

COASTAL CONSERVANCY

Staff Recommendation
October 18, 2012

SEARS POINT WETLAND RESTORATION IMPLEMENTATION

Project No. 06-017-02
Project Manager: Betsy Wilson

RECOMMENDED ACTION: Authorization to disburse up to \$3,189,500, including \$992,000 to be reimbursed by the United States Fish and Wildlife Service National Coastal Wetlands Conservation Program and \$1,232,500 to be reimbursed by the California Department of Water Resources Integrated Regional Water Management Program, to the Sonoma Land Trust for implementation of the Sears Point Wetland and Watershed Restoration Project in Sonoma County.

LOCATION: On the edge of San Pablo Bay between the mouth of the Petaluma River and Tolay Creek, Sonoma County (Exhibit 1).

PROGRAM CATEGORY: San Francisco Bay Area Conservancy

EXHIBITS

- Exhibit 1: [Project Location and Site Map](#)
- Exhibit 2: [Phase I Project Design](#)
- Exhibit 3: [Project Photographs](#)
- Exhibit 4: [Project Letters](#)
- Exhibit 5: [Environmental Impact Report/Statement](#) please find at www.sonomalandtrust.org/publications/plans_reports.html
- Exhibit 6: [Mitigation and Monitoring Report](#)

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 authorizes the disbursement of an amount not to exceed three million, one hundred eighty-nine thousand, five hundred dollars (\$3,189,500), which includes nine hundred ninety-two thousand dollars (\$992,000) in grant funds to the Conservancy from the United States Fish and Wildlife Service (USFWS) National Coastal Wetlands Conservation Program and one million, two hundred thirty-two thousand, five hundred dollars (\$1,232,500) in grant funds to the Conservancy from the California Department of Water

Resources (DWR) Integrated Regional Water Management Program, to the Sonoma Land Trust (SLT) for implementation of the Sears Point Wetland and Watershed Restoration Project in Sonoma County. This authorization is subject to the following conditions:

1. Prior to disbursement of any funds, SLT shall submit for the review and approval of the Conservancy's Executive Officer of 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.
2. In carrying out the project, SLT shall comply with all applicable mitigation and monitoring measures that are identified in the Sears Point Wetland and Watershed Restoration Final Environmental Impact Report/Statement (EIR/S) certified by the California Department of Fish and Game on June 22, 2012.
3. SLT shall enter into an agreement with the Conservancy to protect the public interest in any improvements funded by the Conservancy, consistent with Public Resources Code Section 31116(c)."

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 San Francisco Bay Area.
3. As a responsible agency, the Conservancy has independently reviewed and considered the information contained in the Sears Point Wetland and Watershed Restoration Project EIR/S approved by the California Department of Fish and Game on June 22, 2012 in order to comply with the California Environmental Quality Act (CEQA), and finds that the current proposed project, as modified by incorporation of the mitigation measures identified in the EIR/S, avoids, reduces or mitigates all of the possible significant environmental effects of the project.
4. Sonoma Land Trust is a nonprofit organizations existing under Section 501(c)(3) of the U.S. Internal Revenue Code, whose purposes are consistent with Division 21 of the Public Resources Code."

PROJECT SUMMARY:

Staff recommends that the Conservancy authorize a grant of up to \$3,189,500 to the Sonoma Land Trust (SLT) for implementation of the Sears Point Wetland and Watershed Restoration Project (Project) in Sonoma County. Funds authorized for this project would consist of \$965,000 of Conservancy funds, plus two grants awarded to the Conservancy for the Sears Point project, namely \$992,000 from the United States Fish and Wildlife Service (USFWS) National Coastal Wetlands Conservation Program and \$1,232,500 from the Department of Water Resources (DWR) Integrated Regional Water Management Program through the Bay Area Clean Water Agencies (BACWA). Funding will be used to complete final design and permitting and to carry

out the first phase of project implementation. Phase I of the project includes the preparation of a 960-acre tidal basin for levee breaching, creation and enhancement of 106 acres of seasonal wetlands, construction of a 2.5-mile segment of the San Francisco Bay Trail (Bay Trail), and development of safe public access to the site from Highway 37.

In 2005, SLT acquired the 2,327-acre Sears Point property, a vital link along the northern San Pablo Bay shoreline connecting nearly five miles of protected and restored tidal marsh habitat from the Petaluma River to Tolay Creek (Exhibit 1). Unique among nearly all shoreline conservation properties, the Sears Point property extends deep into the adjacent uplands reaching elevations of nearly 400 feet. Some nine miles of riparian corridors traverse its grasslands, willow groves, and broad plains of seasonal wetlands to connect upland to Bay. Slated for casino development prior to SLT's acquisition, the Sears Point site is now protected in perpetuity offering an unparalleled opportunity for landscape-scale restoration of multiple habitats in the North Bay. Within the San Francisco Bay region, Sears Point is widely regarded as one of the highest priorities for restoration.

