



Safe, Clean Water Program Adjustments and Modifications



January 24, 2023	Modifications and text adjustments to Projects D3, D4, and D6: redline and final versions
May 16, 2023	Safe, Clean Water Program modifications approved as part of the Capital Improvement Program's FY2024-28 Five-Year Plan: summary of modifications to Projects E2 and E4
June 27, 2023	Schedule adjustments to Projects D4, E5, and E8: Proposed Adjustments
November 14, 2023	Text adjustments to Projects E2, E4, and E6: redline and final versions Project schedules revised: Appendix E-1.2

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PROJECT D3

SEDIMENT REUSE TO SUPPORT ~~SHORELINE~~ RESTORATION PROJECTS

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 continues the existing partnership with the U.S. Fish and Wildlife Service (FWS) and explores partnerships with others.~~ 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~~ **bay and throughout the county**. 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.

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

Key Performance Indicators (FY22–36)

1. ~~Maintain partnership agreements to reuse sediment to improve the success of salt pond and tidal marsh restoration projects and activities.~~ **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

PROJECT D3

SEDIMENT REUSE TO SUPPORT RESTORATION PROJECTS

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 county. 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.

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1. Reuse sediment meeting applicable screening criteria at available Valley Water or partnership project sites to support restoration.
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Geographic Area of Benefit: Countywide

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.

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

Key Performance Indicators (FY22–36)

1. Complete planning and design for one (1) creek/lake separation.
2. ~~Partially fund the construction of~~ Construct 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

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Geographic Area of Benefit: Countywide

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.

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

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.
3. ~~Identify, plan, design, and construct a third geomorphic designed project to restore stability and stream function by preventing incision and promoting sediment balance throughout the watershed.~~

Geographic Area of Benefit: Countywide

PROJECT D6

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Geographic Area of Benefit: Countywide

PROJECT E2 SUNNYVALE EAST AND SUNNYVALE WEST CHANNELS FLOOD PROTECTION

The Sunnyvale East and West Channels project is being constructed in two phases, with Sunnyvale West Channel constituting Phase 1 and Sunnyvale East Channel being Phase 2. On January 24, 2023 (FY23), the Board approved modifying and reducing the project’s construction funding allocation and reallocating the Sunnyvale East Channel construction-related planned expenditures to the Safe, Clean Water Program’s Operating and Capital Reserves. Phase 2 remains a commitment under the Safe, Clean Water Program and Valley Water is determining additional funding sources to advance construction. The reduction in funding allocation is effective on July 1, 2023 (FY24). The exact amount of the modified allocation was approved by the Board on May 16, 2023 under the Capital Improvement Program’s FY 2024-28 Five-Year Plan.

Valley Water will reassess funding availability annually as part of the Capital Improvement Program’s financial planning process. The modification was necessitated due to infrastructure construction cost escalations impacting the financial health of the Safe, Clean Water Program.

Modified Funding Allocation

Project E2: Sunnyvale East and Sunnyvale West Channels Flood Protection Financial Summary (\$ Thousand)	
15-Year Allocation	Modified 15-Year Allocation*
\$52,539	\$37,808

Funding allocations were finalized through the Board-approved Capital Improvement Program's FY 2024-28 Five-Year Plan.

PROJECT E4 UPPER PENITENCIA CREEK FLOOD PROTECTION

On January 24, 2023, the Board approved modifying the project's funding allocation to remove the project's construction-related planned allocations, thus impacting the construction of the project. The reduction in funding allocation is effective on July 1, 2023 (FY24). The modification was necessitated due to infrastructure construction cost escalations impacting the Safe, Clean Water Program's financial health. The project's construction-related dollars were reallocated to the Safe, Clean Water Program's Operating and Capital Reserves. Design and Permitting phase funding remain secured. The exact amount of the modified allocation was approved by the Board on May 16, 2023 under the Capital Improvement Program's FY 2024-28 Five-Year Plan.

