

PROJECT A2

WATER CONSERVATION REBATES AND PROGRAMS

This project to help meet and exceed long-term water conservation and reliability goals will increase water-use efficiency in the landscape, residential, schools and commercial sectors through water conservation rebates, technical assistance and public education.

Water Conservation rebate programs may include a residential leak detection and assistance program, an expanded landscape rebate program that promotes California-native plant species as well as water-saving plants, advanced metering infrastructure (AMI) and a restaurant-efficiency and school-efficiency upgrade program.

Water conservation helps manage risks to water supply reliability from climate change and reduces greenhouse gases. Without water conservation, Valley Water would need to import more water or develop additional infrastructure to yield a commensurate water supply every year. Water conservation reduces reliance on imported water supply by creating a more diverse portfolio of supply that is more resilient to risks and uncertainties.

For example, in fiscal year (FY) ~~2023~~ 2024, approximately ~~83,174~~ 85,204 acre-feet of water were saved through Valley Water's long-term conservation programs and plumbing code regulations. Water conservation programs ensure water supply resiliency as the risk of drought increases due to climate change.

Supplying water, **including extracting, conveying, treating, and distributing**, requires a lot of energy ~~to extract, convey, treat, and distribute~~, which may account for up to 10% of California's greenhouse gas (GHG) emissions. Hence, reducing water demand through conservation reduces GHG emissions. Valley Water's 2011 "From Watts to Water" report ([tinyurl.com/ WattsToWater2011](https://www.valleywater.org/Portals/0/PDF/FromWattsToWater2011.pdf)) explains in more detail the crucial role water conservation plays in reducing GHG emissions.

Water conservation also helps adapt to climate change by conserving limited water supply and lessening demand to meet an uncertain water supply future.

Additionally, conservation helps reduce pollution to the Bay because overwatering of irrigated areas, such as lawns, can carry pollutants such as pesticides, herbicides, fertilizers, soil, and trash, which pollute our creeks and the Bay. Minimizing water waste from overwatering and converting landscapes to ones that require fewer chemicals protects our watersheds.

Benefits

- Helps county residents exceed the countywide goal of conserving 110,000 acre-feet of water per year by 2040
- Increases water supply reliability by creating a more diverse portfolio of supply that is more resilient to risks and uncertainties
- Reduces greenhouse gases by reducing water usage, thereby decreasing the energy required for water conveyance, treatment, and distribution
- Supports climate change adaptation by conserving limited water supply and lessening demand to meet an uncertain water supply future
- Reduces pollution to the Bay by reducing irrigation runoff

Key Performance Indicators (FY22-36)

1. Award up to \$1 million per year toward specified water conservation program activities, including rebates, technical assistance, and public education, within the first seven (7) years of the Program.



Permaculture pilot project students learning hands-on lawn conversion.

ACTIVE

ADJUSTED

Project A2 FY25 Highlights

- Provided \$1.1 million towards water conservation activities, including rebates.
- The funding helped Valley Water to convert more than 960,000 square feet (sq ft) of lawn into low water-use landscapes.
- Began the procurement process for the design of the demonstration garden in Valley Water's HQ building.

PROJECT D1

MANAGEMENT OF RIPARIAN PLANTING AND INVASIVE PLANT REMOVAL

This project supports Valley Water management of at least 300 acres of existing riparian planting projects and 200 acres of invasive plant removal projects throughout the five (5) watersheds. The project also funds maintenance of future riparian planting and invasive plant removal sites, which are anticipated as part of upcoming environmental mitigation requirements. Funding for this project ensures that all required riparian planting and invasive plant removal projects are maintained as functional habitat that can support wildlife. In addition, this project includes targeted control of especially damaging non-native, invasive plant species, such as *Arundo donax*, throughout the county.

Climate change has increased temperatures and lengthened growing seasons, which facilitates the spread of non-native invasive vegetation by allowing it to establish early in spring before native species, thus transforming ecosystems.

