

SAN FRANCISCO BAY RESTORATION AUTHORITY

Staff Recommendation  
June 7, 2019

**SOUTH SAN FRANCISCO BAY SHORELINE PROJECT**

Project No.: RA-006  
Project Manager: Brenda Buxton

**RECOMMENDED ACTION:** Authorization to disburse up to \$57,026,673 over a five-year period to the Santa Clara Valley Water District for design and implementation of the South San Francisco Bay Shoreline Project in the community of Alviso, City of San José, Santa Clara County.

**LOCATION:** Community of Alviso and adjacent ponds and waterways, between Alviso Slough and Coyote Creek, northern San José, Santa Clara County (Exhibits 1 and 2); Measure AA Region: South Bay

**MEASURE AA PROGRAM CATEGORY:** Vital Fish, Bird and Wildlife Habitat Program; Integrated Flood Protection Program; Shoreline Public Access Program.

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**EXHIBITS**

Exhibit 1: [Project Location](#)

Exhibit 2: [Project Map](#)

Exhibit 3: [April 11, 2018 SFBRA Staff Recommendation](#)

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**RESOLUTION AND FINDINGS:**

Staff recommends that the San Francisco Bay Restoration Authority adopt the following resolution pursuant to The San Francisco Bay Restoration Authority Act, Gov. Code § 66700-66706:

“The San Francisco Bay Restoration Authority (Authority) hereby authorizes the disbursement of an amount not to exceed fifty-seven million twenty-six thousand six hundred seventy-three dollars (\$57,026,673) to the Santa Clara Valley Water District for design and implementation of the South San Francisco Bay Shoreline Project in the community of Alviso, San José, Santa Clara County, to be disbursed in increments over five years depending on project needs, provided that, in any fiscal year, the Executive Officer shall not make available for disbursement more than \$11.4 million plus amounts that were made available but not disbursed in a prior year. The five-year period of disbursement may be extended as necessary to meet the grantee’s needs.

## *SOUTH SAN FRANCISCO BAY SHORELINE PROJECT*

Prior to commencement of the project, the grantee shall submit for the review and written approval of the Executive Officer of the Authority 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.
3. A plan for acknowledgement of Authority funding.
4. Evidence that all permits and approvals required to implement the project have been obtained.
5. Evidence that the grantee has entered into agreements sufficient to ensure that the project will be implemented, operated, and maintained.”

Staff further recommends that the Authority adopt the following findings:

“Based on the accompanying staff report and attached exhibits, the San Francisco Bay Restoration Authority hereby finds that:

1. The proposed authorization is consistent with The San Francisco Bay Restoration Authority Act, Gov. Code § 66700-66706.
2. The proposed authorization is consistent with The San Francisco Bay Clean Water, Pollution Prevention and Habitat Restoration Measure (Measure AA).
3. The grantee is not required to enter into a project labor agreement per Resolution 22 since the project will be funded by, and undertaken in collaboration with, the U.S. Army Corps of Engineers.”

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### **PROJECT SUMMARY:**

Staff recommends that the Authority authorize disbursement of \$57,026,673, over five years, to the Santa Clara Valley Water District (previously referred to as SCVWD, now referred to as Valley Water) for design and construction of the South San Francisco Bay Shoreline Project (Shoreline Project), which will provide flood protection, restore 2,900 acres of former salt evaporation ponds, and enhance public access in the Alviso area of South San Francisco Bay. The U.S. Army Corps of Engineers (Corps) is designing and constructing the Shoreline Project pursuant to a cost-sharing agreement with Valley Water and the State Coastal Conservancy, which are the non-federal sponsors for the project.

The Authority awarded \$4,439,406 to Valley Water at its April 11, 2018 meeting for the first phase of the Shoreline Project (Exhibit 3). Valley Water needs an additional \$57 million over a five-year period to help meet the cost sharing requirements of the agreement (the Project Partnership Agreement or PPA) with the Corps.