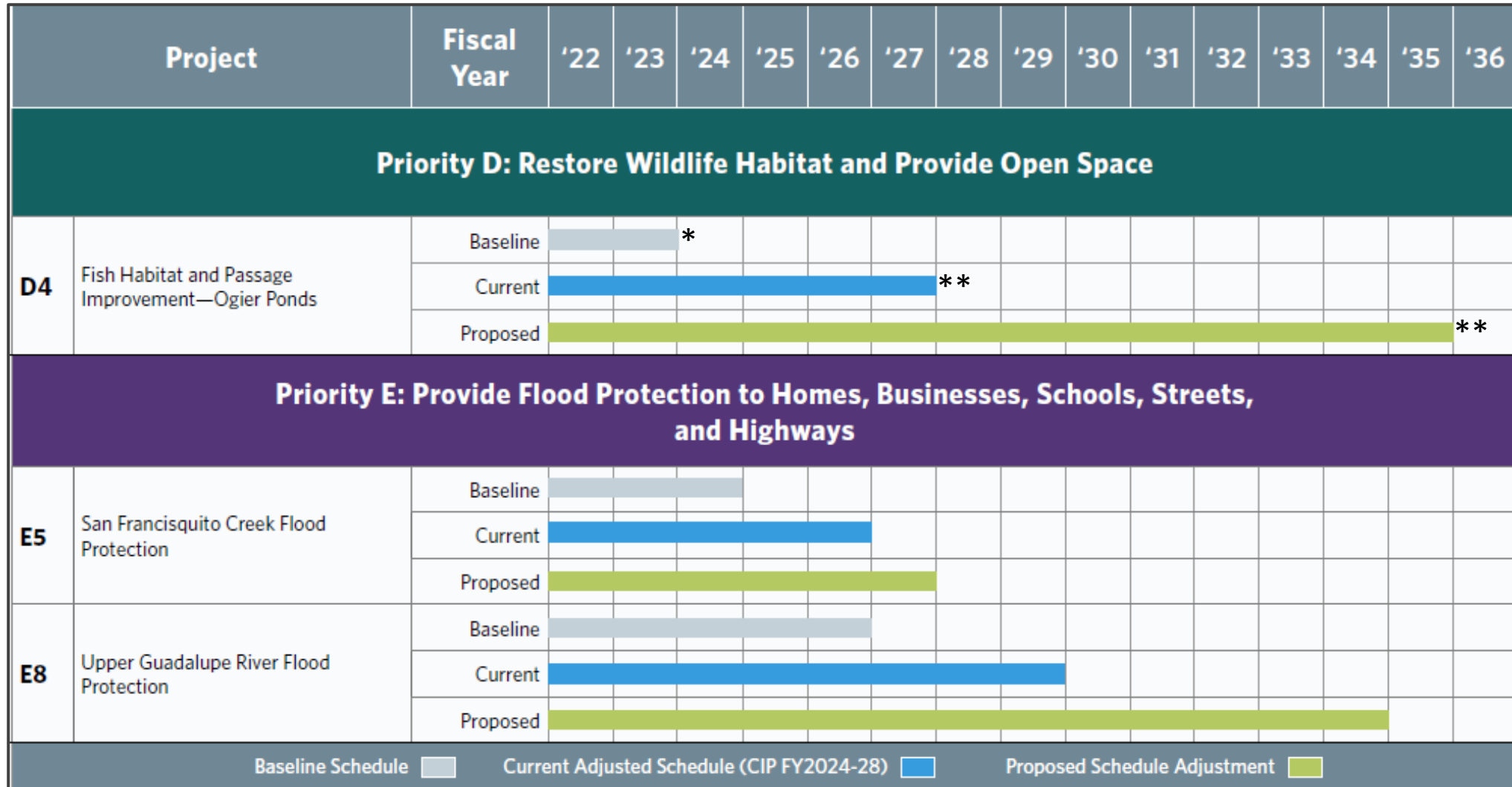
Valley Water will reassess construction funding availability annually as part of the Capital Improvement Program's financial planning process.

