Safe, Clean Water Program Adjustments and Modifications 2024

April 9, 2024	Modifications and text adjustments to Projects A1, E8, and F9
June 25, 2024	Schedule adjustments to Projects E5 and E6: Proposed Adjustments
August 13, 2024	Modifications and text adjustments to Project E8
November 12, 2024	Text adjustments to project description and/or benefits Project schedules revised: Appendix E-1.2

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(NOT IMPLEMENT UNDER THE SAFE, CLEAN WATER PROGRAM)

PROJECT A1

PACHECO RESERVOIR EXPANSION

A collaboration between Valley Water, the San Benito County Water District and the Pacheco Pass Water District, the Pacheco Reservoir Expansion Project is a strategic and long-term investment toward ensuring a more reliable supply of safe, clean drinking water in the face of climate change.

This project will boost Pacheco Reservoir's operational capacity from 5,500 acre-feet to up to 140,000 acre-feet, enough to supply up to 1.4 million residents with water for one year in an emergency. Located in southeast Santa Clara County, the expanded reservoir will also reduce the frequency and severity of water shortages during droughts, protect our drinking water supply and infrastructure and improve habitat for fish.

Valley Water has taken into consideration 2030 and 2070 projected future conditions with climate change to ensure that the reservoir is not only viable today, but can withstand the changes expected in the future.

Benefits

- Ensures a reliable supply of drinking water
- Provides an emergency supply of drinking water
- Improves habitat for fish, including federally threatened steelhead
- Reduces flood risk to disadvantaged communities
- Allows for environmental water management that supports habitat projects and other environmental water needs
- Addresses climate change

Key Performance Indicator (FY22–36)

1. Provide a portion of funds, up to $10 million, to help construct the Pacheco Reservoir Expansion Project.

Geographic Area of Benefit: Countywide

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PROJECT E8
UPPER GUADALUPE RIVER FLOOD PROTECTION, HIGHWAY 280 TO BLOSSOM HILL ROAD—SAN JOSÉ

Preferred project: A federal-state-local partnership

This federally authorized project continues a project in partnership with the U.S. Army Corps of Engineers (USACE) to plan, design and construct improvements along 5.5 miles of the channel extending from Interstate 280 to Blossom Hill Road. Improvements include channel widening, construction of floodwalls and levees, replacement of road crossings and planting of streamside vegetation. Reducing flood frequency and bank erosion will improve water quality, while planned mitigation measures will give fish access to an additional 12 miles of habitat within and upstream of the project reach.

USACE has initiated a General Re-evaluation Report (GRR) of the preferred project, which is anticipated to be completed by October 2023. The scope of the project may change as a result of the GRR findings.

Local-funding-only project

The locally funded project entails constructing flood protection improvements along 4,100 feet of Guadalupe River between the Southern Pacific Railroad (SPRR) crossing, downstream of Willow Street, to the Union Pacific Railroad (UPRR) crossing, downstream of Padres Drive (Reach 7). It also includes completing a gravel augmentation project along approximately 800 linear feet of the Upper Guadalupe River in San José, from approximately the Union Pacific Railroad Bridge to West Virginia Street Bridge to improve aquatic habitat for migrating steelhead and channel stability. Flood damage will be reduced through the local-funding-only project. However, protection from the 1% (100-year event) flood is not provided without completion of the entire Upper Guadalupe River Flood Protection Project.

Mitigation elements of the project, namely Reach 10B (from Curtner Avenue to Almaden Expressway) and Reach 12 (from Brahnam Lane to Blossom Hill Road), were completed in 2015 in partnerships with USACE. Construction on the gravel augmentation project is scheduled to begin in August 2021.

Benefits

- Preferred project will construct 1% flood conveyance capacity for 5.5 miles of channel in San José, protecting approximately 6,280 homes, 320 businesses and 10 schools/institutions
- Local funding only constructs improvements to 4,100 linear feet of Guadalupe River between the Southern Pacific Railroad (SPRR) crossing, downstream of Willow Street, to the Union Pacific Railroad (UPRR) crossing downstream of Padres Drive to convey 1% flow
- Improves stream habitat values and fisheries
- Improves stream water quality
- Allows for creekside trail access
- Addresses climate change

Key Performance Indicators (FY22–36)

1. Preferred project with federal and local funding: Construct a flood protection project to provide 1% (100-year) flood protection to 6,280 homes, 320 businesses and 10 schools and institutions.
2. With local funding only: Construct flood protection improvements along 4,100 feet of Guadalupe River between the Southern Pacific Railroad (SPRR) crossing, downstream of Willow Street, to the Union Pacific Railroad (UPRR) crossing, downstream of Padres Drive, and provide gravel augmentation along approximately 800 linear feet of the Upper Guadalupe River in San José, from approximately the Union Pacific Railroad Bridge to West Virginia Street Bridge to improve aquatic habitat for migrating steelhead and all native fish species and channel stability.

Geographic Area of Benefit: San José

PROJECT F9

GRANTS AND PARTNERSHIPS FOR SAFE, CLEAN WATER, FLOOD PROTECTION AND ENVIRONMENTAL STEWARDSHIP

This project provides grants, ~~and~~ partnerships, and rebates for agencies, organizations, and individuals for water conservation, pollution prevention, creek cleanups and education, wildlife habitat restoration and wildlife corridors and crossings, and access to trails and open space. Eligible projects include water conservation; recycled water programs and infrastructure; pollution prevention programs; watershed stewardship; creek cleanups; education; and developing plans and/or implementing projects that create or enhance wetland, riparian and tidal marsh habitat; protect special status species; improve fish passage and habitat; remove non-native, invasive plant species; plant native species; partnerships to remove flood-inducing blockages, and provide access to creekside trails or trails that provide a significant link to the creekside trail network.

Benefits

- Leverages community resources for efficient use of funds to implement projects that conserve water, prevent trash and contaminants from entering our waterways and groundwater, enhance creek and bay ecosystems, and expand trail and open space access
- Increases collaborations and partnerships with cities, the County, nonprofit organizations, schools and other stakeholders
- Promotes public involvement, awareness and education of safe, clean drinking water, flood protection and environmental stewardship through community-led projects
- Broadens opportunities for smaller jurisdictions

Key Performance Indicators (FY22–36)

1. Provide a grant and partnership cycle each year for projects related to safe, clean drinking water, flood protection and environmental stewardship.
2. Provide annual funding for bottle filling stations to increase drinking water accessibility, with priority for installations in economically disadvantaged communities and locations that serve school-age children and students.
3. Provide annual mini-grant funding opportunity for projects related to safe, clean drinking water, flood protection and environmental stewardship.
4. Provide up to $3 million per 15-year period for a Creekside Neighbor Rebate Program for watershed activities, including bank repair, sediment removal, and downed tree management. ~~partnerships with small municipalities (defined as under 50,000 people in the most recent census available), or special districts with boundaries substantially within the footprint of small cities, for projects aligned with the District Act and related to safe, clean drinking water, flood protection and environmental stewardship.~~

Geographic Area of Benefit: Countywide

PROJECT F9

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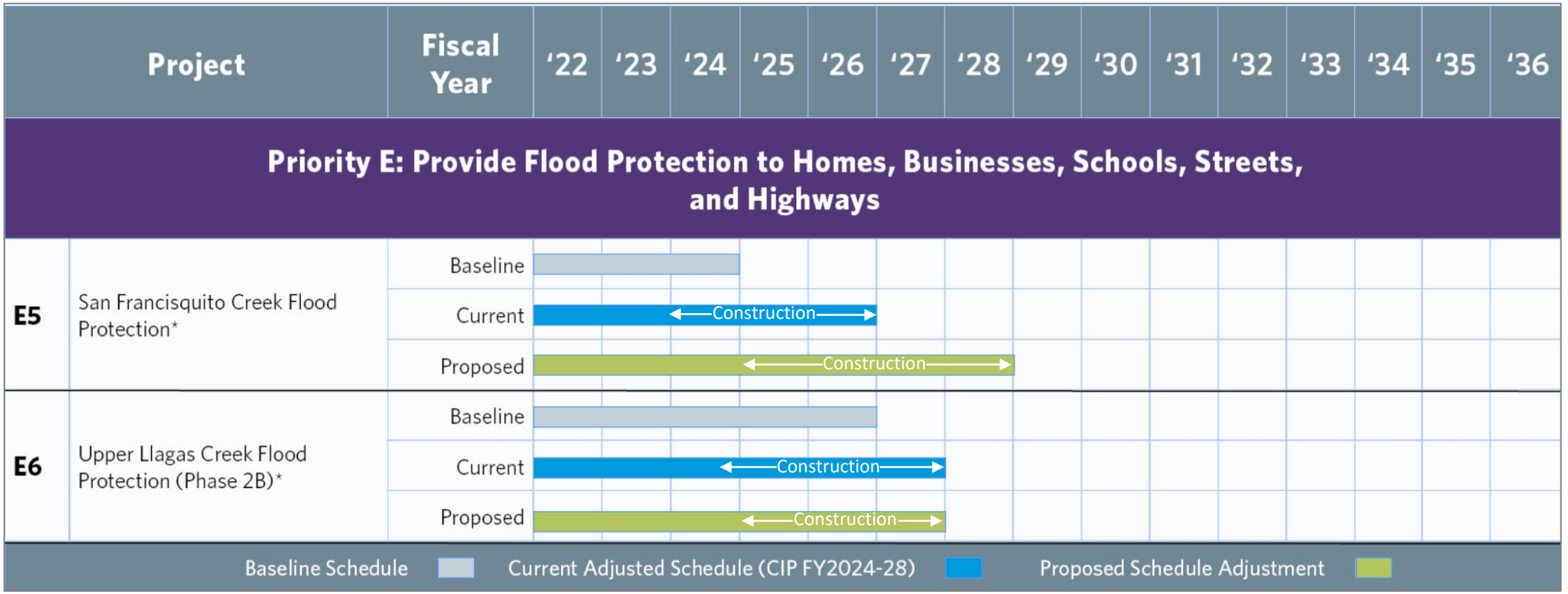
Geographic Area of Benefit: Countywide

Proposed Adjustments



* Includes Design and Construction, but not the plant establishment period and closeout.

