

SAN FRANCISCO BAY RESTORATION AUTHORITY

Staff Recommendation
December 06, 2019

LOWER WALNUT CREEK RESTORATION PROJECT

Project No. RA-013
Project Manager: Adrien Baudrimont

RECOMMENDED ACTION: Authorization to disburse up to \$7,929,855 to the Contra Costa County Flood Control and Water Conservation District (District) to implement the North and South reaches of the Lower Walnut Creek Restoration Project, consisting of restoration and enhancement of brackish tidal wetlands and adjacent uplands along the southern shore of Suisun Bay, Walnut Creek and Pacheco Creek in Contra Costa County; and adoption of findings pursuant to the California Environmental Quality Act.

LOCATION: Lower Walnut Creek, 3 miles east of the City of Martinez, Contra Costa County; Measure AA Region: East Bay.

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

EXHIBITS

- Exhibit 1: [Project Location and Site Map](#)
Exhibit 2: [Project Designs and Photographs](#)
Exhibit 3: [Final Initial Study/Notice of Intent to Adopt a Mitigated Negative Declaration for the Lower Walnut Creek Restoration Project](#)
Exhibit 4: [Project Letters](#)
-

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 hereby authorizes the disbursement of an amount not to exceed seven million, nine hundred twenty-nine thousand, eight hundred and fifty-five dollars (\$7,929,855) to the Contra Costa County Flood Control and Water Conservation District

(District) to implement the North and South reaches of the Lower Walnut Creek Restoration Project, consisting of restoration and enhancement of brackish tidal wetlands and adjacent uplands along the southern shore of Suisun Bay, Walnut Creek and Pacheco Creek in Contra Costa 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 employed 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 a project labor agreement consistent with San Francisco Bay Restoration Authority Resolution 22."

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 Authority has considered the "Final Initial Study/Notice of Intent to Adopt a Mitigated Negative Declaration for the Lower Walnut Creek Restoration Project" (MND) adopted by the District on November 19, 2019 and attached to the accompanying staff recommendation as Exhibit 3, and comments received, and finds that on the basis of the whole record, the proposed project avoids, reduces or mitigates any possible significant environmental effect of the project and there is no substantial evidence that the proposed project, as mitigated, will have a significant effect on the environment."

PROJECT SUMMARY:

Staff recommends the disbursement of up to \$7,929,855 to the Contra Costa County Flood Control and Water Conservation District (District) to implement the North and South reaches of the Lower Walnut Creek Restoration Project (project). The project will restore and enhance brackish tidal wetlands and adjacent uplands along the southern shore of Suisun Bay, Walnut Creek and Pacheco Creek in Contra Costa County. The project will improve habitat quality, diversity, and connectivity along 3.2 miles of creek channel (up to 279 acres). In the South Reach, the project will set the levees back from the channel to restore habitat and provide modest levels of flood protection. The sides of the setback levee will be gently sloped to support a wide marsh to upland transition, to be fed by natural deposition of sediment from the creek. The design will limit the need for periodic dredging to maintain the flood protection benefits. Public trails and associated amenities will offer visitors opportunities for wildlife-compatible recreation,

environmental educational and broad vistas of the project area, Suisun Bay and Mount Diablo. The District is partnering with the John Muir Land Trust (JMLT) for the public access component.

The design seeks long term ecological resilience by taking advantage of regionally rare, site-specific opportunities for increasing baylands resilience, such as undeveloped higher elevation areas (created by past dredging events), proximity to watershed supply of freshwater and sediments, and nearby large natural marshes. The site offers opportunities to enhance and restore estuarine wetlands that have suffered large historic losses. This reduction in habitat area threatens native marsh-dependent fish and wildlife species, including special status species such as salmonids, salt marsh harvest mouse, Ridgway's rail, and California black rail. Loss of wetlands caused habitat fragmentation which limits genetic diversity between isolated populations, further threatening their viability. The project improves habitat connectivity by approximately doubling the width of marsh corridor along the Walnut Creek channel and helping fill a nearly mile-wide gap between two large historic tidal marshes on either side of the site along the shoreline of Suisun Bay.

The proposed project will set levees back from the channel to restore wetlands habitat and provide modest levels of flood protection. The current configurations of Walnut Creek and Pacheco Creek are remnants of a traditional engineered flood protection project implemented by the U.S. Army Corps of Engineers (USACE) in the 1960s. Ultimately, the USACE project didn't achieve the design level of flood protection and much higher-than-expected creek sedimentation resulted in the need for periodic dredging to maintain flow capacity. The project ultimately results in modest improvements in flood risk reduction, while taking advantage of natural sediment processes to create new habitat and reduce dredging needs.

