COASTAL CONSERVANCY

Staff Recommendation
February 19, 2026

BENEFICIAL USE OF DREDGED SEDIMENT FOR WETLAND RESTORATION IN SAN FRANCISCO BAY

Project No. 24-047-01
Project Manager: Vanessa Aczon

RECOMMENDED ACTION: Authorization to (1) enter into a Memorandum of Agreement with the U.S. Army Corps of Engineers; in which the Conservancy is the non-federal sponsor for the Corps's placement of dredged sediment from federal dredging projects at the Cullinan Ranch, Montezuma, Eden Landing, and Hamilton-Bel Marin Keys wetland restoration sites on the shoreline of San Francisco Bay in Alameda, Solano, and Marin counties; 2) disburse to the Corps $13,900,000, including $12,000,000 from a grant to the Conservancy from the U.S. Environmental Protection Agency, pursuant to the Memorandum of Agreement; and 3) adoption of findings under the California Environmental Quality Act.

LOCATION: San Pablo Bay National Wildlife Refuge, Montezuma Slough, Eden Landing Ecological Reserve, Hamilton-Bel Marin Keys, Alameda, Solano, and Marin Counties

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EXHIBITS

Exhibit 1: Project Location Maps

Exhibit 2: December 6, 2018 Staff Recommendation, Redwood City Harbor Beneficial Use Project

Exhibit 3: Final Environmental Assessment/Environmental Impact Report, Maintenance Dredging of the Federal Navigation Channels in San Francisco Bay, Fiscal Years 2025-2034

Exhibit 4: Project Letters

RESOLUTION AND FINDINGS

Staff recommends that the State Coastal Conservancy adopt the following resolution and findings.

Resolution:

The State Coastal Conservancy (the "Conservancy") hereby authorizes the Executive Officer of the Conservancy to: 1) enter into a Memorandum of Agreement with the U.S. Army Corps of

Engineers ("Corps") in which the Conservancy is the non-federal sponsor for the Corps's placement of dredged sediment from federal dredging projects at the Cullinan Ranch, Montezuma, Eden Landing, and Hamilton-Bel Marin Keys wetland restoration sites on the shoreline of San Francisco Bay in Alameda, Solano, and Marin counties and 2) disburse to the Corps an amount not to exceed thirteen million nine hundred thousand dollars ($13,900,000), including $12,000,000 from a grant to the Conservancy from the U.S. Environmental Protection Agency, pursuant to the Memorandum of Agreement (the "project").

Notwithstanding the foregoing, the Executive Officer shall not disburse funds from the Safe Drinking Water, Wildfire Prevention, Drought Preparedness, and Clean Air Bond Act of 2024 ("Proposition 4"), Public Resources Code Sections 90000-95015, unless legislation is enacted that exempts program guidelines and selection criteria for the disbursement of funds from Proposition 4 from the requirements of the Administrative Procedure Act at Government Code sections 11340-11361.

Findings:

Based on the accompanying staff recommendation and attached exhibits, the Conservancy hereby finds that:

1. The proposed authorization is consistent with Chapter 4.5 of Division 21 of the Public Resources Code, regarding San Francisco Bay Area Conservancy Program.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria.
3. The Conservancy has independently reviewed and considered the Final Environmental Assessment/Environmental Impact Report for San Francisco Bay Federal Channels Operation and Maintenance Dredging and Sediment Placement Activities, Dredging Years 2025-2034 (Final EA/EIR) certified by Regional Water Quality Control Board San Francisco Bay Region on December 10, 2025 pursuant to the California Environmental Quality Act ("CEQA") and attached to the accompanying staff recommendation as Exhibit 3. The Conservancy finds, as described further in the accompanying staff recommendation, that:
    a. The proposed project will have potentially significant environmental effects in the areas of Cultural and Tribal resources. The Conservancy finds that the mitigation measures identified in the Final EIR will avoid, reduce, or mitigate these possible significant environmental effects to less-than-significant levels and that these mitigation measures have been required or incorporated into the project.