Since acquiring the property in 2005, SLT has developed a comprehensive restoration plan for the site, a process that brought together a diverse set of stakeholders and underwent intensive peer review. As designed, the Project will restore 960 acres of tidal marsh providing vital ecosystem services including high rates of carbon sequestration, buffering against sea level rise, habitat for recovery of rare, threatened and endangered species, and filtration of pollutants. The Project will also enhance and restore over 106 acres of seasonal wetlands and restore nearly 1,000 acres of upland grasslands and riparian corridors. Within the uplands, the Project will enhance 15.5 acres of breeding and sheltering habitat for the California red-legged frog including creation of several breeding ponds. Public access will be dramatically increased with the construction of 2.5 miles of the Bay Trail for use by hikers, birders, and hunters.

This authorization will provide SLT with funding to complete final design and permitting and to carry out Phase I project implementation (Exhibit 2). In Phase I, SLT and partners Ducks Unlimited will:

- Prepare the 960-acre future tidal marsh by constructing a 2.5-mile levee, excavating over 10 miles of new tidal channels, building over 500 topographic features to promote future vegetation development and sediment deposition, and managing brackish flooding of the site for one to two seasons to allow vegetation to establish before being subject to the full brunt of the tides.
- Restore up to 106 acres of seasonal freshwater wetlands by implementing ecologically-based agriculture and through excavation of depressions in historic locations.
- Construct a 2.5-mile segment of the Bay Trail on top of the new levee overlooking the developing tidal marsh. This will connect directly with the existing 1.3-mile segment of the Bay Trail at the neighboring Sonoma Baylands site. A public railroad crossing will be established at the end of Reclamation Road and a small parking area will be built.
- Improve public access to the site from Highway 37. Public access at Sears Point is currently limited to periodic tours or by special permission and is generally confined to the north side of Highway 37. The site is currently accessed via a small driveway off of Highway 37 where vehicle speeds routinely exceed 70 miles per hour. As a result, site access is difficult and dangerous for visitors and unacceptable to school buses. To address this problem, access to

the site will be provided from the existing traffic signal light at Highway 37 and Reclamation Road. Reclamation Road will be resurfaced and a new access road will continue from the road's terminus to the headquarters area. A new trail will parallel the access road.

Phase II of the project will include breaching and lowering of the outboard levee and dredging of connector channels to ensure full tidal exchange. The Conservancy grant funds are not anticipated to be used for Phase II implementation. However, due to DWR grant requirements, a portion of the Conservancy grant funds will be retained until Phase II of the project is complete.

Design and permitting for the Project will be complete by the end of 2012 and Phase I implementation will begin shortly thereafter. Major construction will be complete in 2014 with pre-vegetation actions and levee breaching complete by mid-2015.

For more than 30 years, SLT has been committed to protecting the varied scenic, natural, agricultural and open landscapes of Sonoma County for the benefit of present and future generations. SLT's involvement with the Sonoma Baylands area began in the mid 1980s when it acquired its first Baylands property along Highway 37. Other acquisitions followed, culminating in the purchase of the two Sears Point properties (Dickson Ranch and the North Point Joint Venture property) in 2004/2005. Today SLT owns or holds easements over most of the land on both sides of Highway 37 from the Petaluma River to Sears Point and Tolay Creek. SLT has conducted numerous successful projects with support from the Conservancy.

Site Description: The 2,327-acre Sears Point property extends from the margin of San Pablo Bay to neighboring ridgelines nearly 400 feet in elevation (Exhibit 3). Some 1,500 acres are diked agricultural baylands, isolated from the Bay more than 100 years ago and subsided to elevations below mean sea level. Two transportation arteries bisect the diked baylands - Highway 37 and the Sonoma Marin Area Rail Transit (SMART) railroad. Progressing inland the property includes more than 800 acres of ecotonal and upland grasslands encompassing seasonal wetlands, riparian drainages, and annual grasslands.

The planned 960-acre tidal marsh restoration is ideally situated between two adjacent restoration projects: Tubbs Island and Sonoma Baylands. Although sea level rise poses a threat to existing and planned tidal marshes, Sears Point has access to abundant sediment sources including the vast mudflats that occupy the northern San Pablo Bay margin and the sediment derived from Sonoma Creek and the Petaluma River.

