COASTAL CONSERVANCY

Staff Recommendation
April 6, 2023

BENEFICIAL REUSE OF EXCAVATED TUNNEL MATERIAL AT WETLAND RESTORATION PROJECTS IN SOUTH SAN FRANCISCO BAY

Project No. 23-007-01
Project Manager: Evyan Borgnis Sloane

RECOMMENDED ACTION: Authorization to disburse up to $1,500,000 to the Santa Clara Valley Transportation Authority (VTA) to complete environmental review under the California Environmental Quality Act and to support the U.S. Fish and Wildlife Service's environmental review under the National Environmental Policy Act, and prepare permit applications for beneficial reuse of excavated tunnel material from VTA's BART Silicon Valley Phase II tunneling project in Santa Clara County at wetland restoration projects in the South San Francisco Bay.

LOCATION: City of San José, County of Santa Clara

EXHIBITS

Exhibit 1: Project Location Map

Exhibit 2: BART Silicon Valley Phase II Project Map

Exhibit 3: South San Francisco Bay Wetland Restoration Project Map

Exhibit 4: May 5, 2022 SCC Staff Recommendation

Exhibit 5: June 18, 2021 SFBRA Staff Recommendation

RESOLUTION AND FINDINGS

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

Resolution:

The State Coastal Conservancy hereby authorizes a grant of an amount not to exceed one million five hundred thousand dollars ($1,500,000) to the Santa Clara Valley Transportation Authority ("the grantee") to complete environmental review under the California Environmental Quality Act and support the U.S. Fish and Wildlife Service's environmental review under the National Environmental Policy Act, and prepare permit applications for

beneficial reuse of excavated tunnel material from VTA's BART Silicon Valley Phase II tunneling project in Santa Clara County at wetland restoration projects in the South San Francisco Bay.

Prior to commencement of the project, the grantee shall submit for the review and written approval of the Executive Officer of the Conservancy (Executive Officer) the following:

1. A detailed work program, schedule, and budget.
2. Names and qualifications of any contractors to be retained in carrying out the project.

Findings:

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

1. The proposed authorization is consistent with Chapter 4.5 of Division 21 of the Public Resources Code, regarding the Conservancy's mandate to address the resources and recreational goals of San Francisco Bay Area.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria.

STAFF RECOMMENDATION

PROJECT SUMMARY:

Staff recommends that the Conservancy authorize a grant of up to $1,500,000 to the Santa Clara Valley Transportation Authority (VTA) to complete environmental review under the California Environmental Quality Act (CEQA) and support the U.S. Fish and Wildlife Service's environmental review under the National Environmental Policy Act (NEPA) and prepare permit applications for beneficial re-use of excavated tunnel material (hereafter "tunnel muck") from VTA's BART Silicon Valley Phase II tunneling project in Santa Clara County at wetland restoration projects in the South San Francisco Bay (Exhibit 1).

The BART Silicon Valley Phase II tunneling project (hereafter "BART Project") is the largest single public infrastructure project ever constructed in Santa Clara County. The BART Project will extend the BART train service a total of six miles from the Berryessa Transit Center into downtown San José and ending in the City of Santa Clara (Exhibit 2). For the BART Project construction, VTA will be excavating approximately 3.5 million cubic yards of tunnel muck and approximately 450,000 cubic yards of true dirt from the station and shaft excavation. Tunnel muck has a softer consistency than true dirt and consists primarily of young bay mud with a variety of grain sizes. While excavated dirt has been used to build berms and habitat transition zones in other wetland restoration projects across the South San Francisco Bay, tunnel muck has not been used in restoration to date. Sediment sampling from 36 sites along the tunnel route suggests the muck is clean enough for beneficial reuse in tidal wetland restoration projects. If the environmental review funded by this authorization concludes that the tunnel muck is not suitable for beneficial reuse, Conservancy staff will invoke the grant agreement's early termination provisions.

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. South San Francisco Bay is no exception. Many of the former salt production ponds across the Don Edwards San Francisco Bay National Wildlife Refuge (Refuge) in the South Bay, which is owned and managed by U.S. Fish and Wildlife Service (USFWS), are deeply subsided. Filling deeply subsided pond bottoms across the South Bay would ensure that tidal marsh habitat would establish once a pond is breached and tidal action is restored. Without a large source of sediment to fill deeply subsided ponds, many restoration projects currently in the planning phase would take decades to reach marsh plain elevations post-breach—time we do not have in the face of sea level rise.