STAFF RECOMMENDATION

PROJECT SUMMARY:

Staff recommend that the Conservancy authorize the Executive Officer to: 1) enter into a Memorandum of Agreement (MOA) with the U.S. Army Corps of Engineers ("Corps") in which the Conservancy is the non-federal sponsor for the Corps's placement of dredged sediment from federal dredging projects at the Cullinan Ranch, Montezuma, Eden Landing, and Hamilton-Bel Marin Keys wetland restoration sites on the shoreline of San Francisco Bay in Alameda,

Solano, and Marin counties (Exhibit 1); and 2) disburse to the Corps an amount not to exceed thirteen million nine hundred thousand dollars ($13,900,000), including $12,000,000 from a grant to the Conservancy from the U.S. Environmental Protection Agency, pursuant to the MOA (the "project").

The Corps dredges approximately 2 million to 2.5 million cubic yards of sediment each year as part of its Operations and Management (O&M) dredge program in San Francisco Bay, maintaining federal navigation channels for shipping. The sediment dredged by the Corps must be placed at permitted placement sites, such as the Deep Ocean Disposal Site, In-Bay disposal sites, or at beneficial use sites. The Corps must choose the option known as the Federal Standard, which is the placement alternative that is the least costly, consistent with sound engineering practices and that meets federal environmental requirements. (See 33 Code of Federal Regulations § 335.7.) If beneficial placement is not the Federal Standard for a dredging project, the Corps can use a beneficial placement site, but the cost that exceeds the Federal Standard (referred to as the incremental cost) must be paid either entirely by a non- federal sponsor, or cost-shared between the Corps and a non-federal sponsor under specific authorizations.

Currently, there are two restoration sites in San Francisco Bay accepting dredged sediment for beneficial use: Cullinan Ranch and Montezuma, both in Solano County. In addition, restoration at Bel Marin Keys in Marin County is in the conceptual design phase and may be available to accept dredged sediment in 2030. Eden Landing in Alameda County is in the permitting stage, and could start accepting dredged sediment within 1-2 years.

To act as the non-federal sponsor, the Conservancy will need to enter into the MOA with the Corps, which will require the Conservancy to pay for the entire cost of beneficial placement (i.e., the difference between what it would cost to bring the material to the ocean and what it would cost to bring the material to a wetland site for beneficial placement), including costs that exceed the Corps' estimated amount due to cost overruns, claims, or other unforeseen circumstances. Cost-sharing the incremental cost of beneficial placement is not an option in this case due to the procedural requirements for cost-sharing.

At this time, the $13,900,000 is an estimate of the incremental cost of beneficial placement at Cullinan Ranch, Montezuma, Eden Landing, and Hamilton-Bel Marin Keys wetland restoration sites. However, Corps staff have indicated that, after entering into the MOA, they will strive to ensure that the actual incremental cost does not exceed the Conservancy's authorized amount of $13,900,000. Conservancy staff will endeavor to work with the Corps to keep the cost at $13,900,000 even if the result is that only part of the dredged sediment is beneficially used.

On December 6, 2018, the Conservancy Board authorized a similar agreement where the Conservancy and Corps entered into a MOA to place dredged sediment at wetland restoration sites (Exhibit 2). That project served as a pilot demonstrating how the Corps could apply non-federal funds to dredging contracts and enter into contracts that affordably allowed beneficial use. In 2018, the Conservancy applied to the Corps' Beneficial Use Pilot Program under Section 1122 of the Water Infrastructure Improvements for the Nation Act of 2016 ("1122 program") for $54,000,000 for beneficial use of dredged sediment in wetland restoration projects. The proposal was selected by the Corps as one of ten beneficial use pilots nationwide.

