COASTAL CONSERVANCY

Staff Recommendation
March 22, 2018

SOUTH SAN FRANCISCO BAY SHORELINE PROJECT

Project No. 02-070-06
Project Manager: Brenda Buxton

RECOMMENDED ACTION: Authorization to support design and implementation of the South San Francisco Bay Shoreline Project by: 1) disbursing up to $100,000 for engineering and environmental services; 2) entering into a Project Partnership Agreement with the U.S. Army Corps of Engineers for construction of the Shoreline Project; and 3) disbursing up to $100,000 to fund a trail feasibility study.

LOCATION: Community of Alviso, San Jose, Santa Clara County (Exhibit 1)

PROGRAM CATEGORY: San Francisco Bay Area Conservancy

EXHIBITS

Exhibit 1: Project Location

Exhibit 2: Shoreline Project Area

Exhibit 3: Proposed Shoreline Project Trails

Exhibit 4: Existing Trail Network

Exhibit 5: Final Integrated Interim Feasibility Study and Environmental Impact Statement/Environmental Impact Report (Integrated Document) available at southbayshoreline.org/documents.

Exhibit 6: Santa Clara Valley Water District Resolution Certifying the Final Environmental Impact Report and Adopting Findings of Fact, Statement of Overriding Considerations, and Mitigation Monitoring and Reporting Program and Approving the Project.

Exhibit 7: Shoreline Project Phasing

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31160 *et seq.* of the Public Resources Code:

"The State Coastal Conservancy hereby authorizes the disbursement of up to $100,000 (one hundred thousand dollars) for engineering and environmental services as part of the Conservancy's

cost share required by the Design Agreement for the South San Francisco Bay Shoreline Project with the U.S. Army Corps of Engineers and Santa Clara Valley Water District.

The Conservancy further authorizes the execution of a Project Partnership Agreement with the U.S. Army Corps of Engineers and Santa Clara Valley Water District for construction of the South San Francisco Bay Shoreline Project.

The Conservancy further authorizes the disbursement of up to $100,000 (one hundred thousand dollars) to the City of San Jose for a feasibility study of trails proposed in the South San Francisco Bay Shoreline Study, subject to the condition that the City shall submit for the review and approval of the Conservancy's Executive Officer a work program including a budget and schedule, the names of any contractors it intends to use, and an acknowledgement plan."

Staff further recommends that the Conservancy adopt the following findings:

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

1. The proposed authorization is consistent with Chapter 4.5 of Division 21 of the Public Resources Code, regarding the Conservancy's mandate to address the resource and recreational goals of San Francisco Bay Area.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria and Guidelines.
3. The Conservancy has independently reviewed and considered the information contained in the *Final Integrated Interim Feasibility Study and Environmental Impact Statement/Environmental Impact Report* (Integrated Document) that was certified with findings by the Santa Clara Valley Water District on March 22, 2016 in order to comply with the California Environmental Quality Act ("CEQA").
4. The Integrated Document identifies Alternative 3 as the preferred alternative. The Integrated Document identifies potentially significant effects from implementation of Alternative 3 in the areas of Hydrology, Water Quality, Biological Resources, Hazards and Hazardous Materials, Air Quality, Noise, and Cultural Resources. Alternative 3, as modified by incorporation of the mitigation measures identified in the Integrated Document, avoids, reduces or mitigates all of the potentially significant environmental effects of the project except for the impacts identified in finding 5, below.
5. Construction of Alternative 3 may result in significant impacts even after mitigation in the areas of Air Quality (emissions of nitrogen oxides and reactive organic gas), Biological Resources (cumulative loss of pond habitat), and Noise (cumulative temporary increase in noise levels). Changes have been incorporated into the project that substantially lessen these three impacts, but they remain significant after mitigation and there are no other feasible measures available to further reduce these impacts. Specific environmental and other benefits of the project described in the accompanying staff recommendation and detailed in the Integrated Document outweigh and render acceptable these unavoidable adverse environmental effects because the project will result in the long-term environmental benefits of restoring habitat for the State- and Federally-listed threatened and endangered species and other plant and animal species that otherwise would be threatened by loss of critical habitat,

protecting the community of Alviso and the Regional Wastewater Facility from tidal flooding, and improving regional trail connections and creating new Bay Trail segments."

PROJECT SUMMARY:

Authorization of the disbursement of up to $200,000 and the signing of a Project Partnership Agreement would support implementation of the South San Francisco Bay Shoreline Project (Shoreline Project), an effort to provide flood protection, restore 2,900 acres of former salt evaporation ponds, and improve public access in the Alviso area of South San Francisco Bay (Exhibit 2). The Conservancy has been part of the Shoreline Project since 2005 because the Shoreline Project will promote the restoration, flood protection, and public recreation goals of the South Bay Salt Pond (SBSP) Restoration Project in the Alviso area.

In 2006, the Conservancy, Santa Clara Valley Water District (SCVWD), and the U.S. Army Corps of Engineers (Corps) embarked on the South San Francisco Bay Shoreline Study (Shoreline Study), a federal feasibility study of the existing flood threat and biological conditions of the Santa Clara County shoreline. The U.S. Fish and Wildlife Service (USFWS) and the City of San Jose's Regional Wastewater Facility (RWF) have participated as well since they are the key landowners in this area. In 2011, the agencies conducting the Shoreline Study narrowed its focus to a high-risk region, the Alviso area between the Guadalupe River and Coyote Creek.