Valley Water

PROJECT E8

UPPER GUADALUPE RIVER FLOOD PROTECTION, HIGHWAY 280 TO BLOSSOM HILL ROAD—SAN JOSÉ

Preferred project: A federal-state-local partnership

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~~USACE has initiated a General Re-evaluation Report (GRR) of the preferred project, which is anticipated to be completed by October 2023.~~ In January 2021, USACE initiated a General Reevaluation Study of the preferred project. The General Reevaluation Report (GRR) is expected to be completed by June 2025. The scope of the project may change as a result of the GRR findings.

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Local-funding-only project

The locally funded project entails constructing flood protection improvements along 4,100 feet of Guadalupe River between the Southern Pacific Railroad (SPRR) crossing, downstream of Willow Street, to the Union Pacific Railroad (UPRR) crossing, downstream of Padres Drive (Reach 7). It also includes completing a gravel augmentation project along approximately 800 linear feet of the Upper Guadalupe River in San José, from approximately the Union Pacific Railroad Bridge to West Virginia Street Bridge to improve aquatic habitat for migrating steelhead and channel stability. Flood damage will be reduced through the local-funding-only project. However, protection from the 1% (100-year event) flood is not provided without completion of the entire Upper Guadalupe River Flood Protection Project.

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Benefits

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- Local funding only constructs improvements to 4,100 linear feet of Guadalupe River between the Southern Pacific Railroad (SPRR) crossing, downstream of Willow Street, to the Union Pacific Railroad (UPRR) crossing downstream of Padres Drive to convey 1% flow
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- Allows for creekside trail access
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Key Performance Indicators (FY22–36)

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Geographic Area of Benefit: San José

Modified Funding Allocation

Project E8: Upper Guadalupe River Flood Protection, Reaches 7-12 Financial Summary ($ Thousand)	
15-Year Allocation	Proposed Modified 15-Year Allocation*
$**64,947**	**$22,278**

**The modified funding allocation is approximated at this time and shown in inflated dollars. The amounts will be finalized. Updated final amounts will be reflected in the Capital Improvement Program FY2026-30 Five-Year Plan. The Plan will also include prior year expenditures under the 2012 Safe, Clean Water Program as part of the updated total project cost.*

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PROJECT A1
PACHECO RESERVOIR EXPANSION

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This project will boost Pacheco Reservoir's operational capacity from 5,500 acre-feet to up to 140,000 acre-feet, enough to supply up to 1.4 million residents with water for one year in an emergency. Located in southeast Santa Clara County, the expanded reservoir will also reduce the frequency and severity of water shortages during droughts, protect our drinking water supply and infrastructure and improve habitat for fish.

Valley Water has taken into consideration 2030 and 2070 projected future conditions with climate change to ensure that the reservoir is not only viable today, but can withstand the changes expected in the future.

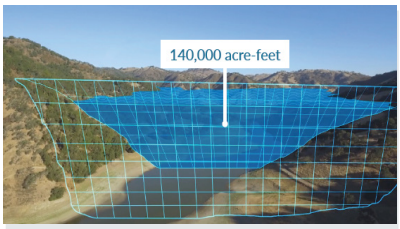
Benefits

- Ensures a reliable supply of drinking water
- Provides an emergency supply of drinking water
- Improves habitat for fish, including federally threatened steelhead
- Reduces flood risk to disadvantaged communities
- Allows for environmental water management that supports habitat projects and other environmental water needs
- Addresses climate change by considering 2030 and 2070 projected future conditions

Key Performance Indicator (FY22–36)

1. Provide a portion of funds, up to $10 million, to help construct the Pacheco Reservoir Expansion Project.

Geographic Area of Benefit: Countywide



Rendering of the proposed expanded reservoir.

SCHEDULED TO START

NOT IMPLEMENT and ADJUSTED

Project A1 FY24 Highlights

- The Board held a formal public hearing and approved not implementing the project under the Safe, Clean Water Program.
- The project, funded by the Water Utility Enterprise Fund, continued to progress as part of Valley Water's Capital Improvement Program (CIP).
- Continued to address the comments received on the Draft Environmental Impact Report (EIR) and develop the Final EIR/Environmental Impact Statement (EIS) document.

PROJECT A2
WATER CONSERVATION REBATES AND PROGRAMS

Permaculture pilot project students learning hands-on lawn conversion.

ACTIVE

ADJUSTED

Project A2 FY24 Highlights

- Provided $1 million towards water conservation activities, including rebates.
- The funding helped Valley Water issue rebates to convert more than 1,400,000 sq ft of lawns to low-water-use landscapes.
- 101 attendees participated in Qualified Water Efficient Landscaper Training, held online and in-person in English and Spanish.

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, approximately 83,174 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 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 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.

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.

Geographic Area of Benefit: Countywide

PROJECT A3
PIPELINE RELIABILITY PROJECT

This project constructs four (4) line valves at various locations along the East, West and Snell treated water pipelines in Saratoga, Cupertino and San José.

Continued from the 2012 Safe, Clean Water Program, this project ~~is closing out its design phase and nearing construction. Once constructed, this project~~ will allow Valley Water to isolate sections of pipelines for scheduled maintenance and repairs following a catastrophic event, such as a major earthquake, and allow the network of emergency wells to operate, even when there is damage upstream and downstream of individual wells.

Plunger Valve at Main Avenue Ponds Vault.

ACTIVE

ADJUSTED

Project A3 FY24 Highlights

- Began construction of the Snell Pipeline valve.
- Construction of the Snell Pipeline valve is expected to be completed by FY27.

Benefits

- Supports shorter service interruption in the case of a pipeline break
- Provides operational flexibility for pipeline maintenance work
- Improves drinking water reliability
- Reduces the amount of water released in streams in the event of a pipeline maintenance or repair

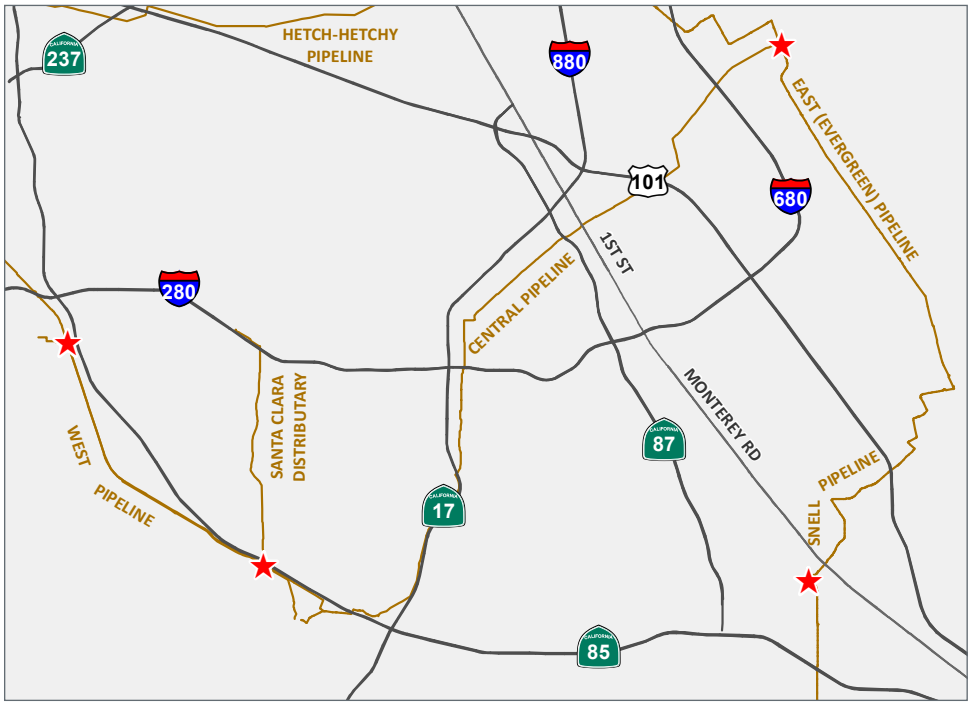
Key Performance Indicator (FY22–36)

1. Install four (4) new line valves on treated water distribution pipelines.

Geographic Area of Benefit: Mountain View, Sunnyvale, Santa Clara, Cupertino, Saratoga, Los Gatos, Los Altos, Campbell, San José and Milpitas

Project Location

Figure A3.1



PROJECT B1
IMPAIRED WATER BODIES IMPROVEMENT

This project reduces pollutants in streams, reservoirs and groundwater of Santa Clara County by supporting surface water quality pollution prevention activities. These programs address water quality concerns currently identified by local and state regulatory agencies, as well as contaminants of emerging concern. Initiatives under this project are consistent with the Regional Water Quality Control Board (RWQCB) impaired water bodies designation and Total Maximum Daily Loads (TMDLs), which are the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards. Under this project, Valley Water studies and implements methods to reduce methylmercury formation in reservoirs, and helps create and carry out realistic plans to reduce contaminants, such as nutrients, bacteria, pesticides, polychlorinated biphenyls (PCBs) and others, in local creeks and reservoirs.

