

COASTAL CONSERVANCY

Staff Recommendation
January 19, 2012

**SOUTH SAN FRANCISCO BAY SALT PONDS RESTORATION:
PHASE I IMPLEMENTATION**

Project No. 02-070-02
Project Manager: Jeff Melby

RECOMMENDED ACTION: Authorize disbursement of up to \$2,557,581, including \$1,232,500 to be reimbursed by the California Department of Water Resources and \$700,081 to be reimbursed by the United States Environmental Protection Agency, to the United States Fish and Wildlife Service for the construction of managed pond habitat and tidal wetlands in Ponds A16 and A17 as part of Phase I implementation of the South Bay Salt Ponds Restoration Project.

LOCATION: Cities of Alviso and San Jose, Santa Clara County

PROGRAM CATEGORY: San Francisco Bay Area Conservancy

EXHIBITS

- Exhibit 1: [Project Location and Site Map](#)
 - Exhibit 2: [November 6, 2008 Staff Recommendation](#)
 - Exhibit 3: [Revised Pond A16 and A17 design plan](#)
 - Exhibit 4: Environmental Impact Statement/Report, EIS/R Table of Impacts, Table of Cumulative Impacts, Mitigation Monitoring and Reporting Program, DFG Analysis of Final Design of Ponds A16-A17, United States Fish and Wildlife Service Environmental Action Statement (provided to Conservancy members as separate CDs and otherwise available for review at www.southbayrestoration.org)
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RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31160-31165 of the Public Resources Code:

“The State Coastal Conservancy hereby disburses up to two million five hundred fifty-seven thousand five hundred eighty-one dollars (\$2,557,581) as follows:

1. Disbursement of up to \$2,522,581 (two million five hundred twenty-two thousand five hundred eighty-one dollars) to the United States Fish and Wildlife Service (FWS) for
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construction of managed pond and tidal wetland habitats at Ponds A16 and A17 (A16/17), of which one million one hundred ninety-seven thousand five hundred dollars (\$1,197,500) will be reimbursed by the California Department of Water Resources (DWR) through the Bay Area Clean Water Agencies (BACWA) and seven hundred thousand eighty-one dollars (\$700,081) will be reimbursed by the United States Environmental Protection Agency (EPA), subject to the following conditions:

- a. Prior to the disbursement of any Conservancy funds for the project, the FWS shall submit for the review and approval of the Conservancy's Executive Officer a work program for the project, including schedule and budget, the names of any contractors it intends to use to complete the project, and a sign plan to acknowledge Conservancy funding for the project.
 - b. In carrying out the project, FWS shall comply with all applicable mitigation and monitoring measures that are identified in the South Bay Salt Pond (SBSP) Restoration Project Environmental Impact Statement and Environmental Impact Report (EIS/R) that was certified with findings by the California Department of Fish and Game (DFG) on March 11, 2008.
2. Disbursement of up to \$35,000 (thirty-five thousand dollars) for project management services to oversee and coordinate implementation of the project to be reimbursed by the California Department of Water Resources (DWR) through the BACWA."

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 project is consistent with the current Project Selection Criteria and Guidelines.
2. The proposed authorization is consistent with the purposes and objectives of Chapter 4.5 of Division 21 of the Public Resources Code, regarding the Conservancy's mandate to address the resource and recreational goals of the San Francisco Bay Area.
3. The Conservancy has independently reviewed and considered the information contained in the EIS/R that was certified with findings by the DFG on March 11, 2008 in order to comply with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).
4. The EIS/R identifies potential significant effects from implementation of Phase I projects of the SBSP Restoration Project, including the projects proposed in this authorization, in the areas of Water Quality, Cultural, Traffic, Noise, Air Quality and Cumulative Impacts. With regard to these impacts, the Conservancy finds that the Ponds A16/17 project, as modified by incorporation of the mitigation measures identified in the EIS/R, avoids, reduces or mitigates all of the possible significant environmental effects of the project, except for the Cumulative Impacts identified in Finding 5, below.
5. Construction of the Ponds A16/17 project may result in "significant and unavoidable" Cumulative Impacts in the areas of Water Quality, Biological Resources, Cultural Resources, Socioeconomics and Environmental Justice, Traffic, Noise, and Air Quality. Specific environmental and other benefits of the project described in the accompanying staff

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recommendation and detailed in the EIS/R outweigh and render acceptable these unavoidable adverse environmental effects because the project will result in the long-term environmental benefits of restoring native habitat for the endangered salt marsh harvest mouse and California clapper rail, for threatened steelhead trout, and for other plant and animal species that otherwise would be threatened by loss of critical habitat, in addition to the other benefits of tidal restoration.

