

COASTAL CONSERVANCY

Staff Recommendation

August 2, 2012

**PHASE II  
BAHIA MARSH RESTORATION**

File No. 08-112-02

Project Manager: Tom Gandesbery

**RECOMMENDED ACTION:** Authorization to disburse up to \$200,000 to the Marin Audubon Society to complete the restoration of tidal wetlands located at the Bahia Lagoon, Marin County.

**LOCATION:** City of Novato, Marin County

**PROGRAM CATEGORY:** San Francisco Bay Area Conservancy

---

**EXHIBITS**

Exhibit 1: [Project Location](#)

Exhibit 2: [Project Map](#)

Exhibit 3: [November 6, 2008 Staff Recommendation \(Phase I\)](#)

Exhibit 4: [Mitigation Monitoring and Reporting Plan from Environmental Impact 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 up to \$200,000 (two hundred thousand dollars) to Marin Audubon Society to complete the restoration of seasonal and tidal wetlands located at the Bahia Lagoon, Marin County, subject to the following conditions:

1. Prior to disbursement of any funds under this authorization Marin Audubon Society shall submit the following for the review and written approval of the Executive Officer of the Conservancy:
  - a. A detailed work plan for the project components, including a final budget and schedule.
  - b. The names and qualifications of any contractors to be retained to carry out the project components.

2. All project work shall be undertaken in compliance with the requirements of all permits and approvals and Marin Audubon Society shall assure implementation of the Mitigation Monitoring and Reporting Program for the project (attached to the accompanying staff recommendation as Exhibit 4).”

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 Project Selection Criteria and Guidelines, last updated by the Conservancy on November 10, 2011.
2. The proposed authorization is consistent with the purposes and objectives of Chapter 4.5 (Sections 31160-31165) of Division 21 of the Public Resources Code regarding the enhancement and restoration of wetlands in the San Francisco Bay Area.
3. Marin Audubon Society is a nonprofit organization existing under Section 501(c)(3) of the U.S. Internal Revenue Code, and whose purposes are consistent with Division 21 of the Public Resources Code.”

---

### **PROJECT SUMMARY:**

Staff requests the Conservancy authorize the disbursement of up to \$200,000 to Marin Audubon Society to complete Phase II of the seasonal and tidal wetlands restoration of Bahia Lagoon, located in northern Marin County (See Exhibit 2). These funds will help complete the restoration of the project area.

A *first phase* of the Bahia Marsh Restoration project (Phase I) was carried out by Marin Audubon Society (MAS) and was completed in 2009. The project consisted of earth moving and other construction activities designed to restore maximum tidal marsh and transitional habitat on over 400 acres of former bay lands at the Bahia Marsh Restoration site, on the Petaluma River in Marin County (Exhibits 1 and 2). The restoration was accomplished largely by lowering and breaching levees and removing soil fill from the site, which was a diked, historic bayland, under funding supplied by the State Wildlife Conservation Board (WCB), Cal-Fed, North American Waterfowl Association and several other non-profit organizations. (See Exhibit 3). After acquisition of the entire Bahia Property in 2002, MAS transferred the upland portion to the Marin County Open Space District and the tidal wetland areas and transitional areas to the California Department of Fish and Game (CDFG). MAS then continued its involvement with the Bahia wetlands by carrying out the Phase I restoration project, with the concurrence and cooperation of CDFG. Recently MAS requested that the Conservancy assist in funding work to complete the second phase (Phase II) of the restoration project.

The planning documents and permits for the Bahia Wetlands Restoration Project detail a phased approach to construction. The restoration has been carried out on different areas of the site,

referred to as West and East Bahia (Exhibit 2). Phase I was intended to restore the East Bahia Peninsula and the Central Bahia. Phase II includes restoration of the West Bahia Baylands. This phased approach was necessary in order to control tidal action in the first few years after breach. Project engineers were concerned that immediate breaching would create a significant tidal prism that would dampen tides in Black John Slough and potentially limit drainage from Rush Creek and Cemetery Marsh upstream of the site. Therefore, the restoration plan included implementation of Phase II within three to five years following Phase I. Visual observations and surveys indicate that Black John Slough and internal channels have scoured sufficiently to allow for implementation of Phase II.

In the project plan and permits, Phase II includes removal of water control structures, levee lowering, and five levee breaches. However, since implementation of Phase I, two of the five planned levee breaches occurred due to natural degradation of a levee. MAS now proposes that the West Bahia levee be breached in two locations (Exhibit 2). The north water control structure (which allows water to flow in both directions) is in good repair and so the Department of Fish and Game has requested that it be preserved as the third connection to outer waters. The Main Levee Breach (WB2 in planning documents) is at the historic channel that connected West Bahia to Black John Slough. The remnant historic channel network that connects to this location provides a complex slough channel morphology which will provide critical habitat that is important to the ecologic success of the West Bahia Baylands. The Small Levee Breach (WB3 in planning documents) will provide drainage to large isolated open water areas in the western portion of West Bahia.

MAS has been involved in preserving and restoring wetlands since 1985. During the last 23 years MAS has implemented 20 projects and restored or enhanced close to 1,000 acres of marsh. In 2003, the Coastal Conservancy granted \$5.75 million to MAS for the acquisition of the larger Bahia Property. MAS is a 501(c)(3) tax exempt nonprofit organization.

**Site Description:** See November 6, 2008 Conservancy staff recommendation (Exhibit 3).

**Project History:** See November 6, 2008 Conservancy staff recommendation (Exhibit 3).

**PROJECT FINANCING:**

Coastal Conservancy	\$200,000
<b>Total Project Cost</b>	<b>\$200,000</b>

The Conservancy's contribution of up to \$200,000 is anticipated to come from an 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 consistent with the Conservancy's enabling legislation, Division 21 of the Public Resources Code. (Public Res. Code § 75074). The proposed project protects coastal waters and restores natural habitat values

by restoring tidal wetlands and shallow water ponds that will provide habitat for numerous species as well as improve water quality. As discussed below, the project is consistent with Chapter 4.5 of Division 21.

Consistent with Proposition 84 requirements, the mitigation and monitoring plan will provide the monitoring and reporting necessary to ensure successful implementation of the project objectives. (See Public Resources Code § 75005(n)).

Another requirement of Proposition 84 involving projects that restore natural resources is that the Conservancy give priority to projects that meet one or more of the criteria specified in § 75071 of the Code. The proposed restoration project satisfies the following specified criteria: (a) *Landscape/Habitat Linkages*—the project will facilitate wildlife movement, botanical transfer, and sustain large acreage of habitat over time in San Pablo Bay. The project creates wildlife movement corridors various habitats for bird and fish species as detailed in the November 6, 2008 staff recommendation (Exhibit 3). In addition, the project will satisfy criteria (b) *Watershed Protection*—the project will contribute to long-term protection of, and improvement to the water and biological quality of San Francisco Bay.

MAS will contribute in-kind work toward monitoring the success of the restoration, through its membership. It is anticipated that MAS volunteers will spend between 400 and 600 hours per year monitoring bird usage and other indicators of wetland health.

#### **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, which directs the Conservancy to address the resource and recreational needs of the San Francisco Bay Area in a coordinated, comprehensive, and effective way. The proposed authorization would further the restoration efforts initiated by MAS. Under § 31162, the Conservancy may undertake projects that will help to achieve specified goals for the San Francisco Bay Area Conservancy Program. Consistent with § 31162(b), the project will help to protect, restore, and enhance natural habitats and connecting corridors, watersheds, scenic areas, and other open-space resources of regional importance as the project will result in enhancement of nearly 400 acres of tidal wetlands.

Section 31163(c) further directs the Conservancy to participate in and support interagency actions and public/private partnerships in the San Francisco Bay area for these purposes. Consistent with §31163(c), the project is: 1) supported by the County's General Plan and the *San Francisco Baylands Ecosystem Habitat Goals Report* (1999);<sup>1</sup> (2) serves a regional constituency of visitors from throughout the Bay Area who have unfettered access to the margins of the wetland via regional trails maintained by the Marin County Parks and Open Space District; (3) will assist in the timely implementation of the restoration project; and (4) will provide benefits that could be lost if the project is not quickly implemented in that the hydrology of the site is constrained and will not return maximum habitat benefits without this project; and 5) includes matching funds in that MAS will provide project management and wildlife monitoring in-kind.

---

<sup>1</sup> San Francisco Bay Area Wetlands Ecosystem Goals Project. U.S. Environmental Protection Agency, San Francisco, Calif./S.F. Bay Regional Water Quality Control Board, Oakland, Calif.

**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 26 acres of transitional/upland habitat and seasonal wetlands as part of a larger restoration project to enhance hydrologic and biotic functions to over 400 acres of wetlands.

**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 broad public support. The acquisition of Bahia was strongly supported by the citizens of Novato as evidenced by a successful referendum placed on the ballot that denied the previous owner the rights to develop the hillside lands. The referendum was approved by a more than 65% majority of the citizens of Novato thereby defeating a massive housing development that had been approved by the City. In addition, almost \$1 million was contributed by individual members of the public toward the purchase of Bahia.
4. **Location:** Bahia Marsh lies in the nine-county San Francisco Bay Area, consistent with Section 31162 of the Public Resources Code.
5. **Need:** If Conservancy funding is not approved, the interior areas of the wetland will receive only limited exchange of water with the slough. The proposed breaches will allow better tidal flushing of the site, which will improve water quality and wildlife habitat. No other source of funding for this work is available.
6. **Greater-than-local interest:** The project has greater than local interest because it will significantly expand tidal marsh habitat for federally-listed endangered California Clapper Rail and Salt Marsh Harvest Mouse habitat, four state-listed special status species, and many other migratory and resident species. In addition, it will restore terrestrial ecotone between tidal marsh and Blue Oak wooded hills, a natural feature that is not known to exist anywhere else in California.
7. **Sea level rise vulnerability:** Due to their location, tidal wetland restoration projects can be vulnerable to sea-level rise impacts. Recent research suggests, however, that the earlier tidal flows can be re-introduced, the sooner a property can return to tidal elevations and the

more likely it will be able to remain resilient to future sea level rise. In addition, the site allows opportunities for future migration of wetlands inland as sea level rises.

### **Additional Criteria**

8. **Resolution of more than one issue:** The proposed project provides a remedy for a water quality problem that arose out of poor circulation (odor complaints in fall of 2007), as well as enhancing circulation in other parts of the wetland. In addition to ecological benefits, the project will provide designated public access trails leading from several public roadways.
9. **Leverage:** See the “Project Financing” section above.
10. **Readiness:** MAS is finished with site work and funding is needed to complete the project before the wet season and the beginning of the Clapper Rail breeding season.
11. **Realization of Conservancy Goals:** See “Project History” section above. This project will restore wetland habitat to lands that were purchased by MAS in 2003 and co-funded by the Conservancy.
12. **Minimization of Greenhouse Gas Emissions:** Due to the small scale of the project (two to three days work), the project will most likely use conventional diesel-driven construction equipment and so mitigation for diesel emissions will not be feasible. However, this project will convert fresh and brackish wetlands to tidal wetlands, which will more effectively sequester carbon, so it is likely that this project will result in a net reduction of GHG emissions over the life of the project.<sup>2</sup>

### **CONSISTENCY WITH SAN FRANCISCO BAY PLAN:**

The proposed project is consistent with the applicable policies contained in Part of the San Francisco Bay Plan, adopted by BCDC in October 2011, and the policies of BCDC in that existing wetlands will be managed for fish and wildlife benefit, no fill will be placed in the wetlands and the restoration project has been well planned and designed. Specifically, MAS will maintain and enhance habitats in a historic bayland, consistent with Policy 6 of the Bay Plan. BCDC issued a permit for this project on December 13, 2007.

---

<sup>2</sup> According to Trulio et. al. (2007) “restoring tidal salt marshes is one of the most effective measures for sequestering carbon.” L. Trulio, et al., “White Paper on Carbon Sequestration and Tidal Salt Marsh Restoration” (Dec. 20, 2007), available at [http://www.sfbayjv.org/global\\_warming/trulioCrookscallaway.pdf](http://www.sfbayjv.org/global_warming/trulioCrookscallaway.pdf) (last visited on July 23, 2012).

**COMPLIANCE WITH CEQA:**

In 2008, as a responsible agency, the Conservancy adopted the Environmental Impact Report (EIR) for the entire project, including this component of the project, . The EIR describes the project's potential for significant impacts and offers mitigation to reduce the potential impacts to a level of insignificance as described in the EIR. A Mitigation Monitoring and Reporting Program (MMRP) was completed by the Department of Fish and Game and compliance with the MMRP was a condition of funding in the Phase I grant. (Exhibit 3 & 4).

This proposed authorization only provides additional funding for the project already evaluated in the EIR adopted by the Conservancy in its November 6, 2008 authorization.