Flood Protection Capital Improvements

FLOOD PROTECTION OVERVIEW

Of the approximately 800 miles of creeks in Santa Clara County, Valley Water has jurisdiction over and manages approximately 275 miles to meet the Board's Ends Policy E–3, "Natural flood protection is provided to reduce risk and improve health and safety for residents, businesses, and visitors, now and into the future." Valley Water's goals are further defined in E-3.1, "Maintain flood protection facilities to design levels of protection" and E-3.2, "Assist people, businesses, schools, and communities to prepare for, respond to, and recover from flooding through equitable and effective engagement." The 275 miles of creeks are located in five watersheds: Lower Peninsula, West Valley, Guadalupe, Coyote, and Uvas/Llagas. Valley Water administers an asset management program for its flood protection infrastructure. The program includes a schedule for maintenance and rehabilitation to ensure that each facility functions as intended throughout its useful life.

Fifty years of flood protection management has significantly reduced the intensity and frequency of flooding in Santa Clara County. By 2005, Valley Water had provided flood protection to 93,253 of the 166,526 parcels in the floodplain and another approximately 10,445 have been protected since then.

The voters in Santa Clara County have supported Valley Water's flood protection efforts by approving benefit assessment funding in 1982, 1986, and 1990. Voters also approved three special parcel taxes. In 2000, voters approved the Clean, Safe Creeks and Natural Flood Protection Plan (Clean, Safe Creeks). The Clean, Safe Creeks Plan was replaced by the Safe, Clean Water and Natural Flood Protection Program, which voters approved in 2012 (2012 Safe, Clean Water). In 2020, voters approved the renewal of the Safe, Clean Water Program, which replaced the 2012 Safe, Clean Water Program in entirety. Unlike the first two special parcel taxes, which were set to sunset in 15-years from the date of implementation, the renewed Safe, Clean Water Program will continue until repealed by voters or until the Board determines the funding is no longer needed.

The renewed Safe, Clean Water Program - Fund 26, along with the Watershed and Stream Stewardship (1% ad valorem property tax) - Fund 12, are the two primary funding sources for flood protection projects. Listed by watershed are the completed and current flood protection capital improvements, moving upstream from the completed downstream work or starting new work on creeks that have not had flood protection work.

Lower Peninsula Watershed

Major Capital Improvements Completed

- San Francisquito Creek from the S.F. Bay to Highway 101 (Safe, Clean Water)
- San Francisquito Creek from Highway 101 to Searsville Dam (Safe, Clean Water)
- Adobe Creek from El Camino to West Edith Ave.
- Matadero Creek from Palo Alto Flood Basin to Barron Creek

Major Capital Improvements Identified in the CIP

- Palo Alto Flood Basin Structure Improvements
- Permanente Creek from S.F. Bay to Foothill Expressway (2012 Safe, Clean Water)

West Valley Watershed

Major Capital Improvements Completed

- Calabazas Creek from Guadalupe Slough to Wardell Road
- San Tomas Creek from Southern Pacific Railroad to Cabrillo Avenue
- Saratoga Creek from San Tomas Creek to Lawrence Expressway

Major Capital Improvements Identified in the CIP

- Sunnyvale East and West Channels (Safe, Clean Water)

Guadalupe Watershed

Major Capital Improvements Completed

- Guadalupe River–Lower from Alviso Marina to Interstate 880
- Guadalupe River–Downtown from Interstate 880 to Interstate 280

Flood Protection Capital Improvements

Major Capital Improvements Identified in the CIP

- Guadalupe River–Upper, Interstate 280 to Blossom Hill Road (Safe, Clean Water)
- Guadalupe River, Tasman Drive to I-880

Coyote Watershed

Major Capital Improvements Completed

- Coyote Creek from S.F. Bay to Montague Expressway
- Lower Penitencia Creek from Coyote Creek to Tasman Drive
- Lower Silver Creek from Coyote Creek to Cunningham Ave. (Reaches 1-6)
- Cunningham Flood Detention Certification
- Berryessa Creek from Calaveras Boulevard to Interstate 680 (2012 Safe, Clean Water)

Major Capital Improvements Identified in the CIP

- Berryessa Creek from Lower Penitencia Creek to Calaveras Boulevard (Safe, Clean Water)
- Coyote Creek Montague Expressway to Tully Road (Safe, Clean Water)
- Lower Penitencia Creek Improvements, Berryessa to Coyote Creeks
- Lower Silver Creek from Interstate 680 to Cunningham Ave., (Reaches 4-6)
- Upper Penitencia Creek from Coyote Creek to Dorel Drive (Safe, Clean Water)

Uvas/Llagas Watershed

Major Capital Improvements Completed

- Llagas Creek–Lower from Pajaro River to Buena Vista Avenue
- Uvas Creek

Major Capital Improvements Identified in the CIP

- Llagas Creek-Lower, Capacity Restoration from Buena Vista Avenue to Pajaro River
- Llagas Creek–Upper, Buena Vista Avenue to Llagas Road (Safe, Clean Water)

Multiple Watersheds

Major Capital Improvements Identified in the CIP

- San Francisco Bay Shoreline (Safe, Clean Water)
- Watershed Asset Rehabilitation Program

CIP PLANNING PROCESS AND FINANCIAL ANALYSIS

The annual CIP Planning Process starts with collecting information on proposed new capital projects in July, followed by the validation of proposed new projects, preliminary scoping, review and financial analyses to produce a Draft CIP in February.

The Board then authorizes release of the Draft CIP to the public and local municipalities for review, conducts a public hearing, and approves the resolution to adopt the Final CIP in May.

A financial analysis of the Watershed and Stream Stewardship Fund and Safe, Clean Water Fund, the funding sources for flood protection capital improvements, was conducted to determine if there are limitations to funding all of the projects proposed for the FY 2023-27 CIP.

Funding required for portions of several CIP projects is contingent on grants and partnership agreements that are under development and not currently secured. As Valley Water works through the process to secure funding, the project schedules may be adjusted. Projects with unsecured funding include:

- San Francisquito Creek, upstream of Hwy 101
- Upper Llagas, portions of Phase 2B (Reaches 6, 7b, 8, and 14)

Further, many of the flood protection projects under the renewed Safe, Clean Water Program include key performance indicators (KPIs) for a preferred project, which requires federal funding, and for a local-funding only version of the project, which can be constructed if federal funding is not received.

Operations and Maintenance Costs

It is understood that new capital projects have an impact on future operations and maintenance, and this is included in the financial analysis. Periodically throughout the project, projections of this impact are updated to reflect changes in the project elements.

Flood Protection Capital Improvements

Significant Project Updates from the Prior Year

Listed here are the changes to projects from the FY 2022-26 Adopted CIP:

- The Palo Alto Flood Basin Tide Gate Structure Improvements Project has increased in cost by $1.04 million due to increased staff labor for coordinating and discussing potential required tribal and archaeological monitoring. More time is needed to acquire all necessary project permits; negotiate reasonable permit conditions; and procure the necessary materials.

- The San Francisco Bay Shoreline Project EIA 11 has decreased in cost by $38.77 million due to the removal of planned expenditures associated with Reaches 4-5 real estate acquisition.

- The San Francisquito Flood Protection Project (Construction SF Bay to Middlefield Rd.) has been updated to extend the schedule by four years to accommodate the additional efforts needed to acquire state and federal regulatory permits and factor in the three-year plant establishment period. The total project cost has increased by $12.61 million due to increased right-of-way fees, additional construction activities and and top of bank treatments.

- The Guadalupe River (Tasman Drive to Interstate 880) Project has increased by $3.26 million due to inflation. Planned expenditures have been allocated to future years due to a delay in feasibility alternatives review and an extension of the design schedule.

- The Berryessa Creek (Lower Penitencia Creek to Calaveras Boulevard, Phase 2) Project has increased in cost by $1.50 million due to higher-than-anticipated costs for construction staff.

- The Lower Penitencia Creek (Berryessa Creek to Coyote Creek) Project has increased in cost by $6.89 million. The total project cost increase is to restore funds that were previously reallocated to the Shoreline Project.

- The Upper Llagas Creek (LERRDs) Project has increased in cost by $3.05 million due to the discovery of underground utilities and the necessary relocation thereof. Cost increases are also associated with the increase of cost for construction materials, as well as the addition of previously unforeseen real estate services.

The Safe, Clean Water Program

The Renewed Safe, Clean Water Program, approved by voters in 2020, began in FY 2021-22 and includes the following flood protection projects:

- San Francisquito Creek, SF Bay to Middlefield Road
- Sunnyvale East & West Channels
- Upper Guadalupe River, I-280 to Blossom Hill Road
- Berryessa Creek from Lower Penitencia Creek to Calaveras Boulevard - Phase 3
- Coyote Creek, Montague Expy. to I-280
- Upper Penitencia Creek, Coyote to Dorel Drive
- Llagas Creek-Upper, Buena Vista Avenue to Llagas Road
- San Francisco Bay Shoreline - Design and Partial Construction of EIA 11 and Planning for other EIAs

With the exception of the Berryessa Creek from Lower Penitencia Creek to Calaveras Boulevard - Phase 3, each of these projects were also included in the 2012 Safe, Clean Water Program. Additionally, the following project is considered complete under the 2012 Safe, Clean Water Program, as the KPIs had been delivered, but is still included in the CIP as it is in the close-out phase:

- Permanente Creek, San Francisco Bay to Foothill Expy. (2012 Safe, Clean Water)

For more information about the Safe, Clean Water Program visit valleywater.org. Please see Appendix C for the implementation schedule for the Renewed Program.

Flood Protection Capital Improvements

The following table is a project funding schedule for flood protection capital improvements resulting from this year's financial analysis. Detailed information for each project can be found in this document on the following pages in the order presented in this table. The chart also identifies partially funded projects and estimated unspent appropriation from FY 2021-22.

Flood Protection Capital Improvements ($K)

Project Number	PROJECT NAME	Through FY21	FY22	FY22 Unspent	FY23	FY24	FY25	FY26	FY27	FY28-37	TOTAL
	LOWER PENINSULA WATERSHED										
10394001	Palo Alto Flood Basin Tide Gate Structure Improvements	4,476	3,061	2,369	-	9,172	8,752	8,867	5,005	-	39,333
10244001s	Permanente Creek, SF Bay to Foothill Expressway	112,281	450	885	337	56	-	-	-	-	113,124
10284007s	San Francisquito Creek, SF Bay thru Searsville Dam (E5)	63,122	12,721	13,143	-	26,586	16,189	388	405	121	119,532
	WEST VALEY WATERSHED										
26074002	Sunnyvale East and West Channels (E2)	37,471	-	14,034	931	13,583	11,598	6,551	249	-	70,383
	GUADALUPE WATERSHED										
30154019	Guadalupe River Tasman Dr - I-880	2,918	2,695	1,631	-	1,575	1,229	30,773	29,934	30,046	99,170
26154001s	Guadalupe River–Upper, I-280 to Blossom Hill Road (E8)	134,641	563	20,135	30	33	34	36	18,386	21,298	175,021
	COYOTE WATERSHED										
26174041s	Berryessa Creek, Calaveras Boulevard to Interstate 680	54,581	-	12,991	-	769	-	-	-	-	55,350
40174004s	Berryessa Ck, Lower Penitencia Ck to Calaveras Blvd	122,982	12,789	3,261	1,912	360	262	2,015	2,024	70,237	212,581
26174043	Coyote Creek, Montague Expressway to Tully Road (E1)	17,235	2,845	-	6,375	10,797	21,796	3,781	-	-	62,829
40264011	Cunningham Flood Detention Certification	11,810	30	-	-	-	-	-	-	-	11,840
40334005	Lower Penitencia Ck Improvements, Berryessa to Coyote Cks.	19,032	7,686	14	8,150	82	86	89	-	-	35,125
40264007s	Lower Silver Creek, I-680 to Cunningham (Reach 4-6)	101,472	26	-	52	-	-	-	-	-	101,550
40324003s	Upper Penitencia Creek, Coyote Creek to Dorel Drive	20,393	2,636	6,579	-	-	-	1,460	3,963	4,371	32,823
	UVAS LLAGAS WATERSHED										
50284010	Llagas Creek–Lower, Capacity Restoration, Buena Vista Road to Pajaro River	6,947	-	2,633	-	-	3,035	3,360	374	-	13,716
26174051s	Llagas Creek–Upper, Buena Vista Avenue to Llagas Road (E6)	171,543	61,353	3,604	55,549	32,621	9,286	1,431	-	-	331,783
	MULTIPLE WATERSHEDS										
00044026s	San Francisco Bay Shoreline (E7)	83,638	24,036	2,325	18,697	21,660	4,707	9,898	10,219	6,772	179,627
62084001	Watersheds Asset Rehabilitation Program	39,362	10,911	623	6,741	8,138	6,487	6,697	9,602	86,074	174,012
	TOTAL	1,003,904	141,802	84,227	98,774	125,432	83,461	75,346	80,161	218,919	1,827,799

The following table shows funding requirements from each funding source for flood protection capital improvements.