6. Alternatives to the Ponds A16/17 project analyzed in the EIS/R are infeasible in that they do not achieve the project objectives of habitat restoration, wildlife-oriented public access, and flood protection; will result in the same or greater environmental impact; and will not produce the same environmental benefit as the proposed project.”

PROJECT SUMMARY:

This authorization would provide up to \$2,557,581 for the construction of managed pond habitat and tidal wetlands in Ponds A16/17 (Exhibit 1) as part of Phase I implementation of the SBSP Restoration Project by allowing the Conservancy to disburse \$1,197,500 from the DWR’s Integrated Regional Water Management Program (IRWMP) through the BACWA and \$700,081 from the EPA’s San Francisco Bay Area Water Quality Improvement Fund (SFBAWQIF), and to provide \$625,000 in Conservancy funds to meet the matching requirements of these grants. The \$35,000 would provide for the project management to ensure consistency and coordination with the SBSP Restoration Project. In addition, \$4.8 million in matching funds is being provided by the FWS.

The November 6, 2008 staff recommendation, attached as Exhibit 2, describes the SBSP Restoration Project’s planning effort to restore 15,100 acres to tidal wetlands and managed ponds, Phase I projects, the role of the Adaptive Management Program in project implementation, and the project’s EIS/R.

The Ponds A16/17 project is part of Phase I implementation of the SBSP Restoration Project. San Francisco Bay has lost approximately 85% of its historic tidal wetlands, and numerous planning processes, including the *San Francisco Baylands Ecosystem Habitat Goals Report*, have identified tidal marsh restoration as integral to improving the health of the Bay. The SBSP Restoration Project will have tremendous potential impact on regional goals to increase available tidal marsh habitats in the South Bay subregion by eventually providing an almost unbroken corridor from Bair Island south around to the east side of the Bay. Restoration of these habitats on a regional scale also has the ability to improve regional water quality, improve the ecological and economic productivity of Bay waters, ameliorate the effects of storms and shoreline flooding, as well as assist in the adaptation of Bay communities to sea level rise.

In terms of wetland habitat creation, the SBSP Restoration Project proposes creating a mix of managed ponds (open water and seasonal ponds contained by levees and managed for a variety of water depths and salinities) and tidal wetlands. Managed ponds provide habitat for waterfowl, small shorebirds (including the threatened snowy plover) and high salinity specialists, such as phalaropes and grebes. Tidal wetland creation restores hydrologic and ecological conditions closer to the past conditions in South San Francisco Bay, creating habitat for the California clapper rail, salt marsh harvest mouse, and steelhead trout.

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The project specifically proposed in this recommendation, the Ponds A16/17 project, will increase habitat quality and ecological diversity and provide wildlife-compatible public access in the South Bay by creating 16 new islands for nesting birds and 240 acres of shallow water habitat for shorebird foraging (Pond A16), restoring 130 acres of tidal wetlands for wetland species (Pond A17), and providing recreational and environmental education opportunities including a public access trail, interpretive signs, a new observation platform, and a fishing pier. In addition, scientific data generated by the project will inform future restoration phases of the SBSP Restoration Project. (See project designs in Exhibit 3.)

The FWS is recommended as the grantee since the FWS has a track record of successfully constructing SBSP Phase I projects, having finished the re-configured managed pond SF2 in September 2010. In addition, the FWS will hire and manage the construction contractor since that is the most efficient means for them to encumber the \$4.8 federal appropriation for the project. Providing the Conservancy and the other grant funds directly to the FWS takes advantage of the FWS's expertise and contracting process in order to ensure a more timely construction completion. The project management funding will ensure that project construction and monitoring remain consistent and coordinated with the existing South Bay Salt Pond Restoration project's plans, permits, and environmental documentation.