The Shoreline Project was developed as an outgrowth of the South Bay Salt Pond (SBSP) Restoration Project, a multi-agency effort to restore over 15,000 acres of former salt-evaporation ponds to wetland habitats. The Shoreline Project will address the need for tidal wetland restoration, flood protection, and improved recreation connections in the South Bay. Ultimately, the project will restore 2,900 acres of managed open water ponds to tidal marsh. However, before the existing pond berms can be breached for restoration, the inland community and infrastructure must be protected. To provide protection from a 1-percent coastal flood (also

## *SOUTH SAN FRANCISCO BAY SHORELINE PROJECT*

referred to as the “one-hundred-year flood”), as well as sea level rise, the project’s first action will be to construct approximately four-miles of engineered levees, a flood gate, and a tidal closure structure.

Once the flood protection features are complete, the project will construct an upland transition area (ecotone) adjacent to the flood protection levee in order to provide habitat for marsh species during high tides and storms. The ecotone will provide an additional protective buffer for the flood protection levee and will also allow marsh habitat to migrate upslope as sea level rises.

With these features in place, the project will commence breaching the existing berms of Ponds A9-A15 and A18 (shown in Exhibit 6 of April 11, 2018 Staff Recommendation attached as Exhibit 3) in a phased manner in order to restore tidal marsh. The pond-to-tidal marsh conversion will be carried out pursuant to an adaptive management plan that has been integrated with the SBSP Restoration Project’s Adaptive Management Plan.

Breaching the surrounding pond berms will require changes to the existing nine-mile loop trail around Ponds A9-A15. When all ponds have been breached, the final configuration of the A9-A15 trails will be a three-mile total of out-and-back trails with spurs to viewing platforms that will allow visitors to see the evolving marshes. However, the project will also add additional trails to improve the regional trail network. (See Exhibit 5 of April 11, 2018 Staff Recommendation attached as Exhibit 3). The project will complete the Bay Trail spine in the project area by creating new trails on the levee-top through Pond A18 and by connecting along existing berms with the existing Coyote Creek/Bay Trail. The project will also bridge existing gaps over the railroad line and Artesian Slough. Finally, the project proposes to continue the existing bicycle trail parallel with State Route 237 an additional 1.4 miles in order to connect with the Guadalupe River Trail. Although there will be a net loss of approximately 1.5 miles of trail, the new trail network will connect with other regional trails and make direct connections between the Alviso Marina, the U.S. Fish and Wildlife Service’s (U.S. FWS) Environmental Education Center, and the Coyote Creek/Bay Trail.

Project construction features and phases are described in more detail in the Project Description section of the attached April 11, 2018 Staff Recommendation (Exhibit 3).

Since the April 11, 2018 authorization, the Corps has received all funds necessary to construct the project, including an amount equal to the non-federal sponsors’ share, through the Supplement Appropriations of the Bipartisan Budget Appropriation of 2018. However, the non-federal sponsors are obliged to reimburse the Corps for the non-federal sponsor share over time as the Corps incurs project costs. Staff and Valley Water anticipate that, of the funds authorized by the Authority, Valley Water will need an average annual amount of \$11.4 million over a five-year period. The authorization provides flexibility to disburse less than \$11.4 million in any year and carry over the undisbursed amounts to a subsequent year. The authorization limits the disbursement amount to \$11.4 million, plus amounts not disbursed in prior years, to give the Authority certainty as to the amount of funds it has available for other projects during the next five years. The authorization also allows the funding period to be extended if not all the authorized funds have been spent in five years due to delays in the construction schedule or in documenting construction costs.

The current estimate for total project costs, including approximately \$10 million of the non-federal sponsors’ land acquisition costs and work-in-kind, is expected to be \$179,635,966. The non-federal sponsors’ cash cost share is projected to be \$104,888,847. The non-federal sponsors’

## *SOUTH SAN FRANCISCO BAY SHORELINE PROJECT*

share is based upon federal cost sharing requirements. The non-federal sponsors, Valley Water and the Conservancy, will provide cash for 35% of the construction costs for the flood protection levee and tidal wetland restoration, with the remaining 65% provided by the Corps. Recreational improvements are cost shared 50-50. The non-federal sponsors are responsible for 100% of the costs identified in the Shoreline Study as being part of the Locally Preferred Plan (LPP), which are those elements of the project desired by the non-federal sponsors but not deemed eligible for cost-sharing under the Corps' guidance. As a result, for this project, the LPP elements include the upland transition zone (ecotone) and raising the levee 3 feet higher to improve long-term levee performance with sea level rise. The total project cost estimate has changed from the April 11, 2018 Staff Recommendation, which stated the costs as \$174,000,000 total and \$103,738,500 as the non-federal sponsor's share. The prior cost estimate did not include all land acquisition costs and work-in-kind being provided by the non-federal sponsor.

