

CONCEPT PROPOSAL (DRAFT 4/25/03)
2003 ALAMEDA CREEK RESTORATION
PROJECT NARRATIVE

Background

Steelhead used to inhabit the Alameda Creek watershed in significant numbers prior to the construction of dams and other human development of the watershed. However, over time urban development reduced the size of the run to the extent that resource agencies determine that a viable fishery no longer existed in the watershed, and subsequently did not require mitigation for projects affecting the species.

In 1996, Central Coast steelhead were listed as threatened pursuant to the federal Endangered Species Act. Because Alameda Creek has the largest watershed of all local streams tributary to the San Francisco Estuary and large portions of the upper basin areas are undeveloped, the watershed has a high priority for steelhead restoration. In addition, the recent identification of steelhead attempting to migrate upstream into Alameda Creek as genetically associated with the Central Coast stock, and availability of various means of public and private support to fund restoration activities, have combined to focus public attention on restoration of steelhead in Alameda Creek.

To coordinate efforts to restore these fish, the Alameda Creek Fisheries Restoration Workgroup (Workgroup) was formed in early 1999. Led by the efforts and financial support of the Alameda County Flood Control and Water Conservation District (ACFCWCD), the Workgroup benefits from the active participation of Alameda County Water District (ACWD), the Alameda Creek Alliance (a citizen's group), the California State Coastal Conservancy (SCC), the California Department of Fish and Game, the East Bay Regional Park District, the National Marine Fisheries Service, Pacific Gas and Electric company, the San Francisco Public Utilities Commission (SFPUC), the U.S. Army Corps of Engineers (Corps), and the Zone 7 Water Agency. The Workgroup has met regularly since its inception and has adopted a statement of goals and objectives to guide its activities.

In February 2000, the Workgroup published a report entitled *An Assessment of the Potential for Restoring a Viable Steelhead Trout Population in the Alameda Creek Watershed* (hereafter, *Assessment*). The *Assessment* found that suitable habitat exists in the watershed to support steelhead spawning and rearing, but that in-migration was completely prevented by the presence of several barriers in the lower portion of the watershed. It concluded that making these barriers passable was essential to steelhead restoration in Alameda Creek. The *Assessment* also made recommendations to address migration and other steelhead restoration issues in the watershed.

In 2002 the Workgroup completed a *Draft Restoration Action Plan* (hereafter, *Plan*), developed through a grant from the California Department of Fish and Game. The *Plan* used the recommendations contained in the *Assessment* as a starting point and presents a plan of action to effect restoration. The *Plan* identified the need to implement nine

passage barrier modification projects, seven fish screens or sets of fish screens at water diversion points, instream flow provisions for four reaches of Alameda Creek to increase available summer rearing habitat, proposed riparian corridor improvements and a steelhead supplementation program. Implementation of these actions should be sufficient to restore a viable steelhead run in the watershed. The Plan also included a monitoring program to track the success of the restoration actions and to inform future management decisions.

Current and Planned Alameda Creek Restoration Activities

Planning for modification of some of the major barriers in the lower watershed is underway through the Corps' §1135 Process, a federal restoration program for aquatic ecosystems affected by flood control projects. The §1135 Process will incorporate several key fish passage projects in the section of Alameda Creek channelized for flood control, including their planning, design, funding and construction. The process is being undertaken by the Corps in cooperation with ACFCWD and ACWD, with the Corps having recently completed the Preliminary Restoration Plan (2002) and Project Management Plan (2003) for the project. Also, the SFPUC is sponsoring removal of two obsolete Alameda Creek dams in Niles Canyon east of Fremont. The SFPUC has dedicated funds for project implementation, including grant funding from CALFED, and initiated the environmental review process for these projects. Zone 7 Water Agency is also currently developing a project that will improve fish passage and habitat in the Arroyo Mocho, a tributary to Alameda Creek.

In addition, the SFPUC and ACWD have conducted fishery studies since 1995. These studies indicate that resident rainbow trout populations in the SFPUC's San Antonio and Calaveras Reservoirs are descended from native steelhead stocks. These studies also indicate that the water temperature requirements of steelhead require steelhead to ascend to the higher elevations in the watershed to reach suitable cool water rearing habitat. Funding of this grant proposal would assist with allowing anadromous steelhead to reach these areas, and to enhance the available rearing habitat.