Flood Protection - Funding Sources ($K)

Fund Number	FUND NAME	Through FY21	FY22	FY22 Unspent	FY23	FY24	FY25	FY26	FY27	FY28-37	TOTAL
12	Watershed Stream Stewardship Fund	405,651	59,280	12,856	33,084	37,066	19,965	51,920	46,939	177,451	831,356
26	Safe, Clean Water and Natural Flood Protection Fund	598,253	82,522	71,371	65,690	88,366	63,496	23,426	33,222	41,468	996,443
	TOTAL	1,003,904	141,802	84,227	98,774	125,432	83,461	75,346	80,161	218,919	1,827,799

FY 2021-22 Funds to be reappropriated

Project	**Palo Alto Flood Basin Tide Gate Structure Replacement**
Program	Flood Protection - Lower Peninsula Watershed
Project No.	10394001
Contact	Bhavani Yerrapotu byerrapotu@valleywater.org

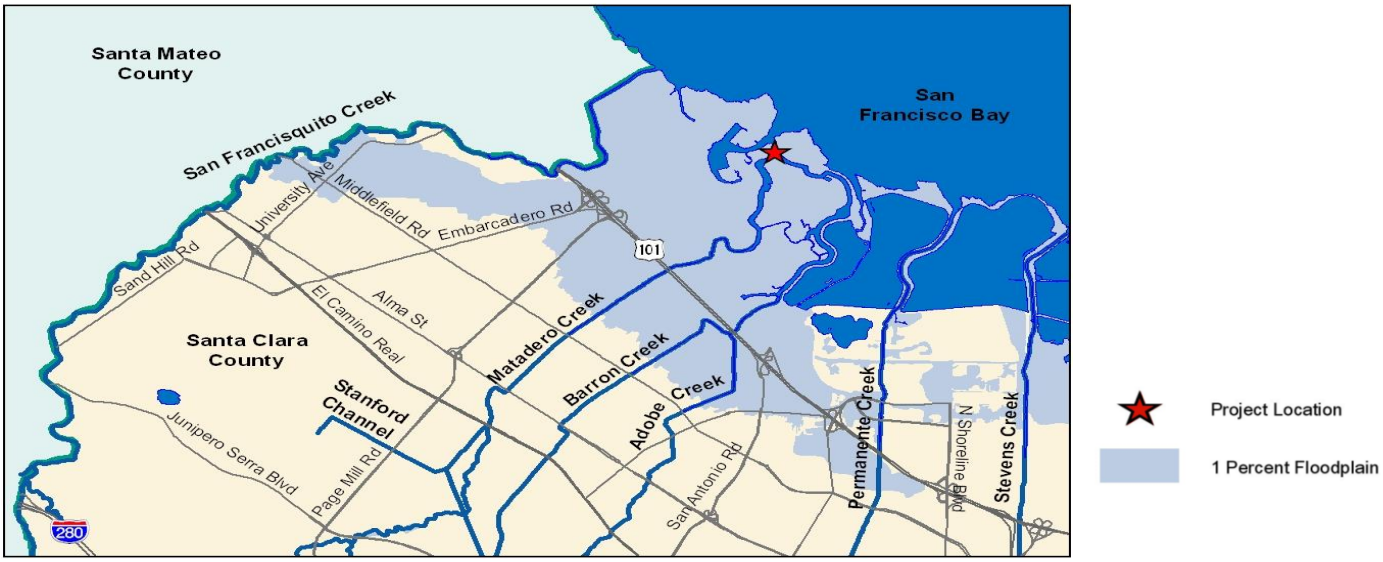
View from the west side of the Palo Alto tide gates facing east

PROJECT DESCRIPTION

This project plans, designs, and constructs a replacement tide gate structure for the Palo Alto Flood Basin to accomplish the following objectives:

- Replace existing tide gate structure to provide existing or better level of service for Matadero, Adobe and Barron Creeks.
- Replace existing tide gate structure to protect property and infrastructure from coastal flooding which could result if existing structure fails.
- Maximize gravity drainage opportunities to practicably address impacts to flood protection facilities due to future sea level rise and the 100-year fluvial flood in cooperation with local planning efforts.
- Limit impacts to existing habitat areas within the Palo Alto Flood Basin.

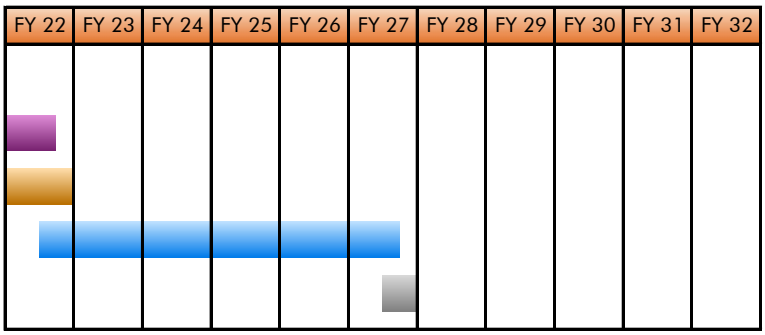
PROJECT LOCATION



SCHEDULE & STATUS

November 2018 to April 2027

Phase	Cost
Plan	1,156
Permits	731
Design	2,403
Construct	33,169
Closeout	90
	37,624



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY21	FY22	FY23	FY24	FY25	FY26	FY27	Future	
10394001-Palo Alto Flood Basin Tide Gate Structure Replacement	3,671	1,498	1,666	9,460	8,320	8,360	4,649	0	37,624
with inflation	3,671	1,498	1,666	9,875	8,752	8,867	5,005	0	39,332

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY21	FY22		FY23	FY24	FY25	FY26	FY27	Future	
10394001-Palo Alto Flood Basin Tide Gate Structure Replacement	4,476	3,061	2,369	0	9,172	8,752	8,867	5,005	0	39,332

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Watershed&Stream Stewardship Fund	39,332
Other Funding Sources	0
Total	39,332

OPERATING COST IMPACTS

Operating cost impacts are expected to be around $27,000 per year starting in FY27. Closer analysis will be determined at the completion of the construction phase.

USEFUL LIFE: 50 Years

Project	**Permanente Creek, San Francisco Bay to Foothill Expressway**
Program	Flood Protection – Lower Peninsula Watershed
Project No.	10244001s
Contact	Bhavani Yerrapotu byerrapotu@valleywater.org

McKelvey Ball Park upon completion in February 2020

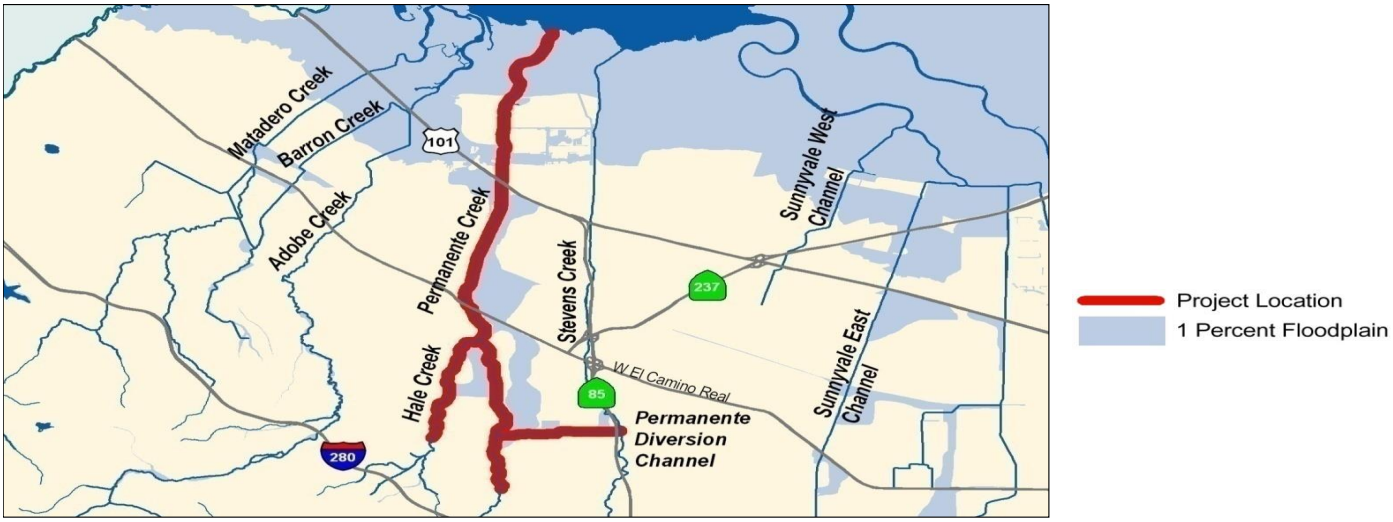
PROJECT DESCRIPTION

This project plans, designs, and constructs improvements along 10.6 miles of Permanente Creek, from San Francisco Bay to Foothill Expressway, Hale Creek from Foothill Expressway to its confluence with Permanente Creek, and the diversion structure between Permanente and Stevens Creeks, to accomplish the following objectives:

- Provide flood protection to 1,664 parcels, including Middlefield Road and Central Expressway.
- Reduce erosion and sedimentation, reduce maintenance costs, and improve safety and stability of the failing channel on Permanente Creek from the San Francisco Bay to Foothill Expressway.
- Provide environmental restoration and enhancement benefits, where opportunities exist.
- Provide recreation enhancements, where opportunities exist.
- Provide natural flood protection by taking a multiple-objective approach.

This project meets the commitments of the voter approved Safe, Clean Water Program (SCW). For a full description of the SCW benefits and KPIs, please visit www.valleywater.org.

PROJECT LOCATION

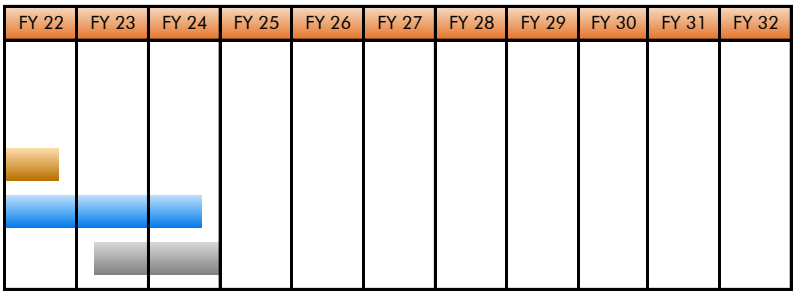


SCHEDULE & STATUS

July 2001 to June 2024

Construction includes multiple contract phases and three years of plant establishment monitoring.

Phase	Cost
Plan	10,051
Permits	3,932
Design	18,055
Construct	80,859
Closeout	187
	113,084



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures						Total
Project	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**Future**	
10244001-Permanente Ck, Bay to Foothill Expwy – Lower Peninsula Fund	17,363	450	337	0	0	0	0	0	18,150
with inflation	17,363	450	337	0	0	0	0	0	18,150
26244001-Permanente Ck, Bay to Foothill Expwy – Clean, Safe Creeks Fund	93,593	441	460	440	0	0	0	0	94,934
with inflation	93,593	441	460	480	0	0	0	0	94,974
TOTAL	110,956	891	797	440	0	0	0	0	113,084
with inflation	110,956	891	797	480	0	0	0	0	113,124

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY21**	**FY22**		**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**Future**	
10244001-Permanente Ck, Bay to Foothill Expwy – Lower Peninsula Fund	17,363	450	0	337	0	0	0	0	0	18,150
26244001-Permanente Ck, Bay to Foothill Expwy – Clean, Safe Creeks Fund	94,918	0	885	0	56	0	0	0	0	94,974
TOTAL	**112,281**	**450**	**885**	**337**	**56**	**0**	**0**	**0**	**0**	**113,124**

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Watershed Stream Stewardship Fund	18,150
SCVWD Clean, Safe Creeks and Natural Flood Protection Fund	93,951
City of Mountain View	1,023
Total	**113,124**

OPERATING COST IMPACTS

The completion of this project is anticipated to increase operating costs by approximately $360,000 per year, beginning in FY21. Increases in operations and maintenance costs include sediment removal at three flood detention sites, and bypass channel inlet and outlet operations and maintenance.

USEFUL LIFE: 30+ Years

Project	**San Francisquito Creek, San Francisco Bay through Searsville Dam (E5)**
Program	Flood Protection – Lower Peninsula Watershed
Project No.	10284007s
Contact	Bhavani Yerrapotu byerrapotu@valleywater.org

Upstream face of Pope/Chaucer Street with water surface approximately two feet below the soffit

PROJECT DESCRIPTION

This project provides coordination and support to the San Francisquito Joint Powers Authority, in partnership with the U.S. Army Corps of Engineers, to complete planning and design documents for an approved project alternative on San Francisquito Creek, from San Francisco Bay through Searsville Dam. This project will accomplish the following objectives:

- Provide flood protection.
- Reduce bank erosion and sedimentation-related impacts along San Francisquito Creek.
- Avoid potential adverse impacts on fish and wildlife habitats.
- Minimize impacts to the creek's environmental resources and restore the riparian corridor where feasible.

The San Francisquito Flood Protection project will provide 100-year flood protection from San Francisco Bay to Highway 101 and replace two bridges between Highway 101 and Middlefield Road.

This project is accounted for in the following: (10284007 & 10284008 are Completed)

- 26284001 – SF Bay through Searsville Dam
- 26284002 – Construction - San Francisco Bay to Middlefield Rd.

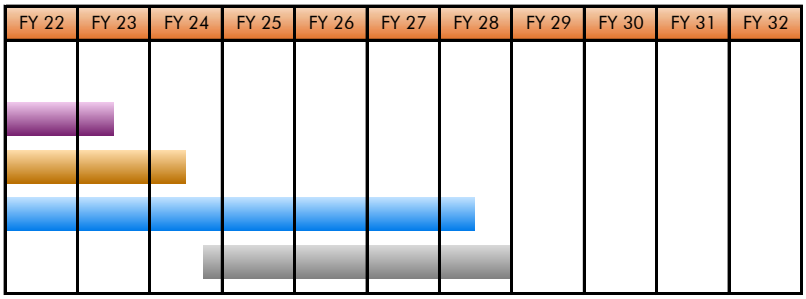
This project meets the commitments of the voter approved Safe, Clean Water Program (SCW), Project E5. For a full description of the SCW benefits and KPIs, please visit www.valleywater.org.

PROJECT LOCATION

SCHEDULE & STATUS

June 2003 to June 2028

Phase	Cost
Plan	4,637
Permits	1,818
Design	23,288
Construct	84,619
Closeout	126
	116,829



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**Future**	
10284007-San Francisquito Ck, Bay-Searsville Dam	4,064	0	0	0	0	0	0	0	4,064
with inflation	4,064	0	0	0	0	0	0	0	4,064
10284008-San Francisquito Ck, Early Implementation	1,614	0	0	0	0	0	0	0	1,614
with inflation	1,614	0	0	0	0	0	0	0	1,614
26284001-San Francisquito Ck, Bay-Searsville Dam	6,605	0	0	0	0	0	0	0	6,605
with inflation	6,605	0	0	0	0	0	0	0	6,605
26284002-San Francisquito Ck - Construction - SF Bay to Middlefield Rd.	49,027	1,390	5,490	32,619	15,277	325	325	93	104,546
with inflation	49,027	1,390	5,490	34,162	16,189	388	405	121	107,171
TOTAL	**61,310**	**1,390**	**5,490**	**32,619**	**15,277**	**325**	**325**	**93**	**116,829**
with inflation	**61,310**	**1,390**	**5,490**	**34,162**	**16,189**	**388**	**405**	**121**	**119,454**

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY21**	**FY22**		**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**Future**	
10284007-San Francisquito Ck, Bay-Searsville Dam	4,064	0	0	0	0	0	0	0	0	4,064
10284008-San Francisquito Ck, Early Implementation	1,614	0	0	0	0	0	0	0	0	1,614
26284001-San Francisquito Ck, Bay-Searsville Dam	6,782	-100	77	0	0	0	0	0	0	6,682
26284002-San Francisquito Ck - Construction - SF Bay to Middlefield Rd.	50,662	12,821	13,066	0	26,586	16,189	388	405	121	107,171
TOTAL	**63,122**	**12,721**	**13,143**	**0**	**26,586**	**16,189**	**388**	**405**	**121**	**119,531**

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Watershed Stream Stewardship Fund	5,678
SCVWD Safe, Clean Water and Natural Flood Protection Fund	75,840
JPA and Member Agencies (D/S Funding)	5,558
Unsecured Grants and Partnerships (U/S Funding)	23,514
Unsecured City of Palo Alto/Caltrans Grant (Newell Road Bridge)	8,941
Total	**119,531**
San Francisquito Joint Powers Authority	11,040
County of San Mateo - In-kind Services	1,500

County and Corps participation are for Feasibility Study activities only. Additional funding will be negotiated during subsequent phases.