Field investigations conducted since SLT acquired the property have documented a wider diversity in native plant and wildlife populations than were anticipated at the time of the acquisitions. The San Pablo Bay watershed is an essential feeding and resting stop for migratory birds on the Pacific Flyway and provides important habitat for many rare and endangered species.

Project History: Historically, nearly 80,000 acres of tidal marshes and open mudflats surrounded San Pablo Bay, providing essential habitat for a wide range of animals, birds, and plants. Over the past 150 years, thousands of acres of these wetlands were diked, drained, and reclaimed for agricultural use; overall, 82% of the North Bay's historic tidal wetlands were destroyed. Beginning in the early 1970s, scientists recognized that in order to enhance the ecological vitality of the Bay, many thousands of acres of tidal marshes would need to be restored. Local, state, and federal agencies consider these restoration activities an essential component of the successful restoration of the Bay, including the recovery of threatened and endangered fish and wildlife species. The *San Francisco Baylands Ecosystem Habitat Goals*

Report, completed in 1999 with input from over 100 scientists and resource managers, recommends restoration of approximately 60,000 acres of tidal marsh to achieve a goal of 100,000 total acres of tidal marsh in San Francisco Bay, and specifically recommends restoration of the Sears Point site.

In 2004/2005, the SLT acquired the North Point and Dickson Ranch properties, collectively known as the 2,327-acre Sears Point property, marking a key milestone in this regional restoration agenda. For a short time, this property was referred to as the “casino lands” because the Federated Indians of Graton Rancheria had proposed a casino development. The planned casino and resort met with stringent opposition. The Rancheria recognized the local sentiment and assigned their purchase option, for which they had paid \$4 million, on the North Point property to SLT.

Funding for the acquisition phase began by leveraging \$1.6 million raised from over 600 individuals and organizations in the local community. To acquire the land, SLT received grants from the Conservancy, the Wildlife Conservation Board, the Gordon and Betty Moore Foundation, and the Sonoma County Agricultural Preservation and Open Space District. Since the acquisitions, SLT has maintained an involved constituency of stakeholders representing over 40 agencies and organizations. The Conservancy authorized \$525,000 towards the acquisition in December 2004.

Post-acquisition, the Conservancy and others provided funding for collection of biological, physical, and archaeological data; the preparation of a Conceptual Restoration Plan, Draft and Final EIR/S, and design plans; and multiple other activities. In parallel with the planning and permitting activities, SLT has completed substantial ecological enhancements in the upland portions of the property. The Conservancy has authorized \$1,435,000 towards restoration planning (\$1 million grant was approved in April 2006 and augmentations were approved in June 2010 and January 2012).

The Project is also flanked by other acquisition, restoration planning, and/or implementation projects the Conservancy has funded, including the adjacent Sonoma Baylands Tidal Restoration Project, the North Parcel Wetlands Enhancement Project, and the nearby Tolay Lake and Tolay Creek Ranches.

PROJECT FINANCING

Coastal Conservancy	
SF Bay Area Conservancy Program Prop 84 funds	\$ 965,000
USFWS National Coastal Wetlands Conservation funds (awarded)	992,000
DWR Integrated Regional Water Management funds (awarded)	1,232,500
North American Wetlands Conservation Act funds (committed)	750,000
Public Lands Highway Discretionary Fund (committed)	2,250,000
Estuary Restoration Act (committed)	1,000,000
Wildlife Conservation Board (committed)	4,000,000
Wildlife Conservation Board (pending)	4,000,000
Environmental Protection Agency (committed)	941,941
Multiple potential sources (e.g., NOAA, Bay Trail, Cosco Busan mitigation funds)	<u>2,268,559</u>
Total Project Costs*	\$18,400,000

* Total project costs are for implementation of the entire Project. The estimated cost for Phase I implementation is \$15,400,000.

The anticipated source of Conservancy funds is a Fiscal Year 2010 appropriation to the San Francisco Bay Area Conservancy Program from the “Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006” (Proposition 84). Proposition 84 authorizes the use of these funds for purposes of the protection of coastal waters and watersheds and to protect and restore the natural habitat values of coastal waters and lands. (Public Res. Code § 75060). Funds may be used for projects in accordance with the Conservancy’s enabling legislation, Division 21 of the Public Resources Code. (Public Res. Code § 75074). This project is also appropriate for prioritization under the selection criteria set forth in Section 75071 in that there are non-state matching contributions toward the restoration.

