

COASTAL CONSERVANCY

Staff Recommendation  
October 23, 2003

**SAN FRANCISQUITO CREEK WATERSHED STEELHEAD RECOVERY**

File No. 03-096  
Project Manager: Ann Buell

**RECOMMENDED ACTION:** Authorization to disburse up to \$233,000 to Acterra, acting through the San Francisquito Watershed Council, to design modifications to fish barriers, eradicate invasive non-native plants, and design and produce materials for watershed stewardship in the San Francisquito Creek Watershed.

**LOCATION:** The San Francisquito Creek Watershed is on the San Francisco Peninsula in the Cities of East Palo Alto, Palo Alto, Menlo Park, Woodside, and Portola Valley, in Santa Clara and San Mateo Counties (Exhibits 1 and 2).

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

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**EXHIBITS**

- Exhibit 1: Project Location
  - Exhibit 2: Watershed Barrier and Revegetation Sites
  - Exhibit 3: Photographs
  - Exhibit 4: Photographs
  - Exhibit 5: Letters of Support
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**RESOLUTION AND FINDINGS:**

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31000 *et seq.* of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes disbursement of an amount not to exceed two hundred thirty-three thousand dollars (\$233,000) to Acterra for analysis, design, securing of landowner permission, environmental review, and permitting for approximately six barriers to fish migration; exotic plant removal at approximately seven sites within the riparian corridor; and stewardship activities throughout the watershed. Prior to the disbursement of any Conservancy funds, Acterra shall submit for the review and written approval of the Executive Officer a detailed work program, budget and schedule for project completion; and the names and qualifications of any contractors and subcontractors to be used.”

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 San Francisquito Creek Watershed Steelhead Recovery project is consistent with Public Resources Code sections 31160-31164, regarding the Conservancy's mandate to address the resource and recreation goals of the San Francisco Bay Area.
2. The San Francisquito Creek Watershed Steelhead Recovery project is consistent with the Project Selection Criteria and Guidelines adopted by the Conservancy on January 24, 2001.
3. Acterra is a nonprofit organization existing under Section 501(c)(3) of the United States Internal Revenue Code, and whose purposes are consistent with Division 21 of the California Public Resources Code.”

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**PROJECT SUMMARY:**

Staff requests authorization to disburse up to \$233,000 to Acterra, acting through the San Francisquito Watershed Council (Watershed Council), to design modifications to six fish barriers, remove invasive exotic plants from seven sites, and design and produce materials for watershed stewardship in the San Francisquito Creek Watershed in Santa Clara and San Mateo Counties. The Watershed Council is a collaborative partnership working to improve water quality, reduce flood dangers and maintain and restore riparian and aquatic habitats along San Francisquito Creek. It is a program of the nonprofit Acterra, whose mission is "to protect and restore our local natural environment through stewardship, information, and leadership."

This proposed project would result in significant progress toward elimination of remaining impediments to full steelhead passage in this key South Bay watershed, which is home to one of the only continuous native runs of federally listed steelhead trout (*Oncorhynchus mykiss*) in San Francisco Bay. It would result in an additional two acres of restored riparian corridor and the development of brochures, presentations, a web site, fact sheets, and a sign plan for "Entering San Francisquito Creek Watershed." The Watershed Council expects to secure implementation funds and complete all barrier remediation projects on these six barriers within six to eight years.

The San Francisquito Creek Watershed covers approximately 43 square miles, from the San Francisco Peninsula ridgeline to San Francisco Bay. It includes three major tributaries to San Francisquito Creek—Los Trancos, Corte Madera, and Bear (Exhibit 2)—all of which support steelhead trout or, upstream of Searsville Dam, rainbow trout. The watershed encompasses seven municipalities, including the cities of East Palo Alto, Palo Alto, Menlo Park, Portola Valley, and Woodside; and the counties of Santa Clara and San Mateo. It also drains most of Stanford University's property. The vast majority of the watershed is privately owned.