OPERATING COST IMPACTS

These projects will have an estimated annual operating cost impact of approximately $250,000 beginning in FY24.

USEFUL LIFE: 30+ Years

Project	**Sunnyvale East and West Channels Flood Protection Project (E2)**
Program	Flood Protection – West Valley Watershed
Project No.	26074002
Contact	Bhavani Yerrapotu byerrapotu@valleywater.org

Sunnyvale West Channel looking south at Carl Road

PROJECT DESCRIPTION

In the early stages of the project design process, Valley Water project team decided to join both improvement projects into a single flood protection project with a single Environmental Impact Report to reduce construction costs and minimize construction coordination issues between the two channels.

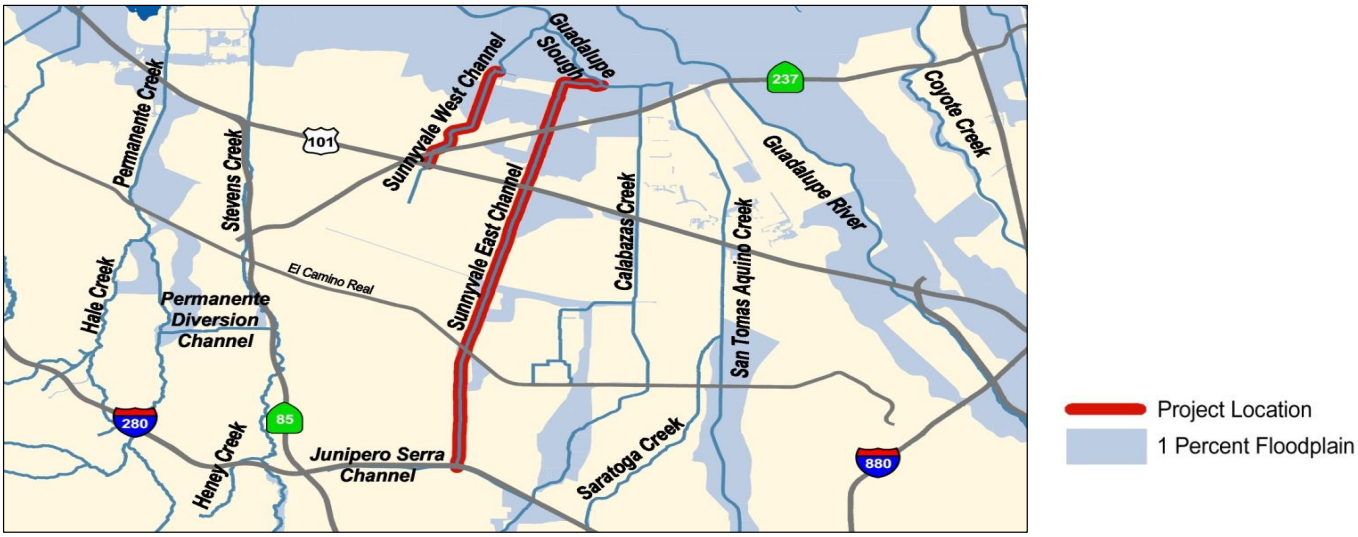
The West Channel extends approximately three miles and upgrades existing channel capacity to provide 1% (or 100-year) riverine flood protection for 47 acres of highly valuable industrial lands. The East Channel extends approximately 6.4 miles and upgrades existing channel capacity to provide 1% riverine flood protection for 1,618 parcels. Both projects decrease channel turbidity and sediment by repairing erosion sites, thereby improving water quality.

- Provides 1% flood capacity for approximately 6.5 miles of channel along Sunnyvale East and approximately three 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 opportunities to integrate recreation improvements with the City of Sunnyvale and others as appropriate.

The Sunnyvale East and Sunnyvale West Channels were originally identified as separate projects. In order to improve efficiency by combining efforts, the planning, design and construction phases for both projects will be performed as a single effort.

This project meets the commitments of the voter approved Safe, Clean Water Program (SCW) Project E2. For a full description of the SCW benefits and KPIs, please visit www.valleywater.org.

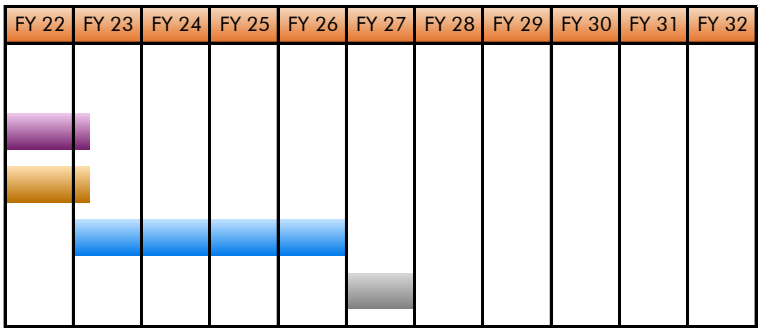
PROJECT LOCATION



SCHEDULE & STATUS

March 2006 to June 2027

Phase	Cost
Plan	5,770
Permits	1,330
Design	12,676
Construct	49,690
Closeout	200
	69,753



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**Future**	
26074002-Sunnyvale East and West Channels Flood Protection Project (E2)	20,165	3,272	14,965	13,450	11,400	6,301	200	0	69,753
with inflation	20,165	3,272	14,965	13,583	11,598	6,551	249	0	70,383

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY21**	**FY22**		**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**Future**	
26074002-Sunnyvale East and West Channels Flood Protection Project (E2)	37,471	0	14,034	931	13,583	11,598	6,551	249	0	70,383

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Clean, Safe Creeks and Natural Flood Protection Fund	70,383
Other Funding Source	0
Total	**70,383**

OPERATING COST IMPACTS

The completion of this project is anticipated to increase operating costs by approximately $210,000 per year based on Operations & Maintenance forecasting, beginning in FY27. Increases in operations and maintenance costs include graffiti removal, vegetation management, rodent abatement, good neighbor maintenance, and encampment cleanup in areas where the City of Sunnyvale's joint use agreements are not applicable.

USEFUL LIFE: 30+ Years

Project	**Guadalupe River Tasman Dr - I-880**
Program	Flood Protection - Guadalupe Watershed
Project No.	30154019
Contact	John Bourgeois jbourgeois@valleywater.org

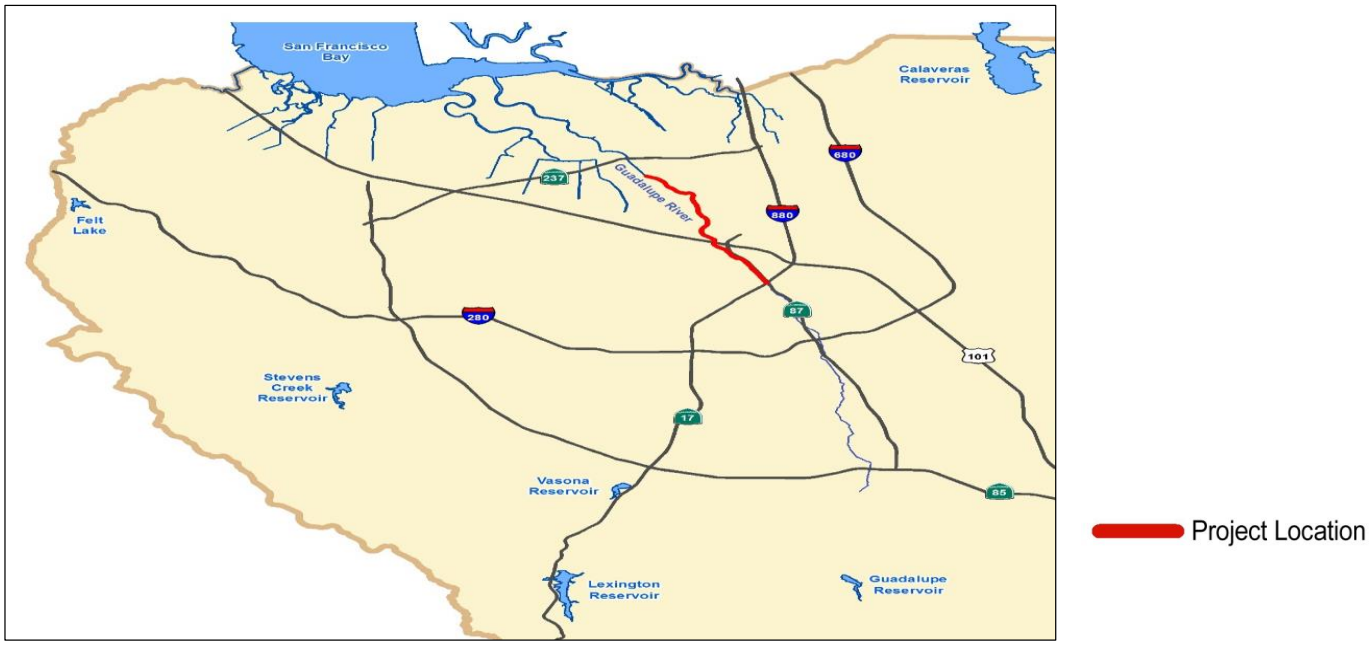
East bank of the Guadalupe River, looking upstream toward Trimble Road

PROJECT DESCRIPTION

This project plans, designs, and constructs improvements along the Guadalupe River from Tasman Drive to Interstate 880 to restore the 100-year flood conveyance capacity. The project will accomplish the following objective:

- Restore designed level of service along a portion of the Guadalupe River to provide 1% flood protection.

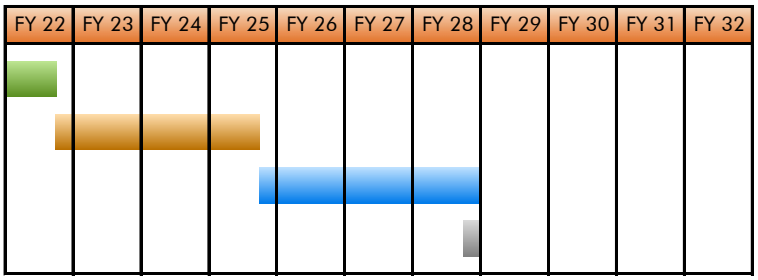
PROJECT LOCATION



SCHEDULE & STATUS

March 2019 to April 2028

Phase	Cost
Plan	2,750
Design	5,145
Construct	79,627
Closeout	50
	87,804



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY21	FY22	FY23	FY24	FY25	FY26	FY27	Future	
30154019-Guadalupe River Tasman Dr - I-880	2,476	1,506	1,568	1,500	1,077	27,111	26,283	26,283	87,804
with inflation	2,476	1,506	1,568	1,638	1,229	30,773	29,934	30,046	99,170

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY21	FY22		FY23	FY24	FY25	FY26	FY27	Future	
30154019-Guadalupe River Tasman Dr - I-880	2,918	2,695	1,631	0	1,575	1,229	30,773	29,934	30,046	99,170

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Watershed Stream Stewardship Fund	99,170
Other Funding Sources	0
Total	**99,170**

OPERATING COST IMPACTS

Operating cost impacts will be determined during the design phase.

USEFUL LIFE: 30 Years

Project	**Guadalupe River–Upper, Interstate 280 to Blossom Hill Road (E8)**
Program	Flood Protection – Guadalupe Watershed
Project No.	26154001s
Contact	Bhavani Yerrapotu byerrapotu@valleywater.org

Flooding from Guadalupe River on Willow Street near the Southern Pacific Railroad Bridge

PROJECT DESCRIPTION

This project partners with the U.S. Army Corps of Engineers (USACE) to plan, design, and construct improvements along approximately 6 miles of the Guadalupe River, from Interstate 280 to Blossom Hill Road, to accomplish the following objectives:

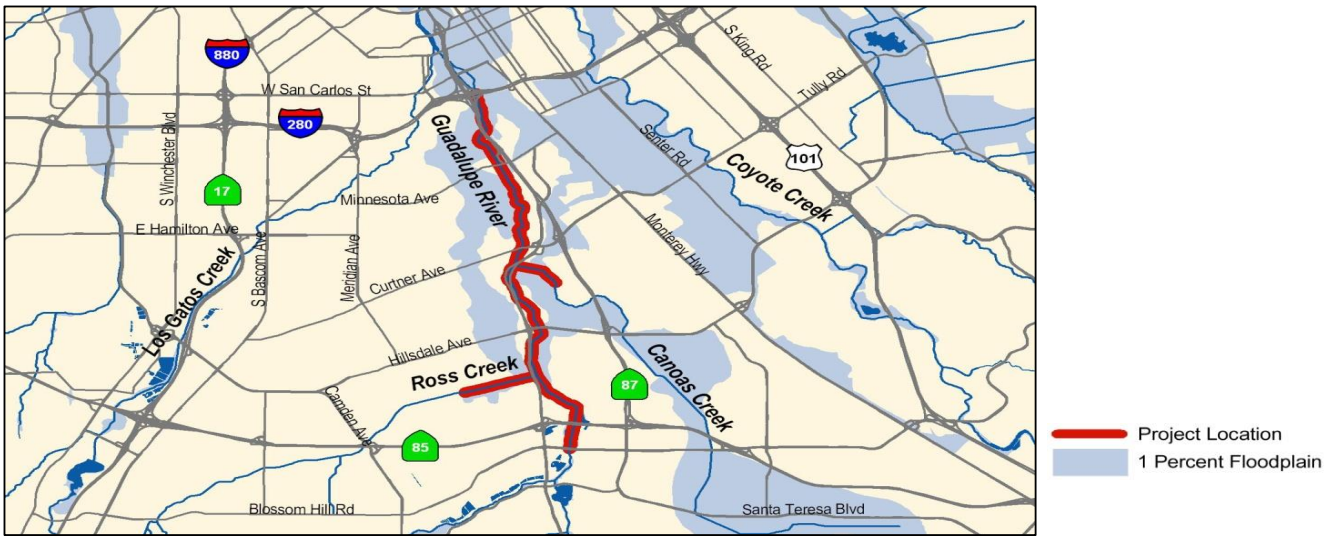
- Provide 1% flood protection to nearly 7,000 parcels along the Guadalupe River, from I-280 to Blossom Hill Road, including portions of Ross Creek and Canoas Creek.
- Provide long-term net gains of 15 acres in riparian forest acreage, quality, and continuity of wildlife habitat, and conditions favoring Chinook salmon and steelhead trout.
- Provide access to an additional 19 miles of suitable upstream spawning and rearing habitat, which would result in significant long-term beneficial impacts on fisheries resources.
- Coordinate with the City of San Jose and the community to establish a continuous maintenance road suitable for trail development between Interstate 280 and Los Alamitos Creek.
- Improve water quality by reducing bank erosion and sedimentation-related impacts along the river and tributaries.
- Address and resolve permit coordination activities and watershed integration issues through the Guadalupe Watershed Integration Working Group.