Currently there are three ponds in the South Bay that are deeply subsided and in active restoration planning phases—A4, A8-complex, and A12-13 (Exhibit 3). The Pond A8-complex, A12, and A13 are all owned by the USFWS as part of the Refuge. Pond A4 is owned and managed by Santa Clara Valley Water District (Valley Water).

First, as a part of the South San Francisco Bay Shoreline Project (Shoreline Project), Ponds A12 and A13 are being planned for restoration to tidal action once the flood risk management levee and habitat transition zone are constructed. As a part of the Conservancy's May 5, 2022 authorization (Exhibit 4), the Reaches 1-3 flood risk management levee is currently under construction and planned to be completed by 2025. The habitat transition zone is currently in the planning phases and construction will begin once the Reaches 1-3 levee is constructed. Pond 12, in particular, is deeply subsided. Modeling conducted by Philip Williams Associates in 2012 as a part of the South San Francisco Bay Shoreline Study predicted that reliance on natural sediment accretion (and medium-high concentrations of suspended sediment) would result in Pond A12 taking approximately 50 years to reach marsh plain elevations after the levees are breached. Filling this deeply subsided pond bottom would significantly reduce this time frame, ensuring that sediment accretion could naturally occur and wetland vegetation establish before sea level rise rates are so steep that natural sediment accretion cannot keep pace.

Similarly, the Pond A8-complex and Pond A4 are deeply subsided and are in the active planning phase of restoration as a part of the Calabazas/San Tomas Aquino Creeks Reconnection Project (Calabazas-STA Project). On June 18, 2021, the San Francisco Bay Restoration Authority (SFBRA) authorized a grant to Valley Water for design and environmental review to restore creek connections to the Pond A-8 complex and Pond A4 (Exhibit 5). The Calabazas-STA Project fulfills the South Bay Salt Pond (SBSP) Restoration Project goal to fully open the 1440-acre Pond A8-complex to unrestricted tidal flows to facilitate marsh restoration. In 2010, during Phase I of the SBSP Restoration Project, Pond A8 was connected to the Bay via water control structures on Alviso and Guadalupe Sloughs. These reconnections have created a muted tidal system that allows tidal waters to enter the pond, but since the land has subsided, it does not fully drain during low tide. Additional reconnections are necessary to fully restore tidal influence and sediment input to the complex and allow for the establishment of tidal marsh.

The Shoreline Project and Calabazas-STA Project both grew out of the SBSP Restoration Project, a multi-agency effort to restore over 15,000 acres of former salt-evaporation ponds to wetland habitats. Both projects will address the need for tidal wetland restoration, flood protection, and improved recreation connections in the South Bay.

For Pond A4, a 2005 study found that 64% of the Pond A4 bottom is lower than mean lower low water and therefore below the intertidal range. Mudflats at elevations between mean lower low water and mean tide level comprise 24% of the pond bottom. Pond A4 is not currently subject to tidal influence, but when it is opened to tidal influence, most of the pond bottom is below tidal elevations and would remain as open water unless artificial or natural sedimentation raised the pond bottom. Raising the entire Pond A4 bottom (roughly 280 acres) to mean higher high water level would require approximately 4.1 million cubic yards of sediment.

While VTA has completed environmental review and permitting for the overall BART Project including disposing of the tunnel muck at local landfills and quarries, they have not conducted CEQA or permitting for beneficially reusing the muck at these local wetland restoration sites. The proposed project would support that environmental review process. Overall, there are large, multiple benefits to beneficially reusing the material rather than disposal including greenhouse gas reductions, cost savings, sea level rise resilience, flood protection, and acceleration of habitat restoration. Increasing the sea level rise resilience of the tidal wetlands adjacent to the community of Alviso is critically important as it will significantly increase the flood protection of Alviso—a historically underserved community that is up to 10 feet under sea level.