Efforts to date to study, protect, and enhance this watershed and its species (including the federally listed as threatened California red-legged frog (*Rana aurora draytonii*) and the California tiger salamander (*Ambystoma californiense*), proposed for listing as threatened) have been multi-jurisdictional, well coordinated, and well documented (see the "Project History" section below) and have led to the identification of work proposed in this project. The San Francisquito Watershed Council's 2001 report entitled *Adult Steelhead Passage in the Bear Creek Watershed* included recommendations for modification of the six barriers described below. Barriers in the

other subwatersheds and on the main stem San Francisquito were assessed as part of the survey for the Bear Creek document but not included in the same report. A total of 30 significant barriers have been identified, and of those 21 remain. This project would eliminate six more of those barriers, as described below.

***BARRIERS (6)***

**1) Bonde Weir** – This weir presents a barrier that is estimated to be passable less than 10% of the time during the six wet months of the year and is located low in the watershed on the main stem of San Francisquito Creek (Exhibit 3). A grant from the Department of Fish and Game (DFG) to the Steelhead Task Force (of the San Francisquito Watershed Council) resulted in a 90 percent design for the replacement of the weir. *Conservancy funding* would be used to complete the existing design report, create the final design, complete the environmental review and permitting process, and conduct public notification (because of the noise and activity that will be inherent to the eventual implementation of this project). Implementation funding will be sought from the National Oceanic and Atmospheric Administration (NOAA) Community Based Restoration program and from DFG.

**2) Old Los Trancos Flashboard Dam** – The Steelhead Task Force considers this dam the most severe steelhead migration barrier in upper Los Trancos Creek (Exhibit 2). Passage is possible only during a very narrow range of medium flow conditions. Improved passage at this site would provide new access to approximately two miles of excellent spawning and juvenile rearing habitat. The Department of Water Resources (DWR) Fish Passage Improvement Program (FPIP) has already conducted a conceptual design analysis for this dam and the Steelhead Task Force has selected a preferred alternative. *Conservancy funding* would be used to pay for the final design of the preferred alternative, complete environmental review, and obtain necessary permissions and permits. NOAA and American Rivers have awarded \$50,000 in funding for full implementation of this project.

**3) Los Trancos Double Box Culverts** – Two double box culverts in close proximity to one another pose passage problems at low flows (Exhibit 4). DWR FPIP staff have offered to collect data and perform "Fish X-ing analysis," which is a DFG-required protocol for modeling barrier modification, for these structures to develop conceptual designs. *Conservancy funding* would be used to develop full designs for these structures and obtain necessary permissions and permits. Implementation funds will be sought from the Santa Clara Valley Water District and other sources.

**4) Fox Hollow Double Box Culvert** – This 30-foot long double box culvert is a depth barrier at low flows and may be a velocity barrier at high flows. It is located low in the Bear Creek sub-watershed and reduces access to almost all of the spawning and rearing habitat in this important sub-watershed (Exhibit 2). *Conservancy funding* would be used to perform Fish X-ing analysis, develop full designs, and obtain necessary permissions and permits.

**5) McGarvey Gulch** – This 4-foot diameter, 20-foot long culvert spills onto a flat concrete apron and is rusted out at the bottom (Exhibit 3). It is very difficult for adult fish to get from the downstream pool, across the apron, and through the de-watered rotted out culvert. Upstream of the culvert there are .4 miles of spawning and rearing habitat. *Conservancy funding* would be used to develop conceptual designs and obtain permits. Funding for future implementation will be sought from the San Mateo County Parks Department.

**6) Felt Lake Diversion Fish Ladder Facility** – The existing fish ladder at the Felt Lake Diversion Dam only accommodates adult steelhead at a narrow flow range and requires substantial manual labor to operate and maintain. Improvements to this fish ladder would provide improved access to over five miles of excellent spawning and rearing habitat upstream (Exhibit 4). Stanford University, the owner of the facility, has retained a consultant to analyze the structure and develop a conceptual design for improvements. *Conservancy funding* is requested for design completion, environmental review, and permitting elements.

