wetland in the western United States.

Given the SWP and CVP's reliance on water from the Sacramento-San Joaquin Delta and its water quality obligations in the Delta, SWC and SLDMWA have a strong interest in issues affecting both the quantity and quality of water supplies in the Bay-Delta. The proposed dredging will cover areas

SWC - SLDMWA -01

from San Francisco Bay to Suisun Bay. The Draft EA/EIS does not sufficiently evaluate potential water quality and water supply impacts of the proposed dredging. Section 3.7.4.1 of the Draft EA/EIS references studies conducted by USACE in 1976, 1977, and 1990, which suggest that salinity impacts from dredging would be localized and short-lived. However, given advances in water quality and hydrodynamic modeling technology, there is potential to better assess the magnitude and duration of these impacts, which have the potential to directly impact water supplies for the SWP, CVP, and other Delta users. These models in conjunction with water supply modeling could help determine the water quality changes from dredging and the short-term and long-term effects on salinity resulting from channel deepening. Since the D1641 Bay-Delta water quality standards require the SWP and CVP to release flows to manage salinity in the Delta, even short-lived salinity shifts to the X2 position could impact SWP and CVP operations. Additionally, the proposal to deepen dredging depths at Richmond Harbor and Napa River may increase salinity intrusion and alter the X2 position, further impacting SWP and CVP operations and water supply. We recommend that readily available and commonly used hydrodynamic modeling be conducted to evaluate potential effects on X2 and suggest appropriate mitigation or avoidance measures. SWC - SLDMWA -01 (con't)

We appreciate the Draft EA/EIS's protective measures for longfin smelt and delta smelt. Further optimization of these measures could be achieved through hydrodynamic modeling that accounts for flow and water quality conditions. This would help identify the best timing and hydrologic conditions for dredging to minimize harm to these species and SWP and CVP operations. SWC - SLDMWA -02

SWC and SLDMWA support the increased beneficial use of dredged material (BUDM) and innovative applications, particularly in the context of anticipated sea-level rise. Although Alternatives 3 and 4 were not selected due to their higher costs related to increased BUDM placement at beneficial sites, the Draft EA/EIS mentions that cost-share partners will be considered to offset these costs in the future. We encourage USACE to seek partnerships with organizations focused on wetland and upland restoration, which could help mitigate these costs. SWC - SLDMWA -03

Finally, the Draft EA/EIS does not address any evaluations or measures to reduce sediment accumulation in San Francisco Bay and the Sacramento-San Joaquin Delta. The USACE State Plan of Flood Control has altered the natural processes of rivers and floodplains that feed into the Delta. We suggest evaluating levee setbacks and floodplain bypass projects as nature-based solutions to reduce the frequency and volume of dredging. These multi-benefit projects could provide flood protection, create floodplain habitat, and attract cost-share partners, much like BUDM placement. SWC - SLDMWA -04

We appreciate the opportunity to review the Draft EA/EIS. We understand the importance of maintaining navigational pathways in the San Francisco Bay and Sacramento-San Joaquin Delta, and as noted, SWC and SLDMWA have a vested interest in these areas. We welcome further discussion on these matters.

If you have any questions or need further coordination, please reach out to Mr. Manny Bahia at mbahia@swc.org or Mr. Scott Petersen at scott.petersen@sldmwa.org.

Sincerely,

Jennifer Pierre
General Manager
State Water Contractors

Federico Barajas
Executive Director
San Luis & Delta-Mendota Water Authority

Comments from Individual

Julie Groves

From: Julie groves
To: Graham-Davis, Jazzy@Waterboards
Subject: Dredging concerns in Richmond
Date: Monday, December 30, 2024 3:10:09 AM

Caution: External Email. Use caution when clicking links or opening attachments. When in doubt, contact DIT or use the Phish Alert Button.

Re dredging
>>> Please recognize the concerns re
>>> dredging and relocation of sediment from the Richmond Inner and Outer Harbors without further testing for contamination, as well as not adequately describing the dumping site

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