This project addresses both greenhouse gas (GHG) reduction and climate change adaptation, as reservoirs are a major source of GHG emissions (i.e. methane, a potent greenhouse gas) during low oxygen conditions. Microbes in the low-oxygen bottom waters of reservoirs and lakes produce methane seasonally. Oxygenation and other interventions may reduce methane production in reservoirs. Oxygenation is the current mechanism to control mercury in fish and may reduce methane emissions. Oxygenation can also reduce the formation of harmful algal blooms, which may become more frequent with warmer temperatures.

Benefits

- Reduces contaminants in streams and reservoirs
- Improves water quality, including water slated for drinking water treatment plants
- Increases understanding of mercury cycling in reservoirs to develop strategies that reduce toxic methylmercury in fish consumed by people and wildlife
- Increases the scientific understanding of environmental pollutants to assist in developing actions to manage them
- Supports regulatory compliance with surface water quality standards for local creeks and reservoirs
- Addresses climate change by providing data on the production of methane in reservoirs to estimate the magnitude of those emissions

Key Performance Indicators (FY22–36)

1. Investigate, develop, and implement actions to reduce methylmercury in fish and other organisms in the Guadalupe River Watershed.
2. Prepare and update a plan for the prioritization of surface water quality improvement activities, such as addressing trash and other pollutants.
3. Implement at least two (2) priority surface water quality improvement activities identified in the plan per 5-year implementation period.

Geographic Area of Benefit: Countywide

Lichen sampling at Guadalupe Reservoir for analysis to determine atmospheric mercury deposition.

ACTIVE

ADJUSTED

Project B1 FY24 Highlights

- Operated oxygenation treatment systems in two (2) reservoirs: Almaden and Calero.
- Completed monthly water quality monitoring and semiannual fish sampling at Almaden, Calero, Guadalupe, and Stevens Creek reservoirs.
- Continued a research project with UC Merced to study sorbent treatment methods for mercury control.
- Began sampling and analysis to investigate the seasonal formation pathways of methylmercury production in Guadalupe Reservoir in a research project with UC Davis.
- Implemented three (3) surface water quality improvement activities in nine (9) waterbodies, including a project to study greenhouse gas emissions from the surfaces of Valley Water reservoirs.

PROJECT B2
INTER-AGENCY URBAN RUNOFF PROGRAM

This project supports Valley Water's continued participation in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) and South County stormwater programs. These programs enable Valley Water to reduce stormwater pollution through technical support and regional leadership. In addition, this project supports stormwater pollution prevention activities in South County Watersheds and green stormwater infrastructure (GSI). GSI allows rainwater runoff from roads, parking lots and other impervious surfaces to soak into the ground and be filtered by soil rather than discharge into storm drains that transport the water to creeks.

Project B2 allows Valley Water to participate in the regulatory development process related to stormwater by participating in stormwater permit re-issuance and providing review, analysis and comments on various water quality regulatory efforts. This project also allows Valley Water to collaborate with local agencies on public education and outreach activities to help prevent urban runoff pollution at the source.

Multi-benefit projects, such as green stormwater infrastructure, are important strategies to address water quality. Green infrastructure uses plants to soak water into the ground, which slows down, spreads and helps absorb rainwater instead of having it go down a storm drain. This improves water quality, can increase groundwater supplies and reduces peak flows to a creek.

Green stormwater infrastructure helps adapt to climate change by increasing groundwater recharge, reducing heat island effects, capturing carbon, lowering building energy demands, and increasing potential water supply sources.

Trash boom cleaning at Thompson Creek.

ACTIVE

ADJUSTED

Project B2 FY24 Highlights

- Operated four (4) trash capture devices (booms) in the county, collecting approximately two (2) tons of trash.
- Maintained municipal stormwater compliance program and several partnerships with cities and the county.
- Conducted a fourth phase of the South County Pet Waste Outreach project

Benefits

- Partners with municipalities and other agencies to reduce contaminants in stormwater and improve surface water quality in our streams, reservoirs, lakes and wetlands
- Maintains Valley Water compliance with the Regional Water Quality Control Board requirements in National Pollutant Discharge Elimination System (NPDES) permits
- Allows continued participation in SCVURPPP and South County urban runoff programs
- Allows Valley Water to help direct required monitoring efforts in ways that benefit Valley Water programs and projects
- Promotes stormwater pollution prevention
- Facilitates collaboration with partners on stormwater projects that provide multiple benefits and support Valley Water's mission
- ~~Addresses climate change~~ Supports climate change adaptation by increasing groundwater recharge, reducing heat island effects, capturing carbon, and lowering building energy demands

Key Performance Indicators (FY22–36)

1. Address trash in creeks by maintaining trash capture devices or other litter control programs.
2. Maintain Valley Water's municipal stormwater compliance program and partner with cities to address surface water quality improvements, including participation in at least three (3) countywide, regional, or statewide stormwater program committees to help guide regulatory development, compliance, and monitoring.
3. Support at least one (1) stormwater quality improvement activity per 5-year implementation period in Santa Clara County, including providing up to $1.5 million over 15 years to support implementation of green stormwater infrastructure consistent with Santa Clara Basin and South County Stormwater Resource Plans.

PROJECT C1
ANDERSON DAM SEISMIC RETROFIT

Anderson Reservoir is currently limited in its capacity due to seismic concerns, costing Santa Clara County valuable drinking water resources. This project, which continues the 2012 Safe, Clean Water project, provides a portion of the funds required to help restore the full operating capacity of Anderson Reservoir.

Anderson Dam creates the county's largest surface water reservoir—Anderson Reservoir—which stores local rainfall runoff and imported water from the Central Valley Project. The reservoir is an important water source for drinking water treatment plants and the recharge of the groundwater basin. Besides restoring drinking water supplies and covering the earthquake retrofitting of Anderson Dam to improve reliability and safety, the upgrade also supports compliance with environmental regulations. Valley Water's regular reservoir releases ensure that downstream habitat has healthy flows to sustain wildlife.

A breach of Anderson Dam at full capacity could have catastrophic consequences, including inundation of surrounding land more than 30 miles northwest to San Francisco Bay, and more than 40 miles southeast to Monterey Bay.

Diversion Outlet Structure nearly complete. Micro Tunnel Boring Machine assembly.

SCHEDULED TO START

ADJUSTED

Project C1 FY24 Highlights

- Made significant progress on the Anderson Dam Tunnel Project, including the completing the excavation of the 24-foot diameter Low-Level Outlet tunnel
- Continued Coyote Creek Flood Management Measures Project construction.
- Continued construction on the Coyote Percolation Pond Dam Replacement.
- Completed construction of the Cross Valley Pipeline Extension.
- Released the Anderson Dam Seismic Retrofit Project Draft Environmental Impact Report for public review.

Benefits

- Brings the dam into compliance with today's seismic standards
- Increases reliability and safety of our area's largest reservoir by protecting it from earthquakes
- Eliminates operational restrictions issued by the two regulatory agencies—the Federal Energy Regulatory Commission (FERC) and the California Department of Water Resources Division of Safety of Dams (DSOD). In February 2020, FERC directed Valley Water to begin safely lowering the reservoir to an elevation of 488 feet (essentially almost emptying the reservoir) beginning October 1, 2020. This project would restore Anderson Reservoir to its full capacity of approximately 90,373 acre-feet of water storage for our current and future water supply
- Ensures compliance with environmental laws and regulations
- Enhances native fish and wildlife habitat with spawning gravel, instream complexities for habitat, and riparian corridor enhancement
- Minimizes the risk of uncontrollable releases from the reservoir, which could cause downstream flooding

Key Performance Indicator (FY22-36)

1. Provide portion of funds, up to $54.1 million, to help restore full operating reservoir capacity of 90,373 acre-feet.

Geographic Area of Benefit: Countywide

PROJECT D1
MANAGEMENT OF RIPARIAN PLANTING AND INVASIVE PLANT REMOVAL

Removing giant reed (Arundo donax).

ACTIVE

ADJUSTED

Project D1 FY24 Highlights

- Maintained approximately 438.5 acres of riparian planting projects at 109 sites throughout Santa Clara County.
- Maintained 420 acres of invasive plant management projects at 19 sites throughout the county.
- Removed 0.86 acre of Arundo donax at 15 sites throughout the county.

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. 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

Key Performance Indicators (FY22–36)

1. Maintain a minimum of 300 acres of riparian planting projects annually to meet regulatory requirements and conditions.
2. Maintain a minimum of 200 acres of invasive plant management projects annually to meet regulatory requirements and conditions.
3. Remove 25 acres of Arundo donax throughout the county over a 15-year period.

PROJECT D3
SEDIMENT REUSE TO SUPPORT RESTORATION PROJECTS

Equipment moving sediment at Pond A8 in Sunnyvale.