### **REVEGETATION**

The Watershed Council has been working to restore a continuous corridor of native riparian vegetation along San Francisquito Creek and its tributaries for over five years. Thirteen sites are targeted for invasive species removal, five of which are on private land and eight on public land (Exhibit 2). Targeted plants at these sites include giant reed (*Arundo donax*), eucalyptus, tree-of-heaven, pampas grass, Himalayan blackberry, Cape ivy, English ivy, periwinkle, acacia, black locust, and broom.

The Watershed Council has a Streambed Alteration Agreement from DFG, valid until December 31, 2005, for watershed-wide removal of exotic plant species. This agreement allows a licensed applicator to apply herbicide (Glyphosate) to terrestrial surfaces in the period May 1 – October 15 and only in areas that are unlikely to be inundated or have runoff occur within three weeks of application. The licensed applicator is required to follow manufacturers' instructions when applying herbicide and to comply with all state and federal laws, including the California and Federal Endangered Species Acts. The Watershed Council will preferentially use precision application techniques for removal of giant reed, eucalyptus, tree-of-heaven, and pampas grass, but spraying may occur in specific instances such as on large infestations of ivy. Other species would be removed using manual methods, possibly in combination with this chemical.

The Watershed Council would maintain all sites where work is done for five years or until revegetation efforts are well established. *Conservancy funding* would be used to remove two acres of invasive weeds at approximately seven sites using mechanical treatment with power tools, chemical application by a certified applicator, and paid labor crews such as the California Conservation Corps. The sites would be revegetated with native riparian species using other funding sources. The revegetation efforts are consistent with the *Baylands Ecosystem Habitat Goals Report* (1999), which recommends reestablishing native vegetation and enhancing the riparian corridor along San Francisquito Creek (p.129).

### **STEWARDSHIP**

Because over 80 percent of the San Francisquito Creek watershed is privately owned and much of this area is densely settled, the cooperation of individual landowners throughout the watershed is critical to protection and enhancement of the watershed's natural and recreational resources. Dispersed impacts across the watershed include conversions of streambank to rock and concrete hardscape, improper manure management at stables, grading and development of floodplain and riparian areas, draining of swimming pools to storm drains, car washing next to watercourses, removal of riparian trees, overapplication of lawn chemicals, and other disturbance and pollution activities.

The Watershed Council is well suited to launch a major watershed initiative to foster both appreciation of the resource and knowledge of how to steward it. Six of the neighborhood associations

that about the creek work closely with the Watershed Council and view them as a reliable source of information on creek issues and management. The Stanford Management Company, which manages over 10 square miles of land in the watershed, looks to the Watershed Council to help educate their lessees—including stables, nurseries, and other commercial operations—about Best Management Practices. Community groups, local corporations, and schools regularly request presentations on the creek and watershed from the Watershed Council.

To respond effectively to these stewardship opportunities the Watershed Council needs to develop a suite of materials and programs targeting specific audiences with specific information and messages. To reach this goal, the Watershed Council is requesting *Conservancy funding* to develop a strategic watershed stewardship plan and to produce a set of program materials. The plan will identify key audiences, the specific messages they plan to deliver to those audiences, and effective media to reach those people. Program materials will include brochures and packaged presentations on horsekeeping, native plant landscaping, bank stabilization, water conservation, and residential-scale stormwater management practices; a plan for "Entering San Francisquito Creek Watershed" signage; a San Francisquito Watershed web site, traveling display, and general Powerpoint presentation describing the watershed, threats to its health, and what people can do to steward it; and a series of fact sheets on flooding, the steelhead populations, and water quality.

All of the proposed barrier remediation, revegetation, and stewardship tasks described above are well within the experience and expertise of the Watershed Council, which has for ten years been designing and implementing this kind of project. A sampling of the achievements and characteristics of the Watershed Council follows.

