

COASTAL CONSERVANCY

Staff Recommendation
October 21, 2010

**SONOMA BAYLANDS WETLANDS
RESTORATION DEMONSTRATION
PROJECT MONITORING**

File No. 88-024-01
Project Manager: Tom Gandesbery

RECOMMENDED ACTION: Authorization to disburse up to \$450,000 to the U.S. Army Corps of Engineers for the Coastal Conservancy's share of post-construction monitoring costs of the Sonoma Baylands Wetlands Restoration Demonstration Project pursuant to the 1994 Project Cooperation Agreement.

LOCATION: Sonoma County, near the mouth of the Petaluma River

PROGRAM CATEGORY: San Francisco Bay Area Conservancy

EXHIBITS

Exhibit 1: [Project Location Map](#)

Exhibit 2: [Site Map](#)

Exhibit 3: [Funding Request Letter and Expense History \(April 22, 2010\)](#)

Exhibit 4: [1994 Project Cooperation Agreement \(PCA\) and Amendment](#)

Exhibit 5: [Project Monitoring Plan](#)

RESOLUTION AND FINDINGS:

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

1. The State Coastal Conservancy hereby authorizes disbursement of up to four hundred fifty thousand dollars (\$450,000) to the U.S. Army Corps of Engineers for the Conservancy's share of post-construction monitoring costs pursuant to the Project Cooperation Agreement for the Sonoma Baylands Wetlands Restoration Demonstration Project.

Staff further recommends that the Conservancy adopt the following findings:

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

3. The Project is consistent with the purposes and criteria set forth in Chapter 4.5 (Sections 31160-31165) of Division 21 of the Public Resources Code regarding the enhancement of natural resources of the San Francisco Bay Area; and,
4. The Project is consistent with the Selection Criteria and Guidelines last updated on June 4, 2009.”

PROJECT SUMMARY:

Summary: In 1994, the State Coastal Conservancy entered into a cost-sharing agreement with the U.S. Army Corps of Engineers (“Corps”) for the construction, post-construction monitoring and any necessary remediation, of the 322-acre Sonoma Baylands Wetlands Restoration Demonstration Project (“Project”). Under the agreement, the Conservancy’s share of total project costs is 25%. The Project has been constructed and is in the post-construction monitoring phase. The Corps is currently conducting monitoring in accordance with an approved monitoring plan as described in greater detail below. On April 22, 2010 the Corps requested that the Conservancy provide \$450,000 as its 25% share of monitoring costs (Exhibit 3). Of this total amount, \$222,934 represents the Conservancy’s share of monitoring costs incurred by the Corps from 1999 through 2010, and \$225,000 represents the Conservancy’s share of monitoring costs that the Corps predicts it will incur from the present through 2015.

The Project involves the placement of large volumes of dredged sediment from the Corps’s deepening of the Port of Oakland to minus 42 feet and so this Project involves the Corps, the Port of Oakland serving as the non-federal sponsor of the harbor dredging and the Conservancy serving as the non-federal sponsor of the restoration of wetlands.

The property for the Project was initially acquired by the Sonoma Land Trust (“SLT”) for the purposes of wetland restoration and open space preservation, and was funded, in part, by a grant from the Conservancy. Subsequently, SLT carried out restoration planning and design, working closely with the Conservancy and the Corps. The construction of the Sonoma Baylands Wetland Restoration Demonstration Project was authorized by Congress in the Water Resources Development Act of 1992, and the Conservancy became the non-federal sponsor of the project, which required that it share the costs of construction and monitoring and that it furnish the site to the Corps. Therefore title to the subject property was transferred to the Conservancy in 1994. Responsibilities of the Corps and Conservancy are described in the Project Cooperation Agreement (“PCA”) that was signed on May 2, 1994 (Exhibit 4) and stipulates that monitoring will remain an obligation of the Corps and Conservancy until success criteria are met. The Corps began site construction in 1990 and completed construction in 1995.

The Corps conducts monitoring and publishes the monitoring results in accordance with a monitoring plan that was approved by the San Francisco Bay Conservation and Development Commission (“BCDC”), the Regional Water Quality Control Board (“RWQCB”), and the National

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Marine Fisheries Service (“NMFS”) when the Project was permitted (Exhibit 5). The monitoring plan laid out the following purposes:

1) determine whether the objectives of the project have been achieved by evaluating the restoration of wetland habitat within the project site in comparison to the biological success criteria established by this plan; 2) determine whether physical remediation measures are required to achieve the primary objective of the project by comparing the physical development and characteristics of the project to the physical success criteria established by this plan; 3) determine whether water quality conditions in the pilot unit are detrimental to winter-run Chinook salmon and indicate that remediation of the pilot unit and modification of the restoration plan for the main unit are required to avoid impacts on the species; and 4) document the development of the physical and biological characteristics of the restored tidal wetland system to provide information for use in the design of future restoration projects.

