

# San Francisco Bay Conservation and Development Commission

455 Golden Gate Avenue, Suite 10600, San Francisco, California 94102 tel 415 352 3600 fax 415 352 3606

March 22, 2019

## Application Summary

(For Commission consideration on April 4, 2019)

**Number:** Consistency Determination No. C2015.006.02

**Date Submitted:** February 6, 2019

**60th Day:** April 27, 2019

**Staff Assigned:** Brenda Goeden (415/352-3623; [brenda.goeden@bcdc.ca.gov](mailto:brenda.goeden@bcdc.ca.gov))



## Summary

**Applicants:** U.S. Army Corps of Engineers (USACE) and U.S. Fish and Wildlife Service (USFWS). The USACE is the federal project sponsor under its Civil Works Program, and the USFWS owns much of the former salt pond property proposed for restoration.

**Partners:** The State Coastal Conservancy (Conservancy), and the Santa Clara Valley Water District (SCVWD). Working under a Design Project Partnership Agreement, the Conservancy and the SCVWD are local project sponsors responsible for 35% of the total Flood Risk Reduction Project (levee) and 100% of locally preferred project components (“betterments,” such as construction of the transitional ecotone habitat), maintenance of the levee and pedestrian bridge over time, and obtaining the property interest for the project.

**Location:** The proposed South Bay Shoreline Project is located at the southern end of San Francisco Bay, and is adjacent to the Town of Alviso, New Chicago Marsh, and the City of San Jose's Pollution Prevention Facility. The subject of this amendment, Reaches 2 and 3 of the levee, would span from the Union Pacific Railroad along the former salt pond A16 to Artesian Slough, and is adjacent to New Chicago Marsh in Santa Clara County (Exhibit A).

**Project:** The South Bay Shoreline Project (Shoreline Project) is a multi-benefit, levee project that in total includes the construction of a 3.8 mile, 15.2-foot levee and the restoration of eight former salt ponds (2,900 acres) to tidal marsh (Exhibit B). The project includes tide gates, railroad and waterway crossings, and public access in the form of trails and viewing areas atop and along newly constructed levees, improved salt pond levees, and offsite regional trails.

The project's primary purpose is to:

- Reduce the risk to public health, human safety, and the environment due to tidal flooding along the South Bay shoreline in Santa Clara County.
- Reduce potential economic damages due to tidal flooding in areas near the South Bay shoreline in Santa Clara County.
- Increase contiguous tidal marsh to restore ecological function and habitat quantity, quality, and connectivity in the study area. The project would increase habitat for native, resident plant and animal species, including special-status species such as the Central California Coast steelhead, Ridgway's rail, and salt marsh harvest mouse.
- Provide opportunities for public access, environmental education, and recreation.

The proposed project is the locally and environmentally preferred project identified in the Environmental Impact Statement and Environmental Impact Report (EIS/EIR), which includes a wider, shallower, bayward sloping levee that would provide transitional habitat (ecotone) along the edge of three of the ponds proposed for tidal marsh restoration.

As described, the entire levee, consisting of five reaches, would be constructed first, and is expected to take about three years. As each reach of levee is completed, the associated transitional ecotone habitat would be constructed on

the bay side of new levee segments except for the levee segment bordering Pond A16, a managed pond. Transitional ecotone habitat is not included in Pond A16 because it will be maintained as a managed pond for waterfowl and other migratory birds, with constant water levels and roosting and loafing habitat islands.

Amendment No. Two includes construction of levee Reaches 2 and 3 (0.95 miles) between former salt pond A16 and New Chicago Marsh, 0.95 miles of Bay Trail atop the levee, a pedestrian bridge over the Union Pacific Railroad tracks, a temporary railroad crossing, a water control structure, and a flood gate, all part of Phase 1 of the Shoreline Project, in accordance with the 1972 federal Coastal Zone Management Act (CZMA), as amended.

Additional levee reaches, project features, and restoration of the eight former salt ponds would be authorized through future Letter of Agreement amendments.

**Issues  
Raised:**

*The staff believes that the consistency determination for levee Reaches 2 and 3 raises four primary issues: (1) whether the project is consistent to the maximum extent practicable with the Coastal Zone Management Program for the Bay, including the McAteer-Petris Act and San Francisco Bay Plan (Bay Plan) policies regarding fill in salt ponds, and to a lesser extent, fill in the Bay; (2) whether the project is consistent with the Bay Plan policies regarding Shoreline Protection and Safety of Fills; (3) whether the project is consistent with the Bay Plan policies regarding Climate Change; and (4) whether the project is consistent with the Bay Plan policies regarding natural resource, including Fish, Other Aquatic Organisms and Wildlife; and Tidal Marshes and Tidal Flats*

## Background

Historically, the project site was part of the open water and tidal marshes of South San Francisco Bay. In the late 19th century, much of South Bay's marshlands were diked (surrounded by levees) and converted to salt ponds and managed for salt production by Leslie Salt, and then Cargill. Most of these former salt ponds are now part of the USFWS Don Edwards San Francisco Bay Wildlife Refuge, established in 1972. The first salt ponds were acquired by USFWS in 1979. An additional 15,000 acres were acquired under the leadership of Senator Diane Feinstein in 2003, with the intent of restoring them to tidal marsh and managed for wildlife and recreation purposes. Approximately 9,000 acres from this acquisition were added to the USFWS's Refuge and the remaining ponds were added to the California Department of Fish and Wildlife's Eden Landing Ecological Reserve. The South Bay Shoreline Study was first authorized by Congress in 1976 and received study authorizations and appropriations in 2002 and 2007 as part of the USACE's Flood Risk Reduction Program and Civil Works Program. The USACE and USFWS state that the levee project would protect approximately 6,000 Alviso residents and employees, and over 1,000 structures from tidal flooding and 100-year flood event (a flood with a one percent annual chance of exceedance) with projected sea level rise through 2067; allows for the restoration of 2,900 acres of tidal marsh and related habitats; and provides educational, recreation and public access opportunities. Structures being protected would include roads, highways, parks, an airport, and a wastewater treatment plant.

In December 2015, the Commission issued the initial phased consistency determination (C2015.006.00), approving the Shoreline Project in concept only to support the USACE's request for Congressional authorization and continued funding for the design phase of the project. The issuance of a phased consistency determination is unusual in that, consistency determinations are typically submitted later in the process, during the Preconstruction Engineering and Design (PED) phase of project development with minimum of 35% design of the project available for review. The initial consistency determination was submitted at the feasibility study level due to a request from the USACE Headquarters to provide political support for the project and funding. The initial consistency determination and plans did not include enough detail to complete a full analysis of the project, and therefore, the Commission agreed to a phased approach for this project, as allowed for in the CZMA, 15 Code of Federal Regulations (CFR) Section 930.36(d). When the Commission reviewed the conceptual plan for the Shoreline Project, it found the plan to be *generally* consistent with the Commission's law and policies. However, per federal regulations, the USACE is required to return to the Commission for subsequent amendments to the consistency determinations for each major decision point for the project. Following the Commission's approval of the Phased Consistency Determination in December 2015, a "Chief's Report" was signed by the Assistant Secretary of the Army, promoting the project from study to design phase. In 2018, the project was appropriate the full \$174 million of federal funds (federal cost share) and the SCVWD and SCC received a grant from the San Francisco Bay Restoration Authority for \$60 million (local cost share).

