

SAN FRANCISCO BAY RESTORATION AUTHORITY

Staff Recommendation
June 18, 2021

**CALABAZAS/SAN TOMAS AQUINO CREEK-MARSH
CONNECTION PROJECT**

Project No. RA-026
Project Manager: Laura Hollander

RECOMMENDED ACTION: Authorization to disburse up to \$3,370,000 to Santa Clara Valley Water District to conduct planning, perform data collection and analysis, develop design plans, and prepare California Environmental Quality Act and National Environmental Policy Act documentation for the Calabazas/San Tomas Aquino Creek-Marsh Connection Project near the community of Alviso in Santa Clara County.

LOCATION: Pond A8 Complex, Alviso, northern San Jose, Santa Clara County (Exhibit 1); Measure AA Region: South Bay

MEASURE AA PROGRAM CATEGORY: Safe, Clean Water and Pollution Prevention Program; Vital Fish, Bird and Wildlife Habitat Program; Integrated Flood Protection Program; Shoreline Public Access Program

EXHIBITS

Exhibit 1: [Project Location and Site Maps](#)

Exhibit 2: [Project Letters of Support](#)

RESOLUTION AND FINDINGS

Staff recommends that the San Francisco Bay Restoration Authority adopt the following resolution and findings:

Resolution:

The San Francisco Bay Restoration Authority hereby authorizes the disbursement of an amount not to exceed three million three hundred seventy thousand dollars (\$3,370,000) to Santa Clara Valley Water District to conduct planning, perform data collection and analysis, develop design plans, and prepare California Environmental Quality Act and National Environmental Policy Act documentation for the Calabazas/San Tomas Aquino Creek-Marsh Connection Project. The project will reconnect the Calabazas and San Tomas Aquino Creeks with San Francisco Bay through the Pond A8 Complex near the community of Alviso in Santa Clara County.

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.

Findings:

Based on the accompanying staff recommendation 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 Sections 66700-66706.
2. The proposed authorization is consistent with The San Francisco Bay Clean Water, Pollution Prevention and Habitat Restoration Measure (Measure AA).

STAFF RECOMMENDATION

PROJECT SUMMARY:

Staff recommends disbursement of up to \$3,370,000 to Santa Clara Valley Water District (Valley Water) to conduct planning, perform data collection and analysis, develop design plans, and prepare California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) documentation for the Calabazas/San Tomas Aquino Creek-Marsh Connection Project (Calabazas-STA Project) near the community of Alviso in Santa Clara County.

San Francisco Bay Restoration Authority (Authority) approval of this recommendation will provide necessary funding to plan for the first freshwater creek-bay reconnection project in the South Bay. The Calabazas-STA Project is located at the interface of the Don Edwards San Francisco Bay National Wildlife Refuge and the City of San Jose, adjacent to the community of Alviso in Santa Clara County (Exhibit 1, page 1). The project will restore natural connections between the watershed and San Francisco Bay. Restoration of natural processes, such as the deposit of marsh-sustaining sediment, will support the development of tidal marsh in a group of former salt production ponds (Ponds A8, A8S, A5, and A7, referred to as the Pond A8 Complex), as well as riparian habitat and freshwater marsh. The project will also restore and enhance wildlife habitat, reduce flood risk for the surrounding community, and fill a gap in the Bay Trail.

Valley Water has already completed its internal Feasibility Report for this project and is ready to proceed with further project planning. During this planning phase, Valley Water will further develop the problem definition, data collection, and stakeholder outreach, as well as an analysis of a range of project alternatives that accomplish the project's goals. The planning phase typically includes preparation of 30% design plans to support alternatives analysis and CEQA/NEPA document preparation. At the conclusion of the planning phase, the project, with

well-defined major components, will be approved by the Valley Water Board and will move forward into detailed design. The recommended funding will provide critical support to Valley Water for planning and early design of the proposed project.

The Calabazas-STA Project fulfills one of the goals of the South Bay Salt Pond (SBSP) Restoration Project, a multiagency effort to restore over 15,000 acres of former salt evaporation ponds in South San Francisco Bay. The long-term goal of the SBSP Restoration Project is 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.

Adjacent to the Pond A8 Complex lie Calabazas and San Tomas Aquino (STA) Creeks, two freshwater creeks that historically carried water from Santa Clara Valley watersheds to freshwater wetlands and tidal marsh along San Francisco Bay. These creeks have since been heavily modified into artificial channels that make unnatural 90-degree turns before they discharge directly into Guadalupe Slough, bypassing coastal marsh (Exhibit 1, page 2). These modifications restrict water flow and sediment transport and promote bank erosion, increasing flood risk, reducing water quality, and cutting off habitat. As a result, Santa Clara Valley Water District (Valley Water) regularly needs to dredge the deposited sediment from these altered creeks, which is financially and ecologically costly.