- It has completed ten fish passage projects remediating significant barriers in this watershed.
- Its Steelhead Task Force includes permitting agencies, technical expertise, financial knowledge, and local knowledge of the watershed.
- It has published several documents, including maps and the *Streamside Planting Guide*, the *Draft Watershed Management Plan*, *Long-Term Monitoring and Assessment Plan*, *Adult Steelhead Passage in the Bear Creek Watershed*, and educational panels installed at the El Palo Alto Park in Palo Alto.
- It involves 500-1,000 volunteers per year in stewardship activities through the Saturday volunteer work days.
- It has worked with 15 to 20 private creekside landowners on revegetating their creekside areas with native plants instead of hardscaping their banks.
- It has eliminated the invasive, exotic giant reed plant, *Arundo donax*, at all but five of the 30 sites.

**Site Description:** The San Francisquito Creek watershed is approximately 43 square miles and extends from the ridgeline of the San Francisco Peninsula (Skyline Boulevard) down through San Mateo and Santa Clara Counties to San Francisco Bay (Exhibits 1 and 2). The last open-channel urban creek system in the area, San Francisquito Creek is fed by numerous tributary creeks in the upper watershed areas of Woodside and Portola Valley. It is home to a viable steelhead trout run (federally listed as threatened), and habitat for the California red-legged frog (federally listed as endangered) and California tiger salamander.

The lower 6.5 miles of the main stem of San Francisquito Creek flows past the Stanford University Campus into downtown and residential Palo Alto, Menlo Park, and East Palo Alto before emptying into San Francisco Bay. The creek edge in this section is defined by public streets, backyards, commercial development, paths, parks, fences, walls, levees, and parking easements. The creek is deeply incised through these urban reaches, with heavily wooded edges consisting of both native and non-native species. Natives include willow species, big-leaf maple, box elder, California bay, California buckeye, valley oak, dogwood, coyote brush, toyon, and California blackberry. Approximately 65 percent of the riparian habitat within these reaches is threatened by invasive plant species, such as acacia, black locust, broom, Cape ivy, English ivy, eucalyptus, fennel, giant reed, Himalayan blackberry, pampas grass, periwinkle, and tree-of-heaven.

The upper watershed is characterized by steep topography, erodible soil (unconsolidated sandstone), and seismically active areas (the San Andreas Fault passes along Corte Madera and Bear Creeks). All of the upper creeks are spring-fed and most of them flow year round, making them very important reaches for spawning and juvenile rearing. Land use is mostly rural residential and is sparsely populated with nature preserves and parks, such as Jasper Ridge Biological Preserve, Stanford Open Space, Huddart Park, Wunderlich County Park, Windy Hill Open Space Preserve, Thornewood Open Space Preserve, and Palo Alto's Foothill Park. Vegetation ranges from redwood forests to oak woodlands and savannahs, and large sections of native grasslands and chaparral.

**Project History:** Habitat improvements to date in the San Francisquito Creek Watershed have been accomplished by a variety of public and nonprofit agencies working cooperatively on analysis, project design, project implementation, and funding issues. Key entities include:

- The **San Francisquito Creek Coordinated Resource Management Process** (initiated in 1993), renamed the **San Francisquito Watershed Council** in 2001. This "CRMP" includes 25 agency and organization representatives in the steering committee, and over 80 organizations and agencies participate. The CRMP/Watershed Council produced the *Draft Watershed Management Plan*, which was adopted (as a final plan) in 1997 by numerous local and regional agencies.
- The **Steelhead Task Force**, which is part of the San Francisquito Creek Watershed Council. The Steelhead Task Force is a 14-member collaboration of resource professionals representing local, state and federal agencies, local environmental groups, Stanford University, and a fly-fishing organization.
- The **San Francisquito Creek Joint Powers Authority (JPA)**. The JPA is a public agency, "empowered to protect and maintain the creek and its environs." It was formed in 1999 by the Cities of Menlo Park, Palo Alto, and East Palo Alto, and the Santa Clara Valley Water District and the San Mateo County Flood Control District.