The Corps has received a total of $26.74 million of federal funding to date for the 1122 program. These federal funds have been used for beneficial use of dredged sediment in San Francisco Bay in 2023, 2024, and 2025. In 2023, the 1122 program funds were used for the incremental cost of beneficially using 1.9 million cubic yards of sediment from the federal channels at the Oakland Harbor and Richmond Harbor, which cost approximately $15 million. The 2024 dredging cycle resulted in the beneficial use of approximately 1.8 million cubic yards from Oakland Harbor and Richmond Harbor at a total incremental cost of approximately $4.9 million. Finally, in 2025, the 1122 program will provide $6.3 million for beneficial use of approximately 1 million cubic yards dredged from the Oakland and Richmond Harbors.

With funding from both the 2018 Conservancy authorization and the Section 1122 Program, the Corps has successfully doubled the amount of dredged sediment being placed at wetland restoration sites from 40% in 2022 to 80% in 2023 and 2024. These two sources of funding are expected to be entirely spent by the end of the 2025 dredging season. If additional funding is awarded from the Conservancy's previous Section 1122 application, the Corps will spend those funds before using funds from this authorization.

There is broad recognition across San Francisco Bay that sediment is a highly valuable and needed resource for tidal wetland restoration and sea level rise resilience. The San Francisco Estuary Institute's *Sediment for Survival* calculated that the Bay's wetlands and mudflats will need more than 450 million cubic yards of sediment between now and 2100 to maintain current wetland and mudflats areas as well as areas currently planned for tidal wetland restoration. The proposed authorization would continue great progress from the Conservancy, Corps, and others to ensure the most dredged sediment as possible is making it to the Bay's wetland restoration projects along the shoreline instead of being lost to the deep ocean or in-Bay disposal.

Site Description: The U.S. Army Corps of Engineers, San Francisco District dredges 11 federally authorized channels in San Francisco Bay to maintain federal navigation channels for shipping (Exhibit 1). The channels and placement sites span eleven counties, including Alameda, Contra Costa, Marin, Napa, Sacramento, San Joaquin, Santa Clara, San Francisco, San Mateo, Solano, and Sonoma. The total area of the federal channels is 5,699 acres. Six of the channels are dredged annually and five are dredged with non-annual dredging cycles. The eleven channels include Richmond Harbor, San Francisco Harbor, Napa River Channel, Petaluma River Channel, San Rafael Creek Channel, San Pablo Bay/Mare Island Straight, Suisun Bay Channel, Oakland Harbor, San Leandro Marina, Redwood City Harbor, and Suisun Slough Channel.

The 1,575-acre Cullinan Ranch is owned by the US Fish and Wildlife Service (USFWS) as part of the San Pablo Bay National Wildlife Refuge, in Solano County in northern San Francisco Bay. USFWS purchased the Cullinan Ranch property in 1991, with an intent to restore the area to tidal marsh for the benefit of federally listed species such as the salt marsh harvest mouse and Ridgway's rail. In January 2015, three breaches were constructed in the northern perimeter levee thereby reconnecting over 1,200 acres of Cullinan Ranch to the surrounding tidal sloughs. This area (Cullinan West) is currently accreting sediment naturally through tidal action and providing open water habitat for a diversity of waterfowl and other waterbirds. While this area

has seen growth of vegetation around the margins, it will take decades for natural accretion alone to build up the elevations needed to transition the entire site into tidal marsh habitat. Despite the existing breaches, bringing in dredged sediment remains a viable option for Cullinan West, as measures will be implemented to ensure that sediment remains on-site until it has settled. Potential strategies include placing the material at the back of the marsh, away from the breaches to reduce the risk of sediment being discharged to the Bay. Additionally, turbidity curtains may be utilized to help isolate the area being enhanced. Further details of such measures will be developed as the project progresses. Overall, bringing in dredged sediment will significantly accelerate sediment build-up, helping the site restore into tidal marsh habitat more quickly and keep pace with sea-level rise.