<b>South Bay Shoreline Project Overview</b>		
<b>Phase</b>	<b>Construction</b>	<b>Year</b>
<b>I</b>	Levee Reach 1	2020
	Levee Reach 2 & 3	2020-2022
	Levee Reach 4 & 5	2022 – 2023
	Breach Ponds A12 & A18	2024
<b>II</b>	Breach Ponds A9, A10 & A11	2027
<b>III</b>	Breach Ponds A13, A14 & A15	2032

**Table 1.** Project Phases

In 2018, the Commission concurred with the USACE and USFWS request for Amendment No. One, and authorized construction of Reach 1 levee construction and associated ecotone. The request for concurrence for Amendment No. Two, summarized herein, constitutes the second decision-point requiring Commission review. Currently, Commission staff anticipates three or four future amendments to this consistency determination, based on the projected ability of the USACE the USFWS and their partners to complete the design for large sections of the project. The USACE and USFWS anticipate that the project will be conducted in three phases, with each phase comprised of multiple actions described in Table 1 above. The schedule has been adjusted from that provided in 2018.

During 2018 and 2019, the USACE and partners entered the design phase for Reaches 2 and 3, which are at 60% design. The flood gate for the railroad crossing and pedestrian bridge are at 35% design, but cannot be furthered until negotiations with the Union Pacific Railroad conclude. The requested amendment includes constructing the Reaches 2 and 3 levee, associated trail, flood gate, a water control structure connecting Pond A16 to New Chicago Marsh, a pedestrian bridge, and minor adjustments to the Amendment No. One authorization (Exhibits C, D, E and F).

### **Project Description**

The Shoreline Project is characterized in the CZMA as a "federal agency activity," namely a "federal development project." Further, the proposed restoration of the former salt ponds the project is characterized as "activities conducted on federal lands" in the CZMA. Such a project is subject to consistency review under CZMA Section 307(c)(1), which requires consistency to the maximum extent practicable rather than full consistency with the State's approved Coastal Zone Management Program. If such a project is located within the Coastal Zone, as the Shoreline Project is, effects on the Coastal Zone are presumed and must be analyzed. While portions of the project can be described as being located adjacent to or within different portions of the Commission's McAteer Petris Act jurisdiction (Bay, shoreline band, and salt ponds), the entire project is subject to the CZMA and the full project impacts should be considered.

**The following project description and analysis relates specifically to the request for Amendment No. Two, with overarching project details provided when necessary for clarity.**

**Jurisdiction:** The proposed Phase 1, Reaches 2 and 3 work would take place within the San Francisco Bay Coastal Zone, and the Commission's salt pond jurisdiction, Bay jurisdiction, the 100-foot shoreline band, and adjacent areas within the Coastal Zone (Exhibit D).

**Work Within  
the Coastal**

**Zone:** Because the existing berms around the former salt ponds do not meet flood protection levee standards, the overall Shoreline Project would excavate the existing berms and construct 3.8 miles of 15.2-foot-high flood protection levee along the proposed alignment (Exhibit C), placing approximately 897,000 cubic yards (cy) of fill material and compacting it to meet levee engineering standards. Reaches 2 and 3 of the levee would be approximately 5,200 feet long (0.95 miles), begin at the at the Union Pacific Railroad crossing, extend eastward and terminate at Artesian Slough.

The 43.52 acre levee (Reaches 2 and 3) would be approximately 110 feet wide at the base, 16 feet wide at the crest, and have an elevation of 15.2 feet NAVD88 after settlement, approximately 10 feet higher than some areas of the existing salt pond berms (existing heights vary) and twice as wide. Once completed, a 12-foot-wide trail, with two, 2-foot-wide shoulders, surfaced with crushed aggregate, would be constructed on the levee crested.

The alignment of Reaches 2 and 3 levee would generally follow the existing inland berm alignment to take advantage of compacted soils beneath. The construction requires excavation of existing berms and soils to create the levee core trench importing approximately 365,000 cubic yards (cy) of imported soil. In order to establish proper construction conditions, Pond A16 would require dewatering, which will be conducted by building a temporary berm and pumping the water out of the construction area. The excavated material would either be placed in the adjacent stockpile areas of A12 and 13 for future use in the ecotone development or, if physically suitable, be reused along with new construction fill to create the new levee or ecotone adjacent to Pond A12, A13 or A18. Because the soil below the levee alignment is former Bay muds, compaction and settling of the levee is expected.

The Reaches 2 and 3 fill in salt ponds acreage, (30.021 acres) is approximately 0.03% of the acreage of the first two restored ponds being returned to tidal action. Small portions of levee Reach 3 would involve work in the Bay, primarily in tidal marsh habitat in Artesian Slough (see Table 2 and Exhibit D). An approximately 0.772-acre portion of tidal marsh would be permanently impacted by levee construction. Pond A16, immediately adjacent to levee Reaches 2 and 3, was previously converted from a salt pond to a managed wetland by the South Bay Salt Pond Project and will remain a managed wetland in perpetuity.

The Union Pacific Railroad tracks run along a levee between Ponds A13 and A16, creating a physical separation between Reach 1 and Reach 2 of the flood protection levee. As a result, additional structures are needed for construction, flood protection, and the public access trail. During construction, truck and heavy equipment would need to cross the railroad tracks on a regular basis. Therefore, the levee on either side of the tracks would include a temporary, 16-foot wide, asphalt paved ramp at a 1-foot vertical to 20-foot horizontal slope. These ramps would be removed when the construction is complete.

Because of the gap between Reach 1 and Reach 2 of the levee, a coastal flood gate is needed. The USACE plans include manually operated approximately 8-foot high by 40 to 110-foot wide flood gate (the height would match that of the levee crest). The dimensions included in the consistency determination are approximate because the project sponsors are in negotiations with the railroad, which is considering future renovations to these tracks to address rising seas and additional rail use.

Similarly, a pedestrian bridge is necessary to continue the Bay Trail across the gap between the levee and over the train tracks. The description in this consistency determination are approximate, the USACE will finalize the plans for the pedestrian bridge in the future, considering the maximum height that would be needed based on the railroad's renovation plans. As described, the bridge would be between 640 and 970 feet long, reach a minimum vertical clearance above the tracks of 29.3 feet NAVD88, and would be Americans with Disability Act (ADA) accessible (Exhibit E and F).

Pond A16 provides supplemental water to New Chicago Marsh (non-tidal salt marsh) during the summer months. Because construction of the levee would eliminate the existing connection, a water control structure, consisting of a 48-inch diameter pipe, flap gate, deck and rails, and apron would be installed in Reach 3 of the levee, to create a new hydraulic connection to the marsh. Without this supplemental water, the marsh would degrade overtime and result in loss of habitat for native and listed species.