Site Description: The entire salt pond complex in the South Bay is spread over an area of approximately 26,000 acres. Salt ponds surround nearly the entire San Francisco Bay south of the San Mateo Bridge (Exhibit 1), on lands that were formerly tidal marsh. An estimated 85% of the historic tidal marshes in the San Francisco Bay-Delta Estuary have been filled or significantly altered over the past two centuries for urban development, agriculture, and salt production. Although dramatically different from 150 years ago, the South Bay's wetland habitats, including the salt ponds, tidal marshes, sloughs, mudflats, and open bay, are used by large populations of waterfowl and shorebirds, harbor seals, and a number of threatened and endangered species, including the California clapper rail, California black rail, California brown pelican, California least tern, western snowy plover, salt marsh harvest mouse, and steelhead trout.

Located in the Alviso Pond Complex and owned by the FWS, Ponds A16/17 were historically part of a large marsh bounded by Alviso and Artesian Sloughs and Coyote Creek. This marsh was surrounded with levees to create salt ponds in the early part of the 20th Century. Ponds A16/17 have subsided approximately five feet and currently function as managed ponds with limited hydraulic connection to the Bay via water control structures installed during the Initial Stewardship phase.

Project History: In March 2003, 15,100 acres of Cargill's salt production ponds, along with 1,400 acres of crystallizer ponds along the Napa River, were acquired with \$72 million from the Wildlife Conservation Board (WCB), \$8 million from the FWS, and \$20 million from the Goldman Fund, Hewlett Foundation, Moore Foundation, and Packard Foundation.

FWS and DFG have taken ownership of the properties and the planning and implementation of most of the Phase I projects, facilitated by the Conservancy, have been completed. The remaining ponds are actively managed according to the goals set forth in the Initial Stewardship Plan (e.g., open, unvegetated ponds with enough circulation to prevent salt production) until

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further implementation planning and the appropriate adaptive management studies are completed.

PROJECT FINANCING

Conservancy	\$625,000.00
DWR	\$1,232,500.00
EPA	\$700,081.00
FWS	<u>\$4,800,000.00</u>
Total Project Costs	\$7,357,581.00

The source of the Conservancy’s funding for this project is expected to be the Conservancy’s fiscal year 2010 appropriation from the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84). 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 protects coastal waters and restores natural habitat values by constructing tidal wetlands and shallow water ponds that will provide habitat for numerous species as well as improve water quality. Finally, as discussed below, the project is consistent with Chapter 4.5 of Division 21.

Consistent with Proposition 84 requirements, the proposed project also includes funding for 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 gives priority to projects that meet one or more of the criteria specified in Section 75071. The proposed restoration project satisfies the following specified criteria: (a) Landscape/Habitat Linkages – one of the largest wetland restoration projects on the west coast of North America, the project 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.

A total of \$1,265,000 is expected to come from DWR’s Integrated Regional Water Management Program (IRWMP), \$1,197,500 to be granted to the FWS for project construction, \$35,000 for project management services, and \$32,500 for Conservancy staff costs. The San Francisco Bay Area IRWMP has resulted in a nine-county effort to coordinate and improve water supply reliability, protect water quality, manage flood protection, maintain public health standards, protect habitat and watershed resources, and enhance the overall health of the bay. A total of \$725,000 (with \$700,081 for the project and \$24,919.00 for Conservancy staff support) is expected from a grant from the EPA which has the goal of improving the water quality of San Francisco Bay. In addition, the FWS will provide most of the project funding through 2009 and 2010 federal appropriations for the Don Edwards San Francisco Bay Wildlife Refuge.

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CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

This project would 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.

Ponds A16/17 are 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 proposed project will include public access improvements and recreational components.

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. The SBSP Restoration Project will restore or enhance nearly 16,000 acres of wetlands, and is a habitat restoration project of regional and 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 SBSP Restoration Project will provide an important open space resource for recreational purposes.

Consistent with Section 31163(c), restoration of the SBSPs meets the following criteria: (1) is supported by adopted regional plans (*San Francisco Bay Plan*, *San Francisco Baylands Ecosystem Habitat Goals Report (1999)*, pp. 97, 126-139, and the *Water Quality Control Plan (1993)*, p. 5-3, for the San Francisco Bay Basin), (2) is multijurisdictional (spanning three counties) and serves a regional constituency (the restoration project is of national significance and will provide a regional recreational resource), (3) can be implemented in a timely way (the construction of Ponds A16/17 will be completed by the end of 2013), (4) provides opportunities for benefits that could be lost if the project is not quickly implemented such as the ability to use natural processes to bring pond bottoms up to marsh plain elevations, and (5) includes matching funds (described under Project Financing).

The project is also 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.