The balance of funds provided under this authorization will be provided by: 1) a grant from the USFWS National Coastal Wetlands Conservation Program to the Conservancy specifically for the Sears Point Wetland and Watershed Restoration Project (total grant amount is \$1,000,000 with \$8,000 going towards Conservancy support), and 2) DWR Integrated Regional Water Management (IRWM) implementation funding for the San Francisco Bay Area, which specifically includes funding for wetland and watershed restoration at Sears Point as part of the Bay Area Wetland Ecosystem Restoration Program (total grant is \$1,265,000 with \$32,500 going towards Conservancy support). The San Francisco Bay Area IRWM Program 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. The Bay Area Clean Water Agencies will be administering DWR’s IRWM funds in the Bay Area.

CONSISTENCY WITH CONSERVANCY’S ENABLING LEGISLATION:

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

The Sears Point Wetland Restoration Project is located in Sonoma County, one of the nine San Francisco Bay Area counties in which the Conservancy is authorized, under Sections 31160 and 31161 of the Public Resources Code, to undertake projects and award grants to address resource and recreational goals for the region.

Consistent with Section 31162, the Conservancy may undertake projects that will help to achieve specified goals for the San Francisco Bay Area Conservancy Program. 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 importance.” The proposed project will restore 960 acres of tidal wetlands and create and enhance 106 acres of seasonal wetlands.

Under Section 31162(a), the Conservancy may act “to improve public access to, within, and around the bay ... without having a significant adverse impact on agricultural operations and environmentally sensitive areas and wildlife ... through completion and operation of regional bay, coast, water, and ridge trail systems ... which are part of a regional trail system.” The proposed project will construct a 2.5-mile segment of the San Francisco Bay Trail, a regional 500-mile trail network that will encircle San Francisco and San Pablo Bays. The proposed Bay Trail has been designed to avoid adversely impacting agricultural operations, environmentally sensitive areas or wildlife.

Finally, the proposed project satisfies all of the criteria for determining project priority under Section 31163(c), as follows: The project (1) is supported by adopted regional and local plans including the *San Francisco Bay Plan*, the *San Francisco Baylands Ecosystem Habitat Goals Report*, the USFWS’s *Draft Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California*, the Sonoma County General Plan, the *Bay Trail Plan*, the *Sonoma Bay Trail Corridor Plan*, and the *2009 California Climate Adaptation Strategy*; (2) serves a regional constituency involving, among others, the California Department of Fish and Game (CDFG), USFWS, San Pablo Bay National Wildlife Refuge, the Sonoma County Agricultural Preservation and Open Space District (SCAPOSD) and several nonprofit organizations whose mission includes natural resource protection and restoration; (3) can be implemented in a timely way with construction planned to start in early 2013; (4) provides benefits that would be lost if the project is not quickly implemented as prompt implementation of tidal wetlands restoration project is vital to keeping pace with sea level rise; and (5) includes significant matching funds as described in the Project Financing section.

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 960 acres of tidal wetlands and create and enhance 106 acres of seasonal wetlands.

Consistent with **Goal 11, Objective E** of the Conservancy’s 2007 Strategic Plan, the proposed project will construct approximately 2.5 miles of the San Francisco Bay Trail.

**CONSISTENCY WITH CONSERVANCY'S
PROJECT SELECTION CRITERIA & GUIDELINES:**

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines, last updated on 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 project has widespread support from the public and private sector including Congresswoman Lynn Woolsey, Assemblyman Jared Huffman, County Supervisor David Rabbitt, DFG, and the San Francisco Bay Joint Venture. Project letters are attached in Exhibit 4.
4. **Location:** The proposed project is located in the nine-county San Francisco Bay Area consistent with Section 31162 of the Public Resources Code.
5. **Need:** The project's size and expense requires a broad coalition of financial support. SLT and project partners will continue to raise project funds, but the current economic climate limits the number of opportunities. Without Conservancy funding the project could be delayed which could result in the loss of \$1.75 million in federal grant dollars, expiring in 2013.
6. **Greater-than-local interest:** The Sears Point project would contribute to the effort to restore a continuous, wide band of tidal marsh along the Bay shore from Tolay Creek to the Petaluma River. Restoration of the Bay's tidal wetlands will aid in the recovery of several threatened or endangered species, including the California clapper rail and salt marsh harvest mouse. The project will also construct a 2.5-mile segment of the Bay Trail, which will connect directly with the existing 1.3-mile segment of Bay Trail at the neighboring Sonoma Baylands site.
7. **Sea level rise vulnerability:** The Sears Point site is located along the shore of San Pablo Bay, making it vulnerable to sea level rise and storm surge. In anticipation, the project design includes multiple adaptive management approaches:
 - The design height for the project is 12 feet, an elevation that will accommodate sea level rise for at least a 50 year planning horizon, which is the typical lifespan of a levee. The levee could be raised further if necessary.
 - Levee specifications include a 10:1 to 20:1 outboard slope in comparison to more typical 5:1 to 10:1 slopes. These gently sloping levees, referred to as a "habitat" levee, offer refuge to vulnerable species (e.g., California clapper rail, California black rail, and the salt marsh harvest mouse) during extreme high tides and storm surge events.
 - The rate of sediment deposition determines the pace of development in all new tidal basins and therefore the ability of the marsh to keep up with sea level rise. As such, the project design incorporates lessons from other sites and new innovative techniques to

