

Lower Penitencia Creek Improvements Project



View from the Milmont Drive bridge facing downstream of Lower Penitencia Creek.

Lower Penitencia Creek

Lower Penitencia Creek is located in the northeastern portion of Santa Clara County within the City of Milpitas. Valley Water improved Lower Penitencia Creek in 1955 and in the 1980s as commercial development construction occurred in the surrounding area. In June 2023 Valley Water completed improvements that included channel widening and raising the levees to increase the creek's capacity to carry storm flows and reduce flood risk. The project also included planting native plants, which are in a 3-year plant establishment period, to ensure their successful growth and benefit.

About the project

The Lower Penitencia Creek Improvements Project extends approximately one mile from its confluence with Coyote Creek to San Andreas Drive in Milpitas. This project was necessary to provide continued flood protection for residents and businesses currently protected along the one-mile project area.

Lower Penitencia Creek receives storm flows from Berryessa Creek and into Coyote Creek. Construction has begun on improvements to Berryessa Creek that will bring more storm flows into Lower Penitencia Creek. In its previous condition, Lower Penitencia Creek did not have the required capacity to carry the increased storm flows when Berryessa Creek flood improvements are completed.

East of Lower Penitencia Creek, Valley Water completed the Lower and Upper Berryessa Creek flood protection projects to provide a 100-year storm level of service, with work on Calera Creek planned for summer 2021. A 100-year storm event is an event that has a 1 percent chance of occurring in any given year.

The Lower Penitencia Creek Improvements Project's planning and design phases were funded by the California Department of Water Resources' Proposition 1E grant. Valley Water's Watershed Stream Stewardship is funding the construction of the flood improvements.



Flood protection

Completion of the improvements along the Upper and Lower Berryessa Creek projects will increase storm flows to Lower Penitencia Creek during a 100-year event. This project would prevent the increased water flow from overtopping Lower Penitencia Creek banks, causing a flood.

This project's completion is necessary to maintain the existing Federal Emergency Management Agency (FEMA) accreditation along the east levee located between California Circle and Berryessa Creek. The current accreditation is for a 100-year flood event and level of protection.

When improvements are completed for the Lower Penitencia and Berryessa Creek projects, Valley Water will update the FEMA flood insurance maps accordingly.

Project objectives

The Lower Penitencia Creek Improvement Project objectives

- Safely carry and prevent the overtopping of Lower Penitencia Creek from the increased Berryessa Creek storm flows.
- Reduce flood risks by aligning the creek elevations where Coyote and Berryessa creeks meet.
- Continue a 100-year level of flood protection to the surrounding homes, businesses, and public facilities.
- Minimize the need for seasonal maintenance.
- Maintain existing Federal Emergency Management Agency (FEMA) accreditation along the east levee located between California Circle and Berryessa Creek and ensure improvements meet certification requirements.



Reach 3, Milmont Road to California Circle (Midstream Right Bank)



BEFORE

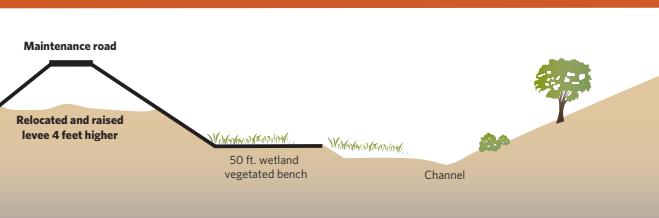


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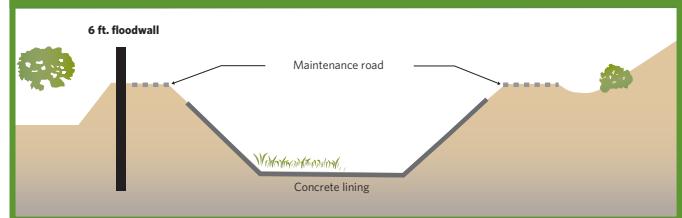
Reach 4, San Andreas Drive to Milmont Road (Left Bank Downstream)

Completed project improvements along Lower Penitencia Creek

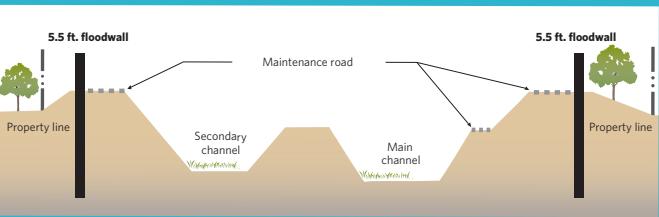
Reach 1—Coyote Creek to Interstate 880



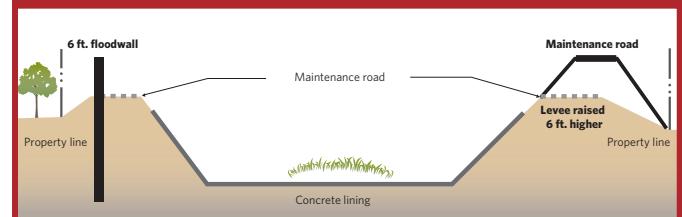
Reach 2 — Interstate 880 to California Circle



Reach 3 — California Circle to Milmont Drive



Reach 4 — Milmont Drive to San Andreas Drive



The sheet pile will be permanently installed as part of the flood protection project improvements. Photo rendering of the steel sheet pile floodwall from inside the Waterstone Development. The floodwall is the structure directly behind the wooden fence.



BEFORE



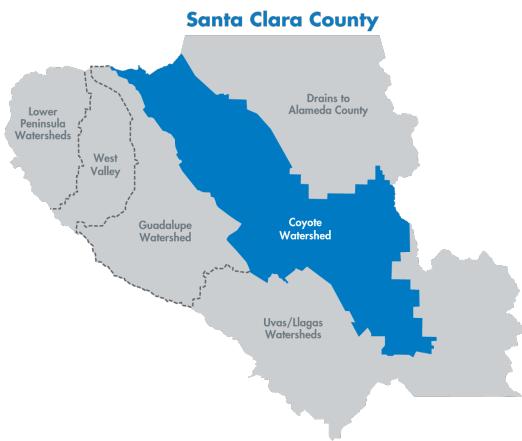
AFTER

Reach 2, California Circle at the pump station

You're in a watershed

A watershed is the area of land that drains a common waterway. In Santa Clara County, our creeks catch rain and runoff from storm drains and carry the water north to San Francisco Bay or south to Monterey Bay. Along the way, some of the water fills reservoirs for drinking water, replenishes the underground aquifer and creates better habitat for fish and wildlife.

This project is in the Coyote Watershed. Sixteen major creeks drain this 350-square-mile area. The county's largest watershed extends from the urbanized valley floor upward to the vast natural areas of the Mt. Hamilton range. Coyote Creek, its main waterway, is the longest creek in the county.



CONTACT US

To find out the latest information on Valley Water projects or to submit questions or comments, contact Jose Villarreal at 408-630-2879 or jvillarreal@valleywater.org or use our Access Valley Water customer request system at <https://delivr.com/2x9ff>.

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