Lastly, the Lower Walnut Creek Restoration Project is in an area with limited public shoreline access. The project will implement an extensive network of trails and associated amenities, offering wildlife-compatible recreation and broad views of the restored wetland habitats, Suisun Bay and Mount Diablo. The project also provides an opportunity to link two major regional trails (Iron Horse Trail and San Francisco Bay Trail), allowing visitors on both trail systems to experience the restored habitats and connect to the project trail network.

For planning and design purposes the project area is divided into three reaches: South, Middle, and North reaches. **Restoration Authority funds will be dedicated to restoring the South and North reaches only**, which are fully separable from the Middle Reach. The Middle Reach will be implemented with separate funding in a later phase of the project.

Restoration

The overall restoration portion of the project will create and enhance a 279-acre mosaic of tidal marsh and channels, adjacent terrestrial lowlands, and uplands to support a diversity of plant communities and wildlife species. The project will restore and enhance approximately 168 acres of tidal wetlands, 23 acres of seasonal wetlands, and 82 acres of transitional and upland areas (Exhibit 2, Figure 1). The project is in the brackish part of the San Francisco estuary, where freshwater flows from the Sacramento-San Joaquin Delta mix with saline waters from San Francisco Bay. Tidal marsh in this mixing zone is habitat for protected species and supports high primary productivity that provides food for many native fish species. Adjacent seasonal wetlands and upland/transitional areas provide a rare ecological opportunity for unique habitat

combinations that were once more prevalent at the Bay edge. The upland areas also provide high tide refugia for sensitive species and add to resiliency to sea level rise. Approximately 6 acres will support public trails and maintenance access.

In the South reach, the restoration portion of the project (approximately 47 acres) will be accomplished by breaching and lowering levees to reintroduce the tides to diked former baylands, excavating tidal channels, and constructing a new setback levee for flood protection (Exhibit 2, Figure 4). The sides of the setback levee will be gently sloped to support a wide marsh to upland transition.

In the North Reach (approximately 232 acres), restoration will be accomplished by breaching and lowering berms, excavating to create new tidal wetlands and channels, and grading existing upland areas to create a diverse landscape of lowland terrestrial habitats, including seasonal wetlands, and uplands integrated with the tidal wetlands (Exhibit 2, Figure 5). An existing undersized culvert beneath the TransMontaigne Access Road will be enlarged to allow full tidal flows to the restored wetlands. The District's access road will be relocated to increase the connectivity of restored habitats and to improve maintenance access to a buried outfall pipeline.

The project includes a pre-construction program of invasive plant species control, onsite propagation of native plant material, and extensive revegetation with native plant species, particularly in the lowland terrestrial and upland habitats. Invasive plant species control and revegetation with native plant species will increase the abundance of native plants in the North and South reaches, including along Pacheco Creek. To balance earthwork cut and fill quantities onsite, fill will be transported between the North and South reaches and implementation of the two reaches will be closely integrated.

Flood Control

The flood control component of the project will provide appropriate levels of flood protection that are suited to the existing land uses and are maintained by natural geomorphic processes without the need for periodic large-scale dredging. In the South Reach, a new setback levee, approximately 3,500 feet long, will be constructed along Walnut Creek. Most of the existing levee will be lowered to create tidal marsh and upland transition habitat. Overall, the project will improve flow conveyance and reduce flood risk by a small amount. Buried utilities will be carefully protected in place or relocated over the new levee in coordination with the utility owner(s).

Public Access

In partnership with the John Muir Land Trust (JMLT), the District will implement public access for the North Reach (Pacheco Marsh). The Pacheco Marsh public access concept (Exhibit 2, Figure 2) includes an elevated vista point compliant with the Americans with Disabilities Act (ADA). Sitting 30 feet above the Bay, it offers visitors broad views of Pacheco Marsh, Suisun Bay, and Mount Diablo (Exhibit 2, Figure 3). Hikers can follow 2.6-miles of trails with boardwalk sections, two bridges, and interpretive signs about the marsh and the restoration process. A seasonal trail to two bird blinds will provide birders and photographers close access to habitat areas. A paved parking/staging area will accommodate approximately 30 cars and provide a restroom facility.

The East Bay Regional Parks District (EBRPD) is evaluating the potential for extension of the popular Iron Horse Trail through the project site. The alignment of the trail extension runs on top

of the proposed setback levee in the South Reach, across Pacheco Creek, then west and north to Waterbird Regional Preserve (Exhibit 1, Figure 1). The District has been working closely with the EBRPD to ensure consistency with future public access through the project site. The proposed South Reach setback levee has been specifically designed to support a public trail on top of it.