The Shoreline Study, formally called the *Final Integrated Interim Feasibility Study and Environmental Impact Study/Environmental Impact Report (Integrated Document)*, contains specific recommendations for federal cost sharing as well as environmental impact analysis of a project that would restore 2,900 acres of tidal wetlands, construct new Bay Trail segments, and provide tidal flood protection to the Alviso community (described below). Corps' Civil Works Review Board approved the Shoreline Study on September 11, 2015. This now enables the Corps to cost-share with the Conservancy and the other Non-federal Project Sponsor, the SCVWD. This partnership with the Corps is essential to the Conservancy and the SBSP Restoration Project partners' efforts to restore tidal marsh in Alviso. The community is currently below sea-level and at great risk for tidal flooding. The infrastructure needed to protect Alviso, which must be constructed before any berms can be breached, would be extremely costly, perhaps prohibitively so, without federal support.

With the Conservancy's May 22, 2016 authorization to enter into a Design Agreement with the Corps and SCVWD, the Shoreline Study moved into the implementation stage and is now referred to as the Shoreline Project. The Shoreline Project includes construction of an engineered levee, mostly on top of the existing berms along the eastern or southern edges of Ponds A12, A13, A16 and A18 (Exhibit 2). At the location of the Union Pacific railroad line, a flood gate will be constructed. A tidal closure structure will be constructed at Artesian Slough to protect against flood water but still accommodate outflows from the City of San Jose's Wastewater Treatment Facility. The Shoreline Project includes restoration of Ponds A9-A15 and A18 to tidal marsh by phasing in pond breaching pursuant to an adaptive management plan that has been integrated with the SBSP Restoration Project's Adaptive Management Plan. An upland transition area (ecotone) will be constructed adjacent to the flood protection levee in Ponds A12, A13 and A18 in order to provide habitat for marsh species during high tides and storms. (No ecotone habitat is proposed for Pond A16 since that pond is managed as open water for pond species. Vegetated upland transition zones are less beneficial for those species.)

While phasing in the restoration of the ponds, the existing nine-mile loop trail around Ponds A9-A15 will be re-routed onto remaining berms. When all ponds have been breached, the final configuration of the A9-A15 trails will be an out-and-back trail with spurs to viewing platforms that will allow visitors to see the evolving marshes. While the Pond A9-A15 loop will be gradually moved inland and reduced in miles, in other project locations, additional new trails will be constructed and trail connectivity improved (Exhibit 3). The maintenance road constructed on top of the flood protection levee will become a Bay Trail alignment, providing new public access in Pond A18 where there is currently no access. This alignment will continue on existing berms to connect with the Coyote Creek/Bay Trail at North McCarthy Blvd. When completed, currently disconnected visitor serving facilities, the Alviso Marina, the USFWS' Environmental Education Center and the Coyote Creek/Bay Trail, will all be joined by one continuous trail.

The Shoreline Project also proposes to continue the bicycle trail parallel with State Route 237 and improve the connection with the community of Alviso. Constructing a pedestrian/bicycle trail adjacent to State Route 237 will fulfill a request from the public to separate bicycle commuters from the wildlife viewing activities along the levee-top trail in order to minimize user conflicts. Furthermore, constructing additional trail miles and improving key connections will help offset some of the trail miles lost to re-configuring the Ponds A9-A15 loop trail.

For the first phase of construction design of the Shoreline Project, the estimated Non-Federal Sponsors' share was projected to be $1,884,615 and, to date, the majority of the funds for the Non-federal Sponsors' share has been provided by the SCVWD. The funds proposed in this authorization for engineering and environmental services will allow the Conservancy to contribute up to $100,000 worth of in-kind services as part of this cost-sharing requirement. The types of services needed by the Shoreline Project include on-going analysis of environmental impacts to ensure compliance with permit conditions well as design support from biologists, structural engineers, hydrologists, and other technical experts as the project moves through each phase of design.

In addition, this authorization would allow the Conservancy's Executive Officer to sign a Project Partnership Agreement (PPA) with the Corps and the SCVWD for construction of the Shoreline Project. The PPA will be subject to the review and approval of the Department of General Services. The PPA requires the Non-Federal Sponsors, the SCVWD and the Conservancy, to 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 those costs identified in the Shoreline Study as part of the Locally Preferred Plan (LPP). LPP elements of the Shoreline Project include the upland transition zone (ecotone) and raising the levee 3 feet higher to improve long-term performance. Total project costs, including the LPP elements, are expected to be $174,000,000[1], with the Non-Federal Sponsors' share projected to be $103,738,500.

Santa Clara Valley Water District is actively raising funding to meet this expected cost share. SCVWD has up to $16.7 million available in the SCVWD's Safe, Clean Water and Natural Flood Protection Program and intends to seek up to $60 million from the San Francisco Bay Restoration Authority's Measure AA funding. In addition, the SCVWD is pursuing funding from the Department of Water Resources. Finally, the SCVWD may also apply to the Conservancy for

[1] This 2015 estimate includes design, construction, land acquisition, and adaptive management and monitoring but does not include operations and maintenance.

a Prop. 1 grant although the amount awarded for a Prop. 1 grant would likely not exceed $2 million (based on the largest amount awarded through the San Francisco Bay Program).

Conservancy funding for construction is not needed at this time. Staff will seek authorization for construction funding at a future Conservancy meeting. The PPA does not distinguish between the two Non-Federal Sponsors – both the SCVWD and the Conservancy have shared responsibility to fund the cost-share. However, based on the expectations set during planning, the elements of the project that will likely be the highest priority for the Conservancy to contribute to are the phased restoration of the ponds and the construction of ecotone, for which the Non-Federal share is estimated to be $11 and $47 million, respectively; as well as the levee trail public access improvements, estimated to be $3 million. All together, these elements would cost $61 million. Additional funding could also be needed for the other recreational elements not cost-shared with the Corps (costs for these would be estimated as part of feasibility study proposed in this authorization).