Once construction of the full levee is completed, the first two ponds, A12 and A18 would be breached (2024) and would be exposed to tidal action. It is anticipated that the subsided pond bottoms will evolve from mudflat to vegetated marsh overtime. Thus, the ponds would be open water or intertidal mudflats initially after breaching, and gradually vegetate as sediment builds in the ponds. Due to the subsided nature of the site, several feet of sediment would need to be deposited through natural processes before the pond bottoms reach elevations suitable for marsh vegetation. In future phases of the project, additional salt pond berms would be breached and lowered to promote tidal circulation to eight restored ponds. The Commission can anticipate two additional restoration requests at five and ten years after the initial breaching to incrementally restore the remaining six ponds.

**Fill** The construction of the Phase 1 Reaches 2 and 3 levee would result in a net total of 416,300 cy of solid fill in the coastal zone, including Bay, salt pond, shoreline band and other coastal zone management areas. Approximately 293,000 cy of soil and sediment would be excavated and used on site in appropriate areas.

**Table 2. Phase 1: Reaches 2 and 3 Levee Construction**

	Bay Jurisdiction	Shoreline Band Jurisdiction	Salt Pond Jurisdiction	Other CZMA Jurisdiction	Total Net Fill Cubic Yards
<b>Description</b>	<b>Solid Fill</b>				
Reach 2 and 3 Levee	0.473 acres	0.76 acres	14.074 acres	4.973 acres	363,000 cy
Riprap and Topsoil	0.3 acres	NA	NA	5.056 acres	40,300 cy
Flood Gate	0	0	0.03 acres	0	Estimated 8,000 cy
Railroad Crossing	0	0	10.891 acres	0	5,000 cy
Pedestrian Bridge (Cantilevered)	0	0	0.532 acres	0.105 acres	unknown
<b>Total</b>	<b>0.773 acres</b>	<b>0.76 acres</b>	<b>11.451 acres</b>	<b>10.029 acres</b>	<b>416,300 cy</b>

\* This area includes some salt pond and shoreline band jurisdiction overlap

### Public

**Access:** Approximately 3.8 miles of public access would be provided on top of the new flood protection levee. The planned additional public access components, including two pedestrian bridges, levee top trails (part of the Bay Trail), spur trails and offsite multi-use trails along the north side of State Route 237 would be constructed as part of later phases of the project (Exhibit G). The levee top Bay Trail segment would be either gravel or decomposed granite and would be ADA-accessible.

As noted in the initial consistency determination, some of the existing trails would be eliminated when outer salt pond berms are breached and lowered in order to return the former salt ponds to full tidal action once the flood protection levee have been completed. The project sponsors estimate that approximately 7.4 miles of existing trails would be lost with full implementation of the project. The public access on the new flood control levee would add approximately 3.6 miles of new access, and the offsite multi-use trail would add 1.6 miles, though well outside the Commission's jurisdiction. While it is expected that the existing levee trails would remain open to public access until the salt pond berms are breached (except where access may be restricted to allow construction), at project completion there would be 3.8 miles less public access to the Bay than currently exist (this number excludes the bike trail along State Route 237).

Construction of the levee Reaches 2 and 3 levee would include construction of approximately 0.95 miles of the levee top trail. The trail would be open to the public once construction is complete. The 640 to 970-foot long pedestrian bridge would be constructed after completion of the entire levee, in 2023.

**Schedule****and Cost:**

Reaches 2 and 3 levee construction is proposed to commence in March 2020 and is anticipated to take 16 months, with completion in 2021. The construction of the flood gate and pedestrian bridge is anticipated to begin in spring of 2022 and be completed in summer 2023. The estimated project cost for this reach is \$41 million. The overall South Bay Shoreline Project cost is \$174 million.

### Staff Analysis

A. **Issues Raised:** *The staff believes that the consistency determination for Reach 1 raises four primary issues: (1) whether the project is consistent to the maximum extent practicable with the Coastal Zone Management Program for the Bay, including the McAteer-Petris Act and Bay Plan policies regarding fill in salt ponds, and to a lesser extent, fill in the Bay; (2) whether the project is consistent with the Bay Plan’s policies regarding Shoreline Protection and Safety of Fills; (3) whether the project is consistent with the Bay Plan policies regarding Climate Change; and (4) whether the project is consistent with the Bay Plan policies regarding natural resource, including Fish, Other Aquatic Organisms and Wildlife; and Tidal Marshes and Tidal Flats.*

1. **Fill.** Most of the fill proposed for levee Reaches 2 and 3 would involve fill in salt ponds, with a more limited fill volume occurring in the Commission’s Bay and shoreline band jurisdictions.

According to Section 66605 of the McAteer-Petris Act, the Commission may allow fill in the Bay and certain waterways only when the fill meets specific requirements: (a) the public benefits from fill must clearly exceed the public detriment from the loss of water areas, and fill should be limited to water-oriented uses or minor fill for improving shoreline appearance and public access; and (b) no alternative upland location is available. The Commission may allow fill in the Bay, certain waterway, *and salt ponds* when: (a) the water area authorized to be filled should be the minimum necessary to achieve the purpose of the fill; (b) the fill should minimize harmful effects to the Bay including the water volume, circulation, fish and wildlife resources, and marsh fertility; and (c) the fill should be authorized when the applicant has valid title to the properties in question.

The Bay Plan’s policies for salt ponds state that, “if the owner of any salt ponds withdraws any of the ponds from their present uses, the public should make every effort to buy these lands and restore, enhance or convert these areas to subtidal or wetland habitat.” It further states that “...opening ponds to the Bay represents a substantial opportunity to enlarge the Bay and restoring, enhancing or converting ponds can benefit fish, other aquatic organisms and wildlife, and can increase public access to the Bay....”

Construction of levee Reaches 2 and 3 would result in the placement of imported clean soil to construct approximately 19.52 acres of levee. The northern levee slope would be covered with approximately 34,000 cy of riprap, covered with 6,300 cy of topsoil and then hydroseeded with native plants. The USACE states that the riprap is necessary to

protect Reaches 2 and 3 of the levee from wind wave driven erosion. Reaches 2 and 3 together make up 0.95 miles of the 3.8 miles of flood protection levee that is necessary to reduce coastal flooding risk, address rising seas, and allow restoration of eight former salt ponds (approximately 2,900 acres) to Bay and tidal marsh habitat.

In constructing the levee, existing infrastructure, including the Union Pacific Railroad, must be accommodated, requiring additional fill in the Commission's CZMA jurisdiction. The Union Pacific Railroad is in the early planning phases for renovating the levee supporting the tracks, including considerations of increasing rail traffic over time. Because of this, the USACE and the USACE cannot fully analyze or determine the appropriate size and location of the flood gate needed to complete the flood protection function of the levee, and the connection between the two proposed trail sections on Reach 1 and Reach 2 of the levee. In addition, temporary railroad crossing ramps are needed to allow trucks and equipment to transit between stockpile and construction areas. The ramps would result in placement of 5,000 cy of temporary fill, including aggregate base and asphalt for the ramp surface, and concrete blocking over the tracks.