The District has experience in successfully delivering large grant-funded projects. The District, and program manager Paul Detjens, recently completed the 62-acre Upper Sand Creek Basin Restoration Project, a \$15 million flood protection and riparian habitat restoration project that was partially funded by state grants. The project was delivered on time using available funds. In 2017, the District completed a 90% state-grant-funded levee rehabilitation project in North Richmond that significantly lowers flood risk while preserving riparian and wetland vegetation. JMLT and its executive director, Linus Eukel, have demonstrated successful habitat preservation and public access project on 15 major properties. This includes the 1,185-acre Fernandez Ranch property in Martinez, Ca. which resulted in 1.5 miles of ADA-accessible trails, three picnic areas, and a 160' pedestrian and emergency vehicle bridge.

The project has a broad support (Exhibit 4). Extensive outreach was conducted to ensure community engagement and input. A Stakeholder Advisory Group made up of representatives of local government, businesses, nonprofit organizations, and utilities met multiple times during the planning process. District staff have led many site tours, convened public workshops, and responded to invitations to present the project to a variety of County government, nonprofit, flood management, and university groups. Finally, the project has enjoyed coverage in the traditional media (newspaper, radio, and Bay Nature Magazine) and on social media. The project has an active web page at www.lowerwalnutcreek.org, periodic Facebook posts, and a well-received series of videos on YouTube titled "Lower Walnut Creek Adventures."

Site Description:

The project site is located 3 miles east of the City of Martinez, along the lowest 2.5 miles of Walnut Creek and 1.5 miles of Pacheco Creek (Exhibit 1, Figure 1, and Exhibit 2, Figure 1). Walnut Creek and Pacheco Creek are tidally-influenced within the project area.

Land use in the project vicinity is primarily industrial and open space and has been disturbed by human activities including dredging, levee-building, other filling, and grading. The resulting landscape is lacking much of the structure and functions (connectivity, natural hydrology, native soils, etc.) that characterize native plant and wildlife communities. In the South Reach, a flood control levee separates Walnut Creek from its historic tidal floodplain. Behind the levee is a poorly-drained basin, disconnected from the tides and supporting patches of un-vegetated salt flats, stressed and low-productivity brackish marsh, and seasonal wetland vegetation intermixed with ruderal upland vegetation. Pacheco Creek is bordered by tidal brackish marsh with flood protection levees on both sides. Invasive, non-native plants are present within the area and dominate the uplands. The North Reach is subdivided by several remnant berms originally used to contain material dredged from Walnut Creek, creating a series of poorly drained basins disconnected from the creek and the tides. Past disposal of clean dredged material created high ground up to 12 feet above the surrounding tidal marsh. Invasive, non-native plants are present within the marsh, non-tidal wetlands and waters, and upland transition habitats. As in the South

Reach, upland communities are dominated by invasive non-native plants. Project lands are owned and managed by the District, except for small areas for which the District will be granted an easement (from Conco Inc.) or lease (State Lands Commission).

PROJECT FINANCING

San Francisco Bay Restoration Authority	\$7,929,855
Contra Costa County Flood Control District	\$2,639,696
John Muir Land Trust (JMLT)	\$2,000,000
CA Department of Fish and Wildlife (CDFW)	\$276,651
U.S. Environmental Protection Agency (EPA)	\$1,376,281
National Fish and Wildlife Foundation (NFWF)	\$1,400,000
U.S. Fish and Wildlife Service (USFWS) - Pending	\$970,000
Project Total	\$16,592,483

Restoration Authority funds will be dedicated to restoring the South and North reaches only. In addition, the District leveraged a suite of local, state and federal funds towards the project, as itemized above. The JMLT funds are from donations, dedicated to the North Reach public access construction. The CDFW matching funds are from a Proposition 1 Delta Water Quality and Ecosystem Restoration Grant Program and will support project management, design, environmental compliance, and regulatory permitting. The EPA match comes from a San Francisco Water Quality Improvement Grant to support design, interim vegetation management, and partial construction of the South Reach of the project. The NFWF matching funds are from a National Coastal Resilience Fund and will support construction of the North and South reaches. The pending USFWS matching funds come from a National Coastal Wetlands Conservation Grant and will support construction of the North reach only.

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

The proposed project is consistent with Section 66704.5(a), (b), and (e) of the San Francisco Bay Restoration Authority Act, Government Code Sections 66700-66706.

Under section 66704.5(a), “[t]he Authority may award grants to public and private entities, including, but not limited to, owners and operators of shoreline parcels in the San Francisco Bay area, excluding the Delta primary zone, for eligible projects in the counties within the authority’s jurisdiction.” The District is a public agency that owns and operates shoreline parcels in the northern portion of the East Bay region of the San Francisco Bay area, for the purpose of constructing and maintaining regional flood control basins, channels, and creeks.