The Conservancy authorized a \$100,000 grant to the JPA in March 2001 for the planning and design of demonstration bank stabilization and revegetation projects on San Francisquito Creek. Staff continues to recommend support for habitat enhancement within this watershed and stewardship activities focusing on water quality and fish habitat issues. This watershed will be included in the Conservancy's own *Assessment of Barriers to Fish Passage in California's Coastal Watersheds* report.

**PROJECT FINANCING:**

Coastal Conservancy	\$233,000
Other sources	<u>92,500</u>
<b>Total Project Cost</b>	<b>\$325,500</b>

Of the Conservancy's contribution for the proposed authorization, \$208,000 is expected to come from the Conservancy's FY 2001/02 appropriation from the "Safe Neighborhood Parks, Clean Water, Clean Air and Coastal Protection Bond Fund" (Proposition 12) designated for protection, restoration, acquisition, and enhancement of habitat for salmon. This authorization is consistent with the funding source because of the importance of providing steelhead trout with adequate passage throughout coastal watersheds, including the San Francisco Bay estuary. Steelhead trout is part of the *Oncorhynchus* family (Pacific salmon family).

The remaining \$25,000 proposed for authorization is expected to come from the Conservancy's FY 02/03 "California Clean Water, Clean Air, Safe Neighborhood Parks and Coastal Protection Act of 2002" (Proposition 40) appropriation for the San Francisco Bay Area Conservancy Program. This portion of the authorization is consistent with the funding source because the proposed revegetation work constitutes restoration and protection of land and water resources in accordance with Section 5096.650(b) of Proposition 40, as well as with the Conservancy's enabling legislation in Division 21 of the Public Resources Code, Chapter 4.5.

Committed matching funds for this proposed project include \$10,000 from the NOAA Community Based Restoration Program, \$10,000 from Stanford University for the Felt Lake Diversion Fish Ladder project, \$50,000 from American Rivers/NOAA for the Los Trancos Flashboard project, \$7,500 from the Department of Water Resources Fish Passage Improvement Program, \$10,000 from the CalFed Watershed and DWR Urban Streams Program, and \$5,000 from the Cities of Palo Alto and Menlo Park. Other funds will be sought as already described under "Project Summary" above. The Watershed Council anticipates that it will be easier to secure implementation funds than any previously granted funds for this project, and thus is confident that it will be able to raise all funds necessary to implementation.

**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 31160-31164, to address resource goals in the San Francisco Bay Area. In particular, the Conservancy may award grants to protect, restore, and enhance natural habitats and connecting corridors, watersheds, scenic areas, and other open-space resources of regional significance (§31162(b)); and promote, assist, and enhance projects that provide open space and natural areas that are accessible to urban populations for recreational and educational purposes (§31162(d)). This grant would restore and enhance reaches of San Francisquito Creek and its tributaries for the passage of steelhead trout, a listed species, and the riparian corridors for other wildlife. Sections of restored riparian corridor of San Francisquito Creek are accessible to urban populations for educational purposes, such as at El Palo Alto Park, where there are four interpretive signs, and at three elementary schools, where students learn from the riparian restoration projects; and for recreational purposes, at Windy Hill Regional Open Space.

Consistent with §31163(c), the Conservancy will be supporting interagency actions and public/private partnerships in the San Francisco Bay Area. Specific groups and actions are described

under "Project History" and "Project Financing," and include a CRMP, the San Francisquito Creek Joint Powers Authority, many nonprofit organizations and public agencies, seven jurisdictions, and Stanford University.

This project is appropriate for prioritization under the selection criteria set forth in §31163(d) in that it is (1) supported by adopted regional plans such as the *Draft Watershed Management Plan* and by the Baylands Ecosystem Habitat Goals Report (1999), which recommends reestablishing native vegetation and enhancing the riparian corridor along San Francisquito Creek (p.129); (2) multijurisdictional, involving seven municipalities; (3) can be implemented in a timely way because matching funds are already committed; and (4) includes matching funds from other sources of funding, as described under Project Financing, above.

