



A Regional Collaboration in Natural Resources Conservation

# Arroyo de la Laguna Streambank Restoration Project

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## Project Fact Sheet

### Project Site

This streambank restoration project is located along a 1,000-foot section of Arroyo de la Laguna, about a half-mile south of the Verona Road bridge between Pleasanton and Sunol. The arroyo is the main tributary to Alameda Creek, the second largest drainage to the San Francisco Bay.

Arroyo de la Laguna's channel drains approximately 400 square miles of Alameda Creek watershed in the Tri-Valley region, and provides habitat for the California red-legged frog, the Western pond turtle, migrating songbirds and future habitat for steelhead trout.

**Landowner:** San Francisco Public Utilities Commission

### The Problem

The arroyo, its wildlife habitat, and its flood protection capabilities are severely impacted by additional runoff from upstream Tri-Valley development, and other factors, including the channel's natural characteristics. The problem is worsened during peak storm events.

- Bank erosion and channel widening along the lower five miles of the arroyo are increasingly threatening the backyards of private properties and even nearby Foothill Road, a major Alameda County thoroughfare.
- Native trees are falling into the arroyo as the creek banks erode.
- Sedimentation and debris carried out through Niles Canyon and toward the Bay are playing havoc impacting flood-control capacity, water quality and riparian habitat.
- Alameda County spends millions of dollars on clearing out the sedimentation as a stop-gap measure to reduce flooding risk in lower Alameda Creek.
- The sedimentation interferes with percolation of clean water to the groundwater storage basins in the lower watershed.
- No single agency has the funds or the responsibility to fully implement the \$600,000 project.
- Local agencies seek experience with biotechnical and bioengineering practices in an urban setting so as to apply it elsewhere.

## **The Solution**

A collaborative effort by local, state and federal agencies focuses on reducing streambank erosion, establishing vegetation, and improving riparian habitat through a series of federally approved “biotechnical and bioengineered” stream restoration practices. The cost is estimated at \$650,000.

- These practices, not commonly used in urban settings by the NRCS, will be applied to this semi-urban creek.
- Various measures used in this demonstration project are aimed largely at slowing down water in the arroyo and forcing it back toward the middle of the creek, while creating a more dynamic and healthier habitat for fish and wildlife.
- The restoration will be completed prior to mid-October 2006.

## **Benefits from the Restoration**

- Improved Water Quality
- Reduced erosion and silt deposition downstream and reduce de-silting costs
- Protection of Foothill Road
- Technical demonstration for application at other sites in Alameda Creek Watershed, including those identified in Zone 7 Water Agency’s Stream Management Master Plan, as well as at other urban watersheds
- Demonstration of regional and multi-agency collaboration
- Improved habitat for fish and wildlife

## **Regional Partners Demonstrate Collaboration**

San Francisco Public Utilities Commission:	Landowner; NRCS Wildlife Habitat Incentives Improvement Program (WHIP) cooperator; Funding Partner
<ul style="list-style-type: none"> <li>• Dublin-San Ramon Services District</li> <li>• County of Alameda</li> <li>• Zone 7 Water Agency</li> <li>• Alameda County Water District</li> </ul>	Funding Partners
United States Department of Agriculture Natural Resources Conservation Service (NRCS)	Project Leadership –management and engineering; Funding Partner - Wildlife Habitat Incentives Program
Alameda County Resource Conservation District (RCD)	Project Leadership –administration, outreach and construction administration

**Alameda County Resource Conservation District (RCD)** provides leadership in the County and region about natural resources conservation and agricultural enhancement through education and outreach, resource services and technical assistance, partnerships and funding. In partnership with the Natural Resources Conservation Service, the Arroyo project demonstrates the Conservation Partnership's leadership in solving natural resources concerns with innovation and regional collaboration. The RCD serves as project administrator.

**Natural Resources Conservation Service (NRCS)** is an agency of the U.S. Department of Agriculture. Its mission is to work cooperatively with local landowners and land users to provide leadership and technical and financial resources in the conservation of our nation's soil, water, air, plant, animal and related natural resources. The NRCS, in partnership with the Alameda County RCD, provided \$200,000 in Wildlife Habitat Incentives Program (WHIP) funds to initiate this project. In addition, the NRCS provided engineering design, regulatory permitting coordination and technical oversight in the installation of this project. NRCS is demonstrating the use of biotechnical and bioengineering practices for urban settings.

**San Francisco Public Utilities Commission (SFPUC)** manages water, wastewater and municipal power for the City and County of San Francisco and owns the parcel where the site is located along the Arroyo de la Laguna in Alameda County. Pursuant to a Wildlife Habitat Incentives Program (WHIP) cooperator agreement, SFPUC and WHIP both contribute \$197,000 equally toward the construction costs. SFPUC is interested in demonstrating the effectiveness of this project so that it can be utilized elsewhere in the arroyo. In addition, SFPUC wants to reduce bank erosion on its property.

**Dublin San Ramon Services District (DSRSD)** contributed \$100,000 as mitigation funding for exclusive use on the Arroyo project. The District is a stakeholder in the Upper Alameda Creek Watershed.

**County of Alameda, Public Works (PBWKS)** has provided \$50,000 as a project co-sponsor in order to help prevent additional erosion alongside Foothill Road. It also wants to reduce the costs to dredge sediment in the Lower Alameda Creek near the Bay, which is very costly and to improve habitat for wildlife.

#### **Livermore-Alameda County Zone 7 Water Agency (Zone 7)**

Zone 7 contributed \$50,000 for this project as the project is located within an area identified in Zone 7's proposed Stream Management Master Plan. Some of the same biotechnical and bioengineering techniques utilized in this pilot project are recommended as components in many of the master plan's proposed projects for bank stabilization, erosion and sediment control. Also, Zone 7 is starting to implement a flood-control plan that no longer relies exclusively on Arroyo de la Laguna to funnel water out of the valley. The new plan calls for diverting some storm water to a series of gravel pits between Livermore and Pleasanton that, as mining operations are completed, will become a "chain of lakes." The stored water would be released downstream only after storms pass, helping to maintain arroyos in a more natural state.

**Alameda County Water District (ACWD)** joins the collaboration as a \$10,000 funder. The Alameda Creek watershed contributes to the District's groundwater basin. This project will enhance the arroyo's water quality as it enters the groundwater basin.

**Four Winds Growers** in Fremont donated 50 mature eucalyptus trees that were removed from Mission Creek in a prior streambank restoration project. The funding to remove the trees was provided as mitigation by an urban project in Hayward.

**Hanford Applied Restoration & Conservation (Hanford ARC), Contractor**

This specialized restoration contractor has experience with habitat restoration projects throughout the United States. These projects have included numerous applications of cutting edge technology in the fields of soil bioengineering and habitat restoration for wetlands, streams, soil erosion and other applications.

**Media Contacts**

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**Directions to View the Project**

From I-680 in Pleasanton, exit at Castlewood Drive and go west. Turn left (south) onto Foothill Road, toward Sunol. The site is about two miles from Castlewood Drive, on the east, across the road from Pleasanton Ridge Park’s parking lot. The project site is where the arrow crosses the roads, below. Visitors may view the construction from Foothill Road, from outside of the fence. ***This is a restricted, hard hat construction zone, and visitors may not enter.***