Excavated material that is brought into the Refuge must meet the *Master Quality Assurance Project Plan for Don Edwards San Francisco Bay National Wildlife Refuge* (Refuge QAPP). VTA will conduct a testing program to demonstrate that the tunnel excavated material has contaminant levels below screening limits established in the Refuge QAPP.

Site Description: The excavated tunnel muck will be brought into Ponds A12, A13, A8-complex, and A4 to raise deeply subsided pond bottoms prior to full tidal wetland restoration. The ponds are adjacent to the systemically excluded community of Alviso in the city of San Jose, California.

Ponds A12 and A13 have an area of 580 acres and are a part of the Shoreline Project. The Shoreline Project includes Ponds A9-A15 that were part of the 2003 SBSP Restoration Project acquisition. These ponds are now owned and managed by the USFWS as managed pond habitat for shorebirds and waterfowl as part of the Refuge. The Refuge and its Environmental Education Center receive approximately 733,000 visitors each year, and the Refuge's adjacent New Chicago Marsh Trail receives an estimated 8,200 visits each year.

The Pond A8 Complex (Pond A8, A8S, A5, & A7) is a 1,440-acre area of former salt ponds located between Guadalupe and Alviso Sloughs. It is surrounded by earthen levees but has muted tidal connections to these sloughs via water control structures. Calabazas and STA Creeks are channelized creeks that drain into Guadalupe Slough. Vegetation along the creeks indicate freshwater conditions and include non-native trees, shrubs, and grasses. Levee roads and areas adjacent to roads are dominated by non-native ruderal species, with scattered to

sometimes dense stands of coyote brush. The southern perimeter of Pond A8 is a landfill identified as a future Bay trail alignment connecting Sunnyvale with the community of Alviso.

Pond A4, located southwest of the A8 Ponds, has an area of about 320 acres. It is a former salt production pond that was acquired by Valley Water in Year 2000. Pond A4 is hydraulically connected to the Pond A8-complex via a siphon running underneath Guadalupe Slough. A pump in the southeast corner of Pond A4 pumps water to the A8 ponds complex. A second siphon connects Pond A4 to the Cargill Channel which connects to Pond A3W (also owned by USFWS).

Grant Applicant Qualifications: VTA is an independent special district that provides transportation options to serve the people of the Santa Clara Valley. VTA provides bus, light rail, and paratransit services, as well as participates as a funding partner in regional rail service including Caltrain, Capital Corridor, and the Altamont Corridor Express. VTA is responsible for the design and construction of large and complex infrastructure projects including heavy rail (BART), transit, and highway projects. VTA manages multi-billion-dollar programs and is well equipped to manage a grant from the Conservancy of this size. The proposed project involves hauling excavated material and placing it in former salt evaporation ponds, which is far less complex compared to the major infrastructure projects they construct, including the BART Project, the largest infrastructure project to be constructed in Santa Clara County, where the material will be coming from.

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 proposed project is a good investment of state resources as it will accelerate tidal marsh development for the SBSP Restoration Project, Shoreline Project, and the Calabazas/San Tomas Aquino Creeks Reconnection Project, all projects supported by the Conservancy and/or SFBRA. The enormous quantity of the tunnel muck being excavated as a part of the BART Project is a huge opportunity to move the needle on the sea level rise resilience of wetland restoration in the South Bay. By bringing in the excavated tunnel muck to raise these deeply subsided pond bottoms, the ponds will be able to become tidal marsh habitat before sea level rise rates are too steep for wetlands to form naturally.

VTA's planning for the larger BART Project is well underway with a consultant on board for the design-build contract. This contractor will also be leading the environmental review process for

the beneficial reuse of the tunnel muck. Given the high quantity of material, the budget for the environmental review and permitting is feasible and reasonable.

3. Project includes a serious effort to engage tribes. Examples of tribal engagement include good faith, documented efforts to work with tribes traditionally and culturally affiliated to the project area.