Proposed Projects for Grant Application.

The Workgroup has identified the following Alameda Creek watershed projects as critical for the success of the steelhead restoration efforts. The projects are located throughout the watershed and will be implemented by various agencies involved in the Workgroup, including ACWD, ACFCWCD, SFPUC, Zone 7 Water Agency, EBRPD and City of Fremont. Grant funding for these projects through the Regional Board and/or CALFED will ensure that these projects are implemented, with the overall goal of providing fish passage and habitat improvements in order to restore a viable and sustainable population of steelhead to the local watershed. The location of each of these projects is also shown on the attached map of Alameda Creek watershed. (*note: map to be added to proposal*)

1. Quarry Lakes-Pit T Interconnection (ACWD) – Funding Request: \$1.0 M

Through a new interconnection of two existing recharge ponds, the Alameda Creek Quarry Lakes-Pit T Interconnection will help to consolidate ACWD's existing diversion facilities. Currently, the only means to provide recharge water to Pits T-1 and T-2 is through the inflation of an inflatable dam (lower rubber dam) on the Alameda Creek flood control channel and subsequent diversion of water from the flood control channel. This project will eliminate the need for the use of ACWD's lower inflatable dam during periods of steelhead migration, thus removing a potential fish passage barrier. This project will also eliminate the need for a more costly fish ladder and fish screen, while still providing for local groundwater recharge. The project will include the construction of a new pipeline under the Alameda Creek Flood Control Channel connecting the Quarry Lakes recharge facilities (north of the channel) and Pits T-1 and T-2 (south of the channel) – thereby providing an alternate source of recharge water to Pits T-1 and T-2. The estimated cost for this facility is \$1.0 million.

2. Kaiser Pond Diversion Fish Screen (ACWD) – Funding Request: \$0.4 M

The only means of providing water to the Kaiser Recharge pond (located south of the flood control channel) is through diverting water from the flood control channel. This project will involve the construction of a fish screen on this diversion to allow for safe passage of out-migrating steelhead to San Francisco Bay. The estimated cost for this facility is \$400,000.

3. Upper Inflatable Dam Fish Ladder (ACWD) – Funding Request: \$1.4M

This project involves the construction of a fish ladder at ACWD's upper inflatable dam in the Alameda Creek flood control channel. Fish passage at this facility will be required to ensure steelhead have access to the upper Alameda Creek Watershed. The design and construction of this facility will be closely coordinated with East Bay Regional Park District to provide interpretive signs and public access through a viewing area. The estimated cost for this facility is \$1.4 million.

4. Stonybrook Creek Passage Improvements (ACFCWCD, City of Fremont) – Funding Request: \$0.5M

Stonybrook Creek is considered to have the most viable salmonid habitat in the area downstream from the Sunol Valley. Native rainbow trout have been documented in this tributary, including a radio-tracked steelhead trout that migrated into the drainage in the winter of 1999. A passage study included temperature monitoring and showed summer temperatures remaining consistently below 18° C in pools, conditions suitable for rearing of juvenile salmonids. Tree canopy is dense and canyon walls are steep, providing ample shade.

Replacement of a culvert on Stonybrook Creek and retrofit or replacement of another would allow fish passage into an additional 0.6 miles (>3,000 ft.) of Stonybrook Creek

containing potential spawning and rearing habitat. Modification of the existing crossings to structures that span the active channel will not only eliminate the individual barriers, but will also allow for unimpeded transport of bedload leading to increased habitat quality. Preliminary cost estimates indicate that the lower barrier could be replaced at a cost of \$400,000-\$500,000, while the upper barrier could be modified at a cost of approximately \$30,000-\$40,000.

5. Sunol Valley Restoration (SFPUC, EBRPD) – Funding Request: \$1.3M

Alameda Creek through Sunol Valley represents a difficult passage area for steelhead in the event that an anadromous run returns to the area following installation of the ladders over ACWD facilities discussed above. A PG & E drop structure (installed to protect a large gas line) needs to be removed and replaced with a series of step pools (or similar improvement) to gradually change the grade of the stream and reduce erosion at the pipeline crossing. The estimated cost for this improvement is approximately \$800,000. In addition, the SFPUC is working with its quarry lessees to reduce subsurface percolation in Sunol Valley at the quarry lessees' expense. However, there is a need for plantings along the stream banks throughout Sunol Valley to provide shade and cover for riparian species and improve water quality. The project would also accommodate trail improvements managed by the East Bay Regional Park District that were contemplated in the SFPUC's Alameda Watershed Management Plan adopted in September 2000. The estimated costs for these improvements is approximately \$500,000.

