



Safe, Clean Water
and Natural Flood Protection

PRIORITY F

PROJECT F1: Vegetation Control and Sediment Removal for Capacity

PRIORITY F Support public health and public safety for our community

YOUR TAX DOLLARS AT WORK



Valley Water

Safe,
Clean
Water

and Natural Flood Protection

About the Project

Project F1 supports Valley Water's ongoing vegetation control and sediment removal activities that reduce flood risk by maintaining the design conveyance capacity of flood protection projects. The project includes controlling in-stream vegetation and tree growth and removing sediment at appropriate intervals. Before carrying out in-stream maintenance, Valley Water's personnel perform biological pre-construction surveys to minimize environmental impacts. Any unavoidable impacts are mitigated through environmental restoration and improvement projects.

The project also helps fund future maintenance of flood protection projects completed under the Safe, Clean Water Program. It comprises two sub-projects that support Valley Water's ongoing vegetation control and sediment removal activities. Specifically, they are:

- F1.1 Vegetation Control for Capacity
- F1.2 Sediment Removal for Capacity



Sediment removal at Sunnyvale East Channel.

Benefits

This project helps ensure existing flood protection projects continue to provide flood protection and improve and protect stream water quality.

Key Performance Indicator

Maintain completed flood protection projects for flow conveyance.

History of Santa Clara County Creeks

Historically, streams in Santa Clara County would slowly meander, soaking into the earth through gravels and aquifers, feeding seasonal ponds and wetlands that expanded and

contracted with flood and drought. Sediment and debris carried by these flows accumulated causing redirection of the stream's course or flooding. As these wetlands and seasonal ponds were drained for agriculture and development, streams were channelized and neighborhoods were built, reducing the usable area for the streams to fan out naturally. As the population and agricultural use peaked, so too did the pumping of the Valley's vast aquifer. As a result of aquifer depletion, the elevation of the valley floor subsided, prompting the need to construct levees and flood control structures. These structures would raise the elevation so that seasonal flows could be contained within a more narrow floodplain.

Releases from water storage facilities in the upper watersheds of our creeks sustain native fish populations and recharge ground water but also contribute to increased variation in seasonal vegetation density, sedimentation and erosion. Today, these channelized flood protection structures rush water through the landscape to keep the residents of Santa Clara County safe from floods. However, they require significant maintenance and repair given that human interventions have altered the natural role of the wetlands.



In-stream vegetation control at Los Coches Creek.

Sediment and Flow Conveyance

Sediment and debris washed downstream can restrict the flow of water in some areas. During a heavy storm, these restricted flow areas could cause water to back up, increasing the risk of flooding. Crews remove sediment to allow stormwater to flow through the creeks as designed. Selective removal of in-stream vegetation maintains flow conveyance in streams and riparian corridors. This work is performed in the warmer and low rain months in preparation for fall and winter flows. In salmonid streams, work must generally be done between June 15 and October 31, to allow for the upstream migration of spawning adult steelhead.

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The Sunnyvale East Channel before sediment removal.



The Sunnyvale East Channel after sediment removal.

Vegetation and Flow Conveyance

Vegetation plays a dynamic role in the way streams behave. Grasses, herbs, shrubs, and trees sink their net-like roots deep into banks and covered by organic matter, form a natural filtration, soil erosion protection, and bank stabilizing subsoil network. This network of roots taps directly into the stream and the aerial parts of these plants form the riparian canopy. This canopy is vitally important—not just to birds and insects, but for water quality. In addition to being visually pleasing, the canopy's shade prevents the growth of algae, weeds, and cattails; lowers the water temperature, making it more suitable for wildlife and aquatic species.

While shaded creeks may be a desirable outcome, some of the vegetation eventually needs to be cleared out to maintain the design flow conveyance capacity. Valley Water works to identify creeks within its land rights that are in need of periodic maintenance.

Beneficial Reuse of Sediment for Restoration

To the extent possible, Valley Water coordinates its sediment removal work with **Safe, Clean Water Project D3: Sediment Reuse to Support Shoreline Restoration**. Removed sediment that meets specific reuse criteria is delivered to U.S. Fish and Wildlife Service-owned Pond A8 to provide a suitable substrate

on which marsh vegetation can grow, helping to create and restore tidal marsh habitat. In addition to the environmental benefits, reusing sediment reduces disposal costs as the sediment would have otherwise been taken to landfills.

Funding

The project is funded in part by the voter-approved Safe, Clean Water and Natural Flood Protection (Safe, Clean Water) Program, under Project F1. The estimated total project cost is \$202.5 million, of which \$103.6 million is funded by Safe, Clean Water Program.

About Valley Water

Valley Water, with a history dating back to 1929, manages an integrated water resources system that includes the supply of clean, safe water, flood protection and stewardship of streams on behalf of Santa Clara County's 2 million residents.

For assistance

Access Valley Water Hotline:



valleywater.org



408-630-2378

A full list of projects in the **Safe, Clean Water and Natural Flood Protection Program** can be found at www.valleywater.org/safe-clean-water-and-natural-flood-protection-program.

CONTACT US

To find out the latest information on Valley Water projects or to submit questions or comments, use our **Access Valley Water** customer request system at access.valleywater.org.



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