

COASTAL CONSERVANCY

Staff Recommendation
November 10, 2011

**NORTHERN TRIBUTARIES TO UPPER ALAMEDA CREEK:
UPDATING STREAM MANAGEMENT MASTER PLAN**

Project No. 11-047-01
Project Manager: Melanie Denninger

RECOMMENDED ACTION: Authorization to disburse up to \$190,000 to Zone 7 Water Agency to update its Stream Management Master Plan (SMMP) for approximately 100 miles of stream corridors in its service area in the Alameda Creek watershed in eastern Alameda County, and to update environmental review of the SMMP.

LOCATION: Livermore and Amador Valleys in eastern Alameda County (Exhibits 1 and 2)

PROGRAM CATEGORY: San Francisco Bay Area Conservancy

EXHIBITS

- Exhibit 1: [Project Location](#)
- Exhibit 2: [Project Site Map](#)
- Exhibit 3: [Project Photographs](#)
- Exhibit 4: [Project Letters](#)

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 \$190,000 (one hundred ninety thousand dollars) to Zone 7 Water Agency (Zone 7) to update its Stream Management Master Plan (SMMP) for approximately 100 miles of stream corridors in its service area in the Alameda Creek watershed in eastern Alameda County and to update environmental review of the SMMP, subject to the condition that prior to disbursement of any Conservancy funds, Zone 7 shall submit for review and approval by the Executive Officer of the Conservancy (“the Executive Officer”):

1. A work program, budget and schedule for the project and
2. All contractors that Zone 7 intends to retain in connection with 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 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 San Francisco Bay Area Conservancy Program.”
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PROJECT SUMMARY:

Introduction

Staff recommends that the Conservancy provide up to \$190,000 (one hundred ninety thousand dollars) to Zone 7 Water Agency (Zone 7) for updating its Stream Management Master Plan (SMMP) for approximately 100 miles of stream corridors in its service area in the Alameda Creek watershed in eastern Alameda County (Exhibits 1 and 2) and for updating environmental review of the SMMP.

The updated SMMP will integrate engineering and design for restoration and enhancement of riparian, in-stream and freshwater wetland habitat that was extensively degraded in the late 1800s and early 1900s with flood management, groundwater recharge and water quality improvement measures. (See “Site Description” below for more discussion of conditions in the project area.) The project will also build upon work that the Conservancy has supported to restore the lower reaches of Alameda Creek, which is widely considered to offer the best opportunity in the Bay Area to restore stream habitat for recovery of the threatened steelhead.

Zone 7 is a special district with responsibility for providing flood protection, drinking water and agricultural water to the cities of Livermore, Pleasanton and Dublin and to unincorporated areas in eastern Alameda County. The SMMP is Zone 7’s plan for managing the streams in its jurisdiction, and it sets forth Zone 7’s goals and objectives for six resource areas affected by management of streams and drainage areas: flood protection and drainage; erosion and sedimentation; water supply; water quality; habitat and environment; and trails, recreation and public education.

While Zone 7’s existing SMMP made an ambitious attempt to address these water resource management issues, its board of directors has concluded that the SMMP needs extensive additional work to incorporate new hydrologic data, advancements in understanding stream geomorphology and ecological functions, and projections in light of climate change; adequately address elevated water temperature and excessive channel erosion affecting steelhead habitat; fully integrate the various water resource management objectives; re-evaluate the level of flood protection needed; take advantage of opportunities to restore and enhance riparian and other wetland habitat; and refine or revise the conceptual designs of the 45 enhancement projects proposed in the existing SMMP to ensure effectiveness and sustainability.

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Zone 7 has allocated over \$1.6 million for updating the SMMP engineering and environmental documents and has requested Conservancy funding assistance to address the biological aspects of the SMMP and environmental review updates and to fully integrated habitat enhancement measures with water management engineering. Once the updating of the SMMP and environmental review documents have been completed, Zone 7 will be in a position to fund construction of the resulting integrated designs for multi-purpose water management projects and to apply for matching funds from the Integrated Regional Water Management Program of the Department of Water Resources (DWR), the San Francisco Bay Estuary grant program administered by the U.S. Environmental Protection Agency (USEPA), and other sources.