Under section 66704.5(b), “[a]n eligible project shall do at least one of the following: (1) Restore, protect, or enhance tidal wetlands, managed ponds, or natural habitats on the shoreline in the San Francisco Bay area, excluding the Delta primary zone. (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 identified in paragraph (1). (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 identified in paragraph (1).” The proposed project restores and enhances brackish tidal wetlands and adjacent uplands along the southern shore of Suisun Bay, Walnut Creek and Pacheco Creek. It results in modest improvements in flood risk reduction, while taking advantage of natural sediment processes to create new habitat and reduce dredging needs. Public trails and associated amenities will offer visitors opportunities for wildlife-compatible recreation, environmental educational and broad vistas of the project area, Suisun Bay and Mount Diablo.

Under section 66704.5(e), “[g]rants awarded pursuant to subdivision (a) may be used to support all phases of planning, construction, monitoring, operation, and maintenance for projects that are eligible pursuant to subdivision (b).” The proposed project is a construction project that is consistent with this section.

CONSISTENCY WITH MEASURE AA PROGRAMS AND ACTIVITIES:

Under Measure AA’s “Vital Fish, Bird and Wildlife Habitat Program... to significantly improve wildlife habitat that will support and increase vital populations of fish, birds, and other wildlife in and around the Bay,” this project will restore approximately 168 acres of tidal wetlands, 23 acres of seasonal wetlands, and 82 acres of transitional and upland areas to a more natural condition while improving both recreation and habitat values. The project includes invasive plant species control, propagation of native plant material, and extensive revegetation with native plant species. Once restored, the new brackish tidal wetland and adjacent uplands environment has the potential to provide habitat for a diversity of plant communities and wildlife species, including special status species such as salmonids, salt marsh harvest mouse, Ridgway’s rail, and California black rail.

Under Measure AA’s “Integrated Flood Protection Program...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,” this project will “[p]rovide nature-based flood protection through wetland and habitat restoration along the Bay’s edge and at creek outlets that flow to the Bay.” The current leveed configurations of Walnut Creek and Pacheco Creek are remnants of a traditional engineered flood protection project implemented by the USACE in the 1960s. Ultimately, the USACE project didn’t achieve the design level of flood protection and much higher-than-expected creek sedimentation required periodic dredging to maintain flow capacity. The proposed project will breach and lower existing levees to reintroduce the tides to diked former baylands and create tidal marsh and upland transition habitat, excavate tidal channels, and construct a new setback levee for flood protection. The project ultimately results in improved flow conveyance and modest improvements in flood risk reduction, and incorporates sustainable natural geomorphic processes without periodic large-scale dredging.

Under Measure AA’s “Shoreline Public Access Program... to enhance the quality of life of Bay Area residents, including those with disabilities, through safer and improved public access, as part of and compatible with wildlife habitat restoration projects in and around the Bay,” this project will “[c]onstruct new, repair existing... public access trails, signs, and related facilities along the shoreline and manage these public access facilities.” The public access portion of the proposed project includes an ADA compliant elevated vista point sitting 30 feet above the Bay; 2.6-miles of trails with boardwalk sections, bridges, and interpretive signs about the marsh and restoration process; a seasonal trail to two bird blinds; and a paved parking/staging area with a restroom facility. In addition, the project is gauging public support for a kayak launch point within Lower Walnut Creek which would serve as a connection to the Bay Water Trail. The project is also coordinating with EBRPD to connect the regional Iron Horse Trail, which currently ends 1.5 miles south of the project site, to the Waterbird Regional Preserve and the Bay Trail.

CONSISTENCY WITH MEASURE AA PRIORITIZATION CRITERIA:

1. Greatest positive impact.

The project provides multiple benefits, combining habitat restoration with improved flood protection and public access. Integration of tidal floodplain restoration and flood protection is a modern model for flood management, replacing the 1960s-era approach previously imposed at the site that required periodic dredging to maintain flood flow capacity. In addition, the proposed public access improvements at the North Reach are critically located and will serve as a destination for a community with no shoreline trail access for 10 miles (between Radke Martinez Regional Shoreline and Bay Point Regional Shoreline). The 2.4 miles of public trails and elevated observation areas will offer visitors the benefits of wildlife-compatible recreation and expansive views. Furthermore, the project lays the groundwork for expanding and connecting regional trail networks to outdoor recreation, wildlife, and carbon-free commute corridors.

