Safe, Clean Water
and Natural Flood Protection

Fiscal Year 2016-2017 | Year 4

Safe, Clean Water
and Natural Flood Protection

Santa Clara Valley
Water District

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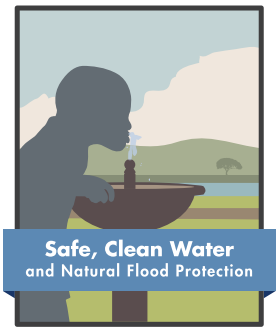

Safe, Clean Water
and Natural Flood Protection
Fiscal Year 2016-2017 | Year 4

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Interim Chief Operating Officer

Presented by

Ngoc Nguyen
Interim Deputy Operating Officer

November 17, 2017

Santa Clara Valley Water District

Santa Clara Valley Water District

Safe, Clean Water and Natural Flood Protection Fiscal Year 2016-17 Annual Report

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Santa Clara Valley Water District

Safe, Clean Water and Natural Flood Protection Fiscal Year 2016-17 Annual Report

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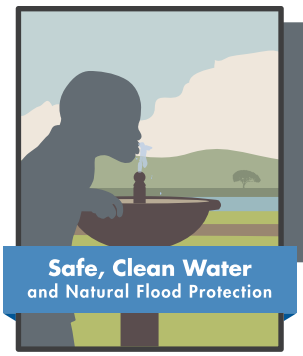


FY 2016-17 Annual Report

Safe, Clean Water and Natural Flood Protection

Santa Clara Valley Water District

MESSAGE FROM THE CHIEF EXECUTIVE OFFICER

November 2017

Fiscal Year 2016-17 (FY17) marks the fourth of the 15-year Safe, Clean Water and Natural Flood Protection Program (Safe, Clean Water). This report (Year 4 annual report) presents a status update on the implementation of projects during FY17.

On November 6, 2012, voters approved the Safe, Clean Water Program as a countywide special parcel tax for 15 years with a sunset date of June 30, 2028. This Program replaced the Clean, Safe Creeks and Natural Flood Protection Plan, which voters approved in November 2000.

The Safe, Clean Water Program addresses the following needs, values, and priorities as identified by Santa Clara County stakeholders:

Priority A: Ensure a Safe, Reliable Water Supply

Priority B: Reduce Toxins, Hazards and Contaminants in our Waterways

Priority C: Protect our Water Supply from Earthquakes and Natural Disasters

Priority D: Restore Wildlife Habitat and Provide Open Space

Priority E: Provide Flood Protection to Homes, Businesses, Schools, and Highways

Each year, the Santa Clara Valley Water District (District) prepares a report providing a progress update for each of these Program priorities, along with fiscal year accomplishments.

Some highlights of the Program for FY17 include:

- **Coyote Creek Flood Protection Project:** The District Board of Directors (Board) held a formal public hearing and approved modifications to the project in order to: extend the project reach approximately 2.9 miles upstream to Tully Road; change the target protection from 1% (or 100-year) level flood event, to protection from a flood event equivalent to the February 21, 2017 flood (which is approximately a 20 to 25 year event); and identify short-term flood relief solutions and begin implementation prior to the 2017-2018 winter season.
- **Permanente Creek Flood Protection Project:** District began construction of the Rancho San Antonio detention site in December 2016 and completed construction of a new, expanded parking area. Construction of the McKelvey Park detention site began in January 2017. The Channel Improvement Construction Contract was awarded in May 2017.
- **San Francisquito Creek Flood Protection Project:** District continued year 2 of the 3-year construction project. Some major elements include construction of the concrete block retaining wall, 20-foot high fence and pedestrian ramp adjacent to the International School of the Peninsula, and approximately 900 feet of floodwall on the Palo Alto side of the creek from E. Bayshore Road toward the San Francisco Bay.
- **Pilot Mini-Grant Program:** Board approved $200,000 for a Pilot Mini-Grant Program that is being launched in FY18. The pilot program will provide seed funding, up to $5,000 per project, to encourage broader and long-term community engagement in wildlife habitat restoration and watershed stewardship activities in Santa Clara County.

- **Sediment Removal:** District completed 17 sediment removal projects, removing nearly 84,000 cubic yards of sediment to maintain design capacity, with 14% of this work funded through the Safe, Clean Water Program.
- **Vegetation Control:** District completed 391 acres of in-stream vegetation management to reduce flood risk on 116 miles of streams throughout the county using an integrated combination of mechanical, hand labor and herbicide methods.
- **Safe, Clean Water Cleanup Activities:** District removed approximately 1,037 tons (14,324 cubic yards) of trash and debris from our waterways through pollution prevention and reduction activities, trash capture devices, encampment cleanups, trash and debris removal, and volunteer cleanup programs and events (Projects B1, B2, B4, B6, and B7 respectively).
- **Safe, Clean Water Report Appendices:** Board approved the Independent Monitoring Committee's (IMC) recommendations, which included the addition of new appendices to the Year 4 annual report. The new appendices are Appendix D - Capital Project Confidence Levels and Appendix E - Cumulative Trash Removal Data for Projects B1-B4, B6 and B7. Additional information was also added to Appendix A - Financial Information and Appendix C - Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3.

To ensure transparency and accountability, the Board established an IMC to monitor the Program's progress and to ensure the outcomes are achieved in a cost-efficient manner. Each year, the Board authorizes finalization of the prior fiscal year's annual report and submittal to the IMC for its review. In addition, the Safe, Clean Water Program requires 3 independent audits, the first of which was conducted in FY17. The audit focused on compliance and performance, and while the Safe, Clean Water Program was found to be operating in full compliance, the auditors did make some recommendations regarding performance. The independent audit, as well as a staff response, are available on the Safe, Clean Water website.

The Year 3 annual report was reviewed by the IMC and recommendations for improving the report were presented to the Board. These recommendations have been incorporated into the Year 4 annual report. The District appreciates each IMC member for volunteering and looks forward to the committee's review of the Year 4 annual report.

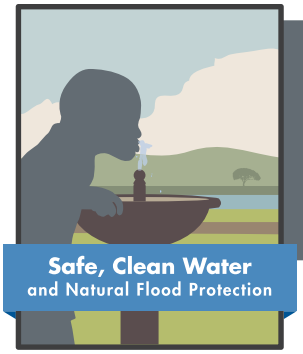
The accomplishments presented in this report would not have been achieved without the District's dedicated employees, each of whom is committed to the success of the Safe, Clean Water Program and will continue to work hard to provide Silicon Valley safe, clean water for a healthy life, environment, and economy.

The FY17 annual report and independent audit is available to the public at *valleywater.org/SafeCleanWater.aspx*. Also available is the Safe, Clean Water 5-Year Implementation Plan. Approved by the Board on May 14, 2013, the 5-Year Implementation Plan provides direction for the first 5 years of the 15-year Program and is updated annually to reflect any adjustments or modifications.

We welcome your inquiries and insightful comments on the FY17 annual report.

Sincerely,

Norma J. Camacho,
Chief Executive Officer, Santa Clara Valley Water District



FY 2016-17 Annual Report

Safe, Clean Water and Natural Flood Protection

Santa Clara Valley Water District

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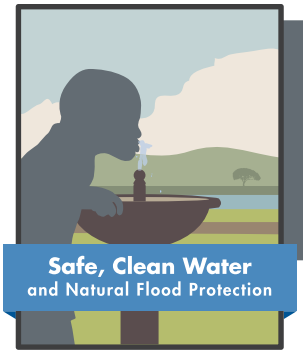


FY 2016-17 Annual Report

Safe, Clean Water and Natural Flood Protection

Santa Clara Valley Water District

PROGRAM SUMMARY

The Safe, Clean Water and Natural Flood Protection Program (Safe, Clean Water) is a 15-year strategy to ensure uninterrupted water resources services in Santa Clara County. The Program was developed through more than 18 months of community collaboration, with input from more than 16,000 residents and stakeholders, to prepare for the scheduled sunset of Clean, Safe Creeks (CSC) and Natural Flood Protection funding. The result of this effort is a program that fulfills our community's top priorities to:

Priority A: Ensure a Safe, Reliable Water Supply

Priority B: Reduce Toxins, Hazards and Contaminants in our Waterways

Priority C: Protect our Water Supply from Earthquakes and Natural Disasters

Priority D: Restore Wildlife Habitat and Provide Open Space

Priority E: Provide Flood Protection to Homes, Businesses, Schools, and Highways

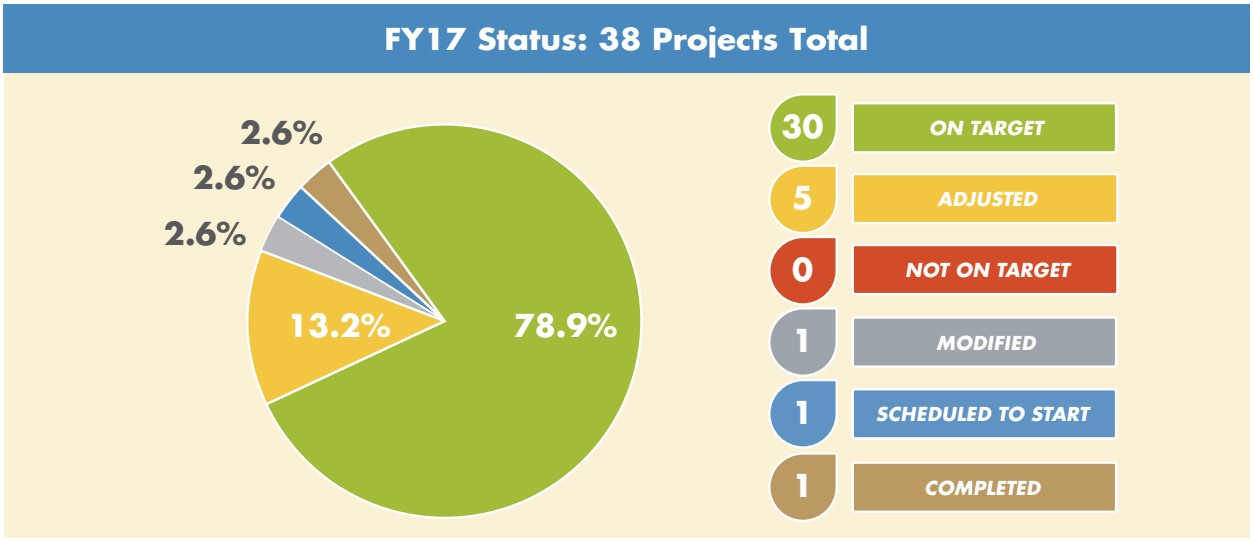
Santa Clara County voters passed the Safe, Clean Water ballot measure in November 2012 by an overwhelming majority – nearly 74%. Safe, Clean Water extends funding at the same parcel tax rate approved under the previous CSC plan, and ensures a seamless continuation of critical water-related services to Santa Clara County.

This report is the fourth of 15 annual reports to be prepared for Safe, Clean Water and provides project status towards accomplishing Program Key Performance Indicators (KPIs) and the targets in the 5-Year Implementation Plan:

- On Target: Status indicates the project is on track to meet targets
- Adjusted: Status indicates the potential that targets will not be met and implementation required a schedule adjustment (future year status' will be based upon the adjusted schedule)
- Not on Target: Status indicates that the target has not been or will not be met
- Modified: Status indicates the Board formally modified the project following a public hearing (future year status' will be based upon the modified project targets)
- Scheduled to Start: Status indicates that the project is scheduled to start in a future fiscal year
- Completed: Status indicates that the project has been completed and the KPIs have been met

There are 38 projects under Safe, Clean Water. As indicated in Table 1 (p. 3), approximately 79% (30 projects) are on target ( ); 13% (5 projects) required schedule adjustments ( ); 2.6% (1 project) was modified ( ); 2.6% (1 project) is not scheduled to start ( ) until Fiscal Year 2019; and 2.6% (1 project) was completed ( ). See Graph 1 (p. 2).

Graph 1



For Fiscal Year 2016-17 (FY17), the adjusted budget for the Program totaled $186 million. Actual funds expended and encumbered as of June 30, 2017 were $73.5 million, approximately 39% of the Safe, Clean Water Program's adjusted budget. Underspending was primarily due to delays in construction and real estate acquisition for the following capital flood protection projects: Upper Llagas (E6), Upper Guadalupe (E8), and Sunnyvale East and West (CSC). Project construction delays occurred primarily as a result of: addressing redesign or analyses requested by regulatory agencies, delays in acquisition of regulatory permits, and delays in land acquisition. To address delays in obtaining permits, the District permit strategy team continues to work on short-and long-term strategies to secure timely permits.

To address recommendations made by the Independent Monitoring Committee (IMC), the District utilizes a rating system for capital projects that include confidence levels for schedule, funding, permits, and jurisdictional complexity (the level to which a project's deliverables can be impacted by other entities or jurisdictions). By applying a confidence level to each of these topics, the IMC and community will be able to identify the areas of concern for each project that could impact the probability for the project to remain On Target. The confidence levels are addressed under the Opportunities and Challenges section for each of the capital projects. Listed below are the 3 confidence levels and their definitions:

- **High** – Applies to projects that have achieved the following: received full funding, received regulatory permits, met schedule milestones (and will continue to move forward on schedule), and, if applicable, jurisdictional complexity issues have been resolved.
- **Moderate** – Applies to projects that are in the process of the following: receiving funding from other sources, receiving permits, requesting the Board approve a schedule adjustment, and, if applicable, resolving jurisdictional complexity issues.
- **Low** – Applies to projects that have a high probability of experiencing or already have been: denied funding, denied permits, delayed in schedule, and, if applicable, jurisdictional complexity issues that are impacting completion of the project.

Appendix D is a new addition to the annual report and was created to delve into the confidence levels for each capital project, as well as demonstrate the jurisdictional complexity. For further project and contact information, visit: *www.valleywater.org/SafeCleanWater.aspx*

Table 1

Project	Project Description	Status
Priority A: Ensure a Safe, Reliable Water Supply		
A1	Main and Madrone Avenue Pipelines Restoration	ON TARGET
A2	Safe, Clean Water Partnerships and Grants	ON TARGET
A3	Pipeline Reliability Project	SCHEDULED TO START
Priority B: Reduce Toxins, Hazards, and Contaminants in our Waterways		
B1	Impaired Water Bodies Improvement	ON TARGET
B2	Interagency Urban Runoff Program	ON TARGET
B3	Pollution Prevention Partnerships and Grants	ON TARGET
B4	Good Neighbor Program: Encampment Cleanup	ON TARGET
B5	Hazardous Materials Management and Response	ON TARGET
B6	Good Neighbor Program: Remove Graffiti and Litter	ON TARGET
B7	Support Volunteer Cleanup Efforts and Education	ON TARGET
Priority C: Protect our Water Supply from Earthquakes and Natural Disasters		
C1	Anderson Dam Seismic Retrofit	ADJUSTED
C2	Emergency Response Upgrades	ON TARGET
Priority D: Restore Wildlife Habitat and Provide Open Space		
D1	Management of Revegetation Projects	ON TARGET
D2	Revitalize Stream, Upland and Wetland Habitat	ON TARGET
D3	Grants and Partnerships to Restore Wildlife Habitat and Provide Access to Trails	ON TARGET
D4	Fish Habitat and Passage Improvement	ADJUSTED
D5	Ecological Data Collection and Analysis	ON TARGET
D6	Creek Restoration and Stabilization	ON TARGET
D7	Partnerships for the Conservation of Habitat Lands	ON TARGET
D8	South Bay Salt Ponds Restoration Partnership	ADJUSTED
Priority E: Provide Flood Protection to Homes, Businesses, Schools, and Highways		
E1.1	Vegetation Control for Capacity	ON TARGET
E1.2	Sediment Removal for Capacity	ON TARGET
E1.3	Maintenance of Newly Improved Creeks	ON TARGET
E1.4	Vegetation Management for Access	ON TARGET
E2.1	Coordination with Local Municipalities on Flood Communication	ON TARGET
E2.2	Flood-Fighting Action Plans	ON TARGET
E3	Flood Risk Reduction Studies	ON TARGET
E4	Upper Penitencia Creek Flood Protection	ON TARGET
E5	San Francisquito Creek Flood Protection	ON TARGET
E6	Upper Llagas Creek Flood Protection	ADJUSTED
E7	San Francisco Bay Shoreline Protection	ADJUSTED
E8	Upper Guadalupe River Flood Protection	ON TARGET
Other Flood Protection Projects and Clean, Safe Creeks Grants Projects		
	Permanente Creek Flood Protection	ON TARGET
	Sunnyvale East and Sunnyvale West Channels Flood Protection	ON TARGET
	Berryessa Creek Flood Protection	ON TARGET
	Coyote Creek Flood Protection	MODIFIED
	Calabazas Creek Flood Protection	COMPLETED
	Clean Safe Creeks Grants Projects	ON TARGET

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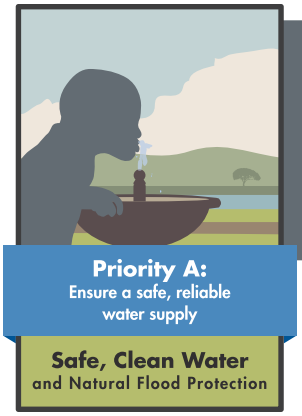


Priority A

Ensure a Safe, Reliable Water Supply

Projects under Priority A will upgrade aging water transmission systems to increase pipeline capacity and reduce the risk of water outages. The priority also provides grants to develop future conservation programs, helps local schools fulfill state mandates for drinking water availability, and provides rebates on nitrate removal systems to improve water quality and safety for private well users.

Project A1
Main Avenue and Madrone Pipelines Restoration

Project A2
Safe, Clean Water Partnerships and Grants

Project A3
Pipeline Reliability Project

Appendix A: Financial Information

Appendix B: Inflation Assumptions

Appendix C: Cumulative Partnerships and Grants Information for Project A2

Appendix D: Capital Project Confidence Levels

Main Ave. ponds.

ON TARGET

Project A1 FY17 Highlights

- Completed 90% design
- Board approved the Engineer's Report and adopted the CEQA Mitigated Negative Declaration

Project A1

Main Avenue and Madrone Pipelines Restoration

This project will restore the Main Avenue and Madrone pipelines to full operating capacity of conveying 10 cubic feet per second (cfs) and 27 cfs, respectively, for a total of 37 cfs from Anderson Reservoir or the Santa Clara Conduit for groundwater recharge via the Main Avenue Recharge Ponds and the Madrone Channel. The project will plan, design, and construct approximately 14,000 linear feet or 2.6 miles of 30-inch to 36-inch diameter pipeline and associated appurtenances.

Benefits

- Increases groundwater recharge by about 2,000 acre-feet per year in South County's Llagas Groundwater Sub-basin, a sufficient water supply for 4,000 families of 5.
- Improves operational flexibility.
- Maximizes the delivery of imported water to treatment plants supplying drinking water to North County.
- Saves energy, reduces operating costs, and cuts CO_2 emissions by reducing dependence on Coyote Pumping Plant.

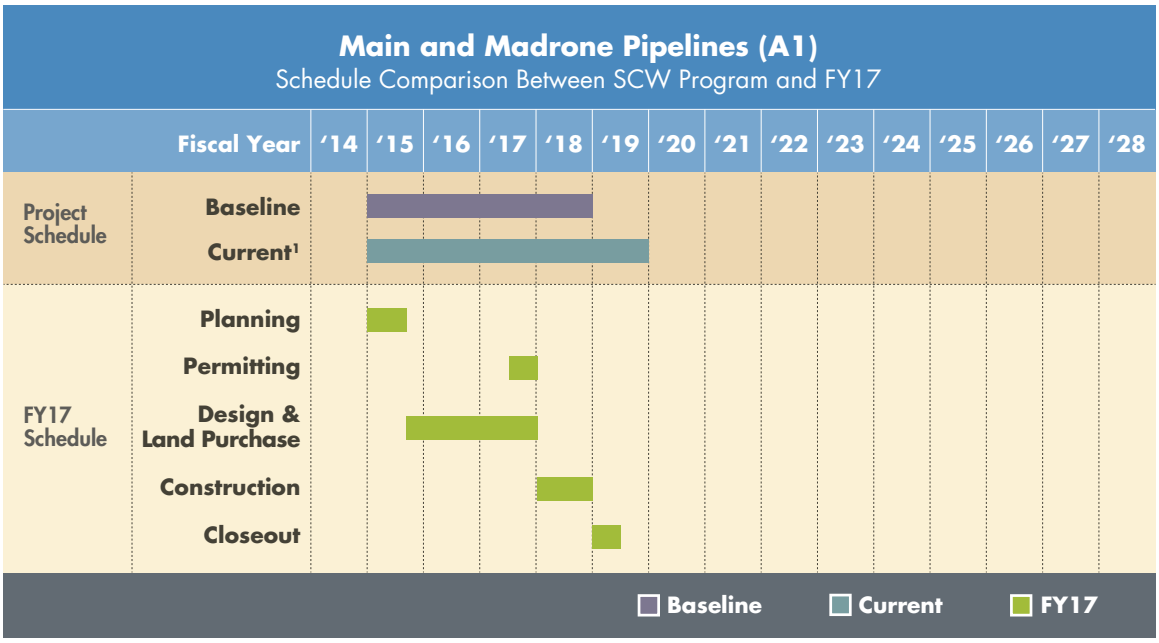
Key Performance Indicators (15-year Program)

1. Restore transmission pipeline to full operating capacity of 37 cfs from Anderson Reservoir.
2. Restore ability to deliver 20 cfs to Madrone Channel.

Geographic Area of Benefit: Countywide

Project Location

Schedule



[1] Board approved schedule adjustment through the change control process in FY16.

Status History

Fiscal Year	Status
FY 14	*SCHEDULED TO START*
FY 15	*ON TARGET*
FY 16	*ADJUSTED*

Status for FY17: On Target

Progress on KPI #1 and #2:

- Project work continued in FY17. The 90% design was completed in May 2017. On June 13, 2017, the District Board approved the Engineer's Report and adopted the California Environmental Quality Act (CEQA) Mitigated Negative Declaration (MND).
- The District will continue work to finalize the project's design plans and construction documents, and acquire the necessary permits and pipeline easements in early FY18.

Financial Information

In FY17, 141% of the annual budget was expended. The over expenditure was due to adding the design of the new pipeline's connection to the Anderson Dam outlet pipe. This was originally to have been undertaken as part of the Anderson Dam Project design and construction, but since this project's design work will extend for several more years before construction begins, this connection will now be completed as part of the Main Avenue and Madrone Pipelines project. The project is on track to meet its KPI's financial forecast.

The original Safe, Clean Water Program funding level for Project A1 was set at $5.4 million (2012 dollars). With the project scheduled for completion in FY19, the inflated amount of funding is $6.3 million. The adjusted total project cost has increased to $16.1 million, with the current 15-year forecast projecting a total cost of $17.7 million. The increase is a result of the addition of the design and construction of the connection to the Anderson Dam and other minor design changes. The Water Utility Enterprise Fund will cover the $11.4 million remainder of costs not covered by the Safe, Clean Water Program.

Financial Summary ($ Thousands)
A1. Main Avenue and Madrone Pipelines Restoration

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$1,148	$1,615	$0	$1,615	141%	$16,096	17%

Opportunities and Challenges

Acquisition of easements

Easement acquisition is currently scheduled to be completed by August 2017.

Confidence levels

Schedule: Moderate confidence

Discussions with 1 property owner for pipeline easement acquisition are still underway. Completion of remaining project activities is on schedule.

Funding: High confidence

All project funding through FY18 has been secured through the Safe, Clean Water Program, and is included in the Water Utility Enterprise Funding of capital improvement projects.

Permits: Moderate confidence

There has been no indication that permit acquisitions will be challenging.

Jurisdictional Complexity: High confidence

Coordination with the County of Santa Clara and the City of Morgan Hill is underway. There has been no indication that jurisdictional issues will be challenging.

Project A2

Safe, Clean Water Partnerships and Grants

Grants and partnerships covered under this project include:

- Grants for agencies and organizations to study and pilot-test new water conservation programs. In FY10, county water conservation stood at 50,600 acre-feet, but this number needs to nearly double by 2030 to meet future demand.
- Grants to help schools in the county provide drinking water dispensers and other potable water devices for students. California Senate Bill 1413 (SB 1413) requires that schools provide access to free, fresh drinking water during mealtimes in food service areas.
- Rebates to private well water users for the installation of point-of-use treatment systems to remove excess nitrate from their drinking water.

Benefits

- Helps the District exceed the conservation goal of 98,500 acre-feet per year by 2030.
- Reduces water demands and the need to invest in new or expanded water supply sources and associated infrastructure.
- Increases water supply reliability.
- Helps schools provide safe, clean drinking water to students and comply with state mandate.
- Assists private well water users in maintaining the quality and safety of their drinking water.

Key Performance Indicators (15-year Program)

1. Award up to $1 million to test new conservation activities.
2. Increase number of schools in Santa Clara County in compliance with SB 1413 and the Healthy Hunger-Free Kids Act, regarding access to drinking water by awarding 100% of eligible grant requests for the installation of hydration stations; a maximum of 250 grants up to $254,000.
3. Reduce number of private well water users exposed to nitrate above drinking water standards by awarding 100% of eligible rebate requests for the installation of nitrate removal systems; a maximum of 1,000 rebates up to $702,000.

Geographic Area of Benefit: Countywide

Water conservation hydroponics research grant.

ON TARGET

Project A2 FY17 Highlights

- Executed and funded 2 water conservation grant agreements for a total of $87,440
- Increased the total amount of funds for the hydration station grants to $250,000 for 50 hydration stations
- Awarded 100% of eligible nitrate treatment system rebate requests

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: On Target

Progress on KPI #1:

- The Board approved a funding amount for the FY17 grant cycle of up to $100,000 and authorized the Chief Executive Officer (CEO) to execute grant agreements consistent with Board approved criteria. 8 grant applications were received, of which the District recommended and the CEO approved 2 grant proposals for a total of $87,440 (See Table 2.1). The 2 FY17 grant agreements were executed and funded in FY17.
- The total amount awarded to date is $545,940.

Table A2.1 Water Conservation Grants

Grantee	Project	Description	Awarded	Total Project Cost
Fisher Nickel, Inc.	Dipper Well Replacement	Measure existing dipper well(s) water use and verify the savings potential through a replacement with best available technologies in a real-world food service setting.	$37,500	$50,000
Ecology Action	Every Drop Counts — Investigation of Water Savings from Indoor, Non-Potable Rainwater Harvesting Systems	Test the efficacy of advanced metering infrastructure (AMI) in reducing water use amongst Purissima Hills Water District Customers.	$49,940	$97,765
TOTAL			**$87,440**	**$147,765**

Progress on KPI #2:

- In FY16, staff changeover at the District as well as at First 5 Santa Clara County (First 5), the grantee administering the hydration station program grants, delayed extending the grant agreement between the 2 organizations. The agreement, which expired on July 30, 2016, was renewed in May 2017 to extend the term of the agreement retroactively from July 1, 2016, to December 31, 2018, and to add $50,000 in grant

funding for installation of 10 additional hydration stations. With this amendment, the total amount of grant funding provided to First 5 is $250,000 for 50 hydration stations.

- To better manage the District's grants programs under 1 unit, the Hydration Station Grant Program was moved from the Office of Communications to the unit managing majority of the grants. Having grants administrated from 1 source provides better support, consistency and program coordination.
- To date, 41 hydration stations have been installed, and 3 schools have already received commitments from the District. Applications for the remaining 6 schools will be opened in FY18. With the installation of 50 hydration stations, the District will complete KPI #2.

Progress on KPI #3:

- In FY17, 100% of eligible rebate requests totaling $3,480 were awarded to private well users for the installation of 8 nitrate removal systems. Total amount awarded to date is $5,966.

Financial Information

In FY17, 73% of the total annual budget was expended. The Water Conservation Grant Program (KPI #1) expended 92% of its FY17 budget. In FY17, there was no budget allocated for the Hydration Station Grant Program (KPI #2) as the Board had allocated a total of $250,000 in FY13, FY15 and FY16, and it was anticipated that the project would be completed in FY16. The Nitrate Treatment System Rebate project (KPI #3) expended only 30% of its budget due to few rebates being requested. The District has increased outreach and modified program eligibility to improve well owner participation as described in the opportunities and challenges section. If these changes don't improve participation, the District will re-evaluate the benefits of continuing to offer the nitrate treatment system rebate program in order to determine whether to hold a public hearing to recommend the project for non-implementation to the Board through the Change Control Process.

Financial Summary ($ Thousands)
A2. Safe, Clean Water Partnerships and Grants

Fiscal Year 2016-2017						15-year Program	
Project No. and Name	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan*	% of Plan Spent
		Actual	Encumbrance	Total			
26061008 Water Conservation	$127	$29	$87	$116	92%	$1,272	47%
26062009 Hydration Stations	$0	$0	$0	$0	0%	$299	37%
26061010 Nitrate Treatment System Rebate	$56	$17	$0	$17	30%	$789	38%
Total	**$183**	**$46**	**$87**	**$133**	**73%**	**$2,360**	**43%**

*The Adjusted 15-year Plan amounts for Project A2 are estimated allocations per project number. The Safe, Clean Water Program 15-year Plan does not have an allocation for each project number, only for Project A2 as a whole. The District has chosen to have multiple project numbers associated with Project A2 in order to deliver the KPIs.

Opportunities and Challenges

Water Conservation Grant Program

Appendix C includes an update on the status of all conservation grants awarded to date. City of Palo Alto and Our City Forest grant agreements expired on June 30, 2017. Due to complications with their sub-consultant agreements, the City of Palo Alto received no grant funding from the District. However, the city has indicated they are still interested in completing the projects moving forward. Our City Forest (OCF) received only partial funding because, half way through their experiments, the District released updated nursery best management practices (BMPs) related to phytophthora and other pathogens and nursery irrigation. The OCF experiments were in conflict with these updated BMPs and thus were no longer necessary. Funding was provided to OCF to cover their costs for the work completed up to the release of the new BMPs. San Jose Water Company has amended their 2 grant agreements to extend the time to complete their projects due to a change in equipment. City of Morgan Hill extended their agreement to allow for more time to capture data related to supplemental irrigation.

Hydration Station Grant Program

Although the program has progressed slower than initially planned, the project is expected to achieve its goal in FY19, when the remaining 9 of the 50 hydration stations will be installed.

The IMC recommended the District conduct a survey to gather information on the use of the hydration stations by the schools, so the District is working with First 5 to conduct such a survey, which would be carried out in FY18.

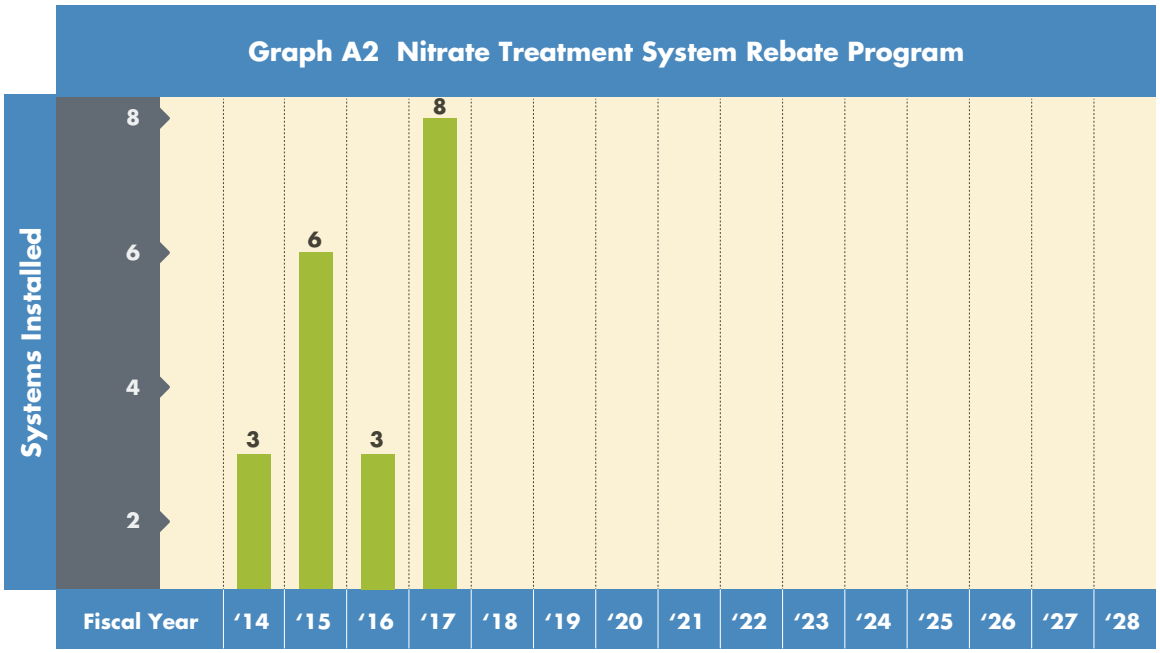
Nitrate Treatment System Rebate Program

While the nitrate treatment system rebate program awarded 100% of eligible rebate requests in FY17, private well water user participation in the program continues to be very low. This low participation is despite expanded eligibility to include residents served by State Small Water Systems and increased rebate funding. FY17 outreach efforts included several direct mailings to well owners, targeted promotion of the rebate program in South County retail stores, co-promotion of the program with the domestic well testing program, promotion of the program with local water treatment contractors, publications in numerous e-newsletters, and collaboration with the Santa Clara County Department of Environmental Health (DEH). Information on the program was also provided at various meetings with South County residents.

In addition to continued and expanded outreach, a program change was made in the second half of FY17; the maximum rebate percentage was increased from 80% to 100% of the total cost of the nitrate treatment system, up to a total rebate amount of $500.

The number of private well users exposed to elevated nitrate is unknown, as water quality monitoring and reporting for these wells is not required by the state. Results from the District's voluntary domestic well testing program indicate that about 1/3 of domestic wells had nitrate above the state drinking water standard. A survey of well owners indicated that the majority that chose not to participate in the rebate program do not use their well water for drinking or already have a treatment system. A similar program in Washington had a participation rate of 2%, despite offering systems at no cost to participants.

Since the program's inception in FY14, a total of 20 rebates have been issued totaling $5,966. In FY17, the District awarded 8 rebates for a total of $3,840. While the District continues to pursue low-cost strategies to expand participation, related efforts and program changes do not appear to be having a significant impact. Regulatory agencies responsible for protecting groundwater quality view this program as a proactive measure to help minimize well owner exposure to elevated nitrate, and the District will continue to promote the program. However, given the low participation and ongoing implementation costs, the District should re-evaluate the benefits of continuing to offer the nitrate treatment system rebate program.



Shannon line valve.

SCHEDULED TO START

Project A3 FY17 Highlights

- Adjusted schedule, per IMC recommendation, to accelerate the project start date. The planning phase is now scheduled to begin in FY19 and construction is planned for completion by FY25 (see Opportunities and Challenges)

Project A3

Pipeline Reliability Project

This project constructs 4 line valves at various locations along the East, West and Snell treated water pipelines in Saratoga, Cupertino and San José. This will allow the District to isolate sections of pipelines for scheduled maintenance and repairs following a catastrophic event, such as a major earthquake.

Benefits

- Supports shorter service interruption in the case of a pipeline break
- Provides operational flexibility for pipeline maintenance work
- Improves drinking water reliability

Key Performance Indicator (15-year Program)

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

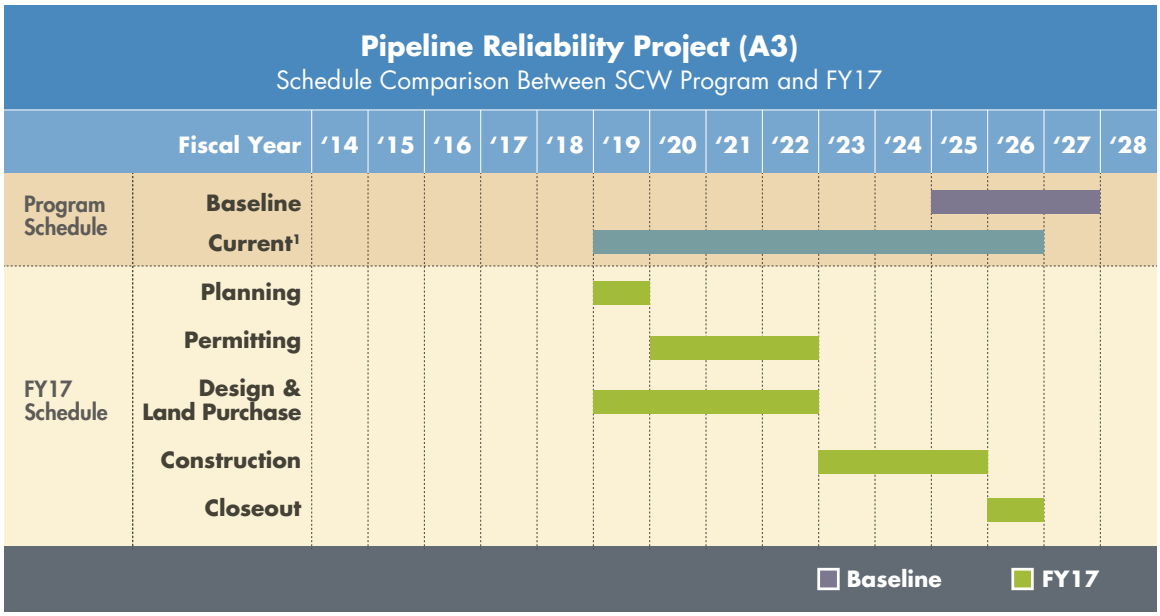
Geographic Area of Benefit: Mountain View, Sunnyvale, Santa Clara, Cupertino, Saratoga, Los Gatos, Los Altos, Campbell, San José and Milpitas

Project Location

Legend

★ Project Location

Schedule



[1]Board approved a schedule adjustment through the change control process in FY17.

Status History

Fiscal Year	Status
FY 14	*SCHEDULED TO START*
FY 15	*SCHEDULED TO START*
FY 16	*SCHEDULED TO START*

Status for FY17: Scheduled to Start (FY19)

Financial Information

This project is scheduled to begin in FY19.

Opportunities and Challenges

Schedule adjustment

The original project schedule had an estimated start date of FY25 and completion date of FY27. In reviewing the FY15 Safe, Clean Water Annual Report, the IMC recommended advancing the project schedule. The District evaluated the funding impacts and staff resource availability for initiating this project earlier, and, as part of the January 10, 2017 presentation of the Preliminary FY18-22 CIP to the Board, informed the Board that this project work will be incorporated into the District's 10-Year Pipeline Inspection and Rehabilitation Program.

The planning phase for this project is anticipated to begin in FY19. The District is currently estimating that construction will be completed by FY25. On March 23, 2017, the Board approved an adjustment to the project's schedule, to begin in FY19 and be completed by FY25.

Confidence levels

The confidence levels will be determined when work on the project begins.

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Priority B

Reduce Toxins, Hazards and Contaminants in our Waterways

Projects under Priority B use multiple strategies to reduce and remove contaminants in our local creeks, streams and bay. In addition to mercury treatment systems in our reservoirs, projects under this priority also prevent toxins from entering waterways by working with municipalities and other agencies to reduce runoff pollution. The District also provides grants to reduce emerging contaminants and supports public education and volunteer cleanup efforts. Additional projects include coordinated cleanup of encampments near waterways, trash and graffiti removal, and rapid emergency response to hazardous materials spills.

Project B1
Impaired Water Bodies Improvement

Project B2
Interagency Urban Runoff Program

Project B3
Pollution Prevention Partnership and Grants

Project B4
Good Neighbor Program: Encampment Cleanup

Project B5
Hazardous Materials Management and Response

Project B6
Good Neighbor Program: Remove Graffiti and Litter

Project B7
Support Volunteer Cleanup Efforts and Education

Appendix A: Financial Information

Appendix B: Inflation Assumptions

Appendix C: Cumulative Partnerships and Grants Information for Projects B3 and B7

Appendix E: Cumulative Trash Removal Data for Projects B1-B4, B6 and B7

Calero Reservoir oxygenation system.

ON TARGET

Project B1 FY17 Highlights

- Operated and maintained existing oxygenation treatment systems in 4 reservoirs
- Reduced methylmercury in the bottom of the reservoir at an average of 70% below historical summer concentrations
- Implemented the first 2 pollution prevention activities in 2 creeks

Project B1

Impaired Water Bodies Improvement

This project helps the District meet surface water quality standards and reduces pollutants in streams, groundwater, lakes and reservoirs. Efforts are carried out in compliance with the Regional Water Quality Control Board (RWQCB) Total Maximum Daily Loads (TMDLs) standards as they continue to evolve (TMDLs are the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards). Under this project, the District employs treatment systems in reservoirs to reduce methylmercury formation, and helps create realistic plans and expectations for reducing contaminant loads by engaging in the regulatory development process with the RWQCB for new and emerging contaminants.

Benefits

- Reduces contamination in creeks and reservoirs
- Improves water quality, including water going to drinking water treatment plants
- Reduces mercury in reservoirs to prevent its entry into the food web
- Improves fisheries by reducing mercury contamination
- Supports regulatory compliance of TMDL standards affecting District operations

Key Performance Indicators (15-year Program)

1. Operate and maintain existing treatment systems in 4 reservoirs to remediate regulated contaminants, including mercury.
2. Prepare plan for the prioritization of pollution prevention and reduction activities.
3. Implement priority pollution prevention and reduction activities identified in the plan in 10 creeks.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: On Target

Progress on KPI #1:

- Operated and maintained existing oxygenation treatment systems (systems) in 4 reservoirs to remediate methylmercury production and improve water quality. The District is subject to the Guadalupe River Watershed TMDL, but initiated voluntary methylmercury production and control studies in 2005 prior to adoption of the TMDL.

Hypolimnetic oxygenation systems are operated to prevent anaerobic conditions that occur during summer reservoir stratification. Stratification is a separation of the water into 2 layers: the epilimnion (top layer) and the hypolimnion (bottom layer). Under low-oxygen conditions, mercury can be converted to methylmercury, a highly-toxic compound that bioaccumulates in fish tissue and presents serious health risks to birds and people consuming fish. This year, the oxygenation systems were operated nearly continuously throughout the stratification periods of the 4 reservoirs (Almaden, Calero, Guadalupe, and Stevens Creek), with only brief interruptions due to mechanical issues. Specialized maintenance and troubleshooting is needed to keep the systems operational. The addition of technical team members and greater emphasis on off-season preparation increased the operational periods significantly. In the winter, cooler temperatures, wind, and rain, led to reservoirs that are mixed and better oxygenated, so oxygenation systems are turned off in the winter.

Operation of oxygenation systems:

- » Almaden Reservoir – 14 weeks
- » Calero Reservoir – 26 weeks
- » Guadalupe Reservoir – 24 weeks
- » Stevens Creek Reservoir – 26 weeks

Water quality sampling occurred twice-monthly in each reservoir during oxygenation system operation, and once per month during the remainder of the year. Fish were sampled in summer 2016 and spring 2017. The District will report to the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) on the effectiveness of the hypolimnetic oxygenation systems in December 2017, as required by the Guadalupe River Watershed Mercury TMDL. These findings will also inform the implementation plan of the upcoming Statewide Mercury Program for reservoirs being developed by the State Water Resources Control Board (SWRCB). A newly-compiled panel of technical advisors will review data and findings for scientific validity. Stevens Creek Reservoir is not in the Guadalupe River watershed and is being treated and sampled as a reference site.

The TMDL has water quality objectives related to fish tissue and hypolimnion water methylmercury concentrations. For more information on the Guadalupe River Mercury TMDL, please see the SFRWQCB's website:

http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/guadaluperivermercurytmdl.shtml

Operation of the systems resulted in significant reduction in methylmercury in the hypolimnion (bottom of the reservoir), with an average decrease of 70% below historical summer concentrations. In most cases, the methylmercury TMDL for the hypolimnia of reservoirs were met. In addition, manganese and iron were reduced by about 40% in Calero Reservoir, benefitting the Rinconada and Santa Teresa drinking water treatment plants.

The District was asked to present findings at the International Conference on Mercury as a Global Pollutant in Providence, Rhode Island. The presentation was developed during this reporting period and delivered at

the conference in July 2017. The presentation is available on the Project B1 website: *http://valleywater.org/uploadedFiles/Programs/Safe_Clean_Water_and_Natural_Flood_Protection/Priority_B/ICMGP_FINAL.PDF?n=7677*

Although not a KPI, 4 solar-powered circulators are operated in Lake Almaden to improve oxygen concentration at the lake bottom. They have resulted in modest reductions in methylmercury in the lake.

Progress on KPI #2: *(Completed in FY15)*

An initial Pollution Prevention Prioritization Plan (Plan) was drafted in January 2015. The Plan prioritizes Project B1 pollution prevention and reduction activities in 10 water bodies identified as impaired in Santa Clara County. This Plan sets the foundation for implementing activities to improve impaired water bodies in Santa Clara County based on the SWRCB's 303 (D) list. The Plan was updated in 2017 and includes a map of impaired water bodies in Santa Clara county and a prioritization process for the impaired water bodies to determine pollution prevention and reduction activities. This Plan presents a recommendation as a guide; however, as knowledge of conditions change, both the Plan and implementation are considered flexible. The Plan will be updated with new information such as regulatory actions (such as updates to the 303 (D) list) and water quality data as needed (*http://www.valleywater.org/uploadedFiles/Programs/Safe_Clean_Water_and_Natural_Flood_Protection/Priority_B/B1%20Prioritization%20Plan%202017.pdf?n=339*).

Progress on KPI #3:

- In FY17, the District continued to implement the first 2 pollution prevention activities in 2 creeks and planned a third pollution prevention activity.

<u>Priority pollution prevention and reduction activities</u>

Pollution Prevention Activity #1:

Trash Accumulation Point Mapping (Guadalupe River): The District began implementation of the Plan in December 2015. The first pollution reduction activity in the plan was to map trash accumulation locations in the Guadalupe River, from Highway 237 to Blossom Hill Road. The first Guadalupe River Map was completed in FY16. Trash was cleaned up at the accumulation points identified on the FY16 map, removing 78 cubic yards (approximately 7.8 tons*) of trash from the Guadalupe River. Initially, the concept was for the map to be updated approximately every 6 months; however, due to high flows this winter, re-mapping was delayed and was conducted in May and June 2017. Trash identified as part of this mapping effort will be cleaned in FY18 (*http://valleywater.org/uploadedFiles/Programs/Safe_Clean_Water_and_Natural_Flood_Protection/Priority_B/TrashRaftData_FiscalYear_Comparisons.pdf*).

**This estimate may have slightly varied from past annual reports due to a refinement of the conversion from cubic yards to tons.*

Pollution Prevention Activity #2:

Trash Reduction (Guadalupe River and Coyote Creek): To reduce trash accumulation, the project funds patrol and enforcement services from City of San José park rangers and California Department of Fish and Wildlife officers to prevent reestablishment of homeless encampments along the Coyote Creek and Guadalupe River. The current agreements through June 2017 are in the process of being extended.

The agreement with the California Department of Fish and Wildlife for $70,000 was intended to assist in identifying debris sites, patrolling areas to prevent re-encampment, and to conduct enforcement related to the Department's jurisdiction. The cost share agreement with the City of San José for $175,000 is to fund park ranger services to prevent re-encampment and provide outreach to the homeless community.

These services also benefit and align with the work being done under Project B4 Good Neighbor Program: Encampment Cleanup.

Pollution Prevention Activity #3:

The District is working with the City of San José to develop a trash accumulation point map for Coyote Creek for summer 2017, which will be Pollution Prevention Activity #3.

Financial Information

Project expenditures for FY17 are 81% of the annual budget. The project is under budget due to increased program efficiencies, but also delays in contracting with vendors for the Calero Reservoir system.

Financial Summary ($ Thousands)
B1. Impaired Water Bodies Improvement

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$1,507	$1,025	$189	$1,214	81%	$27,427	18%

Opportunities and Challenges

Partnership opportunities

The District continues to explore partnerships with cities, non-profits and volunteer groups to implement priority pollution prevention and reduction activities in 10 water bodies throughout the county. This includes:

- Working with the City of San José on trash in Guadalupe River and Coyote Creek.
- Increased collaboration with the SFRWQCB and mercury researchers, as well as invitations to present mercury findings at various conferences.

The project also assists the District's Water Utility Enterprise with iron and manganese reduction in Calero Reservoir which feeds the Rinconada and Santa Teresa water treatment plants.

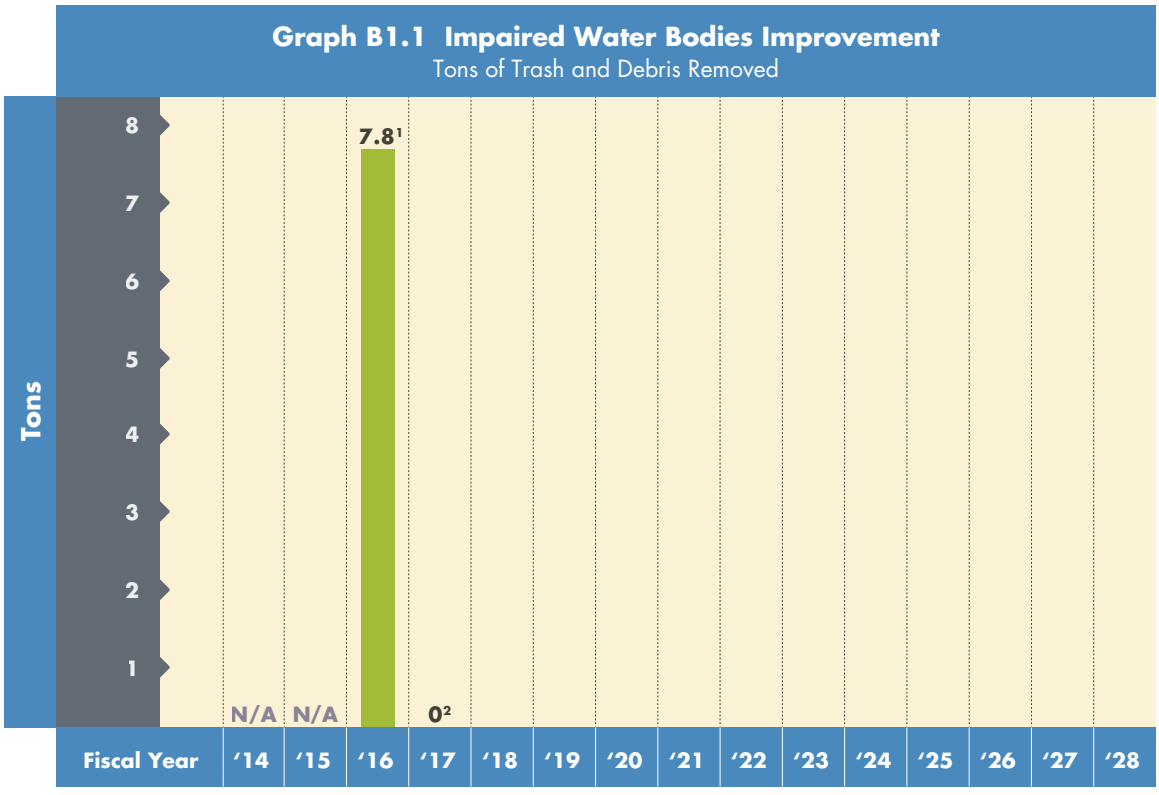
To satisfy collective monitoring requirements of the Guadalupe River Watershed Mercury TMDL, the District collaborates with the other regulated parties – the County, Midpeninsula Regional Open Space District, and Guadalupe Rubbish Company, on a coordinated monitoring program. A 5-year monitoring report was

submitted to the SFRWQCB in January 2017. The partners are primarily responsible for source control and implementing projects to remediate mercury contaminated sites upstream of the reservoirs in the old Almaden Mining district.