ACTIVE

ADJUSTED

This project reuses local sediment removed through Valley Water's Stream Maintenance Program, capital projects and other local sources to create and restore tidal marsh, riparian or wetland habitats. Sediment may be reused to support the South Bay Salt Pond Restoration project or other environmental enhancement and restoration projects. Valley Water removes sediment from streams to maintain their capacity to carry floodwaters. To secure environmentally appropriate reuse sites, partnership agreements may be required. This project also funds site improvements necessary to facilitate sediment delivery to the reuse sites.

Beneficial reuse of sediment has become a key component in tidal marsh, riparian or wetland restoration around the bay and throughout the country. As sea levels rise, natural sedimentation and vegetation rates cannot keep up and tidal zones are in danger of being submerged, erasing environmental gains from restoration work. By delivering clean sediment from local creeks that would have naturally flowed into the San Francisco or Monterey Bays, this project accelerates natural marsh- building processes and helps to keep up with sea-level rise. Activities necessary for sediment reuse may include testing, transport, cover material, and site improvements required for access.

Project D3 FY24 Highlights

- Explored and Identified Pond A4 as a new location for sediment reuse.
- Continued testing of the sediment removed from local streams under the Stream Maintenance Program to ensure consistent sediment quality data is available as Valley Water works with the Regional Water Quality Control Board to modify criteria for reuse material.

Benefits

- Accelerates progress of important tidal wetland restoration projects, including tidal marsh, wetland, and riparian habitat
- Reduces disposal costs for sediment that has been removed from local channels
- Reduces disposal of clean fill into local landfills
- Addresses climate change impacts by accelerating the natural marsh-building process and helping keep up with the sea-level rise

Key Performance Indicators (FY22–36)

1. Reuse sediment meeting applicable screening criteria at available Valley Water or partnership project sites to support restoration.
2. Provide up to $4 million per 15-year period to support activities necessary for sediment reuse.

Geographic Area of Benefit: Countywide

Recent Project Status History (FY22–26):

Fiscal Year	Status	Change Control	Change Control Summary	Report Link
FY22	***ACTIVE***	***NONE***	Not Applicable	***FY22 (2021–2022)***
FY23	***ACTIVE***	***MODIFIED & ADJUSTED***	KPI #1 modified after sediment at Pond A8 was no longer needed. As well, the project name, description, and benefits were adjusted.	***FY23 (2022-2023)***
FY24	***ACTIVE***	***ADJUSTED***	Project benefits adjusted. See details below.	

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 Alamitos 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 and native species can continue to flourish and adapt.

Ogier Ponds, looking north.

ACTIVE

ADJUSTED

Project D4 FY24 Highlights

- Closed out the Design Phase of the Almaden Lake Improvement Project and delivered KPI #1.
- Completed Conceptual Alternatives Analysis Report for Ogier Ponds-Coyote Creek Separation Project.
- Began work on the Planning Study Report on the Moffett Fish Ladder.

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
- ~~Addresses climate change~~ 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

PROJECT D5
ECOLOGICAL DATA COLLECTION AND ANALYSIS

CRAM survey on Guadalupe Creek tributary.

ACTIVE

ADJUSTED

Project D5 FY24 Highlights

- Completed the Guadalupe River Watershed 10-year reassessment report.
- Completed watershed management plans for the Upper Pajaro River Watershed and the Guadalupe River Watershed.
- Began developing the Upper Pajaro Native Ecosystem Enhancement Tool.

This project continues to build and update watershed data to track stream ecosystem conditions, helping Valley Water and other county agencies and organizations make informed watershed, asset management and natural resource decisions. The new and updated information will be used to develop or modernize integrated watershed plans (such as watershed profiles, One Water Plan and Stream Corridor Priority Plans) that identify potential projects, support grant applications, environmental analyses and permits, and are shared with land use agencies, environmental groups, and the public to make efficient and coordinated environmental decisions throughout the county. These data and plans will help integrate and enhance Valley Water's programs, projects, maintenance and stewardship actions through standardized, repeatable and defensible measurements that guide, organize and integrate information on stream and habitat conditions.

Measuring changes in ecological conditions through time allows Valley Water, resource agencies, land managers and the public to understand and respond to climate change effects and evolving creek and habitat conditions.

Benefits

- Improves natural resource, watershed and asset management decisions
- Provides a systematic, scientific guide for decisions and actions to improve stream conditions
- Supports effective and environmentally sound design options
- Provides reliable data on countywide stream conditions and basis for measuring the success of past mitigation and environmental stewardship project projects
- Facilitates a watershed approach to resource management, permitting and restoration planning
- ~~Addresses~~ Supports climate change adaptation by providing data to better understand its effects on local habitats to enable increased habitat resiliency

Key Performance Indicator (FY22–36)

1. Reassess and track stream ecological conditions and habitats in each of the county's five (5) watersheds every 15 years.
2. Provide up to $500,000 per 15-year period toward the development and updates of five (5) watershed plans that include identifying priority habitat enhancement opportunities in Santa Clara County.

Geographic Area of Benefit: Countywide

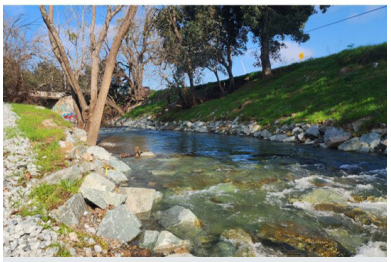
Recent Project Status History (FY22–26):

Fiscal Year	Status	Change Control	Change Control Summary	Report Link
FY22	***ACTIVE***	***NONE***	Not Applicable	***FY22 (2021–2022)***
FY23	***ACTIVE***	***NONE***	Not Applicable	***FY23 (2022-2023)***
FY24	***ACTIVE***	***ADJUSTED***	Project benefits adjusted. See details below.	

PROJECT D6
RESTORATION OF NATURAL CREEK FUNCTIONS

This project will develop, compile and use local hydrologic and geomorphic data to identify, design and construct projects to restore and improve natural functions and stability of stream channels.

Geomorphically appropriate channels will be more resilient to damage from more intense rainfall patterns caused by climate change.



Construction completed on the Bolsa Road Fish Passage Project.

COMPLETED

ADJUSTED

Project D6 FY24 Highlights

- Completed the Bolsa Road Fish Passage Improvements Project.
- Bolsa Road Fish Passage Improvements Project named the 2024 Project of the Year by the American Public Works Association Silicon Valley Chapter.

Benefits

- Uses scientific principles to improve sediment balance and reduce erosion, enhance percolation and reduce instability and sedimentation in creeks
- Can help reduce annual maintenance cost for sediment removal where erosion and incision problems can be addressed
- Improves native aquatic habitat
- Improves the aesthetic value of a stream
- Addresses climate change impacts by constructing geomorphically appropriate channels that will be more resilient to intense rainfall patterns caused by climate change

Key Performance Indicators (FY22–36)

1. Construct the Hale Creek Enhancement Pilot Project, which includes restoration and stabilization of a 650-foot section of concrete-lined channel on Hale Creek, between Marilyn Drive and North Sunshine Drive on the border of Mountain View and Los Altos.
2. Construct the Bolsa Road Fish Passage Project along 1,700 linear feet of Uvas-Carnadero Creek in unincorporated Santa Clara County, which includes geomorphic design features that will restore stability and stream function.

Geographic Area of Benefit: Countywide

PROJECT D7
PARTNERSHIPS FOR THE CONSERVATION OF HABITAT LANDS

Coyote Ceanothus

ACTIVE
ADJUSTED

Project D7 FY24 Highlights

- Provided $4.0 million to the Santa Clara Valley Habitat Agency to acquire 978 acres of Richmond Ranch near San José.

Funding from this project helps the community acquire and protect important habitat land to preserve local ecosystems. The project supports implementation of multi-agency agreements, such as the Valley Habitat Plan, that pool mitigation or conservation dollars to protect or restore large areas of habitat land**.**

Acquiring, restoring, connecting and protecting habitat areas helps native species to adapt to a changing climate. Large, contiguous land patches allow species room to move and adapt, to find cover from the damaging effects of climate change and to reestablish resting and rearing areas.

Benefits

- Protects, enhances and restores natural resources in Santa Clara County
- Contributes to the recovery of special status species
- Coordinates regional mitigation or conservation projects to create larger, less fragmented conservation lands that are more beneficial for wildlife and the environment
- May fulfill a portion of Valley Water's responsibilities to the Valley Habitat Plan
- Addresses climate change impacts such as habitat fragmentation and biodiversity loss by conserving and restoring habitat land

Key Performance Indicator (FY22–36)

1. Provide up to $8 million per 15-year period for the acquisition or enhancement of property for the conservation of habitat lands.

Geographic Area of Benefit: Countywide

Recent Project Status History (FY22–26):

Fiscal Year	Status	Change Control	Change Control Summary	Report Link
FY22	***ACTIVE***	***NONE***	Not Applicable	***FY22 (2021–2022)***
FY23	***ACTIVE***	***NONE***	Not Applicable	***FY23 (2022-2023)***
FY24	***ACTIVE***	***ADJUSTED***	Project benefits adjusted. See details below.	

Status for FY24:

Annual Status	Change Control
ACTIVE	***ADJUSTED (Text Adjustment)***

The text under Benefits is adjusted to explain how the project addresses climate change impacts. This adjustment is in response to a recommendation by the IMC.