This project is accounted for in the following:

- 26154001 Fish Passage Modification (Completed)
- 26154002 I-280 to Southern Pacific Railroad Bridge (Reach 6) Flood Protection Project was completed in 2012.
- 26154003 Southern Pacific Railroad Bridge to Blossom Hill Road (Reaches 7-12) A General Re-Evaluation Report has been conducted with the USACE and it is expected to be completed by December, 2023.

This project meets the commitments of the voter approved Safe, Clean Water Program (SCW), Project E8. For a full description of the SCW benefits and KPIs, please visit www.valleywater.org.

PROJECT LOCATION

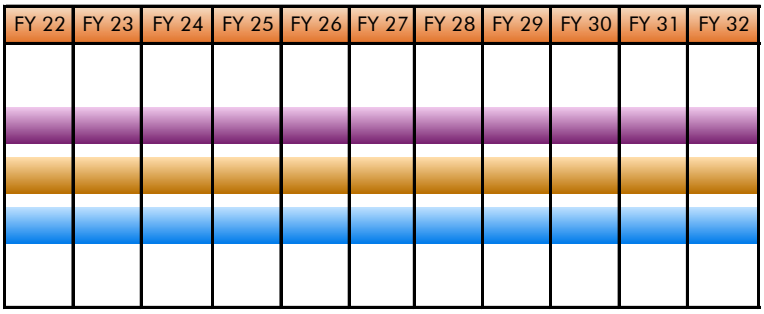


SCHEDULE & STATUS

September 1985 to June 2031

Planning phase is complete. Design and construction of eight individual reaches are being done sequentially.

Phase	Cost
Plan	9,124
Permits	2,579
Design	77,072
Construct	73,539
Closeout	273
	167,888



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**Future**	
26154001-Guadalupe Rv—Upr, Fish Passage Mods	2,651	0	0	0	0	0	0	0	2,651
with inflation	2,651	0	0	0	0	0	0	0	2,651
26154002-Guadalupe Rv—Upr, I-280 to SPRR (R6)	33,578	1,688	31	30	30	30	30	2,215	37,632
with inflation	33,578	1,688	31	33	34	36	37	2,863	38,300
26154003-Guadalupe Rv—Upper, SPRR to Blossom Hill Rd. (R7-12)	68,377	888	888	300	100	8,725	22,940	17,500	119,718
with inflation	68,377	888	888	328	114	10,235	26,916	20,436	128,183
Actuals in closed project numbers	7,887	0	0	0	0	0	0	0	7,887
with inflation	7,887	0	0	0	0	0	0	0	7,887
TOTAL	**112,493**	**2,576**	**919**	**330**	**130**	**8,755**	**22,970**	**19,715**	**167,888**
with inflation	**112,493**	**2,576**	**919**	**360**	**148**	**10,271**	**26,953**	**23,299**	**177,020**

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests						Total
Project	**FY21**	**FY22**		**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**Future**	
26154001-Guadalupe Rv—Upr, Fish Passage Mods	2,651	0	0	0	0	0	0	0	0	2,651
26154002-Guadalupe Rv—Upr, I-280 to SPRR (R6)	34,704	563	1	30	33	34	36	37	2,863	38,300
26154003-Guadalupe Rv—Upper, SPRR to Blossom Hill Rd. (R7-12)	89,399	0	20,134	0	0	0	0	18,347	20,436	128,183
Actuals in closed project numbers	7,887	0	0	0	0	0	0	0	0	7,887
TOTAL	**134,641**	**563**	**20,135**	**30**	**33**	**34**	**36**	**18,385**	**23,299**	**177,020**

FUNDING SOURCES

(in thousands $)

SCVWD Watershed Stream Stewardship Fund	12,000
SCVWD Safe, Clean Water and Natural Flood	131,565
State of California	28,864
City of San Jose	4,591
Total	**177,020**

OPERATING COST IMPACTS

The completion of this project is anticipated to increase operating costs by approximately $360,000 per year, beginning in FY21, for mitigation and monitoring labor and equipment, implementation of adaptive management measures, and operations and maintenance in accordance with the USACE Operations and Maintenance Manual.

USEFUL LIFE: 30+ Years

Project	**Berryessa Creek, Calaveras Boulevard to Interstate 680**
Program	Flood Protection – Coyote Watershed
Project No.	26174041s
Contact	Bhavani Yerrapotu byerrapotu@valleywater.org

Berryessa Creek near flood stage at Piedmont Road in San Jose

PROJECT DESCRIPTION

This project partners with the U.S. Army Corps of Engineers (USACE) to plan, design, and construct improvements along approximately two miles of Berryessa Creek, from Calaveras Boulevard to Interstate 680, to accomplish the following objectives:

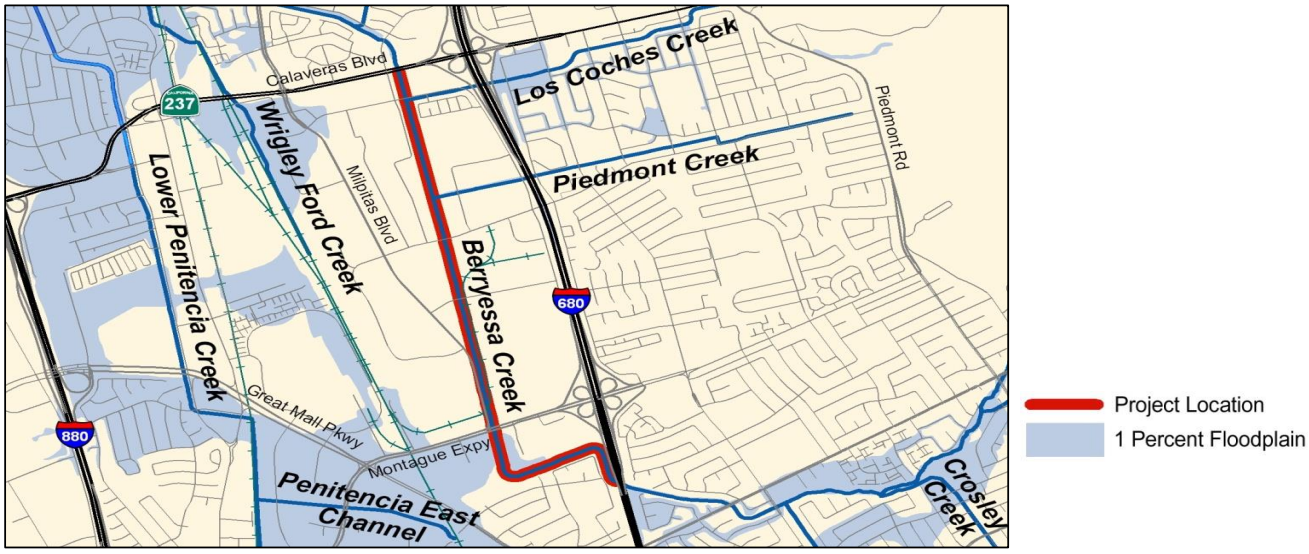
- Provide 1% flood protection to more than 1,100 homes, businesses, and public buildings.
- Reduce sedimentation and maintenance requirements.
- Mitigate for project impacts.
- Improve stream habitat values.
- Coordinate with the cities of San Jose and Milpitas, and the community to establish a continuous maintenance road suitable for trail development along the Berryessa Creek project.
- Obtain a Letter of Map Revision from the Federal Emergency Management Agency.
- Incorporate Valley Water's Clean, Safe Creeks and Natural Flood Protection Program Objectives.

This project is accounted for in the following:

- 26174041 – Coordination with USACE
- 26174042 – Reimbursable work – Lands, Easements, Rights of Way, Relocations and Disposal

This project meets the commitments of the voter approved Safe, Clean Water Program (SCW). For a full description of the SCW benefits and KPIs, please visit www.valleywater.org.

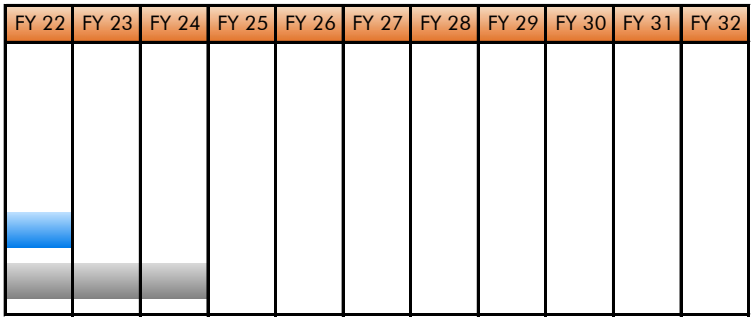
PROJECT LOCATION



SCHEDULE & STATUS

January 2000 to June 2024

Phase	Cost
Plan	8,323
Permits	1,831
Design	11,961
Construct	27,022
Closeout	253
	53,274



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**Future**	
26174041-Berryessa Creek, USACE Coordination	23,393	531	398	11,286	0	0	0	0	35,608
with inflation	23,393	531	398	12,041	0	0	0	0	36,363
26174042-Berryessa Creek, LERRDs	17,666	0	0	0	0	0	0	0	17,666
with inflation	17,666	0	0	0	0	0	0	0	17,666
TOTAL	**41,059**	**531**	**398**	**11,286**	**0**	**0**	**0**	**0**	**53,274**
with inflation	**41,059**	**531**	**398**	**12,041**	**0**	**0**	**0**	**0**	**54,029**

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY21**	**FY22**		**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**Future**	
26174041-Berryessa Creek, USACE Coordination	35,594	0	11,670	0	769	0	0	0	0	36,363
26174042-Berryessa Creek, LERRDs	17,666	0	0	0	0	0	0	0	0	17,666
TOTAL	**53,260**	**0**	**11,670**	**0**	**769**	**0**	**0**	**0**	**0**	**54,029**

Adjusted Budget includes adopted budget plus approved budget adjustments. Funding exceeds planned expenditures by approximately $1,321,000. Excess funding will be returned to reserves upon completion of the project.

FUNDING SOURCES

(in thousands $)

SCVWD Clean, Safe Creeks and Natural Flood Protection Fund	18,429
State of California	25,600
Department of Water Resources (Prop 1E)	10,000
Total	**54,029**
USACE - In-kind Services	13,600

OPERATING COST IMPACTS

The completion of this project is anticipated to increase operating costs by approximately $135,000 per year, beginning in FY20, to maintain approximately two miles of new levees and flood walls, and for activities such as vegetation control and graffiti removal.

USEFUL LIFE: 30+ Years

Project	**Berryessa Creek, Lower Penitencia Creek to Calaveras Boulevard**
Program	Flood Protection – Coyote Watershed
Project No.	40174004s
Contact	Bhavani Yerrapotu byerrapotu@valleywater.org

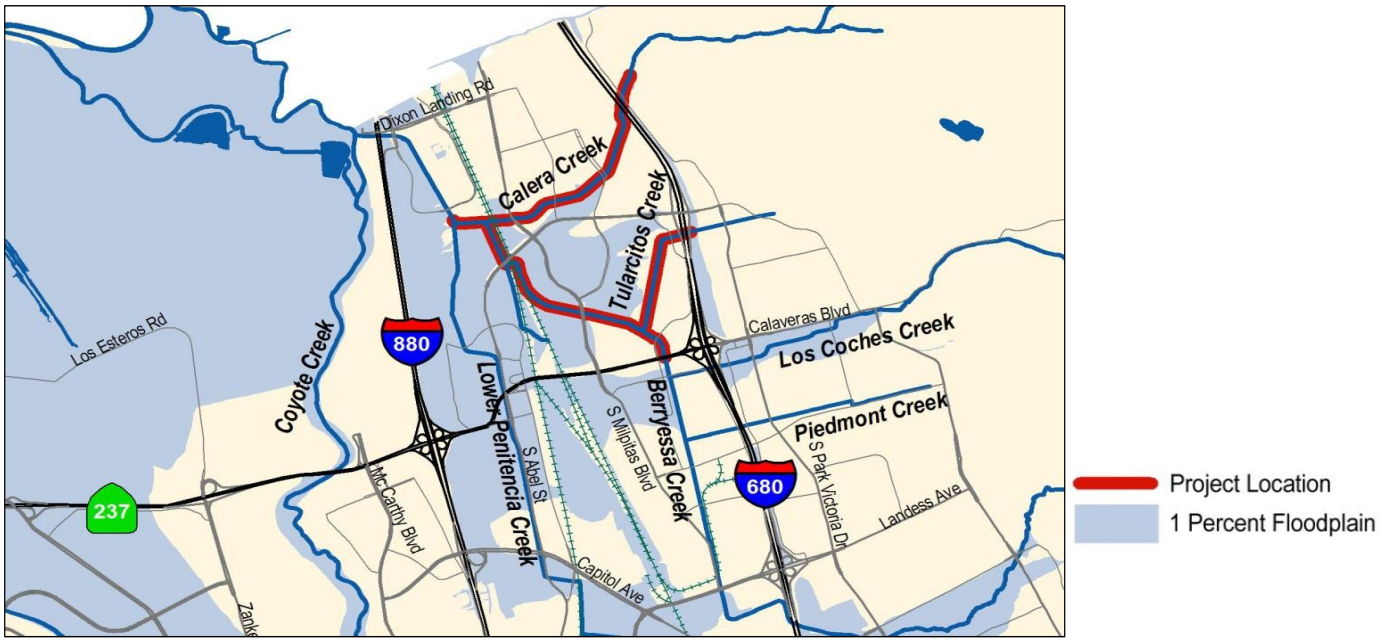
Berryessa Creek upstream of the confluence with Lower Penitencia Creek

PROJECT DESCRIPTION

This project plans, designs, and constructs improvements along approximately three miles of Berryessa Creek and its tributaries, from the confluence with Lower Penitencia Creek to Calaveras Boulevard (Phase 1 and 2) and both Calera and Tularcitos Creeks (Phase 3), to accomplish the following objectives:

- Provide 1% flood protection to 1,823 homes, businesses, and public buildings in the surrounding area.
- Improve the structural integrity of the levees.
- Improve maintenance access and safety for Valley Water staff.
- Identify opportunities to integrate recreation inputs consistent with the City of Milpitas' Trail Master Plan.
- Obtain a letter of map revision from the Federal Emergency Management Agency.