In another portion of the area, project partners, USFWS and Ducks Unlimited, designated a 290-acre site (Cullinan East) specifically to receive dredged sediment. Project partners are implementing plans to import up to 4.5 million cubic yards of sediment to the Cullinan Ranch East project site. The sediment is imported from dredging projects throughout San Francisco Bay. So far, approximately 4.2 million cubic yards of sediment have been imported to the site. Dredged sediment was initially delivered via barges which travelled up Dutchman Slough and moored adjacent to the Cullinan East project site; the sediment was hydraulically pumped over the perimeter levee and deposited in the dredged sediment containment area. To accommodate larger equipment, a Napa River offloading location was added, with a pipeline in Dutchman Slough. Within the next five years, the Cullinan Ranch East area will be restored to tidal action, and because of the dredged sediment, it will be at an elevation that is able to immediately support vegetated tidal marsh habitat.

Montezuma is privately owned and operated by Montezuma LLC. This subsided wetland restoration site is located at the eastern edge of nationally-recognized Suisun Marsh. It is adjacent to Montezuma Slough near the town of Collinsville in Solano County. This site represents 12.6% of the Suisun Marsh and the entire region is low in the tidal frame with non-engineered levees providing limited protection from inundation and salt water intrusion into the Western Delta, which threatens much of the State's freshwater infrastructure. In addition to restoring tidal wetlands for endangered species habitat, including least tern, salt marsh harvest mouse, Ridgway's rail, Delta smelt, and salmon, this site will support productive vegetation that will build organic sediment, allowing for marsh transgression over time into the adjacent upland habitat. Montezuma's design includes construction of an internal levee system with specific deep cells that can accept sediment with slightly elevated levels of contamination, making it unique among Bay Area restoration projects. At Montezuma, 17 million cubic yards of dredged sediment are necessary to restore approximately 1,880 acres of tidal and seasonal wetlands. Approximately 9 million cubic yards of dredged sediment has been placed to date as part of Phase 1 of the project. The site has deep-water access for all classes of dredge scows, a docking area, and its own high capacity offloader, The Liberty, that is used by all contractors. This project site is fully permitted and operational.

Bel Marin Keys V is an expansion of the Hamilton Wetland Restoration Project. The roughly 960-acre Hamilton site owned by the Conservancy and adjacent parcel owned by the State Lands Commission, is located in the City of Novato, Marin County, on the western shore of San Pablo Bay. Restoration of the former airfield, using sediment primarily from the Port of Oakland

50-foot Deepening Project, was completed by the Corps in 2014 when the site was breached to the Bay. The adjacent Bel Marin Keys V project site (also owned by the Conservancy), authorized by the Water Resources Development Act of 2007, as an aquatic ecosystem restoration project, would expand Hamilton by 1,580 acres, creating nearly 2,600 acres of contiguous restored wetlands. Bel Marin Keys V was converted from salt marsh habitat to agricultural use over the past 150 years, and is therefore heavily subsided. Restoration of Bel Marin Keys V will develop habitat for federal endangered species, including the Ridgway's rail and the salt marsh harvest mouse. This site is currently in the design phase. Under the current design, the site could accept several million cubic yards of dredged sediment to construct tidal wetlands. Construction of the new setback levee was completed in Fall of 2021, and the site may be ready to start receiving dredged sediment in 2030.

Eden Landing Ecological Reserve is located in along the East Bay shoreline within Union City. Eden Landing is part of the South Bay Salt Ponds Restoration Project, the largest tidal wetland restoration project on the West Coast. The site encompasses more than 6,400 acres of diverse habitat such as former diked salt ponds, evolving tidal wetlands, managed ponds, sloughs, and uplands, all of which create habitats for a wide range of wildlife, including sensitive and endangered species such as the Ridgeway's rail. The site is owned and managed by the California Department of Fish and Wildlife, focusing on wildlife habitat and providing wildlife-oriented public access. The southern part of the reserve (approximately 2,200 acres) is currently being planned for restoration. Restoration plans include creating wetland to upland transition slopes, raising of levees, and breaching four of the largest ponds, returning them to full tidal action. This site is being evaluated as a potential site for placement of dredged sediment, which will help accelerate sediment accretion and speed up marsh development and resilience in the face of rising sea levels.