Operational and maintenance challenges

Summer 2016 was the first year that oxygenation systems ran generally continuously. Shut down days ranged from 5 at Calero Reservoir to 27 at Almaden Reservoir. Maintenance issues continued to affect the systems this fiscal year, but were addressed by specialized maintenance servicing, adding technical support staff, improved coordination with equipment service vendors, and improved operational knowledge. Start up at Calero Reservoir in spring 2017 was delayed due to the need for additional maintenance contracts.

Specialized equipment requires original vendors to perform much of the trouble shooting and maintenance. The District is exploring use of internal staff and/or issuing a long-term contract to ensure reliable ongoing maintenance of systems.



[1] This estimate may have slightly varied from past annual reports due to a refinement of the conversion from cubic yards to tons.
[2] Due to high flows during the winter of FY17, re-mapping was delayed and conducted in May and June 2017. Trash identified as part of this mapping effort will be cleaned in FY18.

Project B2

Interagency Urban Runoff Program

This project supports the District's continued participation in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) and South County programs that help the District reduce stormwater pollution and meet regulatory requirements to reduce contaminants in surface water.

The District also participates in the regulatory development process related to stormwater by providing review, analysis and commentary on various basin plan amendments, Total Maximum Daily Loads (TMDLs) and water bodies listed as impaired or threatened under the federal Clean Water Act. Project B2 also allows the District to maintain regional public education and outreach activities to help prevent urban runoff pollution at the source.

Benefits

- Uses partnerships with municipalities and local agencies to reduce contaminants and improve surface water quality in our streams, reservoirs, lakes and wetlands
- Maintains District compliance with the Regional Water Quality Control Board and National Pollutant Discharge Elimination System (NPDES) permits
- Allows continued participation in SCVURPPP and South County urban runoff programs
- Promotes stormwater pollution prevention through public outreach

Key Performance Indicators (15-year Program)

1. Install at least 2 and operate 4 trash capture devices at stormwater outfalls in Santa Clara County.
2. Maintain partnerships with cities and County to address surface water quality improvements.
3. Support 5 pollution prevention activities to improve surface water quality in Santa Clara County, either independently or collaboratively with South County organizations.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Trash hot spot cleanup and sorting.

ON TARGET

Project B2 FY17 Highlights

- Cleaned and removed all 4 trash capture devices (booms) in the county after first rain events
- Maintained several partnerships with cities and Santa Clara County
- Received a Proposition 1 grant to develop a Storm Water Resource Plan for the Santa Clara Basin
- Completed Pollution Prevention Activity #1 and initiated Pollution Prevention Activity #2

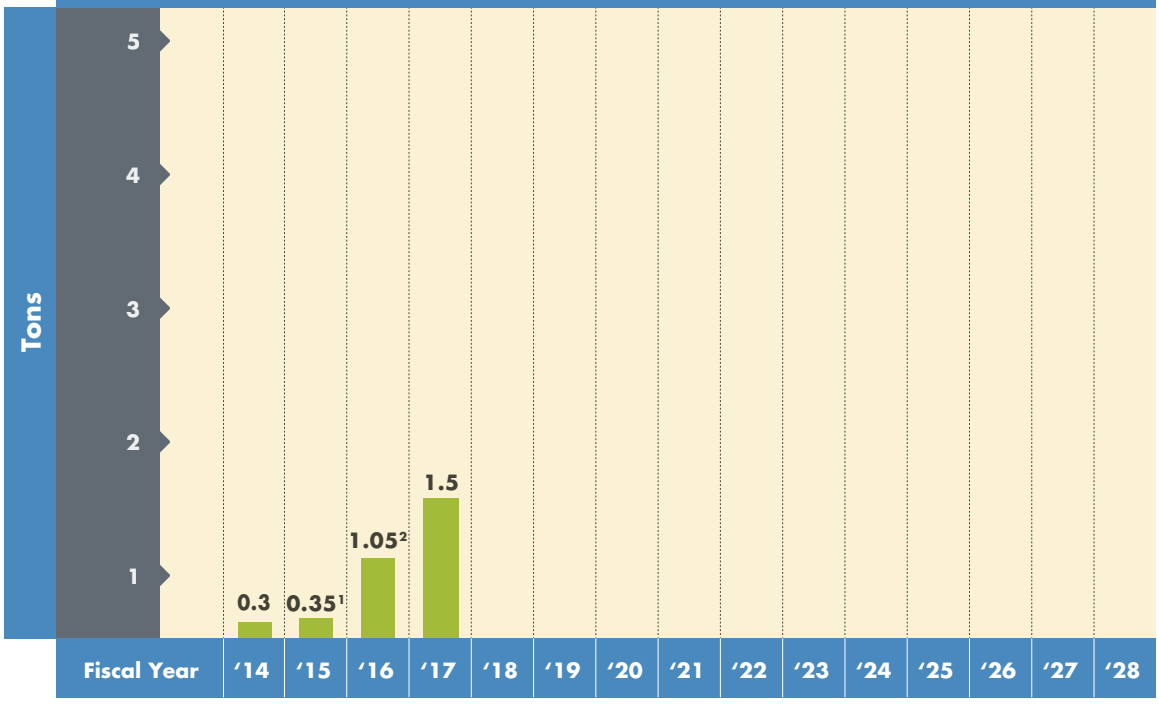
Status for FY17: On Target

Progress on KPI #1: *(Installation of 2 trash capture devices was completed in FY14)*

- In FY17, a total of 4 trash capture devices (booms) were operational in Santa Clara County. Approximately 15 cubic yards (1.5 tons) of trash were collected and removed (Graph B2.1). The 4 booms were located at:
  - » Lower Silver Creek near King Rd. and Schulte Dr., San José
  - » Matadero Creek at West Bayshore Rd., Palo Alto
  - » Adobe Creek at East Bayshore Rd., Palo Alto
  - » Thompson Creek upstream of Tully Rd., San José

All booms were cleaned and removed after first flush rain events. The Matadero and Adobe creek booms are managed by the City of Palo Alto under an agreement with the District, who performed the environmental permitting. These 2 booms were redeployed in April 2017. The Thompson Creek boom was reinstalled in June and the Lower Silver Creek boom will be reinstalled after the planned sediment removal operation in the fall of 2017. There is a potential that 1 or both booms managed by the District will be relocated in FY18 which will require additional environmental clearance beyond the current Categorical Exemptions. Siting or determining location for booms must consider hydraulics, wildlife concerns, and sediment, as well as ensuring that booms capture trash from

Graph B2.1 Interagency Urban Runoff Program
Tons of Trash and Debris Removed from Trash Booms (KPI #1)



[1] The amount of trash and debris removed in FY15 has been corrected. In previous annual reports, the amount was provided in cubic yards but was reported as tons on the graph.
[2] This estimate may have slightly varied from past annual reports due to a refinement of the conversion from cubic yards to tons.

surrounding land uses. In addition to booms, the stormwater permit requires the cleanup of designated "hot spots." Under Project B2, 2 hot spots were cleaned this year generating 3 cubic yards (0.3 tons) of trash. Many of the designated hot spots did not have trash this year due to high flows. Other hot spots were cleaned through the Good Neighbor and Volunteer programs.

Progress on KPI #2:

- Maintained several partnerships with cities and Santa Clara County.
  - » In July 2015, the District renewed its annual agreement for SCVURPPP. SCVURPPP is a partnership with Santa Clara County and 13 cities in the county to reduce pollution in urban runoff to the "maximum extent practicable" to improve the water quality of South San Francisco Bay and the streams of Santa Clara County. The District's contribution to the SCVURPPP budget is 30%, and the District chairs the management committee. More information can be found at *http://scvurppp-w2k.com/*. Work conducted in FY17 includes continued implementation of the requirements of the San Francisco Bay Municipal Regional Stormwater Permit (MRP 2.0), which became effective in January 2016 (see *http://www.waterboards.ca.gov/rwqcb2/water_issues/programs/stormwater/Municipal/R2-2015-0049.pdf*). A SCVURPPP 2016 Program Summary can be found here: *http://scvurppp-w2k.com/pdfs/1617/Program_Summary_2016_web.pdf* Annual reports are submitted to the Regional Water Quality Control Board with accomplishments on the required activities (*http://www.waterboards.ca.gov/rwqcb2/water_issues/programs/stormwater/MRP/2016_AR/Santa_Clara/index.shtml*).
  - » In December 2016, the District on behalf of SCVURPPP was awarded a Proposition 1 grant to develop a Storm Water Resource Plan for the Santa Clara Basin that will support the development and implementation of MRP-required Green Infrastructure Plans and produce a list of prioritized runoff capture and use projects eligible for future state implementation grant funds. The District, in addition to managing the grant, participates on the Technical Advisory Committee.
  - » The District co-chairs the Bay Area Stormwater Management Agencies Association (BASMAA) trash committee and has played a lead role in developing a receiving water trash monitoring plan as part of a Bay Area wide effort. More information on BASMAA can be found at *http://basmaa.org/*
  - » The District participates in the Santa Clara County Technical Advisory Committee (TAC) to the Recycling and Waste Reduction Commission (RWRC). The TAC works on various relevant issues, including waste and litter reduction, outreach, green business and reducing disposables. Under Project B3, the District funds an agreement with the County for its Green Business Program, which is reviewed by the RWRC TAC. In addition, the District chairs the Eco-Gardeners committee, jointly funded by the Recycling and Waste Reduction Committee and SCVURPPP, with a goal of promoting native, drought tolerant landscaping, reducing use of pesticides and encouraging composting.
  - » The District actively participates and shares data, reports, and findings with the South County stormwater group, comprised of Morgan Hill, Gilroy, and the County of Santa Clara.

Progress on KPI #3:

In FY17, Pollution Prevention Activity #1 was completed and Pollution Prevention Activity #2 was initiated for a total of 2 pollution prevention activities, both in South County.

- *Pollution Prevention Activity #1:* Completed South County Pajaro River Watershed Pathogen and Microbial Source Tracking Study (*http://valleywater.org/uploadedFiles/Programs/Safe_Clean_Water_and_Natural_Flood_Protection/Priority_B/B2%20-%202016%20MST%20Map%20results_w_total.pdf*), working with Gilroy and Morgan Hill, as well as the County. The District's report was finalized in FY17. In addition, this study resulted in further monitoring of pathogen sources by South County agencies with additional investment by the District this year. This activity has resulted in information that other agencies are using to develop pollution prevention outreach.
- *Pollution Prevention Activity #2:* The District performed data analysis for South County nutrient impairment and TMDL for the Pajaro River watershed to prioritize agricultural parcels based on predicted nitrate, precipitation, soil erosivity, slope and area. The analysis was presented to the South County stormwater group. The District is currently developing next steps to reduce nutrient loading in the Uvas/Llagas Watershed.

Financial Information

The project was on target with 101% of the FY17 budget expended. KPI #1 focuses on pollutant removal by intercepting and removing trash in creeks and is an estimated 10% of the expenditures. KPIs #2 and #3 focus on pollution prevention.

Financial Summary ($ Thousands)
B2. Interagency Urban Runoff Program

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$660	$669	$0	$669	101%	$12,641	20%

Opportunities and Challenges

Trash capture

Opportunities exist for the use of booms at additional creek locations to help capture trash during Project B1 trash mapping and clean-up activities. Trash booms require environmental permitting and may not be appropriate for all creek locations. The District has provided lessons learned information on booms to SCVURPPP and BASMAA partners.

Volunteer Creek Cleanup Partnership Program

The interest and enthusiasm for volunteer cleanup is very high. Some activities appear to overlap with activities covered in Projects B2, B3, B4, B6 and B7. To achieve cost-effectiveness and avoid duplication, additional coordination among these projects has been initiated to optimize the use of the various funding sources. For additional information on the volunteer program, please see Project B7.

Project B3

Pollution Prevention Partnerships and Grants

This project provides pollution prevention grants to qualified local agencies, nonprofit groups, schools, etc., totaling an average of $500,000 per cycle. In addition, up to $200,000 per year goes toward partnerships with municipalities for specific programs to reduce contaminants in surface or groundwater, and reduce emerging contaminants.

Grants could support programs such as public education to prevent pharmaceuticals from entering waterways, technical assistance to help growers protect groundwater, and partnerships to reduce litter and graffiti.

Medication bin demonstration.

ON TARGET

Project B3 FY17 Highlights

- No grant cycle in FY17
- Continued administration of 12 awarded grants, including 1 grant extension
- Established 2 partnerships

Benefits

- Helps prevent contaminants such as pharmaceuticals, household hazardous waste and trash from entering our waterways
- Helps meet regulatory requirements as listed under the impaired water bodies listing of the federal Clean Water Act
- Reduces contaminant source loads in groundwater and surface water, and protects local watersheds
- Provides public education to reduce contaminants in our waterways
- Leverages community resources for efficient use of funds

Key Performance Indicator (15-year Program)

1. Provide 7 grant cycles and 5 partnerships that follow pre-established competitive criteria related to preventing or removing pollution.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: On Target

Progress on KPI #1:

- FY17 was not a grant cycle year; FY18 will be the third grant cycle.
- The District continued to administer the 12 grants that were awarded in FY14 and FY16.
- 1 grant project, the Secure Pharmaceutical Collection Bin Expansion by the California Product Stewardship Council was completed in FY17.
- 2 partnerships were established in FY17:
  - » San Jose Watershed Community Stewardship & Engagement Project, which has been extended until June 30, 2018 with additional funding of $350,000 each from the District and the City of San José.
  - » Pollution Prevention and Zero Waste Program
- The West Valley College Track and Sports Field Stormwater Pollution Reduction Project Grant was scheduled to be completed in FY17, but the grantee—West Valley Mission Community College District—has requested a 3-year extension, which will be presented to the Board for consideration in July 2017.

Financial Information

FY17 project expenditures were 84% of the total annual budget. While the partnership dollars were fully utilized with the extension and expansion of the San Jose Watershed Community Stewardship & Engagement Project agreement, the project was under expended due to low staff labor hours resulting from staff turnover.

Financial Summary ($ Thousands)
B3. Pollution Prevention Partnerships and Grants

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$433	$13	$350	$363	84%	$7,595	27%

Opportunities and Challenges

Staffing and program improvements

In FY17, grant administration, especially invoice payment and grant management, was hindered due to the District's staff turnover combined with a reorganization of the grant program. Staffing needs were addressed in May 2017 and following the assignment of additional staff resources, overall improvements were made to the grant administration process. These improvements included the development of electronic filing systems to quickly retrieve information, and engaging with grantees on invoicing requirements and processes. Further organizational changes are planned in August 2017, which will significantly improve program efficiency. These improvements include streamlining, simplifying and automating grant administration.

West Valley College Track and Sports Field Stormwater Pollution Reduction Project delayed

The West Valley College Track and Sports Field Stormwater Pollution Reduction Project, scheduled to be completed in FY17, has been delayed. The grantee, West Valley Mission Community College District (West Valley College), is requesting a modification in the scope of work and a 3-year extension to implement the revised scope and achieve the intended outcome of the grant.

The purpose of the project is to reduce the discharge of urban stormwater pollution entering Vasona Creek from the surrounding campus lands. Initial analysis by West Valley College determined that the Track and Sports Field was infeasible due to the relative depressed elevation of the track in relationship to Vasona Creek. The design feasibility was also restricted by low solid infiltration rates and high groundwater discovered on the campus. The grantee, with the assistance of a consultant, explored other feasible high-priority alternatives based on the percentage of impervious areas and level of pollutant load and determined Parking Lot 2 on the campus to be the best substitute. In fact, a parking lot offers greater opportunity for pollutant removal since automobiles are the leading source of copper, zinc and lead contamination in urban stormwater. Roofs, which were the primary type of impervious area in the Track and Sport Field project, have lower pollutant levels.

A request for the revised scope of work and the 3-year extension is scheduled to be presented to the Board for consideration in July 2017.

Secure Pharmaceutical Collection Bin Expansion Project limited by a new County program

In May 2015, 1 year into the grant project, the County of Santa Clara established a New Extended Producer Responsibility Drug Disposal Program (Ordinance No. NS-517.89). The ordinance requires pharmaceutical companies to install medication collection bins in 2017. Furthermore, the ordinance requires that all medication collection bins accept controlled medications. Delays in securing permits to install collection bins required the project to be extended from 2 years to 3 years, with no additional funding. In December 2016, the pharmaceutical companies, who are required to meet the ordinance, confirmed that they will not accept the 29 collection bins that have already been installed by the grantee. As a result, the grantee was unable to recruit additional pharmaceutical collection sites.

Subsequently, the remaining funds budgeted for the purchase and installation of medication collection bins ($20,004.71) were reallocated to expanding marketing and education efforts for the existing bins and the Don't Rush to Flush campaign, which supports the new county ordinance, and to support additional labor needed to complete this project because it was extended by 1 year, ending on June 30, 2017.

Early engagement

Additional efforts are required early in the projects to engage and inform grantees on the documentation and reporting necessary for reimbursements. This early education results in more accurate and complete submittals later in the process.

Volunteer Creek Cleanup Partnership Program

The interest and enthusiasm for volunteer cleanup is very high. Some activities appear to overlap with activities covered in Projects B1, B2, B3, B4, B6 and B7. In FY17, the District began attending monthly Creek Partners meetings with the City of San José for better coordination on cleanup efforts, and to establish communication with various community organizations.

Outreach

Recognizing that more work was needed to connect with the grantees and conduct outreach, in FY17 the District introduced Grants at Work articles to mark projects reaching major milestones or completion. These were shared with the Board through the CEO Bulletin and/or the non-agenda board packet, and with the community through the monthly ValleyWater e-news, the District blog and social media. In addition, the IMC's suggestion to disseminate the results of completed projects to organizations/communities that may benefit will be implemented as projects are completed.

Project B4

Good Neighbor Program: Encampment Cleanup

This project supports the District's ongoing coordination with local cities and agencies to clean up large creekside encampments that contaminate waterways and damage District facilities. This cooperative effort includes local police departments, social services, and nonprofit advocacy groups that help provide alternatives to homelessness.

FY17 encampment cleanup site.

ON TARGET

Project B4 FY17 Highlights

- Cleaned 407 encampment sites, which removed more than 907 tons of trash and debris
- Participated in monthly meetings with the Joint Trash Team

Benefits

- Reduces trash and other pollutant loads in surface water, including streams, reservoirs and wetlands
- Improves the aesthetics of creeks in neighborhoods and parks
- Coordinates efforts among multiple agencies to create lasting solutions

Key Performance Indicator (15-year Program)

1. Perform 52 annual cleanups for the duration of the Safe, Clean Water Program to reduce the amount of trash and pollutants entering the streams.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: On Target

Progress on KPI #1:

- Cleaned 407 encampment sites in FY17 (Graph B4.1).
  - » Removed more than 907 tons of trash and debris from encampments (Graph B4.2).

While the District provides encampment cleanup support on District property in cities throughout the county, the majority of these cleanups were performed in coordination with the City of San José as part of an ongoing agreement to complete encampment removal activities along the creeks. In addition, the District participated in the Joint Trash Team along with the City of San José and other

partner agencies on a monthly basis to plan and schedule services that are required for cleanup events, such as social services, law enforcement and volunteer support.

Financial Information

In FY17, the project was on track with 101% of its budget expended. Due to an extremely aggressive Stream Maintenance Program (SMP) schedule, there was a minor reduction in service during the SMP season.

Financial Summary ($ Thousands)
B4. Good Neighbor Program: Encampment Cleanup

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$1,011	$1,019	$0	$1,019	101%	$5,314	78%

Opportunities and Challenges

Volunteer Creek Cleanup Partnership Program

The interest and enthusiasm for volunteer cleanup is very high. Some activities appear to overlap with activities covered in Projects B2, B3, B4, B6, and B7. To achieve cost-effectiveness and avoid duplication, additional coordination among these projects has been initiated to optimize the use of the various funding sources. For additional information on the volunteer program, please see Project B7.

Coyote Creek encampment

Homelessness in Santa Clara County

Along with a number of cities and countywide agencies, the District Board has endorsed the Community Plan to End Homelessness in Santa Clara County and the District remains an active partner in implementing the plan.

Operational and maintenance challenges

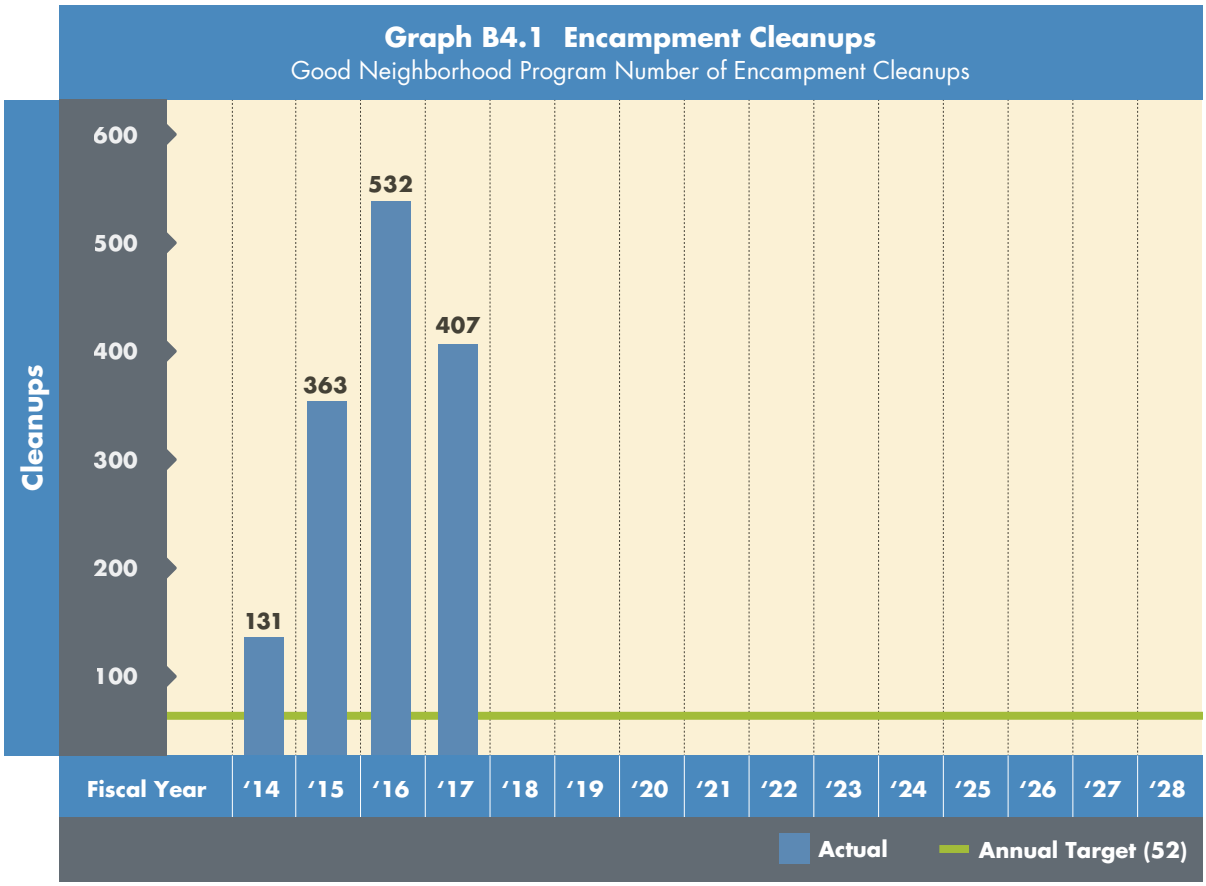
Winter storms impacted the District's ability to perform cleanups during the winter and resources were redirected to Debris Removal after the winter storms. In addition, the extremely aggressive SMP schedule from June through November redirected limited resources from Encampment Cleanup efforts to scheduled SMP work.

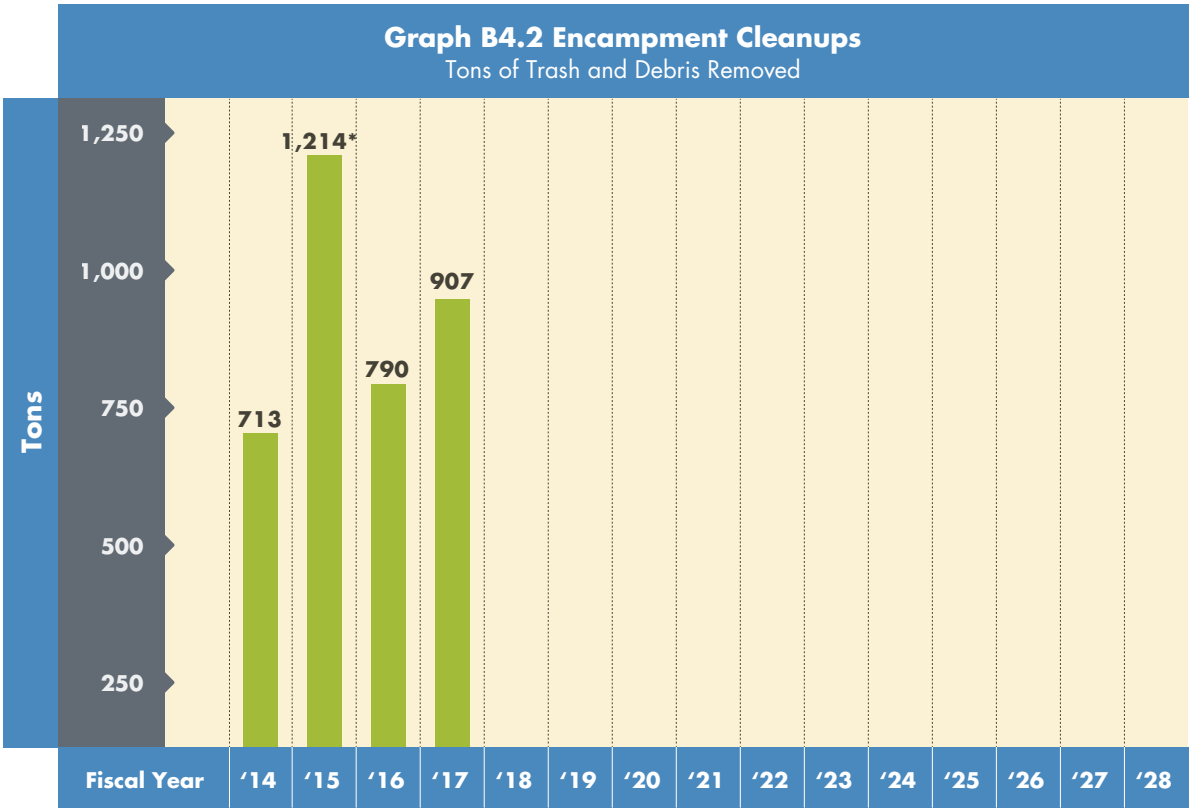
Funding

There continues to be an increasing demand for District resources to address encampment cleanups from cities and the community. These additional requests have significantly impacted the project's budget. This project does not have sufficient Safe, Clean Water funding allocated to accomplish the current level of demand for service beyond FY19.

To address this high level of demand and the overall issue of homelessness in the county, the Board formed a Homeless Encampment Ad Hoc Committee. The Committee is working closely to explore alternative funding sources and methods for addressing the issue of homelessness. On May 15, 2017, the Committee met to hear and discuss homeless encampment issues, and passed a motion to forward the Board the recommendation to approve utilizing a portion of net rental income from properties purchased through Watersheds (Fund 12) to fund the homeless encampment cleanup project. This recommendation would allow for up to 90% of each FY's net rental income to be utilized to fund Project B4 through FY28.

Depending on the net rental income amount, the District may need to pursue additional funding sources or redirection of funding for this project to meet the current level of demand for service.





*In FY15, the Encampment Cleanup totals spiked as a result of trash and debris removed from a large scale clean up in Coyote Creek in December 2014.

Project B5

Hazardous Materials Management and Response

This project allows the District to continue providing a local, toll free number to report hazardous materials spills 24 hours a day, 7 days a week. Emergency staff responds within 2 hours of the initial report, with spill cleanup in District rights-of-way performed in a timely manner. Appropriate agencies are alerted when spills are outside District jurisdiction.

Vehicle accident near creek.

ON TARGET

Project B5 FY17 Highlights

- Met 100% of the required 2 hour or less response time for urgent calls, with an average response time of 65 minutes countywide
- Increased outreach to the public and expanded to include the Nextdoor website

Benefits

- Prevents and reduces contaminants in surface and groundwater
- Provides a quick, systematic emergency response that reduces negative impacts of hazardous materials spills

Key Performance Indicator (15-year Program)

1. Respond to 100% of hazardous materials reports requiring urgent on-site inspection in 2 hours or less.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: On Target

Progress on KPI #1:

- In FY17, the District received 141 incident calls countywide, of which 76 received an on-site response; 25 were classified as urgent. The remaining 65 calls did not receive on-site responses because they were outside of the District's jurisdiction, were reporting an event that occurred in the past and already mitigated, or were addressed by another District team. The District met 100% of its required 2 hour or less response time for urgent calls, with an average response time of 65 minutes countywide.

Financial Information

FY17 expenditures totaled 92% of the annual budget. Expenditures under this project can fluctuate widely based on the following:

1. The number of calls received on the Pollution Prevention hotline,
2. The number of calls requiring a field response,
3. A varying amount of time required resolving/mitigating once in the field, and
4. An unspecified amount of waste to be disposed under the Emergency Response Program.

Financial Summary ($ Thousands)
B5. Hazardous Materials Management and Response

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$37	$34	$1	$35	92%	$618	17%

Opportunities and Challenges

Multiple incidences

Occasionally, multiple incidents occur on the same day and the current Emergency Response Program may potentially have trouble meeting the 2-hour response goal. However, this rarely occurs and has not prevented the District from meeting the KPI.

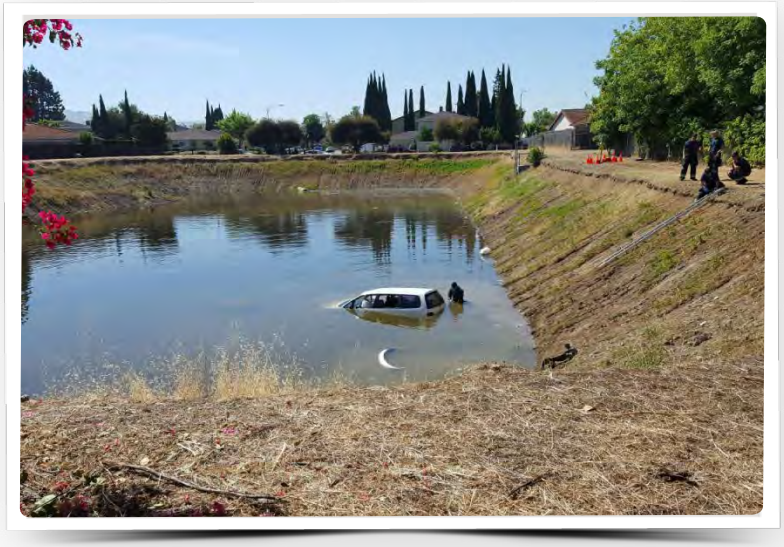
Response times

Other challenges to meeting timeliness performance standards include accessing remote locations, mobilizing equipment and supplies (boats and absorbents) for on-water response, or encountering traffic when traveling to various locations in the county. It is also critical that the District's Watershed Emergency Response Program maintain good working relationships with other response agencies and be trained and equipped to continue to respond effectively to a wide array of pollutants and hazardous substances.

Increased outreach

Mailers and other communications sent out to the public include a reference to the District's Access Valley Water online customer service center. The Access Valley Water service page serves as a 1-stop shop for residents to inform the District on a variety of issues. When submitting their case information, the reporting party has the option to select "hazardous material reporting" as the topic of concern. Additionally, the District has expanded public communication efforts to include posting on the Nextdoor website.

Local municipalities provide a mechanism for the public to report illegal dumping either through an online reporting or a specified telephone numbers. Municipal staff, in responding to the report, would contact the District's Pollution Prevention hotline if a District facility (i.e. waterway, percolation pond, etc.) were impacted.



Vehicle submerged in Helmsley Pond near Summerpark Court, San José

Table B5

Fiscal Year	Total Reports	Total Responses*	On-site Responses Classified as "Urgent"	Countywide Average Response Time
2016 - 2017	141	76	25	65 minutes

*The remaining 65 calls did not receive on-site responses because they were outside of the District's jurisdiction, were reporting an event that occurred in the past and already mitigated, or were addressed by another District team.

Graffiti near Dobern Bridge.

ON TARGET

Project B6 FY17 Highlights

- Conducted 4 litter cleanup events, which removed 82 tons of debris from 395 sites countywide
- Conducted 4 graffiti cleanup events, which cleaned 111,438 square feet of graffiti at 2,067 sites countywide
- Logged 231 complaints regarding illegal dumping and trash and 51 complaints regarding graffiti

Project B6

Good Neighbor Program: Remove Graffiti and Litter

This project allows the District to continue responding to complaints about illegal dumping, trash and graffiti on District property and rights-of-way. Cleanup efforts include graffiti removal from headwalls, concrete embankments, signs, structures and other District assets, as well as maintaining, repairing and installing fences and gates so that District structures and facilities remain safe and clean. The project also includes quarterly cleanups of problem sites to help reduce waterway pollution and keep creeks and riparian areas free of debris.

Benefits

- Reduces trash and contaminants in local waterways
- Improves the appearance of waterways in neighborhoods and parks by removing trash, graffiti and litter as well as illegally dumped items such as cars, shopping carts, appliances, etc.
- Reduces illegal dumping into or near waterways by repairing and installing fencing on District property
- Provides coordinated response to community complaints about trash and graffiti in neighborhoods

Key Performance Indicators (15-year Program)

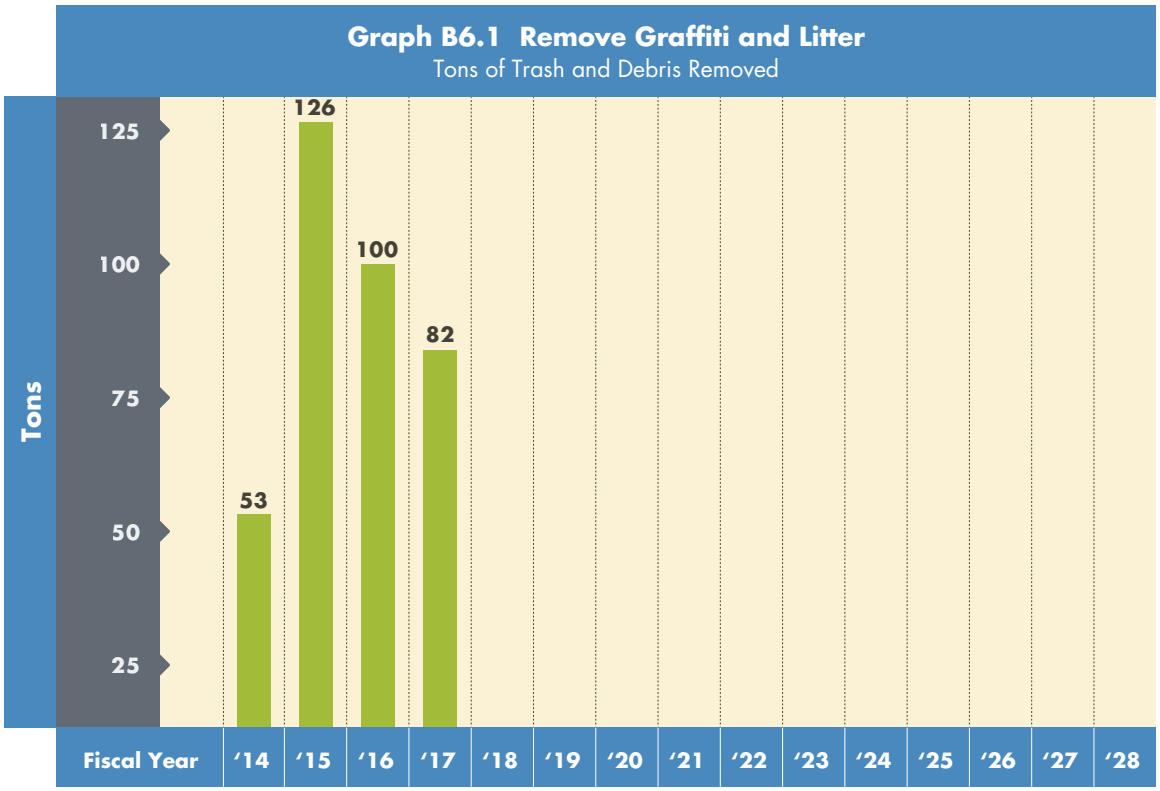
1. Conduct 60 cleanup events (4 per year).
2. Respond to requests on litter or graffiti cleanup within 5 working days.

Geographic Area of Benefit Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: On Target



Progress on KPI #1:

- Conducted 4 litter cleanup events (1 per quarter), which consisted of removing trash and debris from sites throughout the county that have been identified as trash hot spots where the District has fee title. In total, 82 tons (1,148 cubic yards) of debris was removed from 395 sites countywide (Graph B6.1).
- Conducted 4 graffiti cleanup events at multiple sites throughout the county (1 per quarter). The quarterly graffiti cleanup events consist of removing graffiti from identified hot spots and from sites based on inspection or citizen complaint. In FY17, a total of 111,438 square feet of graffiti was covered at 2,067 sites throughout the county.

Progress on KPI #2:

- Logged 231 complaints regarding illegal dumping and trash and 51 complaints regarding graffiti into Access Valley Water (AVW). All AVW complaints were responded to within 5 days or less (1.5 days on average) regarding scheduling the planned activity. Each complaint must be assessed to determine whether the reported location is on District property. For graffiti complaints on District property, work was completed within 24 hours of being reported to the outside contractor.

Financial Information

Managing the scheduled quarterly cleanup events and responding to 231 complaints resulted in 70% expenditure of the FY17 budget. The above average rainfall experienced during the winter 2016-2017 season resulted in a reduced number of litter sites and less square footage of graffiti on District properties, which led to the under expenditure of the project.

Financial Summary ($ Thousands)
B6. Good Neighbor Program: Remove Graffiti and Litter

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$577	$392	$14	$405	70%	$10,038	19%

Opportunities and Challenges

Volunteer Creek Cleanup Partnership Program

The interest and enthusiasm for volunteer cleanup is very high. Some activities appear to overlap with activities covered in Projects B2, B3, B4, B6, and B7. To achieve cost-effectiveness and avoid duplication, additional coordination among these projects has been initiated to optimize the use of the various funding sources. For additional information on the volunteer program, please see Project B7.

Contractor services

The pilot program utilizing the services of a contractor for graffiti removal has been a success. The contractor conducted monthly inspections of 5 specific geographic locations with subsequent removal of any graffiti found. Utilizing a computer application for smart phones, the contractor also responded to 2,067 requests resulting in removal of 111,438 square feet of graffiti. Work was completed in less than 24 hours of being reported. Because of the success of this program, graffiti removal will continue to be addressed by a contractor in FY18.

Graffiti at Montpere Way in Saratoga

Project B7

Support Volunteer Cleanup Efforts and Education

This project provides grants and partnerships for cleanup, education, outreach and watershed stewardship activities. Funding also allows the District to continue supporting volunteer cleanup activities such as National River Cleanup Day, California Coastal Cleanup Day, the Great American Pick Up, and Adopt-A-Creek, as well as Creek Connections Action Group and creekwise education.

Coastal Cleanup Day at Los Gatos Creek.

ON TARGET

Project B7 FY17 Highlights

- Postponed the FY17 grant release until FY18, to allow time to incorporate grant administration and management improvements
- Continued administration of 6 grants
- Completed 7 grant projects awarded in FY14
- Funded 4 countywide volunteer cleanup events

Benefits

- Reduces contaminants entering our waterways and groundwater
- Engages community, and supports watershed stewardship
- Leverages volunteer community resources for efficient use of funds

Key Performance Indicators (15-year Program)

1. Provide 7 grant cycles and 3 partnerships that follow pre-established competitive criteria related to cleanups, education and outreach, and stewardship activities.
2. Fund District support of annual National River Cleanup Day, California Coastal Cleanup Day, the Great American Pick Up; and fund the Adopt-A-Creek Program.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: On Target

Progress on KPI #1:

Although FY17 was a grant cycle year under the 5-Year Implementation Plan for fiscal years 2014-2018 and no new grants were released during the year, the project is on track to achieve the 15-year program KPIs.

The FY17 grant release was postponed until FY18 (August 2017), to allow time to incorporate grant administration and management improvements. This will be the second grant cycle for Project B7.

In FY17, the District continued to administer 6 grants, which were completed during the year. The 6 projects were:

1. Schools Goin' Green by the City of Sunnyvale
2. Education for Clean Water by Environmental Volunteers
3. Acterra Lower Peninsula Healthy Creeks Project by Acterra Stewardship
4. Clean Bay Project by Save the Bay
5. Girl Scouts Go Green in SC County by Girl Scouts of Northern California
6. ReThink Disposable; Preventing Riparian Trash at the Source by Clean Water Fund

With the closure of the Trash Free Coyote Creek Education and Outreach Project by the San Jose Park Foundation in FY16, all the 7 grants under this priority have been completed.

Progress on KPI #2:

- Continued funding of countywide volunteer cleanup activities (Graph B7.2):
  - » National River Cleanup Day: 1,251 volunteers cleaned approximately 65 miles of creeks and shoreline removing approximately 33,408 pounds (approximately 17 tons) of trash and 3,086 pounds (approximately 1.5 tons) of recyclables. A new user-friendly online virtual map with cleanup site information was successfully launched for the annual event and it helped improve volunteer recruitment. It allowed volunteers to easily access and view cleanup site locations from a computer or a mobile device. The District plans to use the virtual map for National River Cleanup and Coastal Cleanup days, as well as roll it out for all available Adopt-A-Creek sites.
  - » Coastal Cleanup Day: 1,883 volunteers picked up more than 48,568 pounds (approximately 24 tons) of trash and 6,442 pounds (approximately 3.2 tons) of recyclables along 60.75 miles of creeks in Santa Clara Valley.
  - » Great American Litter Pickup: The District supported this annual event focusing on picking up litter from city streets, parks and public areas.
  - » Adopt-A-Creek: This program continues to be popular with many neighborhood and civic groups. Participation in this program is at 135 adopted sites (an increase of 10 sites from the previous year) with groups committing to host a minimum of 2 cleanup events per year. In the past, the District did not receive consistent data from adoptees on the quantity of trash. To make it easier for adoptees to report data, in FY17 the District began collecting the information online through Access Valley Water, the District's online and mobile customer service program.

Financial Information

In FY17, the project used 46% of the allocated budget because the grants were not released as scheduled.

Financial Summary ($ Thousands)
B7. Support Volunteer Cleanup Efforts and Education

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$207	$94	$0	$94	46%	$2,430	34%

Opportunities and Challenges

Staffing and program improvements

In FY17, grant administration, especially invoice payment and grant management, was hindered due to the District's staff turnover combined with a reorganization of the grant program. Staffing needs were addressed in May 2017 and following the assignment of additional staff resources, overall improvements were made to the grant administration process. These improvements included the development of electronic filing systems to quickly retrieve information, and engaging with grantees on invoicing requirements and processes. Further organizational changes are planned in August 2017, which will significantly improve program efficiency. These improvements include streamlining, simplifying and automating grant administration.

In the last quarter of FY17, the District undertook a comprehensive analysis of Project B7 grants administration and management. Subsequently, a new grant administration system was selected to help improve the grant administration process. Considerable work, including updating guidelines to make the program more consistent with other public agencies, was conducted before the planned release of the grants in FY18 (August 2017).

While implementing the improvements, the District will follow the Board's guidance resulting from the March 2016 Comprehensive Review of the Safe, Clean Water Grants and Partnership Projects Program:

a. Be responsive to community needs and input;

b. Make grant application and contracting process easier for applicants. Allow adequate time for applicants to obtain landowner approvals when right of way is needed for project implementation; be flexible in working with applicants on scope and budget; outreach to nonprofit entities that could support the District's goals for the Safe, Clean Water Grants and Partnership Projects Program;

c. Broaden community engagement in District's grants and partnership projects to help the community feel positive about projects that are being funded by taxpayer dollars; and

d. Tailor level of control or risk management based on project specifics.

Grants outreach

The District is implementing the Independent Monitoring Committee (IMC) recommendations to provide additional project detail on the project webpage; share the results from the projects funded by the grants with organizations and communities that can benefit from the information; and perform project outreach through the District's Education Outreach Program and other programs. For example, the outreach materials from ReThink Disposable are displayed at the District's cafeteria, and the District's Education Outreach Program is exploring possibilities of distributing those at cafeterias of schools that the District visits.

The District is working on the webpage update in conjunction with the grant release in FY18.

The District's Education Outreach Program also helps educate the public on pollution prevention and urban runoff, and challenges students to participate in a cleanup. In FY17, the District's Education Outreach Program released a new program, Plastic Voyage, for 5th grade and up to high school to promote awareness of the single-use disposable plastic issue that is accumulating in waterways and oceans. Students examine different types of plastic litter and determine how our environment and wildlife are being affected by it, and students are offered solutions on how they can help solve this problem. Furthermore, under a new pilot program, the District worked with schools that have adopted creeks near school campuses to begin working with science teachers to conduct water quality and macroinvertebrates Citizen Science Investigations. The pilot was successful and the program is scheduled to be fully rolled out in FY18.

The District's Youth Stewardship Commissioners are given credit for an extracurricular activity if they Adopt-A-Creek section in their name or with a group they have coordinated. 3 extracurricular activities are required to receive a letter of recommendation from the District, and Adopt-A-Creek is 1 of the options.

Recognizing that more work was needed to connect with the grantees and conduct outreach, in FY17 the District introduced Grants at Work articles to mark projects reaching major milestones or completion. These were shared with the Board through the CEO Bulletin and/or the non-agenda board packet, and with the community through the monthly ValleyWater e-news, the District blog and social media. In addition, the IMC's suggestion to disseminate the results of completed projects to organizations/communities that may benefit will be implemented as projects are completed.

Grant project wins acclaim

The Schools Goin' Green project was identified as an outstanding stormwater project by the California Stormwater Quality Association (CASQA). A poster presentation about the project will take place at CASQA's 13th Annual Conference in September 2017.

Volunteer Creek Cleanup Partnership Program

In FY17, the District began attending monthly Creek Partners meetings with the City of San José for better coordination on cleanup efforts, and to establish communication with various community organizations.

Internally, the District initiated quarterly meetings to improve coordination among staff working on various pollution prevention priority projects to achieve cost-effectiveness and avoid duplication. Furthermore, Priority B1 Impaired Water Bodies Improvement Project, funds part-time assistance in support of Project B7, the Adopt-A-Creek program, which greatly benefits the interagency urban runoff program.

Adopt-A-Creek (AAC) Program

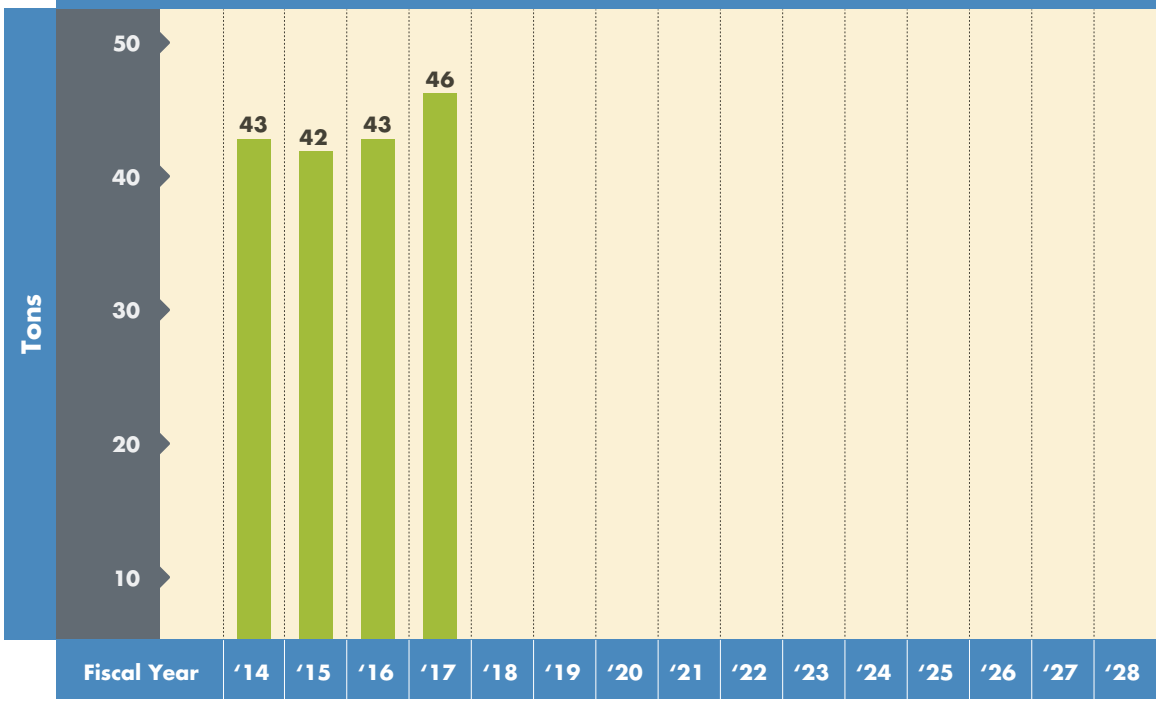
In Santa Clara County, trash in creeks and waterways continues to significantly impact stream water quality and flood risks. To address this, in 1994 the District created the Adopt-A-Creek (AAC) program. The program has experienced successful volunteer participation since it began and has seen a steady increase in the number of adopted sites from 125 in FY16 to 135 in FY17.

Volunteer activities, like the AAC program, engage and actively involve residents in helping to keep trash out of our rivers, streams, and creeks. Along with the other cleanup events, these programs are successful because of the thousands of volunteers that participate.

To make it easier for the community to volunteer, in FY16 the District implemented administrative improvements that have allowed volunteers to submit applications online, streamlined the renewal process, and increased communication with volunteers by adopting various social media tactics. In the third quarter of FY17, the District made it easier for adoptees to report the amount of trash collected by launching online and mobile data reporting through the Access Valley Water customer service tool.

As an opportunity for continued improvement of the AAC program, and to further connect with volunteers, the District plans to hold the first volunteer recognition event for AAC partners and National River Cleanup Day and Coastal Cleanup Day site coordinators in August 2017. The event will serve as an opportunity to recognize volunteers and their contributions in maintaining clean and healthy creeks and to help recruit new AAC partners.