Riparian planting aims to reestablish native California plant species, combating habitat loss and fragmentation from urban development and sprawl. Carefully selected perennial plants, which can thrive for decades, aid in climate change mitigation by producing oxygen and absorbing and storing carbon in various forms. The shade provided by mature trees helps to moderate the urban heat island effect, reducing the need for additional energy sources to keep us comfortable. **Shade can also help moderate the water temperature of streams, limiting extreme changes that can impact fish and other aquatic organisms.** Invasive plant control targets non-native species, often less tolerant to climate extremes like flooding and droughts. These species can hinder the reestablishment of native plants after such disturbances and can diminish forest carbon storage capacity. Invasive plants also tend to form dense monospecific thickets, increasing the risk of more frequent and severe wildfires. Management of riparian planting and invasive plant removal helps prevent the spread of non-native species, making the natural habitat less vulnerable and more resilient to climate change. Furthermore, restoring habitats that are damaged during regular operations is an important component of sustainable stewardship to protect nearby natural areas. It helps improve native habitat.

Benefits

- Maintains 300 acres of existing riparian planting sites
- Maintains 200 acres of existing invasive plant management projects
- Allows Valley Water to monitor plant survival and habitat functions
- Complies with environmental laws, which require long-term habitat mitigation for routine stream maintenance, flood protection and water supply projects
- Provides for the maintenance of future riparian planting and invasive plant management sites
- Addresses climate change impacts by making the natural habitat less vulnerable and more resilient



Removing giant reed (Arundo donax).

ACTIVE

ADJUSTED

Project D1 FY25 Highlights

- Maintained 425.4 acres of riparian planting projects at 105 sites throughout Santa Clara County.
- Maintained 313.53 acres of invasive plant management projects at 23 sites throughout the county.
- Removed 1.78 acres of *Arundo donax* at 25 sites throughout the county.

PROJECT D4

FISH HABITAT AND PASSAGE IMPROVEMENT

This project helps restore and maintain healthy fish populations, especially steelhead, by improving fish passage and habitat. Sites may include Alamos Creek at Almaden Lake and County of Santa Clara-owned Ogier Ponds, where human-made creek alterations disrupt fish migration. Project D4, which includes coordinating and partnering with other external parties, incorporates studies of streams throughout the county to determine what and where habitat improvements will most benefit steelhead. These studies can be used by regional partners to implement complementary habitat enhancements.

The project also continues funding to place instream gravel, boulders, large wood, or other features to enhance fish habitat at appropriate locations. By adding natural stream features such as large wood, we can create habitat to provide refuge during fish migration, prolonged drought, or extreme rainfall events. Additionally, habitat restoration can improve ecosystem function and increase resiliency to climate change. By restoring natural functions, issues such as water quality may be ~~less exacerbated~~ **improved** and native species can continue to flourish and adapt.

Benefits

- Improves habitat and passage for steelhead and other native fish within Santa Clara County watersheds
- Contributes to required mitigation for environmental impacts of reservoir and recharge operations and countywide Stream Maintenance Program
- Maintains investment in earlier habitat improvements
- Improves fish passage and habitat conditions, strengthening the resiliency of native fish populations, including steelhead, against the impacts of climate change

Key Performance Indicators (FY22-36)

1. Complete planning and design for one (1) creek/lake separation.
2. Partially fund the construction of one (1) creek/lake separation project in partnership with local agencies.
3. Use \$8 million for fish passage improvements by June 30, 2028.
4. Update study of all major steelhead streams in the county to identify priority locations for fish migration barrier removal and installation of large woody debris and gravel as appropriate.
5. Complete five (5) habitat enhancement projects based on studies that identify high priority locations for large wood, boulders, gravel, and/or other habitat enhancement features.

Geographic Area of Benefit: Countywide



Ogier Ponds, looking north.

ACTIVE

ADJUSTED

Project D4 FY25 Highlights

- Completed the Feasible Alternatives Analysis Report for the Ogier Ponds-Coyote Creek Separation Project.
- Completed the Conceptual Alternatives Report and Feasible Alternatives Analysis Report for the Moffett Fish Ladder.
- Completed the data collection and stream reconnaissance phases of the fish passage barrier prioritization study for Guadalupe Creek, Alamos Creek, and Arroyo Calero.