With the Authority’s support, the project will realize the most significant restoration on the south Suisun Bay shoreline, at the mouth of the largest watershed in Contra Costa County. Implementation of the project will restore and enhance a 279-acre mosaic of brackish tidal wetlands, seasonal wetlands and adjacent uplands for threatened and endangered species. Project benefits occur along 3.2 linear miles of creek channel, by re-connecting the creek to its tidal floodplain, and substantially improving habitat connectivity between two large historic marshes along the Suisun Bay shoreline. By enhancing an area of higher-elevation dredged material, the site provides a rare opportunity to restore tidal wetlands and adjacent uplands, an ecologically valuable ecotone that has largely been lost around the Bay.

2. Greatest long-term impact.

Restoration of wetlands at the site will provide long-term benefits to the San Francisco Bay ecosystem, including contributing to recovery of threatened and endangered species (Recovery Plan for Tidal Marsh Ecosystem of Northern and Central California, USFWS 2013; Baylands Ecosystem Habitat Goals Project, 1999; Baylands Ecosystem Habitat Goals Project Science Update 2015). Creation of long-term, sustainable benefits is an explicit project objective and was carefully considered during plan development. Early in planning,

the project coordinated with regional baylands experts to develop strategies for improving long-term resilience of the lower Walnut Creek landscape to support ecosystem services and wildlife habitat under changing future conditions. This coordination occurred primarily via the Flood Control 2.0 project, funded by the US EPA and led by scientists from the San Francisco Estuary Institute (SFEI) in partnership with the District.

The project plan draws from recommendations in Flood Control 2.0's Resilient Landscape Vision for Lower Walnut Creek (SFEI 2016) and from the Baylands Ecosystem Goals Science Update (Goals Project 2015). With input from over 100 scientists, the Goals Project identified science-based actions to support ecosystem functions and services in light of expected climate and other environmental changes. The Goals Project identifies the following recommendations (in **bold**), all of which have been incorporated into the project plan:

- **Restore estuary-watershed connections to nourish the baylands with sediments and freshwater.** The project incorporates multiple breaches and channels along Walnut Creek to reconnect the flow of freshwater, sediment, and biota between the creek and the baylands. The high sediment supply delivered from the Walnut Creek watershed (second highest of the San Francisco Bay watersheds; SFEI 2016), makes the restored marshes highly resilient to sea-level rise.
- **Design complexity and connectivity into the baylands landscape at various spatial scales.** The project provides for a more continuous band of wetlands along Walnut Creek and connects along the Bay shoreline to large historic marshes (Exhibit 2, Figure 6). Grading of the North Reach has been thoughtfully designed to provide habitat complexity (e.g., seasonal wetlands, alkali flat, moist grassland, upland grassland and scrub in the upland transition).
- **Restore and protect complete tidal wetlands systems.** The project restores a continuum of habitats from tidal channels through tidal marshes and adjacent terrestrial areas. The restoration is laid out with attention to enhancing interactions across the habitat ecotones. Higher elevation areas adjacent to the marsh will provide terrestrial species with refuge from higher tides and more extreme high-water events with climate change.
- **Plan for the baylands to migrate.** The project includes large areas of upland transition that provide space for natural marsh migration with sea level rise. This space coupled with Walnut Creek's high sediment load, make the site resilient to even high rates of SLR (Exhibit 2, Figure 7).
- **Reduce stressors by removing invasive vegetation.** Invasive vegetation removal before, during, and after construction is a key component of project implementation.

In addition, public access elements of the project have been designed with trails and other structures elevated to account for future sea level rise. Coordination with EBRPD staff was

prioritized to ensure the South Reach levee configuration is compatible with future extension of the Iron Horse trail through the project area.

3. Leveraging resources and partnerships.

Authority grant funds for construction will provide the critical piece needed to implement the North and South Reaches. Matching funds provided by the District, U.S. EPA, CDFW, and JMLT indicate the high level of support for the project. (See Project Financing section above for a list of all the funding sources that will be applied to the proposed project.) Beyond the immediate term, the District will leverage its partnership with EBRPD to facilitate a planned extension of the popular Iron Horse trail through the project area. The setback levee configuration was planned in close coordination with EBRPD so it will be able to accommodate the future trail. In addition, the project leverages a public/private partnership with Conco Inc. to locate much of the proposed South Reach setback levee on Conco property, allowing for an expanded restoration area.

4. Economically disadvantaged communities.

The project area is part of the community east of Martinez, identified as an economically disadvantaged community (EDC) by the Authority (EDC Map, 2017). The project will benefit the community by providing a destination to access the Bay shoreline, the associated trails and other recreational benefits, educational opportunities, and open space.