The proposed Calabazas-STA Project will address the needs of both the SBSP Restoration Project and Valley Water, serving habitat restoration efforts as well as flood protection needs. The project will restore connections between the creeks, tidal marsh, and Bay by directing the two creeks into the Pond A8 Complex and breaching the levees at several locations to restore tidal action, facilitate sediment accretion, and support tidal marsh establishment (Exhibit 1, page 3). By restoring marsh and reestablishing natural creek-marsh-bay connections, this project will increase habitat for Ridgway's rail and the salt marsh harvest mouse, and will benefit native fish, including the listed Central California Coast steelhead. The project will also improve riparian habitat and enhance freshwater and brackish marsh habitat at Harvey Marsh, a seasonal marsh between the creeks that was restored as part of a mitigation effort undertaken by Caltrans (Exhibit 1 page 2). The added flow capacity of the realigned STA and Calabazas Creeks will reduce flood risk to the surrounding cities of Sunnyvale, Santa Clara, and San Jose, including the nearby community of Alviso, an historically economically disadvantaged community that is highly vulnerable to flooding from storm events and sea level rise. Further, the project will add a one-mile trail segment on adjacent US Fish and Wildlife property that will close part of the Bay Trail gap between Sunnyvale and the community of Alviso. In addition, the Project will provide amenities, such as benches and interpretive panels, and realign and improve the existing Collishaw Trail owned by Santa Clara County.

The Calabazas-STA Project draws on a key recommendation identified by the Baylands Goals Update (2015). The report identifies sediment supplies as critical for allowing existing and evolving marshes to keep pace with sea level rise. One of the ways to increase sediment supply in marshes is to restore historical connections between the San Francisco Bay estuary and its

surrounding watersheds, nourishing the baylands with fresh water and sediment from creek outflows. The reestablishment of freshwater input from Calabazas and STA Creeks is a first-of-its-kind approach to wetland restoration in the South Bay, and lessons learned from this project will provide a valuable resource as efforts continue to restore watershed-estuary transitions and connections.

This proposal will fund planning, data collection and analysis, early design, and the environmental clearance process for the Calabazas-STA Project. Baseline monitoring and scientific studies will support planning efforts, environmental clearance, and design, as they will provide the data necessary to understand sediment transport and supply from Calabazas and STA creeks, identify potential project impacts to fish and other wildlife and water quality, including potential impacts from resuspension of sediment contaminated with mercury, as well as give detailed bathymetric and topographic information that will inform hydrodynamic and sediment transport modeling and the design process.

As the water resources stewardship and flood risk management agency for Santa Clara County, Valley Water is qualified to lead this project, which it will do in partnership with the SBSP Restoration Project Management Team. Since 2005, Valley Water has successfully collaborated with the SBSP Restoration Project and the US Fish and Wildlife Service, along with adjacent landowners, cities and counties, utilities, transportation agencies, flood control districts, and park districts to restore over 3,500 acres of tidal marsh and other wetland habitats while managing flood risk and significantly contributing to recreational features and many miles of public access trails. Valley Water is also well-qualified to conduct public outreach for this project, as they have experience leading such efforts with other projects such as the South San Francisco Bay Shoreline Project. Valley Water anticipates contributing a total of \$2,050,000 of in-kind funding to support this project; however, it has numerous other demands for its funding for critical water and flood protection infrastructure and seeks additional funds in order to complete planning for this project.

Letters supporting Valley Water's application to the San Francisco Bay Restoration Authority from Congressperson Ro Khanna, 25th District Assembly member Kansen Chu, San Jose City District 4 Councilman Lan Diep, former Mayor of Mountain View Patricia Showalter, along with twenty other local cities, environmental groups, and community organizations are attached to this staff recommendation (Exhibit 2).