The grantee intends to begin tribal engagement during the environmental review phase of this project. As the lead agency under CEQA, VTA, and in coordination with the USFWS under NEPA and Section 106 of the National Historic Preservation, will notify the Native American community of the beneficial reuse project through formal written correspondence and follow-up meetings. Typically, VTA reaches out to members of the Amah Mutsun Tribal Band, Amah Mutsun Tribal Band of Mission San Juan Bautista, Indian Canyon Mutsun Band of Costanoan, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area, The Confederated Villages of Lisjan, North Valley Yokuts Tribe, The Ohlone Indian Tribe, Tamien Nation, and Wuksache Indian Tribe/Eshom Valley Band. VTA intends to engage Native American communities early in project development and provide them the opportunity to communicate concerns that they may have regarding places within the project area that are important to their community. During project development and if any cultural resources are identified, VTA will collaborate with Native American communities in consultation with USFWS in the identification and protection of cultural resources, sacred lands, or other heritage sites.

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

The proposed project will help increase the sea level rise resilience of Conservancy and SFBRA-supported tidal wetland restoration projects in the South Bay. By raising the deeply subsided pond bottoms and thus the tidal elevations, the benefitting wetland restoration projects will require minimal management in the future as they will better keep pace with sea level rise. If this project did not occur, future management actions to raise tidal elevations would likely be needed over time.

5. Project delivers multiple benefits and significant positive impact.

The proposed project has multiple benefits including sea level rise resilience, wetland habitat restoration, flood risk management, greenhouse gas emissions reductions, and cost savings. First, raising pond bottoms will allow wetland restoration habitat to be restored before sea level rise forces the ponds to remain as open water or mudflat habitat. Successful tidal wetland restoration will provide critical habitat for wildlife including several wetland dependent, protected species, among the many other ecosystem services that wetlands provide. Second, by increasing tidal heights prior to breaching the pond levees, the project will provide sea level rise resilience to the wetlands as well as further flood protection to adjacent communities. For greenhouse gas reduction benefits, the former salt production ponds identified for beneficial reuse are a much closer distance to the BART Project tunneling activities compared to the previously identified disposal sites (landfills & quarries). The project will significantly reduce the distance truck haulers would need to drive (up to 164 miles), greatly reducing greenhouse gas emissions associated with moving the material. Given that moving the material will require approximately 600 truck trips per day over the 3-year construction window, keeping the haul

distance under 10 miles will significantly reduce greenhouse gas emissions and save the VTA millions of dollars. Once the ponds are successfully restored with vegetation established, the wetlands will provide carbon sequestration as tidal wetlands are one of the most carbon dense ecosystems in the world.

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

All participating projects including the BART Project, the Shoreline Project, the SBSP Restoration Project, and the Calabazas-STA Project have been meaningfully engaging local community members.

The proposed project would also help implement the goals of the SBSP Restoration Project which is supported by Senator Dianne Feinstein, the Richard and Rhoda Goldman Fund, the William and Flora Hewlett Foundation, the Gordon E. and Betty I. Moore Foundation, the David and Lucile Packard Foundation, Resources Legacy Fund, the California Natural Resources Agency, California Department of Fish and Wildlife, SFBRA, USFWS, Valley Water, the San Francisco Bay Joint Venture, Save The Bay, The Bay Institute, National Audubon Society, Citizen's Committee to Complete the Refuge, Cargill, and many other agencies, organizations, and individuals.

The proposed project will also provide multiple benefits to a systemically excluded community, Alviso, in the city of San Jose including recreation, wildlife benefits, and flood risk management.

PROJECT FINANCING

Coastal Conservancy	**$1,500,000**
Grantee	$100,000
Project Total	**$1,600,000**

Conservancy funding is anticipated to come from a fiscal year 2018/2019 appropriation to the Conservancy from the "California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access for All Act of 2018" (Prop 68, Public Resources Code Division 46, Chapters 1-13, Sections 80000-80173). Chapter 8 of Prop 68 allocates funds to the Conservancy "for the purpose of San Francisco Bay restoration in accordance with the San Francisco Bay Restoration Authority Act" (Public Resources Code section 80110(b)(10)). The SFBRA Act authorizes grants for projects that will restore, protect, or enhance tidal wetlands, managed ponds, or natural habitats on the shoreline in the San Francisco Bay area; and such grants can be used for all phases of such projects, including construction, monitoring, operation, and maintenance. (Gov. Code section 66704.5.) The proposed project is consistent with the SFBRA Act (Gov. Code sections 66700 – 66706) because it will provide the environmental review needed to restore tidal, seasonal, and managed wetlands on the shoreline of San Francisco Bay. Accordingly, the proposed project is an appropriate use of Proposition 68 funds allocated for restoration of San Francisco Bay consistent with the SFBRA Act.