CONSISTENCY WITH CONSERVANCY'S 2007 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S)

Consistent with **Goal 10, Objective C** of the Conservancy's 2007 Strategic Plan, the proposed project will restore 370 acres of managed (240 acres) and tidal (130 acres) wetland habitat.

Consistent with **Goal 11, Objective B**, the proposed project will feature scenic overlooks and interpretive signs.

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Consistent with **Goal 11, Objective L**, the public access trails and interpretive facilities at the project site will comply with the Americans with Disabilities Act.

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 November 10, 2011, 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. **Support of the public:** The SBSP Restoration Project 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 Resources Agency, DFG, FWS, Santa Clara Valley Water District, Alameda County Flood Control District, 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.
4. **Location:** The project is in Santa Clara County within the nine-county San Francisco Bay Area consistent with Section 31162 of the Public Resources Code.
5. **Need:** Approximately 85% 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. Without the addition of Conservancy funding, these important objectives, which underlie the SBSP implementation projects and the Shoreline Study, would not be met.
6. **Greater-than-local interest:** Restoration of this area is of national significance and will result in the largest tidal wetland restoration project on the west coast of the United States. When combined with other restoration projects underway in San Francisco Bay, including Napa-Sonoma Marsh, Hamilton/Bel Marin Keys, Bair Island, Eden Landing, and Sonoma Baylands, the SBSP Restoration Project is on scale with other national restoration efforts, such as the Everglades and Chesapeake Bay. Restoration of the salt ponds to a mix of tidal marsh and managed ponds 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 clapper rail and salt marsh harvest mouse.

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7. **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 SBSP 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 SBSP 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 Phase I 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.

Additional Criteria

8. **Urgency:** The SBSP Restoration Project needs to maintain the steady progress it has made on project implementation to ensure project success over the long run.
9. **Resolution of more than one issue:** The restoration of the Ponds A16/17 will provide for habitat restoration for fish and wildlife, improved water quality and flood control, and enhanced recreational opportunities.
10. **Leverage:** See the "Project Financing" section above.
11. **Innovation:** The SBSP Restoration Project is a national model for how to coordinate a scientifically sound, publicly-supported, multi-objective, multi-agency project, on scale with the Everglades and Chesapeake Bay.
12. **Realization of prior Conservancy goals:** This project builds on the Conservancy's participation in the development of the *San Francisco Baylands Ecosystem Habitat Goals Report*, which has goals, objectives, and recommendations for restoration in San Francisco Bay, and the Conservancy's participation in wetland acquisition and restoration projects in San Francisco Bay, including Napa Marsh, Bair Island, and Hamilton/Bel Marin Keys. This authorization builds upon previous authorizations by the Conservancy for the SBSP Restoration Project and maintains the Conservancy's investment of \$12.8 million to date.
13. **Cooperation:** The Conservancy is facilitating the long-term restoration planning, working closely with DFG and FWS. The Conservancy, WCB, and private foundations are cooperatively funding the restoration planning. In addition, over 50 entities have been identified as stakeholders in this restoration project, including local, state, and federal agencies, nongovernmental organizations, special districts, utilities, and the general public.

CONSISTENCY WITH SAN FRANCISCO BAY PLAN:

Ponds A16/17 are within 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

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2008):

Part III: The Bay as a Resource

Water Quality (p.17)

- To the greatest extent feasible, the Bay marshes, mudflats, and water surface area and volume should be maintained and, whenever possible, increased.

Water Surface Area and Volume (p. 20)

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

Marshes and Mudflats (p. 21)

- To offset possible additional losses of marshes due to necessary filling and to augment the present marshes: (a) former marshes should be restored when possible through removal of existing dikes; (b) in areas selected on the basis of competent ecological study, some new marshes should be created through carefully placed lifts of dredged spoils; and (c) the quality of existing marshes should be improved by appropriate measures whenever possible.

Part IV: Development of the Bay and Shoreline

Public Access (pp. 50-60)

- 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.

Salt Ponds and Other Managed Wetlands Around the Bay (pp. 65-68)

- As long as is economically feasible, the salt ponds should be maintained in salt production and the wetlands should be maintained in their present use. Property tax policy should assure that rising property taxes do not force conversion of the ponds and other wetlands to urban development. In addition, the integrity of the salt production system should be respected (i.e., public agencies should not take for other projects any pond or portion of a pond that is a vital part of the production system).