PROJECT E1
COYOTE CREEK FLOOD PROTECTION, MONTAGUE EXPRESSWAY TO TULLY ROAD—SAN JOSÉ

Sheet piles being delivered to Corie Ct staging area in San José.

ACTIVE

ADJUSTED

This project is to plan, design and construct improvements along approximately nine (9) miles of Coyote Creek, between Montague Expressway and Tully Road, in San José. The primary objective is to provide protection from floods up to the level that occurred on February 21, 2017, equivalent to approximately a 5% flood (20-year event). In December 2019, the Valley Water Board of Directors voted to allocate local funding for construction of the preferred project; however, Valley Water is also exploring additional external funding sources and partnership opportunities.

Since 2017, Valley Water has implemented several short-term interim projects to help reduce the risk of flooding along Coyote Creek. These include the installation of an interim floodwall and embankment along the creek in the Rock Springs community. This structure protects the Rock Springs community from a flood event equivalent to the February 2017 flood. Other interim projects include repairing a 150-foot levee adjacent to the South Bay Mobile Home Park, installing flood gauges on bridges that provide real-time visual information on water levels and removing invasive vegetation from Valley Water and City property in parts of the creek that experienced the most flooding.

Project E1 FY24 Highlights

- Completed installing over 8,500 feet of floodwalls along a four-mile stretch of Coyote Creek under the Coyote Creek Flood Management Measures Project (Phase 1).
- Completed 60% design for the Coyote Creek Flood Protection Project (Phase 2).
- Issued the Notice of Preparation of the Draft Environmental Impact Report for Phase 2.

Benefits

- Protects approximately 600 parcels from the level of flooding that occurred on February 21, 2017, approximately a 5% flood
- Improves water quality, enhances stream habitat and increases recreational opportunities
- Provides opportunities to incorporate revegetation and aesthetic elements to the Coyote Creek park chain in the project
- 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. Additionally, Valley Water considered the implications of sea level rise (SLR) and determined that the project is outside SLR impact reach

Key Performance Indicator (FY22–36)

1. Construct flood protection improvements along Coyote Creek between Montague Expressway and Tully Road to provide protection from floods up to the level that occurred on February 21, 2017, approximately a 5% (20-year) flood event.

Geographic Area of Benefit: San José

Flooding History and Project Background

Flooding History

Flooding has occurred many times within the Coyote Creek Watershed, including along portions of Coyote Creek in 1911, 1917, 1931, 1958, 1969, 1982, 1983, 1997, 1998, and 2017. The largest flow recorded on Coyote Creek was 25,000 cubic feet per second in 1911, before the construction of the current two water-supply reservoirs in the upper watershed. The worst flooding in the project reach since Anderson Reservoir was constructed in 1950 occurred in February 2017. Coyote Creek overtopped its banks at several locations between Montague Expressway and Tully Road. Businesses and hundreds of homes were inundated by creek waters for many hours. Highway 101 near Watson Park and various local streets were closed due to flooding, and thousands of residents had to be evacuated and sheltered.

PROJECT E2
SUNNYVALE EAST AND SUNNYVALE WEST CHANNELS FLOOD PROTECTION, SAN FRANCISCO BAY TO INVERNESS WAY AND ALMANOR AVENUE—SUNNYVALE

Google Sunnyvale West Channel Enhancement Project (looking North/ Downstream).

ACTIVE

ADJUSTED

Project E2 FY24 Highlights

- The Board approved increasing project funding to construct both phases of the project.
- Resubmitted the regulatory permit applications following project refinements resulting from a partnership with Google Inc.
- Following regulatory agencies' comments, Valley Water to resubmit updated permit applications.

This project is to upgrade approximately 6.4 miles of the existing Sunnyvale East Channel to provide 1% flood protection (100-year event) to 1,618 parcels and approximately three (3) miles of the existing West Channel to provide 1% flood protection for 47 acres of highly valuable industrial lands, including the former Onizuka Air Force Base.

The Sunnyvale West Channel (Phase 1) and Sunnyvale East Channel (Phase 2) improvement projects have been combined into a single flood protection project with a single Environmental Impact Report (EIR) to reduce construction costs and improve efficiencies. Both projects decrease channel turbidity and sediment by repairing erosion sites, thereby improving water quality and reducing sediment to the San Francisco Bay

Benefits

- Provides 1% flood capacity for approximately 6.4 miles of channel along Sunnyvale East and approximately three (3) miles of channel along Sunnyvale West within the City of Sunnyvale, protecting 1,618 properties (Sunnyvale East) and 47 acres (11 properties) of industrial land (Sunnyvale West)
- Improves channel water quality by providing erosion control measures to decrease sediment and turbidity
- Identifies recreational opportunities that can be integrated by the City of Sunnyvale and others as appropriate
- 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 Indicator (FY22–36)

1. Provide 1% (100-year) flood protection for 1,618 properties and 47 acres (11 parcels) of industrial land, while improving stream water quality and working with other agencies to incorporate recreational opportunities.

Geographic Area of Benefit: Sunnyvale

Flooding History and Project Background

Flooding History

The Sunnyvale East and West Channels were constructed in the 1960s to serve as storm drains in response to flooding caused by a combination of major storm events, land subsidence, and inadequate drainage to the San Francisco Bay. Since construction, the channels have experienced flooding during major storm events in 1963, 1968, 1983, 1986 and 1998.

PROJECT E3
LOWER BERRYESSA FLOOD PROTECTION, INCLUDING TULARCITOS AND UPPER CALERA CREEKS (PHASE 3)—MILPITAS

This project is located in the City of Milpitas and includes Tularcitos Creek and Upper Calera Creek, which are two tributary creeks of Lower Berryessa Creek. Once constructed, this project will provide 1% (100-year event) flood protection to 1,100 parcels affected by Upper Calera Creek from the drop structure upstream of Arizona Avenue upstream to José Higuera Adobe Park, and to an estimated 320 parcels along Tularcitos Creek between its confluence with Berryessa Creek and Interstate 680. Additionally, this project will address inadequate maintenance access along all three creeks, which has made past maintenance more difficult, costly and time-consuming. Design for this project is slated to begin in 2032.

Berryessa Creek upstream of the confluence with Lower Penitencia Creek.

SCHEDULED TO START

ADJUSTED

Project E3 FY24 Highlights

- This project is scheduled to begin in 2032.

Benefits

- Provides 1% flood protection for an estimated 1,420 parcels along Upper Calera and Tularcitos creeks
- Improves access for long-term channel maintenance for both creeks
- Incorporates opportunities to integrate levees with the City of Milpitas trail system
- Identifies opportunities for stream habitat enhancement and/or restoration
- 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 Indicator (FY22–36)

1. With local funding only: Complete the design phase of the 1% (100-year) flood protection project to protect an estimated 1,420 parcels.

Geographic Area of Benefit: Milpitas

Flooding History and Project Background

Flooding History

Flooding occurred along Berryessa Creek in 1982, 1983, and 1997. While no reports of flooding along Calera Creek or Tularcitos Creek have been discovered, the Federal Emergency Management Agency and Valley Water 1% flood maps indicate potential flooding along portions of Lower Berryessa Creek and Calera Creek. Flows in Lower Berryessa Creek have a backwater effect on most of Tularcitos Creek. Tularcitos Creek cannot contain design flows due to both this backwater effect and inadequate channel capacity. Also, though the existing levees on both sides of Tularcitos Creek are structurally stable, they are constructed with highly plastic clay that shrinks and swells, causing erosion and cracking along portions of the levees. Additionally, Upper Calera Creek cannot contain design flows due to inadequate channel capacity.

Project Background

The Berryessa Creek Flood Protection Project, extending from Calaveras Boulevard to Interstate 680, was initially a part of Valley Water's first voter-approved measure, known as the Clean, Safe Creeks and Natural Flood Protection Plan (CSC Plan), which became effective on July 1, 2002. In 2012, voters approved replacing the CSC Plan with the Safe, Clean Water and

PROJECT E4
UPPER PENITENCIA CREEK FLOOD PROTECTION, COYOTE CREEK TO DOREL DRIVE—SAN JOSÉ

Upper Penitencia Creek along Commodore Park.

ACTIVE

ADJUSTED

Project E4 FY24 Highlights

- Began the Design Phase for the local-funding-only project (KPI #2), which includes Phases 1 and 2.
- Property acquisition discussions are ongoing to secure land rights for channel widening within Phase 1.

Preferred project: A federal-state-local partnership

This project continues a partnership with the U.S. Army Corps of Engineers (USACE), to plan, design and construct improvements along 4.2 miles of Upper Penitencia Creek from the confluence with Coyote Creek to Dorel Drive. Part of the project will protect the area around the Bay Area Rapid Transit's (BART) Berryessa station near King Road, which would otherwise be subject to flooding.

In addition to providing flood protection, this multi-objective project will provide ecological restoration and recreation benefits while preserving the water supply. The natural creek channel will be preserved while adjacent existing open space and parkland will remain as recreational areas, only rarely taking the role as a temporary floodplain so that floodwaters do not enter surrounding neighborhoods and commercial areas. Proposed construction measures may include modified floodplains, limited levees/ floodwalls, a bypass channel, and fish passage improvements.