Graph B7.2 Support Volunteer Cleanup Efforts and Education
Tons of Trash and Debris Removed



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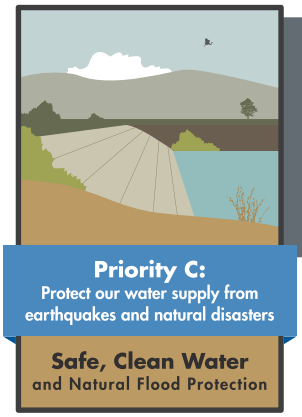


Priority C

Protect our Water Supply from Earthquakes and Natural Disasters

Projects under Priority C include retrofitting to protect our water supply infrastructure from the impacts of natural disasters, like earthquakes. It also includes emergency flood response enhancements to improve communication between responders and help reduce damages from floods.

Project C1
Anderson Dam Seismic Retrofit

Project C2
Emergency Response Upgrades

Appendix A: Financial Information

Appendix B: Inflation Assumptions

Appendix D: Capital Project Confidence Levels

Anderson Dam.

ADJUSTED

Project C1 FY17 Highlights

- Adjusted schedule to align with the KPI and reflect the fund transfer years of FY16 and FY28 (see Opportunities and Challenges)

Project C1

Anderson Dam Seismic Retrofit

Anderson Reservoir is currently limited to about 52% of its capacity due to seismic concerns, costing Santa Clara County valuable drinking water resources. This project covers earthquake retrofitting of Anderson Dam to improve reliability and safety, and returns the reservoir to its original storage capacity.

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

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

In December 2016, the Board was informed by the District that findings from the geotechnical and geologic investigations performed during the project's design phase led to the conclusion that a more extensive dam retrofit than had originally been envisioned would have to be performed. Further, the Board was informed that the more extensive retrofit work would double the previous project's estimated cost. The District presented the Board with a water supply cost-benefit analysis that showed the benefits of the more extensive retrofit project significantly outweighed the cost of not proceeding with the retrofit, which would require the District to purchase additional imported water every year to make up for the loss of long-term storage at Anderson Reservoir. Based upon this information and analysis, the Board directed the District to continue work on this critical infrastructure project.

Benefits

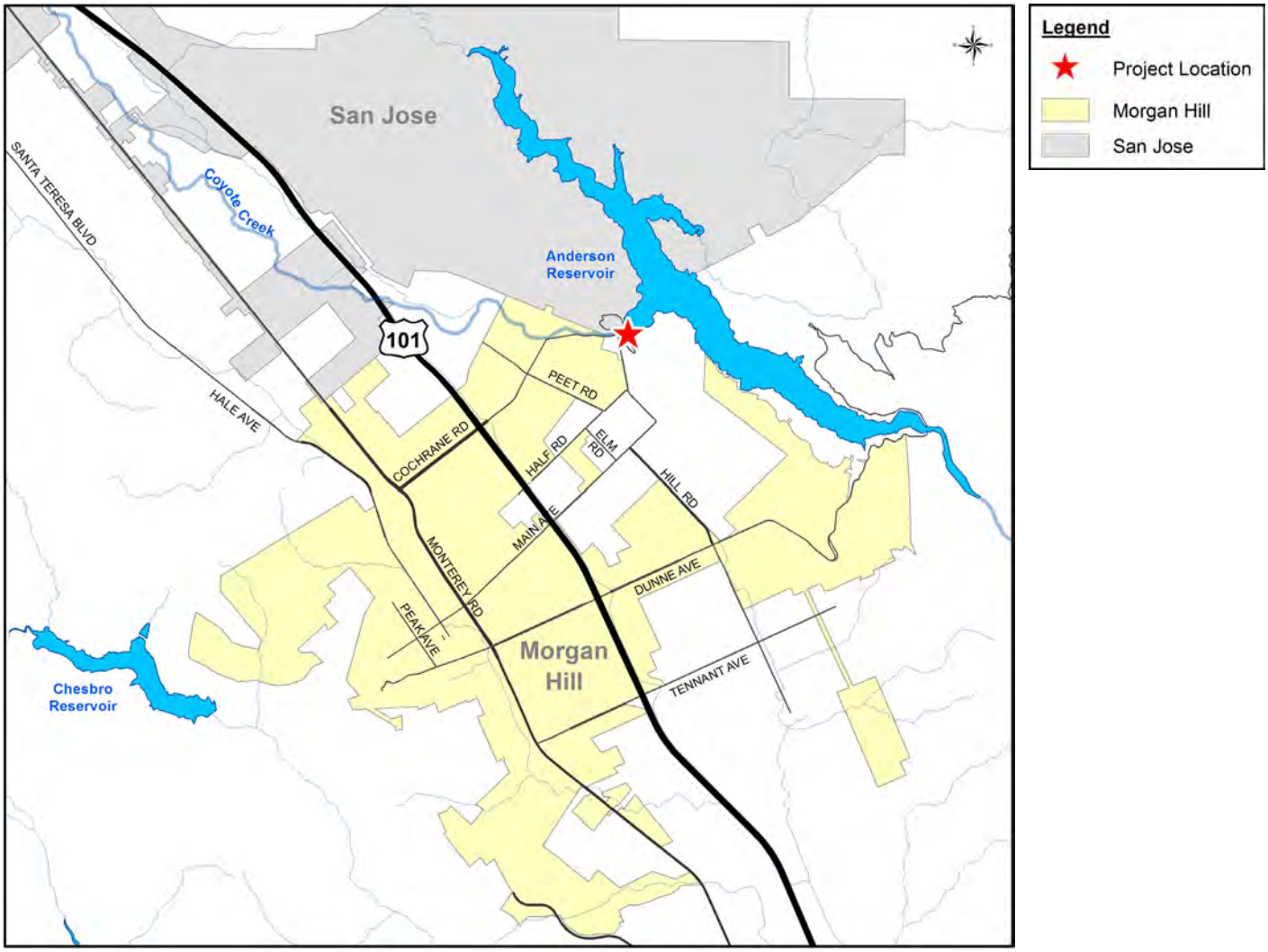
- Brings the dam into compliance with today's seismic standards
- Increases reliability and safety of our area's largest reservoir by protecting it from earthquakes
- Eliminates operational restrictions issued by the state Department of Water Resources Division of Safety of Dams (DSOD) which would restore Anderson Reservoir to its full capacity of approximately 90,373 acre-feet, regaining 48% or about 43,500 acre-feet of water storage for our current and future water supply
- Ensures compliance with environmental laws requiring reservoir releases that maintain appropriate flows and temperatures to support downstream wildlife habitat
- Minimizes the risk of uncontrollable releases from the reservoir which could cause downstream flooding

Key Performance Indicator (15-year Program)

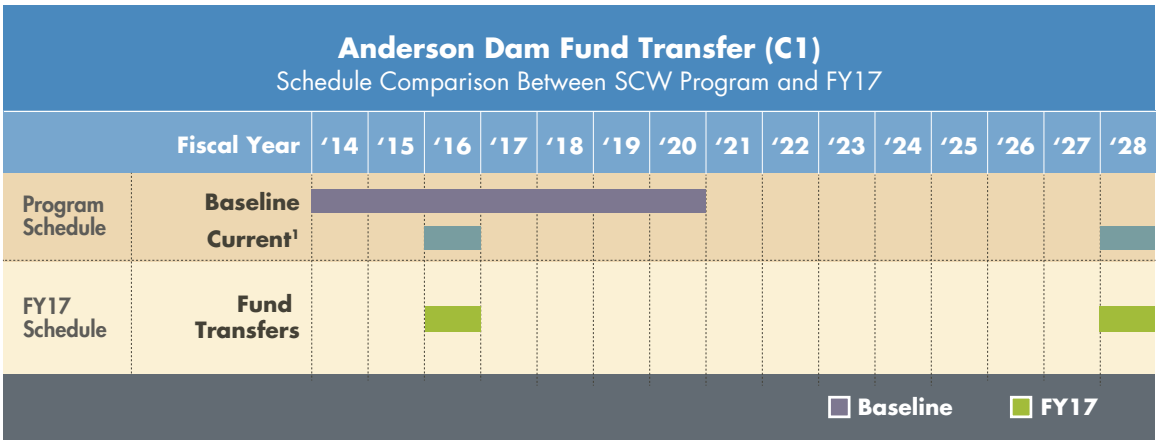
1. Provide portion of funds, up to $45 million, to help restore full operating reservoir capacity of 90,373 acre-feet.

Geographic Area of Benefit: Countywide

Project Location



Schedule



[1]Board approved a schedule adjustment through the change control process in FY17.

Status History

Fiscal Year	Status
FY 14	*ON TARGET*
FY 15	*ON TARGET*
FY 16	*ON TARGET*

Status for FY17: Adjusted (schedule adjustment)

Progress on KPI #1:

- In May 2015, the Board approved, as part of its annual groundwater production charge setting, that $14 million of Safe, Clean Water funding be transferred to the Water Utility Enterprise Fund as reimbursement for the Anderson Dam project in FY16 instead of the Safe, Clean Water-scheduled $15 million transfer in FY18. The purpose of this earlier transfer was to offset the groundwater production charge increase for FY16.

Financial Information

The total Safe, Clean Water Program funding level for this project was presented in 2012 dollars at $45 million; however, this amount is subject to inflation and the adjusted 15-year plan is $67.1 million. These funds will reimburse the Water Utility Enterprise Fund for the Anderson Dam Seismic Retrofit Project and will be distributed in 2 payments; the first payment of $14 million was transferred in FY16, and the remainder is scheduled to be transferred in FY28.

Opportunities and Challenges

Schedule adjustment

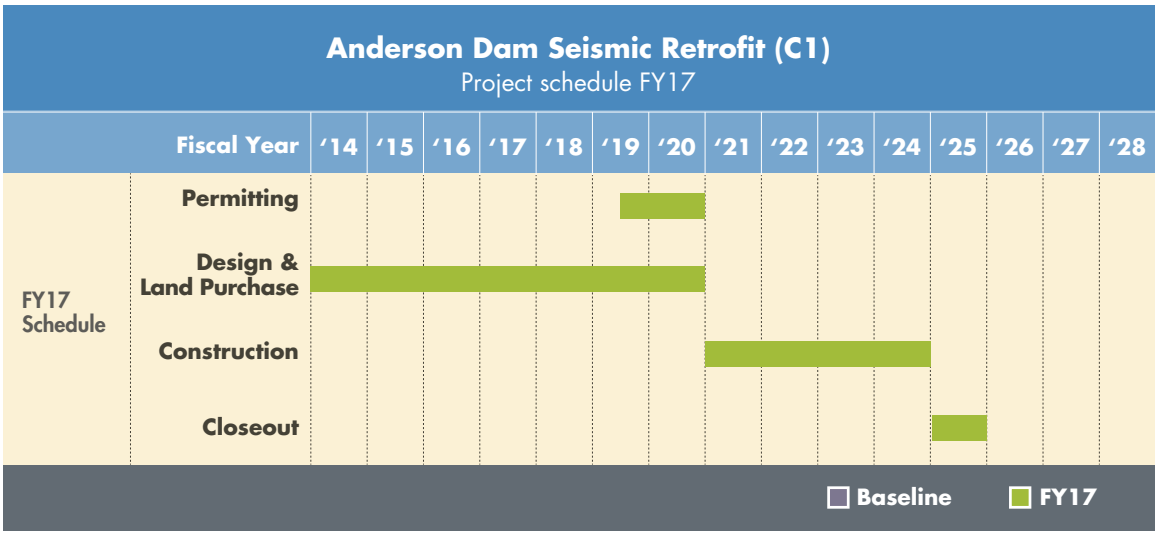
On March 23, 2017, the Board approved adjusting the schedule to reflect the FY16 actual and FY28 planned fund transfers rather than the project delivery schedule. The original Safe, Clean Water Program schedule, as included in the Safe, Clean Water Program Report, referenced the project's baseline delivery schedule. The Key Performance Indicator (KPI) for this project is the transfer of up to $45 million (2012 dollars) of Safe, Clean Water Program funding to partially reimburse the Water Utility Enterprise for the seismic retrofit project costs. Thus, the funding schedule is what should be referenced in the Program to indicate progress toward completing the KPI. The original fund transfer was to occur in 2 different years — FY18 and FY28. The first fund transfer was completed in FY16. The second and final transfer is still scheduled for FY28.

Progress

Project design work continued in FY17, with the 30% design plans completed by June 30, 2017.

The Board was informed in December 2016 that the results of the Phase 2 geotechnical and geologic investigations, as well as determinations from other technical workshops held during calendar year 2016, indicate the need for a more extensive retrofit of the dam's existing embankments to address seismic deficiencies. A modified project scope was presented to the Board, with a cost estimate of $400 million (2016 dollars), twice the previous project cost estimate of $200 million.

At the December 13, 2016 Board meeting, the District presented the costs of not proceeding with this dam retrofit project. With a current total project cost estimate of $400 million and annual operations and maintenance costs over a 50-year life cycle, the net present value of the seismic retrofit project is about $410 million. If the seismic retrofit project is not undertaken, a new water source of approximately 47,000 acre-feet per year (AFY)(the annual average yield of Anderson Reservoir over its 67-year life is about 47,000 acre-feet) would have to be secured by the District. Based on an average imported water cost of $750/acre-foot, and assuming a 50-year time period, the net present value of securing 47,500 AFY of imported water would be $1.8 billion. This does not include the cost of a new storage facility in the County to hold this additional imported water.



Permits

The proposed project is a covered activity under the Santa Clara Valley Habitat Plan, and the Habitat Plan will provide the federal Endangered Species Act and state Natural Community Conservation Planning Act compliance for several special-status species the project may affect, including California tiger salamander, California red-legged frog and Coyote ceanothus. Consistent with Habitat Plan requirements, the District plans to consult with wildlife agencies when project-specific design and construction details are 60% complete.

Additionally, Coyote Creek downstream of Anderson Dam is designated critical habitat for Central California Coast steelhead and essential fish habitat for Chinook salmon. Early coordination with resource agencies indicates potential construction-related water quality concerns, fish passage considerations, and operational effects will require appropriate evaluation.

The Environmental Impact Report, estimated to be completed in June 2018, will further evaluate the magnitude of impacts of implementation of the project. The District will continue to engage natural resource agencies through development of environmental documentation to support natural resource permitting efforts.

Confidence levels

Schedule: Moderate confidence

The more extensive dam retrofit work as defined by the modified project will require additional time to prepare design plans and specifications and the environmental documentation. The current estimated start of construction is 2020.

Funding: High confidence

The total project cost (current estimate is $400 million) is in the District's 5-year Capital Improvement Program.

Permits: Moderate confidence

Anderson Dam is operated under licenses from DSOD and Federal Energy Regulatory Commission (FERC). The project design will require their approval before construction. The permits from these agencies will depend mostly on the technical complexity of the project. DSOD and FERC will review the project at various design stages to facilitate issuance of the permits from the different agencies that will be required for this project, including: United States Army Corps of Engineers (USACE), National Marine Fisheries Service (NMFS), Mine Safety and Health Administration (MSHA), California Department of Fish and Wildlife (CDFW), California Department of Industrial Relations/California Occupational Safety and Health (Cal/OSHA), Regional Water Quality Control Board, State Water Resources Control Board, and the Santa Clara Valley Habitat Plan. The schedule for some of these permits cannot be easily predicted.

Jurisdictional Complexity: Moderate confidence

The District owns and operates Anderson Dam and Reservoir, which are located within the City of Morgan Hill. Santa Clara County Parks manages the recreational activities at Anderson Reservoir through a lease agreement with the District. The District is working with these various agencies throughout the project.

Project C2

Emergency Response Upgrades

This project covers the development of an automated flood warning system that uses real-time rainfall data to predict stream flows and potential flood risk. The system efficiently disseminates information to emergency responders and the public using the web, text, automated calls and other technologies, allowing more time to activate flood-fighting measures and reduce flood damage.

New stream gauge sensor.

ON TARGET

Project C2 FY17 Highlights

- Added a pilot forecast point to determine reservoir inflows into Coyote and Anderson
- Tested a new hydrologic modeling strategy and collaborated with other agencies to receive specialized data
- Completed 5 of the 7 flood-warning locations

Benefits

- Enhances interagency response to storm-related emergencies
- Improves the accuracy of flood forecasting services
- Helps municipalities and neighborhoods lessen flood impacts
- Maintains access to technical resources that assist municipalities with floodplain management
- Promotes community awareness of flood risks
- Implements risk reduction strategies consistent with the Federal Emergency Management Agency's (FEMA) Community Rating System as appropriate

Key Performance Indicator (15-year Program)

1. Map, install, and maintain gauging stations and computer software on seven flood-prone reaches to generate and disseminate flood warnings.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: On Target

Progress on KPI #1:

- In FY17, the District added a pilot forecast point to determine reservoir inflows into Coyote and Anderson. FY17 focused on improving the rainfall data and exploring a more robust hydrologic modeling process.
- A new hydrologic modeling strategy was tested to make it easier for the

District to operate the system and react to changing conditions. This strategy proved to be a success during the 2016-2017 rainy season, which saw plenty of storms. The tool provided invaluable information during the floods in January and February, proving its use in emergency situations.

- Additional improvements during the FY17 season include:
  - » Collaborating with Scripps Institute at University of California San Diego (UCSD) to receive their Atmospheric River (AR) forecast data.
  - » Collaborating with the Meteorology Department at San Jose State University (SJSU) to receive additional forecast expertise.
  - » The addition of the National Weather Service's High Resolution Rapid Refresh (HRRR) forecast data.
- It was also determined that the Lower Silver Creek forecast point for the Dobern Bridge constriction could be removed due to a completed flood control project in that area. Together with the Uvas Creek, West Little Llagas Creek, Upper Guadalupe River and San Francisquito Creek systems, 5 of the 7 flood-warning locations are complete.

Financial Information

In FY17, the project expended on-target 103% of its annual budget.

Financial Summary ($ Thousands)
C2. Emergency Response Upgrades

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$298	$289	$17	$307	103%	$3,357	35%

Opportunities and Challenges

Recent flooding

This recent wet winter season was the system's first real exercise during a true flood year, with multiple storms and floods. The system and the operators were put under extreme scrutiny to provide accurate information. There were many lessons learned as to what worked well and what did not, helping the District focus on improvements that will yield high returns in the next several years.

Rainfall forecast

To address the inherent uncertainties in rainfall forecasts, the District is casting a wide net to build relationships with the National Weather Service and universities to better understand and utilize the meteorological products that exist. The District hopes to leverage the different information to provide a more informed forecast, since rainfall forecasts have the largest impact to food forecast predictions.

Robust hydrologic modeling

Even with the simplified modeling system, it became evident during this past year that the automation features, processes, and quality control tools need substantial upgrades. The District's current modeling software, which works well for normal business, is lacking during emergency situations. The District will look to develop new models with different software that can address all the deficiencies and test them this next winter.

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Priority D

Restore Wildlife Habitat and Provide Open Space

The 8 projects under Priority D restore and protect wildlife habitat and provide opportunities for increased access to trails and open space. Funding for this priority pays for control of non-native, invasive plants, revegetation of native species, and maintenance of previously revegetated areas. Other projects include removal of fish barriers, improvement of steelhead habitat and stabilization of eroded creek banks.

To support these and future restoration projects the District will create a comprehensive, updated database on stream conditions countywide. The District and other agencies can then use the new information to make informed decisions on where and how to use restoration dollars so they have the greatest value for wildlife.

Project D1
Management of Revegetation Projects

Project D2
Revitalize Stream, Upland and Wetland Habitat

Project D3
Grants and Partnerships to Restore Wildlife Habitat and Provide Access to Trails

Project D4
Fish Habitat and Passage Improvement

Project D5
Ecological Data Collection and Analysis

Project D6
Creek Restoration and Stabilization

Project D7
Partnerships for the Conservation of Habitat Lands

Project D8
South Bay Salt Ponds Restoration Partnership

Appendix A: Financial Information

Appendix B: Inflation Assumptions

Appendix C: Cumulative Partnerships and Grants Information for Project D3

Appendix D: Capital Project Confidence Levels

Guadalupe River native vegetation irrigation installation.

ON TARGET

Project D1 FY17 Highlights

- Maintained 324 acres of revegetation projects at 127 sites countywide

Project D1

Management of Revegetation Projects

This project supports District maintenance of at least 300 acres of existing revegetation projects throughout the 5 watersheds, and provides for maintenance of future revegetation sites. Funding for this project ensures that design objectives of all revegetation projects are maintained during the establishment period so that mitigation results in functional habitat that can support wildlife.

Benefits

- Maintains 300 acres of existing revegetation
- Allows the District to monitor plant survival and habitat functions
- Complies with environmental laws requiring habitat mitigation for flood protection and water supply projects
- Provides for maintenance of future revegetation sites

Key Performance Indicator (15-year Program)

1. Maintain a minimum of 300 acres of revegetation projects annually to meet regulatory requirements and conditions.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	NOT ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: On Target

Progress on KPI #1:

- In FY17, the District maintained 324 acres of revegetation projects. Maintenance work included invasive weed control, pruning, mowing, and irrigation of 10 newer sites, which require more maintenance, and 117 established sites, which require a lower level of maintenance, throughout all 5 watersheds in Santa Clara County.

Financial Information

In FY17, 57% of the annual budget was expended to meet the target. The District could meet its KPI at this low expenditure because lower levels of maintenance were required due to the deferment of all new plantings in FY15 and FY16 in response to the drought and the *Phytophthora* (plant pathogen) issues. In addition to having to catch up on the deferred plantings, the District anticipates that the regulatory agencies will require new plantings to mitigate for projects in the coming fiscal years, which will result in a significant increase in the required maintenance as they will need regular watering and weed control to reduce plant competition. The District expects to be on track with its financial expenditures in the coming fiscal years.

Financial Summary ($ Thousands)
D1. Management of Revegetation Projects

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$1,159	$654	$10	$664	57%	$22,259	11%

Opportunities and Challenges

Resources

This fiscal year, the KPI was met by supplementing available staff resources with a significant amount of outsourced labor. While this allowed the District to meet its KPI, the use of outsourced labor is not sustainable. To address this, the Board approved 2 new Maintenance Worker III (MWIII) positions for FY18.

Phytophthora

In FY16, the District informed the regulatory agencies that due to the drought and Phytophthora (plant pathogen) issues, the District would not be installing new riparian planting sites. Despite this, increased maintenance is required at the existing sites to ensure survival of vegetation. In FY17, the District began installing new riparian planting sites utilizing seeds, cuttings, and container plants grown from nurseries that are following the Phytophthora working group's regional guidelines.

Revegetation at Calabazas Creek

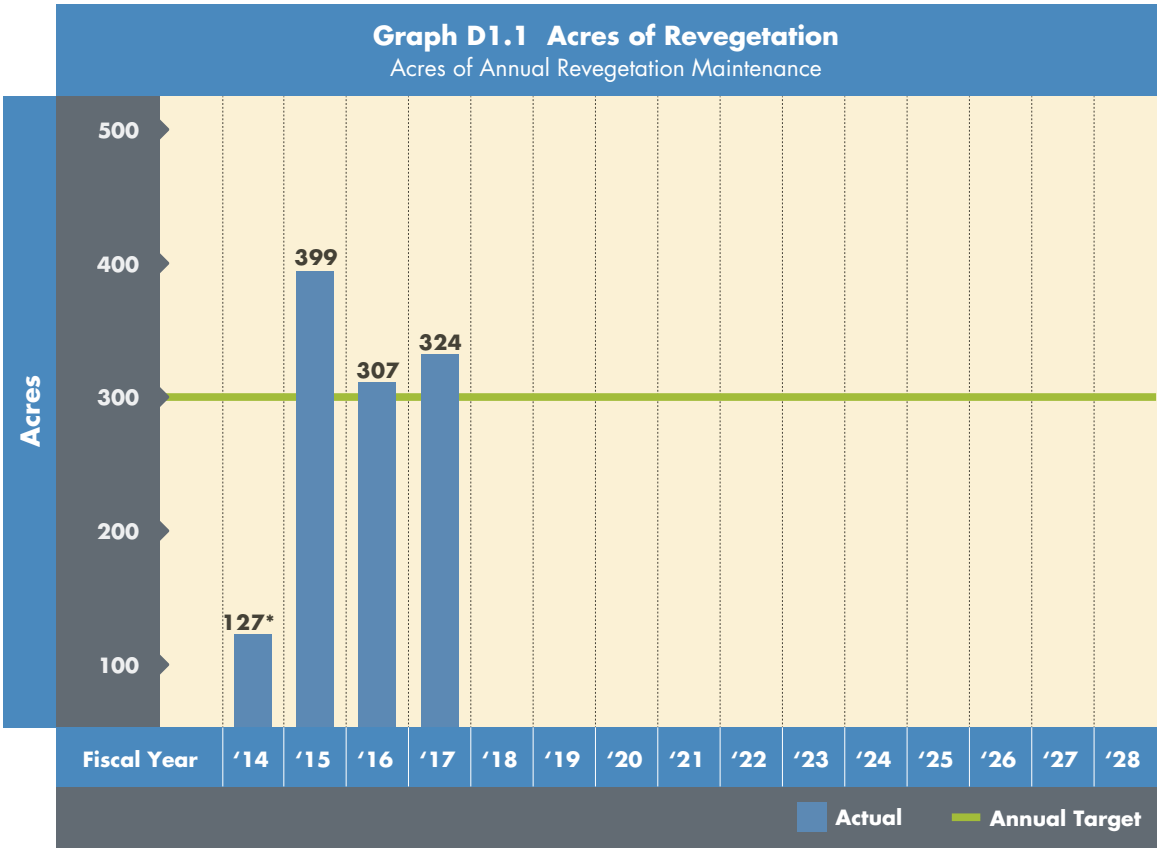
New capital project mitigation

As the Safe, Clean Water capital projects are constructed, and after the initial 3-year plant establishment period, additional acreages of mitigation will become part of Project D1 and will require increased maintenance to meet their 10-year success criteria. This will require funding additional staff resources in the future.

Projections show that in FY21, an estimated 4.13 acres of mitigation from the Lower Silver Creek Flood Protection Project will become part of Project D1, and in FY23 and FY25, an estimated 70 acres of mitigation from the Upper Llagas Creek Flood Protection Project will become part of Project D1.

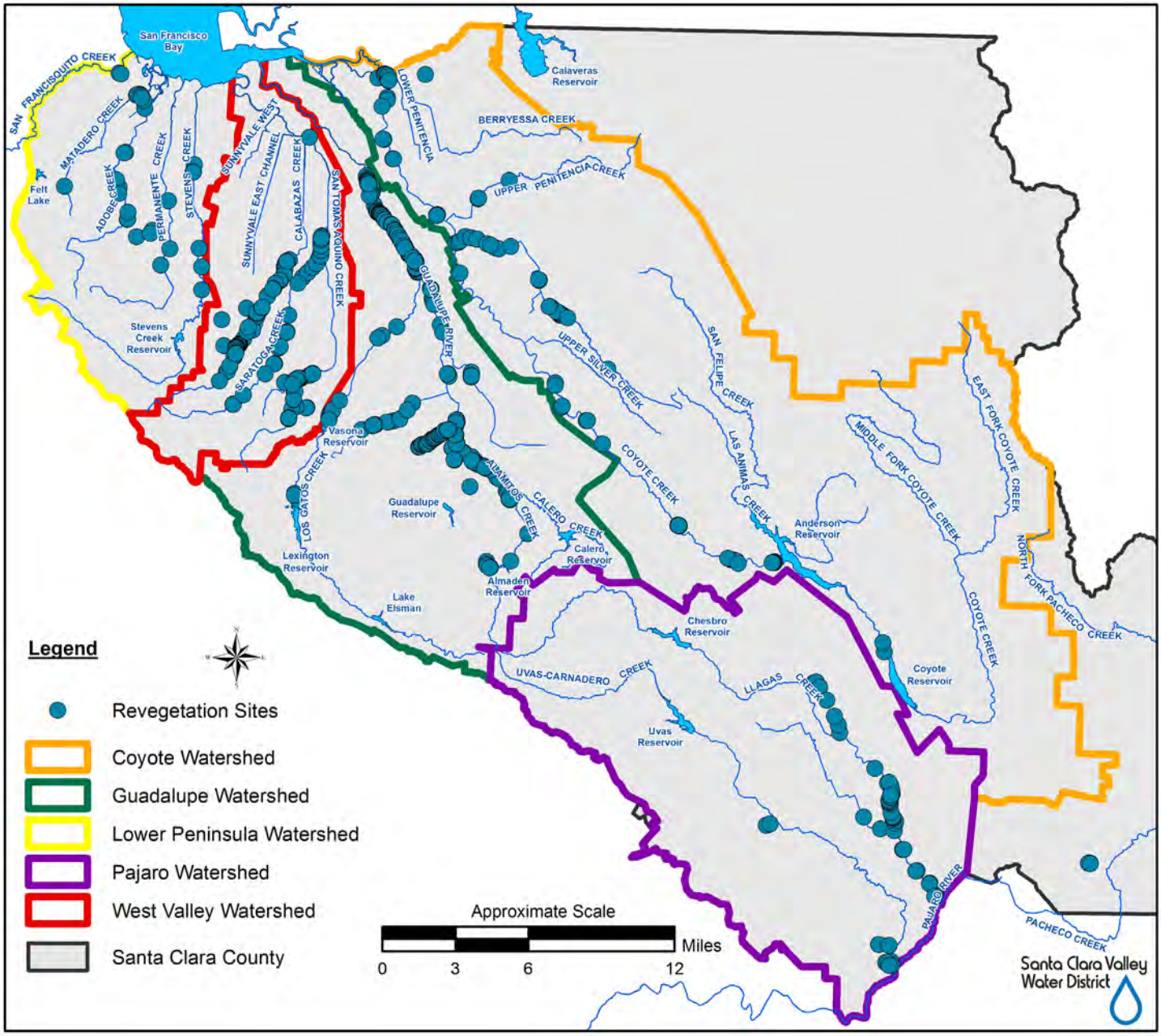
New Stream Maintenance Program (SMP2) permits

The SMP2 permits require an increased level of mitigation. The District plans to use a combination of recently approved staff and additional contract labor to supplement existing District labor resources to comply with the increased mitigation requirements.



*In FY14, the drought required much more maintenance than planned on new or revegetated plantings and thus impacted the District's ability to meet the annual maintenance target.

FY17 Revegetation Maintenance: 324 Acres



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Project D2

Revitalize Stream, Upland and Wetland Habitat

This project allows the District to remove non-native, invasive plants and revegetate habitat with native species when needed. Funding also restores degraded habitat between revegetated sites to create a more contiguous habitat corridor for wildlife. This project includes targeted control of especially damaging non-native, invasive plant species such as *Arundo donax*, and education for nearby landowners and other stakeholder groups on the control of harmful species. This project also helps implement the Stream Corridor Priority Plans developed in Project D3.

Non-native tree removal on west edge of Guadalupe River.

ON TARGET

Project D2 FY17 Highlights

- Revitalized approximately 14 acres of native riparian and tidal marsh habitats
- Signed 1 Memorandum of Understanding (MOU) and prepared 3 draft MOUs
- Conducted negotiations to establish community partnerships for revitalization of at least 7 acres of native habitat
- Working cooperatively on wildlife corridors with partner agencies
- Updated wildlife and botanical links on all 5 plant palettes
- Updated the project website with maps, figures, and links to external resources

Benefits

- Increases viability of native riparian species by reducing competition from non-native, invasive species
- Improves habitat by installing tidal and riparian plant species
- Improves ecological function of existing riparian and wetland habitats to support more diverse wildlife species
- Improves patchy wildlife corridors by increasing connectivity of habitat
- Increases community awareness about the damaging impact that non-native, invasive plants have on local ecosystems

Key Performance Indicators (15-year Program)

1. Revitalize at least 21 acres, guided by the 5 Stream Corridor Priority Plans, through native plant revegetation and removal of invasive exotic species.
2. Provide funding for revitalization of at least 7 of 21 acres through community partnerships.
3. Develop at least 2 plant palettes for use on revegetation projects to support birds and other wildlife.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: On Target

Progress on KPI #1:

- In FY17, 0.3 acres were revitalized through native plant revegetation and removal of invasive species. The District is on track to exceed its 5-year Implementation Plan target. The project thus far has revitalized approximately 14 acres of native riparian and tidal marsh habitats:
  - » Removed 2.5 acres of invasive and non-native woody vegetation along the lower Guadalupe River to help meet U.S. Army Corps of Engineers (USACE) levee and flood protection design conditions near Highway 101 and Montague Expressway;
  - » Controlled nearly 8 acres of invasive vegetation along Stevens and Saratoga creeks in coordination with the District's Stream Maintenance Program (SMP); and
  - » Treated approximately 4 acres of invasive smooth cordgrass (*Spartina alterniflora*) in Santa Clara County tidal marshes of the South San Francisco Bay estuary.

In response to a recommendation made by the Safe, Clean Water Program's Independent Monitoring Committee (IMC), figures of the habitats being revitalized, showing extent of invasive and non-native plant cover, were added to the Project D2 website (*http://www.valleywater.org/SCW-D2.aspx*). The Guadalupe River link was updated with new maps showing invasive removal locations, a table depicting acres of vegetation managed for the flood protection projects, and the mailer sent to neighbors prior to conducting work. The mailer is an example of public outreach and education for Project D2. Neighbors observed the Project D2 work from the Guadalupe River Trail.

The Stream Corridor Priority Plans (SCPPs) are a KPI under Safe, Clean Water Project D3 with its 5-year target to develop 2 plans by the end of FY18. Until the SCPPs are completed, the District continues to prioritize Project D2 habitat revitalizations by selecting areas where invasive or non-native vegetation has at least 1 of the following characteristics:

a. Impacts sensitive plant or animal communities, especially habitats for state or federally listed species;

b. Involves flood protection, where invasive removal may increase hydraulic flow conveyance, or is recommended by USACE for levee stability;

c. Grows adjacent to, but not within, District mitigation or revegetation sites;

d. Revitalizes the functionality of riparian and tidal habitat; and

e. Improves wildlife corridors by increasing connectivity of habitat, especially along the Coyote Creek watershed to improve the connectivity between the Santa Cruz Mountains and the Diablo Range.

Progress on KPI #2:

- In FY17, the District prepared 3 draft Memorandums of Understanding (MOUs) and is negotiating to establish community partnerships with the target of providing funding for revitalization of at least 7 acres of native habitat. The agencies and MOU status/descriptions are listed below.
  - » Santa Clara County Parks – The draft MOU continues to be reviewed and discussed. Its focus is cooperative work to map invasive vegetation and perform control at Anderson Reservoir. Mapping non-native, invasive, and rare plant cover along the Anderson Reservoir shoreline is done annually by the District and County Parks to plan future Project D2 efforts.
  - » California Coastal Conservancy – The draft MOU is to map and systematically control invasive plants in the tidal marsh and ecotone habitats that are part of the South Bay Salt Pond Restoration Project. This MOU will likely be finalized in FY18.
  - » Midpeninsula Regional Open Space District (Midpen) – The MOU is to restore native habitats important as wildlife corridors. The MOU will be signed by both parties in July 2017 and habitat revitalizations are anticipated to be initiated in early FY18.
- Also in response to an IMC recommendation, cooperative work has begun on improving conditions at road crossings, where key wildlife corridors with barriers are identified. The District has begun working cooperatively on wildlife corridors with the Santa Clara Valley Transportation Authority (VTA), De Anza College, Santa Clara Valley Habitat Plan (VHP), Caltrans, and others as part of the Coyote Valley Linkage Assessment, California Central Coast Connectivity Project, Pajaro Connectivity Study, and Highway 17 Wildlife Connectivity Improvement Study.

Progress on KPI #3: (Completed in FY15)

- The 2 plant palettes required for Project D2 were created in FY15, meeting KPI #3. In FY16, an additional 3 palettes were developed, 2 of which were in response to an IMC recommendation showing plants that support birds and other wildlife. All 5 palettes were updated in FY17 and are available on the Project D2 website for use on revegetation projects, or native gardens. The palettes have links to other websites with additional ecological information and wildlife values for each plant species.
  - » Also in FY17, links to external resources on native habitats and gardening with natives were added to the Project D2 website; San Francisco Estuary Institute (SFEI) programs to restore native habitats, and Santa Clara Valley Chapter of the California Native Plant Society. The District is checking other internet resources that have native planting guides, such as Audubon, Calflora and National Wildlife Federation. The District had several inquiries about using the Project D2 native plant palettes in FY17.

Financial Information

Project D2's emphasis in FY17 was on continuing to establish partnerships and cooperative efforts on wildlife habitat corridors. Less, though some, effort was made on direct habitat revitalization due to water mold (*Phytophthora* spp.) concerns and severe to extreme drought, which continued through autumn 2016. The last 0.3 acres of invasive and non-native vegetation was controlled on the lower Guadalupe River to complete CEQA and environmental permit limits for this 2.5 aces of work. As a result, only 81% of the annual budget was expended. Partnerships should result in increased spending in FY18.

Financial Summary ($ Thousands)
D2. Revitalize Stream, Upland and Wetland Habitat

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$740	$398	$200	$598	81%	$18,190	5%

Opportunities and Challenges

Mapping techniques and partnerships

Opportunities for Project D2 include exploring various Geographic Information Systems (GIS) and remote sensing resources to map areas of dominant vegetation types at river or creek reach scales. There are GIS and map resources at State and County scales, but these are difficult to apply to a watershed, sub-watershed, or reach. California Invasive Plant Council (Cal-IPC) and Calflora are improving their statewide invasive plant detection and mapping systems. Some resource agencies are using this new application, which is available to the public, including as a cell phone application, but more data needs to be added in order to prioritize and select sites for rehabilitation (see *http://www.calflora.org/entry/invasives2.html*).

The District's Vegetation Field Operations Unit supports Project D2 by mapping invasive trees greater than 12 inches diameter at breast height (DBH) on District fee title and easements in conjunction with the District's Stream Maintenance Program's Invasive Plant Management Plan (IPMP). As the IPMP provides advanced mitigation for SMP, it receives priority credit at locations where invasive vegetation is removed. Project D2 does not apply to mitigation sites, but can fund, manage, and take credit for non-native and invasive vegetation control at land adjacent to mitigation sites. Most District properties are now mapped throughout the county; however, the District owns or has easement on only a small percentage of each watershed. The numerous sites not owned by the District that could benefit from revitalized native habitats need to be identified, inventoried and prioritized.

Partnerships

Native habitat revitalizations on lands not owned by the District can be accomplished by Project D2 partnerships. The District continues to pursue partnerships with greater emphasis on connectivity of wildlife habitats and public agencies that manage large areas of land, which could most benefit the County's wildlife.

Some progress was made on partnerships and the IMC's recommendation to reach out to municipalities in FY17. Discussions of a Project D2 partnership have begun with the City of San José. Finalizing a Project D2 partnership with Santa Clara County Parks has taken more time than anticipated due to staff changes and limited staff resources at the County. The District has, however, continued to work cooperatively together while the formal Project D2 agreement is being developed and finalized. County Parks will be a valuable partner because of their sizable land holdings in the mid- and upper-watersheds, as well as their education and outreach capabilities. Cooperative efforts for Project D2 will continue to be a focus in FY18, especially for education and outreach. The Project D2 partnership with Midpen offers a number of opportunities to increase public awareness and education. Midpen organizes and participates in community and children oriented events, docent-led activities, outdoor service projects, nature hikes and field tours, posts educational trail signs, operates a nature center and farm, and multimedia nature tours.

Education and outreach

In response to USACE recommendations, work was done in December 2016 for invasive tree removal along the west levee of the Guadalupe River between Trimble Road and Montague Expressway. The invasive and non-native vegetation work occurred near the lower Guadalupe River riparian mitigation sites. Mailers were sent as outreach and notification to neighbors. The mailer was modified and laminated, then posted as trail signs informing users of the Guadalupe River Trail while Project D2 work was being performed. The City of San José Parks and Recreation Department posted notifications on social media; using Facebook and Twitter to inform the public.

Regarding the IMC's recommendation to include methods for removal of invasive plants in existing District mailers or other outreach materials, the District has found that invasive vegetation control is challenging, and often requires multiple techniques over time including properly applying herbicides, and felling trees. Many of these activities are best performed by experienced professionals and licensed herbicide applicators for safety, effectiveness, minimal environmental impacts, and soil stability. The best source for invasive plant removal techniques is referenced on the Project D2 website; the Cal-IPC Weed Workers' Handbook (*http://cal-ipc.org/ip/management/wwh/pdf/18601.pdf*), Invasive Plants of California's Wildlands (*http://cal-ipc.org/ip/management/ipcw/index.php*), and San Francisco Estuary Institute (SFEI) Practical Guidebook to the Control of Invasive Aquatic and Wetland Plants (*http://www.sfei.org/nis/*). When inquiring, citizens have been directed to these books.

Drought impacts

The moderate to extreme drought extending through 2016 caused noticeable vegetation dry-back, early dormancy, and mortality. Santa Clara County was classified as abnormally dry (Santa Cruz Mountains) with moderate and severe drought in the Santa Clara Valley, and extreme drought in the Diablo Range (see *http://droughtmonitor.unl.edu/Home/StateDroughtMonitor.aspx?CA*). Fortunately, the drought ended by February 2017.

Drought impacts habitat revitalizations in a number of ways, including lack of water for establishing native plants, limited to no irrigation as water supplies are conserved for other uses, plant stress, and increased susceptibility to disease.

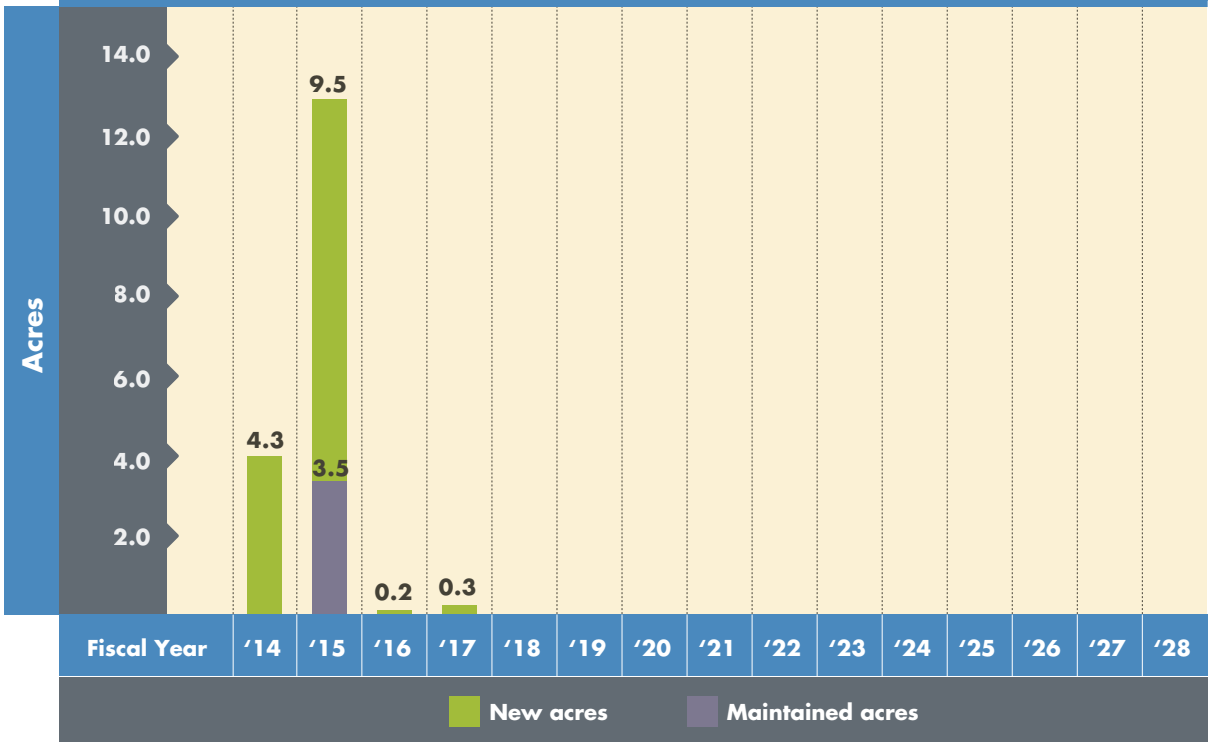
Water molds (*Phytophthora* spp.)

The District and its consultant, a leading plant pathogen expert, continue to study and plan to remediate mitigation sites infected by water molds (*Phytophthora* spp.). Some infamous examples of water molds include sudden oak death (SOD, *P. ramorum*) and the historic Irish potato famine. Infection by *Phytophthora* can lead to root rot, drought-

like symptoms from reduced water uptake, and plant death. Infected plants may not show any initial signs of the disease or stress. The District hosted 2 state-of-the-science symposiums, most recently on May 18, 2017 and will add a link to the recording on the Project D2 website when it is available. Videos of the February 12, 2015 lectures are on the Project D2 website, as are other links to *Phytophthora* internet resources to increase awareness and inform the public.

The District continues to implement a plant pathogen testing program, develop best management practices (BMPs) for contractors and nurseries, and participate in the regional Working Group for Phytophthoras in Native Habitats (*www.Calphytos.org*). Collaborative efforts include education, outreach, partnerships, and advanced scientific studies in an attempt to better understand and reduce the spread of water molds. The Project D2 website has several links to provide information on water molds.

Graph D2.1 Acres of Invasive and Non-native Vegetation Control by Fiscal Year



Project D3

Grants and Partnerships to Restore Wildlife Habitat and Provide Access to Trails

This project provides grants and partnerships for activities such as developing Stream Corridor Priority Plans; creating or enhancing wetland, riparian and tidal marsh habitat; protecting special status species; removing fish migration barriers; installing fish ladders; removing non-native, invasive plant species; and planting native species. The project includes 7 grant cycles, 1 held approximately every other year during the 15-year duration of the Safe, Clean Water Program, as well as funding for partnerships that restore stream and wetland habitat and provide open space access. This project also funds work that provides access to creekside trails or trails that provide a significant link to the creekside trail network, for example, the possible construction of a bridge over Coyote Creek in the Rock Springs neighborhood.

South Valley meadow construction.

ON TARGET

Project D3 FY17 Highlights

- Postponed the FY17 trails grant release until FY18 to allow time to incorporate grant administration and management improvements
- Continued administration of grant agreements awarded in FY14-16
- 3 grant projects are in the final stages and 1 grantee has requested a 2.5-year extension

Benefits

- Enhances creek and bay ecosystems
- Improves fish passage and habitat
- Expands trail and open space access
- Leverages community funding through grants
- Increases collaborations and partnerships for stewardship activities with cities, the County, nonprofit organizations, schools and other stakeholders

Key Performance Indicators (15-year Program)

1. Develop 5 Stream Corridor Priority Plans to prioritize stream restoration activities.
2. Provide 7 grant cycles and additional partnerships for $21 million that follow pre-established criteria related to the creation or restoration of wetlands, riparian habitat and favorable stream conditions for fisheries and wildlife, and providing new public access to trails.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: On Target

Progress on KPI #1:

- Stream Corridor Priority Plans (SCPPs) are in development as a part of the Integrated Water Resources Master Plan (One Water), which is a major District planning effort currently underway. As part of the planning effort, in FY16 a partnership was established with the Aquatic Science Center (ASC), a joint powers authority affiliated with the San Francisco Estuary Institute (SFEI). ASC will partner with the District to assist in the development of various tools used by the master plans for all 5 major watershed areas. The SCPPs will be prepared as a product of the master planning effort.

Progress on KPI #2:

- Although FY17 was a trails grant cycle year under the 5-Year Implementation Plan for FY14-18 and no new grants were released during the year, the project is on track to achieve the 15-year program KPIs.
- No new grants, including the pilot mini-grants, were released due to staff turnover and changes, as well as a comprehensive analysis and update of Project D3 grant management and administration to help improve the program. The updates include utilizing a new grant administration system and updating grant guidelines. The objective is to automate, streamline, simplify and make the program efficient and consistent with other public agencies. Consequently, a new grant cycle for both Restore Wildlife Habitat and Provide Access to Trails will be administered in FY18 to make up for the lost year. The trails grants are scheduled to be released in August 2017.
- The District continued to administer the grant agreements executed in FY14 (Grant Cycle 1a - habitat), FY15 (Grant Cycle 1b - trails), and FY16 (Grant Cycle 2a - habitat). To date, 1 grant project has been completed and closed, and it is the Vasona Creek at West Valley College: Stream Stabilization and Habitat Enhancement Phase 2 project.
- The following 3 projects were completed and expected to be closed in FY17:
  - » McClellan Ranch Preserve Meadow Enhancement Project by Acterra Stewardship
  - » Foothills Park Riparian Enhancement Project by Acterra Stewardship
  - » Coyote Valley Open Space Preserve South Valley Meadow Restoration by Santa Clara County Open Space Authority
- The Uvas Creek Steelhead Spawning Habitat Enhancement Project, which was scheduled to have been completed in FY17, has been delayed and the grantee, the Resource Conservation District of Santa Cruz County (RCD Santa Cruz) has requested a 2.5-year extension.

Financial Information

In FY17, only 49% of the annual budget was expended, due to the delayed release of a new grant cycle. The grants are now scheduled to be released in FY18.

Financial Summary ($ Thousands)
D3. Grants and Partnerships to Restore Wildlife Habitat and Provide Access to Trails

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$1,384	$98	$576	$674	49%	$24,092	21%

Opportunities and Challenges

Staffing and program improvements

In FY17, grant administration, especially invoice payment and grant management, was hindered due to the District's staff turnover combined with a reorganization of the grant program. Staffing needs were addressed in May 2017 and following the assignment of additional staff resources, overall improvements were made to the grant administration process. These improvements included the development of electronic filing systems to quickly retrieve information, and engaging with grantees on invoicing requirements and processes. Further organizational changes are planned in August 2017, which will significantly improve program efficiency. These improvements include streamlining, simplifying and automating grant administration.

In the last quarter of FY17, the District undertook a comprehensive analysis of grants administration and management, following which a new grant administration system was selected to help improve the grant administration process. Considerable work, including updating guidelines to make the program more consistent with other public agencies, was being conducted before the planned release of the grants in July and August 2017.

While carrying out the improvements, the District will follow the Board's guidance resulting from the March 2016 Comprehensive Review of the Safe, Clean Water Grants and Partnership Projects Program:

a. Be responsive to community needs and input;

b. Make grant application and contracting process easier for applicants. Allow adequate time for applicants to obtain landowner approvals when right of way is needed for project implementation; be flexible in working with applicants on scope and budget; outreach to nonprofit entities that could support the District's goals for the Safe, Clean Water Grants and Partnership Projects Program;

c. Broaden community engagement in District's grants and partnership projects to help the community feel positive about projects that are being funded by taxpayer dollars; and

d. Tailor level of control or risk management based on project specifics.

Uvas Creek Steelhead Spawning Habitat Enhancement Project extended

The Uvas Creek Steelhead Spawning Habitat Enhancement Project, which was scheduled to have been completed in FY17 has been delayed, with the grantee, the RCD Santa Cruz, requesting a 2.5-year extension.