If, despite these provisions, the owner of the salt ponds or the owner of any managed wetland desires to withdraw any of the ponds or marshes from their present uses, the public should make every effort to buy these lands, breach the existing dikes, and reopen these areas to the Bay. This type of purchase should have a high priority for any public funds available, because opening ponds and managed wetlands to the Bay represents man's last substantial opportunity to enlarge the Bay rather than shrink it. (In some cases, if salt ponds are opened

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to the Bay, new dikes will have to be built on the landward side of the ponds to provide the flood protection now being provided by the salt pond dikes.)

COMPLIANCE WITH CEQA:

In order to comply with CEQA and NEPA, FWS and DFG, in consultation with the Conservancy, the Santa Clara Valley Water District, and the Alameda County Flood Control and Water Conservation District, prepared a joint EIS/R for Phase I of the SBSP Restoration Project to evaluate the potential environmental impacts of the proposed project. The EIS/R (Exhibit 4) was certified by the DFG on March 11, 2008 pursuant to CEQA. The Record of Decision was adopted by FWS on January 27, 2009 pursuant to NEPA.

Subsequent to the adoption of the EIS/R, the Pond A16/17 project was re-designed due to technical limitations to move the island locations and add tidal wetland restoration of Pond A17 to the project. Tidal restoration of Pond A17 was analyzed in the EIR/S, but it was not initially proposed to be a part of Phase I implementation. DFG and FWS analyzed the proposed project changes, which reduce the amount of earthwork and increase the amount of tidal wetlands created. (See Exhibit 4.) Both agencies found that the changes are generally consistent with the analysis in the EIR/S and will not cause additional significant environmental impacts. Based on the DFG and FWS analyses, Conservancy staff concurs that these design changes do not necessitate a subsequent or supplemental EIR under CEQA. Therefore, further environmental review is not necessary.

A general discussion of the EIR/S was included in the November 6, 2008 staff recommendation for the implementation of Phase I (Exhibit 2). This staff recommendation addresses only those significant and potentially significant project impacts and cumulative impacts for the Ponds A16/17 project.

Adaptive Management's role in preventing significant impacts

The Project Description and CEQA sections of the attached November 6, 2008 staff recommendation discuss how incorporating the Adaptive Management process into the design of the project enables the project to avoid what could be potentially significant impacts. Applied Studies are identified in the EIS/R as part of the strategy to prevent and manage potential impacts. The specific applied study associated with preventing potential impacts created by the Pond A16/17 project is the public access and wildlife study.

Public access impacts to wildlife are of concern to many of the project stakeholders. To address this uncertainty the potential effects of human disturbance will be monitored through an applied study, and if impacts that are approaching a significant level are found, then the various management actions discussed in the Adaptive Management Plan would be implemented to prevent impacts from reaching a significant level. Results of an applied study of public access impacts at other Phase I sites will be published next year. (Applied Study No. 17 in the Adaptive Management Plan, pp. 95-6 of Appendix D of the EIS/R, Exhibit 4).

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Significant Effects Reduced To Less Than Significant Levels By Mitigation

Although creation of shallow water pond habitat with nesting islands and tidal wetlands at Ponds A16/17 is expected to have many beneficial impacts, this project also could have significant negative impacts. These potential impacts are reduced to a less-than-significant level with the mitigation measures described below and summarized in the Mitigation Monitoring and Reporting Program (MMRP), attached as Exhibit 4. The potentially significant impacts and the associated mitigation measures that are applicable to Ponds A16/17 restoration project proposed in this staff recommendation are summarized below.

Water Quality. Two potentially significant impacts from the project were identified in the EIS/R: 1) impacts to water quality from contaminants other than mercury (Impact 3.4-5 in Table A1) and 2) seawater intrusion of regional groundwater sources (Impact 3.4-6 in Table A1). The potential contamination impacts are reduced to a less-than-significant level by the construction contractors' adherence to Best Management Practices, a Stormwater Pollution Prevention Plan, and Regional Water Quality Control Board Waste Discharge Requirements (Mitigation Measures 3.4-5 a,b,c,d,e, and f in the MMRP). In addition, the landowner actions to minimize illegal dumping and litter and inform the public if there are any threats to public health due to bacterial growth will serve to also reduce or avoid these potential impacts. In regards to seawater intrusion, the potential impacts are reduced to a less-than-significant level by properly destroying any abandoned wells in consultation with the local groundwater management agency. (Mitigation Measure 3.4-6 in the MMRP.)