maximize sediment deposition and retention. These techniques include the construction of topographic features and pre-vegetation of the site in advance of levee breaching.

- Looking several decades forward, the Sears Point property includes over 1,300 acres landward of the new levee to be constructed as part of the project which allows for the possibility of a future levee breach to allow the marsh to migrate inland as sea levels rise. While Highway 37 and the railroad currently stand in the way of this action, discussions are underway regarding the long-term future of Highway 37 and the potential of a causeway or other structure to raise this Highway.

Additional Criteria

8. **Urgency:** From an ecological perspective there is consensus among scientists that prompt implementation of this tidal wetlands restoration project is vital to keeping pace with sea level rise. Delays to project implementation may reduce the likelihood of project success.
9. **Leverage:** See the “Project Financing” section above. The authorization includes funding secured from federal and state grant programs.
10. **Readiness:** Design and permitting will be complete by the end of 2012 with construction to begin soon thereafter. Major construction is planned to be completed in 2014 with pre-vegetation actions and levee breaching completed by mid-2015.
11. **Realization of prior Conservancy goals:** See “Project History” above.
12. **Cooperation:** SLT is working closely with DFG and USFWS on this project. DFG and the USFWS have agreed to split future ownership and management of the Sears Point property. The Conservancy, Wildlife Conservation Board, and private foundations funded the restoration planning. A coalition of private, local citizens, private foundations, and nonprofit organizations supported and worked on the development of the restoration plans.
13. **Minimization of greenhouse gas emissions:** While project construction will result in greenhouse gas (GHG) emissions, the project will incorporate the following measures to avoid or minimize GHG emissions to the extent feasible and consistent with the project objectives: 1) no soils will be imported to the site (i.e., levee and topographic features will be constructed using sediment excavated from new tidal channels); 2) preference will be given to contractors using cleaner technologies and equipment; 3) all staging of equipment and materials will be done on-site; 4) preference will be given to contractors that develop a construction and demolition plan emphasizing reuse and recycling of demolition refuse; 5) waste will be taken to the closest disposal facilities; and 6) use of low intensity roadway materials will be encouraged for road improvements.

In addition, according to several literature sources and reviews, tidal wetlands are a substantial net GHG sink. The EIR/S for the Project estimates that the restoration of 960 acres of tidal wetlands at the Sears Point site will offset construction emissions in approximately 1.5 to 9 years and thereafter result in net reductions of GHG emissions.

CONSISTENCY WITH SAN FRANCISCO BAY PLAN:

The project is 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:

Part III: the Bay as a Resource

Water Quality

Policy 1 - 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

Policy 2 - Water circulation in the Bay should be maintained, and improved as much as possible.

Tidal Marshes and Tidal Flats

Policy 4 - Where and whenever possible, former tidal marshes and tidal flats that have been diked from the Bay should be restored to tidal action in order to replace lost historic wetlands. As recommended in the *Baylands Ecosystem Habitat Goals Report*, around 65,000 acres of areas diked from the Bay should be restored to tidal action.

Policy 5 - Tidal restoration projects should include clear and specific long-term and short-term biological and physical goals, and success criteria and a monitoring program to assess the sustainability of the project.

Part IV: Development of the Bay and Shoreline

Public Access

Policy 2 – New projects in the Bay or on the shoreline, including new wildlife areas, increase public access to the Bay to the maximum extent feasible.

Policy 4 - Public access should be sited, designed and managed to prevent significant adverse effects on wildlife.

Policy 10 - Federal, state, regional, and local jurisdictions, special districts, and BCDC should cooperate to provide appropriately sited, designed and managed public access, especially to link the entire series of shoreline parks, regional trail systems (such as the San Francisco Bay Trail) and existing public access areas to the extent feasible without additional Bay filling and without significant adverse effects on Bay natural resources.

COMPLIANCE WITH CEQA:

In order to comply with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), DFG and USFWS as lead agencies, in cooperation with SLT, prepared a joint EIR/S to evaluate the potential environmental impacts of the Sears Point Wetland and Watershed Restoration Project. The EIR/S (Exhibit 5) was certified by DFG on June 22, 2012 and the Record of Decision (ROD) was adopted by USFWS on July 25, 2012.