Modified Funding Allocation

Project E4: Upper Penitencia Creek Flood Protection Financial Summary (\$ Thousand)	
15-Year Allocation	Modified 15-Year Allocation*
\$26,106	\$9,207

* Funding allocations finalized through the Board-approved Capital Improvement Program's FY 2024-28 Five-Year Plan.

Proposed Adjustments



*Did not include construction **Includes construction

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PROJECT E2

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

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 Onizuka Air Force Base.

The Sunnyvale East Channel and 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.

~~In 2018, Valley Water entered into a Memorandum of Understanding with Google, LLC (Google) to incorporate Google's proposed enhancement effort along 1,100 linear feet of the Sunnyvale West Channel into the project. This portion of the project will also be part of Google's Caribbean Campus Project. Valley Water has completed 100% design and has re-submitted all the required permit applications for the project. Once all permits are received, Valley Water will begin construction.~~

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 **accounting for 2-foot 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



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

ACTIVE

MODIFIED and ADJUSTED

Project E2 FY23 Highlights

- Completed the 100% design documents.
- Acquired all required permanent right-of-way and are working to obtain temporary staging areas for project construction.

PROJECT E2

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

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 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 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

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- 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 accounting for 2-foot 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.



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

ACTIVE

**MODIFIED and
ADJUSTED**

Project E2 FY23 Highlights

- Completed the 100% design documents.
- Acquired all required permanent right-of-way and are working to obtain temporary staging areas for project construction.

PROJECT E4

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

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 ~~Capital~~ 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 ~~Capital~~ 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

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.
2. With local funding only: Construct a 1% (100-year) flood protection project from Coyote Creek confluence to ~~Capital~~ Capitol Avenue to provide 1% (100-year) flood protection to 1,250 parcels, including the new Berryessa BART station.



Upper Penitencia Creek along Commodore Park.

ACTIVE

MODIFIED & ADJUSTED

Project E4 FY23 Highlights

- Completed an additional review of the Planning Study Report.
- Finalized the revised Planning Study Report.

PROJECT E4

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

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.

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Upper Penitencia Creek along Commodore Park.

ACTIVE

MODIFIED & ADJUSTED

Project E4 FY23 Highlights

- Completed an additional review of the Planning Study Report.
- Finalized the revised Planning Study Report.

PROJECT E6

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

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.

In September 2019, Valley Water began construction on the locally funded Reaches 4, 7a, a portion of Reach 5 and Lake Silveira, which is expected to be completed in 2022. Construction of the approximately 2,300 linear feet of a horseshoe-shaped underground tunnel and approximately 1,600 linear feet of twin reinforced concrete box culverts upstream and downstream of the tunnel to carry high water flows is scheduled to begin in November 2020. Construction is expected to take 2.5 years.

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

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.



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

ACTIVE

ADJUSTED

Project E6 FY23 Highlights

- Completed construction of a 2,300-foot-long tunnel underneath downtown Morgan Hill.
- Completed multiple utility owner relocations (overhead to underground) associated with Phase 2A construction.

PROJECT E6

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

Preferred project: A federal-state-local partnership

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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.