Recreational Resources. The project proposed to re-route the existing trail network that encircles Ponds A16 and A17 by making the loop portion of the trail smaller (around Pond A16) with an out-and-back trail along the western edge of A17 to a viewing platform. While this is a change to the existing trail, this is a less-than-significant impact since the trail re-grading, viewing platforms, and interpretive signs will enhance the trail experience.

Biological Resources. The EIS/R identified potential recreation-oriented impacts to sensitive species and their habitats as less-than-significant for all Phase I projects including Ponds A16/17. The reasons the public access trail and viewing platforms proposed as part of the Ponds A16/17 improvements are considered less-than-significant is because the trails already exist and the project changes will reduce trail impacts by design features such as placing the nesting islands at least 600 feet away from the overlooks and re-routing portions of the existing trail system to no longer completely surround the sensitive wetlands habitats to be created in the project.

Cultural Resources. Two potentially significant impacts to cultural resources were identified in the EIS/R: 1) disturbance of known or unknown cultural resources (Impact 3.8-1 in Table A1), and 2) disturbance of historic salt ponds which may be considered a significant cultural landscape (Impact 3.8 -2). The potential impact of disturbing cultural resources is reduced to a less-than-significant level by pre-construction surveys and records search, and appropriate protocols established for contractors if any resources are found (Mitigation Measure 3.8-1 in the MMRP). To reduce disturbance of historic resources to a less-than-significant level, if the site is evaluated and found to be a significant cultural landscape, then appropriate

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documentation and public outreach and interpretation will be incorporated into the project (Mitigation Measure 3.8-2 in MMRP).

Traffic. Several potentially significant impacts related to traffic are identified in the EIS/R. Short-term impacts from construction traffic would be reduced to a less-than-significant level by scheduling truck trips outside of morning and evening peak commute hours (Mitigation Measure 3.12-1 in the MMRP). Potential increased wear and tear on local roads from construction will be reduced to a less-than-significant level by before and after documentation of road conditions and a pre-construction agreement between the project landowners and the local public works entity that details repair requirements (Mitigation Measure 3.12-4 in the MMRP).

Noise. The EIS/R identified three potentially significant impacts from construction. Short-term construction noise (Impact 3.13-1) will be reduced to a less-than-significant level by restrictions on the selection, placement and operation of construction equipment (Mitigation Measure 3.13-1 in the MMRP). Traffic-related noise impacts (Impact 3.13-2) will be reduced to a less-than-significant level by restrictions on hauling (Mitigation Measure 3.13-2 in the MMRP). Pump operation noise impacts (Impact 3.13-4) will be reduced to a less-than-significant level by enclosing pump that exceeds noise standards (Mitigation Measure 3.13-4 in the MMRP.)

Air Quality. Several potentially significant impacts to air quality were identified in the EIS/R. Short-term construction-generated air pollutant emissions (Impact 3.14-1) would be reduced to a less-than-significant level by implementation of Basic Control Measures (Mitigation Measure 3.14-1 in the MMRP). Exposure of sensitive receptors to toxic air contaminant emissions (Impact 3.14-3) would be reduced to a less-than-significant level by restrictions on size and use of construction equipment and creation of a Health and Safety Plan (Mitigation Measures 3.14-3a and b in MMRP).

Utilities. A Union Pacific Railroad (UPRR) line runs adjacent to the western boundary of the project area. Potential disruption of rail service is expected to be reduced to a less-than-significant level by avoiding construction activities in the UPRR right-of-way. In addition, increased tidal prism from the breaching of A17 may create scour around the railroad bridge piers. Any erosion around the piers will be monitored, thus avoiding potential impacts to the bridge, as outlined in the project's supplemental Environmental Action Statement (USFWS November 2011, attached as Exhibit 4).

Cumulative Impacts

The EIS/R also identifies cumulative impacts for all of the project alternatives (including no action) and Phase I projects that are unavoidable potentially significant impacts to the environment. All of the impacts of the Phase I projects are not considerable, and only become potentially significant when combined with impacts from sea level rise, future SBSP Restoration Project phases, and numerous other wetland, flood control, recreational, residential, commercial, and industrial projects completed or planned for in South San Francisco Bay in the near term (see Section 4.2.2 in EIS/R for a discussion of other projects).