The purpose of the project is to improve riparian and in-channel habitats in Uvas Creek below Uvas Dam by removing non-native, invasive plant species and enhancing spawning gravel quality through gravel augmentation.

The project has been delayed due to regulatory permitting challenges and the required efforts to coordinate with the County of Santa Clara (County) and the Federal Emergency Management Agency (FEMA) on the placement of fill within FEMA's jurisdiction.

FEMA, the County and RCD Santa Cruz have finally reached a consensus on a path forward. Meanwhile, RCD Santa Cruz has made considerable progress and worked to advance the project and its tasks, including site evaluation, developing design alternatives and identifying the preferred alternative in consultation with the County, the District and the National Marine Fisheries Service, removing invasive species, and in conducting community outreach.

An amendment requesting extending the term of the agreement by 2.5-years to December 31, 2019, is planned to be brought before the Board in early FY18.

Meanwhile, because the agreement was scheduled to expire on June 30, 2017, and to allow the project to move forward, the District granted a 12-month extension under the District Chief Executive Officer's authority.

Plant pathogen

In January 2015, the District became aware that a water mold pathogen *Phytophthora*, which is related to Sudden Oak Death, was identified in Santa Clara County. It poses a significant risk to the habitat restoration efforts covered by existing and future grant/partnership agreements. Consequently, the District continues to implement a plant pathogen testing program, develop best management practices (BMPs) for contractors and nurseries, and participate in the regional Working Group for Phytophthoras in Native Habitats (*www.Calphytos.org*). Collaborative efforts include education, outreach, partnerships, and advanced scientific studies in an attempt to better understand and reduce the spread of water molds.

Pilot Mini-Grant Program

In July 2017, the District will release Project D3: Restore Wildlife Habitat Mini-Grants. This follows the Board approving the following the following components of the pilot mini-grant program in March 2017:

i. Mini-Grant Minimum Requirements and Evaluation Criteria
ii. Submittal, Selection and Award Process
iii. Application Form
iv. Evaluation Score Sheet
v. Outreach Plan

The pilot program is designed to provide seed funding to encourage broader and long-term community engagement in wildlife habitat restoration and watershed stewardship activities in Santa Clara County. The pilot mini-grant is not designed to cover all expenses associated with an activity but rather a portion to kick start stewardship activities. Eligible activities include tangible educational activities and small scale physical improvements. Previously, in March 2016, the Board had approved proposed Pilot Mini-Grant Program funding in the amount of $200,000.

Outreach

Recognizing that more needed to be done to connect with the grantees and conduct outreach, in FY17 the District introduced Grants at Work articles to mark projects reaching major milestones or completion. These were shared with the Board through CEO Bulletin and/or the non-agenda board packet, and with the community through the monthly ValleyWater e-news, the District blog and social media.

Early engagement

Additional effort needs to be made early in the projects to engage and inform grantees on the required documentation and reporting necessary for reimbursements. This early education results in more accurate and complete submittals later in the project.

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Project D4

Fish Habitat and Passage Improvement

This project helps restore and maintain healthy steelhead trout populations by improving fish passage and habitat. Possible work sites include Alamitos Creek at Lake Almaden and Ogier Ponds in the Coyote watershed, where man-made creek alterations disrupt fish migration. The project also includes studies of steelhead streams throughout the county to determine where improvements are needed to support spawning, rearing and migration. Funding also pays for the development of a program to use large woody debris to create fish habitat.

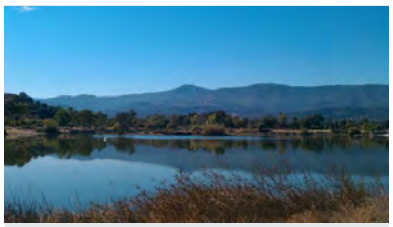
Benefits

- Improves spawning and rearing habitat within the Coyote, Guadalupe and other watersheds
- Improves steelhead trout habitat
- Helps provide required mitigation for environmental impacts of reservoir and recharge operations and for countywide Stream Maintenance Program

Key Performance Indicators (15-year Program)

1. Complete planning and design for 2 creek/lake separations.
2. Construct 1 creek/lake separation project in partnership with local agencies.
3. Use $6 million for fish passage improvements.
4. Conduct study of all major steelhead streams in the county to identify priority locations for installation of large woody debris and gravel as appropriate.
5. Install large woody debris and/or gravel at a minimum of 5 sites (1 per each of 5 major watersheds).

Geographic Area of Benefit: Countywide



Almaden Lake.

ADJUSTED

Project D4 FY17 Highlights

- Adjusted to separate the schedules (see Opportunities and Challenges)

Creek/Lake Separation Projects:

- Developed the draft EIR for the Almaden Lake Improvements Project
- Completed several data collection efforts for incorporation into the feasibility study Ogier Ponds Project

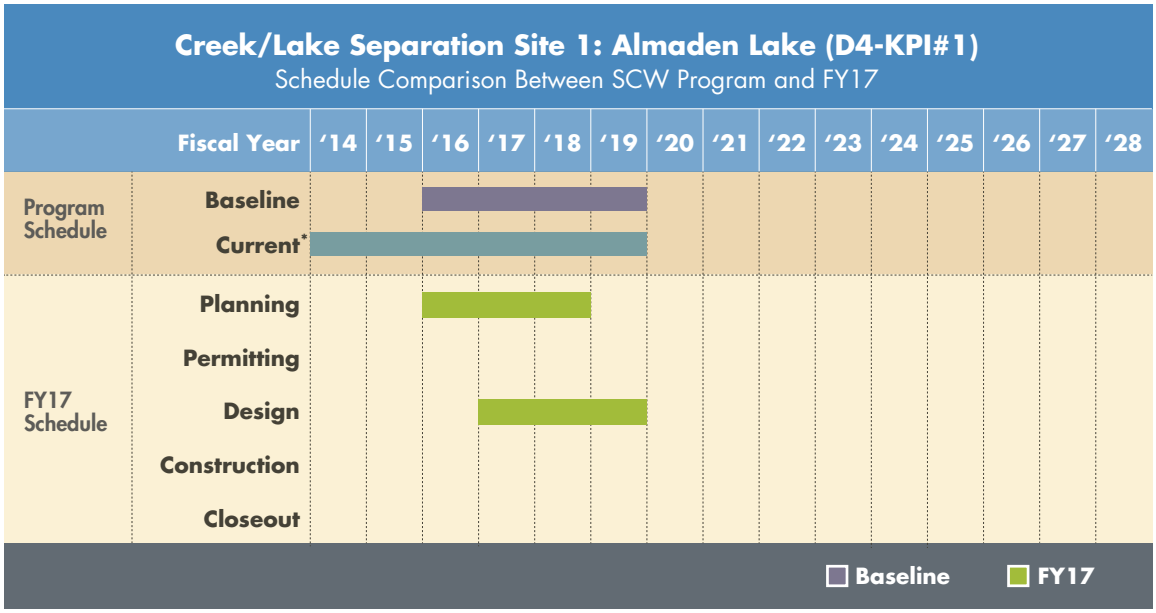
Fish Passage Improvements:

- Completed 90% design for the Bolsa Road Fish Passage Project
- Funding secured for environmental permit submittals and 100% design of the Singleton Road Fish Passage Project

Fish Habitat Improvements:

- Began the study of 8 creeks and rivers as the first phase of developing a gravel augmentation and large-woody debris program

Schedule



*Board approved a schedule adjustment through the change control process in FY17.

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: Adjusted (schedule adjustment)

Progress on KPI #1:

Creek/Lake Separation Site 1: Almaden Lake

- In FY17, the District's environmental consultant, Environmental Science Associates (ESA), provided the project team portions of the draft of the Environmental Impact Report (EIR) for the Almaden Lake Improvements Project (located within Almaden Lake Park in San José). The District needs to review the draft and provide ESA with information on the water source for the separated lake. Public review of the draft EIR is expected by late 2017. The project continues to receive a lot of interest from the community and the District continues to engage stakeholders during the planning phase.

Creek/Lake Separation Site 2: Ogier Ponds

- The District and Santa Clara County Parks (SCC Parks) executed a Memorandum of Agreement on March 1, 2016 to prepare a study to investigate the feasibility of separation of Ogier Ponds Quarry Complex from

Coyote Creek. The feasibility study elements include evaluation of the site for environmental enhancement, recreation, water supply and flood attenuation.

- Several data collection efforts have been completed to date for incorporation into the study and include water quality monitoring, groundwater monitoring, a wildlife evaluation, topography bathymetry and a historic aerial imagery investigation. The draft feasibility report is anticipated to be complete by December 2017 and the final feasibility report is anticipated to be complete by March 2018. Objectives for the feasibility report are as follows: evaluate removal of artificial hydraulic connections between Coyote Creek and Ogier Ponds; enhance potential aquatic and riparian habitat associated with the channel of Coyote Creek for steelhead; protect the existing groundwater recharge capability of the project area; and work with SCC Parks to preserve recreational amenities and opportunities.

Progress on KPI #2:

- Currently 2 projects are in the planning phase and the Board has not yet selected which project will receive construction funding from the Safe, Clean Water Program.

Progress on KPI #3:

Fish Passage Improvements

- In FY17, the District completed 90% design for the Bolsa Road Fish Passage Project.
- The District continues to coordinate with the City of San José on the Singleton Road Fish Passage Project on Coyote Creek. The city has secured funding for environment documents and 100% design of the preferred alternative. The city has begun preparation of the requisite documents.

Progress on KPI #4:

Fish Habitat Improvements

- To improve aquatic habitat for steelhead in Santa Clara County, the District is developing a gravel augmentation and large-woody debris (LWD) program.
- The program will study steelhead streams in Santa Clara County in 2 phases to determine appropriate locations to place gravel and LWD for maximum habitat benefit. The first phase began in FY17 with the study of: Alamitos, Guadalupe, Los Gatos, Uvas, Upper Penitencia, Coyote and Stevens creeks, and Guadalupe River. The second phase will begin in FY18 and will study Bodfish, San Francisquito and Lower Llagas creeks, as well as any other remaining county steelhead streams. To identify appropriate locations for both gravel augmentation and LWD placement a set of analytical criteria is being developed for site selection and implementation.

Progress on KPI #5:

Fish Habitat Improvements

- To prioritize locations which will be selected for placement of LWD and gravel for habitat improvement, stream reaches were defined using geomorphic, hydrologic, biologic and regulatory criteria. The development of the criteria for site selection is underway and is expected to be completed in FY18. The next step is to develop

a list of specific sites within these watersheds where these habitat improvements will provide the most beneficial habitat lift.

- Once the site selection is complete, 4 habitat improvement features will be installed (note that 1 LWD project has already been installed in prior years of the program).

Financial Information

In FY17, 21% of the total annual budget was expended.

The Almaden Lake Improvements Project (KPIs #1 and 2) expended 29% of its annual budget. This was due to a delay in planned work resulting from the District's expansion of alternatives to be evaluated in the EIR during the planning phase in response to stakeholder's concerns about the project. While the project experienced delays, delivery of the overall KPIs should not be impacted.

The Fish Habitat Improvement project (KPIs #1, 4 and 5) expended 85% of its FY17 budget. The under expenditure is due to contracting delays. The project remains on track to meet its 5-Year Implementation Plan target.

The Fish Passage Improvements project (KPI #3) is under expended at 3% of its FY17 budget. The project progression has slowed in waiting for response from the Union Pacific Railroad and the City of San José; however, noting the construction of the Evelyn Road fish passage improvement in previous years, the project remains on track to meet its 5-Year Implementation Plan target.

The Construct Creek/Lake Separation project (KPI #2) has expended 0% of its FY17 budget because the Board has not yet selected which project will receive construction funding from the Safe, Clean Water Program.

Financial Summary ($ Thousands)
D4. Fish Habitat and Passage Improvements

Fiscal Year 2016-2017						15-year Program	
Project No. and Name	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
		Actual	Encumbrance	Total			
26044002 Fish Passage Improvement	$2,418	$71	$0	$71	3%	$8,219	19%
26042002 Fish Habitat Improvement	$501	$364	$62	$426	85%	$5,828	21%
26044001 Almaden Lake Capital Project	$1,444	$424	$0	$424	29%	$2,102	103%
26C40355 Construct Creek/ Lake Separation	$0	$0	$0	$0	0%	$13,385	0%
Total	**$4,363**	**$860**	**$62**	**$922**	**21%**	**$29,534**	**17%**

Opportunities and Challenges

Schedule adjustment

On April 11, 2017, the Board approved a schedule adjustment for the project. The original project schedule indicated an estimated completion date of FY19, however, based upon the different KPIs, the schedules have been separated. For KPI #1, planning and design for 2 creek/lake separation projects, the estimated completion date is FY19. For KPI #2, construction of 1 creek/lake separation project, the construction schedule will be determined when the Board selects which of the 2 projects will be constructed. The remaining schedules for KPIs #3-5 (fish passage improvements, study of all major steelhead streams, and installation of large woody debris and or gravel, respectively) were combined, with a completion date of FY28 to allow sufficient time to complete the studies and implement the improvements.

Resource needs

Fish barrier mitigation and creek/lake separation projects will continue to require a high amount of resources to maintain the level of stakeholder engagement necessary for project success.

Fish Habitat Improvements

The placement of any additional gravel or LWD structures has the potential to increase water surface elevation in a stream. 1 of the challenges for considering gravel and LWD additions for habitat improvements is that for channel reaches in a Federal Emergency Management Agency (FEMA)-designated regulatory floodway, any changes to the channel configuration must be done in a way that will not increase the water surface elevation beyond existing condition, irrespective of the proximity to structures, or bank elevations. This restriction may make the design and construction of habitat enhancement more difficult, requiring the production of a "No Rise" certification. This certification is often costlier as it will require more detailed hydraulic evaluation and may also require more earthwork to meet the "No Rise" certification standards.

Fish Passage Improvements

Singleton Road Fish Passage Removal Project (City of San José)

The City of San José has completed a feasibility study which includes trail realignment, construction of a pedestrian bridge and removal of the Singleton Road fish passage barrier (Photo 1). The city worked with the District to develop a partnership agreement with funds allocated from Project D4 to finance up to $1 million for construction costs to support removal of the Singleton Road Bridge and associated channel restoration. The remainder of the city's trail replacement project will be funded from other sources. The District continues to wait until the city environmental documentation is complete for execution of the partnership agreement to fund the removal of the fish barrier. Removal of the Singleton Road Bridge and restoration of the stream channel will provide steelhead and other native fish significantly improved access to higher quality habitats in Coyote Creek.

Bolsa Bridge Fish Passage Project

This project has been put on hold due to staffing constraints and will be resumed at a later date.

Confidence levels

Almaden Lake

Schedule: High confidence

The District is on track to complete the planning and design phases, including developing a completed EIR.

Funding: High confidence

The Safe, Clean Water funding covers the cost of the planning and design phases.

Permits: N/A

The confidence level for permits will be determined if the Board selects the project to move forward with construction.

Jurisdictional Complexity: Low confidence

The project has a high level of stakeholder engagement, as such, the project has the potential to encounter continuous issues and interest in its design.

Photo 1: Singleton Road Fish Passage Barrier

Bolsa Road Fish Passage Project

Schedule: Low confidence

The facility is owned by the Union Pacific Railway (UPRR) and therefore schedule is in large part driven by approval and right of entry permits to move forward.

Funding: High confidence

Project funding through FY19 has been secured through the Safe, Clean Water Program.

Permits: High confidence

Environmental enhancement projects typically receive higher priority for permitting approvals. The District will have to obtain all required permits, after environmental clearance.

Jurisdictional Complexity: Low confidence

As land owner, UPRR has full jurisdiction over the site.

Project D5

Ecological Data Collection and Analysis

This project creates a comprehensive watershed database that tracks stream ecosystem conditions helping the District, other County agencies and organizations make informed watershed and asset management decisions. This new information integrates and enhances the District's stewardship actions through a standardized, repeatable and defensible approach that guides, organizes and integrates information on stream conditions.

This ecological monitoring and assessment is conducted on an ongoing basis and is shared with land use agencies, environmental resource groups, and the public to support efficient restoration decisions throughout the county.

Benefits

- Improves watershed and asset management decisions
- Provides a systematic, scientific guide for decisions and actions to improve stream conditions
- Supports effective design options for capital projects
- Maximizes the impact of restoration dollars with more reliable data on countywide stream conditions

Key Performance Indicators (15-year Program)

1. Establish new or track existing ecological levels of service for streams in 5 watersheds.
2. Reassess streams in 5 watersheds to determine if ecological levels of service are maintained or improved.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

District biologist overlooking Coyote Ridge.

ON TARGET

Project D5 FY17 Highlights

- Completed the Pajaro River watershed assessment, report available on Project D5 website
- Completed the draft report for the Lower Peninsula watershed assessment
- Signed contracts for scientific and technical guidance with the San Francisco Estuary Institute, and for assistance with field work for the West Valley watershed assessment
- Established an ecological service index for 4 of the 5 watersheds

Status for FY17: On Target

Progress on KPI #1:

- In FY17, the District completed the Pajaro River watershed assessment, along with field work and a draft report for the Lower Peninsula watershed assessment. A contract for scientific and technical guidance was signed with the San Francisco Estuary Institute (SFEI), and a public bid for assistance with field work was conducted to assess the West Valley watershed.
- As of FY17, the District has established an ecological service index (ESI) for 4 of the 5 watersheds as required under this KPI (see Figure D5-1). These assessments include:
  1. Coyote Creek watershed (2 ESIs including Upper Penitencia Creek);
  2. Guadalupe River watershed (3 ESIs, including all tributaries with a separate ESI for urban and non-urban portions of the watershed);
  3. Pajaro River watershed within Santa Clara County (3 ESIs including Pacheco Creek and Uvas-Llagas Creek);
  4. Lower Peninsula watershed (3 ESIs including the parts of San Francisquito Creek within Santa Clara County, Adobe Creek and Stevens Creek).
- The reports for these assessments are available on the Project D5 website (see *http://www.valleywater.org/SCW-D5.aspx*) and on SFEI's webpage (see *http://www.sfei.org/projects/santa-clara-valley-water-districts-watershed-condition-assessments#sthash.yyRANCI2.dpbs*). Assessment data collected from the watersheds are available on EcoAtlas (see *http://www. ecoatlas.org/regions/ecoregion/bay-delta*).
- Contracts for the West Valley watershed assessment are in place for field work to begin in early FY18. The West Valley watershed will be the fifth to be assessed, therefore Project D5 is on schedule to meet the 5-Year Implementation Plan KPI target.

Progress on KPI #2:

- According to the Safe, Clean Water 5-year implementation plan, all 5 watersheds will be assessed for the first time by the end of FY18. Planning and scheduling watershed reassessment will be done in FY18, allowing 10 years until FY28 to reassess the 5 watersheds, and meet KPI #2.

Additionally, future watershed studies or assessments by others, such as those shown under related information on the Project D5 website, may offer reassessment for all or parts of the County's watersheds. The Project D5 effort continually strives to be consistent with, and complementary to, other watershed assessments throughout California. Working with SFEI is instrumental in achieving consistency and comparability.

Previous Safe, Clean Water annual reports included California Rapid Assessment Method (CRAM) index scores for the District's watersheds compared to other watersheds and a statewide assessment. The following figure shows ESIs for District watersheds and creeks from the Project D5 work to date. The Project D5 website has a comparative figure with percent of streams in various stages of ecological health (i.e., poor, fair, good). Using the Project D5 results, ecological levels of service can be established for the watershed in total, and for individual creeks. Outreach, education and dissemination of the Safe Clean Water Project D5 findings continues in partnership with SFEI at the resource agency level through California's Wetland and Riparian Area Monitoring Plan, and with the public by expansion of EcoAtlas and its Landscape Profile tool.

Financial Information

In FY17, 83% of the annual budget was expended. The FY17 budget included hours, services and supplies to complete the Lower Peninsula watershed report and begin the West Valley assessment. Some delays in contracting pushed this work into early FY18. The project remains on-track to meet the 5-Year Implementation Plan target.

Financial Summary ($ Thousands)
D5. Ecological Data Collection and Analysis

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$712	$259	$333	$592	83%	$9,020	17%

Opportunities and Challenges

Environmental permitting impact assessments and mitigation

The District, with expert advice from SFEI, is applying Safe, Clean Water Project D5 results to assist in environmental permitting. The U.S. Army Corps of Engineers (USACE) South Pacific Division issued guidance in 2015 and has standard operating procedures to use CRAM for impact assessment and mitigation. Guidance applies to both the USACE San Francisco and Sacramento Districts. The Project D5 ambient Pajaro watershed assessment is being analyzed with site specific CRAM measures for Project E6: Upper Llagas Creek Flood Protection Project, Sections 401 (Central Coast Regional Water Quality Control Board) and 404 of the Clean Water Act permit applications. Project D5 watershed and stream condition assessments continue to be influential to the State Water Resources Control Board's evolving efforts to regulate discharge of dredged or fill materials to waters of the state.

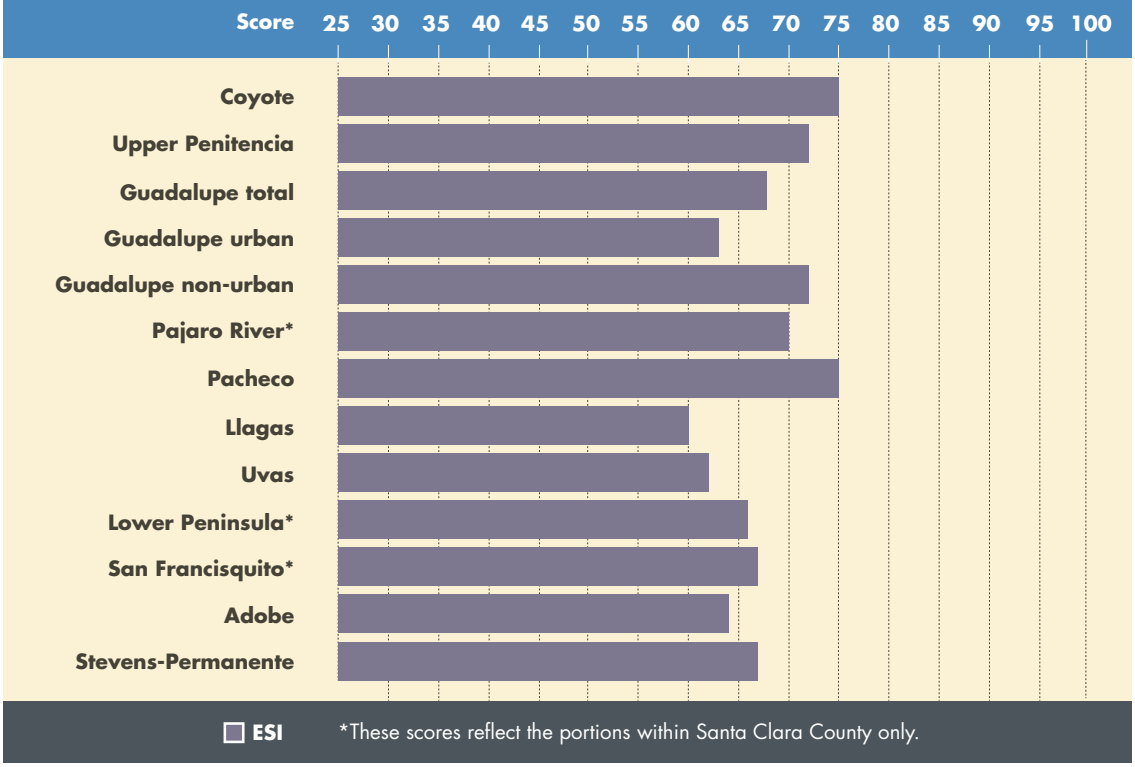
Ongoing drought conditions

The recent moderate to severe drought has stressed ecosystem health. The extent to which the drought affects stream conditions and ability of the watershed assessments to reflect drought impacts will not be known until more field work is completed. The Coyote Creek watershed was assessed in 2010, a wet year at approximately 120% of normal rainfall. The Guadalupe watershed assessment in 2012 coincided with the beginning of the drought, at 50% average rainfall. The Pajaro assessment was done in 2015 at 92% precipitation and the fourth year of drought; and the Lower Peninsula assessment occurred in 2016 during the fifth year of drought, although it was recorded as 106% of normal rainfall. In dramatic contrast, it will be interesting to assess the West Valley watershed after this year, which is close to the wettest rainy season in 122 years of record keeping in California, and official end of the drought. San Jose was 125-130% of normal precipitation in water year 2017 (October 1, 2016 to April 30, 2017 see *http://www.cnrfc.noaa.gov/monthly_precip.php*).

Landowner coordination

As noted in past Safe Clean Water annual reports, the District needs the assistance and cooperation of land owners, resource agencies, environmental organizations and citizen groups to maintain healthy ecosystems. The District owns only approximately 2% of the Lower Peninsula watershed, 3% of the Coyote and Pajaro watersheds, and only 8% of the Guadalupe watershed. The West Valley assessment in FY18 will report the percent of District ownership through this watershed. Most of the District's land is significantly below the headwaters with large tracts adjacent to the reservoirs. The District must receive permission to access and collect data from land owners prior to conducting field work. The process to request and be granted access permission takes a substantial amount of planning and time. Fortunately, the vast majority of private and public land owners respond positively, allowing District access to conduct the Project D5 assessments.

Figure D5-1 Ecological Service Index (ESI)
Based on CRAM Scores of District Watersheds



Project D6

Creek Restoration and Stabilization

This project will use geomorphic data to design and construct projects to increase the stability of eroding creek banks and help restore the natural functions of stream channels. Possible work may include the removal of Comer Debris Basin on Calabazas Creek in Saratoga, and activities to reduce and prevent incision and promote sediment balance in Stevens and Uvas creeks.

Hale Creek trapezoidal channel.

ON TARGET

Project D6 FY17 Highlights

- Continued the design process for the Hale Creek Enhancement Pilot Project in coordination with the Regional Water Quality Control Board

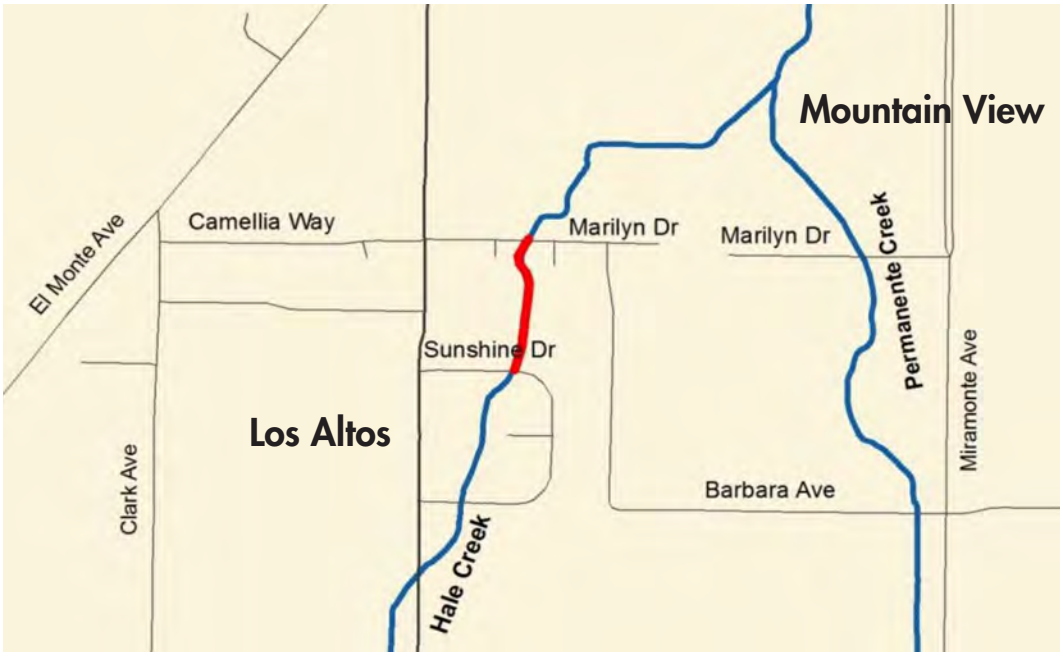
Benefits

- Uses scientific principles to restore sediment balance and reduce erosion, instability and sedimentation in creeks
- Helps restore stream functions and improves recharge capacity of channel by decreasing sedimentation
- Protects roads from damage caused by eroding channel banks
- Reduces annual maintenance cost for sediment removal

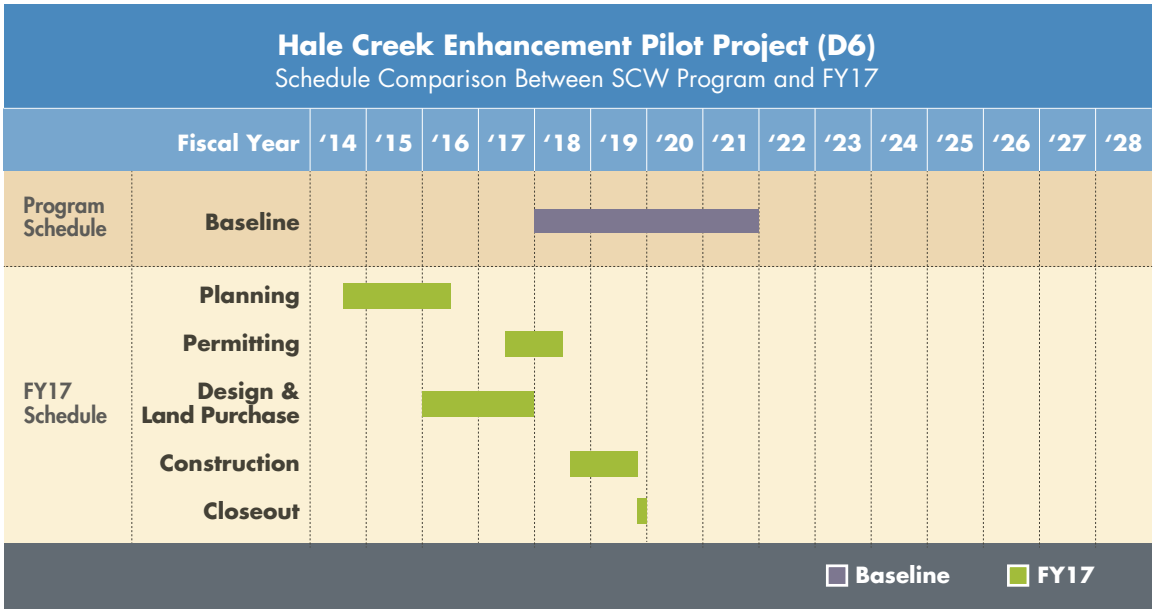
Key Performance Indicator (15-year Program)

1. Construct 3 geomorphic designed projects to restore stability and stream function by preventing incision and promoting sediment balance throughout the watershed.

Geographic Area of Benefit: Countywide



Schedule



Status History

Fiscal Year	Status
FY 14	*SCHEDULED TO START*
FY 15	*SCHEDULED TO START*
FY 16	*ON TARGET*

Status for FY17: On Target

Progress on KPI #1:

- Project D6 continued in FY17 with the Hale Creek Enhancement Pilot Project for restoration and stabilization of Hale Creek. In coordination with the Regional Water Quality Control Board (RWQCB), 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, has been prioritized and selected for a pilot study to restore geomorphic creek features in a confined urbanized setting. In FY17, the design process continued with the following accomplishments.
  - » Preliminary 60% plans were developed and are under review
  - » A project description has been written up to begin the California Environmental Quality Act (CEQA) process
  - » Initial meetings have been held with all the adjacent property owners
- The remaining 2 projects to meet this KPI have not yet been identified. This is expected to be addressed in FY18.

Financial Information

In FY17, this project expended 53% of its annual budget. The under expenditure is a result of District staff resources being shared with other Safe, Clean Water Projects for support during their construction phase. Work on the Hale Creek Enhancement Pilot Project will continue as resources are available. The project remains on track to meet its 5-Year Implementation Plan target.

The original Safe, Clean Water Program funding level for this project was presented in 2012 dollars at $12.8 million; however, this amount is subject to inflation and the adjusted 15-year plan is $16.7 million. The Program has been designed to collect sufficient revenues to account for project cost increases due to inflation.

Financial Summary ($ Thousands)
D6. Creek Restoration and Stabilization

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$613	$324	$0	$324	53%	$16,719	4%

Opportunities and Challenges

Confidence levels

Hale Creek Enhancement Pilot Project

Schedule: Moderate confidence

This section of Hale Creek is bordered by 7 private residential properties and a church parking lot. The ability to resolve potential encroachments and obtain the necessary temporary easements for construction will be critical for project success.

Funding: High confidence

Project funding through FY18 has been secured through the Safe, Clean Water Program.

Permits: High confidence

Since the District is coordinating with the RWQCB on this project, permit acquisition is expected to be a smooth process for this stream restoration project.

Jurisdictional Complexity: High confidence

This project is on the border of Mountain View and Los Altos and both cities have been supportive of the project. The work is being done on existing District right of way and easements, so no additional land acquisition is necessary beyond temporary construction easements.

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Project D7

Partnerships for the Conservation of Habitat Lands

Funding from this project helps the community acquire important habitat land to preserve local ecosystems. The project supports implementation of the Valley Habitat Plan, a multi-agency agreement that pools mitigation dollars to purchase large areas of habitat land for conservation.

Coyote Ceanothus Plant.

ON TARGET

Project D7 FY17 Highlights

- Continued partnership with Valley Habitat Plan to work on permitting, evaluating lands for acquisition and developing partnerships
- Developed draft criteria to determine suitable partnerships and use of funds that link land acquisition/partnerships to the benefits

Benefits

- Fulfills a portion of the District's acre allocation to the Valley Habitat Plan
- Protects, enhances and restores natural resources in Santa Clara County
- Contributes to the recovery of special status species
- Coordinates regional mitigation projects to create larger, less fragmented conservation lands that are more beneficial for wildlife and the environment
- Provides for endangered species and wetlands mitigation for future water supply and flood protection projects

Key Performance Indicator (15-year Program)

1. Provide up to $8 million for the acquisition of property for the conservation of habitat lands.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: On Target

Progress on KPI #1:

- The Valley Habitat Plan has provided permitting for over 40 District projects, including dam, pipeline and recharge facility maintenance activities and has streamlined permit acquisition by several months.
- The Santa Clara Valley Habitat Agency (VHA) has been working with partners on a wetland creation project to stay ahead of provisions required by the Regional General Permit.

- The District has developed draft objectives for the allocation of funding for land acquisition to support purchase of reserve areas.
- The VHA has been evaluating lands for acquisition, and developing partnerships with an NGO, a foundation, and an investor-owned utility; they have requested District participation in the acquisition of a large property that could fulfill current and future Valley Habitat Plan mitigation requirements which the District is evaluating.

Financial Information

This project has been working with partner agencies to establish criteria to identify partnerships; no Safe, Clean Water funds were budgeted or expended in FY17.

Opportunities and Challenges

Valley Habitat Plan

The Habitat Plan provides 50-year permits, issued in July 2013, for incidental take of endangered species to the 'co-permittees' – the District, Santa Clara County and the cities of San José, Gilroy and Morgan Hill, for public and private projects. The Habitat Plan sets fees to compensate for species impacts resulting from permitted projects. The funds are used by the VHA to acquire preserve areas which are managed to meet the Habitat Plan conservation strategy developed to meet the requirements specified by the federal Endangered Species Act (ESA), the Natural Communities Conservation Plan per the California Natural Conservation Planning Act (NCCP) and the California Endangered Species Act (CESA).

The VHA was established in May 2013, to implement the Habitat Plan under a Joint Powers Authority between Santa Clara County and the cities of San José, Gilroy and Morgan Hill and the District. Since 2014, the Habitat Plan has permitted over 40 District projects, including dam, pipeline and recharge facility maintenance activities and streamlined permit acquisition by several months.

To fulfill plan requirements, the VHA has been evaluating lands for acquisition as preserve areas, and seeking to find partners to do so. The Anderson Dam Seismic Retrofit is a high priority project that is covered by the Habitat Permit. When the retrofit was evaluated to anticipate impacts, a key issue was the presence of the federally-listed endangered Coyote Ceanothus, a white-flowered shrub that is only found in 3 locations in Santa Clara County. The largest population of Coyote Ceanothus grows at Anderson Reservoir and will be impacted by the removal of the dam which will result in removal of a large population of the plants that grow on it. As a result, the Habitat Permit requires that a new population must be created, or protected through direct purchase of land or through a conservation easement. Criteria for funding partnerships with the VHA are based on this and other elements in the Valley Habitat Plan.

Process development

The District has developed draft criteria to determine suitable partnerships and use of funds that link land acquisition/partnerships to the benefits identified in this project. Partnership funding selection process will be approved in early FY18 for funding recommendations in that fiscal year.

Project D8

South Bay Salt Ponds Restoration Partnership

This project reuses local sediment from streams flowing into San Francisco Bay to create and rehabilitate habitat in the South Bay Salt Ponds Restoration. The District reuses sediment that has to be removed from streams to maintain their capacity to carry floodwaters. In partnership with the U.S. Fish and Wildlife Service (FWS), clean sediment is applied to appropriate locations to improve the success of the South Bay Salt Ponds Restoration effort.

Sediment deposited in Pond A8.

ADJUSTED

Project D8 FY17 Highlights

- Adjusted schedule to FY28 because of the long-term need for sediment placement (see Opportunities and Challenges)
- Deposited 85,000 cubic yards of sediment on the Pond A8 levee to construct a gentle slope for marsh vegetation growth

Benefits

- Accelerates progress of an important tidal wetland restoration project
- Reduces disposal costs for sediment that has been removed from local channels to maintain flood carrying capacity
- Increases space availability in local landfills

Key Performance Indicators (15-year Program)

1. Establish agreement with FWS to reuse sediment at locations to improve the success of Salt Pond restoration activities.
2. Construct site improvements up to $4 million to allow for transportation and placement of future sediment.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: Adjusted (schedule adjustment)

Progress on KPI #1: *(Completed in FY14)*

Progress on KPI #2:

- In FY17, the Stream Maintenance Program (SMP) deposited 85,000 cubic yards (approximately 97,500 tons) of sediment on the Pond A8 levee constructing a gentle slope that will be a good substrate for marsh vegetation to grow on. This work was paid for by the SMP project through Project E1: Vegetation Control and Sediment Removal for Flood Protection. No site improvements were needed to transport and place sediment to Pond A8 in FY17.

Financial Information

Only 5% of the annual budget in FY17 was spent on this project for project management purposes. This is typical for years in which new sites or agreements are not required to continue the project.

Financial Summary ($ Thousands)
D8. South Bay Salt Ponds Restoration Partnership

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$317	$14	$0	$14	5%	$4,111	6%

Opportunities and Challenges

Schedule adjustment

On April 11, 2017, the Board approved an adjustment to the Project D8 schedule to extend the project for the duration of the Safe, Clean Water Program to end in FY28. The original project schedule estimates a completion date of FY17, however, placing sediment is a long-term need. This project pays for the construction of road improvements that are needed when the placement site for depositing sediment from the SMP moves from 1 location to another. Sediment has been deposited at Pond A8 for several years and it is expected that this site will need sediment for several more years. When a new placement site is needed, roads must be constructed or reinforced to support the heavy equipment that transports the sediment. The move to a new site is expected every 3 to 5 years depending on the size of the site and the amount of sediment available for placement.

Habitat improvement

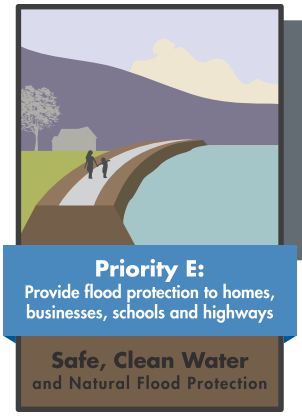
This project provides an important opportunity to assist with the South Bay Salt Pond Restoration Program. The sediment is being used to construct a broad, gentle slope that will increase marshland acreage that absorbs energy during storm surges, while providing habitat for many wetland species. After the slope is constructed, the District will partner with San Francisco Bay Bird Observatory to revegetate the site with diverse, native species.

Erosion protection

Erosion resulting from wind induced wave action has occurred along the toe of the landfill located at the southwest corner of Pond A8, which is owned by FWS. However, the erosion was on an adjacent property that the landfill is located on. In FY17 the Coastal Conservancy (the agency that oversees the management of the South Bay Salt Pond Restoration Program), the FWS and the District worked together with the landfill owner's consultant, Crawford Consulting, to develop and implement a program to repair the toe of the landfill. It will be important to continue to monitor the site to ensure the erosion pattern is addressed if it repeats.

New site development

As the accessible sections of Pond A8 are filled in by the program, a new location for deposition may be needed in FY18. This may necessitate developing new access paths to beneficial locations in other ponds. This will be explored in FY18 and future years.



Priority E

Provide Flood Protection to Homes, Businesses, Schools and Highways

Flood protection measures under Priority E include capital construction projects, studies of flood prone areas, maintenance of existing flood protection channels and improvements to emergency planning for flood response.

Flood protection capital projects are prioritized to protect the largest number of people, homes and businesses, as well as safeguard the highways, streets, public transportation and business centers that people depend on for their livelihoods. All the construction projects under Priority E are undertaken in partnership with the federal government, and will require federal funding in addition to local funding to complete the preferred scope. Should federal funding become scarce, a reduced scope would be implemented, as described in the individual project summaries.

Whenever possible, the District also leverages funds from the state, local municipalities and other stakeholders.

Project E1: Vegetation Control and Sediment Removal for Flood Protection
Project E2: Emergency Response Planning
Project E3: Flood Risk Reduction Studies
Project E4: Upper Penitencia Creek Flood Protection
Coyote Creek to Dorel Drive – San José
Project E5: San Francisquito Creek Flood Protection
San Francisco Bay to Middlefield Road – Palo Alto
Project E6: Upper Llagas Creek Flood Protection
Buena Vista Avenue to Wright Avenue – Morgan Hill, San Martin, Gilroy
Project E7: San Francisco Bay Shoreline Protection
Milpitas, Mountain View, Palo Alto, San José, Santa Clara and Sunnyvale
Project E8: Upper Guadalupe River Flood Protection
Highway 280 to Blossom Hill Road – San José

The countywide map and schedule comparison for Safe, Clean Water flood protection projects (E4 to E8) and other capital projects can be found on pages 154-157.

Appendix A: Financial Information
Appendix B: Inflation Assumptions
Appendix D: Capital Project Confidence Levels

Vegetation control for capacity on Los Coches Creek.

ON TARGET

Project E1 FY17 Highlights

- Maintained 90.7% of improved channels at design capacity
- Completed 391 acres of in-stream vegetation management on 116 miles of streams countywide
- Completed 17 sediment removal projects, removing 83,792 cubic yards of sediment to maintain design capacity
- Completed 2,976 acres of upland vegetation management
- Managed a cumulative total of 1,786 acres of vegetation, exceeding the 4-year target to manage a total of 1,632 acres

Project E1

Vegetation Control and Sediment Removal for Flood Protection

This project supports the District's ongoing vegetation control and sediment removal activities that reduce flood risk by maintaining design conveyance capacity of flood protection projects. These activities also provide access for maintenance personnel and equipment. The project includes: controlling in-stream vegetation growth, removing sediment at appropriate intervals, removing hazardous trees, and performing weed abatement and pruning to provide access and establish firebreaks. Before carrying out in-stream maintenance, District personnel perform biological pre-construction surveys to minimize environmental impacts. Allocations for Project E1 also helps fund future maintenance of flood protection projects completed under the Safe, Clean Water program.

This project is comprised of 4 sub-projects that support the District's ongoing vegetation control and sediment removal activities. Reference Appendix B in the 5-Year Implementation Plan for project descriptions. These sub-projects are:

E1.1 Vegetation Control for Capacity

E1.2 Sediment Removal for Capacity

E1.3 Maintenance of Newly Improved Creeks

E1.4 Vegetation Management for Access

Benefits

- Ensures that existing flood protection projects continue to provide maximum flood protection
- Provides safe access for maintenance of creek channels
- Reduces fire risk along creeks and maintains compliance with fire codes
- Improves water quality

Key Performance Indicators (15-year Program)

1. Maintain 90% of improved channels at design capacity.
2. Provide vegetation management for 6,120 acres along levee and maintenance roads.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: On Target

Progress on KPI #1:

- In FY17, 90.7% of improved channels were maintained at design capacity. Improved channels are those channels where the District has fee or easement land rights and which have been modified for flood protection purposes. This percentage is based upon identification of sediment and vegetation that compromise the flow conveyance capacity of channels. This identification occurs through routine maintenance inspections, following operations and maintenance manuals, and review of as-built plans and specifications.

Updated maintenance guidelines, including levels of service, are currently being developed to provide improved thresholds for sediment removal and vegetation management. These updated guidelines will better inform the inspection and maintenance process for the District's flood protection assets. While these are being managed as working documents, draft guidelines have been prepared for 17 creeks.

E1.1 Vegetation Control for Capacity

Completed 391 acres of in-stream vegetation management to reduce flood risk on 116 miles of streams throughout the county using an integrated combination of mechanical, hand labor and herbicide methods (Graph E1.1).

E1.2 Sediment Removal for Capacity

Completed 17 sediment removal projects, removing 83,792 cubic yards (CY) of sediment to maintain design capacity (Graph E1.2). The Safe, Clean Water Program funds 14% of this work. Below is a table showing the quantities of sediment removed from each watershed/creek:

Watershed	Creek	Sediments removed (CY)
Lower Peninsula	Adobe Creek	3,290
Lower Peninsula	Stevens Creek	2,112
Lower Peninsula	Stanford Channel	200
West Valley	Calabazas Creek	19,474
West Valley	San Tomas Aquino Creek	54,220
Guadalupe	Ross Creek	160
Guadalupe	Canoas Creek	30
Guadalupe	Guadalupe River	457
Coyote	Coyote Creek	1,900
Coyote	Berryessa Creek	1,121
Coyote	Lower Silver Creek	685
Pajaro	Jones Creek	143
TOTAL:		**83,792**

E1.3 Maintenance of Newly Improved Creeks

Sub-project E1.3 Maintenance of Newly Improved Creeks has $19.1 million identified in the original 15-year plan, as shown in the financial summary, to ensure funding is available for future maintenance work. This item is unique because the $19.1 million is a placeholder, set aside in anticipation of future maintenance work that will be required. As Safe, Clean Water flood protection capital improvement projects are completed and become "newly improved creeks," these projects move into the maintenance phase. As maintenance work is identified for these newly improved creeks, the District will allocate the placeholder dollars to the appropriate maintenance activities. In general, vegetation management and sediment removal are the primary activities that comprise maintenance of newly improved creeks for flood protection.

Progress on KPI #2:

E1.4 Vegetation Management for Access

- Completed 2,976 acres of upland vegetation management to maintain access and provide fire protection using an integrated combination of mechanical, hand labor and herbicide methods. Of this total acreage, 15% of the completed work was funded by Safe, Clean Water for a total of 446 acres towards the 15-year goal of 6,120 acres. (Graph E1.4)
- During the first 4 years of the Safe, Clean Water Program, the District managed a cumulative total of 1,786 acres of vegetation, compared to a 4-year target of 1,632 acres.

Financial Information

E1.1 Vegetation Control for Capacity

In FY17, this project expended 92% of its annual budget. The slight under expenditure occurred because fewer projects received permit approvals than planned, resulting in fewer labor hours being charged than were budgeted.

Financial Summary ($ Thousands)
E1.1. Vegetation Control for Capacity

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$1,726	$1,581	$3	$1,584	92%	$24,571	17%

E1.2 Sediment Removal for Capacity

The project expended 99% of the adjusted budget amount. In FY17, the magnitude of sediment removal activities required a budget adjustment. This accelerated Safe, Clean Water Program spending; however, the overall funding for sub-project E1.2 remains unchanged. The District anticipates that it will continue to be able to meet KPI #1 throughout the duration of the Safe, Clean Water Program.

Financial Summary ($ Thousands)
E1.2. Sediment Removal for Capacity

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$986	$974	$0	$974	99%	$9,848	19%

E1.3 Maintenance of Newly Improved Creeks

N/A – As no Safe, Clean Water flood protection capital improvement projects have yet been completed, no maintenance work was conducted on newly improved creeks in FY17; therefore, no expenditures have been made from the $19.1 million identified in the original 15-year plan. These funds will remain set aside for this project.

E1.4 Vegetation Management for Access

The project was on track with 101% of annual budgeted funds expended.

Financial Summary ($ Thousands)
E1.4. Vegetation Management for Access

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total[1]			
$438	$440	$1	$442	101%	$6,156	25%

[1]The total amount is different than the sum of the actual and encumbrance amounts due to rounding.

Opportunities and Challenges

Increased sediment removal

Sediment removal activities were performed at 17 sites along 12 creeks including Stevens, Adobe, San Tomas Aquino, Calabazas, Ross, Coyote, Berryessa, and Lower Silver Creeks, and Guadalupe River during the FY17 summer SMP season (June 15 through October 13, 2016). Nearly 84,000 CY of sediment was removed to restore flood conveyance capacity, which more than doubled the prior FY total. The timing of this work was fortuitous in that it better prepared these channels to handle the heavy storm events of the 2016-2017 winter season.

Updated maintenance guidelines

To complement District inspection and creek maintenance standards, detailed maintenance guidelines are being developed and/or updated for managing improved channels along local creeks. When completed, these guidelines will serve as a critical resource to guide the District in maintaining improved channels at design capacity.

In response to the Independent Monitoring Committee (IMC) recommendation to include an explanation regarding why the District does not target maintaining 100% of improved channels at design capacity, the District has included the following explanation:

> The District targets maintaining 90% of improved channels at design capacity, rather than 100%, because capacity has to decrease to a certain threshold in order to trigger maintenance. Additionally, there are several factors beyond the District's control that impact its ability to maintain the creeks at 100% design capacity. This includes limitations in regulatory approvals, environmental constraints, and limited staff resources due to budgetary restrictions.