The Valley Water has up to \$15 million available as match for the Authority's grant in the Valley Water's Safe, Clean Water and Natural Flood Protection Program. Additional funds are expected to come from the State Coastal Conservancy and other state sources.

The community of Alviso, including the Alviso Water Task Force, supports the Project and was involved in determining the levee alignment. The recreational enhancements will improve the community's access to the regional trail network, wildlife viewing and education opportunities. The Shoreline Project is also strongly supported by multiple local, state and federal elected officials and government agencies; restoration and habitat-focused non-governmental organizations; chambers of commerce groups for all Silicon Valley cities; recreation groups; and community groups. (See project letters in Exhibit 7 of the April 11, 2018 Staff Recommendation attached as Exhibit 3.)

**Site Description:** 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 U.S. FWS as managed pond habitat for shorebirds and waterfowl as part of the Don Edwards San Francisco Bay National Wildlife Refuge (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. At the present time there are two Refuge trail systems in Alviso: an approximately nine-mile loop trail around Ponds A9-A15 and a three-mile loop-and-spur trail around A16 and A17. An active railroad line separates these two trail networks and there is no direct connection to the Bay Trail. In addition, the project includes the adjacent Pond A18, currently owned by the City of San José, but will be acquired by Valley Water prior to construction. Pond A18 is an 850-acre managed pond connected to the Bay through two water control structures. There is currently no public access to Pond A18. Pond A18 is adjacent to the City of San José's Regional Wastewater Facility, which provides wastewater treatment for over one million people in the South Bay.

*SOUTH SAN FRANCISCO BAY SHORELINE PROJECT*

**PROJECT FINANCING**

<b>San Francisco Bay Restoration Authority</b>	<b>\$57,026,673</b>
San Francisco Bay Restoration Authority (April 2018)	\$4,439,406
Santa Clara Valley Water District	\$15,000,000
Additional Funding (to be secured)	\$28,422,768
<b>Subtotal: non-federal sponsors' Cash Share</b>	<b>\$104,888,847</b>
U.S. Army Corps of Engineers	\$74,747,119
<b>Project Cash Total</b>	<b>\$179,635,966</b>

The San Francisco Bay Restoration Authority funds will be matched by \$74 million from the Corps and up to \$15 million from the Santa Clara Valley Water District's voter-approved countywide special parcel tax, District Measure B: Safe Clean Water and Natural Flood Protection Program.

Possible sources for additional funding include future appropriations to the Conservancy and subvention funds from the California Department of Water Resources. In addition, the Shoreline Project team is also actively seeking ways to lower the costs of ecotone construction through coordination with regional dirt brokers, using local sources of fill, or re-designing this feature to reduce the amount of fill.

The table below estimates the schedule for when the non-federal sponsor would owe funds to the Corps and does not include Valley Water's prior direct costs for fill material or land acquisition and work-in-kind. Due to significant overlap with tasks, the timing of these costs are approximations. Most of the non-federal sponsor payments are owed earlier in the project implementation. Restoration Authority funds will be particularly critical for costs incurred in 2019 through 2024. After the construction of the levees and ecotone and other structures, the breaches of Ponds A9, A10, A11 and A13, A14, A15 are expected to cost \$4 million for each breach with \$371,846 of annual monitoring and adaptive management costs. The Corps' federal share is allocated to most of the costs for the second and third breaching, and therefore Valley Water will owe a lesser amount during that time period.