The EIR/S identifies potential significant effects from implementation the Sears Point Wetland and Watershed Restoration Project, including the implementation activities proposed in this

authorization. The EIR/S identifies potential significant effects from implementation of the Phase I implementation activities in the areas of: Geology, Soils, and Paleontology; Water Quality; Public Health and Safety; Biological Resource; Hazardous Substances and Waste; Transportation; Air Quality; Noise; Cultural Resources; and Environmental Justice. Mitigation measures are identified in the EIR/S to avoid, reduce or mitigate all of the possible significant environmental effects. The Project's significant effects and mitigation measures are set forth in the EIR/S and summarized in the attached Mitigation and Monitoring Report (Exhibit 6).

Geology, Soils, and Paleontology: Upland portions of the project site are underlain by the Petaluma Formation, which is considered highly sensitive for paleontological resources. Site preparation and earthwork in the upland portions of the project site have the potential to disturb or damage these resources. To reduce impacts to a less than significant level, a qualified professional paleontologist will be retained to conduct a preconstruction survey prior to site preparation and project earthwork beginning within upland portions of the site and, if necessary, a paleontological salvage operation will be conducted. If sensitive paleontological remains are found during construction, construction activities will cease immediately and a qualified professional paleontologist will be notified.

Water Quality: Hazardous materials associated with construction equipment would be present on-site during project construction. Fuel, lubricants, coolants, and other fluids contained by construction equipment are considered hazardous to water resources if accidentally released due to poor equipment maintenance or an unforeseeable incident. If these materials are not managed appropriately, long-lasting impairment of water and sediment quality could result as some construction-related materials are highly mobile, persistent, and bioaccumulative in the environment. To reduce impacts to a less than significant level, SLT¹ and its contractors shall implement construction Best Management Practices (BMPs), conduct water quality monitoring, and complete most construction activities prior to levee breaching to minimize sediment discharges during construction. All construction work shall comply with the conditions of construction permits from regulatory agencies, including the RWQCB, to protect beneficial uses of water resources.

It is also possible that mercury methylation could increase as a result of the pre-vegetation of the site. Although it is generally thought that restoring large areas of salt marsh throughout the San Francisco Bay region is beneficial to the environment, large-scale restoration projects could also expose populations of fish and wildlife species to increased levels of methyl mercury. However, current research appears to indicate that tidal salt marshes are less prone to mercury methylation than freshwater marshes, and that concentrations in biota are relatively low. Because the scientific understanding of these processes is still developing, there is a need for adaptive management of this issue. SLT shall develop and implement a methyl mercury adaptive management plan which includes a methyl mercury monitoring plan and triggers for further action. The methyl mercury adaptive management plan will be modified as necessary to reflect increased understanding of mercury cycling in San Francisco Bay.

Construction of the project will utilize dredged material to fill former drainage ditches and to construction internal features such as marsh mounds, sidecast ridges, and habitat slopes. There are potential temporary turbidity impacts due to dredging with a clamshell or hydraulic dredge

¹ All mitigation measures that apply to SLT also apply to any successor property owners such as CDFG and/or USFWS.

and placement of dredged material on the project site. To reduce the temporary impacts of dredging to less than significant, SLT and its contractors shall implement water quality control measures for project dredging as required by conditions of construction permits from regulatory agencies. Water quality control measures may include the use of a silt curtain and water quality monitoring surrounding the construction site.

Public Health and Safety: The project has the potential to increase mosquito breeding habitat. The wetlands within the 106-acre seasonal wetland preservation and enhancement area represent the most potential for producing problem numbers of mosquitoes. There is also the potential for mosquito production associated with the tidal wetland area during the pre-vegetation phase, which involves irrigation to develop sacrificial vegetation. To control and properly regulate mosquito breeding habitat, SLT shall consult and coordinate water management, restoration design, construction, and operation activities with the Marin/Sonoma Mosquito Vector Control District (MSMVCD).