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

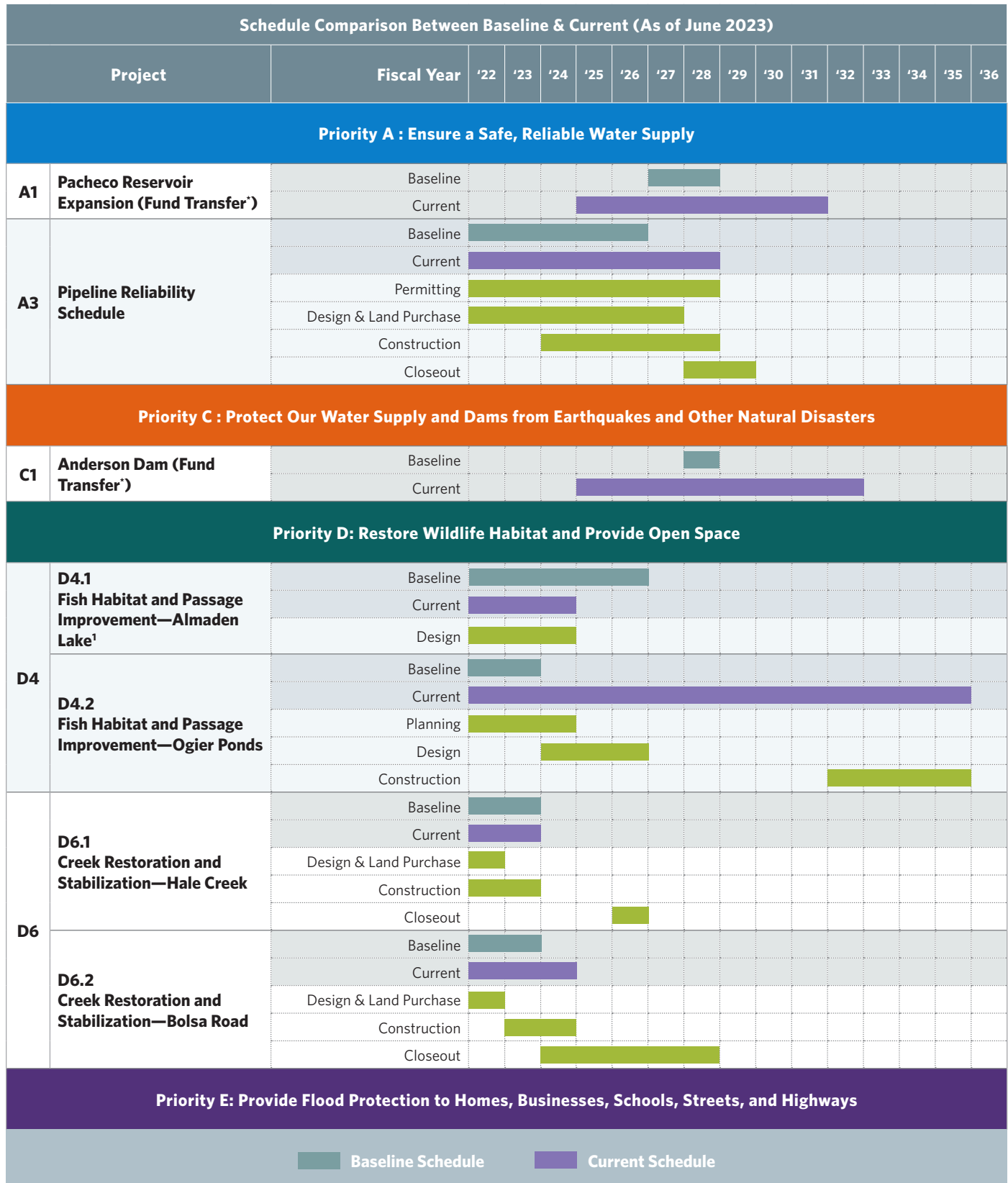
ACTIVE