Any Conservancy portion of the Non-federal Sponsor's funds would not be needed at once, but could be allocated as federal funds are appropriated by Congress for each phase of the project. Table 1, below, shows an estimated cost by phase. The ecotone construction, the most expensive project element, would not start until 2019 at the earliest and would be phased in through 2021. For the wetland restoration elements, breaching of the first subset of ponds is anticipated for 2022 and would continue in five year increments until 2032. (See Exhibit 7 for a map of project phasing). The entire project's schedule, and therefore the need for Non-Federal Sponsor contributions, is likely to be pushed further back if there are any construction or appropriation delays. This length of time will allow the Conservancy to use funding from future state funding measures as well as seek additional grant sources. Furthermore, Conservancy staff is working with the Corps and SVWVD to lower the cost of ecotone construction through value engineering or redesigning the ecotone to concentrate the slopes in critical areas and reduce overall material volume and handling.

Table 1: Shoreline Project Costs and Schedule[2]

Phase	Levee Reach	Tidal Marsh Restoration	Ecotone Creation	Anticipated Construction Year	Estimated Conservancy Cost
1	1			2018	$100,000
	2 and 3		Ponds A12/13 and A18	2019	$17,000,000
	4 and 5		Pond A18	2020-2021	$34,000,000
		Ponds A12 and A18		2022	$5,000,000
five years of adaptive management monitoring					
2		Ponds A9, A10, and A11		2027	$3,000,000
five years of adaptive management monitoring					
3		Ponds A13, A14, and A15		2032	$2,000,000
five years of adaptive management monitoring					

[2] Conservancy staff have based this estimate on US Army Corps of Engineer's Oct. 2015 cost estimate for each project phase's costs. The Corps has not yet broken out costs by each Reach.

The remaining funds in this authorization, up to $100,000 to the City of San Jose for a trail feasibility study, will facilitate development of Shoreline Project trails that are not part of the Corps' cost-share. During the Shoreline Study planning, the Corps determined that construction costs of the levee-top trail and the pedestrian bridges over the railroad and Artesian Slough could be cost shared with the Non-Federal Sponsor. However, the remaining proposed trails, the link between the levee-top trail to the Bay Trail/Coyote Creek Trail and the continuation of the bicycle trail along State Route 237, were determined to not be eligible for federal funds. Nonetheless, because of the benefits of these trails described above, Conservancy staff recommends proceeding with planning of these trail elements.

Since the State Route 237 bicycle trail and the connection to the Bay Trail/Coyote Creek Trail are not on USFWS land, the trail manager is most likely to be the City of San Jose. This makes the City the most appropriate entity to conduct this feasibility assessment. The City's Department of Parks, Recreation and Neighborhood Services (Trail Program) has extensive experience with assessing trail feasibility. Early and detailed investigations such as this will improve the feasibility of future project development. The City has planned 100 miles of urban trails, which has supported the construction of 59.5 miles of trails in the City.

Site Description: The Shoreline Project includes ponds that were part of the 2003 SBSP Restoration acquisition, Ponds A9-A15. These ponds are now owned and managed by the USFWS. The USFWS operates Ponds A9-A15 as managed pond habitat for shorebirds and waterfowl as part of the Don Edwards San Francisco Bay Wildlife Refuge (Refuge). In addition, the project includes the adjacent Pond A18, currently owned by the City of San Jose. Pond A18 is an 850-acre managed pond connected to the Bay through two water control structures. The Refuge is visited by approximately 150,000 people per year, who engage in walking, jogging, biking, and birdwatching or participate in the Refuge's education programs at the Environmental Education Center in Alviso. At the present time there are two Refuge trail systems in Alviso: a nine-mile loop trail around Ponds A9-A15 and a three-mile loop-and-spur trail around A16 and A17 (Exhibit 4). An active railroad line separates these two trail networks. There is currently no public access to Pond A18. There is also no direct connection the Bay Trail. Pond A18 is adjacent to the City of San Jose's Regional Wastewater Facility, which provides wastewater treatment for over one million people in the South Bay.

PROJECT FINANCING

Coastal Conservancy	$200,000
Santa Clara Valley Water District	$500,000
U.S. Army Corps of Engineers	$3,500,000
Project Total	**$4,200,000**

The source of the funds for this project is expected to be the Conservancy's fiscal year 2016 appropriation from the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84, Public Resources Code section 75001, et seq.).

This funding source may be used for the protection of bays and coastal waters, including projects to prevent contamination and degradation of coastal waters and watersheds, projects to protect and restore the natural habitat values of coastal waters and lands, and projects and expenditures to promote access to and enjoyment of the coastal resources of the state pursuant to the Conservancy's enabling legislation, Division 21 of the Public Resources Code. See Public Resources Code section 75060. The proposed project (preparation of construction designs and a trail feasibility study for the Shoreline Project) protects coastal waters and restores natural habitat values by planning for construction of tidal wetlands that will provide habitat for numerous species as well as improve water quality and for trails that will provide access to coastal resources. Finally, as discussed below, the project is consistent with Chapter 4.5 of Division 21.

In addition, consistent with Proposition 84 requirements, the Shoreline Project, once constructed, will include monitoring and reporting necessary to ensure successful implementation of the project objectives. See Public Resources Code section 75005(n).