Project Description

Conservancy funding will be used by Zone 7 to engage specialists such as ecologists, biologists and landscape architects to collaborate with its project manager and engineers to identify objectives and locations for stream and riparian habitat restoration and enhancement, compile information from existing studies, conduct additional field studies as needed, develop conceptual designs for integrating habitat enhancement with flood management and groundwater recharge, and conduct environmental review. Zone 7 will contribute an estimated \$1,625,975 to the project. Its staff will manage the project and do much of the water engineering in-house, at an estimated staff cost of \$851,538. Zone 7's engineering consultant costs are estimated at \$774,437. Zone 7 staff and its team of consultants will work together to ensure that the plan meets the needs of local agencies and landowners as well as the requirements of future implementation funders and to propose implementation priorities.

More specifically, the proposed project will entail the following types of tasks:

- Formulating a methodology that will yield the following: optimal integration of flood management, water quality, water supply and habitat objectives; community support; sustainable water resource management; financially feasible recommendations; and documentation needed for successful construction funding applications
- Convening a technical advisory committee and other stakeholder groups to assist with plan preparation
- Coordinating with related planning activities, such as downstream measures for steelhead recovery and other water management purposes; local agency development and water management proposals; preparation of the SFPUC's HCP for its extensive Alameda Creek watershed properties; design for urgent reduction of erosion on a portion of Arroyo de la Laguna; planning for future use of the Chain of Lakes; evaluation by the California Rangeland Conservation Coalition and private property owners of the ecological services provided by rangelands; park and open space management activities; modeling of climate change scenarios; implementation and expansion of the Eastern Alameda County Conservation Strategy; preparation by the National Marine Fisheries Service of a central coast steelhead recovery plan; and identification of impaired stream conditions by State and federal regulatory agencies
- Identifying realistic prospects for implementation funding and determining characteristics needed in the plan to ensure eligibility for targeted implementation funding

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- Identifying and gathering essential hydrological, biological and other existing data, studies and plans and conduct additional field studies as needed
- Formulating a conceptual framework for habitat restoration and enhancement, especially in highly modified reaches of streams, and for integrated water management throughout the planning area
- Identifying specific integrated water resource management measures for the entirety of the planning area, with public access and interpretation where compatible with water management objectives
- Reviewing the engineering and design of 45 water management projects in the existing SMMP
- For both typical and special site-specific channel conditions, providing conceptual designs for construction, protocols for maintenance, and construction and maintenance costs estimates (*conceptual designs will be sufficiently detailed to proceed directly to construction drawings*)
- Developing and applying a rationale for setting priorities for carrying out construction
- Preparing documentation required by the California Environmental Quality Act (CEQA), drawing upon existing environmental documents as much as possible.

The proposed project area includes all of Zone 7's service area within the Alameda Creek Watershed (Exhibit 2), except for lands owned by the San Francisco Public Utilities Commission (SFPUC)—for which the SFPUC is preparing a Habitat Conservation Plan (HCP) and which it manages in cooperation with the Alameda Creek Watershed Council. Most of the conceptual project designs are anticipated to be on the extensive network of stream corridors owned and managed by Zone 7 or the cities of Livermore, Pleasanton and Dublin. All of the cities have provided letters supporting the proposed project (see Exhibit 4). Private owners of rangelands, vineyards and other property will be invited to participate.

Qualifications of Grantee

Zone 7 is a special district which owes its unusual name to having once been part of the Alameda County Flood Control and Water Conservation District, with responsibility for one of the zones within that district. Zone 7 now has an independent board of directors and supplies treated drinking water to water retailers serving more than 200,000 people in Pleasanton, Livermore, Dublin and nearby unincorporated areas. It also supplies agricultural water to 3,500 acres, primarily the South Livermore Valley vineyards, and provides flood protection to 425 square miles of eastern Alameda County.

In 2005, Zone 7 and the Conservancy became co-administrators of a grant from DWR for preparation of the Bay Area IRWMP. In that complex planning and administrative context, Zone 7 demonstrated its contract and project management expertise. Zone 7 has also made significant progress toward integrated water planning within its own jurisdiction, as discussed in "Project History" below.