Biological Resources: There are several potential impacts to biological resources as follows:

- Loss of tidal salt marsh. The construction of breaches and a connector channel will result in the temporary loss of up to 2.6 acres of tidal salt marsh habitat. This loss is expected to be offset by the extensive acreage of salt marsh habitat that would develop at the project site as it matures (i.e., a 360:1 ratio of restored tidal marsh habitat to lost tidal marsh habitat is expected at maturity). Based on experiences at nearby restoration sites in the North Bay, the tidal marsh habitat lost to breaching and dredging is expected to be replaced within 1 to 2 years. To ensure that the impacts to tidal salt marsh habitat are fully compensated, SLT shall monitor the restoration site following completion of construction to ensure that at a minimum the impacted tidal salt marsh habitat is replaced at a 3:1 ration within 5 years of project completion. If the required ratio is not achieved in the 5 year period, SLT shall work with USFWS and CDFG to develop and implement appropriate adaptive management activities.
- Loss of special status plant populations. While no special status plant species have been documented on the project site, there is low to moderate potential for several special status plant species to occur within the grasslands, agricultural fields and diked seasonal wetlands, and along the margins of seasonal wetlands. Special status plant surveys will be conducted prior to initiating construction and, if necessary, appropriate protective measures to minimize the impact to the plant species will be implemented. If direct impact or loss of special status plants is unavoidable, SLT shall replace lost species to the extent practicable.
- Introduction or spread of noxious weeds during construction. Construction activities at the project site have the potential to introduce invasive non-native plant species not presently found in the project area, and could also promote the spread of non-native plants that now occur in the project area. A qualified botanist shall conduct a non-native plant assessment of areas subject to construction activities and shall recommend specific measures to minimize spread of non-native species (e.g., wash stations for construction vehicles and equipment, an herbicide spray program to destroy invasive weed infestations prior to construction). Restoration areas shall be monitored for infestation of invasive plants, such as non-native cordgrasses, perennial pepperweed, stinkwort, and/or other potentially invasive species. All infestations occurring within wetland habitats shall be controlled and removed to the extent feasible.

- Potential for construction-related impacts to special status species. Construction-related ground-disturbing activities including grading, excavation, and vegetation clearing could result in impacts to several species, including salt marsh harvest mice, California clapper rails and California black rails, burrowing owls, nesting special status and non-special status birds, special status and non-special status bats, California red-legged frog, northwestern pond turtle, Callippe silverspot butterfly and Myrtle's silverspot butterfly, and special-status fish species. Mitigation measures will be implemented to reduce potential impacts to a less than significant level including pre-construction surveys, buffer zones, construction windows to avoid activity during breeding seasons and rearing periods, and on-site mitigation.

Hazardous Substances and Waste: There are several potential impacts to hazardous substances and waste as follows:

- Accidental release of fuels and lubricants during construction. Construction of the project could expose construction workers, the public or the environment to hazardous materials through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Accidental releases of small quantities of potentially toxic substances (e.g., petroleum and other chemicals used to operate and maintain construction equipment) could contaminate soils and degrade the quality of surface water and groundwater, resulting in a public safety hazard. A Hazardous Material and Spill Prevention Control and Countermeasure Plan shall be prepared and implemented for the use of construction equipment for the project. The plan will describe storage procedures and construction site housekeeping practices and identify the parties responsible for monitoring and spill response.
- Exposure of humans, plants, or wildlife to contaminants as a result of Black Point Sports Club remediation activities. The RWQCB approved a Corrective Action Plan for the site which includes the excavation of 12,000 cubic yards of contaminated soil (lead shot, clay target debris, and/or polynuclear aromatic hydrocarbons are present in the former Black Point Sports Club skeet range area) as a site remediation measure. The excavated soil is then proposed to be used as fill material for a portion of the new flood control levee. A minimum of three feet of clean cover material is recommended to surround the contaminated soil in the levee to prevent environmental exposure.

To mitigate potential significant impacts associated with the excavation and placement of contaminated soil, SLT shall coordinate with the RWQCB on site clean-up requirements prior to construction, implement contaminated soil excavation protocols and excavated material placement for construction of levee core protocols, develop remediation design plans and specifications in conjunction with final design of the restoration project, comply with an approved corrective action plan for the site and prepare an implementation report, and prepare a site safety plan (soil and groundwater management plan) to protect people from residual soil/groundwater contamination during construction. SLT shall implement appropriate administrative controls to ensure that the encapsulated soil is not inadvertently exposed.

- Potential exposure of humans, plants, or wildlife to hazardous chemicals contained in dredged material during dredging and material placement activities. The process of dredging material from the connector channel may disturb and redistribute contaminants that have been previously buried or otherwise sequestered in sediments. Once disturbed, these

contaminants may become biologically available in sediments and the water column and could exert toxic effects on organisms that come in contact with them. To reduce these impacts to a less than significant level, SLT shall sample and test sediments proposed to be dredged for chemical constituents of concern and for toxicity using protocols acceptable to the San Francisco Dredged Material Management Office (DMMO).