Another requirement of Proposition 84 is that for projects that restore natural resources, the Conservancy give priority to projects that meet one or more of the criteria specified in Section 75071. The Shoreline Project satisfies the following specified criteria: (a) Landscape/Habitat Linkages – the Shoreline Project will help implement one of the largest wetland restoration projects on the west coast of North America. It will facilitate wildlife movement, botanical transfer, and sustain large acreage of habitat over time; and (b) Watershed Protection – the project will contribute to long-term protection of and improvement to the water and biological quality of the San Francisco Bay.

The Conservancy's authorization is matched by funds that have been provided for construction engineering and design. U.S. Army Corps of Engineers has received a $3.5 million federal appropriation and the Santa Clara Valley Water District has provided a Non-federal Sponsor contribution of $500,000 in cash and $150,000 of in-kind staff time.

The City of San Jose estimates it will provide approximately $4,500 worth of in-kind staff time managing the trail feasibility study.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

This project will be undertaken pursuant to Chapter 4.5 of the Conservancy's enabling legislation, Public Resources Code Sections 31160-31165, to address resource goals in the San Francisco Bay Area.

The Shoreline Project is within the nine-county Bay Area as required under Section 31162 of the Public Resources Code.

Under Section 31162(a), the Conservancy may undertake projects to improve public access to and around the Bay, without having a significant adverse impact on environmentally sensitive areas and wildlife, such as wetlands, through completion of regional trails, local trails connecting to population centers and public facilities and which are part of a regional trail system, and through the provision of related facilities. The Shoreline Project includes construction of 1.8 miles of Bay Trail segments and connecting trails as well as related public facilities, while enhancing wildlife habitat.

Under Section 31162(b), the Conservancy may act to protect, restore, and enhance natural habitats and connecting corridors, watersheds, scenic areas, and other open-space resources of regional significance. This authorization would specifically provide for the design of 2,900 acres of tidal wetland restoration, approximately 90 acres of upland transition zone (ecotone) creation, and 3.8 linear miles of levee construction, in addition to re-configuring of existing trails and creation of new trail connections, all of which helps implement the goals of the SBSP Restoration Project, a wetland restoration project of national significance.

Under Section 31162(d), the Conservancy may act to promote, assist, and enhance projects that provide open space and natural areas that are accessible to urban populations for recreational and educational purposes. The implementation of the Shoreline Project, which includes trails and other opportunities for recreation, will provide an important recreational open space area to residents of the South Bay, as well as to residents of the entire Bay Area.

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

Consistent with Section 31163(c), the project meets the following criteria: it (1) is supported by adopted regional plans (San Francisco Bay Plan, Baylands Ecosystem Habitat Goals Report (1999) pp. 97, 126-139, *Baylands Goals Update (2015)* pp. 198, 203, and the *San Francisco Basin (Region 2) W*ater Quality Control Plan (June 29, 2013) pp. 2-2 and 4-92), (2) is multijurisdictional (involves multiple agencies) and serves a regional constituency (the restoration component will facilitate nationally and regionally significant wetland restoration efforts 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, and (5) includes matching funds from other sources of funding as described above in the "Project Financing" section.

The Conservancy is authorized to fund plans and feasibility studies under Public Resources Code Section 31111.

CONSISTENCY WITH CONSERVANCY'S 2018-2022 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 12, Objective C** of the Conservancy's 2018-2022 Strategic Plan, the proposed project will assist with planning of a project that will restore up to 2,900 acres of tidal wetlands. In addition, consistent with **Goal 13, Objective D** this project will develop plans for new sections of the Bay Trail. Finally, consistent with **Goal 13, Objective H** this project includes developing plans for regionally significant public access trails that link with the Bay Trail.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines, last updated on October 2, 2014, in the following respects:

Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Promotion and implementation of state plans and policies:** The restoration, flood protection and adaptive management actions of the Shoreline Project will promote and implement several state plans including:

   • *CA Climate Adaptation Strategy/Safeguarding California: Reducing Climate Risk Plan (July 2014).* The plan identifies Actions Needed To Safeguard Biodiversity And Habitats including #2: Implement adaptive management studies to refine approaches for conserving biodiversity, especially for species and communities vulnerable to climate change such as coastal wetlands.

   • *California Water Action Plan (2014)*. The project helps achieve Goal #4, Protect and Restore Important Ecosystems as it is one of the 10 "large-scale habitat projects along the California coast in strategic coastal estuaries to restore ecological health and natural system connectivity, which will … help defend against sea level rise". In addition, the project supports Goal #8, Increase Flood Protection, calls for flood protection projects that achieve multiple benefits including through floodplain restoration.

   • *California @ 50 Million: The Environmental Goals and Policy Report (2013 Draft)*. Key Action #3 of the "Preserve and Steward State Lands and Natural Resources" calls for building resilience in natural systems and specifically points out that wetlands "provide important carbon sequestration opportunities for the state."