*SOUTH SAN FRANCISCO BAY SHORELINE PROJECT*

<b>Table 1: Shoreline Project Costs and Schedule</b>		
Activity	Schedule	Non-federal Sponsor Costs
Pre-Construction Project Engineering and Design	complete	\$1,919,555
Project Engineering and Design, Reach 1, 2, and 3 Levees Construction	May 2019 - May 2022	\$35,162,344
Fill acquisition for Reach 4 and 5 Levees and Ecotone, Railroad Crossing and Pedestrian Bridge Design	October 2019 - December 2023	\$20,132,718
Artesian Slough Closure Structure Construction and Reach 4 and 5 Levee Construction	January 2022 - February 2024	\$26,940,768
Complete Ecotone & Breach Ponds A12, A18	January 2024 - July 2027	\$20,692,655
Monitoring and Adaptive Management	January 2027 - January 2030	\$3,447
Breach Ponds A9, A10, A11	February 2030 - December 2031	\$12,360
Monitoring and Adaptive Management	January 2032 - December 2035	\$3,447
Breach Ponds A13, A14, A15	January 2036 - January 2036	\$12,360
Monitoring and Adaptive Management	February 2036 - December 2045	\$9,192
Non-federal Sponsor <b>Cash</b> Total		\$104,888,846

**CONSISTENCY WITH AUTHORITY’S ENABLING LEGISLATION, THE SAN FRANCISCO BAY RESTORATION AUTHORITY ACT:**

Consistent with Section 66704.5, the Valley Water is a public entity and the project will: 1) restore, protect, or enhance tidal wetlands, managed ponds, or natural habitats on the shoreline in the San Francisco Bay area; (2) build or enhance shoreline levees or other flood management features that are part of a project to restore, enhance, or protect tidal wetlands, managed ponds, or natural habitats; and (3) provide or improve public access or recreational amenities that are part of a project to restore, enhance, or protect tidal wetlands, managed ponds, or natural habitats.

Consistent with Section 66704(e), this award would be used to support planning and construction.

**CONSISTENCY WITH MEASURE AA PROGRAMS AND ACTIVITIES:**

This authorization is consistent with Measure AA’s *Vital Fish, Bird and Wildlife Habitat Program* since it will significantly improve or restore over 2,900 acres of wetland habitat that will support and increase vital populations of fish, birds, and other wildlife in and around the Bay, including the San Francisco Bay National Wildlife Refuge.

## *SOUTH SAN FRANCISCO BAY SHORELINE PROJECT*

Consistent with Measure AA's *Integrated Flood Protection Program*, this authorization will use natural habitats to protect communities along the Bay's shoreline from the risks of severe coastal flooding caused by storms and high water levels by constructing ninety-two acres of transitional upland habitat (ecotone) along the Bay's edge while also constructing approximately four miles of levees to protect existing shoreline communities and infrastructure.

Furthermore, this authorization is consistent with Measure AA's *Shoreline Public Access Program* since it will enhance the quality of life of Bay Area residents, including those with disabilities, by constructing 4.6 miles of new trail segments, including sections of Bay Trail, connecting visitor-serving facilities, and providing signs, interpretive information, and related facilities.

### **CONSISTENCY WITH MEASURE AA PRIORITIZATION CRITERIA:**

1. **Greatest positive impact.** The Shoreline Project will accomplish the instrumental first step of providing flood protection to the Alviso area, thus allowing the restoration of 2,900 acres of former salt-evaporation ponds to wetlands and the enhancement of recreational opportunities that provide beneficial use to all Bay Area residents. The proposed restoration is at a sufficient scale that some of the ecological structure, function and connectivity that has been lost in San Francisco Bay will be regained. The restored habitat will benefit the recovery of protected wetland species and help restore ecological functions as well as decrease water turbidity, improve water quality and improve the physical health of the overall bay. Providing integrated flood protection results in critical health, safety and environmental benefits to residents and businesses, which are served by regional infrastructure, such as the Regional Wastewater Facility (RWF), in the Alviso area and throughout the county. Furthermore, the Shoreline Project will connect the existing regional trail networks to provide Bay Area residents, students and visitors improved connections between the U.S. FWS Refuge's Environmental Education Center, the County's Marina Park, and the Coyote Creek/Bay Trail.
  