Permitting challenges

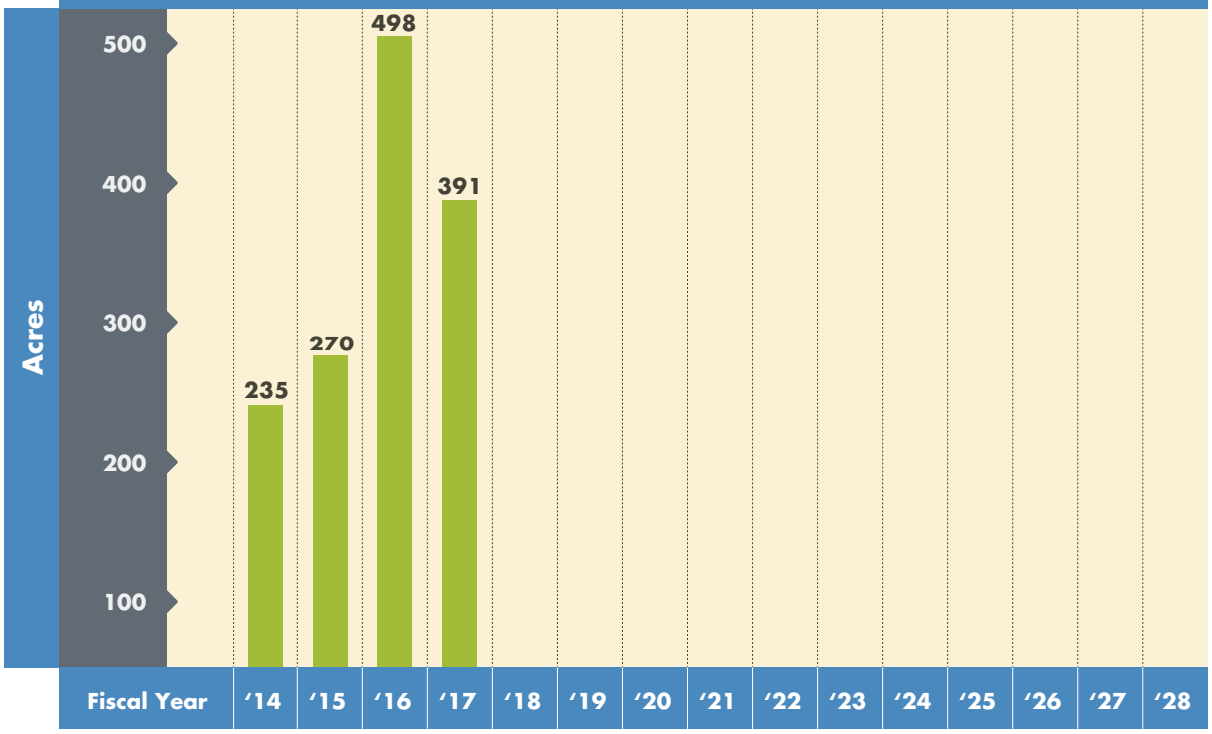
Challenges include increased regulatory permitting and mitigation requirements, affecting both the ability and cost to do necessary maintenance; therefore the District has a moderate confidence level for permitting.

Wet season

There was increased rainfall in FY17, resulting in additional weed management work due to a wet growing season. To meet fire code requirements, the District must eliminate combustible fuel loads on watershed facilities.

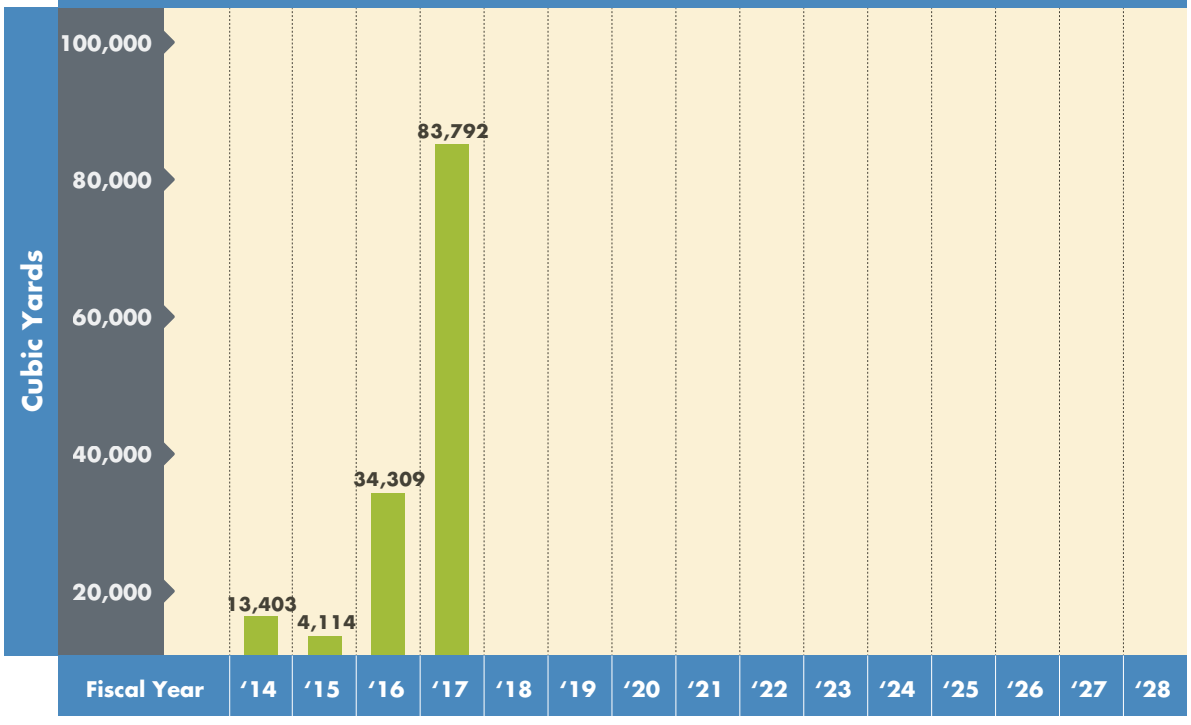
Graph E1.1 Vegetation Control for Capacity

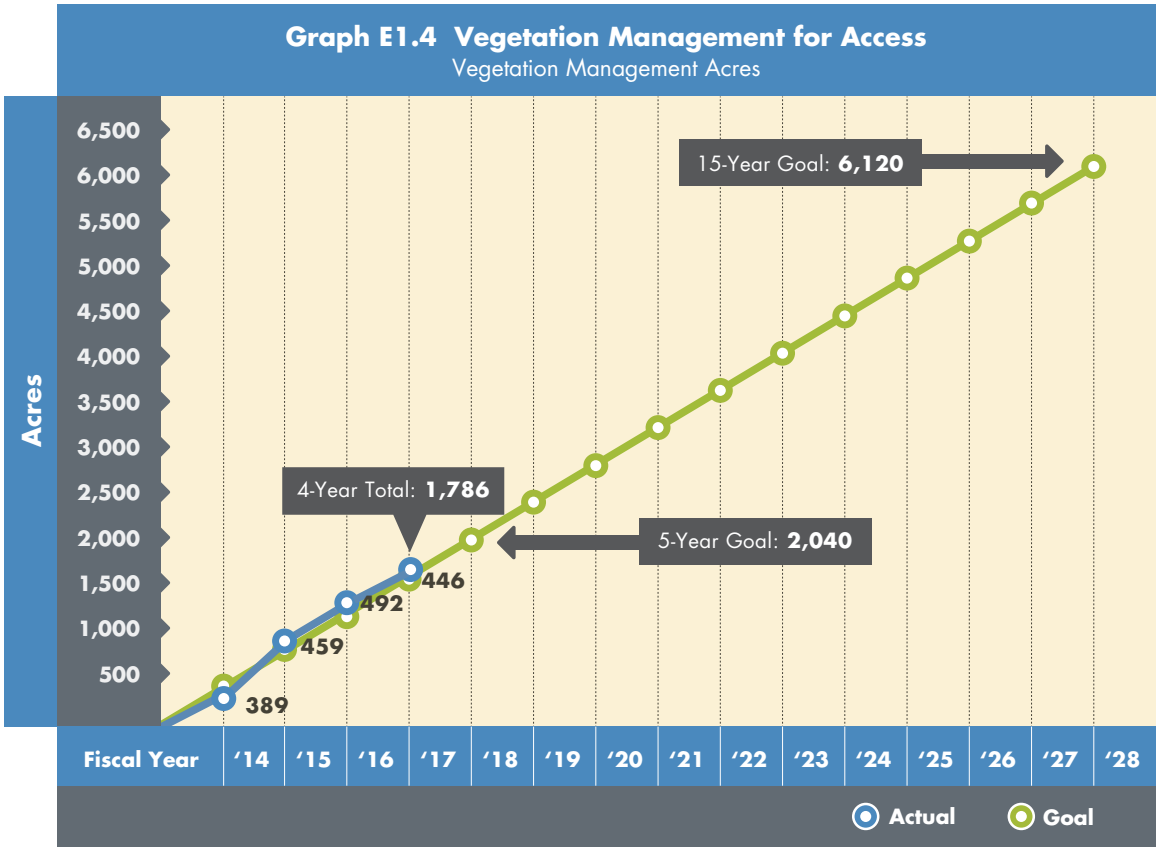
Acres of In-Stream Vegetation Management Removed to Maintain Design Capacity



Graph E1.2 Sediment Removal for Capacity

Cubic Yards of Sediment Removed to Maintain Design Capacity




Graph E1.4 Vegetation Management for Access
Vegetation Management Acres
Acres
6,500
6,000
5,500
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
15-Year Goal: 6,120
4-Year Total: 1,786
5-Year Goal: 2,040
389
459
492
446
Fiscal Year
'14
'15
'16
'17
'18
'19
'20
'21
'22
'23
'24
'25
'26
'27
'28
Actual
Goal

Project E2

Emergency Response Planning

This project allows the District to work with local municipalities to clearly identify roles and responsibilities for floodplain management and flood emergency management. The project supports countywide emergency response and preparedness activities, develops communication procedures and disseminates web-based flood forecasting information developed under Project C2, Emergency Response Upgrades. Collaborators also develop formal, site-specific flood-fighting strategies and coordinate outreach throughout the county so that the public receives uniform flood warning messages.

This project is comprised of 2 sub-projects that support the District's ongoing emergency response planning. Refer to Appendix B in the 5-Year Implementation Plan for project descriptions. These sub-projects are:

E2.1 Coordination with Local Municipalities on Flood Communication

E2.2 Flood-Fighting Action Plans

Benefits

- Reduces flood damage
- Provides effective coordinated response to storm-related emergencies
- Improves community awareness about flood risks

Key Performance Indicators (15-year Program)

1. Coordinate with agencies to incorporate District-endorsed flood emergency procedures into their Emergency Operations Center plans.
2. Complete 5 flood-fighting action plans (1 per major watershed).

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Emergency response planning.

ON TARGET

Project E2 FY17 Highlights

- Participated in multiple countywide agency coordination efforts and hosted 3 countywide agency coordination meetings
- Completed a Flood Emergency Action Plan (EAP) for San Francisquito Creek that outlines actions the District will take in a flood emergency
- Postponed the development of the Canoas Creek Flood EAP to expedite the joint Coyote Creek Flood EAP with the City of San José

Status for FY17: On Target

Progress on KPI #1:

E2.1 Coordination with Local Municipalities on Flood Communication

- In response to recommendations made by the Independent Monitoring Committee, the District began reviewing the procedures of other agencies to determine how a collaborative approach can best yield agency procedures that reflect the District's emergency response planning approach. This work began with the City of San José's Emergency Operations Plan in January 2017, just a month before the February 21, 2017 flood event on Coyote Creek. The review of all county and city emergency procedures will take time as the total number is currently unknown.
- In October 2016, the District hosted its annual Winter Preparedness workshop to discuss emergency action responses for local creeks. Presentations were delivered on: District Office of Emergency Services; flood forecasting and warning system; sandbag operations; National Weather Service weather outlook; Cal Fire coordination and County coordination.
- In January 2017, the District continued its engagement with the emergency management community by hosting a meeting for the Emergency Managers Association (EMA) and presented on topics such as the December storms, operational coordination and cost recovery process. EMA attendees included representatives from: Santa Clara County Office of Education, Santa Clara County Office of Emergency Services (OES), City of Gilroy, Kaiser Permanente, County Mass Care & Shelter, City of Morgan Hill, Milpitas OES and several others.
- The District participated in the EMA, Operational Area Council, and the Operational Area Signatories meetings. The District also continued to support and attend the San Francisquito Creek Joint Powers Authority emergency management committee and the city manager's meetings.
- In May 2017, the District hosted a Community Rating Service (CRS) meeting. The meeting offered attendees an opportunity to engage with the District on the topic of response to flooding events and pre-flood planning. During the meeting, the District engaged with the cities of Palo Alto and Santa Clara on the topic of flood management (including measuring, forecasting and overall response to flooding) and how best to work together moving forward. All attendees were encouraged to contact the District regarding emergency planning and response.

Progress on KPI #2:

E2.2 Flood-Fighting Action Plans

- In FY15, work was initiated to create a Flood Emergency Action Plan (EAP) for San Francisquito Creek (Lower Peninsula watershed) that outlines actions the District will take in a flood emergency. This effort continued in FY16 and was completed in FY17.
- In FY17, the development continued for the Canoas Creek Flood EAP (Guadalupe watershed). This work was interrupted by the Coyote Creek flooding of February 2017. After the flooding, it was determined that a joint

Coyote Creek Flood EAP (Guadalupe watershed) was needed between the City of San Jose and the District to address emergency response in future years. The joint Coyote Creek Flood EAP project was expedited in FY17 and is anticipated to be completed in FY18. Subsequently, the lessons learned from the Coyote Creek Flood EAP development will have an impact on the content and format for what will be a revised Canoas Creek Flood EAP.

- Technical mapping and flood-warning baselines are being produced under Project C2, Emergency Response Upgrades. These will be used to update the San Francisquito Creek Flood EAP and to complete the Canoas Creek Flood EAP, when fully developed

The project is on track to meet the targets identified in the 5-Year Implementation Plan.

Financial Information

The FY17 budget was slightly over expended at 103% of the annual budget.

Financial Summary ($ Thousands)
E2. Emergency Response Planning

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$439	$280	$175	$454	103%	$2,530	26%

Opportunities and Challenges

Community Rating System scores

This project offers an opportunity to meet some CRS criteria and potentially increase CRS scores throughout the county for those cities that participates in the CRS program. For example, a higher CRS rating could be achieved under the program if a Flood Warning & Response System were implemented and if EAPs were developed for the District's levees and dam programs.

The development of EAPs by collaborating municipalities with a focus on specific CRS guidelines would need to be emphasized. For example, CRS points could be gained for a flood warning and response system that included: flood threat recognition, emergency warning dissemination, flood response operations and critical facilities planning.

Increasing CRS point scores can translate to reduced flood insurance rates within each participating community. The prioritization of such effort would need to align in accordance with demands of the District's CRS program and be budgeted during the annual District budget process.

Agency coordination

KPI #1: To address an IMC recommendation and take a proactive approach to coordinating with agencies to incorporate District-endorsed flood emergency procedures into their Emergency Operating Center plans, the District began reviewing the emergency response procedures of other agencies to recommend specific flood response procedures for inclusion. The District is hopeful that this review will yield procedures that are coordinated among agencies and that reflect the District's emergency response planning approach.

KPI #2: In the wake of the Coyote Creek flood in February 2017, the District and the City of San José began undergoing an intensive collaborative effort to develop and exercise a Joint Flood EAP that will specify emergency response actions and roles and responsibilities for both agencies. This plan is scheduled to be adopted by the District and the City of San José during fall of 2017.

Project E3

Flood Risk Reduction Studies

This project develops engineering studies to understand the actual flood risk in high priority flood-prone areas and develops options for managing the flood risks.

Studies will focus on the following reaches:

- Alamitos Creek upstream of Almaden Lake in San José
- Rock Springs neighborhood along Coyote Creek in San José
- Calera Creek near Milpitas High School to Interstate 680 in Milpitas
- Tributaries to Lower Silver Creek (Ruby, Norwood, Quimby and Fowler creeks) in San José

The study includes hydrology, hydraulics, geotechnical and remapping work of the floodplain areas. If appropriate, updated maps will be submitted to Federal Emergency Management Agency (FEMA) to provide a more accurate reflection of the floodplain.

Flooding History and Project Background

In 1997, the Rock Springs neighborhood suffered severe flood damages to approximately 25 low-income apartment buildings. A subsequent study investigated the flooding problem and offered possible solutions. With the additional planning and partial design from Project E3, the District would be well-positioned to apply for future grants and/or partnerships to complete the needed flood protection work in this neighborhood.

Alamitos and Calera Creeks were modified with levees and floodwalls about 30 years ago, but their designs do not meet current FEMA guidelines which were published after the projects were built. Both the Alamitos and Calera neighborhoods are mapped as regulatory floodplains. In 2012, FEMA released new draft technical guidance for mapping floodplains behind levees; these new guidelines may significantly reduce the size of the regulatory floodplains for Alamitos and Calera Creeks, but a study is needed to qualify for updated regulatory mapping.

Every winter, thousands of households, schools and businesses in San José are susceptible to flood damage in the Lower Silver Creek watershed. While the District is improving the flood carrying capacity of Lower Silver Creek itself, the smaller tributaries continue to pose a flood risk. Project E3 would map and quantify these flood risks and identify possible solutions that may also provide environmental or recreational benefits.

Post Feb. 21 storm event study.

ON TARGET

Project E3 FY17 Highlights

- Completed the second of 7 engineering studies addressing 1% flood risk on creek reaches for Coyote Creek near Rock Springs neighborhood
- Presented the Alamitos flood study mapping results to the City of San José for consideration to apply for a Letter of Map Revision from FEMA

Benefits

- Provides more accurate mapping of areas at risk of flooding
- May add or remove parcels from the FEMA regulatory floodplain, based on updated mapping standards
- Information can be integrated into flood warning program to provide advance, real-time warnings of impending flood events
- Provides technical basis for developing future flood protection plans, and for potential funding partnerships

Key Performance Indicators (15-year Program)

1. Complete engineering studies on 7 creek reaches to address 1% flood risk.
2. Update floodplain maps on a minimum of 2 creek reaches in accordance with new FEMA standards.

Geographic Area of Benefit: Milpitas and San José

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: On Target

Progress on KPI #1:

- In FY17, the second of 7 engineering studies addressing 1% (or 100-year) flood risk on creek reaches was completed for Coyote Creek near Rock Springs neighborhood.
  - » The hydraulic model is in the process of being calibrated with high water marks collected by both the District and the City of San José for the February 21, 2017 storm event. The revised model results will be used to generate an updated floodplain map for the 1% event, which should be completed in early FY18.
  - » The feasibility study for identifying alternatives to reduce the risk of flooding in the Rock Springs neighborhood is underway. The study is on track to be completed in early FY18. This study will 'plug in' to a larger feasibility study for Coyote Creek. 1 of its objectives is to understand how 1% flood protection elements at Rock Springs neighborhood would affect flooding in downstream reaches of Coyote Creek.
- The District plans to complete the studies for the remaining 5 reaches by FY22.

Progress on KPI #2:

- The 1% floodplain map for Alamitos Creek downstream of McKean Road was updated in FY16 and is available for download on the Project E3 website (*http://valleywater.org/SCW-E3.aspx*).
  - » Prior to developing and adopting the Levee Analysis and Mapping Procedures (LAMP), FEMA assumed that non-accredited levees should be completely failed in the hydraulic analysis. FEMA's new approach recognizes the partial flood protection provided by non-accredited levee reaches.
  - » The hydraulic model will be calibrated with high water marks collected by the District for the February 21, 2017 storm event, and the 1% floodplain maps will be adjusted accordingly. This work is expected to be completed by mid-FY18.
- The District presented the Alamitos flood study mapping results to the City of San José in June 2017. The city will review the results and consider whether to apply for a Letter of Map Revision from FEMA. As the Floodplain Administrator, it is the city's responsibility to work with FEMA to update FEMA's maps. The District acts as a technical resource.

Financial Information

In FY17, the project was slightly over-expended at 104% of its annual budget.

Financial Summary ($ Thousands)
E3. Flood Risk Reduction Studies

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$656	$634	$48	$682	104%	$9,374	30%

Opportunities and Challenges

Floodplain maps

The Alamitos Creek and Coyote Creek (Rock Springs neighborhood) studies presented an opportunity for the District to use new software (HEC-RAS 5.0) to generate state of the art, 2-dimensional floodplain maps. The maps are available to the public on the project's webpage: *http://www.valleywater.org/SCW-E3.aspx*.

Figure 1 below shows a simplified version of the Coyote Creek (Rock Springs neighborhood) study map.

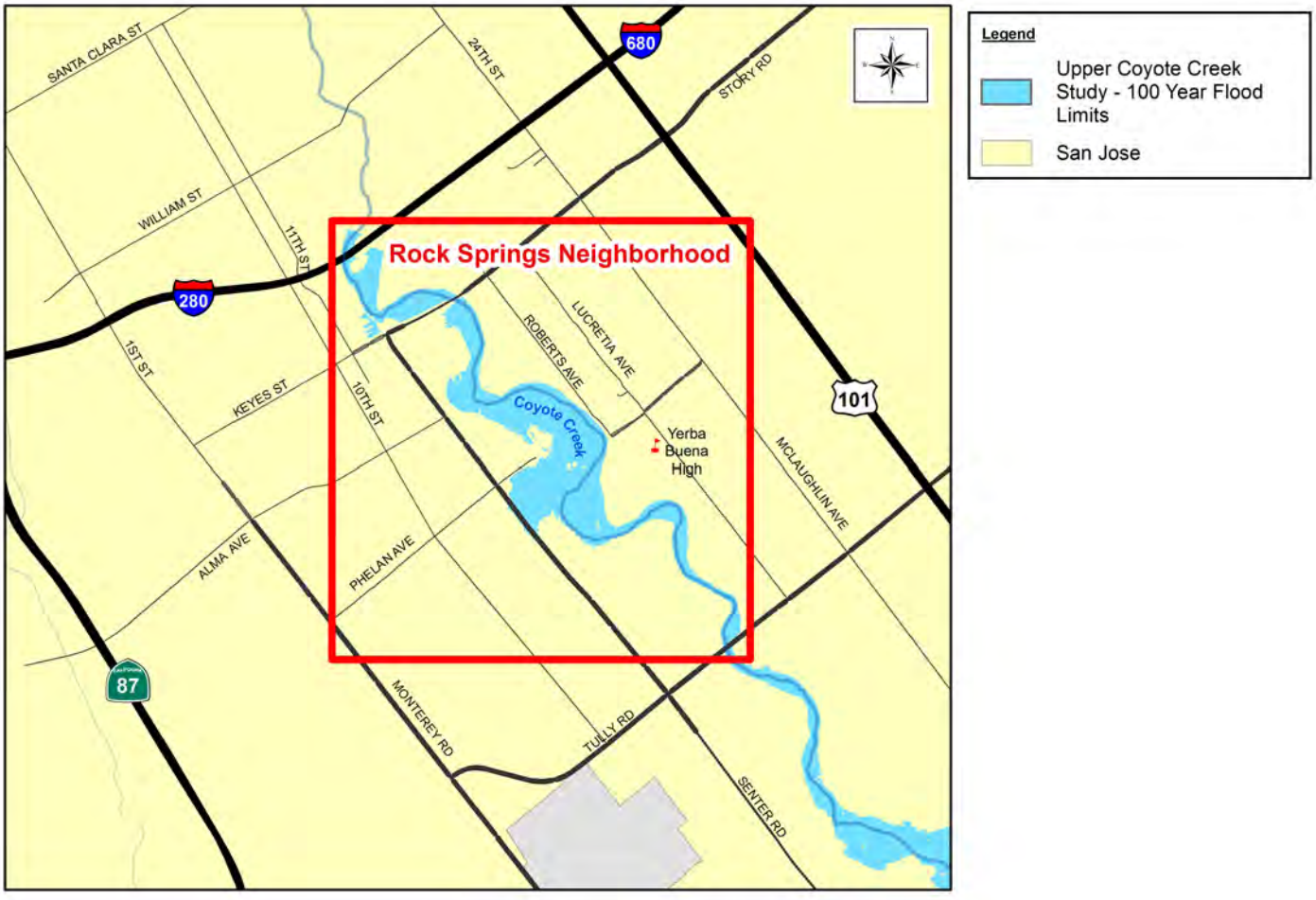
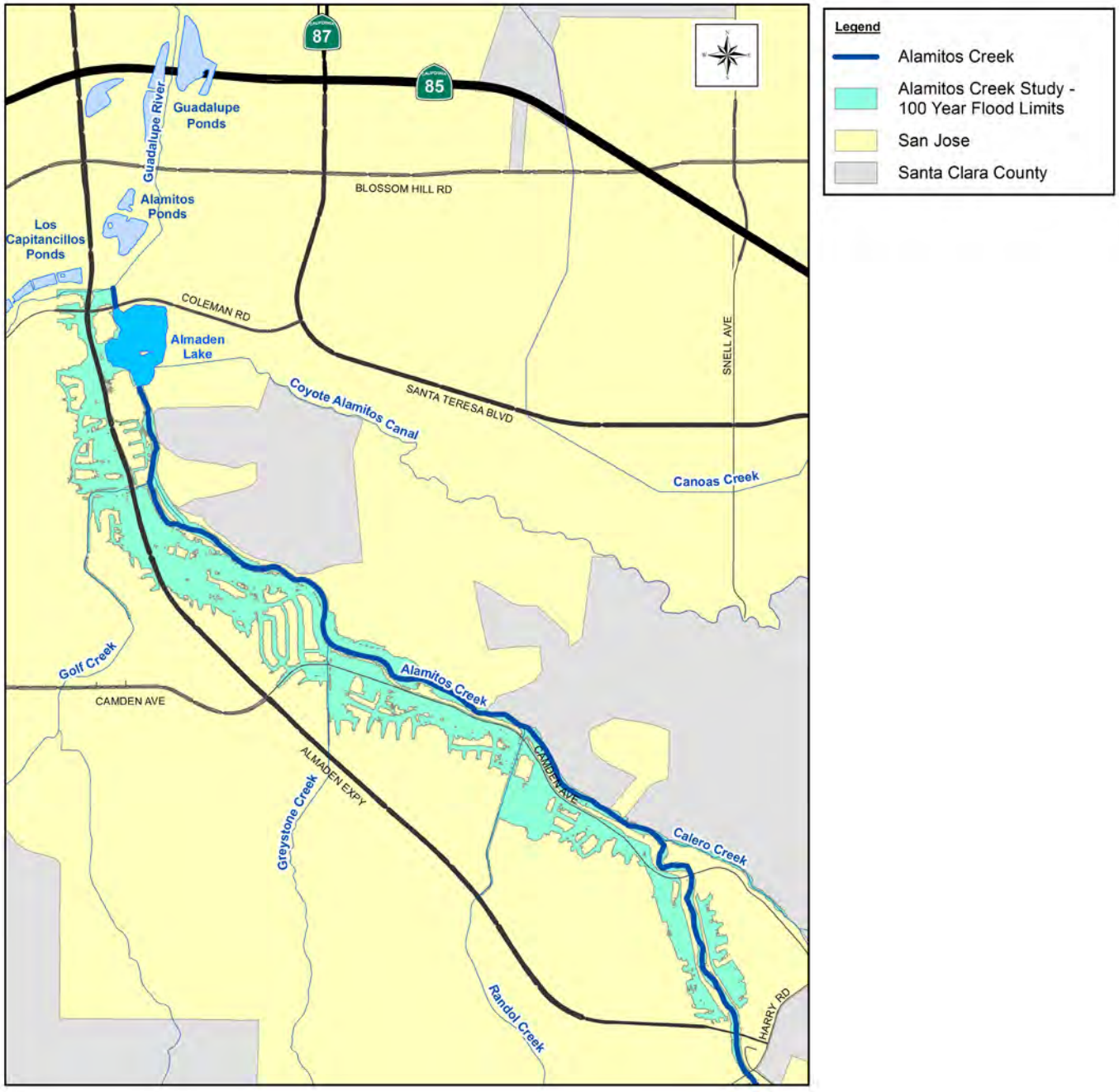


Figure 2 below shows a simplified version of the Alamitos Creek study map.



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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. The project is also funded in partnership with the state. Part of the project must be completed prior to a planned Silicon Valley Rapid Transit extension to the Bay Area Rapid Transit line, to protect the area around the proposed Berryessa station near King Road, which would otherwise be subject to flooding.

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, levees, flood walls, bypass channels, and fish passage improvements. Existing District water supply facilities may also be modified to protect habitat and improve water supply reliability.

The $41.9 million in local funding from Safe, Clean Water allows the District to move ahead with the planning, design and construction of the project.

Upper Penitencia Creek along Commodore Park.

ON TARGET

Project E4 FY17 Highlights

- Continued work on the project's planning study
- Developed a hydraulic model of the floodplain using a state-of-the-art 2-D numerical model
- Verified creek hydrologic and hydraulic parameters
- Partnered with San Francisco Estuary Institute to conduct a Flood Control 2.0 Landscape Concepts meeting with various stakeholders and a science hub of regional experts
- Continued development of Problem Definition Report/ Memorandum

Flooding History and Project Background

Upper Penitencia is a major tributary of Coyote Creek, flowing westerly from Alum Rock Park through the residential neighborhoods of Berryessa and Alum Rock in San José. More than 5,000 homes, schools and businesses are located in this floodplain, including many high-tech and commercial industries supporting the greater Silicon Valley.

With the capacity to carry less than a 10-year event, Upper Penitencia Creek has spilled its banks at least 7 times since the District began preparing flood reports in 1967. Damaging flood events occurred in 1978, 1980, 1982, 1983, 1986, 1995, and 1998, impacting many homes, businesses and surface streets.

Potential damages from a 1% (or 100-year) flood event are estimated at $455 million (in 2004 dollars, according to a USACE economic analysis), with average annual damages estimated at $30.5 million for the full reach from the Coyote Creek confluence to Dorel Drive.

The preferred project would build on a 1981 tri-party agreement between the District, the City of San José, and Santa Clara County to preserve open land and

provide flood protection along the Upper Penitencia Creek corridor. As a result of the agreement, 78 acres have been permanently preserved as Penitencia Creek County Park and Penitencia Creek Trail. A 4-mile, intermittent trail follows Upper Penitencia Creek from 700-acre Alum Rock Regional Park to its confluence with Coyote Creek. In addition to much-needed flood protection, this project will help provide the opportunity for the City of San José and Santa Clara County to complete the long-planned trail and linear park.

Benefits

- Preferred project provides 1% flood protection to approximately 5,000 homes, schools and businesses. Locally funded-only project provides 1% flood protection to the proposed rapid transit station and areas downstream from King Road
- Reduces sedimentation and maintenance requirements
- Improves water quality in Coyote Creek
- Provides opportunities for recreation improvements consistent with the City of San José and Santa Clara County Park master plans

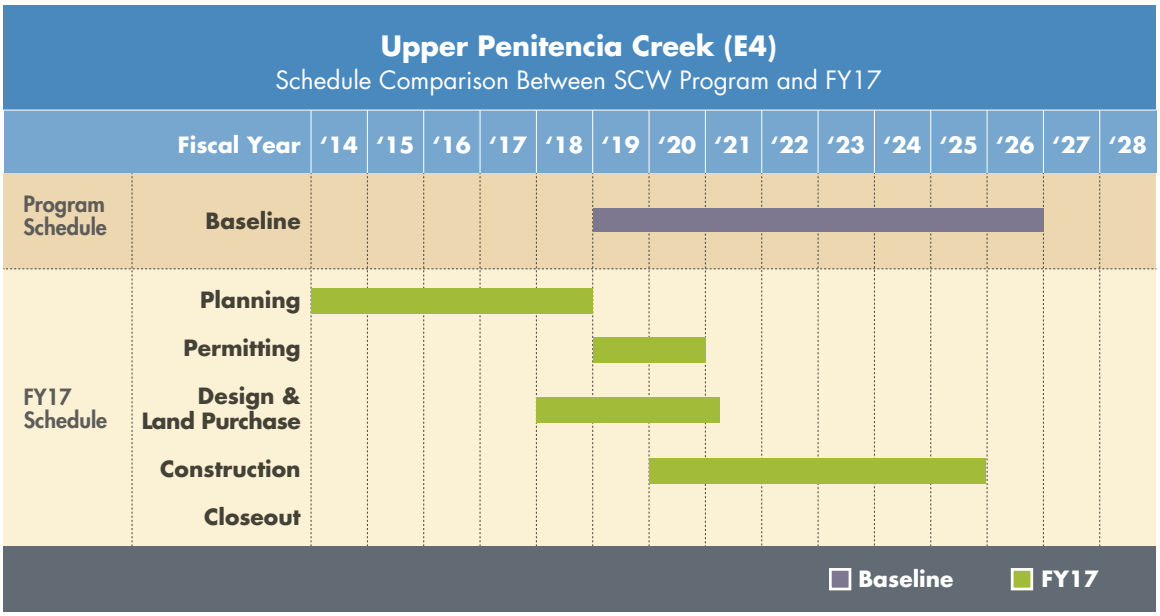
Key Performance Indicators (15-year Program)

1. Preferred project with federal and local funding: Construct a flood protection project to provide 1% flood protection to 5,000 homes, businesses and public buildings.
2. With local funding only: Acquire all necessary rights-of-way and construct a 1% flood protection project from Coyote Creek confluence to King Road.

Geographic Area of Benefit: San José

Project Location

Schedule



Status History

Fiscal Year	Status
FY 14	ADJUSTED
FY 15	ADJUSTED
FY 16	ADJUSTED

Status for FY17: On Target

Progress on KPI #1 and #2 (combined):

- In FY17, the District continued work on the project's planning study, focusing on a multi-purpose project that would provide long-term benefits for flood protection, fish and wildlife, riparian vegetation, water supply, and recreation. Some of the highlights over the year included:

  » Development of a hydraulic model of the floodplain using a state-of-the-art 2-D numerical model to determine the flood problem under various flood frequency events

  » Verification of creek hydrologic and hydraulic parameters

  » Partnered with San Francisco Estuary Institute to conduct a Flood Control 2.0 Landscape Concepts meeting with various stakeholders and a science hub of regional experts to ensure planning process begins with full range of concepts in mind

  » Continued development of Problem Definition Report/Memorandum

Financial Information

This project expended 0% of its Safe, Clean Water budget in FY17. The ongoing planning effort continues to be supported by the District's Watershed and Stream Stewardship fund. Therefore, no Safe, Clean Water funds were expended in FY17.

Opportunities and Challenges

Water supply

There are a number of water supply facilities along the project reaches, including several groundwater percolation ponds. Project alternatives should not reduce recharge operations in the watershed and should look for the opportunity to improve water supply functions.

Ecosystem restoration

The natural corridor at Upper Penitencia Creek is considered to be among the best remaining habitat areas in the Santa Clara Valley between Coyote Creek and the Diablo Range. Habitat in Upper Penitencia Creek could support several special-status species, including steelhead trout, California red-legged frog, California tiger salamander and Western pond turtle. The upstream portion of the project area contains valuable and relatively undisturbed native California sycamore alluvial woodland.

Recreation

There are several parks and open spaces along the creek, as well as the Penitencia Creek trail. These recreational features are well-used by the community, and there are opportunities for this project to work jointly with its partners to improve these resources.

Inundation maps

In response to an Independent Monitoring Committee (IMC) recommendation, the inundation maps were added to the project webpage to show the 5,000 homes that will receive flood protection from this project (*http://valleywater.org/SCW-E4.aspx*).

Confidence levels

Schedule: Moderate confidence

The project is on track to meet the Safe, Clean Water schedule. It is at the beginning of the planning phase.

Funding: Moderate confidence

The District will complete a full watershed planning study and project design. If only local funding continues to be available, the District will proceed with the local-funding-only option to complete a prioritized portion of the project. The project has not received USACE funding for the past 3 years and therefore the District made the determination to move forward with the local funding only project in FY16.

Permits: Moderate confidence

The resource agencies have been brought in very early in the planning process, and will continue to be engaged during planning and design. This will help to shape a true watershed project with associated ecosystem restoration measures and facilitate the acquisition of regulatory permits for project construction.

Jurisdictional Complexity: Moderate confidence

There are a variety of opinions among the resource agencies as to the most suitable features to incorporate into the project. The project is entirely within the City of San José. A tri-party agreement between the City of San José, Santa Clara County and the District to jointly use mutual resources along the creek for recreation, flood protection, and water supply purposes aligns the local jurisdictions well with the project.

Sheet pile installation work.

ON TARGET

Project E5 FY17 Highlights

- Completed construction of approximately 900 feet of floodwall on the Palo Alto side of the creek from E. Bayshore Road toward the San Francisco Bay as part of the local-state funding only project for S.F. Bay to Highway 101
- Continued work on the 95% design document for channel constrictions and resumed Pope/Chaucer Street Bridge design as part of the local-state funding only project for upstream of Highway 101

Project E5

San Francisquito Creek Flood Protection
San Francisco Bay to Middlefield Road – Palo Alto

The project is sponsored by the San Francisquito Creek Joint Powers Authority (SFCJPA), of which the District is a member agency, in partnership with the U.S. Army Corps of Engineers (USACE). The project builds on the planning and design tasks initiated as part of the Clean, Safe Creeks plan.

Preferred project: A federal-state-local partnership

This project will complete construction of setback levees and floodwalls from San Francisco Bay to Highway 101 to provide 1% (or 100-year) flood protection and ecosystem benefits. Upstream of Highway 101 the project will provide 1% flood protection, ecosystem protection, and recreational benefits.

The work upstream of Highway 101 will remedy channel constrictions and modify bridges at Newell Road and Pope/Chaucer Street, and include; a combination of: modified bridges at University Avenue and Middlefield Road; upstream detention; under-ground bypass channels; and floodwalls.

Local-state-funding-only project:

The local-state-funding-only project will be the same as the preferred project downstream of Highway 101; but upstream of Highway 101, the project will remedy channel constrictions and modify bridges at Newell Road and Pope/Chaucer Street to allow the channel to contain flood waters equal to the channel's capacity of 7,000 cubic feet per second, approximately a 30-year event. Allowing this level of water to flow through the channel will protect approximately 3,000 parcels in Palo Alto from a flood event close to the February 1998 flood, the largest on record. Currently the channel can only convey a 15-year flood event.

If sufficient funding becomes available, a 1% flood protection project upstream of Highway 101, including some combination of: modifications to the University Avenue and Middlefield Road bridges; upstream detention; underground bypass channels; and floodwalls, could be built.

Flooding History and Project Background

San Francisquito Creek is one of the last continuous riparian corridors on the San Francisco Peninsula, and is also home to 1 of the few remaining viable steelhead trout runs. The creek can cause severe flood damage with very little warning and has overflowed 7 times since 1910.

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

Benefits

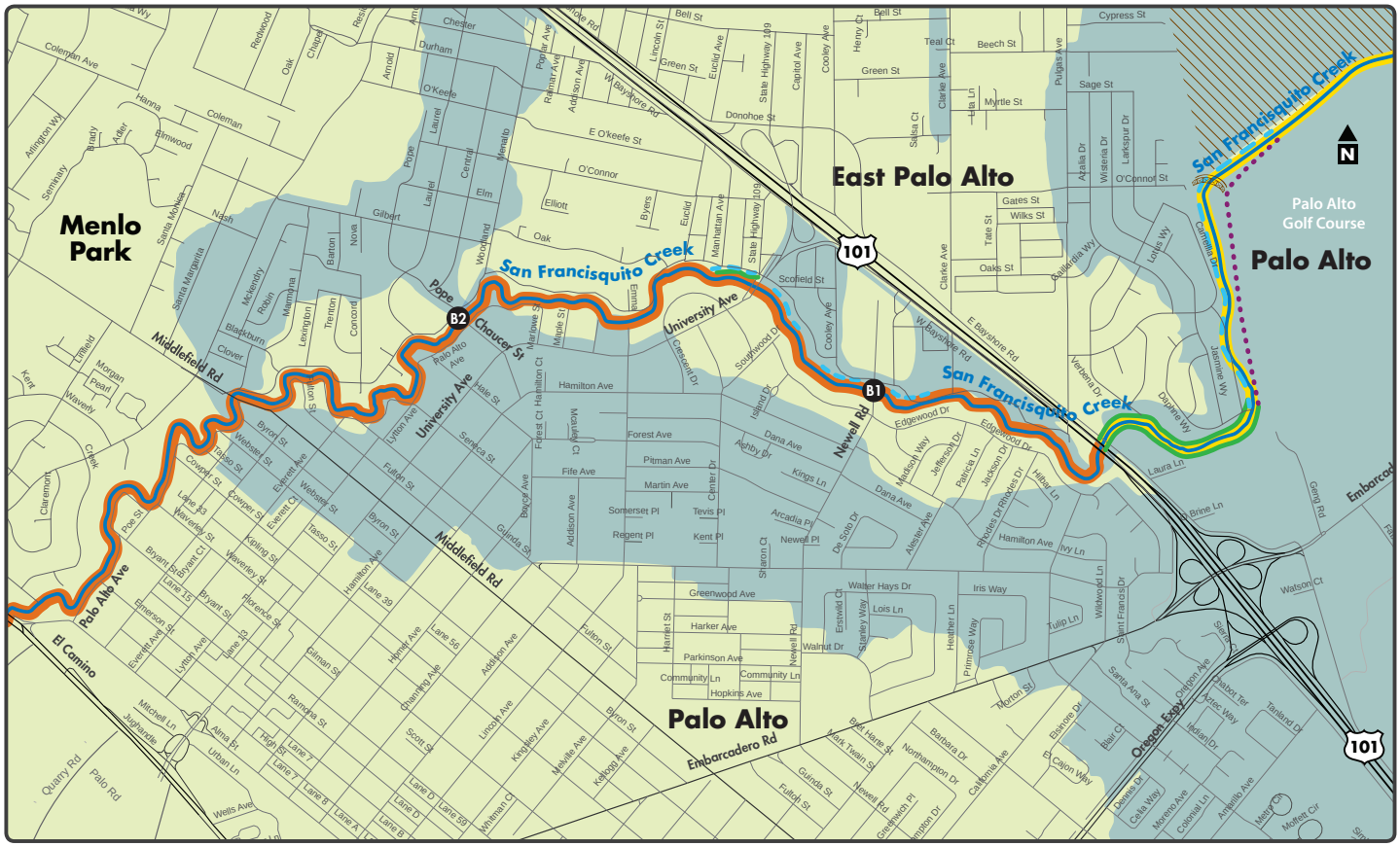
- Provides 1% flood protection for approximately 3,000 homes and businesses in Palo Alto
- Reduces bank erosion and sedimentation-related impacts along San Francisquito Creek
- Provides new or improved habitats for endangered species
- Improves water quality
- Enhances recreational opportunities for the community
- Leverages dollars via cost-shares and grants from the state Department of Water Resources and the California Department of Transportation

Key Performance Indicators (15-year Program)

1. Preferred project with federal, state and local funding: Protect more than 3,000 parcels by providing 1% flood protection.
2. With state and local funding only: Protect approximately 3,000 parcels from flooding (100-year protection downstream of Highway 101, and approximately 30-year protection upstream of Highway 101).

Geographic Area of Benefit: Palo Alto

Project Location



LEGEND

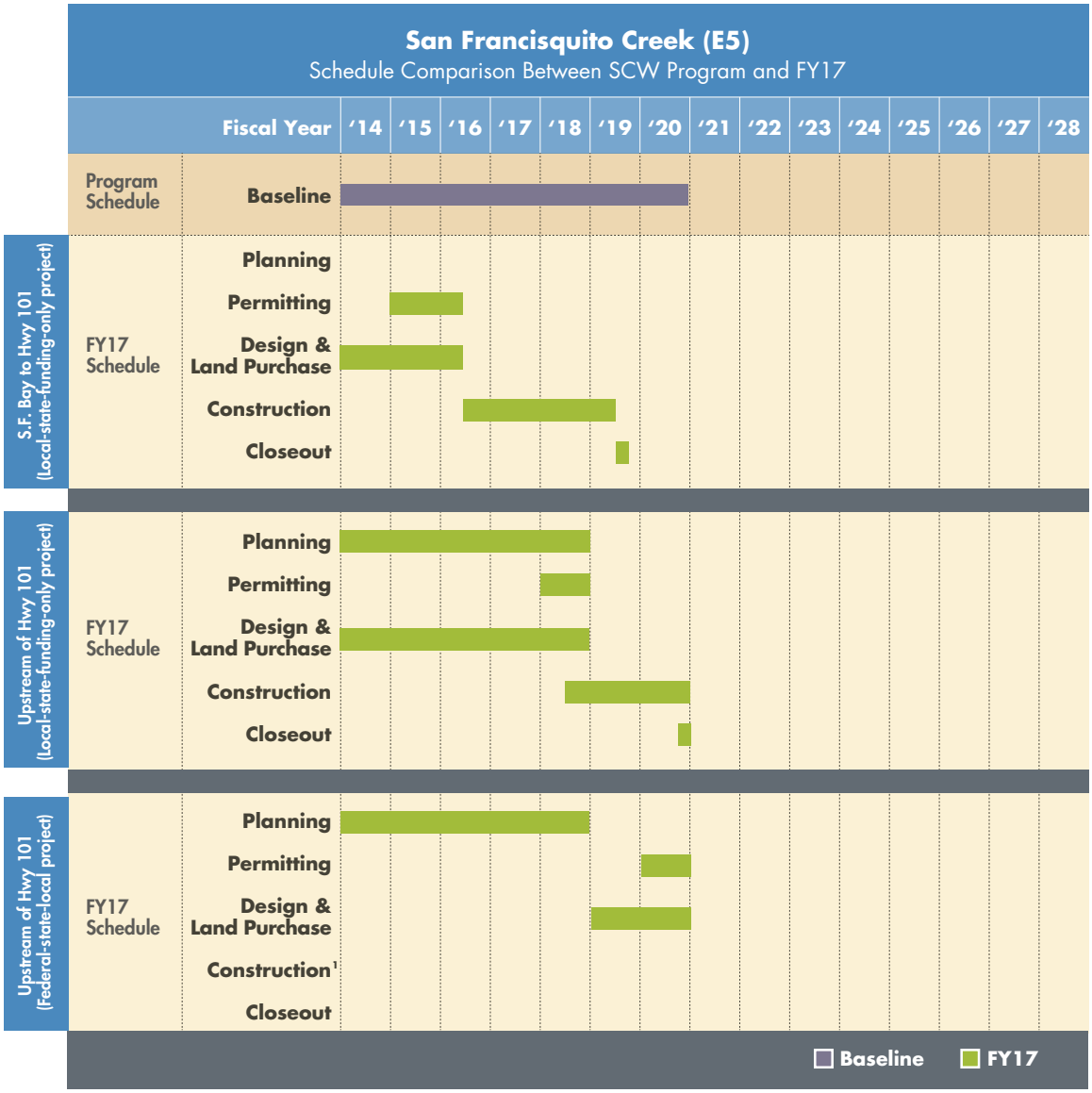
- SF Bay to 101 Project Limits — Downstream in yellow
- 101 to El Camino Project Limits — Upstream in orange
- New Floodwalls
- Widened Channel
- Relocated Levee
- Friendship Bridge
- 100-year FEMA Floodzone
- Faber Tract Marsh

Bridge Modification Projects

Current:

- B1 Newell Rd (Palo Alto)
- B2 Pope/Chaucer St (SCVWD)

Schedule



[1]There is no schedule for construction at this time because USACE is currently only authorized to complete the feasibility study. The project will not be eligible to receive federal funding for construction until both the feasibility study and design are complete.

Status History

Fiscal Year	Status
FY 14	*MODIFIED*
FY 15	*ON TARGET*
FY 16	*ON TARGET*

Status for FY17: On Target

Progress on KPI #1 and #2 (combined):

S.F. Bay to Highway 101 Project

Local-state-funding only - design and construction of 1% flood protection project

- In year 2 of the 3-year construction project, completed construction of the concrete block retaining wall, 20-foot high fence and pedestrian ramp adjacent to the International School of the Peninsula, and approximately 900 feet of floodwall on the Palo Alto side of the creek from E. Bayshore Road toward the San Francisco Bay.

Upstream of Highway 101 Project

Federal, state and local funding - planning and design of 1% flood protection project

Currently, USACE is preparing a Smart Planning Waiver request from their headquarters for a new schedule and project cost. This waiver is required since the execution of the project has exceeded the Smart Planning criteria (completion of the study within 3 years and under $3 million). They are also preparing a revised Project Management Plan (PMP) to incorporate these changes.

USACE has completed the following deliverables:

- Economic analysis of the pre-project conditions
- Hydraulic modeling of alternatives
- Obtained an environmental consultant to prepare National Environmental Policy Act (NEPA) documentation

USACE will continue working on the following deliverables in FY18:

- Preparing Tentatively Selected Plan
- Completing Draft Feasibility Report

Local-state-funding-only - construction of approximately 30-year flood protection project

Channel constrictions

- Continue to work on the 95% design document for channel constrictions upstream of Highway 101. The design document is being coordinated with the SFCJPA and expected to be completed in December 2017.
- The SFCJPA has obtained an environmental consultant to prepare the Environmental Impact Report (EIR) and the draft EIR is scheduled to be released in fall 2017.

Newell Road Bridge

- The City of Palo Alto is responsible for planning, permitting, design, and construction of the Newell Road Bridge Replacement project. The planning, permitting and design phases are primarily funded by a Caltrans grant. The District is contributing the required local cost share for the grant. The planning phase will be complete upon the certification of the Newell Road Bridge Environmental Impact Report, which is estimated to be completed in winter 2017. The design is scheduled to be completed by December 2018. Construction is set to begin in the spring of 2019 and will be completed by the end of 2019.

Pope/Chaucer Street Bridge

- Pope/Chaucer Street Bridge design has resumed and is expected to be completed in 2018. Construction is expected to begin in the summer of 2019 and be completed by the end of 2020.

Financial Information

In FY17, 81% of the total annual budget was expended. The S.F. Bay to Highway 101 project was slightly under expended at 74% of its budget due to a delay in finalizing an agreement for a real estate transaction. The project remains on target. The upstream of Highway 101 project expended 101% of FY17 budget.

Financial Summary ($ Thousands)
E5. San Francisquito Creek

	Fiscal Year 2016-2017					15-year Program	
Project No. and Name	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
		Actual	Encumbrance	Total			
26284001 Planning and Design (Highway 101 to Searsville Dam)	$550	$555	$0	$555	101%	$1,449	303%
26284002 Construction (SF Bay to Highway 101 and Upstream Elements)	$1,439	$1,063	$0	$1,063	74%	$48,672	64%
Total	**$1,989**	**$1,617**	**$0**	**$1,617**	**81%**	**$50,121**	**71%**

Opportunities and Challenges

Confidence levels

S.F. Bay to Highway 101 Project

Schedule: High confidence

Despite recent findings that determined that the endangered Ridgway's rail were present within a portion of the project area, the construction schedule remains on track for completion within the Safe, Clean Water Program deadline. To accommodate the rail, construction will be performed away from rail area in summer 2017 until the nesting season is over on September 1. The District is also implementing the measures identified in the Species Avoidance Plan approved by the regulatory agencies to reduce the impact to species such as the endangered salt marsh harvest mouse.

Funding: Moderate confidence

The District recently entered into a First Amended Construction Funding Agreement with the SFCJPA and its member agencies to fully fund construction of the S.F. Bay to Highway 101 Project. There are a few significant potential claims by the contractor that could impact the funding to complete the construction of the project.

Permits: High confidence

All resource agency permissions have been acquired.

Jurisdictional Complexity: High confidence

The jurisdictional complexity of this project is unparalleled among Safe, Clean Water projects, as this project requires cooperation with the SFCJPA and its member agencies, which include the District, the cities of Palo Alto, East Palo Alto and Menlo Park and the San Mateo County Flood Control District. Despite this, the District has high confidence that the jurisdictions will continue to work together to accomplish the common goal of providing flood protection along San Francisquito Creek.

Upstream of Highway 101 Project

Schedule: Moderate confidence

Prior to constructing the local-state-funding-only project, the USACE feasibility study must be completed and state and federal regulatory permits must be secured.