Grant Applicant Qualifications: The Corps is highly qualified to place dredged material from its O&M dredging program at wetland restoration project sites as the Corps is the largest dredger in San Francisco Bay and have been leading the contracting for federal dredging and beneficial use placement for decades. The Corps has demonstrated its ability to utilize non-federal dollars in dredging and placement contracts under the December 6, 2018 Conservancy authorization (Exhibit 2).

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA:

The proposed project is consistent with the Conservancy's Project Selection Criteria, last updated on September 23, 2021, in the following respects:

Selection Criteria

1. **Extent to which the project helps the Conservancy accomplish the objectives in the Strategic Plan.**

See the "Consistency with Conservancy's Strategic Plan" section below.

2. Project is a good investment of state resources.

The project is a good investment of state resources as it will beneficially use dredged sediment from federal navigation channels at wetland restoration project sites. This dredged sediment would otherwise have been lost, being disposed of in the Bay or ocean. Raising the land elevations at the wetland restoration sites (i.e. Cullinan Ranch, Montezuma, Eden Landing, and/or Bel Marin Keys) will ensure wetland restoration success as well as sea level rise resilience over time.

The proposed project is supported by several local and regional plans, serves a regional constituency within the Bay Area, is ready for implementation, and will lose project benefits if not implemented quickly. To that end, the project aligns and implements goals from the following plans:

- **Restoring the Estuary: An Implementation Strategy for the San Francisco Bay Joint Venture.** The project will significantly contribute to the goal outlined in the Joint Venture's 2-Year Operational Plan within the Implementation Strategy to "increase the beneficial use of sediment at restoration sites".
- **Baylands Ecosystem Habitat Goals Science Update 2015.** The project strongly supports the regional strategy to develop and implement a comprehensive regional sediment-management plan and several recommended actions to increase the beneficial reuse of dredged sediment to elevate restored ponds such as Cullinan Ranch and others. The 2015 Science Update stresses the importance of establishing tidal marshes by 2030 to maximize resilience to sea level rise and emphasizes the need to accelerate the planning, permitting, and construction of restoration projects. By providing funding for the incremental cost of beneficial use, the project is maximizing the amount of sediment needed to raise restored wetland elevations which maximizes wetland restoration success and sea level rise resilience.
- **Long-Term Management Strategy for the Placement of Dredged Material in the San Francisco Bay Region, Management Plan.** The project supports the goal of this strategy to increase beneficial dredged sediment reuse. It will increase the amount of sediment going to restoration by providing funding to pay the cost offset (also called incremental cost) of in-bay or deep-ocean disposal for dredging projects that have suitably clean sediments that otherwise would not go to beneficial use.
- **Comprehensive Conservation and Management Plan for the San Francisco Estuary.** The project will lead to restoration of critical physical processes and habitats, allowing tidal wetlands to migrate landward and ensuring habitat connectivity as climate change alters landscapes.

3. Project benefits will be sustainable or resilient over the project lifespan.

Beneficial use of dredged sediment will assist in addressing sea level rise vulnerability in San Francisco Bay, by raising elevations of subsided restoration sites prior to tidal restoration. This will allow for the restored wetlands to reach marsh plain elevation earlier than if the sites solely relied on natural processes. Once the marsh plain of a restored wetland is colonized by

vegetation, marshes become efficient sediment traps and reduce wave energy. Vegetated marshes have a better chance of keeping up with sea level rise than sites that start out deeply subsided.