In addition, because of the gap between Reach 1 and Reach 2 of the levee, a coastal flood gate and pedestrian bridge is needed. While these features are only at 60 percent design, they would not be built until 2023 when the levee is complete, allowing sufficient time for further design development. As currently described the two features would result in solid and cantilevered fill. The Commission can authorize these features in concept now, revisit these features as needed when designs are better developed. The USACE and the USFWS are committed to designing features that meet sound engineering standards and minimizing fill while providing the flood protection and public benefits of the project.

Lastly, a water control structure, consisting of a 48-inch diameter pipe, flap gate, deck and rails, and apron would be installed in Reach 3 of the levee, to create a new hydraulic connection to New Chicago Marsh. This connection is necessary to preserve existing endangered species habitat. However, it appears that in order to be compliant with the USACE standard engineering practices, this feature may be over-designed for its purpose, and may create a pathway for flood waters should it fail during a coastal flooding event. The current water control structure is smaller than proposed. When discussing the size of this feature with the USACE, the rationale for the sizing was compliance with the standard engineering manual and the ability to inspect the pipe by walking into it. Current technology allows inspection of pipes through remote sensing, i.e., cameras, so the ability to physically entering the pipe may not be necessary. Commission staff is discussing this issue with the USACE and will either provide an update in the Staff Recommendation or via plan review. In the event that the design changes, the amount of fill from this feature would likely be reduced.

As stated in the law and policies cited above, the Commission can authorize fill in the Bay for protecting shorelines, to create or enhance habitat, and to provide public access. Policies guiding fill in salt ponds is governed by maximizing open water, improving circulation and minimizing harmful effects as salt ponds are restored to tidal marsh or subtidal areas. The proposed fill in the Shoreline Project includes shoreline protection, enhancing and restoring habitat, and providing public access, and thus meets the

McAteer Petris Act requirements for public and wildlife benefits. The Commission's policies require that all proposed fills in water-covered areas of the Commission's jurisdiction be the minimum necessary and be designed to minimize adverse impacts on the Bay's natural resources. The alignment of the levee in Reaches 1, 2, and 3 take advantage of the existing salt pond berm, minimizing the footprint of the levee in the open salt pond waters.

While the size and scope of the fill proposed for shoreline protection, habitat enhancement, and public access is much larger than previous projects authorized by the Commission, the Commission has authorized fill in the Bay and in salt ponds for such water-oriented uses before. Most recently, the Commission concurred with the USFWS that placing dredged sediment on approximately 15 acres (653,400 square feet) of tidal marsh to create transitional habitat designed to enhance the productivity, functioning and habitat value of the surrounding marshlands at Sonoma Creek was consistent with Commission law and policies (C2014.004). The Commission also concurred with USFWS's determination that placing dredged materials on approximately 4.0 acres to raise pond bottoms and create marsh mounds at lower Tubbs Island (San Pablo Bay Wildlife Refuge) was consistent with the Commission's law and policies (C1993.011.01). In BCDC 2018, the Commission concurred with the USFWS that placement of approximately 900,000 cy of imported and on site fill in former salt ponds for the South Bay Salt Pond Project, Phase Two was consistent with Fill and Salt Ponds policies (C2017.008.00). There are several other relevant examples provided in the Staff Summary for Amendment No. One for this project.

As with the South San Francisco Bay Shoreline Phase 1 Feasibility Study and Conceptual Plan, these elements were constructed to provide flood protection and provide public access. While this portion of the project is specific to shoreline protection, the completion of the levee, flood gate, and pedestrian bridge will enable the USACE and USFWS to restore 2,900 acres of former salt ponds to tidal marsh, consistent with the Commission's Salt Pond policies.

- a. **Priority Use Designation.** The entire project area is designated on Bay Plan Map No. 7 as a Wildlife Refuge. While the ponds currently provide habitat for many species, the habitat value of the project site is expected to be greatly enhanced by returning tidal action to these ponds and as the ponds evolve from subtidal habitat, to intertidal mudflat, to vegetated tidal marsh. Because the ponds will be restored to tidal action, the levee, flood gates and water control structure is necessary to protect the Town of Alviso and the City of San Jose water treatment facility.
- b. **Alternative Upland Location.** The Shoreline Feasibility Study analyzed several project alternatives, including a nonstructural alternative that did not include constructing a flood control structure. The analysis concluded that even if the community of Alviso was relocated (at much greater cost than the proposed project), San Jose's Pollution Prevention Facility would still need a levee to protect this costly and vital infrastructure from flooding.

Regarding the imported soils, use of onsite soil and sediment is not the appropriate quality to use in levee construct for structural integrity. In addition, use of onsite soil or sediment would further deepen the already subsided ponds, creating a greater need for natural sedimentation that would likely delay the development of tidal marsh further into the future.

- c. **Minimum Amount Necessary.** The approximately 365,000 cy of imported for levee Reaches 2 and 3 soil (approximately 19.52 acres) was determined by the project partners to be necessary by the engineering standards to build an approximately 15.2 foot high, stable barrier to withstand a 100-year storm event with medium range projected sea level rise over the next 50 years.
- d. **Effects on Bay Resources.** As has been stated above and discussed further in the Natural Resources section of this document, this multi-benefit project has the primary project purpose of reducing flood risk to the Alviso community and the City of San Jose Pollution Prevention Facility and facilitating the restoration of former salt ponds to tidal habitat; would convert and increase the habitat functions and value of those areas for specific species, particularly those that rely on tidal marshes were historically diked from the Bay. In the instance of the levee Reaches 2 and 3, its completion is necessary to allow breaching of Ponds A12 and A18 (1,120 acres). According to the USACE and USFWS, these two ponds would have enhanced habitat within five years of levee completion. However, some habitat loss will occur for specific species that specialize in shallow open water and/or higher salinity habitats. These species, primarily birds and invertebrates, would likely relocate to other former salt ponds or managed wetlands within the lower South Bay. The water control structure installed between managed pond A16 and New Chicago Marsh would provide a water source during the summer months, improving the habitat at that site.
- e. **Valid Title.** An evaluation of property ownership within the levee Reaches 2 and 3 actual and construction footprint 1 being completed. The land affected by levee construction is owned primarily by the USFWS, but the Union Pacific Railroad, the State Lands Commission, and Zanker Road Resource Management LTD. each own a parcel with the project footprint. The USFWS owns and manages Ponds A12 and A13, the City of San Jose owns Pond A18. As part of the Project Cooperative Agreement (signed February 14, 2019) the local project sponsors - the Conservancy and the SCVWD are responsible for providing the lands, easements and right-aways (LERDs) prior to initiation of project construction. The SCVWD and the Conservancy are working to acquire and provide the property interest documents to the Commission staff. The USFWS has signed a Memorandum of Understanding with the USACE, and has issued a 50-year use permit to the USACE for construction and maintenance of the project.

To resolve this issue, the project sponsors have requested that the Commission waive the requirement that property interests be submitted as part of the consistency determination, and instead require that the LERDs be provided prior to construction. The Commission's Executive Director has agreed to this provision. Further, the USACE' and USFWS's consistency determinations states that "all

necessary property rights will be acquired and evidence of these rights will be provided to BCDC prior to construction.” Further, the Commission’s Letter of Agreement includes this as a special condition.