Local-funding-only project

The original local-funding-only project was to acquire all necessary rights-of-way and construct a 1% (100-year event) flood protection project from Coyote Creek confluence to King Road, which would have protected 450 parcels. In December 2019, the Valley Water Board directed staff to use the available local funding to complete the design and construction of the locally funded project as well as build the reaches of the preferred project that can be constructed with the available funding. This approach extends the local-funding-only project from King Road to Capitol Avenue and provides 1% flood protection for an additional 800 parcels. As a result, the new local-funding-only project would be to construct flood improvements along Upper Penitencia Creek from the confluence of Coyote Creek to Capitol Avenue to increase the 1% flood protection provided with local available dollars to 1,250 parcels, including the new Berryessa BART station.

Benefits

- Preferred project provides up to 1% flood protection to approximately 8,000 homes, schools and businesses.
- Local-funding-only project provides 1% flood protection to 1,250 parcels, including the new Berryessa BART station.
- Restores/enhances ecological and riparian habitat
- Reduces sedimentation and maintenance requirements
- Improves water quality in Upper Penitencia and Coyote creeks
- Provides opportunities for recreation improvements consistent with the City of San José and Santa Clara County Park master plans
- 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 and local funding: Construct a flood protection project to provide 1% (100-year) flood protection to 8,000 parcels.

PROJECT E5
SAN FRANCISQUITO CREEK FLOOD PROTECTION, SAN FRANCISCO BAY TO UPSTREAM OF HIGHWAY 101—PALO ALTO

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

ACTIVE

ADJUSTED

Project E5 FY24 Highlights

- A third-party independent review validated the recalibrated Hydrologic Engineering Center's River Analysis System model that incorporates the conditions observed during the December 31, 2022, storm event.
- SFCJPA engaged a consultant to update the project objectives and design criteria and reevaluate the feasible alternatives listed in the Final Environmental Impact Report (EIR).

This project ~~sponsored~~ 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-funding-only partnership

Highway 101 to Pope-Chaucer Bridge

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 approximately a 7% flood event (approximately a 15-year event).

Newell Road Bridge

The Newell Road bridge replacement, unlike the rest of the project elements in this stretch, is led ~~sponsored~~ 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 renewal. 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.

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 4,000 feet of floodwall and creating a significantly wider creek marsh plain. Therefore, completion of this stretch protects approximately 3,000 parcels in Palo Alto from a flood event close to the February 1998 flood, the largest on record.

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
- 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

Flooding History and Project Background

Flooding History

San Francisquito Creek can cause severe flood damage with very little warning and has overflowed eight times since 1910, including on December 31, 2022.

During the February 1998 El Niño event, record flooding caused an estimated $28 million in damages in Palo Alto, East Palo Alto, and Menlo Park. More than 1,100 homes were flooded in Palo Alto, and Highway 101 was closed, as were numerous other roadways. The largest flood on record before 1998 occurred in December of 1955 when the creek overtopped its banks in several locations, inundating about 1,200 acres of commercial and residential property. Damages were estimated at nearly $2 million in 1956 dollars. Total damages from a 1% flood event are estimated at $300 million in Santa Clara and San Mateo Counties, as calculated by the USACE in 2011.

Project Background

Initially, the project was a part of Valley Water's first voter-approved measure, the Clean, Safe Creeks and Natural Flood Protection Plan (CSC Plan), which became effective on July 1, 2002. In 2012, voters approved replacing the CSC Plan with the Safe, Clean Water and Natural Flood Program (2012 Program), which became effective on July 1, 2013. Subsequently, in November 2020, voters approved the renewed Safe, Clean Water and Natural Flood Protection Program (Safe, Clean Water Program), replacing the 2012 Program. The project has continued in the renewed Safe, Clean Water Program. To learn more about the project history, visit ***www.valleywater.org/project-updates/e5-san-francisquito-creek-flood-protection-0*** and click on the History & Background section.

PROJECT E6
UPPER LLAGAS CREEK FLOOD PROTECTION, BUENA VISTA AVENUE TO LLAGAS ROAD—MORGAN HILL, SAN MARTIN, GILROY

Llagas Creek Reach 4 post-construction storm event, upstream of Rucker Avenue.

ACTIVE

ADJUSTED

Project E6 FY24 Highlights

- Completed Phase 2A construction, including a 2,300-foot-long underground tunnel and 1,600-foot-long twin reinforced concrete box culverts.
- Advertised Phase 2B for construction, which is scheduled to begin in FY25.

Preferred project: A federal-state-local partnership

This project continues a partnership with the U.S. Army Corps of Engineers (USACE) and the State of California to plan, design and construct improvements along 13.9 miles of channel. The project extends from Buena Vista Avenue to Llagas Road and includes West Little Llagas Creek in downtown Morgan Hill. The federally authorized preferred project protects the urban area of Morgan Hill from a 1% flood (100-year event) and reduces the frequency of flooding in surrounding areas. Construction includes channel modifications and replacement of road crossings. Valley Water continues to work with Congress to aggressively pursue federal funds to bring this project to full fruition.

Local-funding-only project

Construct flood protection improvements along Llagas Creek from Buena Vista Avenue to Highway 101 in San Martin (Reaches 4 and 5 (portion)), Monterey Road to Watsonville Road in Morgan Hill (Reach 7a), approximately W. Dunne Avenue to W. Main Avenue (a portion of Reach 8), and onsite compensatory mitigation at Lake Silveira.

Benefits

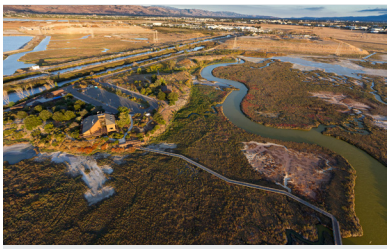
- Provides 1% flood capacity for four (4) miles along West Little Llagas Creek within downtown Morgan Hill, protecting approximately 1,100 homes and 500 businesses
- Provides 10% (10-year event) flood protection to approximately 1,300 agricultural acres in Morgan Hill, Gilroy and San Martin
- Locally funded project provides improved flood protection for a limited number of homes and businesses in Morgan Hill
- Improves stream habitat and fisheries
- Creates additional wetlands
- Improves stream water quality
- Identifies opportunities to integrate recreation improvements with the City of Morgan Hill and others as appropriate
- 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. Additionally, Valley Water considered the implications of sea level rise (SLR) and determined that the project is outside SLR impact reach

Key Performance Indicators (FY22–36)

1. Preferred project with federal and local funding: Plan, design and construct flood protection improvements along 13.9 miles of Upper Llagas Creek from Buena Vista Avenue to Llagas Road to provide flood protection to 1,100 homes, 500 businesses, and 1,300 agricultural acres, while improving stream habitat.

2. With local funding only: Construct flood protection improvements along Llagas Creek from Buena Vista Avenue to Highway 101 in San Martin (Reaches 4 and 5 (portion)), Monterey Road to Watsonville Road in Morgan Hill (Reach 7a), approximately W. Dunne Avenue to W. Main Avenue (portion of Reach 8), and onsite compensatory mitigation at Lake Silveira.

PROJECT E7
SAN FRANCISCO BAY SHORELINE PROTECTION—MILPITAS, MOUNTAIN VIEW, PALO ALTO, SAN JOSÉ, SANTA CLARA AND SUNNYVALE



San Francisco Bay Shoreline

ACTIVE

ADJUSTED

Project E7 FY24 Highlights

- EIAs 1-4: USACE concluded the South San Francisco Bay Shoreline Phase II Study.
- EIAs 5-9: The Shoreline Phase III Feasibility Study officially commenced.
- Valley Water signed a Feasibility Cost Share Agreement with USACE.
- The California State Coastal Conservancy also signed on as a local sponsor.

This project is a partnership with the California State Coastal Conservancy, the U.S. Army Corps of Engineers (USACE) and regional stakeholders to provide tidal flood protection, restore and enhance tidal marsh and related habitats, and provide recreational and public access opportunities along Santa Clara County's shoreline.

This project relies on federal participation from the USACE to develop the project and prepare the plans. Without federal participation, Valley Water cannot implement planning, design and construction on our own due to limited available funding. The Safe, Clean Water funding provides a portion of the local share of funding for planning, design and construction phases for Economic Impact Areas (EIAs) 1-4, and a portion of the local share of funding for the planning study and design phases for EIAs 5-9.

The 2012 Safe, Clean Water Program has already provided $15 million as a portion of Valley Water's local share of funding for flood protection improvements in Economic Impact Area (EIA) 11, which is the urban area of North San José and the community of Alviso. Once completed, EIA 11 will provide flood protection to more than 1,000 residential structures and 100 non-residential structures and allow for the restoration of 2,900 acres of tidal marsh and related habitats.

The project will provide coastal flood protection from a rising sea level and will restore and enhance tidal marsh by using a combination of flood protection levees, wetlands and transitional zone habitats also known as ecotones. Ecotones will provide an additional protective buffer for the levee and allow marsh habitat to migrate upslope as the sea level rises. This approach of using natural infrastructure will help develop a resilient and adaptable flood protection system that can evolve in the future.