4. Project delivers multiple benefits and significant positive impact.

The project will increase tidal wetland restoration success in San Francisco Bay. Tidal wetlands deliver many benefits to the ecosystem and community such as climate mitigation via carbon sequestration, critical habitat to fish and wildlife, nutrient cycling benefits, recreation benefits, vector control improvements, and sea level rise resilience via wave buffering and sediment accretion.

5. Project planned with meaningful community engagement and broad community support.

The project is supported by the state and federal regulatory agencies engaged in the Long-Term Management Strategy for the Placement of Dredged Material in Bay Region.

PROJECT FINANCING

Coastal Conservancy	**$1,900,000**
U.S. Environmental Protection Agency (*via* a grant to the Conservancy)	$12,000,000
San Francisco Bay Restoration Authority	$2,100,00
Project Total	**$16,000,000**

The anticipated funding source for the $1,900,000 Conservancy contribution of this authorization will come from the Safe Drinking Water, Wildfire Prevention, Drought Preparedness, and Clean Air Bond Act of 2024, referred to as the 2024 Climate Bond or Proposition 4), codified at Public Resource Code Sections 90000-95015, to the Conservancy for coastal resiliency projects). These funds are available as described in Section 92010 of the Public Resource Code, which sets forth a detailed description of the purposes of the Proposition 4 coastal resiliency funds. These funds are made available for coastal resiliency projects and programs including projects to protect, restore, and increase the resilience of beaches, bays, coastal dunes, wetlands, coastal forests, watersheds, trails, and public access facilities. The proposed project is consistent with this funding source as it will increase the sea level rise resilience and wetland restoration success of up to four wetland restoration projects by bringing dredged sediment that would have otherwise been disposed of in the Bay or ocean. If Proposition 4 is not amended to provide that program guidelines and selection criteria needed to effectuate or implement the programs of Proposition 4 are exempt from the requirements of the Administrative Procedure Act at Government Code sections 11340-11361, the Executive Officer will determine an appropriate fund source.

The other funding source for the $12,000,000 will be provided via a grant to the Conservancy from the U.S. Environmental Protection Agency.

Unless specifically identified as “Required Match,” the other sources of funding and in-kind contributions described above are estimates. The Conservancy does not typically require

matching funds or in-kind services, nor does it require documentation of expenditures from other funders or of in-kind services. Typical grant conditions require grantees to provide any funds needed to complete a project.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The project is being undertaken pursuant to Chapter 4.5 of Division 21 of the Public Resources Code (sections 31160-31165). Section 31162 authorizes the Conservancy to undertake projects in the nine-county San Francisco Bay Area to help achieve regional public access and resource goals. Consistent with Section 311162(b), the project will raise the elevation of the land which is required to restore the critical tidal wetland habitat.

Consistent with Section 311162(c), the project assists in the implementation of the San Francisco Bay Plan, which contains policies to protect and restore marshes and mudflats: "Tidal marshes and tidal flats should be conserved to the fullest possible extent" [Tidal Marshes and Tidal Flats, Policy No. 1]; "Where feasible, former tidal marshes and tidal flats that have been diked from the Bay should be restored to tidal action in order to replace lost historic wetlands" [Tidal Marshes and Tidal Flats Policy No. 5]; and, "Dredged materials should, if feasible, be reused or disposed outside the Bay…" and "dredging projects should maximize use of dredged material as a resource consistent with protecting and enhancing Bay natural resources, such as creating, enhancing, or restoring tidal and managed wetlands" [Dredging Policy, Policies No.3 and 5, respectively].
The proposed project satisfies the criteria for determining project priorities under Section 31163(c):

(1) It is supported by adopted local and regional plans including the San Francisco Bay Plan, Sediment for Survival, and the Long-Term Management Strategy for the Placement of Dredged Material in the San Francisco Bay Region;
(2) It is multi-jurisdictional and serves a regional constituency by offering opportunities for beneficial reuse of dredged sediment throughout San Francisco Bay and providing a resource enhancement opportunity of statewide significance;
(3) The project can be implemented in a timely way as the Corps receives federal funds to conduct dredging annually and is able to receive additional funds for beneficial use;
(4) It provides benefits that could be lost with time, as tidal wetlands need to be established as soon as possible to keep pace with sea level rise; and
(5) The project includes matching funds from the federal government through the US Environmental Protection Agency, which will pay 65 percent of project implementation.