*The Commission should determine whether the project is consistent to the maximum extent practicable with its law and policies regarding fill in the Bay and in salt ponds.*

## 2. Public Access

- a. **Maximum Feasible Public Access.** Section 66602 of the McAteer-Petris Act states that “...existing public access to the shoreline and waters of the...[Bay] is inadequate and that maximum feasible public access, consistent with a proposed project, should be provided.” The Bay Plan Public Access policies state that “a proposed fill project should increase public access to the Bay to the maximum extent feasible...”, and that “access to and along the waterfront should be provided by walkways, trails, or other appropriate means and connect to the nearest public thoroughfare where convenient parking or public transportation may be available.” Public access to some natural areas should be provided to permit study and enjoyment of these areas. However, the Bay Plan recognizes that some wildlife are 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. Public access should be sited, designed and managed to prevent significant adverse effects on wildlife.

Further, the Bay Plan Recreation policies state, “Bay resources in waterfront parks and, where appropriate, wildlife refuges should be described with interpretive signs. Where feasible and appropriate, waterfront parks and wildlife refuges should provide diverse environmental education programs, facilities and community service opportunities, such as classrooms and interpretive and volunteer programs.” In addition, for flood protection projects, the Recreation policies state, “[t]o enhance the appearance of shoreline areas, and to permit maximum public use of the shores and waters of the Bay, flood control projects should be carefully designed and landscaped and, whenever possible, should provide for recreational uses of channels and banks.

The complete Shoreline Project would result in a net reduction of public access to the Bay when the project is complete. While direct access between Alviso Slough and the trails along Coyote Creek would be improved by providing a more direct route on top of the new flood protection levee, breaching salt pond levees to return the ponds to tidal action would eliminate portions of existing trails. For example, the USACE states, “by breaching the existing A9-A15 pond berms, the project will modify the Alviso Slough Loop Trail. As the project is completed and all the ponds are restored, the trail length will decrease from an approximately 9-mile loop to a 3.3-mile trail out-and-back trail system on the eastern side of Ponds A12, A13, and A15.” The complete Shoreline Project proposes a number of public access improvements to offset the loss of some of these trails and a multi-use trail offsite that will be part of future amendments to this consistency determination. The Commission has authorized several large marsh restoration projects in recent years, primarily in salt

ponds and all with significant public access areas and improvements, but in some cases, due to both habitat concerns and costs associated with bridging new breaches some public access trails were eliminated.

The proposed public access included in this amendment request includes reconstruction of an existing ADA accessible trail and a 640 to 970-foot-long ADA accessible pedestrian bridge connecting levee Reach 1 and Reach 2. Currently, a portion of the Bay Trail exists on the top of the existing flood protection levee between the Union Pacific Railroad tracks and Artesian Slough, and is part of the Don Edwards National Wildlife Education Center complex (Education Center). As part of the levee construction, the levee would be raised as much as 10 feet from the existing grade (increases in levee height vary along the alignment), creating a new levee crown at elevation 15.2 feet NAVD88, and would be approximately 16 feet wide. Once construction of this reach is complete, the 0.95-mile trail section would be re-established as a 12-foot-wide trail (surfaced with either decomposed granite or crushed aggregate), with two 2-foot wide shoulders on either side, improving the trail from current conditions. The re-established trail would likely improve views to the Bay to the north and New Chicago Marsh to the south due to the increase in elevation. Replacing the trail atop the new flood risk levee would also limit the trail's exposure to rising seas over the next fifty years.

The re-established trail would be accessed from the Education Center where there is public parking and restrooms at the eastern end of the trail and from Alviso County Park on the western end once the pedestrian bridge is complete. The Reach 1 levee trail begins at Alviso Marina County Park (County Park) and would be located a top this section of levee as well. Alviso County Park has its own network of trails and overlooks as well as connections to the larger South Bay Salt Pond trail system (Exhibit G) As part of construction of Reach 1, the project would impact an existing County Park trail. As a result of negotiations, the Shoreline Project would reconstruct the existing trail on the western toe of the levee, creating a parallel two trail system in this area. This new trail section would be added to the Letter of Agreement for construction purposes, but the maintenance of this second trail will remain the responsibility of County Parks. Like the Education Center there is ample parking and restrooms available at the County Park.

It is unclear at this time whether amenities, such as signage and seating areas would be included on this portion of the trail. As the Commission receives further amendment requests, the complete public access package should become more apparent. Currently, it is the staff understanding that the USFWS would be responsible for maintaining the trail once it is constructed and the SCVWD and the Conservancy would be responsible for the maintenance of the pedestrian bridge. Some of the complications that have limited the available public access information include the designing of the pedestrian bridges for the railroad and Artesian Slough, which rely in part on discussions with other entities (Union Pacific Railroad and the San Jose Pollution Prevention Plant) and the time needed to further develop the full project design while concurrently initiating construction in order to advance the project and provide needed flood risk reduction to the Alviso community. The

Commission staff anticipates asking the Commission whether the complete public access plan is the maximum feasible public access consistent with the project in the next amendment, which will include the last levee reach.

*The Commission should determine whether the Reaches 2 and 3 portion of the Bay Trail and the proposed pedestrian bridge is consistent with the Bay Plan policies regarding public access.*

3. **Safety of Fills and Shoreline Protection.** The Bay Plan policies on Safety of Fills state, “[t]he Commission may approve fill that is needed to provide flood protection for existing projects and uses. New projects on fill or near the shoreline should either be set back from the edge of the shore so that the project will not be subject to dynamic wave energy, .... takes future sea level rise into account for the expected life of the project, be specifically designed to tolerate periodic flooding, or employ other effective means of addressing the impacts of future sea level rise and storm activity. Rights-of-way for levees or other structures protecting inland areas from tidal flooding should be sufficiently wide on the upland side to allow for future levee widening to support additional levee height so that no fill for levee widening is placed in the Bay.”

The Commission’s Shoreline Protection policies state, “[n]ew shoreline protection projects and the maintenance or reconstruction of existing projects and uses should be authorized if: (a) the project is necessary to provide flood or erosion protection for (i) existing development, use or infrastructure...; (b) the type of the protective structure is appropriate for the project site, the uses to be protected, and the erosion and flooding conditions at the site; (c) the project is properly engineered to provide erosion control and flood protection for the expected life of the project based on a 100-year flood event that takes future sea level rise into account; (d) the project is properly designed and constructed to prevent significant impediments to physical and visual public access; and (e) the protection is integrated with current or planned adjacent shoreline protection measures. Professionals knowledgeable of the Commission's concerns, such as civil engineers experienced in coastal processes, should participate in the design.” They further state that “[a]uthorized protective projects should be regularly maintained according to a long-term maintenance program to assure that the shoreline will be protected from tidal erosion and flooding and that the effects of the shoreline protection project on natural resources during the life of the project will be the minimum necessary.” “Whenever feasible and appropriate, shoreline protection projects should include provisions for nonstructural methods such as marsh vegetation and integrate shoreline protection and Bay ecosystem enhancement, using adaptive management. Along shorelines that support marsh vegetation, or where marsh establishment has a reasonable chance of success, the Commission should require that the design of authorized protection projects include provisions for establishing marsh and transitional upland vegetation as part of the protective structure, wherever feasible.” And finally, that “[a]dverse impacts to natural resources and public access from new shoreline protection should be avoided.”