- Potential exposure of humans, plants, or wildlife to contaminants as a result of construction/restoration activities. Environmental site assessments for the two Sears Point properties reported potential environmental conditions related to leakage from grease cans, barns and residential structures on the site potentially constructed with asbestos-containing material and lead-based paint, and historical application of herbicides. As mentioned above, prior to excavation, SLT shall prepare a site safety plan to protect construction workers and/or the public from known or previously undiscovered soil and groundwater contamination during construction activities. In addition, to protect construction workers and members of the public from known or undiscovered hazardous building materials, including asbestos and lead, all demolition activities will be undertaken in accordance with Cal-OSHA and other applicable standards.

Transportation: Restoration activities would increase the number of vehicle trips to the project site during the site preparation phase. Construction vehicles entering or exiting the site could result in temporary lane closures or cause temporary delays or stoppage of through traffic in the project vicinity, which could adversely affect local traffic circulation, particularly during peak hours. In addition, slow-moving construction vehicles could result in traffic safety hazards. To minimize these impacts to a less than significant level, SLT will require the construction contractor to prepare and implement a traffic control plan.

Air Quality: Construction of the project would result in the temporary increase in emissions of particulate matter (PM10 and PM2.5) and other criteria air pollutants. The Bay Area Air Quality Management District (BAAQMD) has a list of construction dust control measures (sweeping, watering, etc.) that will be implemented for all construction phases in order to reduce these impacts to a less than significant level. In addition, where feasible, construction contracts shall include measures to reduce combustion pollutants to address PM2.5 exposure from diesel engines consistent with the 2010 BAAQMD guidelines.

Noise: With the extension of the Bay Trail through the project site, recreational users would have trail access to locations immediately adjacent to new 160 horsepower storm water pumps. SLT shall design project facilities to reduce noise from operational pumps near adjacent segments of the Bay Trail. Treatments to reduce noise may include, but are not limited to: constructing enclosures around equipment, installation of noise absorptive treatments and other noise insulating materials, and locating equipment away from noise sensitive uses. SLT shall retain a qualified acoustical professional to determine that the treatments are sufficient to reduce sound levels at adjacent segments of the trail.

Cultural Resources: It is not anticipated that the project would cause a substantial adverse change in the significance of federal or state-eligible historic resources. However, the potential exists that buried archaeological resources are present in the project area. Although unanticipated, there also is the possibility that Native American remains may be unearthed. Damage to or destruction of such resources would be a significant impact. To reduce this potential impact to a less than significant level, pre-construction cultural resources surveys shall

be conducted for any areas that have not previously been surveyed and construction contractors shall be required to stop work and appropriately assess the resources if any cultural deposits or human remains are encountered during construction.

Environmental Justice: A potential environmental justice impact may result if fish, which are relied on as a major food source for subsistence harvesting, experience increased toxicity due to an increase methyl mercury concentrations levels. While little is known about the specific fishing habits of subsistence fishers residing along San Pablo Bay, a study conducted by the California Department of Health Services between 1998 and 1999 found that Asian and African American groups were more likely than any other ethnic groups to consume more than the recommended limit set forth in the Office of Environmental Health and Hazard Assessment's healthy advisory and safe eating guidelines for fish and shellfish caught from the Bay and thus, are at greatest risk of toxic exposure.

Both the construction and operation of the project have the potential to increase methyl mercury concentrations levels. However, with the above-discussed mitigation measures for hazardous materials and water quality in place, the likelihood of increased contamination and associated health risks to environmental justice communities reliant on subsistence fishing in San Pablo Bay would be less than significant during the construction and operation phases.

DFG and USFWS circulated the Draft EIR/EIS for review from August 28, 2009 through October 13, 2009. A public meeting to solicit comments on the draft document was held on September 22, 2009. Issues raised during the public review period included the following: public access; private recreational hunting at the Black Point Sports Club; restarting the SMART rail line; methyl mercury effects; flooding of surrounding property; remediation of the contaminated soils; loss of farmland; and potential effects to endangered species such as California clapper rail. The Final EIR/S prepared by DFG and USFWS incorporates responses to all comments received on the Draft EIR/S.

Only one comment letter was received following the publishing a notice of availability for the Final EIR/S on April 20, 2012. The U.S. Environmental Protection Agency recommended that the ROD include a discussion of the regulatory status of the project and the status of consultation with the Army Corps of Engineers. A discussion of the regulatory status of the project is included in the ROD.

Conservancy staff has independently reviewed the Final EIR/S and recommends that the Conservancy, as a responsible agency, find that there is no substantial evidence that the project, as mitigated, may have a significant effect on the environment. Staff will file a Notice of Determination upon approval of the project.