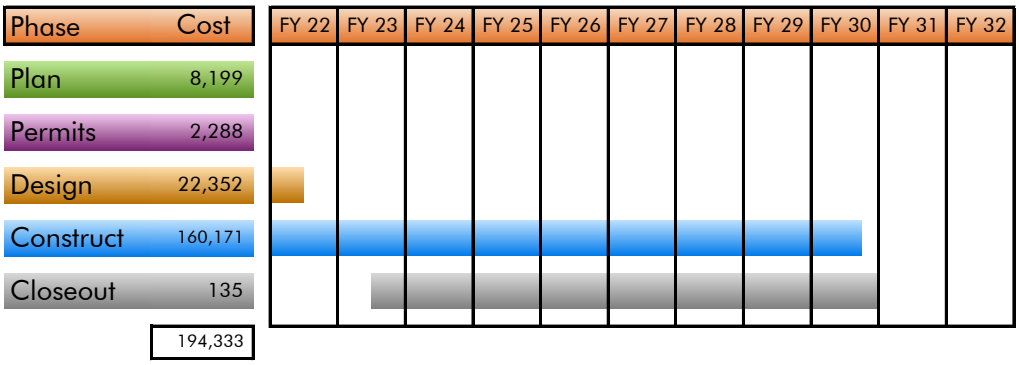
PROJECT LOCATION



SCHEDULE & STATUS

March 2001 to June 2030

Planning phase is complete. Construction includes three phases and three years of plant establishment monitoring.



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**Future**	
40174004-Berryessa Creek, Lower Penitencia Creek to Calaveras Boulevard Phase 1	46,825	105	110	0	0	0	0	0	47,040
with inflation	46,825	105	110	0	0	0	0	0	47,040
40174005-Berryessa Creek, Lower Penitencia Creek to Calaveras Boulevard Phase 2	62,710	22,870	1,912	330	230	0	0	0	88,052
with inflation	62,710	22,870	1,912	360	262	0	0	0	88,115
40C40397-Berryessa Creek, Lower Penitencia Creek to Calaveras Boulevard Phase 3	0	0	0	0	0	1,690	1,624	50,777	54,091
with inflation	0	0	0	0	0	2,015	2,024	61,330	65,369
26C40420-Phase 3 Planning/Design (only)	0	0	0	0	0	0	0	5,150	5,150
with inflation	0	0	0	0	0	0	0	8,906	8,906
TOTAL	**109,535**	**22,975**	**2,022**	**330**	**230**	**1,690**	**1,624**	**55,927**	**194,333**
with inflation	**109,535**	**22,975**	**2,022**	**360**	**262**	**2,015**	**2,024**	**70,236**	**209,430**

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY21**	**FY22**		**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**Future**	
40174004-Berryessa Creek, Lower Penitencia Creek to Calaveras Boulevard Phase 1	50,191	0	3,261	0	0	0	0	0	0	50,191
40174005-Berryessa Creek, Lower Penitencia Creek to Calaveras Boulevard Phase 2	72,791	12,789	0	1,912	360	262	0	0	0	88,115
40C40397-Berryessa Creek, Lower Penitencia Creek to Calaveras Boulevard Phase 3	0	0	0	0	0	0	2,015	2,024	61,330	65,369
26C40420-Phase 3 Planning/Design (only)	0	0	0	0	0	0	0	0	8,906	8,906
TOTAL	**122,982**	**12,789**	**3,261**	**1,912**	**360**	**262**	**2,015**	**2,024**	**70,236**	**212,581**

Adjusted Budget includes adopted budget plus approved budget adjustments. Allocated funding exceeds planned expenditures by approximately $3,151,000. Excess funds will be returned to Fund Reserves at the close of the project.

FUNDING SOURCES

(in thousands $)

SCVWD Watershed Stream Stewardship Fund	200,117
Safe, Clean Water Fund Measure S	8,906
Department of Water Resources (Prop 1E)	12,464
Total	**212,581**

OPERATING COST IMPACTS

The operating cost impacts of these projects are anticipated to average approximately $210,000 annually starting in FY20. Phase II completion is expected to cost $929,000 in FY21; in FY22, $956,000.

USEFUL LIFE: 30+ Years

Project	**Coyote Creek, Montague Expressway to Tully Road (E1)**
Program	Flood Protection – Coyote Watershed
Project No.	26174043
Contact	Bhavani Yerrapotu byerrapotu@valleywater.org

February 2017 flood event, on Rock Springs Drive looking northeast towards Rocksprings Park

PROJECT DESCRIPTION

This project plans, designs, and constructs improvements along approximately nine miles of Coyote Creek, from Montague Expressway to Tully Road, to accomplish the following objectives:

- To reduce the risk of flooding to homes, schools, businesses, and highways from approximately a 20 year flood event (February 2017 event), from Montague Expressway to Tully Road.
- Improve water quality, enhance stream habitat, and provide recreational opportunities.
- Incorporate aesthetic elements of the Coyote Creek park chain.
- Minimize long-term maintenance needs.

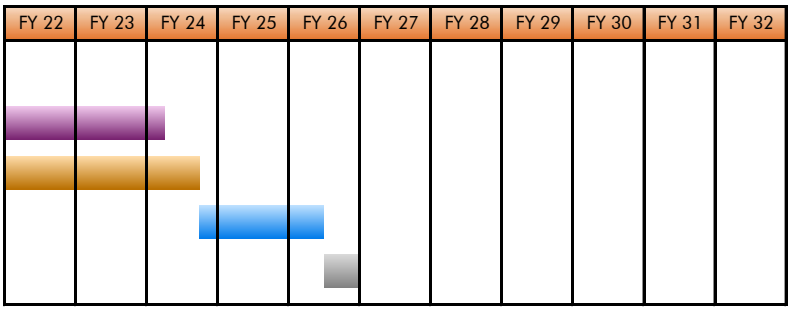
This project meets the commitments of the voter approved Safe, Clean Water Program (SCW), Project E1. For a full description of the SCW benefits and KPIs, please visit www.valleywater.org.

PROJECT LOCATION

SCHEDULE & STATUS

November 2017 to June 2026

Phase	Cost
Plan	9,926
Permits	1,590
Design	16,215
Construct	30,321
Closeout	106
	59,553



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures						Total
Project	FY21	FY22	FY23	FY24	FY25	FY26	FY27	Future	
26174043-Coyote Creek, Montague Expressway to Tully Road (E1)	15,954	4,126	6,375	10,018	19,780	3,300	0	0	59,553
with inflation	15,954	4,126	6,375	10,797	21,796	3,781	0	0	62,829

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY21	FY22		FY23	FY24	FY25	FY26	FY27	Future	
26174043-Coyote Creek, Montague Expressway to Tully Road (E1)	17,235	2,845	0	6,375	10,797	21,796	3,781	0	0	62,829

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Clean, Safe Creeks and Natural Flood Protection Fund	62,829
Other Funding Sources	0
Total	**62,829**

OPERATING COST IMPACTS

Currently Valley Water has limited and sporadic property rights within the project limits along the creek, and ongoing maintenance costs are relatively small. Project implementation may include acquisition of continuous right of way for construction and future operations and maintenance. This project is expected to increase operating costs by approximately $1,000,000 per year starting in FY27.

USEFUL LIFE: 30+ Years

Project	**Cunningham Flood Detention Certification**
Program	Flood Protection – Coyote Watershed
Project No.	40264011
Contact	Bhavani Yerrapotu byerrapotu@valleywater.org

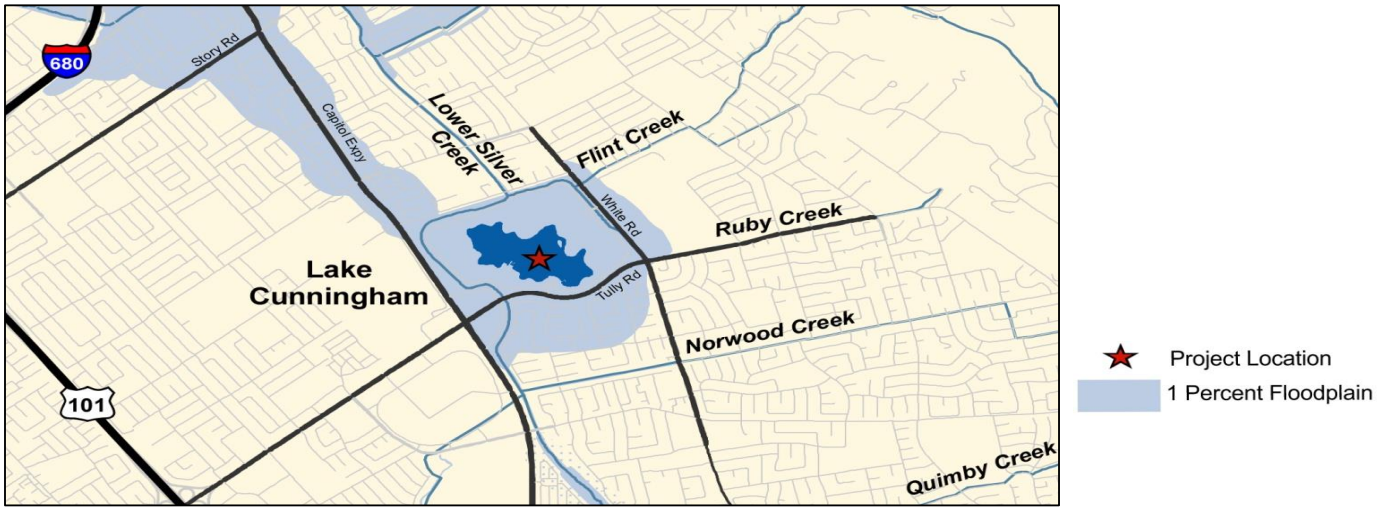
Flooding from Lower Silver Creek in February 1969 at the future site of Lake Cunningham Regional Park

PROJECT DESCRIPTION

This project plans, designs, and constructs final improvements at Lake Cunningham Regional Park (Park) to ensure the site operates as a flood detention facility in accordance with the 1978 agreement with the City of San Jose (City) and to ensure the Lower Silver Creek Project improvements downstream of Cunningham Avenue function as designed. This project will accomplish the following objectives:

- Validate that the flood detention facility can attenuate the volume of water associated with 2,249 cfs below the Park land elevation as stipulated in the 1978 Joint Use Agreement between the City and Valley Water.
- Obtain Federal Emergency Management Agency certification of the flood detention facility and Lower Silver Creek improvements north of the Park to revise the applicable flood insurance rate maps in the Lower Silver Creek 1% floodplain near the north of the Park.
- Update the 1978 Joint Use Agreement between the City and Valley Water to meet the flood detention facility's validated condition.

PROJECT LOCATION



SCHEDULE & STATUS

August 1999 to June 2022

Phase	Cost
Plan	2,322
Permits	369
Design	2,291
Construct	6,731
Closeout	-
	11,840

FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32

EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY21	FY22	FY23	FY24	FY25	FY26	FY27	Future	
40264011-Cunningham Flood Detention Certification	11,807	33	0	0	0	0	0	0	11,840
with inflation	11,807	33	0	0	0	0	0	0	11,840

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY21	FY22		FY23	FY24	FY25	FY26	FY27	Future	
40264011-Cunningham Flood Detention Certification	11,810	30	0	0	0	0	0	0	0	11,840

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Watershed Stream Stewardship Fund	8,122
California Department of Water Resources	1,000
Natural Resource Conservation Service	2,718
Total	**11,840**

OPERATING COST IMPACTS

The project is within Valley Water jurisdiction and it is designed to minimize maintenance activities such as sediment removal. Operating costs are expected to be approximately $60,000 per year starting in FY20.

USEFUL LIFE: 30+ Years

Project	**Lower Penitencia Creek Improvements, Berryessa to Coyote Creeks**
Program	Flood Protection – Coyote Watershed
Project No.	40334005
Contact	Bhavani Yerrapotu byerrapotu@valleywater.org

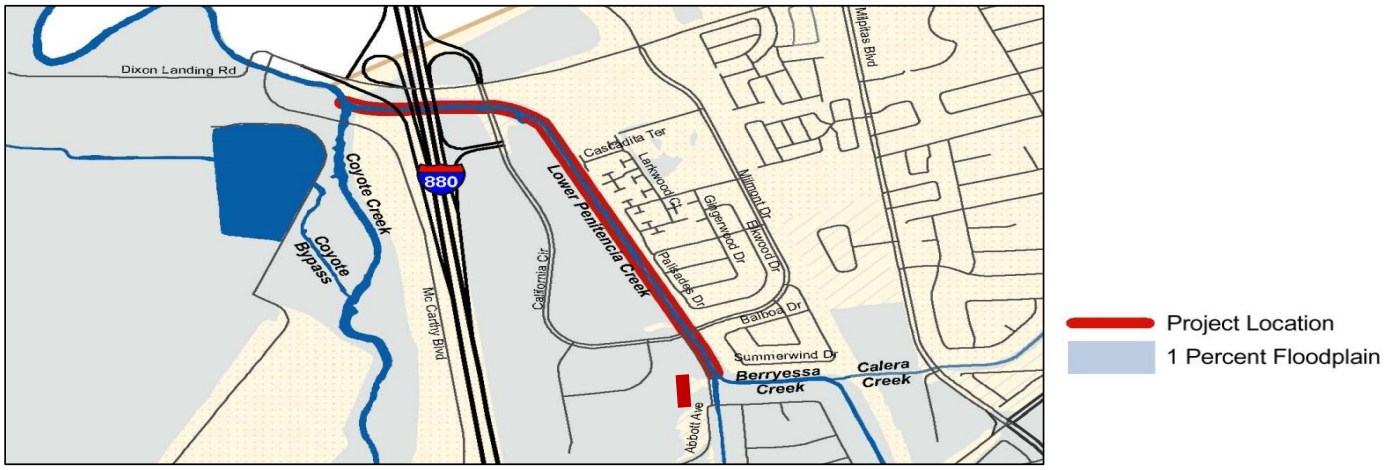
Lower Penitencia Creek, looking downstream from Milmont Drive

PROJECT DESCRIPTION

This project plans, designs, and constructs improvements along approximately one mile of Lower Penitencia Creek from the downstream confluence with Coyote Creek to the downstream face of San Andreas Drive, to accomplish the following objectives:

- Convey the Lower Berryessa Creek 1% design flow.
- Meet required water surface elevations at Coyote Creek and Berryessa Creek confluences.
- Minimize the need for seasonal removal of sediment and non-woody vegetation.
- Maintain existing Federal Emergency Management Agency (FEMA) accreditation along the east levee located between California Circle and Berryessa Creek.
- Enable FEMA certification of the improvements.