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For the restoration project proposed in this staff recommendation the following cumulative impacts apply when considering future changes such as sea-level rise and other projects:

Hydrology, Flood Management and Infrastructure. In the case of coastal flood risk (Cumulative Impact 3.3-1), all alternatives, including no action, are potentially significant due to impacts from sea level rise and climate change. However, Alternatives B and C include construction of a flood protection levee or other measures to reduce the impacts of coastal flooding to a less-than-significant level. Since no Phase I projects, including that proposed in this authorization, include construction of flood protection measures, if the project does not include a future phase with flood protection measures, the combination of Phase I projects, sea level rise, and other projects could be potentially significant with no feasible mitigation. In addition, the EIS/R identified sea level rise as a potentially significant impact (Cumulative Impact 3.3-2) despite the flood protection benefits provided by tidal restoration.

Surface Water, Sediment, and Groundwater Quality. The presence of mercury in the Bay's sediments creates additional potential cumulative impacts. Although the SBSP Restoration Project's combination of monitoring and implementation of the Adaptive Management Plan would reduce impacts from the proposed tidal restoration projects to less-than-significant, when combined with other projects in the area, there are the potentially significant impacts from mercury in Bay sediments (Cumulative Impacts 3.4-3 and 3.4-4). In regards to water quality from other contaminants (Cumulative Impact 3.4-5), the Phase I actions include mitigation measures for all contaminants considered so the project only becomes potentially significant when considering other proposed projects in the South Bay.

Biological Resources. Shorebird habitat is being created as part of the Phase I in Ponds SF2, E12 and 13, and A16, but the conversion of salt ponds into tidal habitats could result in the loss of shorebird foraging habitat. When combined with sea level rise and other projects, this could have a potentially significant cumulative impact (Cumulative Impact 3.6-1). In addition, the cumulative impacts of Phase I when considered with the impacts of the 2,500 acres of other proposed projects in the South Bay and sea level rise could result in a potentially significant loss of mudflats (Cumulative Impact 3.6-2).

Cultural Resources. Phase I activities, including the proposed project, involve excavation activities that have the potential to encounter cultural resources. Although the EIS/R identified mitigation measures to decrease this impact to a less-than-significant level, when combined with other proposed projects there is the potential for significant cumulative impacts (Cumulative Impact 3.8-2).

Socioeconomics and Environmental Justice. Most of the cumulative impacts of Phase I are expected to benefit local business. However, when considering other projects, there could be a cumulatively significant impact to the brine shrimp harvesting business (Cumulative Impact 3.11-1).

Traffic. All project alternatives, including no action, will have cumulative short and long-term traffic impacts when considered with the potential impacts from other cumulative projects as identified in Cumulative Impacts 3.12-1, 3.12-2, and 3.12.-4.

Noise. Noise impacts generated during Phase I construction will be mitigated to a less-than-

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significant level. However, the cumulative impacts of the Phase I projects and other cumulative project would be potentially significant (Cumulative Impact 3.13). In terms of vibrations, the impacts of Phase I actions becomes significant when considered with other cumulative projects (Cumulative Impact 3.13-5).

Air Quality. While all project alternatives including Phase I would be less-than-significant, when considered with other projects, there could be potentially significant cumulative impacts (Cumulative Impact 3.14-3).

Global Climate Change

The Final EIS/R (p. 4-6) included the following discussion regarding cumulative impacts regarding global climate change:

“On August 30, 2006, the Governor of California signed Assembly Bill (AB) 32 (Health and Safety Code section 38501, subdivision (a)), legislation intended to combat global climate change. AB 32 recognizes the threat of global climate change to the economic well-being, public health, natural resources, and the environment of California and identifies potential adverse impacts of global climate change that range from air quality problems to impacts on California’s industries (e.g., agriculture, wine, and tourism). Although global climate change is an international issue, the intent of AB 32 is for California to exercise its authority to reduce greenhouse gas (GHG) emissions and encourage other states, the federal government, and other countries to act. AB 32 gives the California Air Resources Board (CARB) the authority to coordinate with stakeholders to implement this division, which includes developing emissions reduction measures with the California Public Utilities Commission.