According to Corps records, it has spent \$2,124,875 on monitoring between 1999 and 2010 (Exhibit 3). The Conservancy is required under the PCA to provide 25% of these costs on an annual basis. The Conservancy has contributed over \$308,000 toward monitoring since 1999; however, the Corps did not provide the Conservancy with annual requests for its cost share until more recently and the Conservancy owes the Corps an additional \$222,934 for the monitoring that has taken place thus far (Exhibit 3). In light of the Conservancy’s obligation under the PCA to pay 25% of Project costs, staff recommends that the Conservancy authorize the payment of its share of post-construction monitoring costs for 1999-2010. Staff also recommends the additional authorization of up to \$225,000 to cover the next five years of monitoring. Monitoring pursuant to the monitoring plan will be discontinued if all of the success criteria are met prior to the maximum periods specified in the individual success criteria, which are up to 20 years. Monitoring may also be discontinued after 20 years if the Corps, Conservancy, and agencies that approved the monitoring plan (BCDC, RWQCB, and NMFS) agree that monitoring is no longer required. The twentieth year of monitoring will be 2016. If not all of the success criteria are met by 2016, the Conservancy and Corps will consult with the regulatory agencies about whether to undertake remediation measures to change site conditions in a way that might ensure that success criteria are met. To date, the site has been evolving toward a condition that will meet the criteria.

Conservancy staff is also recommending, in a separate staff recommendation, to transfer fee title of the Project site to the U.S. Fish and Wildlife Service (USFWS) for inclusion in San Pablo Bay National Wildlife Refuge.

Site Description: The Project is a 322-acre restored tidal wetlands (see Exhibit 2). The property includes 11,000 feet of flood control levee, atop which is a one-lane service road that also functions as a 2.5 mile segment of the San Francisco Bay Trail. The Northwestern Pacific Railroad (now under the ownership of the Sonoma-Marin Area Rapid Transit Project) right-of-way is situated north of the site, with primary site access crossing the railroad right-of-way at the western end of the property (Exhibit 2). In the future, the public may also be able to access the site at the eastern end of the property, from Reclamation Road on the east, contingent upon

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improvements made by USFWS and Sonoma Land Trust to the Sears Point property (see Exhibit 2).

The Project consists of two hydraulically distinct units, the “pilot” unit, approximately 29 acres in size, and the “main” unit, 260 acres in size (Exhibit 2). Both units receive tidal waters on a daily basis, though initially the pilot unit evolved salt marsh features more rapidly than the main unit. Tidal channel geometry and biological parameters are monitored by the Corps on an annual basis. The Corps has been monitoring the success of the restoration of the Project pursuant to a monitoring plan (Exhibit 5) since completion of construction. Monitoring includes physical measurement of channels (fixed cross sections), fish and bird species richness and abundance, and vegetation coverage and type.

Project History: The Sonoma Baylands site was first acquired by the Sonoma Land Trust (SLT) as part of a larger property acquisition for the general purpose of wetland restoration in 1989. Because the 830-acre property was bisected by the Northwestern Pacific Railroad right-of-way, two distinct restoration efforts were undertaken. The southern portion was set aside and ultimately deeded to the Conservancy for restoration of tidal wetlands. This 322-acre site is referred to as the Sonoma Baylands. The northern portions, referred to as Leonard Ranch and North Parcel, were retained by SLT for preservation of seasonal wetlands and agricultural use.

The Project was constructed by the Corps starting in 1991 and ending in 1995 with the Conservancy serving as non-federal sponsor. The site is a former bay marshland that was cut off from the bay in the late nineteenth century with a dike and used for farming oat hay and possibly other crops. Over the course of time, the land surfaces subsided four to five feet below sea level. Therefore, restoration of wetlands on the site involved filling the site by importing dredged sediment to accelerate marsh formation.

The wetlands were re-constructed using dredged sediment from the Minus 42-foot Deepening Project at the Port of Oakland and from the adjacent Petaluma River entrance channel. The material was placed on the site in slurry form, to recreate the marsh substrate, after levees and berms were constructed. Construction, including levee construction and site grading was completed in 1995. As expected, the site is functioning well with vegetation growing in from the shoreline, and the Corps’ monitoring has revealed that the site benefits a wide variety of bird and fish species. Monitoring is carried out by the Corps in accordance with the project monitoring plan (Exhibit 5) and the results are furnished to the Conservancy and regulatory agencies pursuant to project permits and approvals.

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PROJECT FINANCING:

Past Monitoring Expenses (1999-2010)

Conservancy (already provided):	\$308,284
Conservancy (this authorization):	\$222,934
<u>Corps of Engineers:</u>	<u>\$1,593,657</u>
TOTAL:	\$2,124,875

Estimated Future Monitoring Expenditures (2011-2016):

Conservancy:	\$225,000
<u>Corps of Engineers:</u>	<u>\$675,000</u>
TOTAL:	\$900,000

Staff anticipates using the fiscal year 08/09 appropriation to the Conservancy from the “Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006” (Proposition 84, Public Resources Code section 75001, et seq.). These funds are available for all the purposes of the San Francisco Bay Area Conservancy Program that provide for protection and restoration the natural habitat values of coastal lands and waters. Public Resources Code section 75060(c). Proposition 84 defines the term “restoration” to include the “monitoring and reporting necessary to ensure successful implementation of the project objectives.” Thus the post-construction monitoring of the Project to ensure successful restoration is an appropriate use of these funds. In addition, the proposed project is a priority for Proposition 84 funding under Public Resources Code section 75071(e) due to the significant non-state matching contribution: the funds are matched at a 1:3 ratio with federal funds.