Site Description: The project area encompasses approximately 100 miles of stream corridors within Zone 7's service area in the Livermore and Amador Valleys in eastern Alameda County

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(Exhibit 2). The streams are all tributaries to Alameda Creek, which has the largest watershed of any Bay Area stream and is widely considered to be the most important Bay Area stream for restoring habitat for the threatened steelhead.

Most of the streams in the project area rise in hilly, arid, privately owned rangeland and then flow through cities on flat valley floors before reaching Alameda Creek. The rangeland reaches of the creeks—notably Arroyo Seco, Arroyo las Positas, Arroyo Mocho, Arroyo del Valle, Arroyo de la Laguna, Tassajara Creek, Sinbad Creek and Stoneybrook Creek—are largely undisturbed, except where occasional roads and other infrastructure have constrained the channels or where livestock have reduced riparian vegetation. However, reservoirs on Arroyo Del Valle (owned by DWR) and on San Antonio Creek, Arroyo Hondo and Calaveras Creeks (owned by SFPUC) have significantly modified the functioning of these creeks. Discharges from the reservoirs are now coordinated with efforts to restore the steelhead fishery downstream.

On the other hand, all of the stream corridors on the valley floors in and around the cities have been altered significantly. In their natural condition, most of these streams ran only in the rainy season, spreading out on the valley floors and soaking into the ground to give rise to extensive freshwater wetlands. As settlers moved in during the late 1800s, they dug a system of ditches to drain the wetlands and convey the water toward Alameda Creek. Later, the ditches were enlarged to convey urban runoff year-round and increased storm water discharge in the rainy season. (Photographs attached as Exhibit 3 show typical channel conditions today.) Freeways and other infrastructure further disrupted natural water movement. Quarrying for gravel along some two miles of Arroyo Mocho and Arroyo del Valle in Livermore created a series of ponds known as the Chain of Lakes. Zone 7 and Alameda County are gradually converting these lakes for use in storm water retention, recharging groundwater and providing an urban recreational amenity. Portions of the lakes may also have potential for restoration of the once extensive freshwater wetlands that have virtually disappeared from the area.

Under current conditions, problems with flooding are localized, principally along a portion of Arroyo las Positas and in a Pleasanton neighborhood where storm drains impede proper drainage. However, with channelization and increased runoff from paved urban areas has come greatly increased erosion of stream beds and banks downstream of the cities in the project area. Among the adverse impacts of increased erosion are loss of riparian habitat and property at the sites of the erosion, degradation of steelhead habitat and loss of floodwater conveyance capacity downstream in Alameda Creek. Zone 7 has engaged the San Francisco Estuary Institute to quantify and characterize sources of sediment other than those most apparent from bank failures.

The USEPA has listed Arroyo las Positas and Arroyo Mocho as impaired due to the presence of diazinon in both and to excessive nutrients in the former and elevated water temperature in the latter. Elevated water temperature is detrimental to cold water fisheries, such as steelhead, and can be the result of loss of shading by riparian trees and other factors.

The project area falls within the cities of Livermore, Pleasanton and Dublin and the County of Alameda. Zone 7 owns or maintains 39 milesstream corridors in and around the cities, and has responsibility for flood management and providing drinking and agricultural water. While most of the water that Zone 7 sells to retailers comes from the Delta via the State Water Project, it also relies on some groundwater extracted within the project area.

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Project History: In 2006, Zone 7 took great strides toward incorporating habitat considerations in flood management planning when it replaced its 1960 Flood Control Master Plan with a multi-purpose “Stream Management Master Plan” (SMMP). The planning process entailed extensive consultation with stakeholders to develop stream projects that would address flood protection needs and also water quality protection, ground water recharge, habitat restoration, public access and education. However, according to Zone 7 staff, the overriding goal of the SMMP was to provide enhanced flood protection and the additional elements were not based on clearly articulated goals and objectives and so were not well-integrated into flood management planning. While the SMMP was just completed five years ago, Zone 7 has concluded that all elements of the plan need to be updated to achieve full functional integration and to reflect the current understanding of the dynamics of its urban streams, incorporate new sources of hydrologic data and take advantage of the heightened awareness of the potential for its waterways to provide stream and riparian habitat.