As described by the USACE and USFWS, this multi-benefit project includes significant shoreline protection via the construction of a 100-year tidal flood protection levee adjacent to eight salt ponds that would be restored to tidal action in future phases. In developing the project design, the project partners evaluated alternate locations for the flood protection levee, taking into consideration adjacent land uses, such as New Chicago Marsh, a non-tidal salt marsh, and the protection of the community of Alviso and the City of San Jose Pollution Prevention Facility, and determined the most appropriate action was to excavate the landward salt pond levees and construct the new flood risk reduction levee to elevations sufficiently protective of the 100-year storm event, at a final elevation of 15.2 feet NAVD88. The proposed elevation was determined by evaluating projected high sea level rise scenario elevation for the South Bay in 2067, when mean higher high water is anticipated to be 10.23 NAVD88. Building the levee to this height would be protective of existing development, with an additional 5 feet of freeboard.

The location of the levee is set back from the current Bay edge, buffered by former salt ponds that will be breached as a future phase of this project. Levee Reaches 2 and 3 are adjacent to a managed wetland (converted from a former salt pond), where water levels are managed through a water control structure. While this reduces the impacts of tidal action on the levee, the USACE determined that a layer of rip rap (34,000 cy) covered with 18 inches of topsoil (6,300 cy) for vegetation colonization is necessary to reduce erosion potential from wind waves along the toe, which does not have a transitional ecotone feature.

A 15-foot-wide maintenance corridor on the landward side of the levee is planned and may be used in the future to support further widening of the levee to increase its height if necessary. As part of the feasibility study for this project, the USACE conducted extensive geotechnical review of the levee alignment to determine if the older, soft bay muds lying beneath the project could support the new levee. This analysis led to the engineering and design techniques calling for excavation of soft soils, importation of appropriate soils, site dewatering, fill and compaction of the new soil to ensure levee integrity. In developing the design for Reaches 1, 2 and 3 the USACE has complied with appropriate engineering standards and will monitor and maintain the levee for five years and will certify it prior to transferring it to the local project sponsors (SCVWD) for future maintenance.

*The Commission should determine whether the fill proposed with the project is consistent with the Commission's safety of fills and shoreline protection policies.*

4. **Climate Change.** The Bay Plan policies on Climate Change state, "within areas that a risk assessment determines are vulnerable to future shoreline flooding that threatens public safety, all projects... should be designed to be resilient to mid-century sea level rise projection" and "[i]f it is likely the project will remain in place longer than mid-century, an adaptive management plan should be developed to address the long-term impacts that will arise...." The Climate Change policies go on to state that, "[u]ntil a regional sea level rise adaptation strategy can be completed, the Commission should evaluate each project proposed in vulnerable areas on a case-by-case basis to determine the project's

public benefits, resilience to flooding, and capacity to adapt to climate change impacts.” The policies also state that natural resource restoration projects “should be encouraged, if their regional benefits and their advancement of regional goals outweigh the risk from flooding.” The Bay Plan policies on Safety of Fills state that “[a]dequate measures should be provided to prevent damage from sea level rise and storm activity that may occur on fill or near the shoreline over the expected life of a project....”

A primary project purpose is to protect the community of Alviso, neighboring businesses, and the San Jose Pollution Prevention Facility from tidal flooding. The USACE states that implementation of the plan “...will provide protection from a one-percent annual chance of exceedance (ACE) flood [100-year flood elevation] through the end of the 50-year period of analysis, accounting for sea level rise under the USACE high scenario. Additionally, this project will tie into the surrounding FRM [flood risk management] projects, which also provide protection from a one-percent ACE flood.” The USACE’ consistency further states “the project is consistent with USACE planning policies, which calls for a typical period of analysis of 50 years.” “Regardless, USACE conducted an end-of-century analysis (through 2100) using the high sea level rise rate. The analysis showed that even with extremely high sea level rise, the project will be resilient through 2067. As designed, the project could likely obtain right-of-ways to expand [sic] the FRM levee beyond 2067 to 2079; however, beyond this date additional detailed analysis will likely be required and additional right-of-ways obtained.”

For the period from 2017 through 2067 (approximately mid-century), the USACE used a low rate of sea level rise of 6.12 inches and a high rate of 31.08 inches. For the period from 2017 through 2100 (end of century), the USACE used a low rate of sea level rise of 31.08 inches and a high rate of 60.6 inches. The Commission, based on the National Research Council projections, currently uses sea level rise projections ranging from 10-17 inches at mid-century (2050) and 31-69 inches through the end of the century. The USACE’ consistency determination states that the results of the USACE’ analysis “indicate that for the low rate, the project will provide a level of risk reduction for the one-percent bayside water level through the year 2100. The current Federal Emergency Management Agency (FEMA) certification requirement of two feet of freeboard will also be maintained. For the high rate the project will provide risk reduction against the one-percent bayside ACE water level through 2094; however, the 2-foot FEMA certification requirement will only be maintained through 2067.... The project is resilient to 2067 (mid-century). Based on consideration of actionable climate science, the earliest date that would trigger a comprehensive revision of flood risk in the area would be year 2067 if a significant acceleration of sea level rise occurred, resulting in the high sea level rise scenario. The project will have adaptive capacity to elevation 16.0 feet NAVD88.... Beyond this time, additional plans will need to be made.” The levee Reaches 1, 2, and 3 construction is designed in compliance with the projections and flood risk reduction requirements described above.

*The Commission should determine whether the fill proposed with the project is consistent with the Commission’s safety of fills and sea level rise policies.*

## 5. Natural Resources

- a. **Tidal Marshes and Tidal Flats.** The Bay Plan Salt Pond and Tidal Marsh and Tidal Flats policies cumulatively state, “[a]ny project for the restoration, enhancement or conversion of salt ponds to subtidal or wetland habitat should include clear and specific long-term and short-term biological and physical goals, success criteria, a monitoring program, and provisions for long-term maintenance and management needs. Design and evaluation of projects in former salt ponds should include an analysis of: (a) the anticipated habitat that would result from pond conversion or restoration, and the predicted effects on the diversity, abundance and distribution of fish, other aquatic organisms and wildlife; (b) potential fill activities, including the use of fill material to assist restoration objectives; (c) flood management, mosquito abatement and non-native species control measures; (d) the protection of public utilities facilities; (e) the siting, design and management of public access while avoiding significant effects on wildlife; and (f) protection of water quality from high salinity discharges, methyl mercury, low dissolved oxygen and contaminated sediments.”

In addition, “tidal marsh restoration projects anywhere Commission’s jurisdiction should include in design and evaluation an analysis of: (a) how the system’s adaptive capacity can be enhanced so that it is resilient to sea level rise and climate change; (b) the impact of the project on the Bay’s sediment budget; (c) localized sediment erosion and accretion; (d) the role of tidal flows; (e) potential invasive species introduction, spread, and their control; (f) rates of colonization by vegetation; (g) the expected use of the site by fish, other aquatic organisms and wildlife; (h) an appropriate buffer, where feasible, between shoreline development and habitats to protect wildlife and provide space for marsh migration as sea level rises; and (i) site characterization. If success criteria are not met, appropriate adaptive measures should be taken.”