Valley Water foresees the Calabazas-STA Project facing similar risks to most multi-objective projects along the San Francisco Bay shoreline. These include delays caused by the environmental documentation process or discovery of new information requiring design changes. Valley Water must also carefully consider the effects of the creek connection and levee breaches on the adjacent infrastructure and land uses, such PG&E transmission lines, and a landfill. The risk that is most unique to this project comes from the historic mercury mining in the South Bay area that resulted in significant loads of mercury being deposited in the South Bay, Alviso Slough in particular. During Phase I implementation, the SBSP Restoration Project connected this pond with the Bay through a water control structure that could be managed or closed if the results of the monitoring indicated a connection with the Bay was increasing mercury impacts. Over ten years of the SBSP Restoration Project's mercury studies and monitoring found that connecting Pond A8 with the Bay did not increase the risk of mercury methylation on a permanent basis. This has given the SBSP Restoration Project and Valley Water increased

confidence that opening the pond to full tidal connections will not increase mercury mobilization in the South Bay. Project planning will incorporate monitoring of mercury levels to assess trends and identify adaptive management actions to prevent or reduce mercury mobilization.

Site Description: The Pond A8 Complex 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. Harvey Marsh is a brackish marsh that is owned and managed by Caltrans and was established in 1992 to mitigate the impacts of widening CA-237. The site is approximately 50 acres in size and is separated from the Pond A8 complex by an earthen levee. 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 landfill is identified as a future Bay trail alignment connecting Sunnyvale with the community of Alviso.

PROJECT FINANCING

San Francisco Bay Restoration Authority	\$3,370,000
Santa Clara Valley Water Capital Improvement Program	\$802,000
Project Total	\$4,172,000

Valley Water anticipates spending a total of \$2,050,000 from their Capital Improvement Program towards this project, including \$802,000 in cash contribution and \$1,248,000 of staff time as an in-kind contribution for project management and other items related to planning, data collection and analysis, design, and environmental clearance.

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

Consistent with Government Code Section 66704.5, Valley Water is a local agency working on shoreline parcels in the San Francisco Bay area, on a project that will 1) restore, protect, or enhance tidal wetlands, managed ponds, and 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 66704.5(e) this award would be used to support planning and monitoring for an eligible project.

CONSISTENCY WITH MEASURE AA PROGRAMS AND ACTIVITIES:

This authorization is consistent with Measure AA's *Safe, Clean Water and Pollution Prevention Program*, since the Calabazas-STA Project will restore wetlands that provide natural filters and remove pollution from the Bay's water and enhance creek outlets to the Bay.

This authorization is consistent with Measure AA's *Vital Fish, Bird and Wildlife Habitat Program* since the Calabazas-STA Project will significantly improve or restore 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.

Consistent with Measure AA's *Integrated Flood Protection Program*, the Calabazas-STA Project 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 redesigning Calabazas and STA Creeks to deposit their sediments in Pond A8, where it is needed for tidal marsh formation, these streams will have increased capacity for storm flows which will reduce flood risk to surrounding communities.

Furthermore, this authorization is consistent with Measure AA's *Shoreline Public Access Program* since the Calabazas-STA Project will enhance the quality of life of Bay Area residents by improving the existing Collishaw trail and constructing a one-mile section of trail that will fill a gap in the Bay trail, and providing signs, interpretive information, and benches.

CONSISTENCY WITH MEASURE AA PRIORITIZATION CRITERIA:

1. **Greatest positive impact.** The Calabazas-STA Project will reverse significant hydrologic modifications to a major South Bay watershed and associated marshes. These modifications include channelizing and rerouting of Calabazas and STA Creeks; diking of tidal marsh to create salt production ponds; and removing direct connection of two creeks to tidal sloughs and the Bay. The Project will restore the natural connection of the creeks to an establishing tidal marsh, providing sediment and freshwater input, while restoring tidal influence to the former salt ponds. Restoration of natural water and sediment flows will help the tidal marsh reestablish and thrive, increase the quantity and quality of wildlife habitat, and add natural flood protection that will be resilient to sea level rise. The Project will benefit the recovery of protected wetland species as well as steelhead and other fish and migratory birds. It will restore ecological functions, decrease water turbidity, and improve water quality by filtering pollutants and by converting managed ponds to tidal marsh. It will provide aesthetic and recreational benefits to the local community on a scale that is regionally significant. The resilient flood protection will result in critical health, safety and environmental benefits to residents and businesses in the Project area and throughout the region. The Project will expand and connect the existing regional trail networks, including filling an existing gap in the Bay Trail and providing Bay Area residents, students and visitors improved access to outdoor recreation, wildlife, and education at the Don Edwards National Wildlife Refuge and Alviso Marina Park.
2. **Greatest long-term impact.** The Project will establish the first freshwater creek-tidal marsh-bay reconnection effort in the South Bay, allowing for sediment transport and freshwater input from the watershed to the estuary, and repairing corridors for fish and other wildlife, including many special-status species. Repairing natural landscape transitions from freshwater creek to the Bay via tidal marsh will help restore ecological functions that have long been lost in the South San Francisco Bay. This project will provide valuable lessons for future projects and mark a new era of watershed-estuary restoration in the Bay. The sediment provided may not only help establish tidal marsh but continue to nourish the baylands to enhance resilience to sea level rise. The creek enhancement and restored marsh will provide