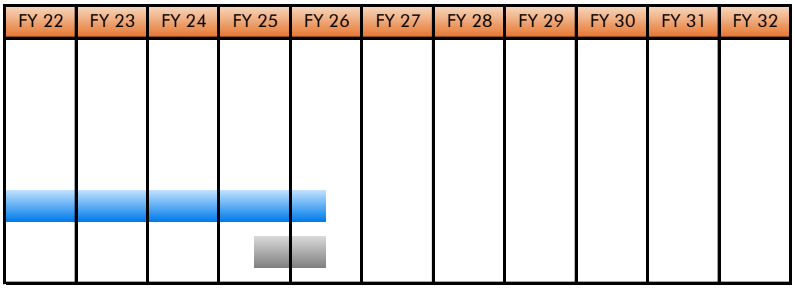
PROJECT LOCATION



SCHEDULE & STATUS

October 2010 to December 2025

Phase	Cost
Plan	3,574
Permits	959
Design	6,087
Construct	17,880
Closeout	20
	35,093



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY21	FY22	FY23	FY24	FY25	FY26	FY27	Future	
40334005-Lower Penitencia Creek Improvements, Berryessa to Coyote Creeks	17,233	9,471	8,164	75	75	75	0	0	35,093
with inflation	17,233	9,471	8,164	82	86	89	0	0	35,125

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY21	FY22		FY23	FY24	FY25	FY26	FY27	Future	
40334005-Lower Penitencia Creek Improvements, Berryessa to Coyote Creeks	19,032	7,686	14	8,150	82	86	89	0	0	35,125

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Watershed Stream Stewardship Fund	30,125
Department of Water Resources (Prop 1E)	5,000
Total	**35,125**

OPERATING COST IMPACTS

This project is expected to have an operating cost of approximately $215,000 per year, beginning in FY23.

USEFUL LIFE: 50 Years

Project	**Lower Silver Creek, I-680 to Cunningham Avenue (Reaches 4-6)**
Program	Flood Protection – Coyote Watershed
Project No.	40264008s
Contact	Bhavani Yerrapotu byerrapotu@valleywater.org

Lower Silver Creek looking upstream from Capital Expressway

PROJECT DESCRIPTION

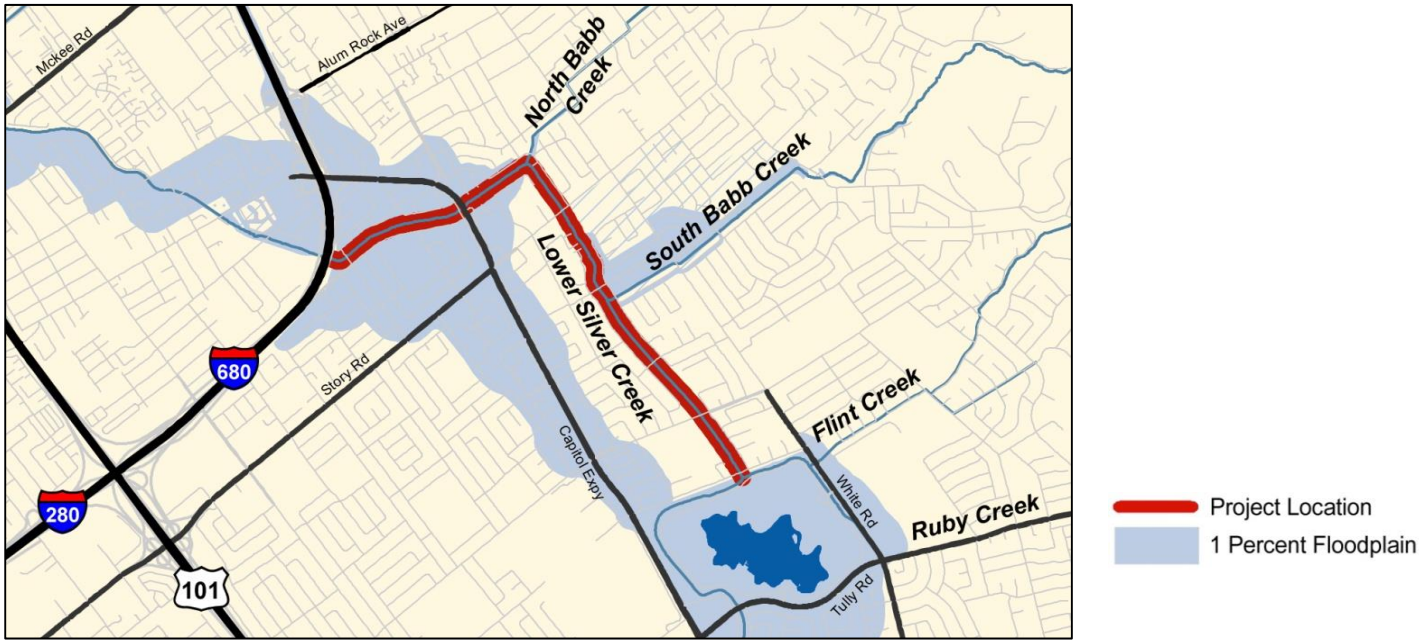
This project is part of a flood control project that partners with the Natural Resource Conservation Service to plan, design and construct improvements along approximately 2.3 miles of Lower Silver Creek, from Interstate 680 to Lake Cunningham. This project includes elements that are eligible for reimbursement from the state and federal governments to accomplish the following objectives:

- Increase flood protection to 3,800 parcels in the surrounding area.
- Allow for on-site mitigation of project impacts, and in some cases enhancement of existing habitat values by increased wetlands and riparian habitat.
- Improve vehicle and pedestrian bridges crossing Lower Silver Creek.
- Develop with the City of San Jose the footprint for a future trail project between Capitol Avenue-Frontage Road and Jackson Avenue that ensures pedestrians and bicyclists may travel beneath the Dobern Pedestrian Bridge.

This project is accounted for in the following:

- 40264007 Lower Silver Creek, I-680 to N. Babb Creek (Reach 4 Planning) - Completed
- 40264008 Lower Silver Creek, I-680 to Cunningham Rd. (Reaches 4-6)
- 40264012 Lower Silver Creek (Reaches 4-6) Reimbursable

PROJECT LOCATION

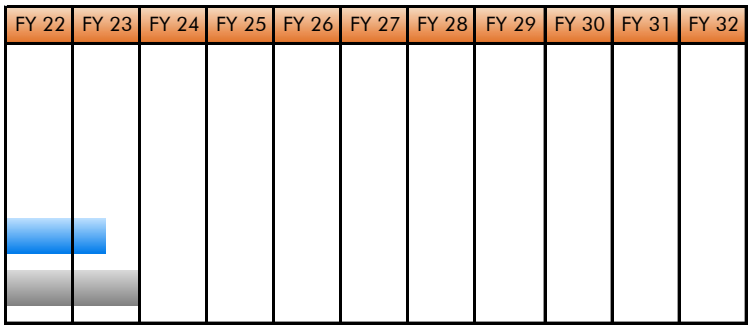


SCHEDULE & STATUS

August 2008 to June 2023

Planning and Design phases are complete

Phase	Cost
Plan	6,309
Permits	233
Design	10,924
Construct	79,895
Closeout	2,071
	101,550



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY21	FY22	FY23	FY24	FY25	FY26	FY27	Future	
40264007-Lower Silver Creek, Reach 4 Planning	2,371	0	0	0	0	0	0	0	2,371
with inflation	2,371	0	0	0	0	0	0	0	2,371
40264008-Lower Silver Ck, Nonreimbursable (R4-6)	95,127	2,072	52	0	0	0	0	0	97,251
with inflation	95,127	2,072	52	0	0	0	0	0	97,251
40264012-Lower Silver Creek, LERRDs (R4-6)	1,928	0	0	0	0	0	0	0	1,928
with inflation	1,928	0	0	0	0	0	0	0	1,928
TOTAL	99,426	2,072	52	0	0	0	0	0	101,550
with inflation	99,426	2,072	52	0	0	0	0	0	101,550

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests						Total
Project	FY21	FY22		FY23	FY24	FY25	FY26	FY27	Future	
40264007-Lower Silver Creek, Reach 4 Planning	2,371	0	0	0	0	0	0	0	0	2,371
40264008-Lower Silver Ck, Nonreimbursable (R4-6)	97,173	26	0	52	0	0	0	0	0	97,251
40264012-Lower Silver Creek, LERRDs (R4-6)	1,928	0	0	0	0	0	0	0	0	1,928
TOTAL	101,472	26	0	52	0	0	0	0	0	101,550

Adjusted Budget includes adopted budget plus approved budget adjustments. Funding exceeds planned expenditures by approximately $984,000. Excess funding will be returned to reserves upon completion of the project.

FUNDING SOURCES

(in thousands $)

SCVWD Watershed Stream Stewardship Fund	48,495
State of California	8,379
Natural Resource Conservation Service - ARRA	20,676
California Department of Water Resources	24,000
Total	101,550

OPERATING COST IMPACTS

The operating cost impacts are estimated to be $230,000 per year beginning in FY20. Projected operating and maintenance costs include sediment removal, vegetation management, bank protection, graffiti removal, and encampment cleanup.

USEFUL LIFE: 50+ Years

Project	**Upper Penitencia Creek, Coyote Creek to Dorel Drive (E4)**
Program	Flood Protection – Coyote Watershed
Project No.	40324003s
Contact	Bhavani Yerrapotu byerrapotu@valleywater.org

Flooding at King Road on Upper Penitencia Creek

PROJECT DESCRIPTION

Initially, this project partnered with the U.S. Army Corps of Engineers (USACE) to plan, design, and construct improvements along approximately 4.2 miles of Upper Penitencia Creek, from the confluence with Coyote Creek to Dorel Drive, to accomplish the objectives listed below. In 2016, the USACE's decided that the multi-objective project which is appropriate for this creek could not be funded under the existing single-purpose authorization. The Project was not included in the USACE's 2017 workplan.

Objectives:

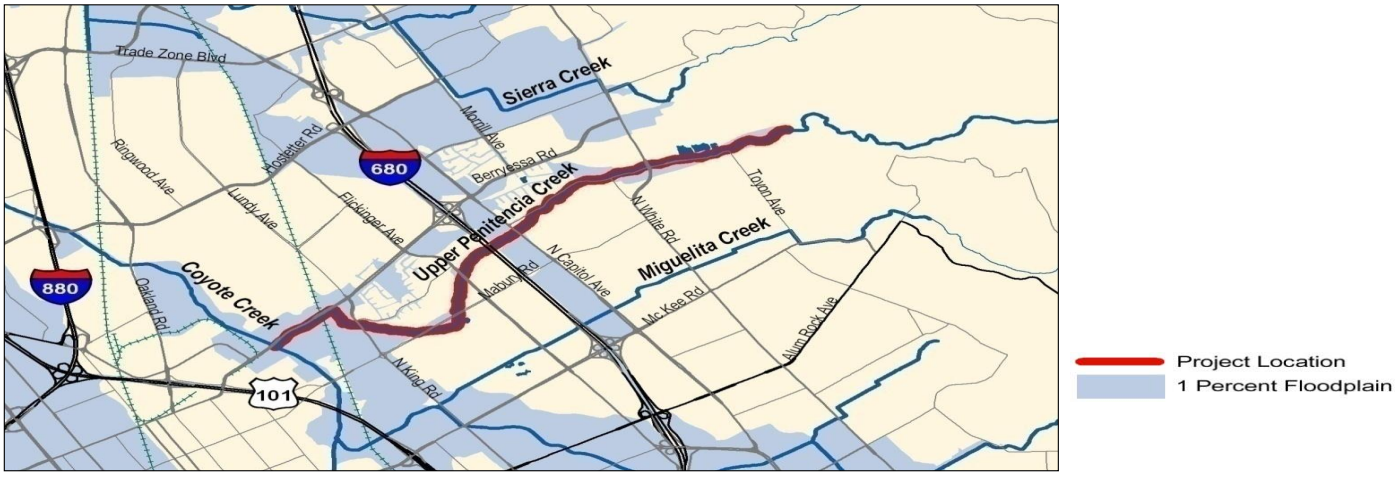
- Provide 1% flood protection to more than 5,000 homes, businesses, and public buildings.
- Improve stream habitat values and fisheries potential.
- Reduce sedimentation and maintenance requirements.
- Identify opportunities to integrate recreation improvements consistent with the City of San Jose's Master Plans, the County's Penitencia Creek Master Plan, and Santa Clara Countywide Trails Master Plan.
- Incorporate Valley Water's Safe, Clean Water and Natural Flood Protection Program objectives.

This project is accounted for in the following:

- 40324003 Initial stages of Planning Phase through FY18
- 26324001 Safe, Clean Water Program

This project meets the commitments of the voter approved Safe, Clean Water Program (SCW), Project E4. For a full description of the SCW benefits and KPIs, please visit www.valleywater.org.