2. **Greatest long-term impact.** The Shoreline Project addresses the area's flood protection needs for the next fifty-plus years using a natural flood protection approach, allowing long-term restoration of the bay and recreational opportunities during that time and beyond. To address the long-term impacts of sea level rise, Valley Water is funding construction of approximately three additional feet of levee height in order to ensure that the levee meets the 1%-event throughout the entire fifty-year planning life span of the project. (Although planned with a fifty-year time horizon, the improvements are expected to last considerably longer, closer to one hundred years with the current sea level rise projections. Also, the levee will be constructed to allow for height increases if necessary.) The flood protection improvements are foundational for restoring the bay and will have co-benefits for the bay's health, safety, environment and economy, while the wetland restoration and ecotone will add resiliency to the levee by buffering the engineered levee from coastal storm actions. The Project's ability to aid in the recovery of at-risk special status species, and to improve water quality and the physical health of the Bay, combined with natural forms of flood protection, will improve the longevity and life of the engineered levee and reduce levee maintenance costs that will be funded by future generations. Lessons from the implementation of the

## *SOUTH SAN FRANCISCO BAY SHORELINE PROJECT*

Shoreline Project at Alviso will be applied to expand activities to the rest of the south bay shoreline.

3. **Leveraging resources and partnerships.** The Valley Water and Conservancy are the non-federal sponsors of the Project and the Corps is the federal sponsor (Water Resources Development Act (WRDA) of 1986). The Shoreline Project partner agencies are coordinating the cost sharing obligations of design and construction based on Corps requirements. The U.S. FWS is also a co-federal sponsor but is not a cost-sharing sponsor of the Shoreline Project. U.S. FWS is involved in management and execution as a major landowner. By partnering with the Corps local and state agencies have received an additional \$74 million.
4. **Economically disadvantaged communities.** Included in the Shoreline Project area is the community of Alviso, which is identified as an economically disadvantaged community (San Francisco Bay Restoration Authority's Economically Disadvantaged Communities map, August 2017). In addition to providing environmental and recreational enhancements, the Shoreline Project will remove Alviso properties from the FEMA flood plain and relieve Alviso property owners from the costly required annual flood insurance premiums, which are estimated to range from \$1,500 to \$3,000 per year.
5. **Benefits to economy.** The Shoreline Project will benefit the region's economy by reducing the potential for economic damages caused by a 1-percent coastal flood event and projected sea level rise. Any flood event that occurred today as a result from failure of the existing pond dikes would likely result in more than \$100 million dollars in structure and content damages to the Alviso community and a 1-percent flood event that occurred today would cause more than \$200 million in residential and commercial structure and content damages. These estimates are projected to increase over the next fifty years as seas rise. Located in the Shoreline Project area, the RWF is a critical \$3 billion facility that treats wastewater for 1.4 million people in Santa Clara County along with high-tech Silicon Valley businesses. If the RWF was flooded and inoperable, it would cause extreme health, safety and environmental impacts throughout the county. Under current conditions, it is estimated that a flood causing inundation of the RWF's underground equipment would cause more than \$200 million in direct damage (in addition to the damage estimated above). In addition to avoided economic damages, the Project will benefit the region's economy by creating job opportunities during construction, and after with post-construction maintenance and monitoring. Based on October 2015 price levels, the Corps' regional economic impact model estimates that the Project would generate 2,731 direct and indirect jobs with an associated labor income of \$124,334,355.
6. **Engage youth and young adults.** The Shoreline Project will provide enhanced opportunities for public access, environmental education, and recreation associated with the restored habitat and is in an area of vital educational and recreational open space with its proximity to the County Marina Park, Refuge trails and the Environmental Education Center (EEC). The Shoreline Project will improve access to the EEC, which receives approximately 733,000 visitors each year, and the adjacent New Chicago Marsh Trail receives an estimated 8,200 visits each year. The Shoreline Project's recreation features are estimated to increase the annual number of visitors to the Refuge and EEC by 20 percent. Preliminary results from the 2014 trail user survey indicate that the primary user groups for this trail are organized

## *SOUTH SAN FRANCISCO BAY SHORELINE PROJECT*

educational groups ranging from elementary through college age (approximately 66 percent). The Project's educational signs and viewing platforms will provide youth and young adults with information regarding the tidal marsh ecosystem, environmental stewardship, and conservation. The Project will also provide connections to the Alviso Marina County Park, which offers educational public boat rides through the Alviso Slough and educational signage depicting the area's history to share how the South San Francisco Bay shoreline has changed over time.