Overall, Zone 7 proposes that the updated SMMP—the integrated water management plan that is the subject of this staff report—incorporate the most current scientific and land planning studies, revisit flood protection project needs by updating hydrology and anticipating the potential effects of climate change, establish guidelines for stream corridor protection, create habitat restoration goals and specifications, and create maintenance prescriptions that are stream-type specific and compatible with flood protection and biological diversity goals. With assistance from the Urban Creeks Council, Zone 7 staff has drafted a work program, budget and schedule for the project; it has also agreed to certain modifications requested by Conservancy staff. Zone 7’s board of directors has approved a budget of up to \$1,625,975 for its share of the cost of preparing the plan.

PROJECT FINANCING

Coastal Conservancy	\$190,000
Zone 7 Water Agency (see also in-kind services below)	<u>774,437</u>
Total Project Costs (excluding in-kind services)	\$964,437

In addition, Zone 7 has committed to providing in-kind services with an estimated value of \$851,538.

The anticipated source of Conservancy funds is the FY09/10 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 Sections 75001 *et seq.*). Proposition 84 funds are available for San Francisco Bay Area Conservancy Program projects that protect coastal waters and watersheds, including projects to prevent contamination and degradation of coastal waters and watersheds, and projects to protect and restore the natural habitat values of coastal waters and lands. The proposed project is consistent with the enabling legislation for the San Francisco Bay Area Conservancy Program, as described further below and will provide the planning necessary to protect the waters of San Francisco Bay and the San Francisco Bay watershed. Thus, the proposed project is an appropriate use of Proposition 84 funds.

CONSISTENCY WITH CONSERVANCY’S ENABLING LEGISLATION:

The proposed project is consistent with the provisions of Chapter 4.5 of Division 21 of the Public Resources Code, Sections 31160-31165, which state that the Conservancy may award grants in the nine-county San Francisco Bay Area to help achieve stated goals. These goals include “to protect, restore, and enhance natural habitats and connecting corridors, watersheds, scenic areas, and other open-space resources of regional importance.” Public Resources Code Section 31162(b). The proposed update to the SMMP will identify measures to protect riparian habitat threatened by bank erosion and to support protection of fishery habitat downstream of the project area from continued excessive sedimentation. In addition, the update will identify measures to restore and enhance fish and wildlife habitat in and along the stream corridors. Thus, the project will help to protect, restore and enhance natural habitats and watersheds.

Further, the natural habitats and watersheds of the project area have regional importance because they connect to, and drain to, San Francisco Bay and affect habitat for the threatened steelhead downstream, and because there is opportunity along scores of miles of stream corridors owned by Zone 7 to restore and enhance in-stream, riparian and freshwater marsh habitat, all of which have been decimated in the Bay Area region. The update of the SMMP is intended to yield detailed conceptual designs for protecting and enhancing steelhead habitat and to enhance habitat in and along stream corridors.

Consistent with Section 31162(c), the proposed project will help “to assist in the implementation of the policies and programs of...the adopted plans of local governments and special districts.” The plan will help implement the Bay Area IRWMP, which has been adopted by Zone 7 and by 18 other local governments and special districts, as well as by the Conservancy, the Association of Bay Area Governments and several water resource interest groups. The Bay Area IRWMP was developed to encourage the synthesis of water resource management objectives on projects and to encourage coordination among water resource managers throughout the region. The updated SMMP will help implement all six of the Bay Area IRWMP goals as follows:

- *Goal #1: Contribute to the promotion of economic, social, and environmental sustainability*—The proposed project will yield recommended measures for flood management, water supply, water quality and habitat that are economically and environmentally sustainable.
- *Goal #2: Contribute to improved [water] supply reliability*—The proposed project will refine recommended groundwater recharge measures and integrate them with other water management measures.
- *Goal #3: Contribute to the protection and improvement of hydrologic function*—The proposed project will recommend measures for protecting and improving hydrologic function, such as reducing excessively erosive flood flows and removing flowage constraints.
- *Goal #4: Contribute to the protection and improvement of the quality of water resources*—The proposed project will recommend measures for protecting and improving the quality of water in the streams and groundwater in the project area, as well as the quality of water flowing downstream from the project area.