CONSISTENCY WITH CONSERVANCY'S 2023-2027 STRATEGIC PLAN:

Consistent with **Goal 3.2, Restore or Enhance Habitats** of the Conservancy's 2023-2027 Strategic Plan, the proposed project will contribute to ensuring the sea level rise resilience and

up to four tidal wetland restoration projects at Cullinan Ranch, Eden Landing, Bel Marin Keys V, and Montezuma Wetlands.

CEQA COMPLIANCE:

On December 10, 2025, the San Francisco Bay Regional Water Quality Control Board certified the Final Environmental Assessment/Environmental Impact Report for San Francisco Bay Federal Channels Operation and Maintenance Dredging and Sediment Placement Activities, Dredging Years 2025–2034 (Final EA/EIR), which addresses the placement of dredged sediment from federal navigation channels. The Final EA/EIR provides a programmatic, Bay-wide evaluation of potential environmental impacts associated with dredging, transporting, and placing sediment at existing authorized sites (Cullinan Ranch and Montezuma). In addition, in May 2019, the California Department of Fish and Wildlife certified the Eden Landing's Phase 2 Final Environmental Impact Report (Final Eden Landing Phase 2 EIR), which includes findings on placement of dredge material at Eden Landing. The Conservancy made findings on the Final Eden Landing Phase 2 EIR at its May 16, 2019 meeting as part of an authorization of funding for design and permitting. The Final EA/EIR did not fully analyze the potential impacts of placing dredged material at Bel Marin Keys because it is still in the design phase; however, the Final EA/EIR did analyze the potential impacts on a broad level for Bel Marin Keys with the expectation that the placement site may become authorized within the 10 year planning horizon of the Final EA/EIR.

The Final EA/EIR compares four action alternatives to the No Project Alternative. The No Project Alternative reflects the existing physical conditions and the - continuation of ongoing long-standing maintenance dredging practices that would continue without expansion or new beneficial use of dredge material. With only minor adjustments, such as reduced dredging frequency in certain channels, this existing baseline is the basis for comparison. The four action alternatives consist of:

1) **Alternative 1** proposes diverting some sediment from deep ocean disposal to in-Bay - sites and non-aquatic beneficial use locations.
2) **Alternative 2** builds on Alternative 1 by increasing hopper dredging to offset costs and achieve greater beneficial use while nearly eliminating ocean disposal.
3) **Alternative 3** further expands beneficial use to 35–45% by leveraging the Water Resources Development Act policy (WRDA 2020) of cost-sharing authority, which requires non-federal contributions to cover incremental costs.
4) **Alternative 4** plans to place up to 75% of material at non-aquatic beneficial use sites and an additional 5–15% at nearshore strategic placement sites, significantly reducing ocean disposal and in-Bay placement.

The Final EA/EIR outlines a phased approach for implementing beneficial placement of dredged material**.** This approach includes three least-cost options: the No Project Alternative, Alternative 1, and Alternative 2. In 2025, the Corps conducted dredging under the No Project Alternative. Alternative 1, which diverts some material from ocean disposal to beneficial use

sites, could start in 2026. Alternative 2, which optimizes dredging regionally to maximize beneficial use and minimize ocean disposal, may begin in 2027. Alternative 3 and Alternative 4, which greatly increase beneficial use, would proceed if additional funding or cost-sharing becomes available.