Benefits

- Provides planning and design to protect nearly 4,700 acres and more than 5,000 structures, including roads, highways, parks, airports and sewage treatment plants in Santa Clara County
- Allows for restoration of tidal marsh habitat for endangered wildlife such as the salt marsh harvest mouse and Ridgway's rail; rich feeding grounds for shorebirds; and nursery areas for young fish such as leopard sharks and steelhead
- Provides educational, recreational and public access opportunities
- Protects more than 4,300 structures (EIAs 1-4)
- Allows for the restoration of 400 acres of tidal marsh and related habitats (EIAs 1-4)
- Addresses climate change by providing coastal flood protection from rising sea levels and restoring and enhancing tidal marshes

Key Performance Indicators (FY22–36)

1. Provide a portion of the local share of funding for planning, design and construction phases for the Santa Clara County shoreline area, EIAs 1-4.
2. Provide a portion of the local share of funding for planning and design phases for the Santa Clara County shoreline area, EIAs 5-9.

PROJECT E8
UPPER GUADALUPE RIVER FLOOD PROTECTION, HIGHWAY 280 TO BLOSSOM HILL ROAD—SAN JOSÉ

Reach 6, site 1 of the Aquatic Habitat Improvement Project (post-construction).

ACTIVE

MODIFIED AND ADJUSTED

Project E8 FY24 Highlights

- USACE is addressing comments received during the technical, policy, public, and agency review of the draft General Reevaluation Report/ Supplemental Environmental Assessment (GRR/EA).
- A final GRR/EA is expected to be released by June 2025.

Preferred project: A federal-state-local partnership

This federally authorized project continues a project in partnership with the U.S. Army Corps of Engineers (USACE) to plan, design and construct improvements along 5.5 miles of the channel extending from Interstate 280 to Blossom Hill Road. Improvements include channel widening, construction of floodwalls and levees, replacement of road crossings and planting of streamside vegetation. Reducing flood frequency and bank erosion will improve water quality, while planned mitigation measures will give fish access to an additional 12 miles of habitat within and upstream of the project reach.

~~USACE has initiated a General Re-evaluation Report (GRR) of the preferred project, which is anticipated to be completed by October 2023.~~ In January 2021, USACE initiated a General Reevaluation Study of the preferred project. The General Reevaluation Report (GRR) is expected to be completed by June 2025. The scope of the project may change as a result of the GRR findings.

Local-funding-only project

The locally funded project entails constructing flood protection improvements along 4,100 feet of Guadalupe River between the Southern Pacific Railroad (SPRR) crossing, downstream of Willow Street, to the Union Pacific Railroad (UPRR) crossing, downstream of Padres Drive (Reach 7). It also includes completing a gravel augmentation project along approximately 800 linear feet of the Upper Guadalupe River in San José, from approximately the Union Pacific Railroad Bridge to West Virginia Street Bridge to improve aquatic habitat for migrating steelhead and channel stability. Flood damage will be reduced through the local-funding-only project. However, protection from the 1% (100-year event) flood is not provided without completion of the entire Upper Guadalupe River Flood Protection Project.

Mitigation elements of the project, namely Reach 10B (from Curtner Avenue to Almaden Expressway) and Reach 12 (from Brahnam Lane to Blossom Hill Road), were completed in 2015 in partnership with USACE. ~~Construction on the gravel augmentation project is scheduled to begin in August 2021.~~

Benefits

- Preferred project will construct 1% flood conveyance capacity for 5.5 miles of channel in San José, protecting approximately 6,280 homes, 320 businesses and 10 schools/institutions
- Local funding only constructs improvements to 4,100 linear feet of Guadalupe River between the Southern Pacific Railroad (SPRR) crossing, downstream of Willow Street, to the Union Pacific Railroad (UPRR) crossing downstream of Padres Drive to convey 1% flow
- Improves stream habitat values and fisheries
- Improves stream water quality
- Allows for creekside trail access
- 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

PROJECT F3
FLOOD RISK ASSESSMENT STUDIES

This project is to enable Valley Water scientists to update custom software models of local creeks for the most current and accurate understanding of potential flood risks in high priority flood-prone areas and then develop options for managing those risks. Existing models will be verified, updated and recalibrated as conditions change. Updating our knowledge-base will lead to more effective creek management and maintenance. Valley Water will also convey this information to the community and partner cities.

When creek conditions necessitate rehabilitation to preserve flood protection, this project also funds preliminary engineering studies to isolate problem areas and explore potential solutions.

Under the 2012 Safe, Clean Water Program, Valley Water completed engineering studies on five (5) reaches of creeks as part of the Flood Risk Assessment Studies project. These were on Coyote Creek (Bay to Anderson Dam, including Rock Springs Neighborhood); Adobe and Barron creeks tidal flood protection (Highway 101 to Middlefield Road in Palo Alto); Alamitos Creek (upstream of Almaden Lake in San José); and Ross Creek (Guadalupe River to Blossom Hill Road in San José). The Coyote Creek study completed under this project was utilized to develop the short-term interim projects that Valley Water built to help reduce the risk of flooding along Coyote Creek (See Project E1 - Coyote Creek Flood Protection Project). These include the installation of an interim floodwall and embankment along the creek to protect the Rock Springs community from a flood event equivalent to the February 2017 flood. Valley Water also updated the Alamitos Creek 2-D hydraulic (HEC-RAS) model of the 1% (100-year event) floodplain and shared the information with the City of San José.

Revising flood models on a regular basis enables Valley Water to keep pace with changes in rainfall patterns and intensity as our climate changes. An up-to-date understanding of flood risks allows us to work toward preventing future flooding.

Summer conditions at West Branch Llagas Creek and Lions Creek, upstream of Church Street in Gilroy

ACTIVE

ADJUSTED

Project F3 FY24 Highlights

- Made progress on updating the hydrology for Stevens Creek watershed using a new methodology developed by Valley Water.
- Completed a preliminary 100-year floodplain for Steven's Creek.
- Updated and calibrated Canoas Creek's 1D steady state model to the January 16, 2019, high flow event.
- Collected data to support and updated model cross sections for a 1D/2D hydraulic model of Lower Penitencia and Berryessa creeks.

Benefits

- Provides more current and accurate mapping of areas at risk of flooding
- Provides the technical basis for developing future flood protection plans, and for potential funding partnerships
- Identifies, in a timely manner, the needs to prevent creek deterioration
- Identifies the need for flood mitigation or creek rehabilitation projects
- Facilitates communication with partner cities on evolving flood risks and possible solutions
- Addresses climate change by updating hydrology studies, which incorporate recent flow data, and mapping out floodplains based on those updated studies

Key Performance Indicators (FY22–36)

1. Complete engineering studies on three (3) creek reaches to address 1% (100-year) flood risk.
2. Annually, update floodplain maps on a minimum of three (3) creek reaches in accordance with new FEMA standards.