5. Benefits to economy.

The project will benefit the region's economy by creating employment opportunities during construction and creating long-lasting indirect benefits post-construction (e.g., trail users and bird watchers at Pacheco Marsh). The construction work will be competitively bid and District contractors will pay prevailing wage. Additionally, the grant program requires a Project Labor Agreement (PLA). The District is very familiar with administering PLAs, and routinely includes them on projects that are greater than \$1 million. Construction and associated activities will provide direct benefits through employment of dozens of workers, and indirect benefits through associated spending by those workers. The project will contribute to workforce development and needed capacity-building for restoration specialty areas such as the project's innovative native plant propagation and planting methods.

New setback levees with gentle ecotone slopes will provide moderate flood risk reduction for the Central Contra Costa Sanitary District facility, with economic benefits associated with avoided flood damages.

6. Engage youth and young adults.

Once the proposed public access features are constructed and open to the public, Pacheco Marsh will become a premiere destination for educating youth about marsh ecosystems and efforts to reverse the effects of past human impact and restore critical wetlands to their natural state. The project will feature educational kiosks and displays that tell these stories at the entrance to the site. Signage and displays along pathways will engage young people as they walk the property and experience different sections of the ecosystem.

JMLT will reach out to local schools to facilitate field trips and guided tours by local experts. Volunteer opportunities will involve young adults in the care and maintenance of the property. As successfully done on other properties, JMLT will engage students to help develop tours of Pacheco Marsh that are enabled via mobile app and smart phones (using the Vizzit platform). These tours will be available to all visitors and allow for self-guided exploration that teaches the lessons of Pacheco Marsh and the importance of the marsh ecosystem.

7. Monitoring, maintenance, and stewardship.

The project is designed to minimize the need for active operations and ongoing maintenance. The District will perform routine observation and maintenance as part of their regular levee monitoring program. Anticipated levee maintenance includes mowing and weed control and repair of erosion sites. Long term operations and maintenance will be funded using ad valorem tax revenue collected from property owners in the watershed. The project will use adaptive management activities to increase the efficiency and effectiveness of restoration strategies and to achieve restoration benefits. Native-plant dominated transition habitat is expensive to achieve using a traditional nursery and container-plant approach. The project is working with experienced specialists and Save the Bay to economically “scale up” approaches successfully pioneered at other sites. The project proposes use of fast-growing native plants and incorporation of onsite farming methods for plant propagation, with the potential for significant cost savings. Lessons learned will be documented for the benefit of future projects. Water levels will be monitored to allow the District to operate the improved culvert for target hydrology. Monitoring will be coordinated with regional monitoring efforts. The District is the current site manager and will manage the future restoration and flood protection levees; JMLT will manage the public access facilities.

8. Coastal Conservancy’s San Francisco Bay Area Conservancy Program.

The project is consistent with the San Francisco Bay Area Conservancy Program criteria because it:

(1) is supported by adopted regional plans (Baylands Ecosystem Habitat Goals Report (1999) pp. 94, 104-105, Baylands Goals Project Update (2016) pp. 133-136, USFWS Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California (2013), Comprehensive Conservation and Management Plan (2016), and the San Francisco Basin (Region 2) Water Quality Control Plan (May 2017) pp. 2-2 and 4-90);

(2) serves a regional constituency (will benefit regional populations of fish and wildlife, will serve as a regional public access and recreation destination, and will complete regional trail connections);

(3) can be implemented in a timely way (with construction beginning soon after initiation of grant funding and complete by 2022);

(4) provides opportunities for habitat, flood protection, and public access benefits that could be lost if the project is not quickly implemented (earlier restoration will reduce damage from unauthorized motor bikes and increase estuarine sedimentation for habitat resilience); and

(5) includes matching funds from other sources of funding (the District, CDFW, and U.S. EPA matching funds and public/private partnership benefits as described in the Project Financing section.

9. San Francisco Bay Conservation and Development Commission’s Coastal Management Program.

The project is consistent with the San Francisco Bay Conservation and Development Commission’s (BCDC’s) Coastal Management Program policies. The project furthers the resource protection, public access, climate change resilience, and other goals of the Bay Plan. The North Reach is currently mapped as water-related industry, reflecting its past zoning and failed past attempts to develop the marsh for industrial use. District staff met with BCDC staff on April 12, 2018 to discuss a Bay Plan amendment to designate the North Reach as waterfront park/beach, similar to other shoreline areas in the vicinity, and BCDC staff are supportive. During the permitting stage, the project will request a routine amendment to the Bay Plan to reflect the proposed tidal marsh and park land use. This amendment would be in place prior to project construction. The project is consistent with the Commission suggestions for this stretch of shoreline to “enhance scenic qualities, preserve views and increase public access.”