   • *CA Wildlife Action Plan* (2005). The project will further the following statewide recommended actions: a) The California Resources Agency, CA Department of Fish and Wildlife, the USFWS, public land managing agencies, and local governments need to develop multicounty regional habitat conservation and restoration plans; g) Public agencies and private organizations need to collaboratively protect and restore lowland linkages in San Francisco Bay.
4. **Support of the public:** This project would help implement the goals of the SBSP Restoration Project which is supported by Senator Dianne Feinstein, the Richard and Rhoda Goldman Fund, the William and Flora Hewlett Foundation, the Gordon E. and Betty I. Moore Foundation, the David and Lucile Packard Foundation, Resources Legacy Fund, the California Natural Resources Agency, CA Department of Fish and Wildlife, USFWS, SCVWD, the San Francisco Bay Joint Venture, Save The Bay, The Bay Institute, National Audubon Society, Citizen's Committee to Complete the Refuge, Cargill, and many other agencies, organizations, and individuals.
5. **Location:** The proposed project is located in southern San Francisco Bay Area, Santa Clara County, consistent with Section 31162 of the Public Resources Code.
6. **Need:** Approximately 85 percent of the tidal marsh in San Francisco Bay has been lost since the Gold Rush, leading to dramatic losses of fish and wildlife, decreased water quality and increased turbidity in the Bay, and changes to physical processes as the size of the Estuary shrank, increasing the need for dredging and the local hazards of flooding. The need for

restoration of tidal marsh in San Francisco Bay in order to aid in the recovery of at-risk species, and improve water quality and the physical health of the Bay, is well recognized among scientists and resource managers. In addition, the community of Alviso is below sea-level and at great risk of tidal flooding.

7. **Greater-than-local interest:** Restoration of this area is of national significance and will result in nearly 3,000 acres of tidal wetland restoration, which will provide benefits to a large number of species, including migratory waterfowl and shorebirds, and aid in the recovery of several threatened or endangered species, including the California Ridgway's rail and salt marsh harvest mouse. In addition, providing flood protection to Alviso will also benefit community residents, many regionally significant high tech businesses, and a wastewater treatment plant that serves over 1 million people.
8. **Sea level rise vulnerability:** Due to their location, all tidal wetland restoration projects can be vulnerable to sea-level rise impacts. However, once the marsh plain of a restored wetland is colonized by vegetation, marshes become efficient sediment traps. Hydrological modeling done as part of the South Bay Salt Ponds Restoration Project's geomorphological analysis indicates that the south Bay's wetlands are likely to keep up with an accelerated pace of sea-level rise. If sea-level rise rates are higher than modeled, it could take longer for marsh vegetation to develop or, in more extreme scenarios, may mean that the restoration sites do not evolve past the intertidal mudflat or shallow open water stage. However, much of the project area is likely to withstand the impacts from sea-level rise for several reasons. The Alviso Ponds are located in the sediment-rich South Bay and past wetland restoration projects have shown much more rapid than predicted sedimentation and colonization by vegetation. Once vegetated, the site will be more resilient to impacts of sea-level rise. The flood protection elements of the plan would increase the flood protection for community of Alviso and the water treatment plant.

Additional Criteria

9. **Urgency:** The Shoreline Project has been one of the few new construction starts in the nation proposed in the Corps' budget. It is critical that the project complete construction permitting and design so that the project can immediately begin construction when funding is appropriated by the U.S. Congress.
10. **Resolution of more than one issue:** The restoration of the South Bay's salt ponds will improve habitat for fish and wildlife as well as water quality. In addition, the project will address a major need for flood protection and complete Bay Trail linkages in the area.
11. **Leverage:** See the "Project Financing" section above.
12. **Realization of prior Conservancy goals:** The Shoreline Project is the result of years of Conservancy participation in planning the Shoreline Study and the SBSP Restoration Project.
13. **Cooperation:** The Conservancy is working closely with the SCVWD, the other nonfederal sponsor, and the Corps in order to implement the wetland restoration, flood protection, and recreational improvements.

CONSISTENCY WITH SAN FRANCISCO BAY PLAN:

The Shoreline Study is under the permit jurisdiction of the San Francisco Bay Conservation and Development Commission (BCDC).

The project is consistent with the following policies of BCDC's San Francisco Bay Plan (Reprinted March 2012):

Part III: The Bay as a Resource

Fish, Other Aquatic Organisms and Wildlife (p. 16)

- To assure the benefits of fish, other aquatic organisms and wildlife for future generations, to the greatest extent feasible, the Bay's tidal marshes, tidal flats, and subtidal habitat should be conserved, restored and increased.

Water Quality (p.19)

- The Bay's tidal marshes, tidal flats, and water surface area and volume should be conserved and, whenever possible, restored and increased to protect and improve water quality.

Water Surface Area and Volume (p. 20)

- Water circulation in the Bay should be maintained, and improved as much as possible.

Tidal Marshes and Mudflats (p. 23-24)

- Where a transition zone does not exist and it is feasible and ecologically appropriate, shoreline projects should be designed to provide a transition zone between tidal and upland habitats.
- Where feasible, former tidal marshes and tidal flats that have been diked from the Bay should be restored to tidal action in order to replace lost historic wetlands or should be managed to provide important Bay habitat functions, such as resting, foraging and breeding habitat for fish, other aquatic organisms and wildlife.
- Any ecosystem restoration project should include clear and specific long-term and short-term biological and physical goals, and success criteria, and a monitoring program to assess the sustainability of the project.

Part IV: Development of the Bay and Shoreline

Public Access (pp. 67-68)

> In addition to the public access to the Bay provided by waterfront parks, beaches, marinas, and fishing piers, maximum feasible access to and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline, whether it be for housing, industry, port, airport, public facility, wildlife area, or other use, except in cases where public access would be clearly inconsistent with the project because of public safety considerations or significant use conflicts, including unavoidable, significant adverse effects on Bay natural resources. In these cases, in lieu access at another location preferably near the project should be provided.
>
> Public access to some natural areas should be provided to permit study and enjoyment of these areas. However, some wildlife is sensitive to human intrusion. For this reason, projects in such areas should be carefully evaluated in consultation with appropriate agencies to determine the appropriate location and type of access to be provided.