Geographic Area of Benefit: Countywide

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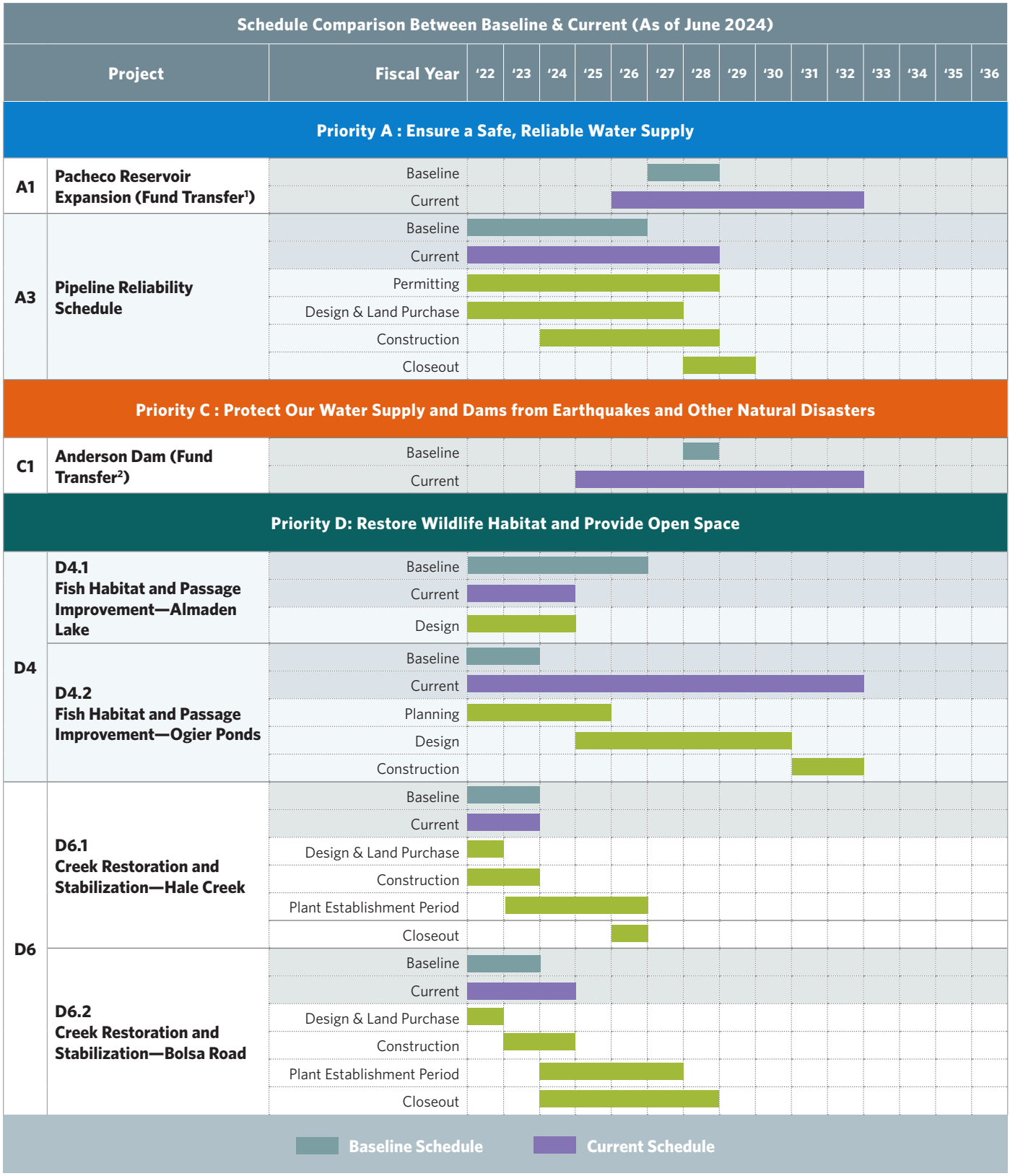
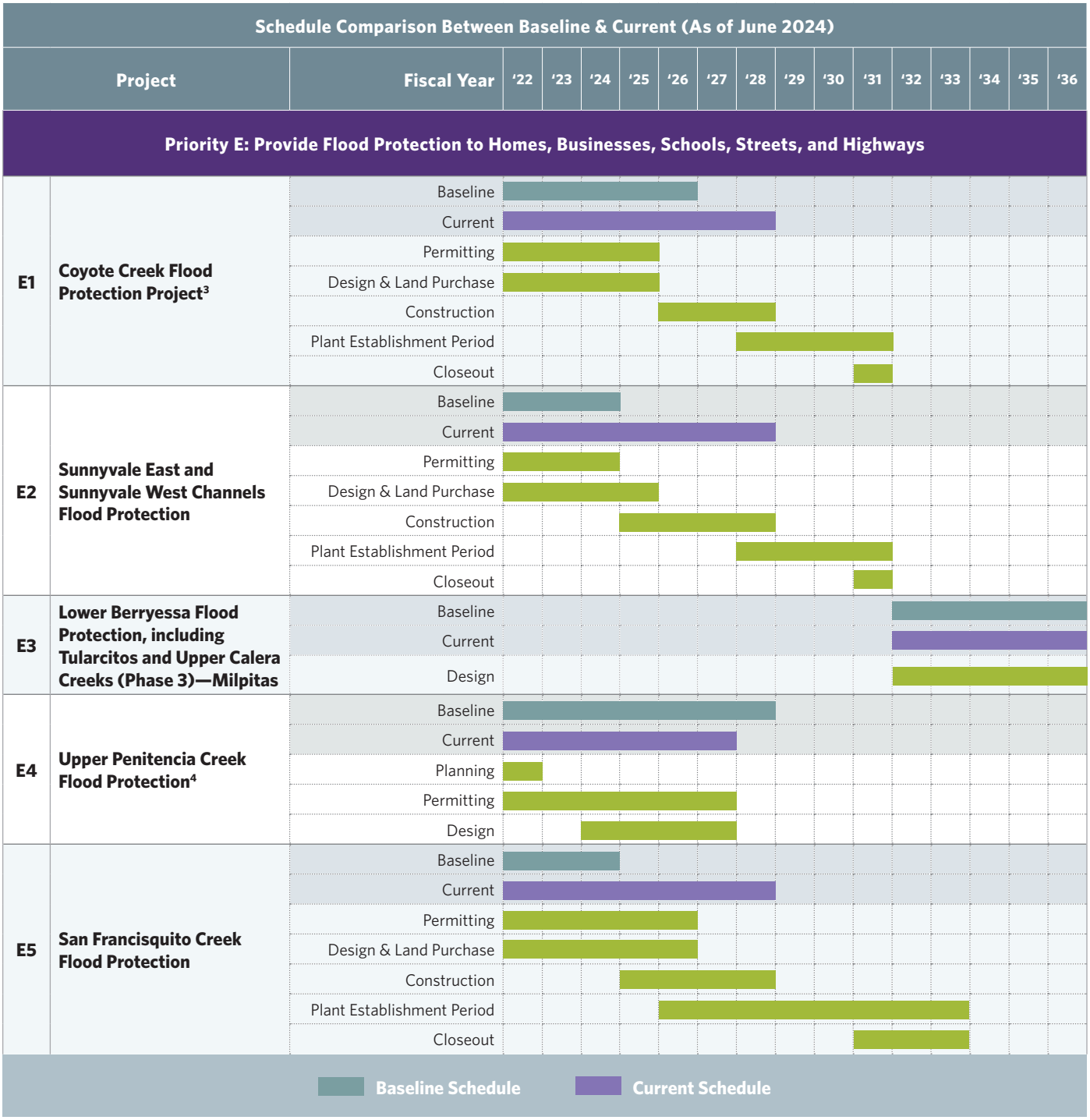
Appendix E-1.2: Schedule Comparison for Projects



[1] In FY24, the Board approved not implementing the project (fund transfer) under the Safe, Clean Water Program.

[2] The project is adjusted only in terms of the Safe, Clean Water Program KPI of providing funding for the project and is not reflective of the overall project schedule.

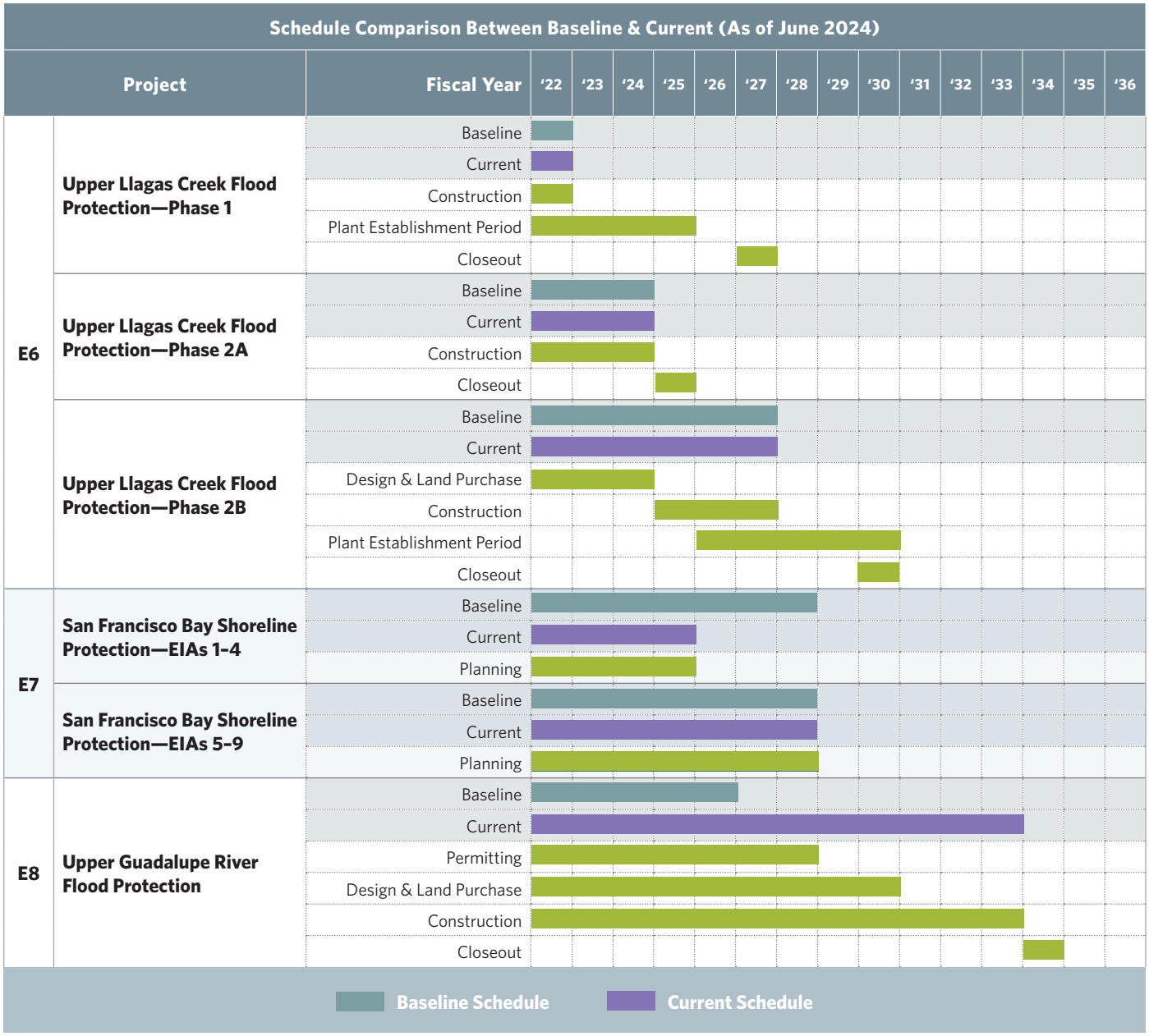
Appendix E-1.2: Schedule Comparison for Projects



[3] 40% of the project is being constructed as part of the FERC-ordered compliance project for Anderson Reservoir and Dam as the Coyote Creek – Flood Management Measures Project.

[4] Only includes planning, permitting, and design per Board-approved modification.

Appendix E1.2: Schedule Comparison for Projects



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