10. San Francisco Bay Joint Venture’s Implementation Strategy.

The project is designated as a Tier 1 priority project in the San Francisco Bay Joint Venture’s priority projects list as of the date of this application. The project meets the Joint Venture’s primary goal of protecting, restoring and enhancing wetlands and associated uplands and overall objectives for improving the management of bay habitats and monitoring to improve future restoration projects.

COMPLIANCE WITH CEQA:

In order to comply with the California Environmental Quality Act (CEQA), the Contra Costa County Flood Control and Water Conservation District prepared the “Final Initial Study/Notice of Intent to Adopt a Mitigated Negative Declaration for the Lower Walnut Creek Restoration Project,” (MND) to evaluate the potential environmental impacts of the project. The District Board of Directors adopted the MND and approved the project on November 19, 2019.

The MND indicates that the proposed project will not have a significant effect on the environment with incorporation of certain mitigation measures. The potential effects for which mitigation is proposed are in the areas of air quality, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, recreation, tribal cultural resources and mandatory findings of significance. The District and its contractors will be responsible for compliance with the mitigation measures. The potential significant effects on air quality, biological resources, cultural resources, and hazards and hazardous materials, will be mitigated by the measures listed below. The potential significant effects on hydrology and water quality, recreation, tribal cultural resources and mandatory findings of significance will be also mitigated by these same measures. The following is a summary of potential impacts and planned mitigation for the project.

Air Quality - The project would result in vehicle emissions and fugitive dust during construction.

Mitigation includes implementing Bay Area Air Quality Management District (BAAQMD) Basic Construction Mitigation Measures to reduce emissions of fugitive dust and equipment exhaust. Some of the measures are: watering exposed surfaces twice a day; covering haul trucks; limiting traffic speed on unpaved roads; limiting equipment idling time; among others.

Biological Resources - The project would result in: (1) potential impacts on western pond turtle; (2) potential impacts on special-status birds; (3) potential impacts on California black rail and Ridgway's rail; (4) potential impacts on salt marsh harvest mouse and Suisun shrew; (5) potential impacts on special-status plants; (6) potential impacts on special-status fish; (7) potential impacts on sensitive natural communities; (8) potential impacts on wetlands and other waters; and (9) potential construction-related impacts on movement of native resident or migratory fish species or established native resident or migratory wildlife corridors.

- (1) Construction-related impacts on western pond turtle would be potentially significant. Mitigation measures would reduce construction-related impacts on western pond turtle to a less-than-significant level by providing biological monitoring within 150 feet of sensitive aquatic sites; environmental training to construction personnel; general protection measures, including speed limits on all levees and roads during construction; and specific survey and relocation measures for western pond turtles, if encountered. Operational and long-term effects of the project on western pond turtle would be less than significant.
- (2) Construction-related impacts on tricolored blackbird, short-eared owl, Northern harrier, saltmarsh common yellowthroat, Suisun song sparrow, and nesting birds protected by the Migratory Bird Treaty Act would be potentially significant. However, mitigation measures would reduce potential construction-related impacts to nesting special-status birds to a less-than-significant level by providing environmental training to construction personnel, providing general protection measures, and requiring avoidance of construction-related work during the nesting bird season. If avoidance of the nesting season is not possible, then pre-construction nesting bird surveys and establishment of no-construction buffer zones around active bird nests would avoid or minimize the potential for this impact to occur. Operational and long-term effects of the project on tricolored blackbird, short-eared owl, Northern harrier, saltmarsh common yellowthroat, Suisun song sparrow, and nesting birds protected by the Migratory Bird Treaty Act would be less than significant.
- (3) Temporary construction-related impacts would result in potentially significant impacts on California black rail and Ridgway's rail. However, implementation of mitigation measures would reduce potential construction-related impacts to Ridgway's rail and black rail to less-than-significant by providing environmental training to construction personnel, providing general protection measures, avoiding disturbance to rail nesting habitat, conducting pre-construction protocol surveys to identify any active nests, and stopping work if project activities disturb nesting rails. Operational and long-term effects of the project on California black rail and Ridgway's rail would be less than significant.
- (4) Construction-related impacts and ongoing Operation and Maintenance (O&M)- related impacts on salt marsh harvest mouse and Suisun shrew would be potentially significant.

However, implementation of mitigation measures would reduce potential construction and ongoing O&M impacts to salt marsh harvest mouse and Suisun shrew to a less-than-significant level by providing environmental training to construction personnel, providing general protection measures, conducting pre-construction surveys, identification and avoidance of suitable habitat for the species, and where avoidance is not possible, using hand tools to clear vegetation. Further, suitable marsh habitat will be protected during work activities, silt fencing will separate suitable habitat from adjacent work areas, a biomonitor will be in place to stop work if the species is detected, and work during high tide periods will be avoided. With implementation of these mitigation measures, construction- and ongoing O&M -related impacts would be less than significant.