COMPLIANCE WITH CEQA:

In order to comply with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), U.S. Army Corps of Engineers (Corps), U.S. Fish and Wildlife Service (USFWS), Santa Clara Valley Water District (SCVWD), and the Conservancy prepared the *Final Integrated Interim Feasibility Study and Environmental Impact Statement/Environmental Impact Report* (Integrated Document) to evaluate the potential environmental impacts of the Shoreline Project (attached as Exhibit 5).

Chapter 4 of the Integrated Document is the CEQA/NEPA project-level environmental impact assessment. The remaining chapters serve as the Corps' planning document and contain additional analysis (e.g. economic, geotechnical) required by the federal feasibility planning process. The SCVWD was the CEQA lead and certified the document, adopted an Errata that corrected minor errors on the Summary of Project Impacts Table, and adopted the Mitigation, Monitoring and Reporting Plan at its March 22, 2016 public meeting (Exhibit 6). The SCVWD filed a Notice of Determination on March 30, 2016.

Shoreline Project Alternatives Analysis

In order to create a reasonable range of alternatives as required under CEQA and NEPA, five alternatives were considered including a no action alternative (Alternative 1). Each action alternative consists of a flood protection measure, environmental restoration or enhancement elements, and changes or improvements to recreation.

Flood Protection Measures

The Integrated Document includes an analysis of various flood protection measures. All the action alternatives propose construction of an engineered levee although the project team did evaluate alternatives to levee construction early in the process. The project team analyzed a scenario which involved moving residences out of Alviso and building an engineered levee around the RWF. This option was determined to be much more expensive than constructing an engineered levee along the salt pond berms and therefore would not be eligible for a Corps cost-shared project. In addition, it would profoundly affect the residents of Alviso. The project team also considered constructing tide gates at the end of slough and building up the outboard berm system. This scenario, however, would not allow tidal restoration of the ponds and therefore would not be consistent with the goals of the SBSP Restoration Project and other regional wetland restoration plans. In order to allow tidal restoration and provide flood protection sufficient to meet the project goals (protection against the one-percent annual chance of exceedance tidal event [or "one hundred-year flood"] with sea level rise), the project team determined that engineered levees would the most effective option for flood protection.

In terms of the location of the flood protection levees, all action alternatives featured the same levee alignment in Pond A18 because earlier in the planning process, alternative alignments were determined to be infeasible. Moving the levee alignment into Pond A18 would have had unacceptable environmental impacts. Moving the alignment into Regional Wastewater Facility (RWF) lands was not consistent with the City of San Jose's plans or would have interfered with RWF operations.

On the USFWS' Refuge property, several alternative alignments were considered for the levee. Alternatives 2 and 3 both run along the existing berm on the eastern side of A12 and the southern

side of Ponds A13 and A16. The difference between the two alternatives is levee height. Alternative 2 proposes a levee height of 12.5 feet since the Corps economic analysis determined this to be the optimal levee height in terms of cost-sharing even though at 12.5 feet, the flood protection level would decrease with time due to sea level rise. However, a 15.2-foot high levee, proposed in Alternative 3, would maintain the level of flood protection during the entire fifty-year life of the project. Alternative 4 follows an old railroad spur alignment through the middle of New Chicago Marsh and Alternative 5 would run south of New Chicago Marsh, immediately adjacent to the community of Alviso.

At the Union Pacific railroad line and Artesian Slough, the project team considered extending the levees inland parallel with the railroad line or slough to high ground in order to close the flood protection gap. However, since this action would generate larger amounts of wetland fill and greatly increase the project costs, this option was not pursued for further analysis as one of the alternatives. Instead, all action alternatives propose to construct a flood gate at the rail line that would be closed during flood events and a water control structure across Artesian Slough that would allow uninterrupted tidal flows and RWF discharges but could be closed during high water events.

Environmental Restoration

All action alternatives proposed tidal restoration for Ponds A9-A15 and A18. During planning, the Shoreline Study sought to be consistent with the programmatic planning of the SBSP Restoration Project. The preferred alternative in the SBSP Restoration Project's long term plan, *2007 South Bay Salt Pond (SBSP) Restoration Project Programmatic Environmental Impact Statement/Environmental Impact Report (2007 EIS/R),* was Programmatic Alternative C, the Tidal Emphasis Alternative, which would eventually convert 90 percent of the former salt ponds to tidal marsh, while 10 percent would remain as enhanced managed ponds. However, by implementing the SBSP Restoration Project in phases, through an adaptive management process, the SBSP Restoration Project would retain the option of stopping tidal marsh restoration prior to restoring 90 percent of total acreage as tidal marsh if, for example, monitoring shows that pond-dependent species appear to be adversely affected by the losses of pond habitats. This means that the adaptive management feedback will guide the SBSP Restoration Project and the end result may be somewhere between Programmatic Alternative B (50% tidal restoration) and Programmatic Alternative C (90% tidal restoration).

Although the Shoreline Study covers a subset of the SBSP Restoration Project area, the Shoreline Study project team adopted the same restoration approach: all of ponds in the project area are to be restored to tidal wetlands but it will be accomplished through an adaptive management framework. The ponds will be broken up into smaller subsets and tidal restoration will be phased in over a fifteen-year period. In between breaches, the restored area will be monitored in manner integrated with the SBSP Restoration Project's monitoring and adaptive management processes. This will allow both the Shoreline Project and the SBSP Restoration Project to jointly assess the changes to the larger South Bay landscape and to slow down, or even halt, pond conversion on either project if negative or undesired impacts emerge.