6. Arroyo de la Laguna erosion control and riparian enhancement studies (Zone 7, SFPUC, ACFCWCD) – Funding Request: \$250,000

The Arroyo de la Laguna between Pleasanton and Sunol Dam contains some of the best remaining Valley Oak riparian habitat in the region. This habitat is threatened by continued downcutting of the channel. Continued deposition of sediment from the Arroyo occurs in the lower Alameda Creek Flood Control channel in Fremont, requiring desilting operations by the Alameda County Flood Control District. This project would have multiple purposes: (1) reducing erosion; (2) enhancing the riparian zone; (3) sediment management; and (4) recreational access. The project would be undertaken in coordination with the Zone 7 water agency, East Bay Regional Park District, and the Alameda County Flood Control District. The estimated cost to conduct the erosion control studies is approximately \$250,000.

7. SFPUC Rubber Dam Upstream of Sunol Valley (SFPUC) – Funding Request: \$1.0 M

The SFPUC has designed a low (3 foot high) rubber dam in the vicinity of the Sunol Valley Water Treatment Plant. The purpose of this facility is to recapture water released from Calaveras Dam. These water releases would enhance five miles of critically needed rearing habitat for steelhead and other native fish. The facility would be operated to allow for passage of adults upstream and movements of smolts downstream. The estimated cost for this facility is \$8 million.

8. Development of offstream water sources for cattle (SFPUC, EBRPD)– Est. Cost \$80,000.

The SFPUC manages vegetation in its 40,000 acre Alameda Creek watershed holdings using grazing allotments managed by lessees. These operations take place in concert with similar leases managed by the EBRPD. The SFPUC's 1997 Grazing Management Plan called for structural improvements to protect water quality and riparian vegetation through the installation of fencing and the creation of off stream watering troughs for cattle. Fencing along Alameda Creek is scheduled to be installed by SFPUC and EBRPD using grant funds from the Natural Resources Conservation Service. This portion of the grant would be used to create offstream water sources for cattle.

Description of six general criteria

- 1. Describe how the Concept Proposal targets an environmental protection or water quality problem identified in an existing watershed plan, SWRCB and RWQCB plan, and/or CALFED Drinking Water Quality Program Plan or Watershed Program Plan.**

Concept proposal is consistent with:

- Alameda Creek Fisheries Workgroup Steelhead Restoration Plan
- Beneficial uses identified for Alameda Creek in RWQCB Basin Plan
- Goals and Objectives of the SFPUC Alameda Creek Watershed Management Plan

- 2. Describe how the Concept Proposal addresses pollutants of concern for an impaired water body, implementation of TMDL, and/or NPS Management Measure, and/or CALFED Drinking Water Quality Program or Watershed Program priority.**

Concept proposal addresses the following issues:

- Ecosystem and aquatic habitat of Alameda Creek
- Cattle grazing and associated water quality problems in Alameda Creek
- Erosion and sediment loading in Alameda Creek

- 3. Describe how the Concept Proposal includes a technically sound and effective means of preventing degradation of water quality and/or restoring water quality, and/or implements the CALFED Drinking Water Quality Plan or Watershed Program Plan.**

Discussion to be added

- 4. Describe how the Concept Proposal provides measurable water quality improvements, and/or improvements in local community capacity to conduct effective watershed management.**

Discussion to be added

5. Describe how the Concept Proposal enhances collaboration and coordination among multiple stakeholders, and contributes to more effective water quality and/or watershed management.

Concept proposal enhances on-going watershed management planning activities:

- Alameda Creek Fisheries Workgroup
- Alameda Creek Watershed Management Plan Steering Committee
- Zone 7 Stream Management Plan
- ACFCWCD sediment management planning

6. Describe how the Concept Proposal provides benefits to the local community and how the benefits will be distributed equitably.

Concept proposal enhances community benefits:

- improved health of local stream ecosystem
- improved opportunities for recreation, and fishery/wildlife viewing
- improved opportunities for public education on watershed management, fisheries, ecosystem health, etc.
- improved access to trails along Alameda Creek