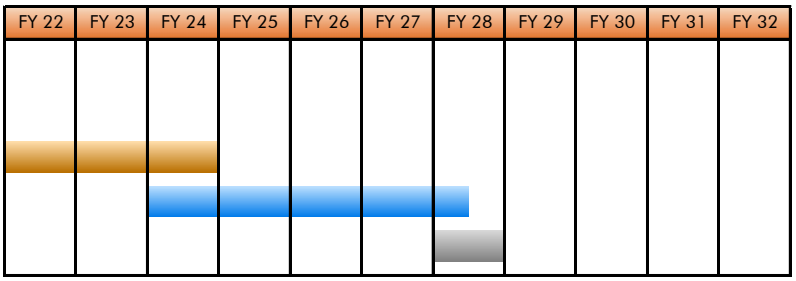
PROJECT LOCATION



SCHEDULE & STATUS

July 2000 to June 2028

Phase	Cost
Plan	8,049
Permits	619
Design	7,637
Construct	14,028
Closeout	154
	30,814



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures						Total
Project	FY21	FY22	FY23	FY24	FY25	FY26	FY27	Future	
40324003-Upper Penitencia Ck, Coyote Ck to Dorel Dr, USACE	9,467	0	0	0	0	0	0	0	9,467
with inflation	9,467	0	0	0	0	0	0	0	9,467
40324005-Upper Penitencia Ck, Coyote Ck to Dorel Dr, LERRDs	2,309	0	0	0	0	0	0	0	2,309
with inflation	2,309	0	0	0	0	0	0	0	2,309
26324001-Upper Penitencia Ck, Coyote Ck to Dorel Dr	2,045	2,629	209	1,811	1,341	3,779	3,458	3,766	19,038
with inflation	2,045	2,629	209	1,978	1,530	4,322	3,963	4,371	21,047
TOTAL	**13,821**	**2,629**	**209**	**1,811**	**1,341**	**3,779**	**3,458**	**3,766**	**30,814**
with inflation	**13,821**	**2,629**	**209**	**1,978**	**1,530**	**4,322**	**3,963**	**4,371**	**32,823**

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY21	FY22		FY23	FY24	FY25	FY26	FY27	Future	
40324003-Upper Penitencia Ck, Coyote Ck to Dorel Dr, USACE	9,467	0	0	0	0	0	0	0	0	9,467
40324005-Upper Penitencia Ck, Coyote Ck to Dorel Dr, LERRDs	2,309	0	0	0	0	0	0	0	0	2,309
26324001-Upper Penitencia Ck, Coyote Ck to Dorel Dr	8,617	2,636	6,579	0	0	0	1,460	3,963	4,371	21,047
TOTAL	**20,393**	**2,636**	**6,579**	**0**	**0**	**0**	**1,460**	**3,963**	**4,371**	**32,823**

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Watershed Stream Stewardship Fund	11,776
SCVWD Safe, Clean Water Fund	21,047
Total	**32,823**

OPERATING COST IMPACTS

Operating costs are expected to average $790,000 per year beginning in FY25.

USEFUL LIFE: Not Available

Project	**Llagas Creek–Lower, Capacity Restoration, Buena Vista Avenue to Pajaro River**
Program	Flood Protection – Uvas/Llagas Watershed
Project No.	50284010
Contact	Bhavani Yerrapotu byerrapotu@valleywater.org

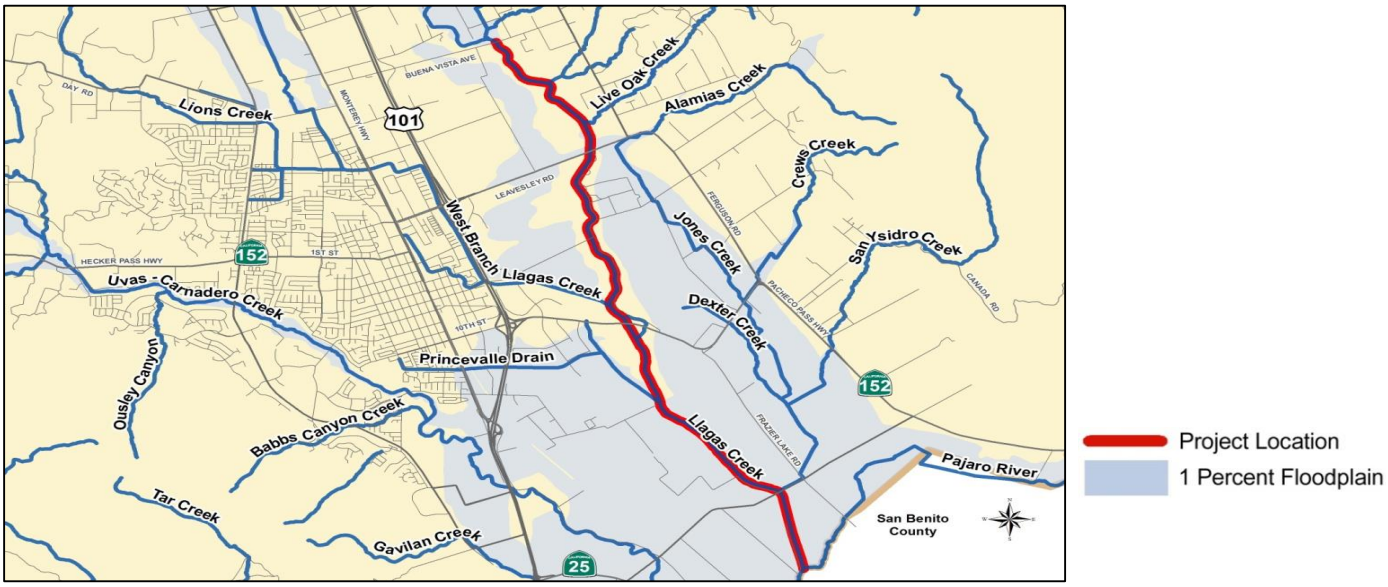
Lower Llagas Creek near Pajaro River

PROJECT DESCRIPTION

This project plans, designs, and constructs improvements on 7.15 miles of Lower Llagas Creek, from Buena Vista Avenue to Pajaro River, to accomplish the following objectives:

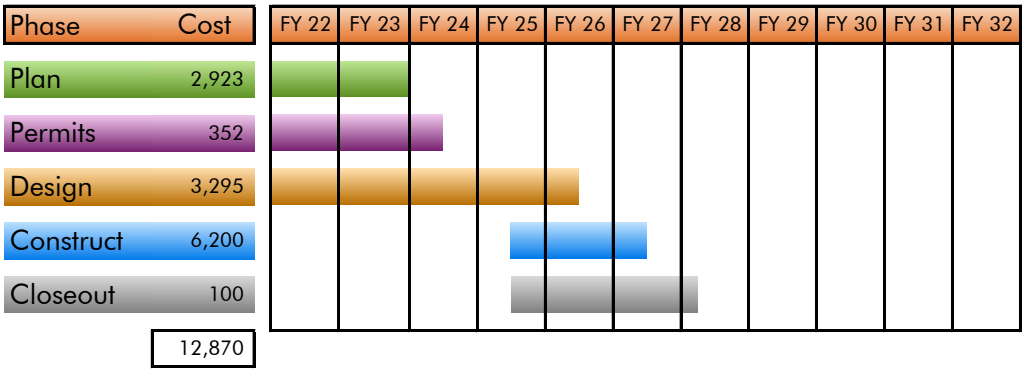
- Evaluate the current flood risk in the area surrounding the project versus the design level flood risk.
- Develop options to provide flood protection for Lower Llagas Creek Reaches 2 and 3 in accordance with Federal Emergency Management Agency criteria where applicable.
- Identify feasible opportunities for environmental restoration and corridor preservation.
- Coordinate planning, design, and construction efforts with the South County Regional Wastewater Authority.

PROJECT LOCATION



SCHEDULE & STATUS

September 2008 to July 2027



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY21	FY22	FY23	FY24	FY25	FY26	FY27	Future	
50284010-Llagas Creek–Lower, Capacity Restoration, Buena Vista Avenue to Pajaro River	3,323	991	1,306	950	3,000	3,000	300	0	12,870
with inflation	3,323	991	1,306	1,037	3,324	3,360	374	0	13,716

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY21	FY22		FY23	FY24	FY25	FY26	FY27	Future	
50284010-Llagas Creek–Lower, Capacity Restoration, Buena Vista Avenue to Pajaro River	6,947	0	2,633	0	0	3,035	3,360	374	0	13,716

FUNDING SOURCES

(in thousands $)

SCVWD Watershed Stream Stewardship Fund	12,596
State of California	1,120
Total	13,716

OPERATING COST IMPACTS

Operating cost impacts will determined at the completion of the design phase.

USEFUL LIFE: 30+ Years

Project	**Llagas Creek–Upper, Buena Vista Avenue to Llagas Road (E6)**
Program	Flood Protection – Uvas/Llagas Watershed
Project No.	26174051s
Contact	Bhavani Yerrapotu byerrapotu@valleywater.org

Llagas Creek floods at Watsonville Road and the surrounding area

PROJECT DESCRIPTION

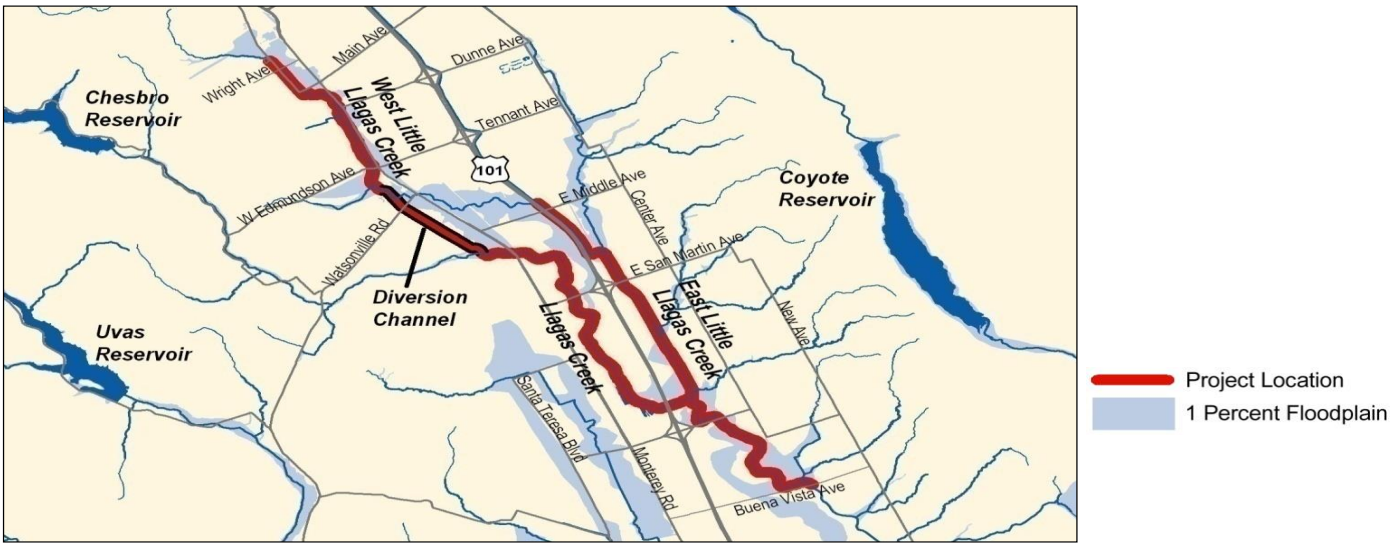
This project continues a Clean, Safe Creeks project in partnership with the U.S. Army Corps of Engineers (USACE) and the state to plan, design, and construct improvements along 13.9 miles of channel. The project extends from Buena Vista Avenue to Llagas Road, including West Little Llagas Creek in downtown Morgan Hill. The federally authorized preferred project protects the urban area of Morgan Hill from a 1% (or 100-year) flood, 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. In 2012, project limits were extended 2,700 feet upstream to Llagas Road to address public concerns.

This project is accounted for in the following:

- 26174051 - Reaches 4-8 & 14 - Reimbursable - Lands, Easements, Rights of Way, Relocation, & Disposal
- 26174052 - Reaches 4-8 & 14 - Construction/Coordination with USACE
- 26174053 - Technical Studies (completed)
- 26174054 - Design
- 50C40335 - Construction, Reach 5, 6, & 7b

This project meets the commitments of the voter approved Safe, Clean Water Program (SCW), Project E6. For a full description of the SCW benefits and KPIs, please visit www.valleywater.org.

PROJECT LOCATION

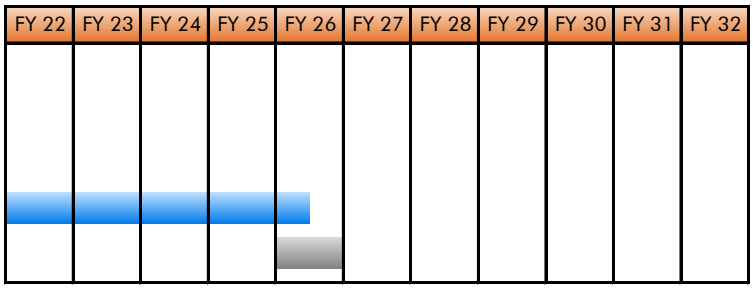


SCHEDULE & STATUS

July 2000 to June 2026

Project schedule may vary considerably and is dependent upon the USACE and Congress.

Phase	Cost
Plan	3,732
Permits	7,239
Design	70,619
Construct	230,271
Closeout	620
	329,698



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**Future**	
26174051-Llagas Ck—Upper, LERRDs	45,006	3,022	21	20	20	0	0	0	48,089
with inflation	45,006	3,022	21	22	23	0	0	0	48,094
26174052-Llagas Ck—Upper, USACE Coordination	95,247	59,909	55,562	31,400	8,886	250	0	0	251,254
with inflation	95,247	59,909	55,562	32,621	9,255	298	0	0	252,893
26174053-Llagas Ck—Upper, Technical Studies	1,446	0	0	0	0	0	0	0	1,446
with inflation	1,446	0	0	0	0	0	0	0	1,446
26174054-Llagas Ck—Upper, Design	22,359	2,303	1,097	1,050	1,150	950	0	0	28,909
with inflation	22,359	2,303	1,097	1,147	1,312	1,133	0	0	29,351
50C40335-Llagas Ck—Upper, Construction Rch 5, 6, & 7b	23,690	0	0	0	0	0	0	0	23,690
with inflation	23,690	0	0	0	0	0	0	0	23,690
TOTAL	**187,748**	**65,234**	**56,680**	**32,470**	**10,056**	**1,200**	**0**	**0**	**329,698**
with inflation	**187,748**	**65,234**	**56,680**	**33,790**	**10,590**	**1,431**	**0**	**0**	**331,783**

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests						Total
Project	**FY21**	**FY22**		**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**Future**	
26174051-Llagas Ck—Upper, LERRDs	45,040	3,048	60	0	0	6	0	0	0	48,094
26174052-Llagas Ck—Upper, USACE Coordination	96,864	58,305	13	55,549	32,621	9,255	298	0	0	252,893
26174053-Llagas Ck—Upper, Technical Studies	1,446	0	0	0	0	0	0	0	0	1,446
26174054-Llagas Ck—Upper, Design	28,193	0	3,531	0	0	25	1,133	0	0	29,351
50C40335-Llagas Ck—Upper, Construction Rch 5, 6, & 7b	23,690	0	0	0	0	0	0	0	0	23,690
TOTAL	**195,233**	**61,353**	**3,604**	**55,549**	**32,621**	**9,285**	**1,431**	**0**	**0**	**331,783**

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Clean, Safe Creeks and Natural Flood Protection Fund	17,900
SCVWD Safe Clean Water Program Fund	173,099
Watershed Stream Stewardship Fund	23,690
State of California	33,004
City of Morgan Hill	4,090
NRCS Grants (Unsecured)	80,000
Total	**331,783**
USACE - In-kind Services	65,000

OPERATING COST IMPACTS

Operation costs are currently anticipated to be approximately $1,500,000 per year, beginning in FY26.