The other environmentally beneficial element proposed by the project is the creation of upland transition zone habitat (also referred to as ecotone). Currently in San Francisco Bay, wetland-upland transition zones have largely disappeared from marshes. These features mimic the natural landform that once existed around the perimeter of San Francisco Bay and provide the functions of a distinct habitat that is now largely absent along southern San Francisco Bay. These habitat

areas serve as high-tide refugia for State- and Federally-listed threatened and endangered species, such as Ridgway's rail, black rail, and salt marsh harvest mouse and also provide habitat for a unique suite of plant species. Adding this feature on the bay side of the levees would benefit the recovery of protected wetland species and help restore ecological functions. Alternatives 2, 4, and 5 analyzed the creation of a small ecotone area (called a "bench") constructed on the bay side of the proposed flood protection levee along Ponds A12, A13, and A18. Alternative 3 analyzed a larger ecotone in the same location with a 30:1 slope. The larger ecotone would result in more fill impacts but was seen as more beneficial since it would buffer the adjacent flood protection levee, provide more transitional habitat, and would allow inland migration of the restored marshes in response to sea level change.

Recreation Elements

All action alternatives include a maintenance road along the crest of the new levee, which will be made available for pedestrian traffic under the management of the USFWS Refuge (for segments on Refuge property) or a local entity (for Pond A18). At Artesian Slough, a pedestrian crossing was proposed over the tide gate structure to connect all levee segments. At the eastern terminus of the levee, the trail would connect to a designated route generally following existing roads and berms and connect with the existing bridge at McCarthy Boulevard. The existing pedestrian walkway on the bridge would take recreationists to the Coyote Creek Trail (which is also the Bay Trail in this area) that runs along the east bank of the creek.

To cross the active railroad, a 380-foot-long pedestrian bridge was proposed with Americans with Disabilities Act-compliant approaches on either side. The location of the railroad bridge varies by alternative. For Alternatives 2 and 3, the bridge would be near the northeast corner of Pond A12 and southwest corner of Pond A16. For Alternative 4, the railroad bridge would be where the Alviso levee segment turns east from Pond A12 to connect in to the idle railroad alignment. For Alternative 5, the railroad bridge would be near the Alviso Marina.

The tidal wetland restoration proposed by the project would impact the nine-mile loop trail around Ponds A9-A15. As the ponds are breached, the trail will move closer to the levee, with the final alignment being an out-and-back trail with spurs to overlook platforms (Exhibit 3). Maintaining the Alviso Slough Trail in its current configuration (Exhibit 4) would require maintaining the existing salt pond berms in place and bridging all proposed breaches. While technically feasible, surrounding the marsh with trails would have substantial impacts to sensitive tidal marsh species. Furthermore, maintaining the existing berms for trails would preclude their use as borrow sites and would not allow the project to create high-tide islands or pickleweed marsh on the former berms, an action that would enhance wildlife habitat. For these reasons, bridging the breaches was not retained for further analysis in the alternatives and, the project proposes that, for the most part, the trails that would be retained would be concentrated on one side of the Alviso Loop Trail to minimize the adverse impacts of human/wildlife interactions. Changes to the Alviso Loop Trail configuration would ensure compatibility with wildlife and habitat created as a result of restoration while maintaining public access to the shoreline.

Overall, berm breaches for ecosystem restoration would result in a reduction of about 7.4 miles of trails; however, with the addition of trail along Pond A18 (additional 3.3 miles) and a proposed trail parallel with State Route 237 (1.6 miles), the net loss would be about 2.2 miles. The new trail just north of State Route 237 would create a paved multi-use trail that provides connection at a current gap in the multi-use network between its current terminus at Zanker Road

to the community of Alviso. In addition, the new trails would connect to the regional trail network and link the visitor serving facilities in the region. Finally, viewing platforms, interpretive signs, and benches would be installed along existing and new trails in the study area.

CEQA Process

The Corps and the USFWS were joint NEPA leads and the SCVWD was the CEQA lead. All agencies have complied with CEQA and NEPA noticing requirements. Notice of Intent/Notice of Preparation (NOI/NOP) was released on January 6, 2006. The Draft Integrated Document was released for review on December 18, 2014 with a public meeting held in Alviso on January 14, 2015. The comment period on the Draft Integrated Document was extended beyond the minimum 45-day period to February 23, 2015. Forty letters from individuals and organizations were received on the Draft Integrated Document including 17 from federal, state, and local agencies; 2 from for profit businesses (Cargill and PG&E); 12 from non-governmental organizations; and 9 from individuals. All comments were considered and evaluated. Written responses to all comments on the Draft Integrated Document are included in Appendix I of the Integrated Document.

Significant Effects Reduced to Less Than Significant Levels by Mitigation

Exhibit 6 contains a California Environmental Quality Act Summary prepared for the SCVWD (Attachment 1 of Exhibit 6). The Summary includes Table C.3-1, Summary of Project Impacts, which lists the project's potential impacts, avoidance and minimization measures that would be incorporated into the project, and the mitigation measures necessary to avoid or minimize significant impacts. After the Corps released the final version of the Integrated Document in December 2015, the SCVWD noticed some errors in the CEQA Summary, namely a few entries in Table C.3-1 do not accurately reflect the information provided in the environmental analysis sections of the Integrated Document. The SCVWD prepared an Errata, (Attachment 2 of Exhibit 6) which the SCVWD Board adopted with the CEQA findings on March 22, 2016.