Annual monitoring costs for federal fiscal years 1999-2010 are summarized in a letter from the Corps of Engineers, dated April 22, 2010 (Exhibit 3). Future annual costs are based on an average of past expenses. However future costs are expected to decrease due to reduced data collection. The terms of how the costs of monitoring are shared between the Corps and Conservancy are described in Article IV of the PCA, dated May 6, 1994 (Exhibit 4).

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CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

Providing funding to monitor the Sonoma Baylands Wetlands Restoration Demonstration Project is consistent with Chapter 4.5 of Division 21, Sections 31160-31163 of the Public Resources Code, which directs the Conservancy to address resource goals in the San Francisco Bay Area.

Under Section 31162(b), the Conservancy may undertake projects and award grants that “protect, restore, and enhance natural habitats and connecting corridors, watersheds, scenic areas, and other open-space resources of regional importance.” Monitoring the Project is necessary to ensure the success of a project that “restores tidal wetlands and enhances natural habitats, connecting corridors and scenic areas”. In addition, the area surrounding the Project is an open space area of regional importance due to its location on the perimeter of San Pablo Bay.

Section 31163(c) directs the Conservancy to “utilize the criteria specified in this subdivision to develop project priorities for the San Francisco Bay Conservancy Program that provide for ...open-space . . . projects.” Monitoring the Project satisfies each of the five criteria for determining project priority in the following respects: (1) the project is consistent with the San Francisco Bay Plan, the 1999 Baylands Ecosystem Habitat Goals and the Circulation Element of the County of Sonoma’s General Plan (2) the project serves a regional constituency because it is situated between at least three major population centers: Northeastern Marin County / Novato, Sonoma Valley, and the Vallejo / American Canyon Area and serves the residents of these cities as well as residents of other cities in the Bay Area; (3) the project will be implemented in a timely manner as it is already ongoing; (4) the project provides the opportunity to obtain valuable monitoring data about the Project that will be lost if not implemented immediately; and, (5) Conservancy’s funding is leveraged at a 25:75 ratio against matching funds from the Corps.

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

Monitoring of the Project is consistent with **Objective 10C** in that it will assist the Conservancy to restore tidal wetlands and sub-tidal habitats and upland areas through post-construction monitoring to ensure achievement of restoration goals.

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

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines adopted June 4, 2009, 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 enjoys wide support from the public. The Board's original project authorization of 1988 as well as the 1996 and 2003 authorizations included support letters from several entities.
4. **Location:** The Project is located in Sonoma County, near the mouth of the Petaluma River, and immediately adjacent to Port Sonoma Marina (Exhibit 1 and 2).
5. **Need:** Monitoring the Project is required by the PCA and by Project permits.
6. **Greater-than-local interest:** Sonoma Baylands is a major restoration project that has received national and international attention. The restored wetlands are of interest to restoration practitioners, scientists, birdwatchers, naturalists, and the general public. The monitoring results are of interest to scientists that are studying restored wetland areas and may inform the development of similar restoration projects that use dredged material such as the Conservancy's current restoration project at the former Hamilton Army Airfield and Bel Marin Keys Unit V.
7. **Sea level rise vulnerability:** The Project is a restored tidal marsh and it is widely acknowledged that such marshes buffer wave action adding an additional measure of flood protection to inland regions. It is assumed that the tidal wetlands will adjust and respond to changing sea level, though the ability of the marsh to grow vertically is dependent on the supply of suspended sediment in San Pablo Bay and the rate of sea level rise. The Project is located in a region of the San Francisco Bay-Delta that historically has had the highest levels of suspended sediment.

Additional Criteria

8. **Urgency:** The Corps requires the Conservancy's share of funding in order to award a contract for monitoring in 2011.
9. **Leverage:** See the "Project Financing" section above. Costs are shared 25% non-federal and 75% federal.
10. **Realization of prior Conservancy goals:** See the "Project History" section above.
11. **Return to Conservancy:** See the "Project Financing" section above.

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CONSISTENCY WITH SAN FRANCISCO BAY PLAN:

The subject property is located on San Pablo Bay adjacent to the Petaluma River and is therefore within the jurisdiction of BCDC. Pursuant to the Coastal Zone Management Act, 16 USC section 1456(c), BCDC reviewed the Project for consistency with the San Francisco Bay Plan. As a condition of its determination of consistency, BCDC required that the Corps monitor the Project following construction to ensure success, in accordance with the Monitoring Plan (Exhibit 5).

COMPLIANCE WITH CEQA: The Conservancy adopted a Negative Declaration for the Project, including post-construction monitoring in 1991. The expenditure of \$450,000 for post-construction monitoring allows implementation of the approved Project to continue and satisfies the Conservancy's obligations under the existing PCA. In addition, the proposed monitoring is exempt from CEQA, pursuant to California Code of Regulations title 14, section 15306, which exempts basic data collection, research and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource.