

# COASTAL CONSERVANCY

Staff Recommendation  
June 20, 2013

## MCINNIS MARSH RESTORATION

Project No. 13-022-01  
Project Manager: Tom Gandesbery

**RECOMMENDED ACTION:** Authorization to disburse up to \$90,000 to Marin County to conduct a feasibility study for the restoration of lower Miller Creek and the surrounding McInnis Marsh.

**LOCATION:** San Rafael, Marin County

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

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### EXHIBITS

- Exhibit 1: [Area Map](#)
  - Exhibit 2: [Site Maps](#)
  - Exhibit 3: [Project Letters](#)
  - Exhibit 4: [Memorandum of Understanding](#)
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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 authorizes disbursement of an amount not to exceed ninety thousand dollars (\$90,000) to the County of Marin to conduct a feasibility study of restoration of lower Miller Creek and McInnis Marsh along the shore of San Pablo Bay, City of San Rafael, Marin County, subject to the condition that no Conservancy funds shall be disbursed until the Executive Officer of the Conservancy has approved in writing:

- a. A final work plan, including a budget and schedule, and
- b. The name and qualifications of any contractors that the County of Marin retains to carry out the project.

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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 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 San Francisco Bay Area Conservancy Program.
2. The proposed project is consistent with the current Project Selection Criteria and Guidelines.

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### **PROJECT SUMMARY:**

The proposed project consists of a study of the feasibility of restoring the hydraulic and ecological functions of the lower (bay-shore) extent of Miller Creek (Exhibit 1, 2) and the surrounding McInnis Marsh. The study will examine the feasibility of restoration activities that would be carried out on land owned by Marin County and Las Gallinas Valley Sanitary District (“LGVSD”). The purpose of the study is to determine how best to restore ecosystem functions while maintaining sanitary treatment facilities and improving flood protection (see Exhibit 2). The project will examine the feasibility of creating or restoring a hydraulic connection between Miller Creek and Gallinas Creek over an area that includes nearly 500 acres of tidal wetlands and 1,500 feet of creek.

Ultimately, Marin County (“County”) hopes to improve ecological conditions and functions in both creeks, restore historic tidal marsh and possibly provide for improvements to flood protection and small boat navigation. The proposed study is a necessary step toward achieving that goal. Based on the results of the study, the County intends to prepare a plan to:

- Re-establish creek transition zone to respond to sea-level rise,
- Increase creek/bay connectivity to support salmonid rearing and migration,
- Maximize available transitional estuarine habitats,
- Provide opportunities for public trails,
- Improve tidal prism in Gallinas Creek, and
- Improve flood and sediment conveyance efficiencies for Miller Creek.

The feasibility study will entail the following activities:

Analysis of Site Conditions, including: an assessment of historical and current physical conditions and biological resources of the project area, including hydrology, geomorphology, hydrogeology, riparian and wetland vegetation, and wildlife and ecological resources. The information gathered will serve as the foundation for design concepts and for habitat specific biological/physical mapping and engineering design.

Identification of Opportunities and Constraints, including: identification of planning, land-use and infrastructure constraints such as storm drains, roads, culverts, and utility lines and easements associated with flood control requirements, recreational access, cultural resources, operating requirements of adjacent land owners, and potential construction access routes into the restoration site. This component of the study will also entail inspection of adjoining properties, in particular, to

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identify areas that could provide unwanted offsite hydraulic connections and/or impacts to water quality.

Development of Habitat Objectives and Restoration Design Criteria including: defining biological and hydrologic design criteria for the habitat characteristics that are necessary to support target species. The goal will be to develop hydrologic design criteria that will maximize benefits for each target habitat (e.g., water depth, duration of inundation, water quality limits, flow or velocity limits, depth to groundwater, channel morphology, frequency of disturbance, etc.). Also the design criteria will include general design criteria for public access features (e.g. preferred locations of trails) and cultural/infrastructure constraints (e.g. protection measures for buried pipelines).

Development of Restoration Design Alternatives including: development of restoration alternatives (or a single preferred alternative) that maximize benefits to target habitats, and are consistent with the hydrologic and geomorphic processes that will shape and maintain creek, and wetland and beach habitats. Restoration alternatives will include a concise description of each design, conceptual sketches, and supporting tables and figures (cross-sections, longitudinal profiles) that constitute a 30% complete design.

The study will be carried out by the County's Department of Parks ("Parks"), which is well qualified to carry out this project. Parks has administered numerous grants for environmental purposes and manages the adjacent McInnis County Park, Golf Course and Driving Range. Parks has agreed to work in partnership with the Marin County Flood Control and Water Conservation District ("Flood Control District") as well as the LGVSD, which owns land through which Miller creek flows. Parks consists of two divisions: the Parks and Landscape Division and the Open Space District (MCOSSD). The two divisions jointly manage over 19,000 acres of parks and open space areas throughout Marin County. The County will act as lead agency for this project and will seek funds for its completion. Funding for future phases of the project could come from U.S Fish and Wildlife Service grants, Department of Water Resources Integrated Regional Water Management Program (IRWMP) and from the County's own funding stream; specifically the recently approved quarter cent sales tax increase passed by voters in November of 2012 to support parks, open space and farmland.

**Site Description:** The project site is located east of Highway 101, between the railroad alignment owned by the Sonoma-Marin Area Rapid Transit (SMART) and San Pablo Bay. To the north of the District lands are the Hamilton Wetlands. To the south is the historic marsh of China Camp State Park (Exhibit 1 and 2). This wetland complex spans the bayland margin between Miller Creek and the Gallinas Creek.

Miller Creek historically terminated in a brackish shoreline marsh, likely without a persistent single channel (Exhibit 2). The Miller Creek delta delivered water and sediment over a broad swath of transitional bay margin including seasonal and tidal wetland. Historically, the primary drainage for Miller Creek was the north fork of lower Gallinas Creek; however, this hydraulic connection was lost in the late 1800s and early 1900s when these marshes were diked and drained for agriculture. The County purchased the McInnis Marsh area for park use in 1972. The south eastern portions of the diked tideland were used for disposal of dredged material. In the late 1990s, the U.S. Army Corps of Engineers initiated a study to restore wetland habitat at McInnis Park. However, the Corps never completed the feasibility study.

A result of agricultural use was that lower Miller Creek was severely channelized, resulting in many negative ecological impacts to the entire Creek. Sediment yield from the Miller Creek

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watershed is high due to both natural watershed processes and ongoing channel erosion in the upper watershed. The site elevations are as much as 3.5 feet below mean sea level, and are predominantly seasonal wetland pond and mudflat supporting large populations of resident and migratory shore birds. Wetland plant communities (salt grass, pickle weed etc.) dominate vegetated flats within the parcel. A narrow band of transitional and upland communities are found on perimeter levees and a few rectangular channels 5-10 feet in width have been excavated within the parcel. The result is that tidal exchange between the parcel and the north fork of Gallinas Creek is muted.

Tidal marsh outboard of the southern levee are considered valued habitat for the California clapper rail and the salt marsh harvest mouse. Parks maintains a pedestrian and bicycle trail on the southern levee that connects to levee trails on the adjacent state parcels to the east. On the northern side of the parcel, the levee borders Miller Creek, which travels a man-made alignment to San Pablo Bay. Las Gallinas Valley Sanitary District facilities occupy the parcels to the north (Exhibit 2).

**Project History:** Miller and Gallinas Creeks have been the focus of restoration studies and projects by various public and private entities, most of which have focused on the upper reaches of the two creeks (upstream of the proposed project but in the same watershed). In the 1990s, the Conservancy granted funds to Marin Audubon for planning and implementation of enhancement of a 2.5-acre marsh along the middle portion of Gallinas Creek, which is also upstream of the proposed project. There have been no studies or enhancement projects carried out on the lower portion of Miller Creek. North of Miller Creek is located the former Hamilton Army Airfield where the Conservancy has partnered with the U.S. Army Corps of Engineers to restore over 750 acres of tidal and seasonal wetland

**PROJECT FINANCING**

<b>Coastal Conservancy</b>	\$90,000
Marin County and LGVSD	\$52,000
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<b>Project Total</b>	<b>\$142,000</b>

The Conservancy’s contribution of up to \$90,000 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), Public Resources Code section 75001 et seq. Proposition 84 authorizes the use of these funds for San Francisco Bay Area Conservancy Program projects that protect coastal waters and watersheds, including projects that protect and restore the natural habitat values of coastal waters and lands. Public Res. Code § 75060(c). The proposed project will facilitate restoration of natural habitat values by studying how best to restore a creek and marsh along San Pablo Bay. Restoration of the creek and surrounding marsh will provide habitat for numerous species as well as improve water quality. As discussed below, the proposed project is consistent with Chapter 4.5 of Division 21.

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 project satisfies the following specified criteria: (a)

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*Landscape/Habitat Linkages*—the project will lead to restoration that will facilitate fish wildlife movement, botanical transfer, and sustain large acreage of habitat over time in San Pablo Bay. 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.

Accordingly, the proposed project is an appropriate use of Proposition 84 funds.

The County of Marin, and its partner agency LGVSD, will contribute \$52,000 or 36.5% toward the total cost of the project.

### **CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:**

This project is consistent with 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 Marin County. Under § 31162, the Conservancy may award grants that will help to achieve specified goals for the San Francisco Bay Area Conservancy Program. Consistent with § 31162(b), the project will help achieve the goal of protecting, restoring, and enhancing natural habitats and connecting corridors as the project will generate the information critical to restoring Miller Creek and the surrounding McInnis Marsh, which restoration will result in enhancement of nearly 500 acres of tidal wetlands habitat and 1,500 feet of creek.

Consistent with §31163(c), the project : 1) is supported by the County's General Plan and the *San Francisco Baylands Ecosystem Habitat Goals Report* (1999), 2) serves a regional constituency because it will improve water quality and habitat of San Francisco Bay, 3) can be implemented in a timely way because Parks is ready to conduct the study,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 restoration, and 5) includes 36% of matching funds.

### **CONSISTENCY WITH CONSERVANCY'S 2013 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):**

Consistent with **Goal 11, Objective C** of the Conservancy's 2013 – 2018 Strategic Plan, the proposed project will help develop plans for enhancement of tidal wetlands, managed wetlands, and seasonal wetlands within an area that contains over 500 acres of wetlands and 1,500 linear feet of creek.

Consistent with **Goal 11, Objective E** of the Conservancy's 2013 – 2018 Strategic Plan, the proposed project will help develop plans for enhancement of riparian and riverine habitat or other watershed functions and processes for the benefit of wildlife and water quality by conducting the feasibility studies necessary to planning restoration of Miller Creek and its surrounding marsh.

### **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:

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### 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 is supported by Parks, the Flood Control District, and LGVSD because the project will lead to improvements in water quality, hydrologic function, and habitat resources in the area. The project is supported by District 1 Supervisor Susan Adams, the Gallinas Watershed Council, the Miller Creek Watershed Stewardship, Marin Audubon, and Marin Conservation League as well as Assemblyman Marc Levine.
4. **Location:** Miller Creek and McInnis Marsh lie in Marin County, one of the nine counties in the San Francisco Bay Area, consistent with Section 31162 of the Public Resources Code.
5. **Need:** The County has not budgeted funding to cover the entire cost of the project but can provide in-kind support and a 36% match in funding.
6. **Greater-than-local interest:** Much of the project site is within McInnis Park, a County-owned regional park that provides developed recreational opportunities and shoreline access. In addition, the San Francisco Bay Trail crosses the park. Approximately 80 percent of the park consists of diked bay lands, wetlands, and estuarine habitat.
7. **Sea level rise vulnerability:** The proposed study will address a range of sea level rise scenarios for the years 2050 and 2100 consistent with Executive Order S-13-08, in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. 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. **Urgency:** The County and LGVSD are addressing the long-standing need to restore a more natural condition to Miller Creek and McInnis Marsh, which should improve fish migration to the upper reaches of Miller Creek. Also the County was successful in adding this restoration project to the list of projects that will be included in the 2013 San Francisco Bay Area Integrated Regional Water Management Plan (a grant program of the Department of Water Resources). Accordingly, the County needs to conduct the feasibility study in order to be in a position to take advantage of the potential for funding design, planning and implementation of the restoration project.
9. **Resolution of more than one issue:** The project will explore ways to improve aquatic habitat, fish passage, flood management and public access along the alignment of lower Miller Creek and a portion of Gallinas Creek.
10. **Leverage:** See the "Project Financing" section above.
11. **Conflict resolution:** Improvement of hydrology in the lower reach of Miller Creek could improve sediment movement within the middle reaches where several landowners have been

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frustrated by periodic flooding from the creek. The project could result in a decrease in the need for land owners to conduct maintenance of the creek. In addition, the County has signed a memorandum of understanding with County Flood Control and LGVSD documenting the partnership involved with this effort (Exhibit 4).

13. **Readiness:** Parks is ready to start work as soon as funds become available from the Conservancy.
14. **Realization of prior Conservancy goals:** See “Project History” above.
15. **Return to Conservancy:** See “Project Financing” section above.
16. **Cooperation:** As mentioned above, the County has signed a memorandum of understanding with the Flood Control District and LGVSD documenting the partnership involved with this effort (Exhibit 4).

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

The proposed project is consistent with the applicable policies contained in Part III “Tidal Marshes and Tidal Flats” of the San Francisco Bay Plan, adopted by BCDC October 2011. In particular, the project is consistent with Policy 4, which provides that former tidal marshes and tidal flats that have been diked from the Bay should be restored to tidal action to replace lost historic wetlands, and Policy 6 which provides that restoration projects should be designed to take into account certain factors. By undertaking the proposed study, the project will lead to restoration of a creek and former tidal marsh in a manner that takes into account the specified factors in Policy 6.

### **COMPLIANCE WITH CEQA:**

The proposed project is statutorily and categorically exempt from the provisions of the California Environmental Quality Act (CEQA) under two sections of the CEQA Guidelines, 14 Cal. Code of Regulations §§15000, et seq. The proposed study is statutorily exempt pursuant to Section 15262 in that it will involve feasibility and planning analysis for possible future action that has not yet been adopted, approved or funded and it will include consideration of environmental factors. The proposed study is categorically exempt under §15306 to the extent that it involves basic data collection and resource evaluation activities. Staff will file a Notice of Exemption upon approval of the project.