- (5) Temporary construction-related impacts would result in significant impacts on special-status plants, and if special-status plants are present in the areas that have not yet been surveyed, these have potential to be impacted indirectly through changes in site hydrology. However, implementation of mitigation measure would reduce potential construction-related impacts to special-status plants and potential indirect impacts to special-status plants due to changes in hydrology to a less-than-significant level. This would be achieved by: conducting pre-construction special-status plant surveys; delineating and avoiding special-status plants within the project work limits by establishing a no-disturbance buffer, including fencing and signage, around the plant to protect it from construction-related activity; compensating for special-status plant impacts that cannot be avoided; and, reporting special-status plant occurrence to the California Natural Diversity Database (CNDDDB). Operational and long-term effects of the project would be less than significant.
- (6) Construction-related impacts on special-status fish would be potentially significant. However, implementation of mitigation measures would reduce the impact of project construction on special-status fish to less-than-significant by restricting the timing of in-water work to periods in which special-status aquatic species are unlikely to be present, and by ensuring the water quality effects of in-water work are no threat to aquatic species and occur at less than significant levels. Operational and long-term effects of the project would be less than significant.
- (7) Construction-related impacts on sensitive natural communities would be potentially significant. Implementation of mitigation measures would reduce construction-related impacts to less than significant by ensuring that sensitive natural communities are delineated and, to the extent feasible, avoided; minimizing impacts by developing and implementing an erosion control plan and SWPPP; using silt curtains to protect submerged aquatic vegetation; avoiding the introduction of non-native, invasive plant species; using only pesticides certified by the USEPA for use in/adjacent to aquatic environments, and monitoring the vegetation and geomorphology for adaptive management to meet the goals of the project. Operational and long-term effects of the project would be less than significant.
- (8) Construction-related activities would potentially significantly impact wetlands and other waters. However, implementation of mitigation measures would reduce impacts to less than significant by isolating the in-water work area to isolate suspended sediments to the work area, restricting work activities to within the construction footprint, and by avoiding

the introduction and spread of weeds. Although the project would include grading and vegetation management activities within potentially jurisdictional wetlands and waters, and temporal loss of wetlands and waters during construction, these activities would support the goals of habitat restoration and would result in a net increase in wetlands and waters. The project would result in long-term benefits, and therefore the potential operational/long-term impact on wetlands and waters is less than significant.

- (9) Construction-related impacts are not expected to significantly impact wildlife movement or wildlife corridors, but would result in potentially significant water quality impacts on migratory fish. However, implementation of mitigation measures would ensure that construction would occur when migratory fish presence is unlikely and water quality impacts associated with in-water construction would be confined to the immediate area of the activity and would reduce potential impacts on migratory fish corridors to less than significant. Individual nesting birds could potentially nest on the project site and could be directly or indirectly impacted by the project construction. Implementation of mitigation measures would reduce these impacts to less than significant. Therefore, impacts to terrestrial wildlife corridors resulting from project construction would be less than significant after incorporation of mitigation.

Cultural Resources - The project would result in: (1) potential impacts on archaeological resources; and (2) potential impacts on human remains.

- (1) Implementation of mitigation measures would reduce potentially significant impacts to less than significant with mitigation incorporated. This mitigation would ensure that work halt in the vicinity of a find until a qualified archaeologist can make an assessment and provide additional recommendations if necessary, including contacting Native American tribes.
- (2) Implementation of mitigation measures would reduce potentially significant impacts to less than significant with mitigation incorporated. This shall comply with applicable State laws, including Section 7050.5 of the Health and Safety Code. This would require work to halt in the vicinity of a find and immediate notification of the County coroner. If the coroner determines the human remains are Native American, they would notify the California State Native American Heritage Commission (NAHC), who shall appoint a Most Likely Descendant (MLD) (PRC Section 5097.98).

Hazards and Hazardous Materials - The project would result in potential impacts exposure of public and workers to hazardous materials.

Implementation of mitigation measure would reduce impacts to less than significant with mitigation incorporated. This mitigation measure would establish procedures analyzing the chemical concentrations in dewatering fluids and ensuring the dewatering fluids are disposed of in accordance with all applicable federal and state laws.

Authority staff has independently evaluated the MND, and concurs that there is no substantial evidence that the proposed project will have a significant effect on the environment. Staff therefore recommends that the Authority find that the project, as mitigated, avoids, reduces, or mitigates the possible significant environmental effects of the project to a less-than-significant

level and that there is no substantial evidence that the project, as mitigated, will have a significant effect on the environment.

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