Environmental Impacts

The Final EA/EIR examines in detail the four alternatives in the areas of Air Quality, Climate change and Greenhouse gases, Biological Resources, Cultural and Tribal resources, Geology and Sediment quality, Hazards and Hazardous materials, Hydrology and Water quality, Land use and Planning, and Transportation and Navigation. Under CEQA, most resource areas were found to have less-than-significant impacts after applying best management practices and mitigation measures. The only categories that were identified having potentially significant effects were in the areas of Cultural and Tribal Resources. Set forth below is a summary of these potential effects, and the mitigation measures that will be incorporated to assure that potential impacts will be eliminated or reduced to less than significant levels.

Impact CT-1: Substantial Adverse Change to a Historical Resource or Disturb Unique Archaeological Resources

Although dredging has historically occurred at the federal navigation channels and existing placement sites, project activities could inadvertently uncover previously unknown cultural resources. Such resources may include historic or archaeological materials, and their disturbance could result in adverse effects. As such, inadvertent discovery of cultural or archaeological resources could have a potential significant impact. This impact will be mitigated through implementation of a Cultural Resources Monitoring Program, and Inadvertent Archaeological Discovery Protocol, which identifies steps the Corps must take if archaeological materials are found during project activities. Monitoring will be conducted by a qualified archaeologist, with expertise in maritime and underwater archaeology. The inspection will occur during sediment placement activities, and if any archaeological resources are discovered, such as fragments of bone, stone tools, structural remnants, or historic remnants, work will cease immediately in the area until the discovery can be evaluated. The mitigation measures identify additional actions depending on the findings and recommendations of the archaeologist. With implementation of these measures, impacts to cultural and archaeological resources will be reduced to a less-than-significant level.

Impact CT-2: Potential to Disturb Human Remains, including Those Interred Outside of Formal Cemeteries

There are no known cemeteries, formal or otherwise, or other evidence of human internment in the federal navigation channels or placement sites. Although unlikely, given the repeated dredging and dredged material placement activities that have historically occurred at the federal navigation channels, and placement sites, there is potential that previously unidentified human remains could be inadvertently uncovered with project implementation of placing dredged materials. Such disturbance of human remains represents a potential project impact. This potential impact will be mitigated through implementation measures of Inadvertent

Archaeological Discovery Protocol, as described above, and through Treatment of Human Remains protocol. The latter requires the Corps to comply with state laws if it discovers human remains. This includes the requirement that if human remains are discovered, dredging and any ground-breaking activities will immediately cease, and the Corps' project representative will notify the appropriate county coroner to evaluate the remains and follow procedures and protocols set forth with CEQA Guidelines Section 15064.5(e)(1). If the coroner determines the remains to be Native American, the Corps must contact the California Native American Heritage Commission (NAHC), which will designate a Most Likely Descendent (MLD), and follow other statutory measures, identified in the mitigation measure, for protection of resources.

Impact CT-3: Potential Impacts on Native American Sacred Sites or Religious Ceremonies

Waterways, including rivers, creeks, and the wildlife they support, have historically been, and remain integral to Native American lifeways. They also continue to hold cultural, spiritual, and ceremonial significance for Native American communities. Dredging activities could indirectly affect the availability of certain wildlife or introduce visual and noise disturbance that may interfere with traditional ceremonies, which is a potential impact. Consideration of these effects is consistent with Executive Order 13007 (61 FR26771-26772) and the American Indian Religious Freedom Act (42 U.S.C. Chapter 21, Subchapter 1, 1996).

During one consultation, one Native American tribe requested advanced notification of annual dredging schedules and additional consultation would occur if concerns are raised regarding potential disruptions to traditional ceremonies during specific times of the year. Potential impacts to sacred sites or religious practices will be identified through ongoing tribal consultation, and the Corps will implement recommended best practices to avoid or minimize effects. With these measures in place, impacts will be reduced to a less-than-significant level.

Upon approval of the project, Conservancy staff will file a Notice of Determination.