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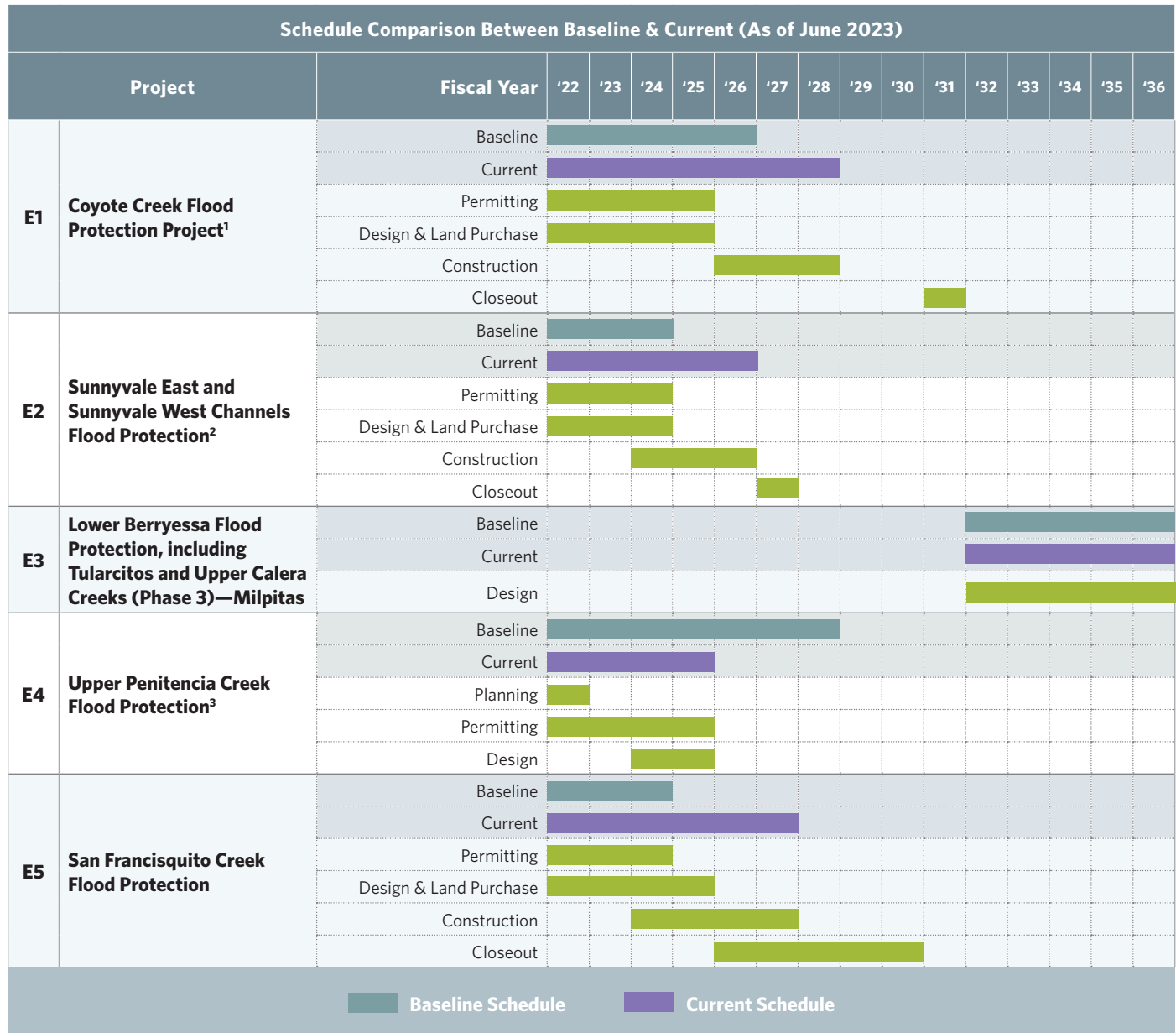
Appendix E-1.2: Schedule Comparison for Projects