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- *Goal #5: Contribute to the protection of public health and safety and of property*—The proposed project will yield recommended measures for managing flooding, preventing further streambank failures, and controlling mosquitoes in wetland areas.
- *Goal #6: Contribute to the creation, protection, enhancement, and maintenance of environmental resources and habitat*—The proposed project will yield recommended measures for protecting and enhancing environmental resources and habitat, and will also recommend maintenance methods that will be adequate to ensure that flood management objectives are met and are also minimally disruptive of fish and wildlife habitat.

Consistent with Section 31162(d), the proposed project will help “to promote, assist, and enhance projects that provide open space and natural areas that are accessible to urban populations for recreational and educational purposes.” The project area includes the cities of Livermore, Pleasanton and Dublin. Streamside trails exist along some reaches of streams within these urban areas and additional trails compatible with habitat and water infrastructure will be considered for incorporation in the updated SMMP. The SMMP will also yield conceptual designs for enhancing open space and natural areas adjacent to urban streamside trails.

**CONSISTENCY WITH CONSERVANCY’S 2007
STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):**

Consistent with **Goal 10, Objective B** of the Conservancy’s 2007 Strategic Plan, the proposed project will yield a plan for restoration or enhancement of freshwater wetlands. Consistent with **Goal 10, Objective G**, the proposed project will yield a plan for restoration or enhancement of riparian and riverine habitat.

**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 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 proposed project has broad support from stakeholders, including the three incorporated cities within the project area, as demonstrated by the project letters attached as Exhibit 4.
4. **Location:** The proposed project is located in Alameda County, within the jurisdiction of the nine-county San Francisco Bay Area Conservancy Program.

5. **Need:** Zone 7's current funding sources are intended for carrying out its water supply and flood management responsibilities, so it has requested Conservancy funding to allow for the integration of habitat and restoration measures with water supply and flood management measures in the updated SMMP. Zone 7 will then be able to use its funding for carrying out the integrated projects.
6. **Greater-than-local interest:** The State Water Plan encourages integrated water management, i.e., management that accomplishes multiple objectives (e.g., flood management, habitat, and groundwater recharge) or that involves regional coordination among water-resource-related agencies and partners. The proposed project will yield an updated and integrated water management plan for Zone 7 and a significant portion of the Alameda Creek watershed. Water management activities in the watershed affect the threatened steelhead downstream in Alameda Creek.
7. **Sea level rise vulnerability:** The project area ranges in elevation from 250-500 feet above sea level, so it is not vulnerable to rising sea level.

Additional Criteria

9. **Resolution of more than one issue:** The proposed project is intended to resolve conflicts resulting from disparate water management objectives. The project will yield a plan that integrates these objectives.
10. **Leverage:** See the "Project Financing" section above.
11. **Conflict resolution:** See the "Resolution of more than one issue" section above.
13. **Readiness:** Zone 7 has committed staff and funding for the proposed project and has obtained the support of all three cities within the project area.
14. **Realization of prior Conservancy goals:** Since the early 2000s, the Conservancy has been participating in the multi-stakeholder effort to restore the Alameda Creek steelhead fishery. The Conservancy has provided grants for streamlining permitting for habitat restoration projects (\$50,000 in 2002), analyzing and designing fish passage alternatives (\$100,000 in 2002), and conducting studies of stream flows and other technical issues (\$202,000 in 2006).

In addition, since 2005, the Conservancy has been one of the leaders of the Bay Area IRWMP. As discussed above in "CONSISTENCY WITH THE CONSERVANCY'S ENABLING LEGISLATION," the proposed project would help implement all of the Bay Area IRWMP goals.
17. **Vulnerability from climate change impacts other than sea level rise:** The updated SMMP's objectives, design and siting recommendations will consider and address vulnerabilities from climate change impacts.

COMPLIANCE WITH CEQA:

The proposed project involves only planning and feasibility analyses for possible future actions that have not yet been authorized or approved by the Conservancy or another agency and is thus statutorily exempt from the California Environmental Quality Act ("CEQA") pursuant to

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California Code of Regulations, title 14, section 15262. Planning carried out as part of the project will, however, consider environmental factors, as required by section 15262. In addition, to the extent that data collection and resource evaluation activities are conducted for this project, they are categorically exempt from CEQA pursuant to California Code of Regulations Section, title 14, section 15306. This categorical exemption applies to activities that consist of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource.

Staff will file a Notice of Exemption upon Conservancy approval.