

# Restoring natural beauty

County uncovers stream to reestablish natural flow and habitat.



**A** recently unearthed and restored section of Castro Valley Creek in Castro Valley, Calif., could have remained buried in concrete if not for a partnership between local government agencies. Two decades ago, a developer encased a 300-foot-long section of the creek, which flows to a San Francisco Bay tributary, in an underground culvert. In 1993, Alameda County bought the surrounding site, under which the buried stream flowed, planning to construct a library on it. Seeing a chance to enhance the library and improve the environment, county officials planned to uncover the stream's culverted section. Funding for the project, however, proved elusive.

In 2002, nearby Union City began designing a multi-modal transit project that called for converting a section of open concrete channel into an underground culvert. To lessen the environmental effects of the culvert, regulatory agencies required the city to remove a culvert from another stream, but a suitable stream did not exist in its jurisdiction.

The Alameda County Flood Control and Water Conservation District then proposed that Union City contribute \$500,000 toward the cost of restoring Castro Valley Creek near the library. Following negotiations, the district moved forward with the stream restoration while Union City proceeded with its transit project.

Questa Engineering, of Point Richmond, Calif., designed the stream restoration, and McGuire and Hester, of Oakland, began construction in spring 2007. Lasting approximately three months, the work involved removing the concrete culvert, regrading the channel and installing approximately 1,320 tons of rocks.

Employing riffles, runs, and deep pools, the restored stream section is a dynamic stretch of different habitats for various fish and microorganisms. Vegetation planted along the waterway helps control erosion, improve wildlife habitat and maintain low water temperatures. The restored stream also improves water quality by slowing water flow so contaminants and pollutants settle to the bottom to be removed by the creek's vegetation. Turbulence resulting from the stream channel's rough surface aerates the creek and increases its concentrations of dissolved oxygen, which

**Project:**  
Urban stream restoration

**Jurisdiction:**  
Alameda County, Calif.

**Agency:**  
Flood Control and Water Conservation District

**Contractors:**  
Point Richmond, Calif.-based Questa Engineering Corp.; Oakland, Calif.-based McGuire and Hester

**Date:**  
Fall 2007

**Cost:**  
\$600,000

is critical for fish and other aquatic wildlife.

Library construction began in April and is scheduled for completion in fall 2009. The restored stream will be in view from the library. The district intends to add a bridge over it and a trail with lighting, interpretive signs and public art nearby, creating a pedestrian-friendly corridor to connect nearby neighborhoods, commercial areas and a Bay Area Rapid Transit station. ACC

A section of stream that was hidden by a culvert has been uncovered on the site of an Alameda County library under construction. The new waterway is designed to support wildlife.