7. **Monitoring, maintenance, and stewardship.** The Project's Monitoring and Adaptive Management Plan, which is integrated with the SBSP Restoration Project's Adaptive Management Plan, will incorporate monitoring, maintenance, and stewardship practices to develop efficient and effective strategies to restore tidal marsh habitat and ecotone to achieve the maximum benefits of the restoration. A crucial element of the Monitoring and Adaptive Management Plan is a feedback loop between information generation (monitoring) and decision-making (adaptive management) while keeping the public informed and involved in the overall process. Since construction will occur in three phases over 14 years, adaptive management and monitoring will be performed at every phase to allow lessons learned from earlier restoration projects to be incorporated as management and monitoring plans are updated and the designs of future actions are developed and implemented. It is critical to investigate and address uncertainties during the first restoration phase, since some of the monitoring studies may take decades to generate useful information. During each phase, the Project partners will assess progress toward the Project objectives and decide whether to continue along the trajectory of additional tidal restoration. Following the third and final phase of pond breaching, monitoring and adaptive management will be ongoing to provide additional information for adaptive decision-making by tracking progress toward the project objectives.
  
8. **Coastal Conservancy's San Francisco Bay Area Conservancy Program.** The Shoreline Project is consistent with the Bay Area Conservancy Program criteria because it (1) follows the recommendations in adopted regional plans (*San Francisco Bay Plan, Baylands Ecosystem Habitat Goals Report* (1999) pp. 97, 126-139, *Baylands Goals Update* (2015) pp. 198, 203, (2) is multijurisdictional (involves multiple agencies) and serves a regional constituency (the restoration component will facilitate nationally and regionally significant wetland restoration efforts and will complete regional trail connections), (3) can be implemented in a timely way, being fully permitted and able to start construction upon full funding, (4) provides opportunities for habitat, flood protection, and public access benefits that could be lost if the project is not quickly implemented, particularly within the context of future sea level rise, and (5) includes matching funds from other sources of funding as described above in the "Project Financing" section.
  
9. **San Francisco Bay Conservation and Development Commission's Coastal Management Program.** The Shoreline Project will further the resource protection and public access goals of the Bay Plan. On January 18, 2018, the Shoreline Project received a Coastal Zone Management Act consistency determination from the San Francisco Bay Conservation and Development Commission for the Phase 1, Reach 1 levee and ecotone construction and for stock piling of dirt in the ecotone area during construction. Additional consistency determinations will be required by BCDC for subsequent phases of the project.

*SOUTH SAN FRANCISCO BAY SHORELINE PROJECT*

10. **San Francisco Bay Joint Venture's Implementation Strategy.** The Project is consistent with the San Francisco's Bay Joint Venture Implementation Strategy and has been included in the San Francisco Bay Joint Venture's June 2017 Priority Projects List.

**COMPLIANCE WITH CEQA:**

Valley Water, as the lead agency for the project under the California Environmental Quality Act (CEQA), adopted the *Final Integrated Interim Feasibility Study and Environmental Impact Statement/Environmental Impact Report* (Integrated Document) for the Shoreline Project on March 22, 2016. At its April 11, 2018 meeting, the Authority reviewed the Integrated Document, and found that the specific environmental, resource, flood protection and public access benefits proposed by the project outweigh the unmitigated or unavoidable environmental effects of the project, thereby warranting its approval. Authority staff filed a Notice of Determination on June 30, 2018. There have been no project changes, changes in circumstances, or new information since April 11, 2018 that trigger the need for additional CEQA review of the project pursuant to 14 Cal. Code Regs. Section 15162. No further action under CEQA is necessary.