The policies further state that, “[b]ased on scientific ecological analysis and consultation with the relevant federal and state resource agencies, a minor amount of fill may be authorized to enhance or restore fish, other aquatic organisms or wildlife habitat...”

The complete Shoreline Project would restore approximately 2,900 acres of tidal marsh habitat to areas long diked off from the Bay and used for salt production. Phase 1 of the project involves breaching two former salt ponds (A12 and A18) to the Bay, restoring tidal action to 1,120 acres in 2024. The levee construction that would be authorized by this amendment furthers the work necessary to allow breaching and restoration of eight former salt ponds to tidal action. In constructing Reaches 2 and 3, the project would permanently impact approximately 0.772 acres of tidal marsh within Artesian Slough, including the levee footprint and a smaller area that would necessary for maintenance access in perpetuity. The USACE estimates that an additional 0.313 acres of temporary impacts to tidal marsh would occur due to construction access activities. It is anticipated that this loss would be fully offset by the large area of tidal marsh that would develop over time.

Once the ponds are breached, they are expected to naturally accumulate sediment over time from the sediment-rich South Bay waters. As the sediment accumulates, the USACE and USFWS anticipate plants to passively vegetate the tidal areas. As previously described in Amendment No. One, the USACE and the USFWS are proposing a 10-year monitoring program so that it can assure the project meets ecosystem restoration objectives and to provide information allowing land managers to adaptively manage the site. Some elements of that monitoring program include: (1) measurements of water levels, sediment accretion rates, and suspended sediment concentrations; (2) tidal marsh habitat acreage; (3) abundance of non-native plants; (4) plant species composition in upland transition zones; and (5) predators of Ridgeway's rail and salt marsh harvest mice. After 10 years, the non-federal sponsors would be responsible for continuing any additional monitoring. While the proposed 10-monitoring plan is for a significant period, the project site, particularly Pond A12 has some deeply subsided areas.

There is concern that the proposed monitoring period may not be sufficient to evaluate the successful vegetation of the site or gather much needed information regarding the efficacy of the transitional habitat, especially in light of the anticipated changes associated with rising seas. The project sponsors have discussed the ability to continue monitoring in some form as part of the South Bay Salt Pond Restoration Project, with the local project sponsors taking the lead on additional monitoring. Portions of the monitoring and adaptive management of the site would be performed by the local project sponsors, the Conservancy and the SCVWD. The Conservancy and the SCVWD have applied for administrative permit for the project, which will primarily involve the monitoring and maintenance that the USACE and USFWS would not be responsible for, such as levee maintenance once the flood risk levee is certified by the USACE and transferred to the SCVWD and longer-term monitoring requirements. The terms of these requirements would be clearly defined in the permit and consistency determination conditions.

Levees often create an opportunity for invasive species to colonize a site, whether plant or animals. The USACE and USFWS propose a few different approaches depending on the invasive species. For plants, the primary concerns are upland ruderal species, such as pepperweed, star thistle, and anise. To address this issue, the levee slopes would be hydroseeded with an appropriate mix of native plants seeds, including grasses, forbes and small shrubs. No large woody vegetation would be included or allow to naturally colonize these areas due to concern for levee integrity. Equipment entering the site would be cleaned and inspected for seeds and vegetative matter as a preventative measure. Non-native, non-invasive plant species would be managed through hand tool removal as needed. Pepperweed and other highly invasive species would be managed by appropriately trained personal with herbicide.

Regarding invasive and predatory animals, habitat fencing may be used to limit access to the site. No dogs will be allowed on USFWS trails or within the Refuge. City properties require dogs to be leashed at all times. The USACE and USFWS would prepare a predator management plan that would address other invasive and predatory animals.

- b. **Fish, Other Aquatic Organisms and Wildlife.** The Bay Plan policies on Fish, Other Aquatic Organisms and Wildlife state that, “[t]o assure the benefits of fish, other aquatic organisms and wildlife for future generations... the Bay’s tidal marshes, tidal flats, and subtidal habitat should be conserved, restored, and increased.” These policies also state that “[t]he Commission should consult with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service or the National Marine Fisheries Service whenever a proposed project may adversely affect an endangered or threatened plant, fish, other aquatic organism or wildlife species...and give appropriate consideration of (their) recommendations in order to avoid possible adverse impacts of a proposed project on fish, other aquatic organisms and wildlife habitat.”

One of the project purposes is restoring approximately 2,900 acres of former salt ponds to full tidal action and their eventual evolution to tidal marsh habitat. While the population of some species in the area are likely to decline with the loss of pond habitat, breaching the levee is likely to result in immediate benefits to water quality, tidal circulation, and the populations of a number other species, including most marsh-centric endangered and special status species such as the Ridgway’s rail, California black rail, salt marsh harvest mouse, steelhead, and green sturgeon. Based on the results of other restoration projects, including the adjacent South Bay Salt Pond Restoration Project, the benefits to fish and wildlife can be expected to be dramatic and significant because of the reintroduction of tidal action, though it will be many years before fully functioning tidal marsh becomes established.

The USFWS issued a biological opinion for conceptual plan on April 27, 2015. The National Marine Fisheries Service (NMFS) issued “a not likely to adversely affect listed species” concurrence letter on May 19, 2015. Listed species that may be impacted during construction of Reaches 2 and 3 of the levee include: salt marsh harvest mouse; Ridgway’s rail; snowy plover; and least tern. The USACE and the USFWS have committed to a number of best practices, minimization and management measures that would be applicable during the construction of levee Reaches 1, 2, and 3. The measures include, but are not limited to: minimizing the construction disturbance area; education of construction employees on avoidance and minimization measures to protect listed and special status species; avoiding night time work in areas of listed species; having a resource agency approved biological monitoring on site during construction activities; limiting timing of construction, maintenance and management activities to two hours after an extreme high tide; installation of raptor perch deterrents; observing established environmental work windows when working within 700 feet of existing tidal marshes; use of hand tools for vegetation removal when working in areas of listed species habitat, maintaining appropriate distances from active nesting sites during breeding season; and other species specific measures as described. With the proposed minimization measures harmful effects to wildlife would be minimized during the construction of the Reaches 2 and 3.

Reach 3 of the levee would include installation of a water control structure in the levee that would consist of a 48-inch diameter pipe, flap gates, a deck, rails, a concrete apron below the water outfall to prevent erosion. This water control structure would create a hydraulic connection between Pond A16 and New Chicago Marsh, a non-tidal salt marsh, to allow water into the marsh during dry summer months. New Chicago Marsh is dominated by pickleweed and supports the endangered salt marsh harvest mouse. Without this feature, the marsh vegetation would likely deteriorate overtime, resulting in a loss of habitat for the mouse and other species. There is no concern that fish species would be trapped in New Chicago Marsh because Pond A16 has a fish screen incorporated into the water control structure connecting it to the Bay.