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

1 Only includes planning, permitting, and design per board-approved modification.

Appendix E-1.2: Schedule Comparison for Projects

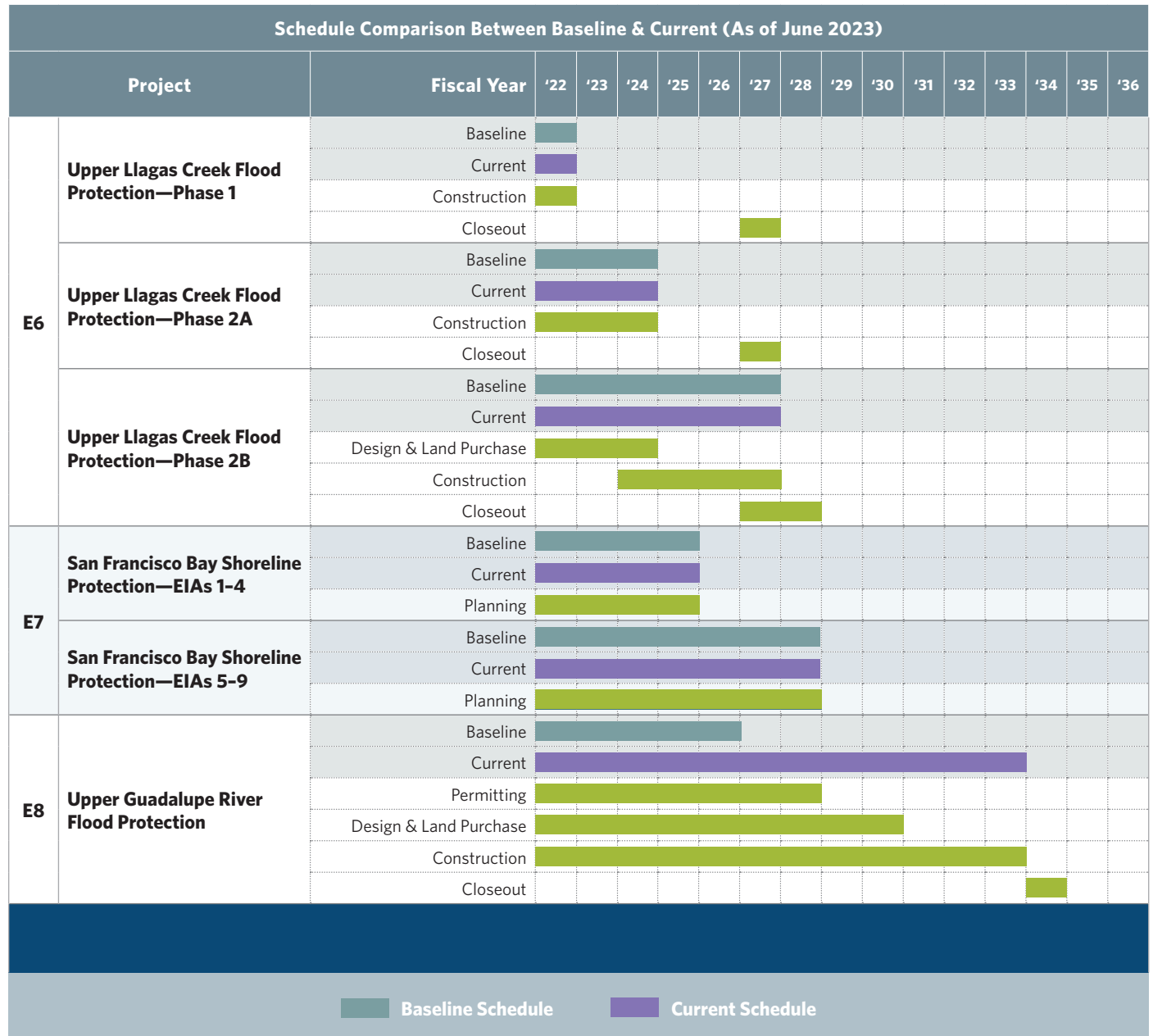


1 40% of the project is being constructed as part of the FERC-ordered compliance project for Anderson Reservoir and Dam as the Coyote Creek – Flood Management Measures Project.

2 Only includes construction of Phase 1 (West Channel) per board-approved modification.

3 Only includes planning, permitting, and design per board-approved modification.

Appendix E1.2: Schedule Comparison for Projects



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