Funding: Moderate confidence

While funding has been secured for constructing the local-state-funding-only project elements (which include remedying channel constrictions and modifications to Newell Road Bridge and Pope/Chaucer Street Bridge), there is the possibility of a funding shortfall due to increasing construction costs and currently unknown design elements. Upon completion of the USACE feasibility study, the SFCJPA will seek federal funding for the 1% flood protection project upstream of Highway 101.

Permits: Moderate confidence

The District does not expect any significant challenges with the acquisition of the regulatory permits for this phase of the project and is moderately confident it will receive the permits necessary to complete construction of the local-state-funding-only project by the Safe, Clean Water Program's identified completion date. The SFCJPA is also scheduling stakeholder meetings with regulators to address their concerns and incorporate their comments in the final EIR to facilitate the permitting process.

Jurisdictional Complexity: High confidence

The jurisdictional complexity of this project is unparalleled among Safe, Clean Water projects, as this project requires cooperation with the SFCJPA and its member agencies, which include the District, the cities of Palo Alto, East Palo Alto and Menlo Park and the San Mateo County Flood Control District. In addition, there are key project stakeholders, including USACE and Stanford University's Searsville Dam Project. Despite this, the District has high confidence that the jurisdictions will continue to work together to accomplish the common goal of providing flood protection along San Francisquito Creek.

Upper Llagas Creek flooding.

ADJUSTED

Project E6 FY17 Highlights

- Adjusted schedule to reflect project delays (see Opportunities and Challenges)
- Completed Phase 1 design work, Phase 2 design continues
- Federal Emergency Management Agency (FEMA) accepted the Conditional Letter of Map Revision
- Continued property acquisitions for Phase 1 and Phase 2
- Received 1 of 3 regulatory permits; the California Department of Fish and Wildlife 1600 Permit.

Project E6

Upper Llagas Creek Flood Protection Project Buena Vista Avenue to Wright Avenue – Morgan Hill, San Martin, Gilroy

Preferred project: A federal-state-local partnership

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 Wright Avenue, 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. The District 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.

Flooding History and Project Background

The area sustained damage in 1937, 1955, 1958, 1962, 1963, 1969, 1982, 1986, 1996, 1997, 1998, 2002, 2004, 2008, 2009, and 2011. In 2009, many businesses and residences in downtown Morgan Hill were flooded under 1 foot of water. The project builds on the planning, design and property acquisition initiated under the Clean, Safe Creeks plan of 2000.

Benefits

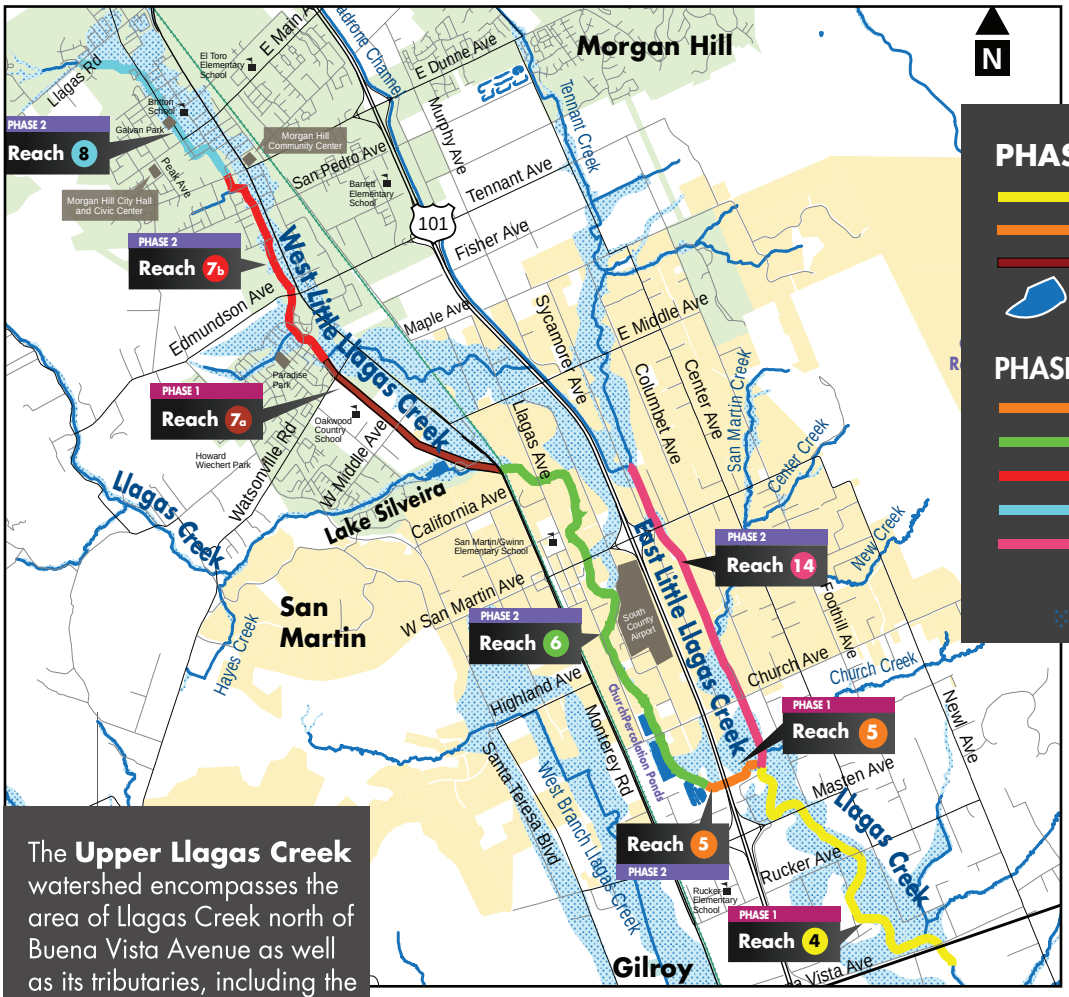
- Preferred project provides 1% flood capacity for 4 miles of channel in downtown Morgan Hill, protecting approximately 1,100 homes and 500 businesses
- Preferred project provides 10-year flood protection to approximately 1,300 agricultural acres in Morgan Hill, Gilroy and San Martin
- Locally-funded-only project provides 1% 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

Key Performance Indicators (15-year Program)

1. Preferred project with federal and local funding: Provide flood protection to 1,100 homes, 500 businesses, and 1,300 agricultural acres, while improving stream habitat.
2. With local funding only: Provide 100-year flood protection for Reach 7 only (up to W. Dunne Avenue in Morgan Hill). A limited number of homes and businesses will be protected.

Geographic Area of Benefit: Morgan Hill, San Martin and Gilroy

Project Location



Legend

PHASE 1 (4.2 miles)

Reach 4	2.4 miles
Reach 5	0.3 miles
Reach 7a	1.5 miles
Lake Silveira	On-site mitgation

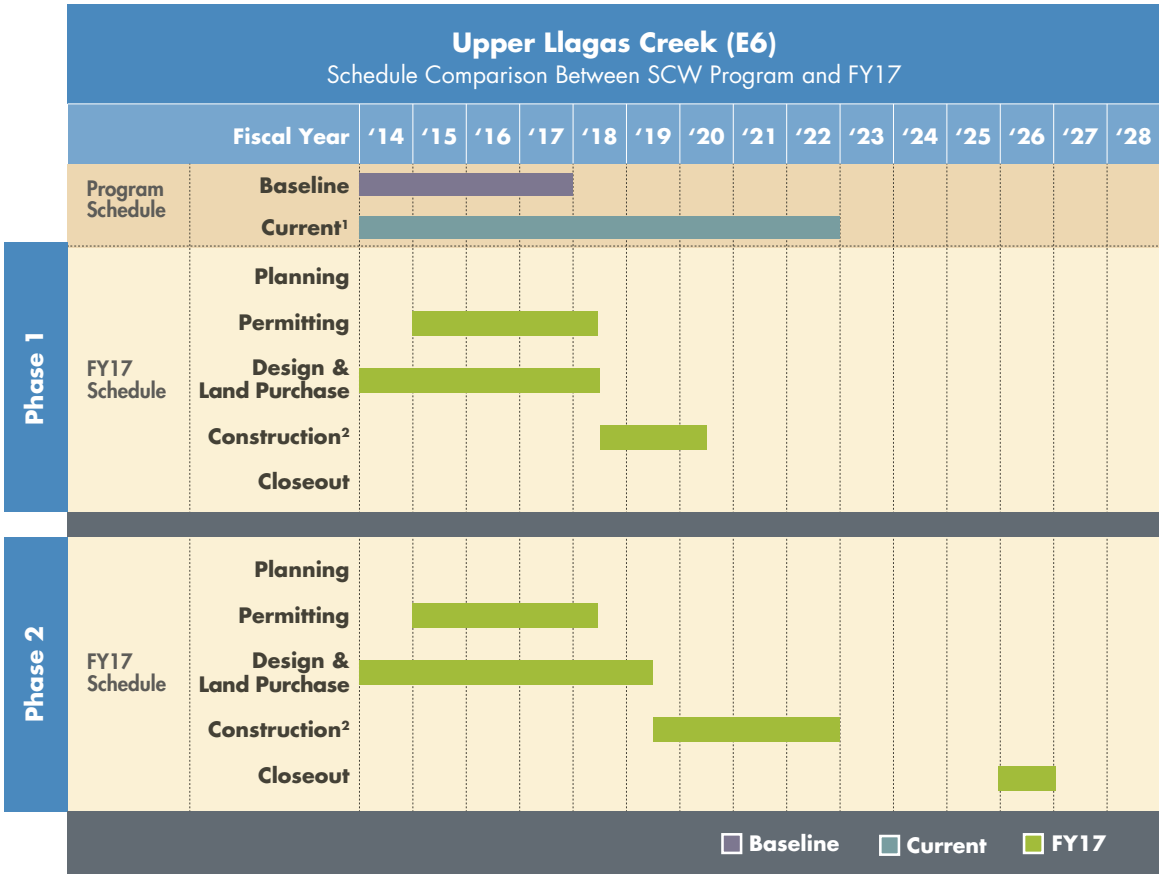
PHASE 2 (9.7 miles)

Reach 5	0.2 miles
Reach 6	3.2 miles
Reach 7b	1.4 miles
Reach 8	1.5 miles
Reach 14	3.4 miles

Est. 100-year flood area

The **Upper Llagas Creek** watershed encompasses the area of Llagas Creek north of Buena Vista Avenue as well as its tributaries, including the West Little Llagas and East Little Llagas Creeks.

Schedule



[1] Board approved schedule adjustments through the change control processes in FY16 and FY17.

[2] Construction also includes a 3-year revegetation establishment period, not shown.

Status History

Fiscal Year	Status
FY 14	*ON TARGET*
FY 15	*ADJUSTED*
FY 16	*ADJUSTED*

Status for FY17: Adjusted (schedule adjustment)

Progress on KPI #1 and #2 (combined):

Phase 1 – Reaches 4, 5 (portion), and 7A (Buena Vista Avenue to Highway 101 in San Martin and from Monterey Road to Watsonville Road in Morgan Hill)

- The Phase 1 design work was completed in FY15.

- To date, 38 of 41 properties necessary for Phase 1 construction have been acquired. The District continues work on acquisition of the necessary rights of way required to advertise, award, and construct the Phase 1 flood protection improvements.

Phase 2 – Reaches 5 (portion), 6, 7B, 8 and 14 (Highway 101 to Monterey Road in San Martin, from Watsonville Road to Llagas Road in Morgan Hill, and from Sycamore Avenue to approximately Highway 101 in San Martin)

- 100% Phase 2 design submittal is scheduled for completion in December 2017.
- To date, 57 permanent rights of way of the 105 (76 permanent/29 temporary construction easements) necessary acquisitions for Phase 2 construction have been acquired. Environmental site assessments, appraisals, offers and acquisitions are underway for the remaining properties needed for Phase 2.
- Phase 2 construction will require an additional estimated $46 million from state subventions, federal, and/or Safe, Clean Water funding to complete construction.

Upon completion of Phase 2, the project will provide flood protection to 1,100 homes, 500 businesses and 1,300 agricultural acres, while improving stream habitat.

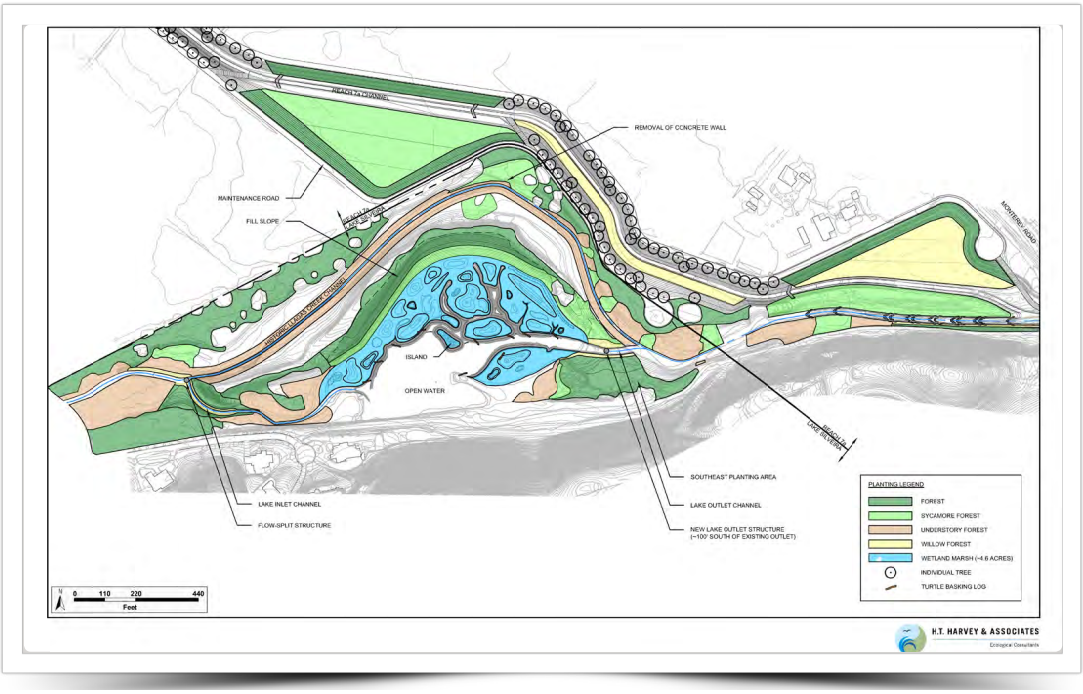
Phase 1 and Phase 2 Combined

- FEMA accepted the Conditional Letter of Map Revision (CLOMR) package on October 19, 2016. After the project has been constructed, the District will prepare a Letter of Map Revision (LOMR) to FEMA to initiate and facilitate a revision to the flood maps.
- The District will continue work with Santa Clara County Parks and Recreation on acquisition of approximately 2,000 linear feet of stream channel and present-day Lake Silveira to implement the compensatory mitigation recommended by the U.S. Fish and Wildlife Service (USFWS). The design plans for the lake are completed and construction of this mitigation element is planned during Phase 1 of construction.

Silveira Lake

- Project construction is subject to receipt of permits from state and federal regulatory agencies.
- The project was approved and the Final Environmental Impact Report (Final EIR) was certified by the District Board on June 10, 2014.
- The District will utilize the results of the California Rapid Assessment Method (CRAM) analysis to provide an assessment of the pre- and post-project environmental condition within the project reaches including the compensatory mitigation site, Lake Silveira (see Figure 1). The analysis will also provide an assessment of the performance/success of the revegetation sites, and to demonstrate compliance with regulatory performance criteria and requisite targets. A draft report was completed and received by the District in May 2016 for review. The final pre-project environmental condition report was completed in March 2017.

Figure 1 below provides a proposed design for the compensatory mitigation element at Lake Silveira:



Financial Information

In FY17, 19% of the total annual budget was expended. The real estate acquisitions project (KPIs #1 and #2) expended 20% of its FY17 budget. Funds were not fully expended in FY17 due to ongoing negotiations to acquire the required properties for the project. The construction project (KPIs #1 and #2) had 16% expenditure in FY17 for tasks related to future construction. Construction funding for Phase 1 is budgeted in this project and due to delays in real estate transactions and permitting; construction did not begin in FY17. The design project (KPIs #1 and #2) expended 101% of its FY17 budget. The project design was slightly over expended due to increased labor hours needed to facilitate the completion of the Phase 1 design and continuance of work on the Phase 2 design.

Financial Summary ($ Thousands)
E6. Upper Llagas Creek

Fiscal Year 2016-2017						15-year Program	
Project No. and Name	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
		Actual	Encumbrance	Total			
26174051 Real Estate Acquisitions	$22,158	$4,131	$226	$4,357	20%	$60,233	30%
26174052 Construction	$30,029	$1,159	$3,527	$4,686	16%	$47,931	11%
26174054 Design	$974	$322	$658	$980	101%	$5,329	177%
Total	**$53,160**	**$5,612**	**$4,411**	**$10,022**	**19%**	**$113,492**	**29%**

Opportunities and Challenges

Schedule adjustment

The Board approved a schedule adjustment on April 11, 2017 to adjust the project completion date to FY22.

The original project schedule indicated an estimated Phase 1 construction completion date of December 2016 (FY17). In 2010, the District assumed the Project lead from USACE-Civil Works due to lack of federal funding. The District completed the Project Environmental Impact Report (EIR) that was certified in June 2014 and which was a prerequisite for the District to acquire more than 100 properties, including the remaining need to acquire Lake Silveira (on-site compensatory mitigation) from County Parks and Recreation.

The District has completed the Phase 1 design (100%) and the Phase 2 design is at 95%. The District has submitted all the required permit applications and is currently in consultation with the various regulatory agencies to obtain the required permits. Before a USACE-Regulatory permit can be negotiated/issued, the USACE needs to finalize their Project Environmental Impact Statement (EIS). All of the above items were factors in the Phase 1 construction start date being delayed. It is currently estimated that Phase 1 construction will begin in FY18, with completion of the flood protection improvements by FY20. Phase 2 construction is currently estimated to begin in FY19 and be completed by FY22.

Environmental Impact Statement

The USACE is expected to issue the Final EIS in September 2017, following a Section 7 consultation with USFWS and National Marine Fisheries Service (NMFS) planned for August 2017. The USACE must complete the Final EIS, publish the Record of Decision, and issue a 404 permit to enable construction to proceed.

Confidence levels

Schedule: Moderate confidence

Along with permitting, the greatest factor affecting the schedule is the remaining property acquisitions. Approximately 146 property acquisitions (Phase 1: 41 parcels; Phase 2: 105 (76 permanent/29 temporary construction) parcels) are required for the project. 38 of the 41 parcels have been acquired for Phase 1 as of June 2017. The 3 remaining parcels are in negotiations.

There are Phase 2 properties owned by the City of Morgan Hill and County of Santa Clara Roads and Airports that must also be acquired before the project can be advertised for construction. Negotiations for these various City of Morgan Hill and County of Santa Clara Roads and Airports properties are proceeding forward and remain on target for acquisition in calendar year 2017.

As described earlier, the District must obtain the necessary rights of way and permits to be able to advertise the project for construction. The major onsite mitigation element for this project is Lake Silveira, which is currently owned by Santa Clara County Parks and Recreation. The District is working with County Parks and the City of Morgan Hill on a Purchase and Sale Agreement on Lake Silveira.

The District is moderately confident that property acquisitions will be completed allowing the project to remain on schedule.

Funding: Moderate confidence

While construction of Phase 1 is fully funded through the Safe, Clean Water Program, Phase 2 construction must also be completed to achieve KPI #1. Currently, Phase 2 construction will require an additional estimated $46 million from state subventions, federal, and/or Safe, Clean Water funding to complete construction. With a total estimated construction cost of $131 million (Phase 1 - $46 million, Phase 2 - $85 million), project completion will be difficult to achieve with available local funding. The District will continue to explore and pursue federal funding opportunities. Completion of just Phase 1 construction will not provide 1% flood protection to the City of Morgan Hill.

Permits: Moderate confidence

The District must incorporate regulatory agency permit requirements into the Final Construction Documents before the construction contract can be bid and awarded. At this time, the District has a moderate confidence level that permits will be received in a timely manner.

To date, the District has received 1 of the 3 permits required prior to advertisement for construction. The California Department of Fish and Wildlife (CDFW) issued the final Streambed Alteration Agreement on January 11, 2017. On May 26, 2017, the Central Coast Regional Water Quality Control Board (RWQCB) recommended the project for certification with receipt of this 401 permit anticipated by July 2017. Lastly, USACE must complete the Final EIS, publish the Record of Decision, and issue a 404 permit to enable construction to proceed. The District has been consulting with the various resource agencies through the various design submittals (30%, 60%, and 90%) for more than 5 years. Comments from the regulatory agencies received to date have been addressed and are reflected in the project design documents.

Jurisdictional Complexity: Moderate confidence

Given the size and complexity of this project, multiple agencies and entities have jurisdictional influence on its progression. These agencies include USACE, City of Morgan Hill, Santa Clara County Parks and Recreation, and County of Santa Clara Roads and Airports.

Chicago Marsh - S.F. Bay Shoreline.

ADJUSTED

Project E7 FY17 Highlights

- Adjusted schedule to reflect project delays (see Opportunities and Challenges)
- Completed the preliminary feasibility study of EIAs 1-10
- Closed the Department of Water Resources Local Levee Assistance grant
- Entered into a design agreement with the study partners to begin the preliminary engineering and design phase and permitting coordination efforts for EIA 11
- Completed the EIA 11 Reach 1 levee 30% design and began real estate transactions/acquisitions to support construction of the Authorized Project

Project E7

San Francisco Bay Shoreline Protection Milpitas, Mountain View, Palo Alto, San José, Santa Clara and Sunnyvale

This project is a partnership with the California State Coastal Conservancy, the U.S. Army Corps of Engineers (USACE), and regional stakeholders to provide tidal flood protection, restore and enhance tidal marsh and related habitats, and provide recreational and public access opportunities. Initial construction for flood protection is planned for Economic Impact Area (EIA) 11, which is the urban area of North San José and the community of Alviso.

This project relies on federal participation from USACE to review and approve the plans. Without federal participation, the District cannot implement additional planning, design and construction due to limited available funding. The proposed Safe, Clean Water funding provides the District's cost share to complete the planning study for EIAs 1-10, and provides a portion of the District's cost share toward design and construction of flood protection improvements in the North San José area (EIA 11), in and near Alviso.

Flooding History and Project Background

This project stems from the 2003 acquisition of thousands of acres of former South Bay salt production ponds, purchased for restoration with combined public and private funding. The South Bay Shoreline Protection Project is an important component of the South Bay Salt Ponds Restoration Project, a large, multi-agency effort to restore 16,500 acres of tidal wetlands which involves all South Bay cities that meet the San Francisco Bay. Without incorporating flood protection measures, proposed recreational use and environmental restoration is likely to reduce the effectiveness of existing shoreline levees formerly maintained for salt production. Project E7 would upgrade levees to protect Silicon Valley's "Golden Triangle," bounded by Highways 101, 237 and 880, and extending north into the Baylands of Milpitas. Multiple flood events since the mid-1990s have damaged business operations in this area, now home to major high-tech corporations including Intel, Google, Yahoo, Cisco, and others. The project would also protect Alviso neighborhoods, as well as important infrastructure such as airports and sewage treatment plants.

The existing multi-agency partnerships for the South Bay Salt Ponds Restoration project and the San Francisco Bay Shoreline Study ensure that all goals for this largest wetland restoration on the West Coast will be incorporated. The Safe, Clean Water measure provides a share of the total funding needed for planning

and design phases for the full shoreline project area. It also provides the funding needed to purchase lands, easements and rights-of-way as necessary to construct improvements in EIA 11, and a share of the construction costs for that portion of the project.

Benefits

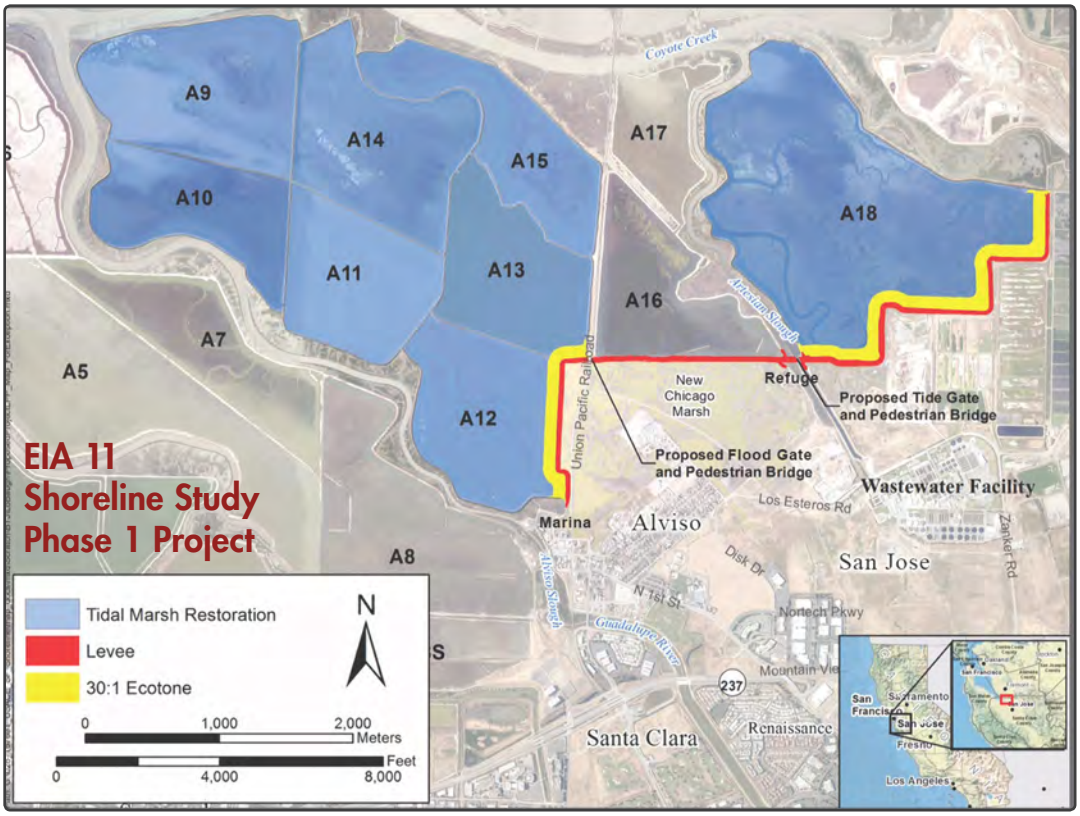
- Protects more than 1,000 residential structures and 100 non-residential structures (EIA 11)
- Provides planning and design to protect nearly 4,700 acres and more than 5,000 structures, including roads, highways, parks, airports and sewage treatment plants in all of Santa Clara County
- Allows for the restoration of 2,900 acres of tidal marsh and related habitats (EIA 11)
- Provides educational, recreational and public access opportunities

Key Performance Indicators (15-year Program)

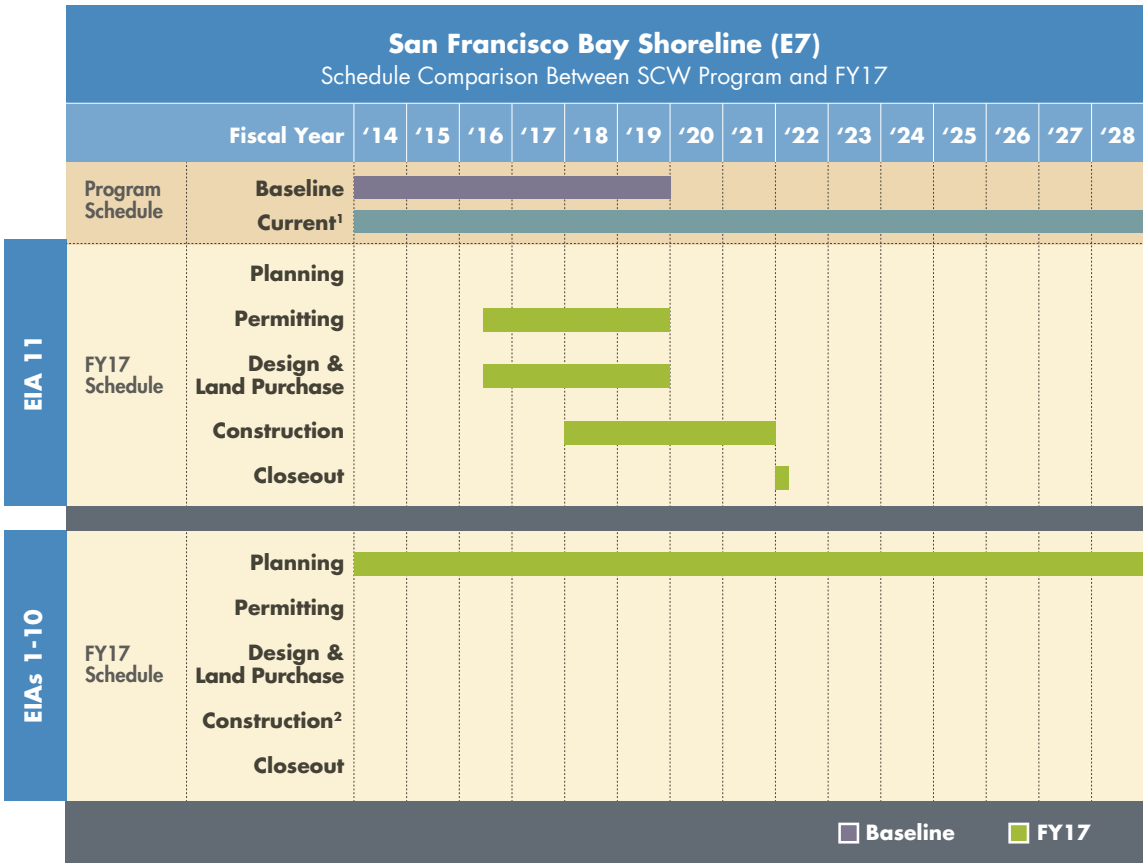
1. Provide portion of the local share of funding for planning and design phases for the former salt production ponds and Santa Clara County shoreline area.
2. Provide portion of the local share of funding toward estimated cost of initial project phase (EIA 11).

Geographic Area of Benefit: Milpitas, Mountain View, Palo Alto, San José, Santa Clara and Sunnyvale

Project Location



Schedule



[1]Board approved a schedule adjustment through the change control process in FY17.
[2] Construction phases are not funded by the Safe, Clean Water Program.

Status History

Fiscal Year	Status
FY 14	ON TARGET
FY 15	ON TARGET
FY 16	ON TARGET

Status for FY17: Adjusted (schedule adjustment)

Progress on KPI #1:

San Francisco Bay Shoreline Protection – San Francisquito Creek to Guadalupe River (EIAs 1-10)

- This study effort is part of the planning phase for the former salt production ponds and Santa Clara County shoreline area. The preliminary feasibility study of EIAs 1-10 was completed in March 2017. The Department of Water Resources Local Levee Assistance grant for this effort was closed in April 2017. The District began preparing for a USACE workshop to explore the next study phase. A draft memorandum of understanding (MOU) is being prepared to partner with the South Bay Salt Pond Phase 2 Project (SBSPP) for construction of the Mountain View, EIAs 4 and 5, flood risk management levee.

Progress on KPI #2:

San Francisco Bay Shoreline Protection – Urban area of North San José/Alviso/San Jose-Santa Clara Regional Wastewater Facility (EIA 11)

- For EIA 11, the study partners entered into a design agreement in July 2016 to begin the project's preliminary engineering and design phase and permitting coordination efforts. Reach 1 levee design, from the Alviso Marina to the Union Pacific Railroad, began in October 2016 and completed 30% design in February 2017. The District began the Lands, Easements, Rights-of-Way, Relocation, and Disposal Area acquisition effort to support construction of the Authorized Project.

Financial Information

In FY17, 30% of the total annual budget was expended. The San Francisco Bay Shoreline Protection, EIAs 1-10 project (KPI #1) expended 36% of its FY17 budget. This was due to reduced costs for the consultant services contract for hydraulic, coastal and economic analysis. The San Francisco Bay Shoreline Protection, EIA 11 project (KPI #2) expended 29% of its FY17 budget. This was due to not beginning preliminary engineering and design phase work until after October 2016 because of a USACE project manager change and not receiving USACE funds until after October 1, even though the Design Agreement was signed in July 2016. In addition, District work has been limited to participation in coordination meetings and a cost share contribution of $500,000. The District's cost share match also cannot exceed the USACE's capabilities.

Financial Summary ($ Thousands)
E7. San Francisco Bay Shoreline Protection

	Fiscal Year 2016-2017					15-year Program	
Project No. and Name	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
		Actual	Encumbrance	Total			
26444002 EIAs 1-10	$1,044	$376	$0	$376	36%	$22,288	8%
26444001 EIA 11	$6,246	$772	$1,045	$1,818	29%	$17,052	11%
Total	**$7,290**	**$1,148**	**$1,046**	**$2,194**	**30%**	**$39,340**	**9%**

Opportunities and Challenges

Schedule adjustment

On April 11, 2017, the Board approved a schedule adjustment. The original project schedule estimated a completion date of FY19. Due to uncertainties with the permitting process, the need to coordinate with the Union Pacific Railroad and the City of San José, as well as the risk of not receiving continued federal funding, the Project E7 completion date, for both KPIs, was extended to FY28.

Confidence levels

San Francisco Bay Shoreline Protection – San Francisquito Creek to Guadalupe River (EIAs 1-10)

Schedule: Low confidence

While the District did complete its preliminary feasibility study on schedule and within budget, the next step would be to conduct a USACE Charrette to determine the next USACE study phase. USACE did not receive funding to conduct a Charrette and it is unknown when they may receive funding. The District has moved forward on studying EIAs 4 and 5, and EIA 10 with the SBSPP effort. The District will continue to prepare for a USACE Charrette and working with the SBSPP effort.

Funding: Low confidence

Current study effort is funded through the Safe, Clean Water Program; however, based on the cost of studying EIA 11 ($22 million for Integrated Feasibility Report and combined Environmental Document), the District anticipates the current funding may not be sufficient and will need to be supplemented by the San Francisco Bay Restoration Authority Measure AA funds as well as with funds from partnering agencies.

Permits: N/A

Current study efforts do not require permits.

Jurisdictional Complexity: Low confidence

In developing the coastal flood protection levee alignment, the District must work with the cities of Palo Alto, Mountain View, Sunnyvale, and San José; along with the National Aeronautics and Space Administration's (NASA) Ames Research and Visitor Center at Moffett Federal Airfield, United States Fish and Wildlife Service, California State Coastal Conservancy, Midpeninsula Regional Open Space District and USACE. This is an ongoing challenge because it requires extensive regional coordination for a significant coastal tidal flood protection project with an estimated price tag of nearly $800 million. Currently Safe, Clean Water provides nearly $1.1 million for a portion of the local share of funding.

San Francisco Bay Shoreline Protection – Urban area of North San Jose/Alviso/San Jose-Santa Clara Regional Wastewater Facility (EIA 11)

Schedule: Low confidence

While the feasibility study for EIA 11 was completed in FY16, due to uncertainties with the permitting process, the need to coordinate with the Union Pacific Railroad and the City of San José, as well as the risk of not receiving continued federal funding, the District recommended that the Project E7 completion date, for both KPIs, be extended to FY28. The Board approved this schedule adjustment through the change control process in FY17. Despite the adjusted schedule, the District's confidence remains low due to the need for a new construction start authorization by the USACE. Obtaining a construction new start authorization is a highly competitive process among USACE projects and selection is dependent on the current administration's priorities.

Funding: Moderate confidence

There is the risk that the full amount of federal funding will not be available by the required fiscal years. USACE has been identified to receive $500,000 in FY17 work plan funds but to date, the study has only received $50,000 to continue preliminary engineering and design phase efforts. The project was included in the next Water Resources Development Act (WRDA 2016) to be authorized for construction. However, the project did not receive a new construction start authorization nor any construction funding in FY18. The moderate confidence level is based on continued uncertainties and risk for continued federal funding and authorization of the USACE project for construction in WRDA 2016.

Permits: Moderate confidence

The District's confidence regarding permits is moderate due to complexities of receiving permits required by the Regional Water Quality Control Board and Bay Conservation and Development Commission's regulatory policies.

Jurisdictional Complexity: Moderate confidence

The overall project confidence level is moderate due to the complexity involved in working with the City of San José (moderate), the San José-Santa Clara Regional Wastewater Facility (moderate) and the Union Pacific Railroad (low). The District has an MOU in place with the USFWS for the implementation of the project on the Don Edwards National Wildlife Refuge land (high).

Upper Guadalupe River Reach 10B.

ON TARGET

Project E8 FY17 Highlights

- Completed erosion repair for Island #10 in Reach 6
- USACE completed 65% design documentation for Reaches 7 and 8
- USACE awarded the contract for the Reach 10B and Reach 12 mitigation planting work

Project E8

Upper Guadalupe River Flood Protection Highway 280 to Blossom Hill Road – San José

Preferred project: A federal-state-local partnership

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

Flooding History and Project Background

Damaging flood events occurred in 1982, 1983, 1986, 1995 and 1998. Severe flooding in 1995 damaged more than 150 homes in the Gardner, Willow Glen, and South San José residential districts, and shut down Highway 87 and the parallel light rail line – both major commuter thoroughfares. Freeway and light rail flooding occurred again in 1998.

The Upper Guadalupe River Flood Protection project was authorized construction by the USACE in 1999 and received local funding in 2000, followed by the start of construction in 2008. Fish passage, erosion protection and other components were constructed earlier.

To increase the level of flood protection while keeping the preferred project viable, the local-only plan funded by Clean, Safe Creeks was modified by the District Board in March 2012 to provide a basis to advance the full federal project as soon as funds become available. The plan is now to acquire all necessary rights-of-way and relocate bridges and utilities in preparation for the full, preferred project. The modified plan also includes design and construction for both Reach 6 (Interstate 280 to the Union Pacific Railroad crossing) and Reach 12 (Branham Lane to Blossom Hill Road).

Benefits

- Preferred project will construct 1% (or 100-year) flood conveyance capacity for 5.5 miles of channel in San José, protecting approximately 6,280 homes, 320 businesses and 10 schools/institutions
- Local funding only constructs improvements to 4,100 linear feet to convey 1% flow
- Improves stream habitat values and fisheries

- Improves stream water quality
- Allows for creekside trail access

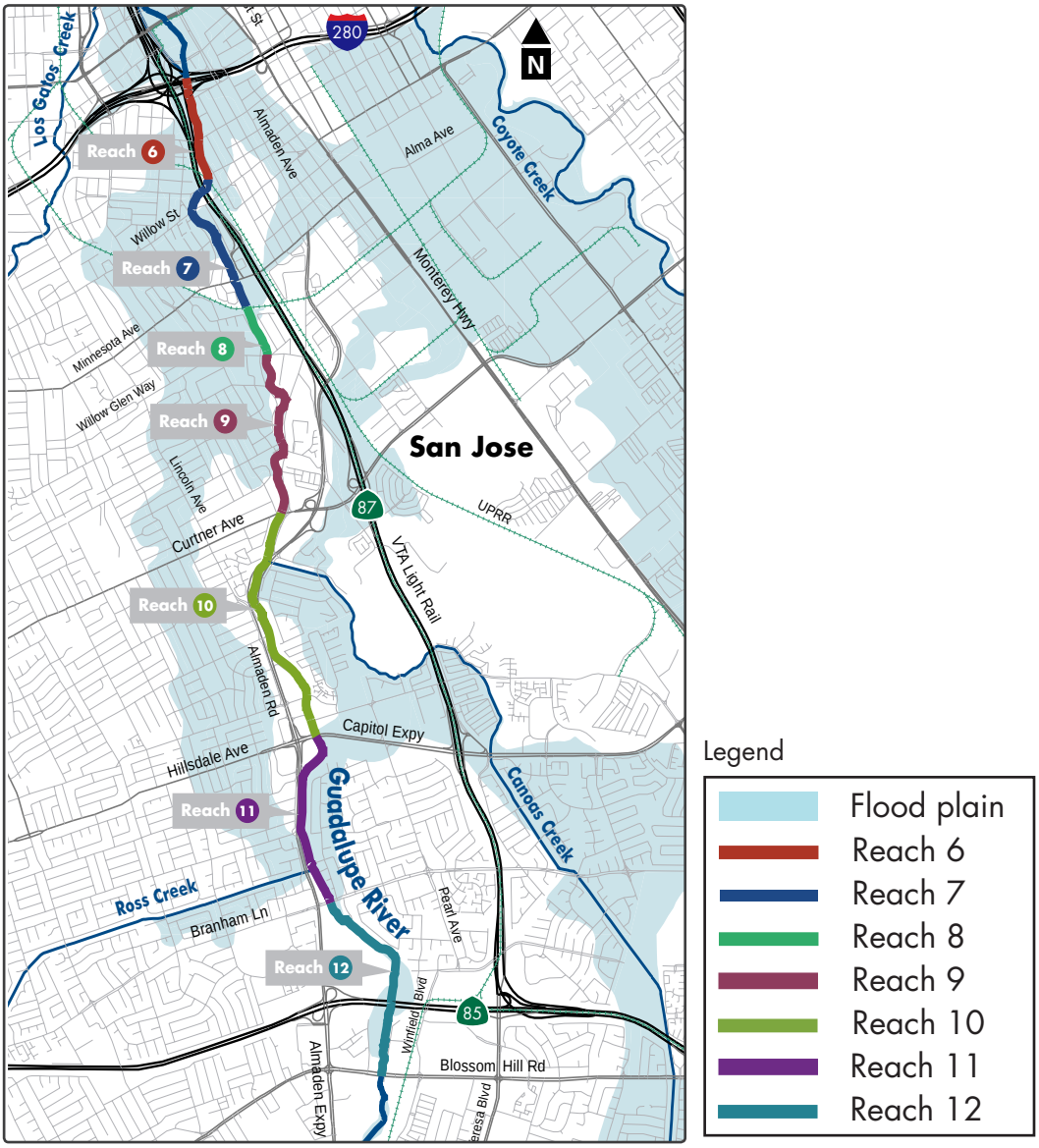
Key Performance Indicators (15-year Program)

1. Preferred project with federal and local funding: Construct a flood protection project to provide 1% flood protection to 6,280 homes, 320 businesses and 10 schools and institutions.

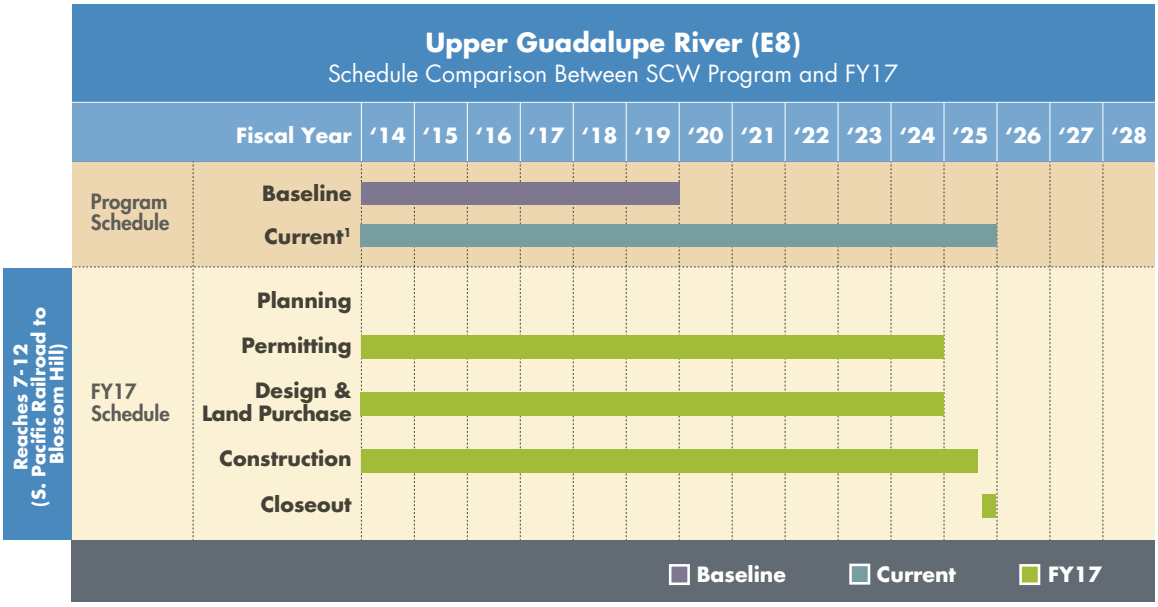
2. With local funding only: Construct flood protection improvements along 4,100 feet of Guadalupe River between Southern Pacific Railroad (SPRR) crossing, downstream of Willow Street, to Union Pacific Railroad (UPRR) crossing, downstream of Padres Drive. Flood damage will be reduced; however, protection from the 1% flood is not provided until completion of the entire Upper Guadalupe River Project.

Geographic Area of Benefit: San José

Project Location



Schedule



[1] Board approved a schedule adjustment through the change control process in FY16.

Status History

Fiscal Year	Status
FY 14	*ON TARGET*
FY 15	*ON TARGET*
FY 16	*ADJUSTED*

Status for FY17: On Target

Progress on KPI #1 and #2 (combined):

Reach 6 (from Interstate 280 to the UPRR bridge crossing downstream of Willow Street)

- Erosion repair for Island #10 was completed in September 2016 and the channel construction project was closed out.
- The District committed to complete a gravel augmentation project on this reach. The regulatory agencies suggested to reassess the gravel augmentation project in summer 2017 due to changes in the creek conditions after the rainy events. The District expects to receive permits by FY19 and to complete construction on the gravel augmentation project by FY20.

Reaches 7 and 8 (from the UPRR bridge crossing downstream of Willow Street to Willow Glen Way)

- USACE completed 65% design documentation for Reaches 7 and 8 and is expected to finalize the 100% design by December 2017.
- Construction contract for Reaches 7 and 8 is scheduled to be awarded by USACE in May 2018 pending availability of funds.
- The District is on track to acquire rights-of-way for the project in accordance with USACE construction schedule.

Reach 9 (from Willow Glen Way to Curtner Avenue)

- The District is acquiring the rights of way for the project in accordance with the USACE. USACE is currently focusing on completing the design of Reaches 7 and 8 so the design and construction schedule is yet to be determined.

Reach 10A (from Curtner Avenue to Almaden Expressway)

- USACE is currently focusing on completing the design of Reaches 7 and 8 so the design and construction schedule is yet to be determined.

Reach 10B (from Curtner Avenue to Capitol Expressway)

- USACE awarded the contract for the mitigation planting work in October 2016.
- Mitigation planting work will be completed by the end of 2017 by USACE.

Reach 10C (from Koch Lane to Capital Expressway)

- USACE is currently focusing on completing the design of Reaches 7 and 8 so the design and construction schedule is yet to be determined.

Reach 11 (from Capitol Expressway to Brahnam Lane)

- No changes in design since 2001. USACE is currently focusing on completing the design of Reaches 7 and 8 so the design and construction schedule is yet to be determined.

Reach 12 (from Branham Lane to Blossom Hill Road)

- USACE awarded the contract for the mitigation planting work in October 2016.
- Mitigation planting work will be completed by the end of 2017 by USACE.

Financial Information

In FY17, 6% of the total annual budget was expended. The Reach 6 (I-280 to Southern Pacific Railroad) project (KPIs #1 and #2) expended 13% of its FY17 budget. This was because the gravel augmentation work will be reassessed due to changes in the channel alignment after the rainy season. The District anticipates performing this work in summer 2018, pending the results of the channel assessment. Reaches 7-12 (Southern Pacific Railroad to Blossom Hill Road) project (KPIs #1 and #2) expended 5% of its FY17 budget. This was due to not acquiring the right-of-way for Reaches 7 and 8 in FY17 as scheduled, because of additional necessary discussions with the property owners, the Joint Power Boards (JPB), Caltrans, and City of San José about riparian setback requirements, amounts of land needed, and property values. The District continues to work with the City of San José, Caltrans, JPB, and property owners to complete acquiring the necessary rights of way for Reaches 7 and 8 in FY18.

Financial Summary ($ Thousands)
E8. Upper Guadalupe River

Fiscal Year 2016-2017						15-year Program	
Project No. and Name	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
		Actual	Encumbrance	Total			
26154002 Reach 6 (I-280 to S. Pacific Railroad)	$2,170	$288	$0	$288	13%	$5,998	23%
26154003 Reaches 7-12 (S. Pacific Railroad to Blossom Hill)	$36,553	$1,768	$33	$1,800	5%	$105,735	9%
Total	**$38,874**	**$2,160**	**$33**	**$2,192**	**6%**	**$111,733**	**11%**

Opportunities and Challenges

Confidence levels

Reach 6 (I-280 to S. Pacific Railroad) Project

Schedule: Moderate confidence

The schedule could be affected due to the results of the assessment for the gravel augmentation work.

Funding: High confidence

This project is fully funded by the Safe, Clean Water Program.

Permits: Moderate confidence

The District is working on acquiring state and federal regulatory permits for gravel augmentation placement.

Jurisdictional Complexity: High confidence

The District has jurisdiction over this reach and all the design elements.

Reaches 7-12 (S. Pacific Railroad to Blossom Hill) Project

Schedule: Moderate confidence

The schedule could be affected due to unforeseen conditions such as a delay in real estate acquisitions, utility relocations related issues and permitting delays.

Funding: Moderate confidence

Federal funding appropriation continues to be the main challenge for this project. At the end of 2017, USACE will request funds for construction of all elements of Reaches 7 and 8. Depending on the amount of federal funding provided, the USACE will determine which elements are constructed in 2018. The District will need to continue working with USACE leadership and federal elected officials to encourage federal appropriations for construction of Reaches 7 and 8 and to complete the remaining reaches of the project.

Permits: Moderate confidence

For Reaches 7 and 8, USACE will acquire all the required permits to construct 2 vehicular bridges, 2 rail road bridges, and a bypass channel. In reaches 10B and 12, USACE will be responsible to acquire the permits for the mitigation planting. In Reaches 9 and 11, no permits are required now.

Jurisdictional Complexity: Low confidence

As a local sponsor, the District is responsible to acquire all the right of way and relocation of utilities. Even after the District acquires easements or joint use agreements for the project from Caltrans, the Joint Power Board/ Caltrain and the City of San José, these agencies will continue to have jurisdiction over the Upper Guadalupe Flood Control Project.

Upper Guadalupe Reach 12 Groundbreaking on May 28, 2015

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Other Capital Flood Protection Projects and Clean, Safe Creeks Grants Projects

Permanente Creek Flood Protection
San Francisco Bay to Foothill Expressway – Mountain View

Sunnyvale East and Sunnyvale West Channels Flood Protection
San Francisco Bay to Inverness Way and Almanor Avenue – Sunnyvale

Berryessa Creek Flood Protection
Calaveras Boulevard to Interstate 680 – Milpitas and San José

Coyote Creek Flood Protection
Montague Expressway to Interstate 280 – San José

Calabazas Creek Flood Protection
Miller Avenue to Wardell Road – Sunnyvale

Clean, Safe Creeks Grants Projects

The countywide map and schedule comparison for Safe, Clean Water flood protection projects (E4 to E8) and other capital projects can be found on pages 173-176.