resilient flood protection to the extensive communities located shoreward of the tidal marsh. Establishing tidal marsh before 2030 and giving it an ongoing source of upland sediment will bring substantial long-term human and ecological benefits to this part of the South Bay.

3. **Leveraging resources and partnerships.** Valley Water anticipates providing a total of \$2,050,000 in combined cash contribution and staff time, while leveraging the long-term partnerships of the State Coastal Conservancy and US Fish and Wildlife Service under the efforts of the SBSP Restoration Project. As noted above, the Project has 24 letters of support from elected officials, cities, environmental groups, and community organizations (Exhibit 2).
4. **Economically disadvantaged communities.** The Project will benefit the community of Alviso, which is identified as an economically disadvantaged community with a substantial minority population (Authority's Economically Disadvantaged Communities map, August 2017). The Project will enhance the natural environment of the Alviso area, reduce local flood risk, and provide improved shoreline access and recreational opportunities for Alviso residents.
5. **Benefits to economy.** The Calabazas-STA Project will benefit the region's economy by reducing future creek maintenance costs and passing savings on to ratepayers and will reduce the potential for economic damages caused by erosion, coastal flooding and sea level rise. Improvements to the Collishaw Trail and the addition to the Bay trail will enhance public access to the shoreline, which will provide economic benefits by enhancing local recreational opportunities, drawing greater traffic to local businesses.
6. **Engage youth and young adults.** The Calabazas-STA Project site is located in close proximity to Valley Water's Alviso Outdoor Classroom, which is used by its existing Education Outreach Program. This robust program offers free hands-on, Next Generation Science Standards-aligned education programs focused on wetland restoration, bay dynamics, and stewardship, serving a diverse audience of preschool to college-age students, educators, and residents of Santa Clara County. The site of the Calabazas-STA Project represents an opportunity to expand this program, utilizing the Alviso Outdoor Classroom and incorporating watershed stewardship, sediment dynamics, and sea level rise.
7. **Monitoring, maintenance, and stewardship.** Authority funding will provide necessary support for developing the Monitoring and Adaptive Management Plan during the data collection and analysis phase. This plan will utilize the SBSP Restoration Project's Adaptive Management Plan as a guide to identify success criteria and describe in detail the planned collection of data on water quality, biota and physical conditions of the study area before and after construction. These initial studies and ongoing monitoring will not only guide project design but will also be used to test potential management and maintenance strategies.
8. **Coastal Conservancy's San Francisco Bay Area Conservancy Program.** The Calabazas-STA 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. 99, 131, Baylands Goals Update (2015) pp. 27, 52-58, (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, (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 in the “Project Financing” section.

9. **San Francisco Bay Conservation and Development Commission’s Coastal Management Program.** The Calabazas-STA Project meets the following priorities of the plan:

Tidal Marshes and Mudflats Policy 5: Restore tidal action to tidal marshes and tidal flats that have been diked to the Bay and/or manage historic wetlands to provide important Bay habitat for fish and other wildlife.

Water Quality Policy 1: Restore the Bay’s tidal marshes and conserve water surface area and volume to protect and improve water quality.

Fish, Other Aquatic Organisms and Wildlife Policy 1: Conserve and restore the Bay’s tidal marshes, tidal flats, and subtidal habitat to assure benefits to fish and other aquatic organisms and wildlife for future generations.

10. **San Francisco Bay Joint Venture’s Implementation Strategy.** This authorization is consistent with the SFBJV Implementation Strategy, and meets many of its objectives. Restoration of the Pond A8 Complex is included by San Francisco Bay Joint Venture on its Priority Projects List.

COMPLIANCE WITH CEQA:

This work is exempt from CEQA pursuant to 14 California Code of Regulations Section 15262, which exempts feasibility and planning studies. The work is also exempt pursuant to 14 Cal Code of Regulations Section 15306, which exempts basic data collection, research and resource evaluation activities that do not result in a serious or major disturbance to an environmental resource. Staff will file a Notice of Exemption upon approval of the recommended authorization.