The recommended project also meets the Conservancy's guidance regarding serving a "severely disadvantaged community" (SDAC) as defined by Proposition 68 because the proposed project has direct benefits to SDACs in the city of San Jose by providing flood protection, sea level rise resilience, job opportunities, and recreation benefits. As described above, the proposed project will increase flood protection and sea level rise resilience by attenuating waves and buffering adjacent communities from storm events. The project will also provide job opportunities to local companies because VTA's contractor hired for the sediment placement activities has a goal of 15% participation from disadvantaged business enterprises and 20% participation of small businesses. VTA's contractor also intends to conduct local outreach with the business community to try to obtain local hires for the material truck hauling. Last, the proposed project will ensure the success of two ongoing wetland restoration projects, the Shoreline Project and Calabazas-STA Project, both of which have public access and recreation components that will serve the SDACS of and around the city of San Jose.

The grantee, VTA, will also provide $100,000 to complete the environmental review and permitting process.

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:

This project will be undertaken pursuant to Chapter 4.5 of the Conservancy's enabling legislation, Public Resources Code Sections 31160-31165, to address resource goals in the San Francisco Bay Area. The Beneficial Reuse of Excavated Tunnel Material at Wetland Restoration Projects in South San Francisco Bay is within the nine-county Bay Area as required under Section 31162 of the Public Resources Code.

Under Section 31162(b), the Conservancy may act to protect, restore, and enhance natural habitats and connecting corridors, watersheds, scenic areas, and other open-space resources of regional significance. This authorization would provide excavated tunnel material to ensure sea level rise resilience and successful tidal wetland restoration at 2,340 acres of former salt production ponds in the South SF Bay (i.e. A4, A8-complex, A12, and A13), all of which helps implement the goals of the SBSP Restoration Project, a wetland restoration project of national significance.

The project is consistent with Sections 31163(a) and (b), directing the Conservancy to participate in and support interagency actions and public/private partnerships in the San Francisco Bay Area to implement long-term resources and outdoor recreational goals.

Consistent with Section 31163(c), the project meets the following criteria: it (1) is supported by adopted regional plans (San Francisco Bay Plan, Baylands Ecosystem Habitat Goals Report (1999) pp. 97, 126-139, *Baylands Goals Update (2015)* pp. 198, 203, and the *San Francisco Basin (Region 2) W*ater Quality Control Plan (June 29, 2013) pp. 2-2 and 4-92), (2) is multijurisdictional

(involves multiple agencies) and serves a regional constituency (the restoration component will facilitate nationally and regionally significant wetland restoration efforts), (3) can be implemented in a timely way, and (4) provides opportunities for habitat, flood protection, and public access benefits that could be lost if the project is not quickly implemented.

CONSISTENCY WITH CONSERVANCY'S 2023-2027 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 1, Objective 1.1**, the proposed project will directly benefit the systemically excluded community of Alviso in the city of San Jose as the excavated material will provide flood protection and sea level rise resilience by increasing pond elevations.

Consistent with **Goal 3, Objective 3.2.1**, the proposed project will support the environmental review process needed to bring in critical sediment to restore tidal wetland habitats in the South Bay.

Consistent with **Goal 4, Objective 4.1.1**, the proposed project will support the environmental review process needed to bring in critical sediment to provide sea level rise resilience for tidal wetland restoration projects in the South Bay.

CEQA COMPLIANCE:

The proposed planning project is statutorily exempt from environmental review under the California Environmental Quality Act (CEQA) pursuant to Title 14 California Code of Regulations Chapter 3 (CEQA Guidelines), Article 18, Statutory Exemptions, Section 15262, which states that a project involving only feasibility or planning studies for possible future actions that have not yet been approved does not require the preparation of an environmental document but does require the consideration of environmental factors. The proposed planning project consists of environmental review (CEQA, NEPA, and planning), and will be subject to CEQA review and analysis prior to implementation. No potential improvements will be approved without undergoing environmental review under CEQA.

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