Appendix A: Financial Information

Appendix B: Inflation Assumptions

Appendix D: Capital Project Confidence Levels

McKelvey Park construction.

ON TARGET

Project FY17 Highlights

- Received Final Streambed Alteration Agreement from the California Department of Fish and Wildlife
- Began construction of the Rancho San Antonio detention site and the McKelvey Park detention site
- Awarded the Channel Improvements construction contract

Permanente Creek Flood Protection

This project will provide flood protection for thousands of homes and businesses in Mountain View and Los Altos, create recreational opportunities and enhance the environment. The project spans 10.6 miles of Permanente Creek, from San Francisco Bay's southwest shoreline through Mountain View to Foothill Expressway in Los Altos. The project uses a natural flood protection approach to prevent potential flooding damages in excess of $48 million (1999 value). The project includes multiple elements: channel improvements; flood detention area and recreational improvements at City of Mountain View's McKelvey Park; and flood detention areas, recreational improvements and enhanced habitat at County of Santa Clara's Rancho San Antonio Park.

Benefits

- Provides flood protection to a minimum of 1,664 parcels (1,378 homes, 160 businesses and 4 schools/institutions) downstream of El Camino Real from a 1% (or 100-year) flood
- Prevent flooding of Middlefield Road and Central Expressway
- Minimize the future cost for maintenance
- Provide opportunities for environmental enhancements and trail extension

Key Performance Indicator (5-year Implementation Plan)

1. Provide flood protection to 1,664 parcels downstream of El Camino Real, including Middlefield Road and Central Expressway.

Geographic Area of Benefit: Mountain View and Los Altos

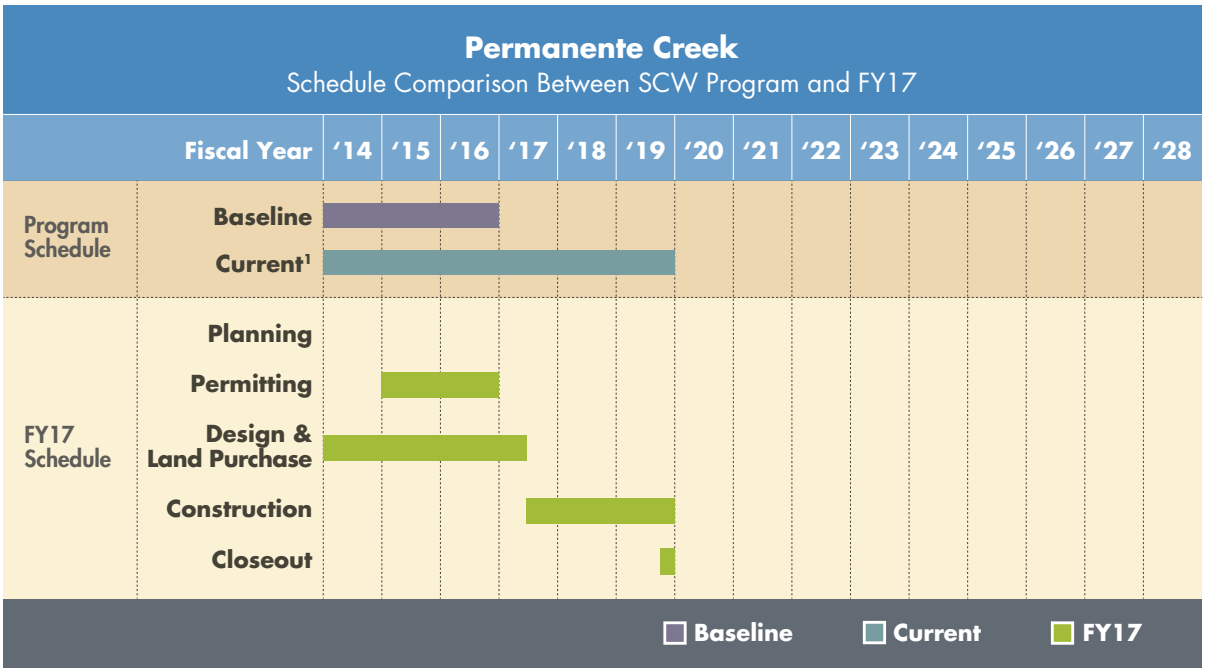
Project Location

LEGEND

Project elements

- Flood-prone area
- A — Floodwalls and levees north of U.S. Highway 101
- B — Flood detention area at City of Mountain View's McKelvey Park
- C — Widening and deepening of existing channels along Permanente and Hale Creeks
- D — Flood detention areas at County of Santa Clara's Rancho San Antonio Park

Schedule



[1] Board approved a schedule adjustment through the change control process in FY16.

Status History

Fiscal Year	Status
FY 14	*ADJUSTED*
FY 15	*ADJUSTED*
FY 16	*ADJUSTED*

Status for FY17: On Target

Progress on KPI #1:

- Received Final Streambed Alteration Agreement from the California Department of Fish and Wildlife on July 26, 2016.
- Began construction of the Rancho San Antonio detention site in December 2016.
- Began construction of the McKelvey Park detention site in January 2017.
- Board awarded the Channel Improvements construction contract in May 2017.

Financial Information

With the beginning of construction at Rancho San Antonio and McKelvey Park, expenditures are on target with 100% of the annual budget expended.

Financial Summary ($ Thousands)
Permanente Creek Flood Protection

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$39,914	$5,825	$34,162	$39,987	100%	$55,430	89%

Opportunities and Challenges

Confidence levels

Schedule: Moderate confidence

Construction is expected to last for approximately 2 years. The McKelvey Park detention basin and channel improvements is occurring in heavily urbanized areas and the District will continue to coordinate closely with the cities of Mountain View and Los Altos and other affected utilities during construction. The Rancho San Antonio detention basin is being constructed at a popular county park directly adjacent to the Gate of Heaven Cemetery and the District will continue to carefully coordinate with Santa Clara County Parks, Midpeninsula Regional Open Space District, the Cemetery, as well as the City of Cupertino on potential traffic issues. Other challenges at the Rancho San Antonio detention basin include the presence of the plant pathogen Phytophthora at the existing wetland and the presence of the threatened California red-legged frog close to the project site.

Funding: Moderate confidence

The adjusted Safe, Clean Water 15-year project allocation, including FY13 encumbered balance and Capital Project Reserves, is $55.5 million. The project expended 100% of the FY17 budget. Due to rising construction costs, PG&E delays, and design changes for Rancho San Antonio and McKelvey Park detention basins, the District anticipates that construction costs will exceed the current funding.

Permits: High confidence

All resource agency permits have been acquired and construction has started.

Jurisdictional Complexity: High confidence

The McKelvey Park detention basin is being constructed on City of Mountain View property and the Rancho San Antonio detention basin is being constructed on Santa Clara County Parks property that is currently managed by Midpeninsula Regional Open Space District. Despite the high jurisdictional complexity, the District's confidence is high due to close coordination with all the stakeholders.

Sunnyvale East and Sunnyvale West Channels Flood Protection Projects

San Francisco Bay to Inverness Way and Almanor Avenue – Sunnyvale

In the early stages of the project design process, the District project team decided to join both improvement projects into a single flood protection project with a single Environmental Impact Report (EIR) to reduce construction costs and minimize construction coordination issues between the 2 channels.

The West Channel extends approximately 3 miles and upgrades existing channel capacity to provide 1% (or 100-year) riverine flood protection for 47 acres of highly valuable industrial lands, including the Onizuka Air Force Base. 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.

Sunnyvale West Channel (looking south).

ON TARGET

Project FY17 Highlights

- Continued design
- Acquired 5 permanent rights of way and 4 temporary staging area easements
- Submitted all the required permit applications to the various state and federal regulatory agencies
- Continued utility relocation agreements

Benefits

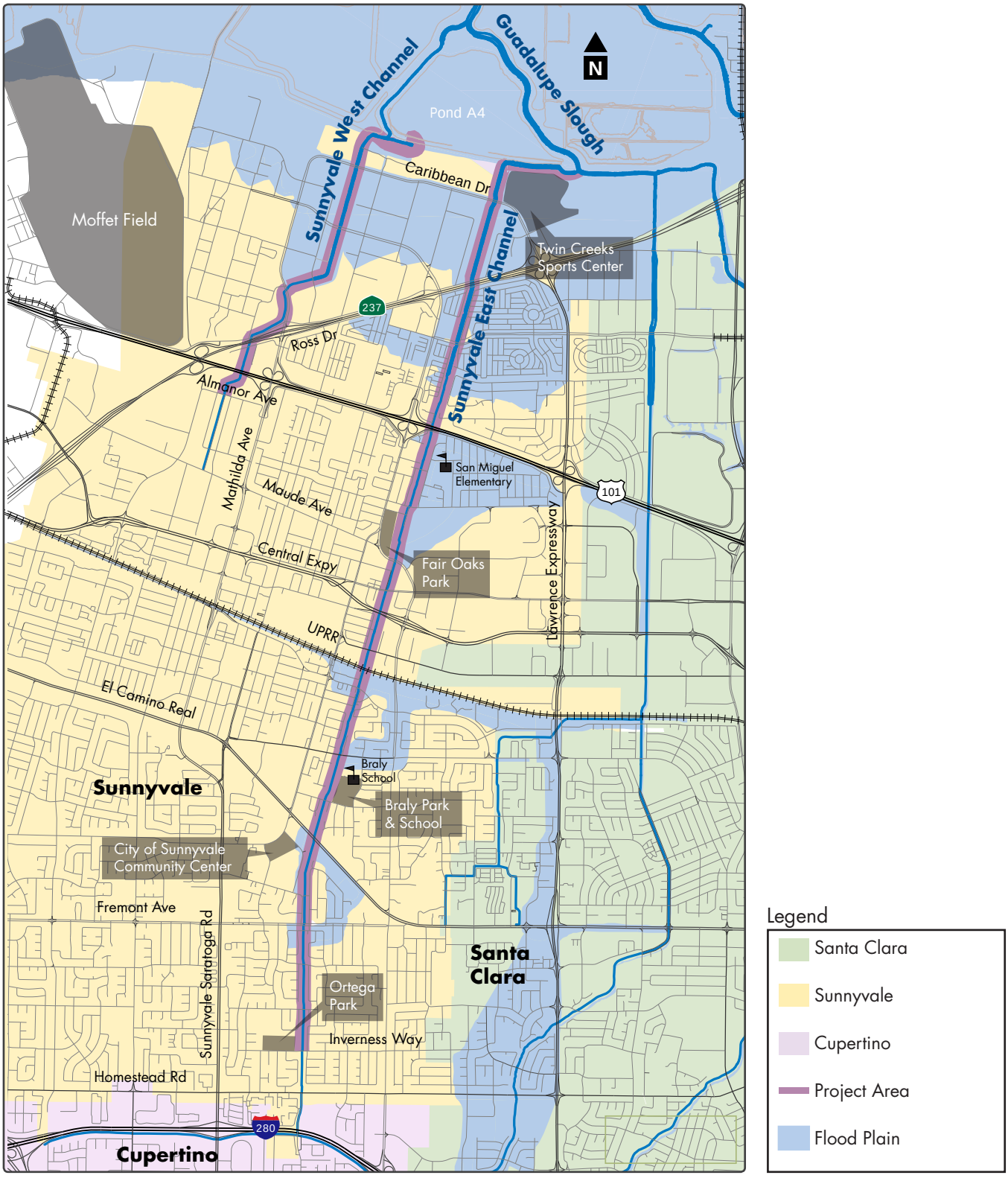
- Provides 1% flood capacity for approximately 6.5 miles of channel along Sunnyvale East and approximately 3 miles of channel along Sunnyvale West within the City of Sunnyvale, protecting 1,618 properties (Sunnyvale East) and 47 acres (11 properties) of industrial land (Sunnyvale West)
- Improves stream 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

Key Performance Indicator (5-year Implementation Plan)

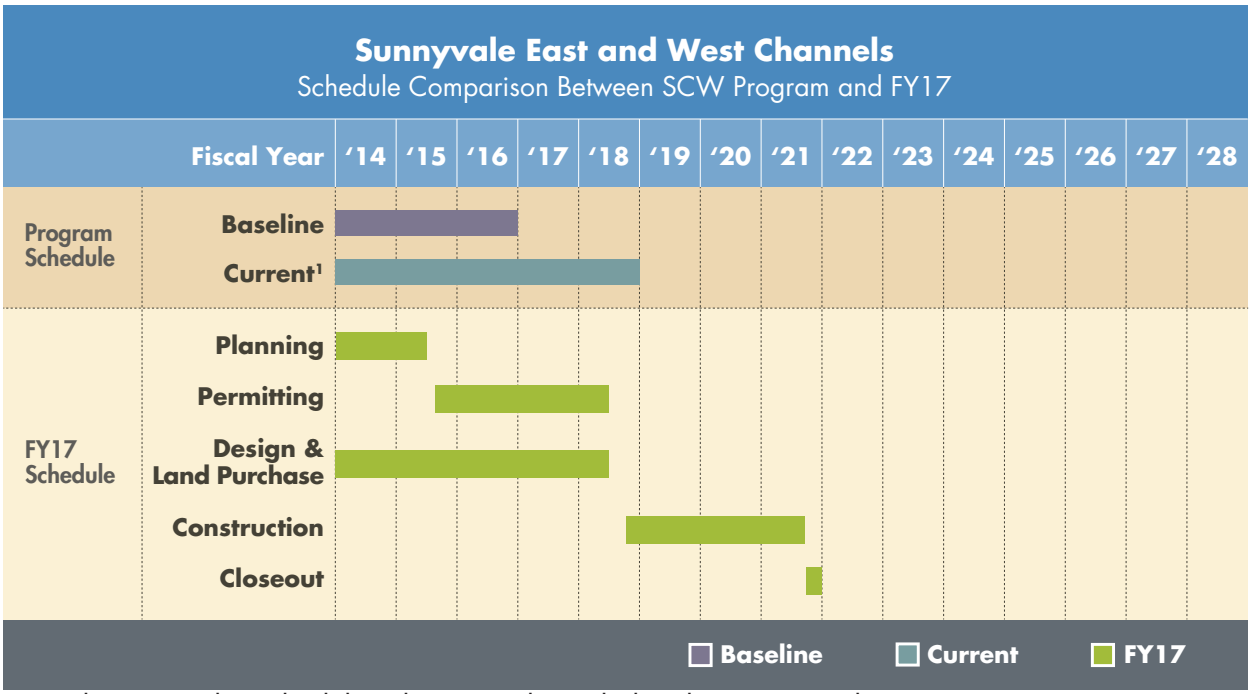
1. Provide riverine flood protection for 1,618 properties and 47 acres (11 parcels) of industrial land, while improving stream water quality and providing for recreational opportunities.

Geographic Area of Benefit: Sunnyvale

Project Location



Schedule



[1]Board approved a schedule adjustment through the change control process in FY16. Additional schedule adjustment will be requested for Board approval in FY18.

Status History

Fiscal Year	Status
FY 14	*ADJUSTED*
FY 15	*ADJUSTED*
FY 16	*ADJUSTED*

Status for FY17: On Target

Progress on KPI #1:

- 100% design is underway and is expected to be completed by September 2017.
- To date, 5 permanent rights of way and 4 temporary staging area easements, all necessary for project construction, have been acquired. The District continues to work on acquiring a parcel or leasing agreement from the U.S. Fish & Wildlife Service, as well as temporary construction easements from Santa Clara County and San Francisco Public Utilities Commission (SFPUC), and anticipates all acquisitions will be final by November 2017.
- In June 2017, the District submitted all the required permit applications from the various state and federal regulatory agencies. Permits are anticipated to be received by February 2018, which would allow project construction to begin in summer 2018.

Financial Information

The FY17 budget included funding for construction; however, due to delays in determining suitable and appropriate project mitigation for submission in the permit applications, the construction funding was unspent. The total project expenditures were 16% of the fiscal year's budget.

Financial Summary ($ Thousands)
Sunnyvale East & West Channels Flood Protection

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$11,555	$985	$875	$1,860	16%	$57,460	11%

Opportunities and Challenges

Confidence levels

Schedule: Moderate confidence

Sunnyvale East Channel

The most significant schedule challenge is timely completion of construction to replace the existing Caribbean Drive Bridge with a new triple cell box culvert. The District had previously requested the City of Sunnyvale to consider allowing a complete closure of Caribbean Drive to avoid a 2-year construction window, expensive detours, lane closure, public safety and other concerns that are involved with a partial closure. The City of Sunnyvale elected to require the District to complete the construction with a partial closure of Caribbean Drive, thus requiring a 2-year construction window.

Sunnyvale West Channel

The most significant schedule challenge is to coordinate the construction of the Carl Road box culvert with the City of Sunnyvale Water Pollution Control Plant (WPCP), as the existing Carl Road crossing serves as their only access to portions of the WPCP facilities out in the lower San Francisco Bay region. In addition, the existing Carl Road box culvert has several gravity extraction conduits to existing adjacent landfills that are required to remain in service 24 hours/7 days a week. Finding resolutions to these WPCP challenges are ongoing.

Funding (combined): High confidence

This project is fully funded by the Safe, Clean Water Program.

Permits (combined): Moderate confidence

The most significant overall challenge faced by the project is securing the necessary regulatory agency permits in a timely manner to proceed with construction. Upon receipt of the various regulatory agency permits, permit conditions and requirements will have to be incorporated into the Final Construction Documents before the project can be advertised for construction.

The Sunnyvale East and West Channels were man-made storm drain systems constructed by the District in the 1950's and 1960's. Both channels have no naturally occurring headwaters, resulting in extremely limited existing channel vegetation; the project's environmental impacts are expected to be minimal.

Jurisdictional Complexity (combined): High confidence

The entire project is within the limits of the City of Sunnyvale. The District has coordinated the planning and design efforts by forwarding to the city the 30%, 60%, and 90% design submittals for review and comment. The District has worked with the city to purchase the necessary project rights of way, including temporary staging areas. The District and city have also executed a cost sharing agreement for the construction of public trails as part of the project, and have executed a Joint Use Trail Agreement.

Sunnyvale West, looking south at Carl Road

Upper Berryessa Creek at Los Coches.

ON TARGET

Project FY17 Highlights

- Completed construction of Montague Expressway bridge replacement work Phase 1
- Continued construction of Phase 2 and Phase 3
- USACE awarded the channel construction contract and began construction

Berryessa Creek Flood Protection

Calaveras Boulevard to Interstate 680

This project is a partnership with the U.S. Army Corps of Engineers (USACE) to plan, design and construct flood improvements to protect homes in Milpitas and San José, as well as Silicon Valley's commercial district, from a 1% (100-year) flood flow. The Bay Area Rapid Transit (BART) 10-mile extension project spans from Warm Springs Station in Fremont to the North San José Berryessa area. The new Milpitas Station is underground and is located in the Berryessa Creek floodplain. The Berryessa Creek project's completion is critical to the BART extension's planned operations.

Benefits

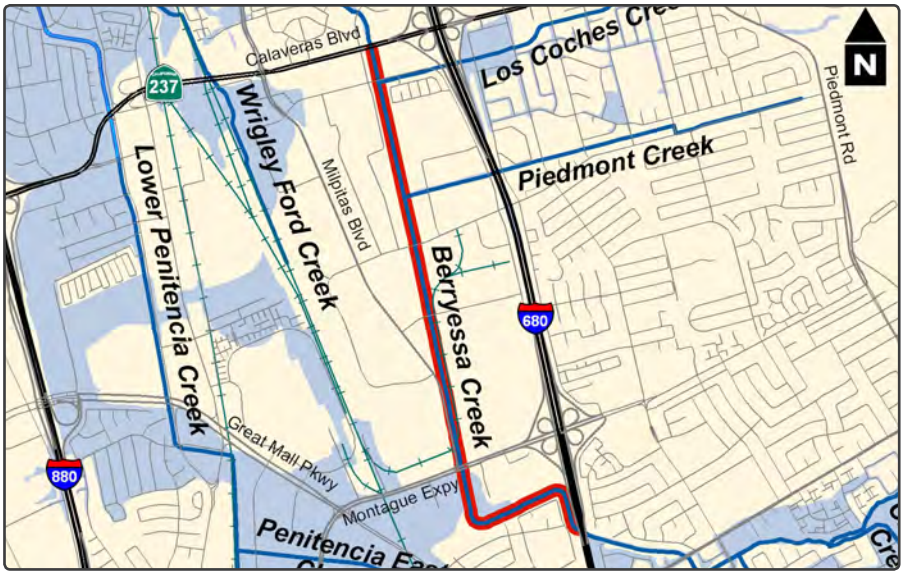
- Protects up to 1,662 businesses and homes in Milpitas and San José from a 1% flood, saving potential damages in excess of $527 million
- Provides protection for more than 30 miles of streets including Highway 237 and Montague Expressway

Key Performance Indicators (5-year Implementation Plan)

1. Local and federal funding flood damage reduction for 1,662 parcels, including 1,420 homes, 170 businesses, and 5 schools/institutions.
2. Using local funds only, a reduced project would extend from the confluence with Lower Penitencia upstream to Montague Expressway, modifying 2 miles of channel and protecting approximately 100 parcels.

Geographic Area of Benefit: Milpitas and San José

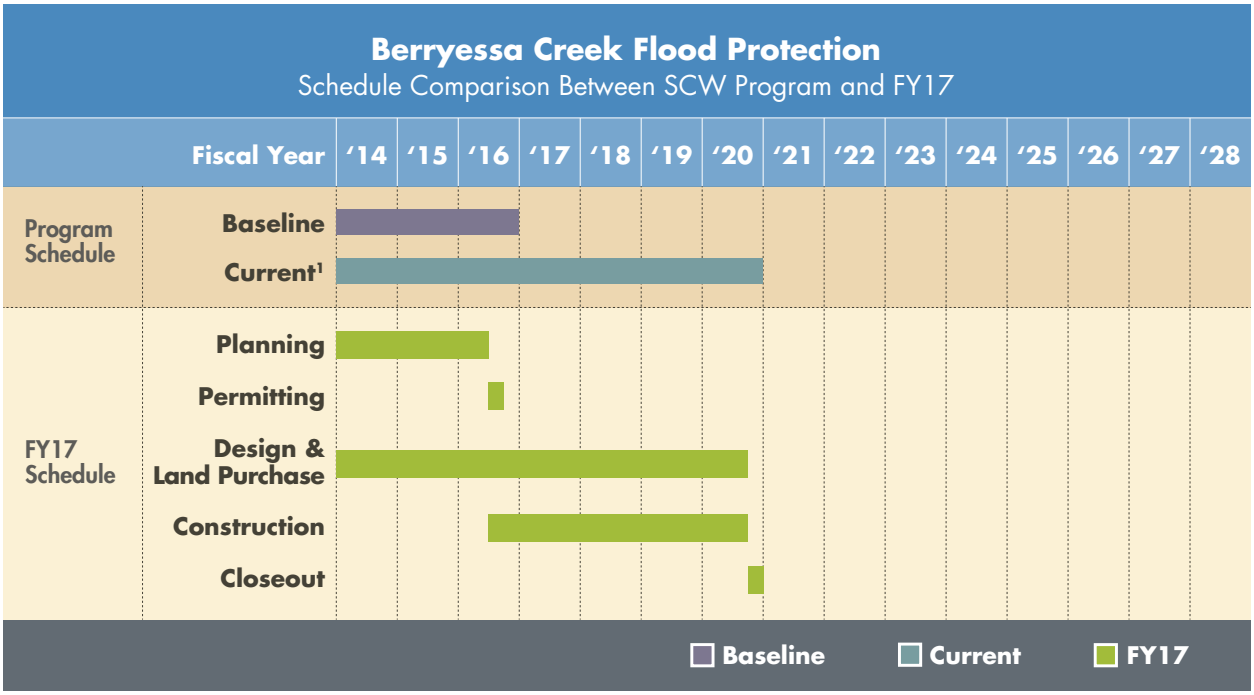
Project Location



Legend

- Project Location
- 1% Flood plain

Schedule



[1]Board approved a schedule adjustment through the change control process in FY16.

Status History

Fiscal Year	Status
FY 14	*ADJUSTED*
FY 15	*ON TARGET*
FY 16	*ADJUSTED*

Status for FY17: On Target

Progress on KPI #1 and #2 (combined):

- To minimize impacts to traffic, the Montague Expressway bridge replacement is being constructed in 3 phases. Phase 1 was completed in December 2016. Phase 2 is currently under construction and expected to be completed by summer 2017. Phase 3 construction is expected to be completed by December 2017.
- USACE awarded the channel construction contract in August 2016.
- The channel construction work is about 50% completed. The project is expected to be completed by December 2017.
- Native American human remains were discovered during excavation activities. The burial relocation will be completed by summer 2017 under the supervision of the Most Likely Descendent (MLD) representative.

The District continues to provide necessary support to USACE including engineering support and coordination with the City of Milpitas, Regional Water Quality Control Board (RWQCB), and Union Pacific Railroad (UPRR) during construction phase in FY17.

Financial Information

In FY17, this project expended 7% of its total annual budget. The under expenditure is primarily due to delays in PG&E's completion of utility relocation design. The District expects these delays to be resolved within the first quarter of FY18. For Real Estate Acquisition (26174041), $0 was budgeted because all the Real Estate acquisitions were secured by the end of FY16. Charges to the project did occur in FY17 resulting from payment of a UPRR invoice and labor charges from Real Estate staff for coordination that required their expertise.

Financial Summary ($ Thousands)
Berryessa Creek Flood Protection

Fiscal Year 2016-2017						15-year Program	
Project No. and Name	Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
		Actual	Encumbrance	Total			
26174041 Design and Construction	$14,411	$771	$21	$792	5%	$11,343	120%
26174042 Real Estate Acquisitions	$(1,897)	$74	$0	$74	0%	$29,554	56%
Total	**$12,514**	**$845**	**$21**	**$866**	**7%**	**$40,896**	**74%**

Opportunities and Challenges

Confidence levels

Schedule: Moderate confidence

USACE began construction in late September 2016 and is scheduled to complete construction by December 2017 to coordinate with the Milpitas BART station opening schedule for late 2017.

The potential presence of underground hazardous materials and cultural resources such as Native American human remains burial add complexity to project construction and could extend the project schedule and possibly affect the budget.

Additionally, certain portions of the trestle bridge replacement work will be performed by UPRR and significant delays in start of their work could impact project schedule. UPRR has been provided with all the plans and specifications necessary for their review and approval; however, they have not yet set a schedule for the bridge replacement.

Funding: High confidence

The project is fully funded.

Permits: Moderate confidence

The RWQCB issued a Section 401 water quality certification for project construction in March 2016 and USACE's construction is ongoing. In April 2017, the RWQCB adopted an order issuing waste discharge requirements which include new mitigation for construction impacts. The District is challenging the RWQCB's April 2017 order.

Jurisdictional Complexity: High confidence

Coordination effort with the City of Milpitas has been extensive during the construction phase of the project.

Although the construction and maintenance agreement has been executed, the District and USACE will need to continue their coordination effort with UPRR especially on replacement of the trestle bridge.

Coyote Creek Feb. 21 flood event.

MODIFIED

Project FY17 Highlights

- Held a formal public hearing and the Board approved modifications to extend the project reach, change the target protection and identify short-term flood relief solutions (see Opportunities and Challenges)

Coyote Creek Flood Protection

Montague Expressway to Tully Road – San José

The project is located in the central portion of the Coyote Watershed and extends approximately 9 miles between Montague Expressway and Tully Road in San José.

Preferred project: A federal-state-local partnership

The primary project objective is to reduce the risk of flooding to homes, schools, businesses, and highways in the Coyote Creek floodplain for floods up to the level of flooding that occurred on February 21, 2017, approximately a 20 to 25 year flood event, and includes planning, design, and project construction. Alternative funding sources, including federal funding, state grants, and additional local funding sources, are being explored and will need to be secured for full construction of the project.

Local funding only project:

The local funding only option includes identifying short-term flood relief solutions that are permittable and do not exacerbate flooding elsewhere, with implementation to begin prior to the 2017-2018 winter season. In addition, under the local funding only option, the District will complete the planning and design phases of the preferred project, and identify prioritized elements of the project for construction with the remaining local funds.

Flooding History and Project Background

Flooding has occurred many times within the Coyote Creek Watershed, including along portions of Coyote Creek in 1911, 1917, 1931, 1958, 1969, 1982, 1983, 1997, 1998, and 2017. The largest flow recorded on Coyote Creek was 25,000 cubic feet per second in 1911, prior to construction of the current 2 water-supply reservoirs in the upper watershed. The worst flooding in the project reach since Anderson Reservoir was constructed in 1950, occurred in February 2017. Coyote Creek overtopped its banks at several locations between Montague Expressway and Tully Road. Businesses and hundreds of homes were inundated by creek waters for many hours. Highway 101 near Watson Park and various local streets were closed due to flooding, and thousands of residents had to be evacuated and sheltered.

The Coyote Creek Project is located in the central portion of the Coyote Watershed on the mainstem of Coyote Creek, within the City of San José. The original project reach extended approximately 6.1 miles between Montague Expressway and Highway 280; however, the project reach was extended approximately 2.9 miles upstream to Tully Road in 2017 to include the Rock

Springs neighborhood and incorporate the areas impacted by the February 21, 2017 flood event. In addition to the primary objective of reducing the risk of flooding to homes, schools, businesses, and highways from Coyote Creek flood events, the project may evaluate opportunities to improve fisheries, stream habitat values, and public access.

Benefits

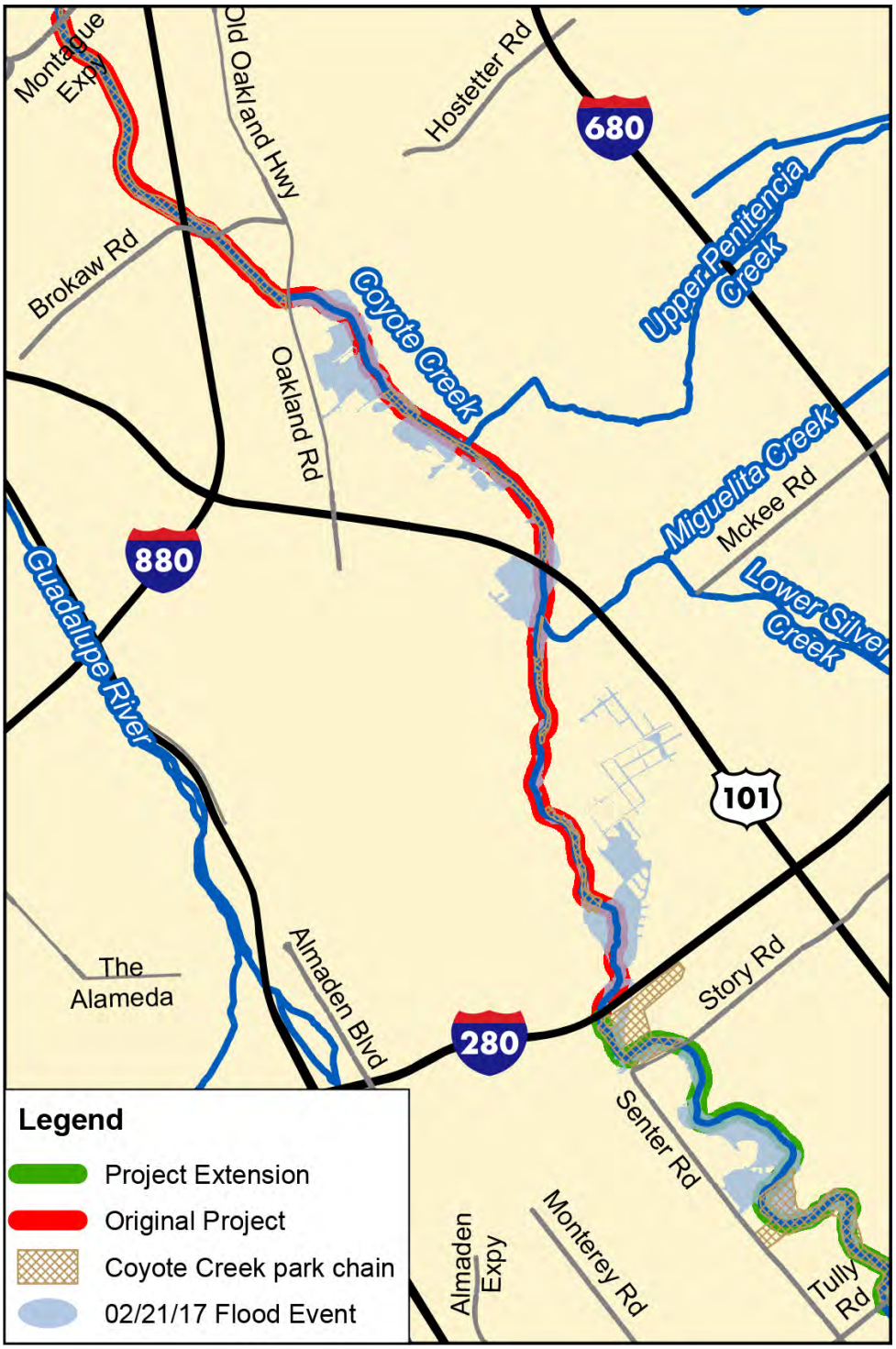
- Implements short-term flood relief solutions
- Provides flood risk reduction for approximately 1,000 parcels from the level of flooding that occurred on February 21, 2017, approximately a 20 to 25 year flood event, when the entire project from Montague Expressway to Tully Road is constructed
- Improves water quality, enhances stream habitat and recreational opportunities
- Incorporates revegetation and aesthetic elements of the Coyote Creek park chain in the project

Key Performance Indicators (5-year Implementation Plan)

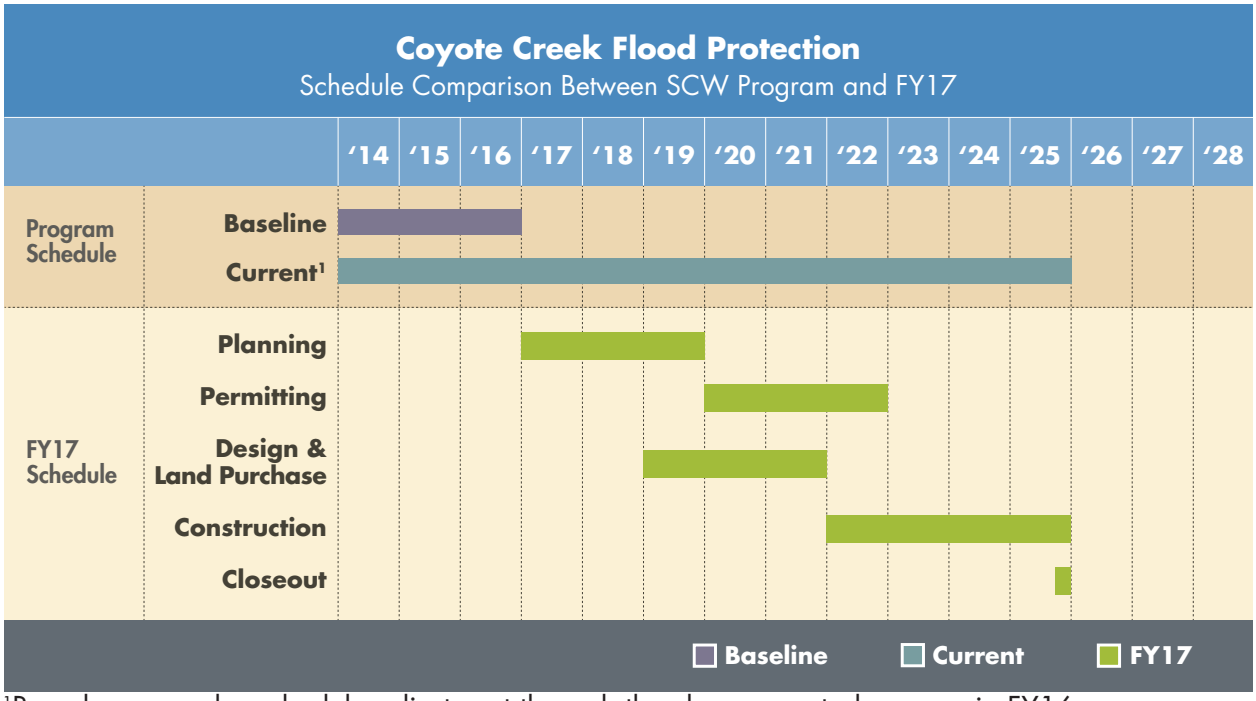
1. Preferred project with federal, state, and local funding: Secure alternative funding sources to construct a flood protection project that provides flood risk reduction from floods up to the level of flooding that occurred on February 21, 2017, approximately a 20 to 25 year flood event, between Montague Expressway and Tully Road.
2. With local funding only: (a) Identify short-term flood relief solutions and begin implementation prior to the 2017-2018 winter season; (b) Complete the planning and design phases of the preferred project; and (c) With any remaining funds, identify and construct prioritized elements of the preferred project.

Geographic Area of Benefit: San José

Project Location



Schedule



[1]Board approved a schedule adjustment through the change control process in FY16.

Status History

Fiscal Year	Status
FY 14	*ADJUSTED*
FY 15	*NOT ON TARGET*
FY 16	*ADJUSTED*

Status for FY17: Modified (public hearing held June 13, 2017)

Progress on KPI #1 and #2:

- On June 13, 2017, the Board held a formal public hearing and approved modifications to the project. In summary, the modifications:
  - » Extend the project reach approximately 2.9 miles upstream to Tully Road;
  - » Change the target protection from 1% (or 100-year) level flood event, to protection from a flood event equivalent to the February 21, 2017 flood (which is approximately a 20 to 25 year event); and
  - » Identify short-term flood relief solutions and begin implementation prior to the 2017-2018 winter season.

Financial Information

Due to the project being put on hold, the FY17 budget was $0; however, the District did expend $128,000 to prepare for and advertise the public hearing, and begin implementation of the modifications prior to the end of the fiscal year.

Financial Summary ($ Thousands)
Coyote Creek Flood Protection Study and Partial Construction

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$128	$128	$0	$128	100%	$22,646	3%

Opportunities and Challenges

Project modifications

Extending the project reach to Tully Road allows the District to include the Rock Springs neighborhood and incorporate the areas impacted by the February 21, 2017 flood event that occurred outside of the original project reach from Montague Expressway to Highway 280.

The target protection was modified because the potentially feasible project alternatives to provide the 1% level of flood protection had projected costs ranging between $500 million to $1 billion and would depend significantly on additional funding. Additionally, the District's ability to provide the 1% level of protection depends on the outcome of various currently ongoing District projects, that can impact the flows into Coyote Creek. Due to uncertainty about the results of these projects and their impacts to Coyote Creek Project design and associated permit acquisitions, and due to the lack of additional funding sources to construct the 1% project, the Board voted to modify the preferred project's target protection to a 20 to 25 year event. This allows the District to provide protection equivalent to the February 21, 2017 storm event. Alternative funding sources, including federal funding, state grants, and additional local funding sources, are being explored and will need to be secured for full construction of the project.

The local funding only option can be accomplished with the $25.8 million remaining for the project and includes identifying short-term flood relief solutions that are permittable and do not exacerbate flooding elsewhere, with implementation to begin prior to the 2017-2018 winter season. In addition, under the local funding only option, the District will complete the planning and design phases of the preferred project, and identify prioritized elements of the project for construction with the remaining local funds.

Confidence levels

Schedule: High confidence

Based on the adjusted schedule with a target completion date of FY25, the District should be able to complete the local funding only option (KPI #2).

Funding: Moderate confidence

The Safe, Clean Water Program should fully fund the local funding only project's planning and design phases, and identification of prioritized elements of the project for construction. To complete the preferred project, the District will need to secure additional funding. Alternative funding sources, including federal funding, state grants, and additional local funding sources, are being explored and will need to be secured for full construction of the preferred project.

Permits: Moderate confidence

Permitting will depend on the alternative selected. The project need is apparent from the recent flooding and resource agencies will be consulted early in the project formulation process to expedite permitting.

Jurisdictional Complexity: High confidence

All local agencies, the City of San José and County of Santa Clara, are fully cooperating due to the significance of the need for the project.

Project completion celebration.

COMPLETED

Project FY14 Highlights

- Provided flood damage reduction for 2,483 parcels that included: 2,270 homes, 90 businesses, and 7 schools/institutions.

Calabazas Creek Flood Protection

Miller Avenue to Wardell Road

The project's objective was to provide 1% (or 100-year) flood protection to 2,483 parcels in the Calabazas Creek watershed between Miller Avenue and Wardell Road. A long detention basin parallel to the creek was built to capture high storm flows, preventing the creek from overtopping its banks in a 1% flood.

The District repaired 14 severely eroding banks, using as little "hardscape" as possible. The project incorporated environmental stewardship principles to reduce erosion with vegetation to enhance habitat for wildlife. The District reduced the cost of the project by collaborating with the City of San José, which rebuilt a bicycle motocross (BMX) park at Calabazas Park.

On November 20, 2012, the District and the cities of Saratoga, San José, and Cupertino received notification from the Federal Emergency Management Agency (FEMA) that the Letter of Map Revision (LOMR) submittal for the Calabazas Creek Flood Protection Project had been approved resulting in a revision of the Flood Insurance Rate Map for the requested area upstream of Miller Avenue. The project objectives have been met.

Benefits

- Provide flood protection on Calabazas Creek from Miller Avenue to Wardell Road
- Protect 2,483 parcels from 1% flooding
- Provide erosion protection measures to improve stream quality
- Identify environmental restoration and enhancement and recreational enhancements, where opportunities exist

Key Performance Indicator (Completed)

1. Flood damage reduction for 2,483 parcels that include: 2,270 homes, 90 businesses, and 7 schools/institutions.

Geographic Area of Benefit: Saratoga, San José and Cupertino

Project Status: Completed in FY14

Status History

Fiscal Year	Status
FY 14	*COMPLETED*
FY 15	*COMPLETED*
FY 16	*COMPLETED*

Project Location

Los Gatos Creek Trail.

ON TARGET

Project FY17 Highlights

- Continued to manage the remaining 5 open grant projects
- 3 of the remaining 5 are scheduled for completion by December 2017
- 2 of the remaining 5 will require further extension

Clean, Safe Creeks Grants Projects

The Clean, Safe Creeks (CSC) Program awarded grants in 3 categories to encourage community involvement in protecting and enhancing the environment. The District awarded grants for 45 projects under the Clean, Safe Creeks Program between FY10 and FY13. As reported in the FY13 Clean, Safe Creeks report, all KPIs have been met as per the executed agreements. However, some grant projects have yet to be completed.

Benefits

These grant agreements address:

- CSC Outcome 2.1: Pollution prevention
- CSC Outcome 3.2: Healthy creek and bay ecosystems are protected, enhanced or restored as determined appropriate by the Board
- CSC Outcome 4.1: There are additional open spaces, trails and parks along creeks and in the watersheds when reasonable and appropriate

Key Performance Indicators (5-year Implementation Plan)

1. CSC 2.1: Reduce urban runoff pollutants in south county cities.
2. CSC 3.2: Creation of additional wetlands, riparian habitat and favorable stream conditions for fisheries and wildlife. (Equivalent of 100 acres of tidal or riparian habitat created or restored).
3. CSC 4.1: Community partnership to identify and provide public access to 70 miles of open space or trails along creeks.

Geographic Area of Benefit: Countywide

Status History

Fiscal Year	Status
FY 14	***ON TARGET***
FY 15	***ON TARGET***
FY 16	***ON TARGET***

Status for FY17: On Target

Progress on KPI #1 - #3 (combined):

- As of the end of FY17, 15 of 22 grant projects have been completed and closed. Of the remaining 7 projects, 2 projects were cancelled, 3 projects are on schedule for completion by the end of 2017 calendar year, and 2 projects will require further extension.

The list of projects and their current status, is included in the Clean Safe Creeks (CSC) Grant Table below.

CSC Grant Table

No.	Grantee Organization	Project Name	Grant Amount Total	Project Start Date	Project End Date	Status
1	City of Saratoga	Village Creek Trail Planning	$39,000	7/1/2011	7/25/2015	Closed
2	Acterra	Adobe Creek Restoration: Redwood Grove to Shoup Park	$46,365	6/28/2011	12/30/2015	Closed
3	City of Cupertino	Stevens Creek Corridor Park and Restoration Project, Phase 2	$285,000	6/28/2011	12/30/2015	Closed
4	City of Cupertino	Stevens Creek Corridor Park and Restoration, Phase 2	$565,000	6/28/2011	12/30/2015	Closed
5	City of San Jose	Penitencia Creek Trail, Reach 1	$300,000	6/15/2010	12/30/2017	Extended
6	City of San Jose	Three Creeks Trail – Trestle and Interim Improvements	$450,000	6/28/2011	12/30/2017	Extended
7	City of Santa Clara-Parks & Recreation Department	City of Santa Clara – Ulistac Natural Area Environmental Enhancement	$106,976	6/28/2011	12/30/2015	Closed
8	City of Saratoga	Village Creek Trail, Phase 1	$27,000	6/28/2011	12/30/2015	Cancelled
9	SCVWD with: CA Wildlife Fndn, S.F. Estuary Invasive Spartina Project and the USFWS Don Edwards S.F. Bay National Wildlife Refuge	Invasive Spartina Monitoring & Control in South Bay Marshes & Creeks	$75,000	6/28/2011	12/30/2015	Closed
10	Town of Los Altos Hills	Adobe Creek Restoration Project at Edith Park	$83,960	9/27/2011	12/30/2015	Closed
11	Town of Los Gatos	Creekside Sports Park Pedestrian Bridge	$300,000	6/28/2011	12/30/2015	Cancelled
12	Trout Unlimited	Little Arthur Creek Streamflow Stewardship Implementation Project	$220,500	6/28/2011	12/30/2017	Extended

CSC Grant Table

No.	Grantee Organization	Project Name	Grant Amount Total	Project Start Date	Project End Date	Status
13	West Valley College	Tennis Court Wetland Enhancement Project	$109,000	6/28/2011	12/30/2015	Closed
14	West Valley College	Vasona Creek Enhancement Project: Bridge #3 Replacement and Channel Stabilization	$200,000	6/28/2011	12/30/2015	Closed
15	West Valley College	Vasona Creek Native Vegetation Enhancement Project	$180,000	6/28/2011	12/30/2015	Closed
16	Acterra	San Francisquito Creek	$80,000	10/19/2013	6/30/2016	Closed
17	City of Gilroy	Ronan Channel Trail – Interim Project, Phase 1	$190,000	1/29/2014	12/31/2017	Extended
18	City of Los Altos	Adobe Creek Restoration at Redwood Grove – Phase 2	$90,000	12/27/2013	6/30/2016	Closed
19	City of San Jose	Los Alamitos Creek – Coleman Road Under-Crossing	$62,727	1/8/2014	12/31/2017	Extended
20	Downtown Streets Team	Coyote Creek Encampment Cleanup	$197,848	1/8/2014	6/30/2016	Closed
21	Save the Bay	Palo Alto Baylands Tidal Marsh Transition Zone Restoration	$75,000	12/27/2013	6/30/2016	Completed
22	Town of Los Altos Hills	O'Keefe Preserve Purissima Creek Habitat Restoration Project	$98,425	10/19/2013	6/30/2016	Closed

Closed: Project completed – Board presentation provided.

Completed: Project completed – Board presentation to be scheduled.

In-Progress: Project on schedule for completion by end date.

Cancelled: Project cancelled by grantee.

Extended: Project schedule or scope is being amended.

Financial Information

In FY17, project expenditures were 8% of the total annual budget. While there were no new grant allocations under this project because the funding was already encumbered, there was money allocated for grant administration and that was underspent due to low staff labor hours resulting from staff turnover.

Financial Summary ($ Thousands)
CSC Environmental Enhancement and Open Space Grant

Fiscal Year 2016-2017					15-year Program	
Adjusted Budget	Budgetary Actual			% of Budget Spent	Adjusted 15-year Plan	% of Plan Spent
	Actual	Encumbrance	Total			
$105	$8	$0	$8	8%	$2,864	121%

Opportunities and Challenges

Grant extensions

The City of San José will require an extension for the Three Creeks Trail – Trestle and Interim Improvements project due to delays regarding the suitability of the Environmental Impact Report (EIR). A ruling on the EIR from the County of Santa Clara Appeals Court is expected in August 2017. The $450,000 grant is for construction of a clear-span bridge trestle and an interim trail near Los Gatos Creek. The initial agreement, which was scheduled to expire on December 30, 2015, had earlier been extended to expire on December 31, 2017.

City of Gilroy has also indicated that they will require an extension for the Ronan Channel Trail – Interim Project, Phase 1. The extension is needed due to staff turnover at the city and subsequent understaffing that has slowed down the project. This project had previously been extended to December 31, 2017.