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

Consistent with **Goal 10, Objective A** of the Conservancy's Strategic Plan, the proposed project will restore approximately two acres of riparian corridor (.2 linear miles of riparian habitat) in the San Francisquito Creek Watershed.

Consistent with **Goal 10, Objective B** of the Conservancy's Strategic Plan, the proposed project will develop designs and complete environmental review for approximately six barrier modification projects in the San Francisquito Creek Watershed.

San Francisquito Creek is specifically listed as a priority project area for the Conservancy in the **Goal Matrix** of the Conservancy's Strategic Plan.

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

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines adopted January 24, 2001, 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:** This project is supported by Senator Byron Sher, Supervisor Liz Kniss, the Department of Fish and Game, the City of Menlo Park, the Northern CA Council Federation of Fly Fisherman, the Portola Valley Conservation Committee, CLEAN South Bay, the Santa Clara Valley Audubon Society, the Woodside Conservation and Environmental Health Committee, Ormondale Elementary School, Woodside Elementary School, Sacred Heart High School, New Perspectives program (6-8th-graders in East Palo Alto), Gunn High School, Crescent Park Neighborhood Association, Dubenick-St. Francis Neighborhood Association, Committee for Green Foothills, Jasper Ridge Biological Preserve, and others (Exhibit 5).



4. **Location:** The San Francisquito Creek Watershed is located on the San Francisco Peninsula in San Mateo and Santa Clara Counties, and thus is within the jurisdiction of the San Francisco Bay Area Conservancy Program.
5. **Need:** The San Francisquito Watershed Council has secured funding from seven different funding sources and needs Conservancy funding to close the gap on the costs of this proposed project.
6. **Greater-than-local interest:** The primary focus of this project is the protection and enhancement of habitat for a federally listed species, steelhead trout. Fisheries biologists see the San Francisquito population of steelhead as a vital genetic resource for efforts to restore a regional population of wild steelhead in Bay Area watersheds.

#### **Additional Criteria**

7. **Urgency:** The San Francisquito steelhead population is greatly diminished from pre-historic levels. These fish are listed as threatened under the Endangered Species Act and are part of the Central Coast Evolutionarily Significant Unit.
8. **Resolution of more than one issue:** Multiple issues will be addressed: fish passage improvements will be designed for implementation, invasive exotic vegetation will be removed, native vegetation planted, and materials fostering improved public understanding of watershed issues created.
9. **Leverage:** See the “Project Financing” section above.
11. **Innovation:** The San Francisquito Watershed Council is considered a "leading edge" watershed group that is leading other groups around the Bay Area and farther afield by example.
12. **Readiness:** Many aspects of the project are already partially completed and staff members, affiliates, and volunteers are ready to continue new phases of their work with approved Conservancy funding.
13. **Realization of prior Conservancy goals:** In addition to building on previous Conservancy support for this watershed as discussed in the “Project History” section above, this project supports the general goals of the National Marine Fisheries Service and DFG in that the steelhead trout using the San Francisquito Creek watershed are part of the Central Coast Evolutionarily Significant Unit.
15. **Cooperation:** Various groups and agencies are contributing to this project, including the Department of Water Resources (technical assistance); Dept. of Fish and Game (permitting process, funding, protocols); the multiple agencies that make up the Joint Powers Authority; Stanford University, including Jasper Ridge (local knowledge); and San Jose State University, among others.

#### **COMPLIANCE WITH CEQA:**

The design work, environmental compliance, and permitting of the proposed project is statutorily exempt from the California Environmental Quality Act (CEQA) under 14 Cal. Code of Regulations Section 15262 in that it involves only planning for possible future implementation. The removal of invasive exotic plants is categorically exempt under §15304, Minor Alterations to Land. (The Department of Fish and Game also did not find any significant negative impacts re-

sulting from the proposed vegetation removal activities when it evaluated Acterra's application for a Streambed Alteration Agreement permit for this watershed and subsequently granted that permit.) Upon approval, staff will file a Notice of Exemption for this project.