“Currently, there are no regulatory standards issued by the state on how global climate change should be addressed and evaluated in its environmental review process. It is anticipated that CARB will develop and enforce mitigation strategies in accordance with AB 32. As these strategies are developed, the SBSP Restoration Project will be analyzed for consistency with CARB measures in subsequent project-level environmental documentation. As it currently stands, it would be speculative to make conclusions about the effects of global climate change resulting from the SBSP Restoration Project without clear quantitative baseline data about the existing pollutants that contribute to global climate change and established thresholds against which to analyze such changes. However, it is likely that the SBSP Restoration Project would sequester extensive carbon due to the increase in marsh vegetation associated with restoration activities. Tidal marshes of the bay are incredibly productive habitats. Atwater and others (1979) summarized existing studies and note that “the vascular plants of the estuaries tidal marshes average between 500 and 1500 g/m²/yr. Selecting 800 g/m²/yr as a typical value, and multiplying by the present area of tidal marsh yields an estimated aboveground primary productivity of 10¹¹ g/yr.” They further note that carbon constitutes about 40% of the dry organic matter of this productivity. Using this same average productivity, and the potential ~13,000 acres (~5200 ha) of tidal restoration would yield about 5.2 x 10⁷ g/yr of above ground productivity, or 2.1 x 10⁷ g of carbon sequestered per year. The effects of climate change and sea level rise on the Project over the 50-year planning period were taken into account by including these factors in the modeling efforts conducted for the design of the restoration activities. The proposed improvements, including new levees that provide flood protection, would be sized to account for the change in sea level that is expected to occur over the 50-year planning period.”

As shown in Appendix N to the SBSP EIS/R, estimated GHG emissions associated with

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construction of the all Phase 1 projects (five public access and six habitat construction projects at five sites, including the one under this proposed authorization) would be approximately 4,200 metric tons of CO₂ per year during the construction phase which is limited to three years. Construction-related emissions would be temporary and finite in nature.

When considering impacts of the project's GHG, it is important to also consider the carbon sequestration that will result from the proposed tidal restoration projects. Using updated estimates of carbon sequestration potential from "Carbon Sequestration in Tidal Wetlands – White Paper" (Crooks, 2009), Conservancy staff estimate that the 960 acres of tidal marsh restoration in Phase 1 (not counting the muted tidal system of Pond A8) will result in a potential sequestration of CO₂ ranging from 710 to 3,552 metric tons per year. In the short term, the construction effects (a total of approximately 12,600 metric tons) will be completely offset after less than 18 years using the more conservative sequestration figure and in less than approximately 4 years using the higher figure.

Also of note is that the project will have few indirect sources of CO₂ emissions during the post-construction life of the project. Over the fifty year planning period used in the EIS/R, the tidal restoration projects are likely to sequester far more than the CO₂ produced during Phase I project construction, operations and maintenance. Of course the actual amount of carbon sequestered will depend on a variety of factors including sea level rise.

In short, based on current information and the nature of the projects, the project proposed for funding under this staff recommendation has little potential to create direct or cumulatively considerable environmental effects related to GHG emissions or climate change.

Statement Of Overriding Considerations

In the event a project has unavoidable significant potential effect, 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 Consideration may be adopted and the project approved, despite its adverse environmental effects. DFG adopted a Statement of Overriding Consideration as part of its Finding of Facts on March 11, 2008.

The overall environmental benefits of the proposed project as detailed in the EIS/R warrant the Conservancy's decision to approve the project even though not all of the environmental effects of the project are fully mitigated. As discussed above, the unavoidable cumulative impacts are only significant when considering the tidal restoration of A16/17 in combination with all Phase I projects and with all other near term projects in the South San Francisco Bay, and other changes such as sea level rise. In the absence of the proposed project, these impacts could still happen but without the habitat and other benefits (described in detail above) generated by the proposed tidal restoration projects.

For these reasons, the Conservancy staff recommends that Conservancy find that the project, as mitigated, avoids or reduces to less than significant all potentially significant environmental effects, except for cumulative effects related to Surface Water, Sediment, and Groundwater Quality, Biological Resources, Cultural Resources, Socioeconomics and Environmental Justice,

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Traffic, Noise, and Air Quality. With respect to these potential unavoidable effects, Conservancy staff likewise recommends that the Conservancy find that the specific environmental, resource, and flood protection benefits of the SBSP Phase I (Ponds A16/17) project proposed in this authorization, outweigh the unmitigated or unavoidable environmental effects of the project, thereby warranting its approval. Upon Conservancy approval of the proposed project, Conservancy staff will prepare and file a Notice of Determination.