USEFUL LIFE: 50+ Years

Project	**San Francisco Bay Shoreline (E7)**
Program	Flood Protection – Multiple Watersheds
Project No.	00044026s
Contact	Bhavani Yerrapotu byerrapotu@valleywater.org

This project will restore tidal marshland in the San Francisco Bay.
Photo by Cris Benton

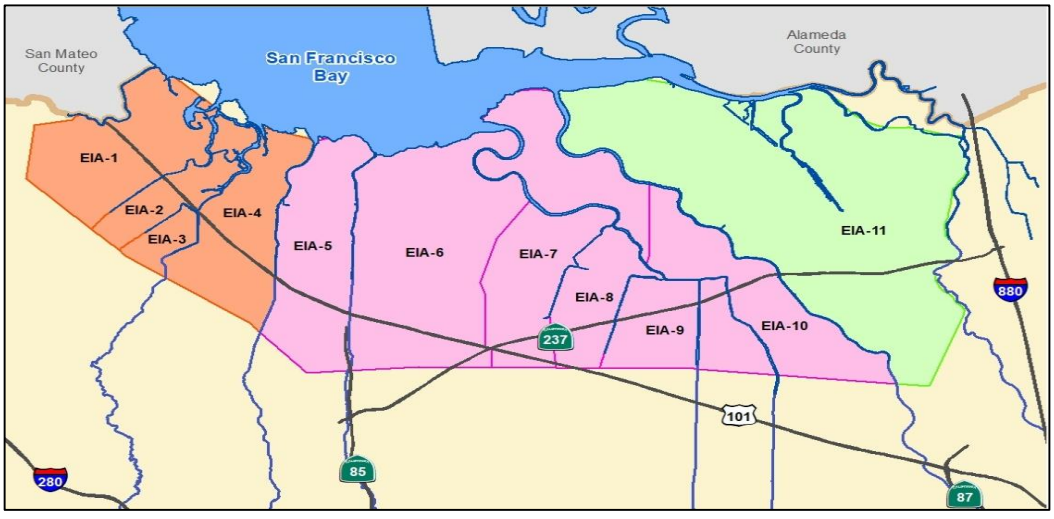
PROJECT DESCRIPTION

This project partners with the California Coastal Conservancy, U.S. Army Corps of Engineers (USACE) and key stakeholders to conduct an integrated, multi-objective project along the San Francisco Bay Shoreline. Project number 00044026 funded the USACE Feasibility Study effort for the North San Jose area, known as Economic Impact Area 11 (EIA 11) which was completed in FY17. This project number will continue to fund other Shoreline efforts outside of the Safe, Clean Water (SCW) project numbers. For EIA 11, the Shoreline Project received $177M under the USACE FY 2018 Disaster Supplemental Appropriations Bill. Valley Water's share of EIA 11 design and construction is $46.8M. Valley Water has been awarded a total of $61 million from a Measure AA grant to partially fund the design and construction of EIA 11. SCW funds will provide $15 million toward Valley Water's cost share of the design and partial construction efforts for EIA 11. SCW funds will provide $5 million toward Valley Water's cost share of the planning, design and construction phase efforts for project number 26444002 for of the Palo Alto-Mountain View area, known as EIA 1-4, along with the remaining EIAs and planning and design phases of project number 26444004 for the area from Mountain View-Sunnyvale-San Jose area, known as EIA 5-10. The Shoreline Project will accomplish the following objectives:

- Provide integrated fluvial and 1% coastal flood protection.
- Provide protection for future sea level rise.
- Restore and/or enhance tidal marsh and related habitats.
- Provide recreational and public access opportunities.
- Pursue continued federal funding.
- Obtain a letter of map revision from the Federal Emergency Management Agency at completion of the Construction Phase.
- Coordinate closely with the South Bay Salt Pond Restoration Project, local jurisdictions/cities, U.S. Fish and Wildlife Service, the community and key stakeholders.

This project meets the commitments of the voter approved Safe, Clean Water Program (SCW), Project E7. For a full description of the SCW benefits and KPIs, please visit www.valleywater.org.

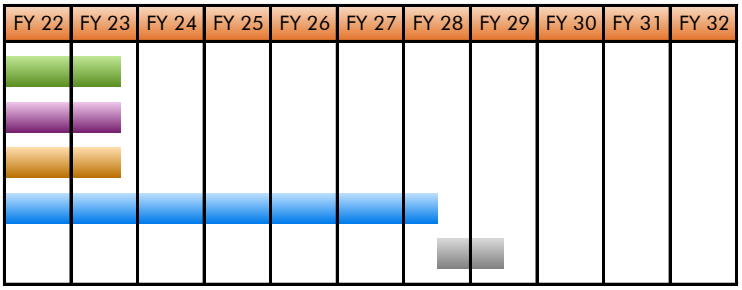
PROJECT LOCATION



SCHEDULE & STATUS

July 2005 to December 2028

Phase	Cost
Plan	22,909
Permits	1,152
Design	36,568
Construct	110,600
Closeout	200
	171,899



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**Future**	
00044026-San Francisco Bay Shoreline	60,691	19,602	18,217	16,602	100	100	0	0	115,312
with inflation	60,691	19,602	18,217	17,739	114	119	0	0	116,483
62044042-Shoreline Early Implementation	359	0	0	0	0	0	0	0	359
with inflation	359	0	0	0	0	0	0	0	359
26444001-EIA 11 Design & Part Construction	17,516	0	0	0	0	0	0	0	17,516
with inflation	17,516	0	0	0	0	0	0	0	17,516
26444002 - EIAs 1-4	4,273	1,373	1,760	2,591	1,025	5,200	5,200	5,200	26,622
with inflation	4,273	1,373	1,760	2,829	1,170	6,201	6,480	6,772	30,858
26444004 - EIAs 5-10	0	1,045	1,045	1,000	3,000	3,000	3,000	0	12,090
with inflation	0	1,045	1,045	1,092	3,423	3,578	3,739	0	13,922
TOTAL	**82,839**	**22,020**	**21,022**	**20,193**	**4,125**	**8,300**	**8,200**	**5,200**	**171,899**
with inflation	**82,839**	**20,975**	**19,977**	**20,569**	**1,284**	**6,320**	**6,480**	**6,772**	**179,138**

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests						Total
Project	**FY21**	**FY22**		**FY23**	**FY24**	**FY25**	**FY26**	**FY27**	**Future**	
00044026-San Francisco Bay Shoreline	60,986	21,632	2,325	15,892	17,739	114	119	0	0	116,483
62044042-Shoreline Early Implementation	359	0	0	0	0	0	0	0	0	359
26444001-EIA 11 Design & Part Construction	17,516	0	0	0	0	0	0	0	0	17,516
26444002 - EIAs 1-4	4,287	1,359	0	1,760	2,829	1,170	6,201	6,480	6,772	30,858
26444004 - EIAs 5-10	0	1,045	0	1,045	1,092	3,423	3,578	3,739	0	13,922
TOTAL	**83,148**	**24,036**	**2,325**	**18,697**	**21,661**	**4,707**	**9,898**	**10,219**	**6,772**	**179,138**

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Watershed Stream Stewardship Fund	3,043
SCVWD Clean, Safe Creeks and Natural Flood Protection Fund (Environmental Enhancement Grant)	2,011
SCVWD Safe, Clean Water and Natural Flood Protection Fund	62,296
California Department of Water Resources	420
SFBRA Measure AA (Grant)	61,444
SFBRA Measure AA (Ballot Reimbursement)	831
State of California	49,093
Total	179,138
Federal Partners, South Bay Salt Ponds (SBSP)	48,470
State, SBSP	14,720
Foundations, Packard-Hewlett-Goldman-Moore, SBSP	17,060
Coastal Conservancy, Shoreline	2,010
Federal, USACE, Shoreline	8,990
Total Partnership Funding for In-kind Services	**91,250**

OPERATING COST IMPACTS

Operating costs will be determined upon completion of the construction phase.

USEFUL LIFE: 50+ Years

Project	**Watersheds Asset Rehabilitation Program**
Program	Flood Protection - Multiple Watersheds
Project No.	62084001
Contact	Bhavani Yerrapotu byerrapotu@valleywater.org

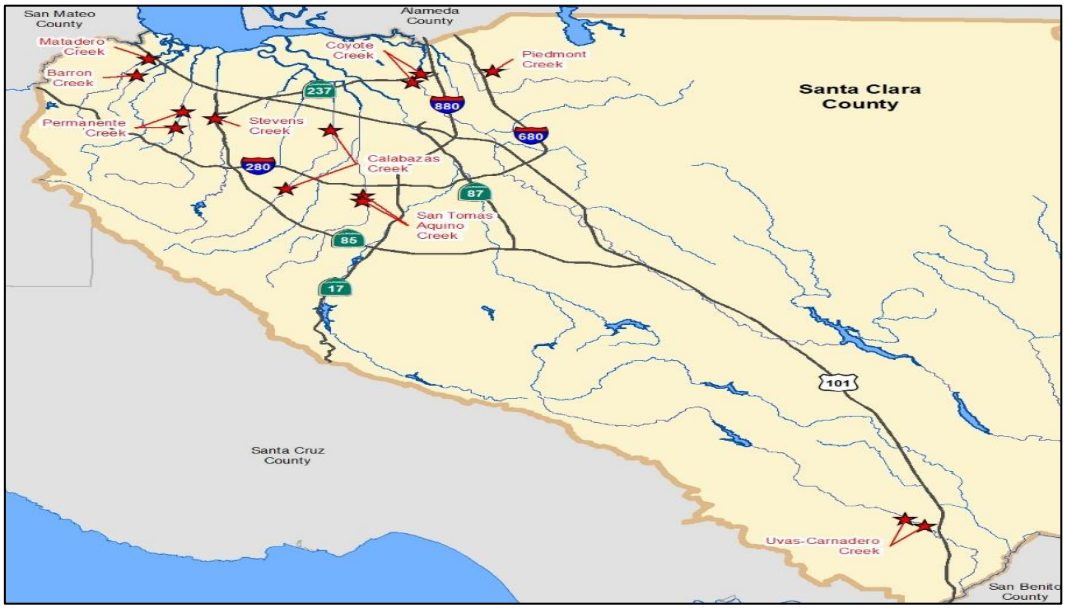
View of damage caused by burrowing animals along West Branch of Llagas Creek in the Uvas/Llagas Watershed

PROJECT DESCRIPTION

This project plans, designs, and constructs repairs to levee and stream bank sites that have erosion damage. Each site requires a different type of repair based on location, severity, and velocities in the creek. The objective of this project is to restore the stream bank or levee to a stable condition so as to reduce the risk of flooding and/or damage to adjacent properties and facilities. For facilities with animal conflict damage, the objective is to repair the damage caused by animals and where applicable, install deterrents for future animal activities. The repair work consists of, but is not limited to:

- Excavation and rebuilding of eroded soil material.
- Installation of rodent barriers such as mesh or fabric.
- Repairing the banks with methods commensurate with the extents of damage and environmental constraints.
- Geomorphic channel restoration with bed and bank repair.
- Outfall restoration and repair.
- Sediment removal and blockage repair.
- Fish ladder modifications and repairs.

PROJECT LOCATION

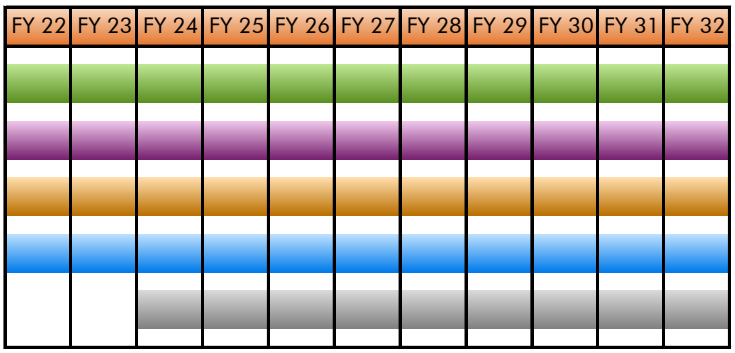


★ Project Location

SCHEDULE & STATUS

Several small projects go through the design and construction phases each year under the Stream Maintenance Program 2 permit.

Phase	Cost
Plan	3,233
Permits	4,837
Design	18,725
Construct	91,237
Closeout	620
	147,364



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY21	FY22	FY23	FY24	FY25	FY26	FY27	Future	
62084001-Watersheds Asset Rehabilitation Program	30,931	18,719	7,364	7,595	5,845	5,835	8,100	62,975	147,364
with inflation	30,931	18,719	7,364	8,138	6,487	6,697	9,602	86,074	174,012

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY21	FY22		FY23	FY24	FY25	FY26	FY27	Future	
62084001-Watersheds Asset Rehabilitation Program	39,362	10,911	623	6,741	8,138	6,487	6,697	9,602	86,074	174,012

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Watershed Stream Stewardship Fund	174,012
City of Palo Alto (Matadero Creek)	227
Total	**174,012**

OPERATING COST IMPACTS

The completion of this project is not anticipated to increase or decrease annual operating costs, as the project does not significantly alter existing facilities or modes of operation.

USEFUL LIFE: Not Available