Many of the identified potential impacts are reduced to a less than significant level with the incorporation of avoidance and minimization measures. However, some impacts, mostly short term impacts from construction, in the areas of Hydrology, Water Quality, Biological Resources, Hazards and Hazardous Materials, Air Quality, Noise, and Cultural Resources require mitigation to avoid, minimize, or mitigate these impacts to a less than significant level. Mitigation measures include actions or requirements to protect the Bay's water quality, prevent scouring of infrastructure near or in project area, protect or enhance habitat for affected species, minimize emissions and noise, and document potential cultural resources. Additional description of mitigation measures is provided in pp. 7-32 of Attachment 3 of Exhibit 6.

Significant Impacts

The Integrated Document found three impacts that cannot be reduced to less-than-significant for Alternative 3 which was selected as the preferred alternative. There are additional impacts for alternatives that are not part of the recommended project but this discussion will summarize only those impacts for Alternative 3.

<u>Violate air quality standard for nitrogen oxides and reactive organic gases</u>
The air quality analysis presents the most conservative case, which assumes that the levee and ecotone would be constructed simultaneously in a four-year timeframe. Other ecosystem-

restoration activities were determined to be similar to regular, ongoing maintenance in the study area and would not result in emissions above those already occurring.

The air quality analysis determined that emissions of nitrogen oxides (NOx) and reactive organic gas (ROG), precursors to ozone, during construction would exceed significance thresholds established by the Bay Area Air Quality Management District (BAAQMD). The Bay Area air basin is already in non-attainment of the National Ambient Air Quality Standards for ozone, so exceeding thresholds would contribute substantially to an existing air quality violation. Implementation of Mitigation Measures N-AIR-1a and M-AIR-1b would require contractors to achieve a fleet-wide reduction of NOx by 20% and of particulate matter by 45% and to use equipment with the Best Available Control Technology. However, these measures will not be sufficient to reduce project emissions to below the BAAQMD significance thresholds. No feasible measures are available to further reduce this impact.

Cumulative loss of pond habitat used by pond-specialist bird species

Once the project is fully implemented it will result in the loss of a substantial amount of human-created managed pond habitat that is used by managed pond-specialist waterbirds for foraging and roosting. The intent of the adaptive management plans for both the Shoreline Project and the SBSP Restoration Project is to avoid significant impacts to pond-specialists by detecting such impacts in sufficient time to address them or stop conversion of ponds to tidal wetlands. Furthermore, in the case of the SBSP Restoration Project, while the amount of pond habitat will be reduced, the remaining ponds will be enhanced for pond-specialist species, maintaining their populations throughout the South Bay. The magnitude of effects would depend on the long-term success of the SBSP Restoration Project, the Shoreline Project and other restoration projects in the region, population trends, and adaptability of the pond-specialist species. Due to the scale of the Shoreline Project relative to other projects, the incremental impact of the Shoreline Project would be cumulatively significant. No feasible measures are available to reduce this impact.

Cumulative temporary increase in noise levels

The cumulative noise impacts experienced by people in the town could be significant because of the proximity of residents to area roads, the airport, the Union Pacific Railroad track, and the RWF, particularly if Shoreline Project construction activity is concurrent with construction activity at the RWF. Mitigation Measure M-NOI-1 would require the contractor to manage equipment noise and reduce work hours pursuant to a City conditional-use permit in order to reduce the incremental contribution of the project to overall noise in the area. However, given all the potential concurrent noise sources, the cumulative impact would remain significant. No feasible measures are available to further reduce this impact.

Project Benefits

The benefits of the Shoreline Project include:

- Providing tidal flood protection to a population of approximately 6,000 residents and workers in the area and to 1,140 structures as well as to key infrastructure such as the Regional Wastewater Facility.
- Creating approximately 2,900 acres of tidal marsh and ecotone habitat which will benefit State- and Federally-listed threatened and endangered species such as salt marsh harvest mouse, Ridgeway's rail, steelhead trout, and other marsh species.

- Restoring marsh at sufficient scale to restore ecological structure, function, and connectivity.
- Enhancing Bay Trail connections and creating new trails to improve access to visitor serving facilities in the area and providing safe pedestrian/bicycle crossing over an active railroad.
- Scouring local sloughs which have been filled with sediment due to decreased tidal prism and increasing their navigability.
- Improved water quality from increased circulation of tidal waters.

Statement of Overriding Considerations

In the event a project has unavoidable significant effects, the CEQA Guidelines require the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project (14 Cal. Code of Regulations, Section 15093). If the specific project benefits outweigh the unavoidable adverse environmental effects of the project, a Statement of Overriding Considerations may be adopted and the project approved, despite its adverse environmental effects.

The overall environmental benefits of the proposed project as detailed above and in the Integrated Document recommend that the Conservancy approve the project even though not all of the potentially significant environmental effects of the project are mitigated. As discussed above, the potentially significant impacts to air quality and noise are mitigated to the maximum feasible extent and are limited to the construction period of the project only. In terms of impacts due to conversion of former salt ponds to tidal wetlands, the project has an adaptive management plan that has been integrated with the SBSP Restoration Project and will seek to monitor and avoid impacts to pond specialist birds. This is seen as a cumulative impact because there is still risk associated with landscape-scale restoration projects and wildlife responses in a changing environment.

For these reasons, Conservancy staff recommends that the Conservancy find that the specific environmental, resource, flood protection and public access benefits of Alternative 3 proposed in the Integrated Document, as described in the Project Benefits section above, outweigh the unmitigated or unavoidable environmental effects of the project, thereby warranting its approval.

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