PROJECT E5

SAN FRANCISQUITO CREEK FLOOD PROTECTION, SAN FRANCISCO BAY TO UPSTREAM OF HIGHWAY 101—PALO ALTO

This project is led by the San Francisquito Creek Joint Powers Authority (SFCJPA), of which Valley Water is a member agency, in partnership with the U.S. Army Corps of Engineers (USACE).

Preferred project: A federal-state-local partnership

The project is to construct improvements along San Francisquito Creek from San Francisco Bay to Middlefield Road and additional detention of floodwaters upstream of Highway 280 to provide 1% (100-year event) flood protection, ecosystem protection and recreational benefits to surrounding communities.

Local-state-limited federal funding partnership

San Francisco Bay to Highway 101 (Reach 1)

In 2019, Valley Water completed the construction of the San Francisco Bay to Highway 101 reach of the project to provide 1% flood protection and ecosystem benefits to the neighboring communities. Major improvements included construction of approximately ~~4,600~~ ~~4,000~~ feet of floodwalls, 6,100 feet of levees, and encompassed a total of 58 acres, creating a significantly wider creek marsh plain.

Highway 101 to Pope-Chaucer Bridge (Reach 2)

This stretch of the project will remedy channel constrictions and replace bridges at Newell Road and Pope/Chaucer streets to allow the channel to contain floodwaters of approximately 7,500 cubic feet per second, equivalent to approximately a 1.4% flood event (70-year event). Allowing this level of water to flow through the channel will protect approximately 3,000 parcels in Palo Alto from a flood event close to the February 1998 flood, the largest on record. Currently, the channel can only convey ~~between a 4-10% flood event (10- to 25-year event).~~ ~~approximately a 7% flood event (approximately a 15-year event).~~

The USACE is studying the San Francisquito Creek through its Continuing Authorities Program, Section 205 (CAP 205), which allows the USACE to study, design, and construct small flood risk reduction projects in partnership with non-federal agencies with a maximum project cost of \$10 million. The level of protection provided is still being studied but will likely be less than 1%.

The Newell Road bridge replacement, unlike the rest of the project elements in this stretch, is led by the City of Palo Alto, which has applied for funding through Caltrans' Highway Bridge Program (HBP). The project has been programmed by Caltrans to fund approximately 89% of the total cost for replacing the Newell Road bridge, while the local match funds, approximately 11% of the total cost, will be funded by Valley Water through the Safe, Clean Water Program. The City of East Palo Alto and the SFCJPA continue to provide input on the Newell Road Bridge replacement.

The SFCJPA continues to pursue partnerships with federal, state, and local agencies for additional construction funding **for the Reach 2 Project.**



Location of proposed in-channel widening along San Francisquito Creek.

ACTIVE

ADJUSTED

Project E5 FY25 Highlights

- SFCJPA Board reaffirmed its commitment to the goal to provide flood protection from a 70-year event (KPI #2).
- A draft augmented alternatives evaluation report was presented to the SFCJPA Board.
- The City of Palo Alto awarded the construction contract for the Newell Road Bridge Replacement project.

Benefits

- Provides 1% flood protection to approximately 3,000 homes and businesses in Palo Alto
- Local-state-funding-only project provides approximately 1.4% (70-year event) flood protection for approximately 3,000 homes and businesses in Palo Alto
- Reduces bank erosion and sedimentation-related impacts along San Francisquito Creek
- Provides new or improved habitats for endangered species
- Improves water quality
- Enhances recreational opportunities for the community
- **Minimizes operational and maintenance requirements**
- Leverages dollars via cost-shares and grants from the state Department of Water Resources and the California Department of Transportation
- Addresses climate change as the project is designed to increase flow capacity, thereby reducing flood risks from storm events projected to become more frequent and intense due to climate change. Furthermore, the project accounts for 2 feet of sea level rise

Key Performance Indicators (FY22-36)

1. Preferred project with federal, state and local funding: Protect more than 3,000 parcels by providing 1% (100-year) flood protection.
2. With state and local funding only: Protect approximately 3,000 parcels by providing 1% (100-year) flood protection downstream of Highway 101, and approximately 1.4% (70-year) protection upstream of Highway 101.

Geographic Area of Benefit: Palo Alto

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