- c. **Water Quality.** The Bay Plan policies on Water Quality state, “Bay water pollution should be prevented to the greatest extent feasible. 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.” The policies also state, “[w]ater quality in all parts of the Bay should be maintained at a level that will support and promote the beneficial uses of the Bay as identified in the San Francisco Bay Regional Water Quality Control Board’s (RWQCB) Basin Plan and should be protected from all harmful or potentially harmful pollutants.” The policies, recommendations, decisions, advice, and authority of the State Water Resources Control Board and the Regional Board should be the basis for carrying out the Commission’s water quality responsibilities.” Finally, the Bay Plan policies on Water Quality state that “new projects should be sited, designed, constructed, and maintained to prevent or, if prevention is infeasible, to minimize the discharge of pollutants into the Bay by: (a) controlling pollutant sources at the project site; (b) using construction materials that contain nonpolluting materials; and (c) applying appropriate, accepted, and effective best management practices; especially where water dispersion is poor and near shellfish beds and other significant biotic resources.”

In order to construct Reaches 2 and 3 of the levee, a temporary berm would be constructed within Pond A16 to allow dewatering of the construction area within the pond. The San Francisco Bay Regional Water Quality Control Board’s (Water Board) issued the South Bay Shoreline Project Order (R2-2017-0049) on December 13, 2017. As part of the Order, this and other water quality issues associated with levee construction are address through best management practices and the requirement to develop a storm water management plan that includes both site water management and the management of soil and erosion.

The largest potential water quality issue is the importation of soil from offsite areas. Sources of soil include those excavated in SCVWD’s offsite projects and those produced by construction projects in the region. Soil that would be imported to the site for construction activities have the potential to have elevated levels of contaminants. The Water Board, working with the project sponsors, established testing and acceptance criteria for imported soil. Soil not meeting these criteria would be rejected as not suitable for use.

Other water quality impact minimization measures that would be implemented include, but are not limited to: placement of a berm or sediment control device around all stockpile areas; maintaining roads and accessways in good condition; disposal of construction materials or debris outside the project site at an appropriate facility; stabilization of disturbed areas within 12 hours of any break in construction activities; and hydroseeding bare soils to further prevent erosion. Regarding potential water quality impacts from construction equipment, measures proposed to reduce this potential include: locating construction staging areas in uplands and confining them to as small an area as possible; maintaining construction equipment free of petroleum and other hazardous material leaks; having spill prevention kits on site and readily available; limiting onsite fueling of equipment; and providing an employee spill prevention and respond training. The USACE and USFWS have committed to developing a hazardous management/fuel spill containment plan in preparation for any unfortunate spill event on site.

*The Commission should determine whether the project is consistent with its laws and policies regarding natural resources and water quality.*

- B. **Review Boards.** The first phase of the Shoreline Project is limited to construction of 1.75 miles of levee and transitional habitat. Public access is limited to a linear trail atop the levee and a pedestrian bridge over railroad tracks. There very limited design features to consider on this portion of the trail, and the pedestrian bridge is at the concept level of design so the Design Review Board did not review it. Further, because Bay fill is limited, and the USACE completed an extensive geotechnical review of the levee alignment, the Engineering Criteria Review Board did not review the project. The review boards may review portions of the project as planning proceeds, such as the railroad overcrossing, flood gates, and proposed public access package as more details are developed.
- C. **Environmental Review.** The USACE, the USFWS and the SCVWD jointly prepared and issued a Final Integrated Interim Feasibility Study with Environmental Impact Statement and Environmental Impact Report (FEIS/EIR) in September 2015.

The Assistant Secretary of the Army, USACE, issued a Record of Decision for the Shoreline Project Phase 1 on July 28, 2016, making the determination that “[t]echnical, environmental, and economic criteria used in the formulation of alternative plans were those specified in the Water Resources Council's 1983 Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies. All applicable laws, executive orders, regulations, and local government plans were considered in evaluation of alternatives. Based on the review of these evaluations, I find that benefits of the recommended plan outweigh the costs and any adverse effects. This Record of Decision completes the National Environmental Policy Act process.”

The SCVWD certified the FEIR and issued a statement of overriding consideration March 22, 2016. The CEQA review found that the South Bay Shoreline Project would result in significant impacts to hydrology and flood risk management, surface water and sediment quality, terrestrial biological resources, hazards and hazardous materials, air quality, noise, and cultural resources. All of these impacts will be mitigated to a less than significant level with the exception of air quality and terrestrial biological resources. Most of these significant environmental impacts are short term impacts relating to construction. However,

the Shoreline Project will result in cumulative impacts resulting in the permanent loss of human-created managed pond habitat, habitat used by pond-specialist water birds for foraging and roosting. However, impacts to these species are being adaptively managed through the South Bay Salt Pond Restoration Project's adaptive management plan, which is integrated with this Project.

The statement of overriding considerations found that the project would provide coastal flood protection benefits to approximately 6,000 residents and people working in the area. A structure inventory identified 1,140 structures, transportation corridors, the City of San Jose Pollution Prevention Facility, and other critical infrastructure in the floodplain that would be protected by the project. In addition, the Project would create approximately 2,900 acres of tidal marsh habitat and ecotone, thereby restoring ecological structure and function, area, and connectivity, historically lost in the South Bay. The project would create transitional habitat, which has largely disappeared from Bay marshes. These habitat areas serve as high-tide refugia for threatened and endangered species, provide habitat for a unique suite of plant species, and would allow some inland migration of the restored marshes in response to rising sea levels. Further, the recreational benefits include enhanced outdoor recreational opportunities and improved access to the [Don Edwards Wildlife] Refuge and adjacent restored marsh areas for the public. The proposed recreation features are estimated to increase the annual number of visitors to the Refuge by 20% and would create key connections in the San Francisco Bay Trail.

**D. Relevant Portions of the McAteer-Petris Act**

1. Section 66602
2. Section 66605
3. Section 66632

**E. Relevant Portions of the San Francisco Bay Plan**

1. *San Francisco Bay Plan* Policies on Fish, Other Aquatic Organisms, and Wildlife
2. *San Francisco Bay Plan* Policies on Water Quality
3. *San Francisco Bay Plan* Policies on Water Surface Area and Volume
4. *San Francisco Bay Plan* Policies on Tidal Marshes and Tidal Flats
5. *San Francisco Bay Plan* Policies on Shoreline Protection
6. *San Francisco Bay Plan* Policies on Safety of Fills
7. *San Francisco Bay Plan* Policies on Climate Change
8. *San Francisco Bay Plan* Policies on Public Access
9. *San Francisco Bay Plan* Policies on Salt Ponds
10. *San Francisco Bay Plan Map 7 Policies and Commission Comments*

**Exhibits**

- A. Project Vicinity**
- B. Shoreline Project Overview and Phases**
- C. Proposed Levee Alignment**
- D. BCDC Jurisdictional Areas and Impact Areas**
- E. Conceptual Pedestrian Bridge and Flood Gate Location**
- F. Flood Gate Detail Drawing**
- G. Proposed Public Access and Recreational Trail System**
- H. Environmental Impact Statement and Report (EIS/EIR) Summary**