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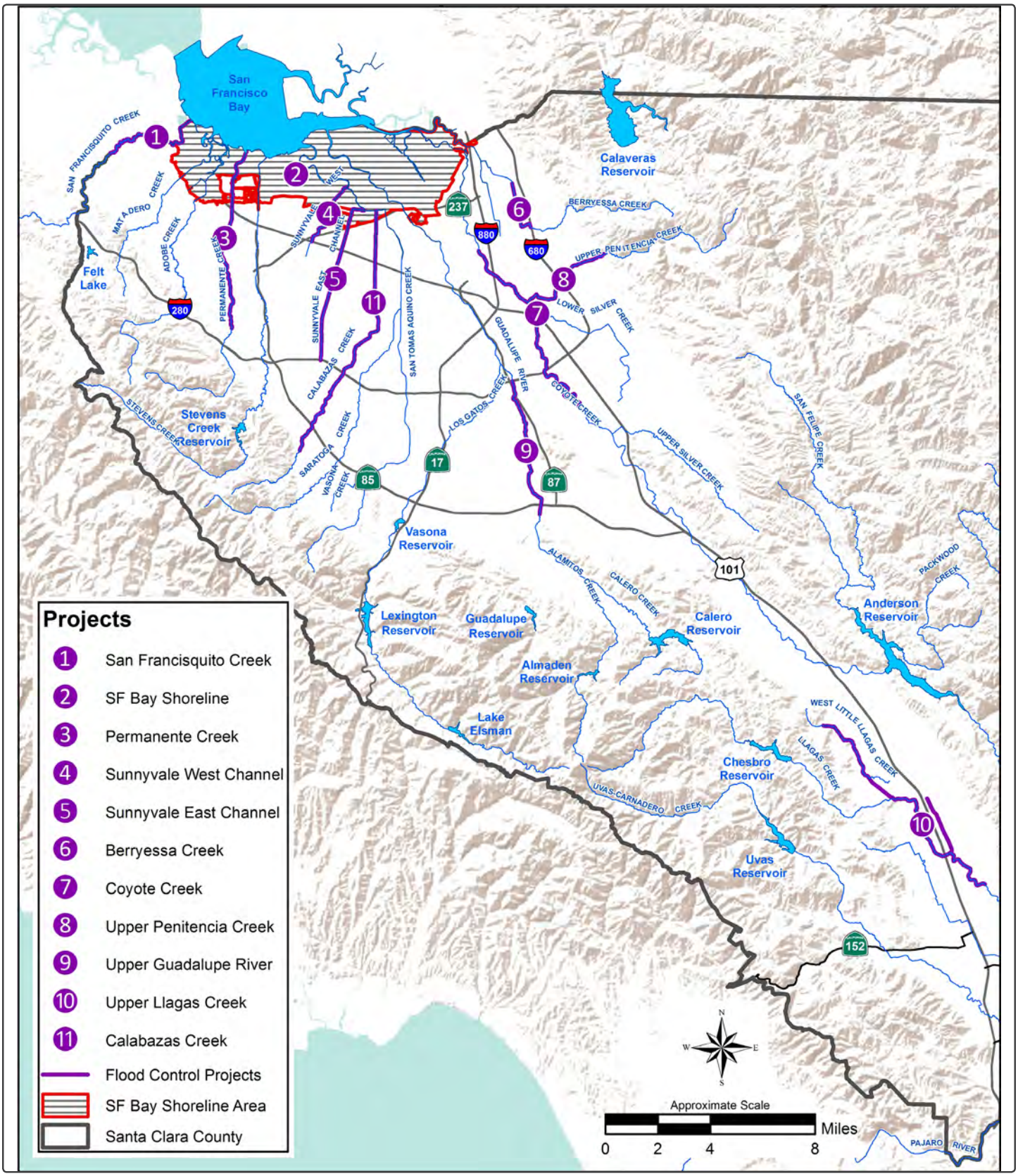
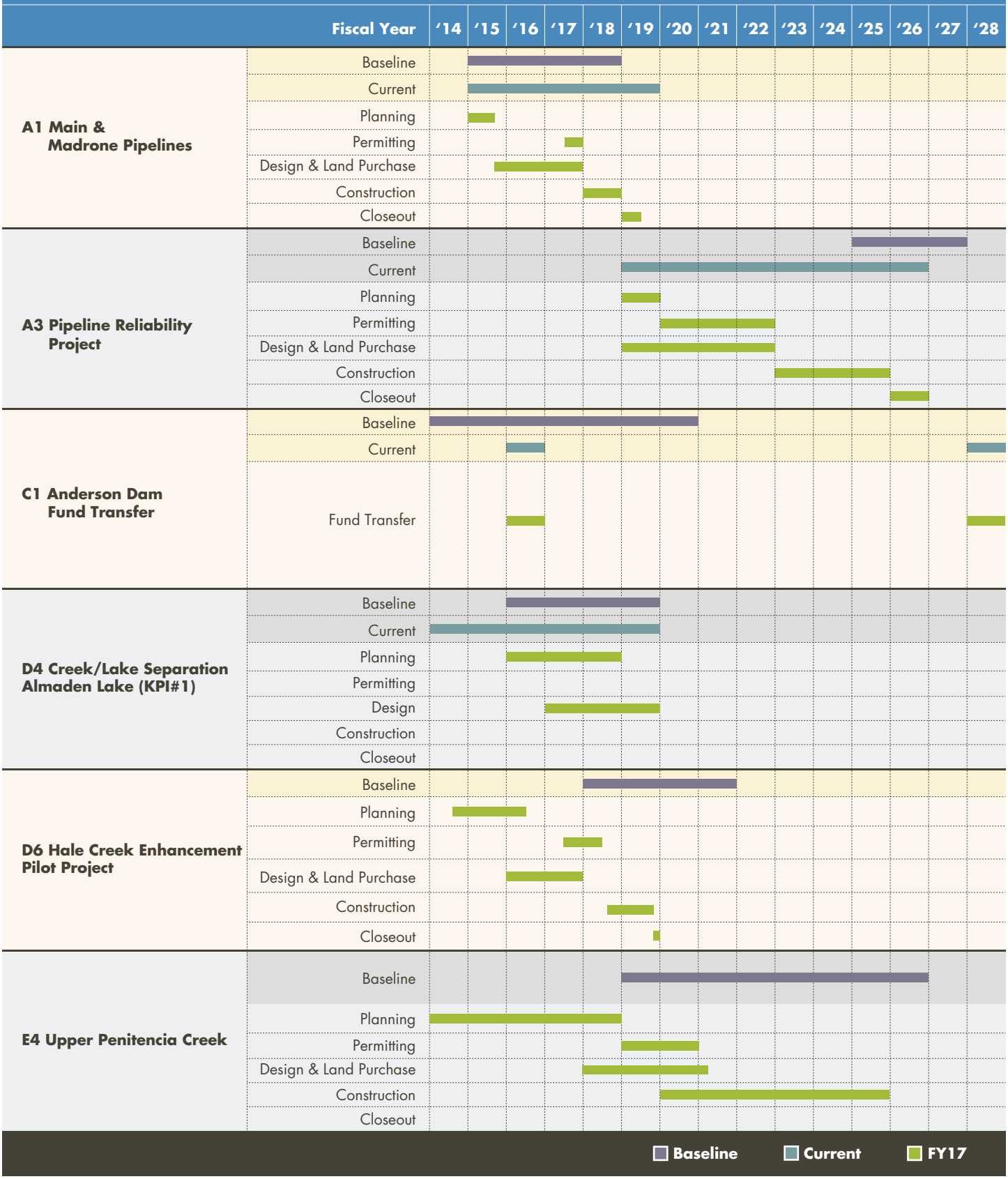
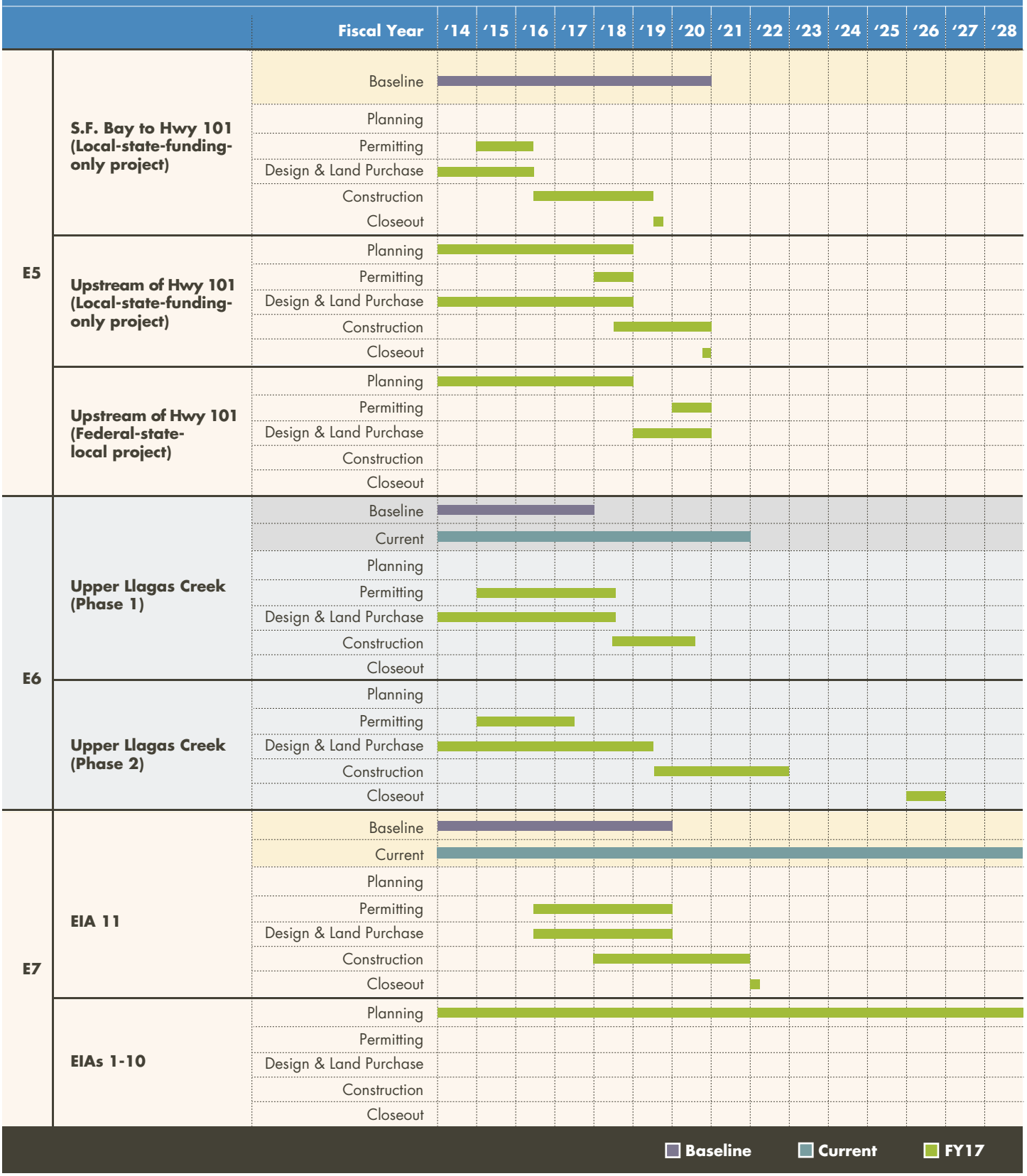
Safe, Clean Water Capital Flood Protection Projects



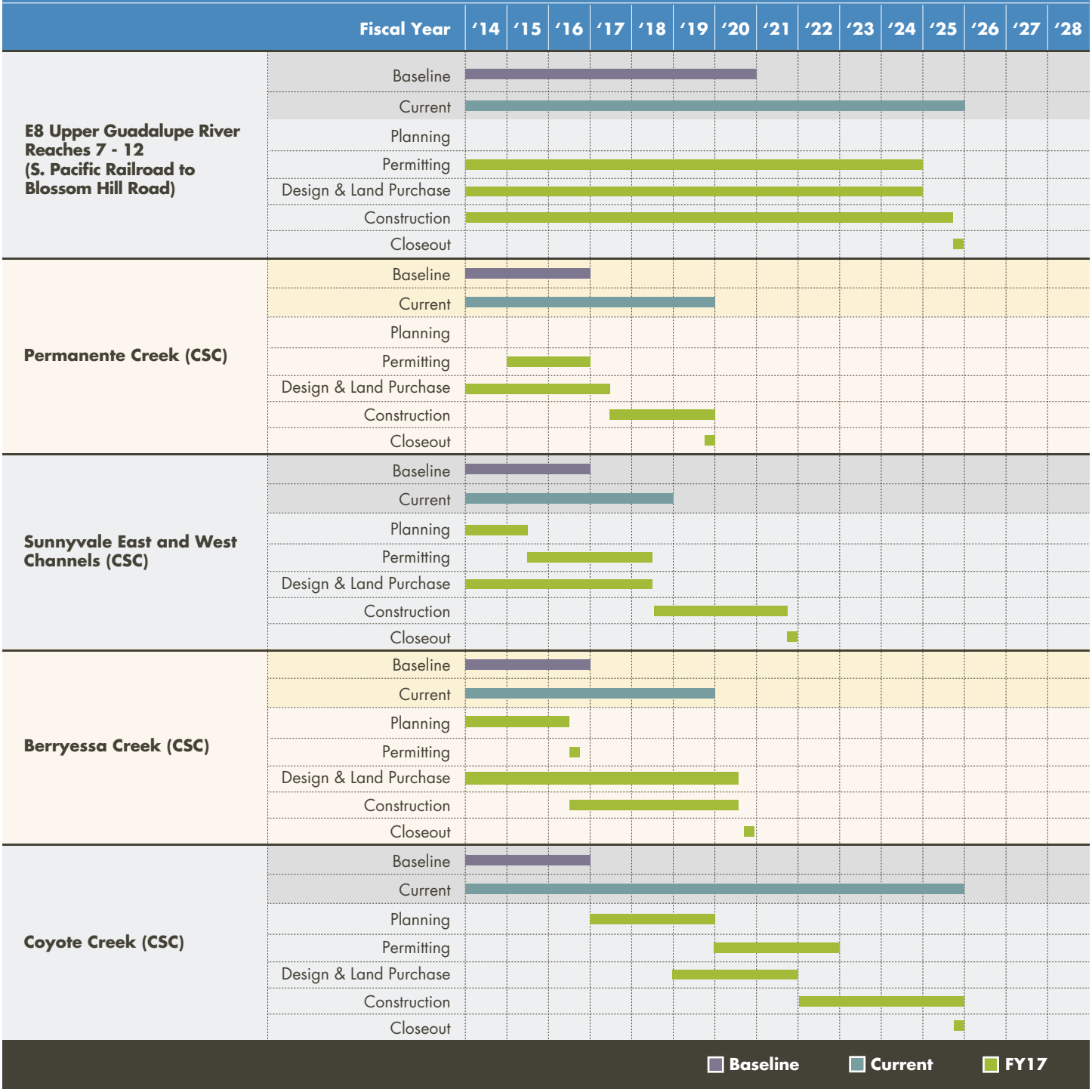
Schedule Comparison Between Baseline & Current (As of June 30, 2017)



Schedule Comparison Between Baseline & Current (As of June 30, 2017)



Schedule Comparison Between Baseline & Current (As of June 30, 2017)



Appendices

Appendix A: Annual Financial Summary Fiscal Year 2016-2017 ($ Thousands)

	Adopted Budget	Budget Adjustment	Adjusted Budget	Budgetary Actual Total			% Received
Revenue							
Special Tax	41,528		41,528			41,099	99%
Interest	1,680		1,680			651	39%
Other	19,202		19,202			2,115	11%
Subtotal	**62,410**		**62,410**			**43,865**	**70%**
Transfers and Refunding Proceeds	-		-			–	–
Total Funding Sources	**62,410**		**62,410**			**43,865**	**70%**

Costs	Adopted Budget	Budget Adjustment[1]	Adjusted Budget	Budgetary Actual			% of Budget Spent
				Actual	Encumbrance	Total	
Priority A: Ensure a safe, reliable water supply							
A1 Main Avenue and Madrone Pipelines Restoration	520	628	1,148	1,615	–	1,615	141%
A2 Safe, Clean Water Partnerships and Grants	183	–	183	46	87	133	73%
A3 Pipeline Reliability Project	–	–	–	–	–	–	–
Subtotal	**703**	**628**	**1,331**	**1,661**	**87**	**1,748**	**131%**
Priority B: Reduce toxins, hazards and contaminants in our waterways							
B1 Impaired Water Bodies improvements	1,570	(63)	1,507	1,025	189	1,214	81%
B2 Interagency Urban Runoff Program	660	–	660	669	–	669	101%
B3[1] Pollution Prevention Partnerships and Grants	283	150	433	13	350	363	84%
B4 Good Neighbor Program: Encampment Cleanup	1,011	–	1,011	1,019	–	1,019	101%
B5 Hazardous Materials Management and Response	37	–	37	34	1	35	92%
B6 Good Neighbor Program: Remove Graffiti and Litter	577	–	577	392	14	405	70%
B7[3] Support Volunteer Cleanup Efforts and Education	207	–	207	94	–	94	46%
Subtotal	**4,345**	**88**	**4,433**	**3,245**	**554**	**3,799**	**86%**
Priority C: Protect our water supply from earthquakes and natural disasters							
C1 Anderson Dam Seismic Retrofit	–	–	–	–	–	–	–
C2 Emergency Response Upgrades	298	–	298	289	17	307	103%
Subtotal	**298**	**–**	**298**	**289**	**17**	**307**	**103%**
Priority D: Restore wildlife habitat and provide open space							
D1 Management of Revegetation Projects	1,159	–	1,159	654	10	664	57%
D2 Revitalize Riparian, Upland and Wetland Habitat	803	(63)	740	398	200	598	81%
D3[1] Grants and Partnerships to Restore Wildlife Habitat and Provide Access to Trails	1,534	(150)	1,384	98	576	674	49%
D4 Fish Habitat and Passage Improvements	3,748	615	4,363	860	62	922	21%
D5 Ecological Data Collection and Analysis	712	–	712	259	333	592	83%
D6 Creek Restoration and Stabilization	482	131	613	324	–	324	53%
D7 Partnerships for the Conservation of Habitat Lands	–	–	–	–	–	–	–
D8 South Bay Salt Ponds Restoration Partnership	–	317	317	14	–	14	5%
Subtotal	**8,438**	**851**	**9,289**	**2,607**	**1,181**	**3,788**	**41%**
Priority E: Provide flood protection to homes, business, schools, and highways							
E1.1 Vegetation Control for Capacity	1,726	–	1,726	1,581	3	1,584	92%
E1.2 Sediment Removal	480	506	986	974	–	974	99%
E1.3 Maintenance of Newly Improved Creeks	–	–	–	–	–	–	–
E1.4 Vegetation Management for Access	438	–	438	440	1	442	101%
E2.1 Coordination with Local Municipalities on Flood Communication	214	225	439	280	175	454	103%
E2.2 Flood–Fighting Action Plans	–	–	–	–	–	–	–
E3 Flood Risk Reduction Studies	656	–	656	634	48	682	104%
E4 Upper Penitencia Creek	–	385	385	–	–	–	–
E5 San Francisquito Creek	536	1,453	1,989	1,617	–	1,617	81%
E6 Upper Llagas Creek	1,071	52,089	53,160	5,612	4,411	10,022	19%
E7 San Francisco Bay Shoreline Protection	6,668	622	7,290	1,148	1,046	2,194	30%
E8 Upper Guadalupe River	8,766	30,108	38,874	2,160	33	2,192	6%
Subtotal	**20,555**	**85,388**	**105,943**	**14,447**	**5,715**	**20,162**	**19%**
Permanente Creek Flood Protection	11,722	28,192	39,914	5,825	34,162	39,987	100%
Sunnyvale East and West Channels Flood Protection	–	11,555	11,555	985	875	1,860	16%
Berryessa Creek Flood Protection	14,747	(2,233)	12,514	845	21	866	7%
Coyote Creek Flood Protection	–	128	128	128	–	128	100%
CSC Environmental Enhancement and Open Space Grant	105	–	105	8	–	8	8%
Calabazas Creek Miller to Wardell	–	–	–	–	–	–	–
Subtotal	**26,575**	**37,643**	**64,217**	**7,792**	**35,058**	**42,850**	**67%**
Subtotal of All Outcome Costs	**60,914**	**124,597**	**185,511**	**30,041**	**42,613**	**72,654**	**39%**
SCW Planning and Development	2,539	(100)	2,439	2,285	9	2,294	94%
Debt Proceeds	(1,625)	–	(1,625)	(1,444)	–	(1,444)	–
Debt Service	296	–	296	29	–	29	10%
Management and Maintenance of Acquired Properties	–	–	–	–	–	–	–
Transfer for Winfield improvement	–	–	–	–	–	–	–
Total Program Cost	**$62,124**	**$124,497**	**$186,621**	**$30,911**	**$42,621**	**$73,533**	**39%**
Net Increase/(Decrease) to Reserves	285		(124,211)			(29,668)	

[1] Includes carryforward of unspent prior year capital budget.

Appendix A: Cumulative Financial Summary Fiscal Year 2013-2017 ($ Thousands)

	15-year Plan	FY13 Enc Bal & Cap Project Reserve	Board [1] Approved Adjusted	Adjusted 15-year Plan	Program-To-Date Actual Total	% Received	Current 15-year Forecast	
Revenue								
Special Tax	722,739			722,739	156,587	22%	715,236	
Interest	11,676			11,676	5,650	40%	14,052	
Other	79,714			79,714	11,424	14%	83,715	
Total	**814,129**			**814,129**	**173,661**	**21%**	**813,003**	
Beginning CSC Reserves	115,623	80,474		196,097	178,074		178,074	
Transfers and Refunding Proceeds	–	–			11,697		37,140	
Total Funding Sources	**929,752**	**80,474**	**–**	**1,010,226**	**363,433**		**1,028,217**	

	15-year Plan	FY13 Enc Bal & Cap Project Reserve	Board [1] Approved Adjusted	Adjusted 15-year Plan	Program-To-Date Actual			% of Adj. Plan Spent	Current 15-year Forecast[3]	15-year Forecast/ above (below) 15-year Plan
					Actual	Encumbrance	Total			
Priority A: Ensure a safe, reliable water supply										
A1 Main Avenue and Madrone Pipelines Restoration [2]	8,303	–	7,793	16,096	2,790	4	2,794	17%	17,707	1,611
A2 Safe, Clean Water Partnerships and Grants	2,360	–	–	2,360	579	428	1,007	43%	2,402	41
A3 Pipeline Reliability Project	12,923	–	995	13,918	–	–	–	–	11,796	(2,122)
Subtotal	**23,586**	**–**	**8,788**	**32,374**	**3,369**	**431**	**3,800**	**12%**	**31,905**	**(470)**
Priority B: Reduce toxins, hazards and contaminants in our waterways										
B1 Impaired Water Bodies improvements	26,982	445	–	27,427	4,549	378	4,927	18%	27,125	(302)
B2 Interagency Urban Runoff Program	12,641	–	–	12,641	2,503	–	2,503	20%	11,628	(1,014)
B3 Pollution Prevention Partnerships and Grants	7,595	–	–	7,595	1,108	964	2,072	27%	7,982	387
B4 Good Neighbor Program: Encampment Cleanup	5,209	105	–	5,314	4,122	–	4,122	78%	7,082	1,767
B5 Hazardous Materials Management and Response	618	–	–	618	101	1	102	17%	620	2
B6 Good Neighbor Program: Remove Graffiti and Litter	10,036	2	–	10,038	1,870	31	1,901	19%	9,531	(507)
B7 Support Volunteer Cleanup Efforts and Education	2,430	–	–	2,430	819	1	819	34%	2,148	(281)
Subtotal	**65,511**	**552**	**–**	**66,063**	**15,072**	**1,374**	**16,446**	**25%**	**66,116**	**53**
Priority C: Protect our water supply from earthquakes and natural disasters										
C1 Anderson Dam Seismic Retrofit	67,053	–	–	67,053	14,000	–	14,000	21%	66,053	(1,000)
C2 Emergency Response Upgrades	3,357	–	–	3,357	1,157	17	1,174	35%	3,265	(92)
Subtotal	**70,410**	**–**	**–**	**70,410**	**15,157**	**17**	**15,174**	**22%**	**69,318**	**(1,092)**
Priority D: Restore wildlife habitat and provide open space										
D1 Management of Revegetation Projects	22,259	–	–	22,259	2,431	10	2,440	11%	17,440	(4,819)
D2 Revitalize Stream, Upland and Wetland Habitat	18,190	–	–	18,190	792	200	992	5%	16,352	(1,838)
D3 Grants and Partnerships to Restore Wildlife Habitat and Provide Access to Trails	24,092	–	–	24,092	1,685	3,399	5,084	21%	24,138	46
D4 Fish Habitat and Passage Improvements	29,176	358	–	29,534	4,184	725	4,909	17%	26,582	(2,952)
D5 Ecological Data Collection and Analysis	9,020	–	–	9,020	1,170	345	1,515	17%	6,807	(2,213)
D6 Creek Restoration and Stabilization	16,719	–	–	16,719	655	–	655	4%	21,643	4,924
D7 Partnerships for the Conservation of Habitat Lands	10,524	–	–	10,524	–	–	–	–	10,936	412
D8 South Bay Salt Ponds Restoration Partnership	4,694	–	(583)	4,111	232	–	232	6%	3,978	(133)
Subtotal	**134,673**	**358**	**(583)**	**134,448**	**11,148**	**4,679**	**15,827**	**12%**	**127,875**	**(6,573)**
Priority E: Provide flood protection to homes, business, schools, and highways										
E1.1 Vegetation Control for Capacity	24,560	11	–	24,571	4,251	3	4,254	17%	26,493	1,922
E1.2 Sediment Removal	9,832	16	–	9,848	1,905	–	1,905	19%	8,767	(1,081)
E1.3 Maintenance of Newly Improved Creeks	19,051	–	–	19,051	–	–	–	–	15,988	(3,063)
E1.4 Vegetation Management for Access	6,156	–	–	6,156	1,520	1	1,521	25%	6,827	670
E2.1 Coordination with Local Municipalities on Flood Communication	2,530	–	–	2,530	472	175	647	26%	1,820	(710)
E2.2 Flood–Fighting Action Plans	1,361	–	–	1,361	–	-	–	–	–	(1,361)
E3 Flood Risk Reduction Studies	9,374	–	–	9,374	2,631	137	2,768	30%	8,969	(405)
E4 Upper Penitencia Creek	59,413	–	(10,496)	48,917	–	–	–	–	48,771	(146)
E5 San Francisquito Creek	47,740	2,907	(526)	50,121	21,017	14,604	35,621	71%	50,104	(16)
E6 Upper Llagas Creek	84,098	6,784	22,610	113,492	27,955	4,457	32,412	29%	132,498	19,006
E7 San Francisco Bay Shoreline Protection	22,288	–	17,052	39,340	2,568	1,046	3,613	9%	29,190	(10,150)
E8 Upper Guadalupe River	69,112	39,382	3,239	111,733	7,935	3,832	11,767	11%	112,668	935
Subtotal	**355,515**	**49,100**	**31,879**	**436,493**	**70,254**	**24,255**	**94,509**	**22%**	**442,096**	**5,602**
Clean, Safe Creeks Capital Flood Protection Projects										
Permanente Creek Flood Protection	22,111	9,398	23,921	55,430	10,904	38,204	49,108	89%	67,695	12,264
Sunnyvale East and West Channels Flood Protection	82,249	4,463	(29,252)	57,460	5,524	962	6,486	11%	61,150	3,690
Berryessa Creek Flood Protection	25,288	6,757	8,851	40,896	26,006	4,238	30,243	74%	54,183	13,286
Coyote Creek Flood Protection	18,663	5,757	(1,774)	22,646	742	_	742	3%	26,347	3,701
CSC Environmental Enhancement and Open Space Grant [3]	–	2,864	–	2,864	2,272	1,203	3,475	121%	4,213	1,349
Calabazas Creek Miller to Wardell	–	1,223	–	1,223	66	–	66	5%	159	(1,064)
Subtotal	**148,311**	**30,462**	**1,746**	**180,519**	**45,514**	**44,607**	**90,121**	**50%**	**213,746**	**33,227**
Subtotal of All Outcome Costs	**798,007**	**80,472**	**41,829**	**920,308**	**160,514**	**75,364**	**235,878**	**26%**	**951,056**	**30,748**
SCW Planning and Development	31,999	2	–	32,002	7,738	11	7,750	24%	39,640	7,638
Cost of Financing	43,119	–	–	43,119	–	–	–	0%	54,825	11,706
Debt Proceeds [4]	–	–	–	–	(10,162)	_	(10,162)	0%	–	–
Debt Service	–	–	–	–	33	–	33	0%	–	–
Management and Maintenance of Acquired Properties	–	–	–	–	–	–	–	0%	–	–
Overhead Adjustment	–	–	–	–	283	–	283	0%	–	–
Market Valuation Reserve	–	–	–	–	–	–	–	0%	–	–
Currently Authorized Projects [5]	–	–	–	–	–	–	129,019	0%	–	–
Operating and Capital Reserve	56,627	–	(41,829)	14,798	–	–	631	4%	(13,882)	(28,680)
Total Program Cost	**$929,753**	**$80,474**	**$0**	**$1,010,227**	**$158,408**	**$75,375**	**$363,433**	**36%**	**$1,031,639**	**$21,412**

[1] Board approved adjustments include changes to Safe Clean Water capital projects based on the Board approved FY18 CIP.

[2] Cost of the project is $16.1M. The Water Utility fund will pay $9.8M via transfer; net cost to Safe Clean Water is $6.3M.

[3] The $4.2M Current 15-yr Forecast includes CSC encumbrance carry forward, plus additional cost to administer remaining CSC grants.

[4] The $10.2M is proceeds from the 2012 and 2017 debt refundings.

[5] The $129M currently authorized projects reserve represents previously budgeted capital dollars that were unspent due to project delays.

Appendix A: Other Revenue ($ Thousands)

Table A-3.1 Other Revenue — Original Forecast

Other Revenue Sources	Project Numbers	Original Forecast
Capital Reimbursements		
State Subventions		
E6 — Upper Llagas Creek (Buena Vista Rd. to Wright Ave.)	26174051s	$30,000
E8 — Upper Guadalupe River (I-280 to Blossom Hill Rd.)	26154001s	$33,044
CSC — Berryessa Creek (Calaveras Blvd. to I-680)	26174041s	$12,841
City of Morgan Hill		
E6 — Upper Llagas Creek (Buena Vista Rd. to Wright Ave.)	26174051s	$780
	Sub-Total	**$76,665**
Rental Income		
Fund 26	-	$3,049
	Sub-Total	**$3,049**
	Combined Total	**$79,714**

Appendix A: Other Revenue ($ Thousands)

Table A-3.2 Other Revenue Comparison — Actuals Program to Date (FY17) vs. Forecast (FY18-21)

Other Revenue Sources	Project Numbers	Actuals Program to Date (FY17)	Forecast (FY18-21)
Capital Reimbursements			
State Subventions			
E6 — Upper Llagas Creek (Buena Vista Rd. to Wright Ave.)	26174051s	$3,552	$30,406
E8 — Upper Guadalupe River (I-280 to Blossom Hill Rd.)	26154001s	$3,628	$25,789
CSC — Berryessa Creek (Calaveras Blvd. to I-680)	26174041s	-	$6,684
Department of Water Resources Prop. 1E Grant			
CSC — Berryessa Creek (Calaveras Blvd. to I-680)	26174041s	$1,662	$9,708
E7 — San Francisco Bay Shoreline	26444001s	$178	$242
City of Morgan Hill			
E6 — Upper Llagas Creek (Buena Vista Rd. to Wright Ave.)	26174051s	$1,020	-
	Sub-Total	**$10,040**	**$72,829**
Rental Income			
Fund 26		$846	-
	Sub-Total	**$846**	-
	Combined Total	**$10,886**	**$72,829**
	Grand Total	**$83,715**	

Appendix B: Inflation Assumptions

	Actual FY14	Actual FY15	Actual FY16	Actual FY17	Budget FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
COLA Increase %	1.5%	2.0%	3.0%	3.0%	3.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Step Increase %	0.2%	0.3%	0.3%	0.5%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Benefits Rate	52.7%	50.5%	49.6%	53.3%	52.7%	57.5%	61.4%	64.7%	67.9%	71.3%	74.3%	77.5%	81.1%	84.9%	89.0%
Supplies & Svcs Inflation*	3.0%	2.3%	2.7%	3.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Construction Cost Inflation**	4.9%	2.3%	3.5%	1.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

*Actual supplies and services inflation based on the San Francisco-Oakland-San Jose Consumer Price Index for all urban consumers as of June 2017
** Actual construction cost inflation based on Engineering News Record results for the San Francisco Bay Area

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3

SCW Project Number	Grant Cycle FY	Grantee/Community Partner	Project Name	Description of Project	Amount Awarded	Total Project Cost	Status	Measurable Outcomes
A2	2014	City of Palo Alto	Business Water Use Reports	Research water use among small to medium businesses in the hospitality and food service industries in the Palo Alto service area, how best to communicate with these businesses about their water use, and what benchmarking information is available. Develop and pilot Business Water Reports that use behavioral science, data analytics and targeting, and informative graphics to communicate water use and spur conservation among businesses receiving Water Use Reports.	$45,000	$0	Cancelled	
A2	2014	City of Palo Alto	Real-Time Water Use Monitoring - Optimal Utility Management Through Visibility to Water Consumption	Provide customers with the information and tools to monitor their own water use in real-time, thereby empowering them to actively manage water use at their facilities and address leaks or other anomalies in water use before encountering potential financial, mechanical, structural problems or liability risks. Selected Vendor will provide setup, configuration, analytics, real-time data service, weekly and monthly reports, real-time alerts, ongoing software support, updates and maintenance. Vendor will work with CPAU staff to calibrate the sensing devices for each meter whenever necessary, including when and if meters are evaluated for testing, repair and replacement through the CPAU meter auditing program. Vendor will facilitate training for the customer and CPAU staff, as needed, on use of the software monitoring platform. Vendor will assist CPAU staff with the final data evaluation to document program results.	$30,000	$0	Cancelled	
A2	2014	Our City Forest	Innovative Nursery Irrigation	Design and install a prototype of an innovative water-conserving irrigation system in an educational garden.	$30,000	$5,291	Cancelled	
A2	2015	Bevilacqua-Knight, Inc.	Employee Rewards for Water and Energy Savings Program	Partnering with large corporate employers in Santa Clara County for outreach to educate employees on water efficiency and conservation in their homes through an employee rewards program.	$50,000	$64,324	Closed June 2017	• Ran a 3-month campaign which engaged 431 employees from eBay, VMware and BKi (4% of eligible employees at eBay, 8% at VMware, and 76% at BKi) • Participants logged 59 projects and 3,590 actions that cumulatively were estimated to save over 1.3 million gallons of water a year • 97% of VMware participants and 95% of eBay participants thought the challenge was a helpful way to learn about ways to save water • Almost 90% of participants from VMware and eBay believed it was very important that their company provided opportunities to live a sustainable lifestyle at home and work
A2	2015	San Jose Water Company	Advanced Metering Infrastructure (AMI) Residential Pilot Program	Evaluate advance metering infrastructure (AMI) system for single family residential customers - Willow Glen area. Evaluate conservation benefits of AMI cellular network technical system. Transmit data via existing cell network. Provide real time data and leak detection to customers and utility staff.	$50,000	$120,015	Extended	
A2	2015	San Jose Water Company	Advanced Metering Residential Pilot Program	Research to evaluate water saving potential from using new class - advanced water meters (ultrasonic E-Series from Badger Meter Inc.) for single family residential customers in the San Jose Water Company service area - Willow Glen.	$50,000	$107,844	Extended	
A2	2015	City of Morgan Hill	Experimental Turf Irrigation Technology Evaluation at Morgan Hill Aquatics Center	Test KISSS, a new lawn irrigation technology system, on two lawn areas near swimming pool on Morgan Hill facility. This pilot project will be designed specifically to test the technology with experimental and control areas of turf.	$48,500	$64,900	Extended	

A2	**2015**	**Deal Closet LLC DBA Bay Area Fresh**	**Low Cost Hydroponics for Cost Effective Growth of Leafy Vegetables**	Study efficiency of using farm wastewater for commercial growth of leafy vegetable crops through a hydroponic system in Santa Clara County. Using a method that captures wastewater from commercial Nutrient Film Technique (NFT) hydroponic system and recycles it into another hydroponic method, a method that requires no pumps or additional nutrients beyond those initially applied (Kratky's method).	**$25,000**	**$42,144**	**Closed June 2017**	• Conducted 4 experiments to find out if recycling hydroponic wastewater statistically impacts the growth of food crops • Results showed that there was really no effect at all between using recycled wastewater and using fresh water, and it's unlikely additional experiments would produce a result as extreme or more extreme than the one from this sample. • Plant sizes were in favor of using the Kratky system over the NFT system. The NFT plants were smaller and slower growing, but had tighter clustering of sizes. • This project demonstrated that the Kratky method outdoors outperforms NFT in all cases tested except in the case of heavily reused wastewater.
A2	**2016**	**City of Mountain View**	**Advanced Metering Infrastructure Feasibility Study and Pilot**	Evaluate available Advanced Metering Infrastructure (AMI) systems and their ability to optimize meter reading efficiency, increase customer service, and promote water-use efficiency within Mountain View.	**$50,000**	**$175,000**	**In progress**	
A2	**2016**	**Purissima Hills Water District**	**Residential Advanced Metering Program**	Test the efficacy of advanced metering infrastructure (AMI) in reducing water use amongst Purissima Hills Water District Customers.	**$50,000**	**$99,200**	**In progress**	
A2	**2016**	**Velocitron LLC**	**Micro Streams Faucet Adapter**	Install micrometer sensors in businesses in Santa Clara County to determine water use and detect leaks to help save water.	**$30,000**	**$40,000**	**In progress**	
A2	**2017**	**Fisher Nickel, Inc.**	**Dipper Well Replacement**	Measure existing dipper well(s) water use and verify the savings potential through a replacement with best available technologies in a real-world food service setting.	**$37,500**	**$50,000**	**In progress**	
A2	**2017**	**Ecology Action**	**Every Drop Counts – Investigation of Water Savings from Indoor, Non-Potable Rainwater Harvesting Systems**	Partner with residential, commercial, and institutional property owners to construct and monitor water use and water quality of rooftop rainwater harvesting systems for indoor, non-potable uses such as toilet flushing and clothes washing.	**$49,940**	**$97,765**	**In progress**	
A2	**2014**	**First 5 Santa Clara County**	**Water Hydration Stations**	Install 50 hydration stations in local schools to help the schools be in compliance with SB1413 and the Healthy Hunger-Free Kids Act.	**$250,000**	**$250,000**	**In progress**	
				A2 Sub-Total	**$795,940**	**$1,116,483**		

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3 continued

B3	**2014**	**San Jose Parks Foundation**	**Trash Free Coyote Creek Cleanup and Surveillance Project**	The goal is to create a trash free zone in the Coyote Creek riparian corridor between Tully Road and Hellyer Park (including the park) so as to reduce trash and pollution and their associated impacts on water quality and fishery beneficial uses.	**$26,783**	**$80,760**	**Closed Sept. 30, 2015**	• 14 cleanups • Over 80,000 pounds trash removed • 1,296 volunteers participated in a 3-hour event • Monthly coordination meetings with Park Rangers, Environmental Services and the Water District
B3	**2014**	**California Product Stewardship Council**	**Secure Pharmaceutical Collection Bin Expansion**	The project will prevent pharmaceutical waste from contaminating waterways by establishing 50 new convenient and secure pharmaceutical collection bins in pharmacies, hospitals and police stations in Santa Clara County that will be distributed to increase convenience to all county residents.	**$206,417**	**$276,352**	**Completed June 30, 2017**	• 29 collection sites installed in local pharmacies and a few fire and police departments. • Over a ton-and-a-half (3,280 pounds) of prescription medication has been collected from the bins; some sites were emptied every week. • Produced a video to educate county residents about the consequences of improper medicine disposal as well as the appropriate disposal method.

B3	**2014**	**West Valley College**	**West Valley College Parking Lot 2 Stormwater Pollution Reduction Project**	Implement West Valley College Stormwater Pollution Reduction Plan through installation of stormwater improvements within Parking Lot 2. Stormwater planters will be constructed in the northern sections of the existing parking lot landscape islands and in the northeastern corner of the parking lot. The planters will treat runoff from the parking lot asphalt, concrete, and interior landscaping areas. After treatment the stormwater will discharge to existing storm laterals off of Allendale Avenue.	**$200,000**	**$1,052,054**	**Extended**	
B3	**2015**	**City of San José**	**San José Watershed Community Stewardship & Engagement Project**	The work will provide community engagement, outreach and education to engage the homeless population, and provide trash cleanup in both Coyote Creek and Guadalupe River. The work will be conducted in socio-economically diverse neighborhoods along 2 different watersheds.	**$546,250**	**$1,090,000**	**Extended**	
B3	**2013**	**County of Santa Clara**	**Green Business Program**	The District continues to partner with the Santa Clara County (County) Green Business Program and provides funding for Green Business certifications to promote the awareness and increase the number of certifications and re-certifications.	**$240,000**	**$240,000**	**Completed June 30, 2016**	**The partnership funded the certification of a maximum 75 business over the three-year period. During this period, the County of Santa Clara's Green Business Program achieved the following:** **• 90 business certified/recertified in FY14** **• 75 businesses certified/recertified in FY15** **• 103 businesses certified/recertified in FY16** **• An advertisement campaign in FY16 geared towards reducing urban runoff from businesses. The campaign included videos, media ads, events, website, etc.** **Over the three-year period, the program achieved the following results:** **• 584,357 milligrams mercury reduced** **• 740,875,831 pounds solid waste diverted from the landfill** **• 955,408,254 pounds/tons Greenhouse Gas Emissions reduced** **• 7,075 gallons fuel saved** **• 530,483 gallons grease recycled** **• 137,936,466 gallons water saved** **• 410,335,999 kWh energy saved**
B3	**2016**	**West Valley College**	**West Valley College North Walk Storm Water Quality Improvements**	Treat runoff from 6 acres in the North Walk and Parking Lot 6 sub-watersheds. The project includes the installation of storm water planters, rain gardens and bio-swales to promote infiltration and provide water quality treatment.	**$71,068**	**$648,301**	**In progress**	
B3	**2015**	**Silicon Valley Senior Services**	**Environmental Assist Pharmaceutical Pick- Up (EAPP) Program**	EAPP's dedicated volunteers in conjunction with local police/sheriff departments help decrease the amount of pharmaceuticals in our drinking water by assisting seniors and the disabled for safe pick-up of pharmaceutical waste; and providing information and education to Santa Clara residents about safe disposal.	**$90,525**	**$152,185**	**Cancelled**	
B3	**2016**	**South Bay Clean Creeks Coalition**	**South Bay Creek Cleanup Program**	The SBC3 Program recruits volunteers through trail & park tabling, canvassing adjacent neighborhoods. These volunteers can participate in TEAM 222 Clean Up program which conducts clean ups every other month at multiple sites, including corporate events; and work on citizen monitoring network.	**$60,000**	**$80,000**	**Closed June 30, 2017**	**• 14 Cleanups** **• 9.9 tons of trash collected** **• 442 Volunteers; 946 volunteer hours** **• 9 community presentations** **• Developed outreach materials, including art work and video about spawning Chinook Salmon** **• Conducted social media outreach** **The Coalition won the Governor's Environmental and Economic Leadership Award**
B3	**2016**	**San Francisco Bay Wildlife Society**	**Don Edwards San Francisco Bay NWR Clean-Up 2016**	Collaborate with San Jose Conservation Center and Volunteers from Don Edwards San Francisco Bay NWR to remove trash from south San Francisco Bay tidal marshlands, mudflats and adjacent uplands in Santa Clara County. Integrate Litterati™ a social media technology, to create a litter database for long-term trash reduction and provide an interpretive display for education and outreach.	**$35,391**	**$73,390**	**In progress**	
B3	**2016**	**Santa Clara County Creeks Coalition**	**Trash Free North Coyote Creek Watershed Stewardship and Engagement Project**	Conduct 12 volunteer trash cleanups and outreach activities, conduct outreach activities, recruit over 700 volunteers from business and community organizations and implement a docent-led walks program along 5 miles of north Coyote Creek from Tasman Drive to Jackson Street.	**$89,399**	**$142,239**	**In progress**	
B3	**2016**	**Acterra Stewardship**	**Greening Urban Watersheds**	Over a 3-year period, provide designs for 4 rain barrels, 2 cisterns and 4 bio-retention/rain garden projects; coordinate 12 hands-on workshops to install rain barrels/gardens on city properties, and conduct 21 community creek cleanup events along 3 creeks; remove 13,000 pounds of trash from 4 miles of riparian corridors.	**$93,617**	**$189,261**	**In progress**	
B3	**2016**	**Regents of the University of California**	**Effective Storage and Composting of Livestock Manures**	Over a 45-month period, establish demonstration sites at 4 locations at McClellan Ranch, Emma Prusch and Martial Cottle Parks and the South County Airport. Outreach to livestock owners for proper manure storage and safe composting. The work will minimize pathogens from manures from entering storm water and creeks by demonstrating effective and safe composting.	**$60,000**	**$213,845**	**In progress**	

B3	**2016**	**County of Santa Clara**	**Pollution Prevention and Zero Waste Project**	Implement the Green Business Program, a third-party verified compliance-based program addressing surface water quality, storm water protection, pollution prevention and education. The program identifies pollution sources and provides ways to reduce use of toxic materials, and implement storm water protection practices. The program benefits water quality by avoiding impacts of improper management and air deposition on water.	**$200,000**	**$690,000**	**In progress**	
				B3 Sub-Total	**$1,919,450**	**$3,873,727**		

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3 continued

B7	**2014**	**Acterra**	**Acterra Lower Peninsula Healthy Creeks Project**	The Acterra Lower Peninsula Healthy Creeks Project brings together the resources and talents of nonprofit organizations, academic institutions, municipalities, government agencies, and the general public to provide a variety of hands-on creek stewardship activities and watershed education events designed to attract participants of all ages.	**$68,600**	**$179,910**	**Closed Sept. 30, 2016**	• 4,225 participants (1,305 volunteers and 2,920 education participants) • 24 volunteer water quality monitoring events on Stevens, San Francisquito (and its tributaries), Matadero, Barron, and Adobe Creeks. 17 events on Permanente Creek. • High quality data for 23 water monitoring sites and 7 benthic macroinvertebrate sites • 14.75 miles of riparian areas cleared of trash. • 18,180 pounds of trash collected • 10 World Water Monitoring Challenge events • 8 quarterly Watershed Forums • 10 newsletters
B7	**2014**	**Clean Water Fund**	**ReThink Disposable: Preventing Riparian Trash at the Source**	This is the continuation and expansion of a public-private partnership project involving Clean Water Fund (the project lead), and local government. The project (originally Taking out the Trash, but renamed ReThink Disposable), is currently a partnership with the cities of Oakland, San José, South San Francisco, San Francisco, the County of San Mateo, and Stop Waste of Alameda County.	**$82,133**	**$174,036**	**Completed Dec. 31, 2016**	• Successful Coordination with the cities of San Jose, Cupertino and Sunnyvale. • 91 food businesses and 8 institutions received promotional materials to participate in the free ReThink Disposable audit and technical assistance. • 8 presentations to various business associations and corporations in the county to promote the program to the target food business. • 12 food businesses and 1 institution successfully completed the ReThink Disposable audit yielding the following ANNUAL impact numbers: -1,424,038 pieces of disposable food ware items eliminated -24,265 pounds of waste prevented -$5,963 average cost savings after payback period was met • 4 creek cleanups with 127 volunteers removing almost 4,000 pieces of trash and debris (mainly plastics) from "hot spots" on Calabazas and Coyote Creeks. • Engaged almost 30,000 residents in the County with the new ReThink Disposable Source Reduction Pledge. • Hosted 1 ReThink Disposable Free Community Workshop and Training with almost 60 attendees from watershed and creek groups, teachers, and local government staff. • Coordinated with the Green Business Program on outreach and adoption of waste prevention best management practices for food businesses • Developed a new public education tabling pop-up display • San Jose's Hauler, Republic, promoted ReThink Disposable in a feature article in their quarterly newsletter mailed to 30,000 accounts. • The successful results from the Santa Clara Valley Water District grant in the three pilot cities led to two new contracts with the City of Palo Alto and the Santa Clara Recycling and Waste Reduction Commission totaling $230,000 over the next three years. This will fund 60-80 more ReThink Disposable certified food businesses and 3-5 institutions in the county. CWF's ReThink Disposable wins the 2015 Governor's Award for Environmental and Economic Leadership and the 2016 California Resource Recovery Association's Excellence in Waste Prevention Award.

B7	**2014**	**Environmental Volunteers**	**Education for Clean Water**	The Education for Clean Water Project will leverage the Environmental Volunteers' skilled and committed base of volunteer docents to deliver hands-on, Citizen Science based Water Resources education to school classrooms and the general public.	**$25,092**	**$30,271**	**Closed June 30, 2015**	**Conducted education activities in the Palo Alto Baylands Nature Preserve, utilizing the EcoCenter facility and the ecologically rich marshland surrounding it:** **• Developed and produced site resource guide** **• 35 volunteer docents trained in new curriculum** **• 12 local elementary school classrooms (over 300 students) participated in field study excursions** **• 818 community members participated in clean water education program, including art show featuring thematic works by local school children; earth day event; Girls-in-Science forum; and drop in visitors at the EcoCenter** **• Citizen science data collection and data-sharing through Field Scope, a citizen science data sharing project** **• Youth Leadership Board developed a new website promoting wise water use"**
B7	**2014**	**Girl Scouts of Northern America**	**Girl Scouts Go Green in Santa Clara County**	To implement an environmental outreach and education program focusing on the Priority B7 theme to "provide education and outreach for reducing pharmaceutical waste and other pollutants in our waterways (showing a benefit through awareness and engagement).	**$44,116**	**$56,205**	**Closed July 31, 2016**	**The 10-week afterschool environmental stewardship program was held at 18 partner sites in Santa Clara County in which:** **• 487 girls participated** **• At least 4-8 hours were spent on hands-on environmental learning.** **• At least 4-6 hours were spent on environmentally-focused field trip.** **• At each partner site girls engaged in two community action projects.** **• More than 7,500 community members were reached through each of the girl-led community action projects.** **By the end of the program:** **• 82% of participating girls were able to name two or more actions they can personally take to prevent waste or pollutants from entering waterways, as measured by the post-program surveys.** **• 97% of participants were able to explain why mercury and pharmaceuticals are harmful when they enter our waterways, as measured by instructor observation.** **• 80% of participating girls reported that they could have a job that helps the environment, as measured by post-program surveys.** **• 91% of girls showed increased interest level in learning about environmental science, as measured by post-program surveys.**
B7	**2014**	**City of Sunnyvale**	**Schools Goin' Green**	The cities of Sunnyvale and Cupertino are proposing to partner locally with 2-3 middle schools and 2 high schools, through their service organizations or environmental clubs, to clean up litter on and around their school campuses and neighborhoods and to implement student-led campaigns to change the littering behavior of fellow students.	**$32,250**	**$47,448**	**Closed June 30, 2016**	**6 schools participated in the effort to clean up litter on and around their school campuses and neighborhoods and to implement student-led campaigns to change the littering behavior of fellow students. 5 of the 6 schools also established ongoing campus Green Teams.** **Among the major outcomes:** **• 3,421 youth participated in project events** **• 98 cleanups over the course of the project** **• Over 4,189 pounds of litter collected** **• All teams participated in the City's Students Living Green App Challenge in April 2016** **• Youth designed a logo for Schools Goin' Green** **The project was identified as an outstanding stormwater project by the California Stormwater Quality Association (CASQA).**

B7	**2014**	**Save the Bay**	**Clean Bay Project**	The project will build on the strong track record of supporting municipalities and community groups to eliminate significant components of plastic trash in storm water and reduce highly toxic tobacco litter in the San Francisco Bay to benefit water quality and public health.	**$60,000**	**$241,243**	**Closed June 30, 2016**	• Over 2,200 pounds of micro-trash debris removed in Santa Clara County, specifically at Coyote Creek, through community-based restoration and trash removal projects; volunteers also assisted STB scientists with habitat restoration by cultivating native plants and removing non-native plants. • Successfully advocated for the San Francisco Bay Regional Water Quality Board adopting a much stronger Municipal Regional Stormwater Permit in November 2016. The permit now includes additional trash reduction milestones and monitoring requirements, such as 70% trash reduction by 2017; 80% by 2018. • Analyzed data from the 2015 annual reports submitted by cities, counties, and districts holding stormwater permits and using the information to support Santa Clara cities accelerate their progress towards the goal of Zero Trash by 2022. • Created a Monitoring and Education Tool for Plastic Bag Ban Ordinances (and recently added one for Styrofoam bans). It is a database of all ordinances in the San Francisco Bay Area, from Morgan Hill in the South Bay to Cloverdale on 101 North. The database is accessed through a map interface so that one can click on a community and get a popup with information about specific ordinances or progress made toward adoption of ordinances. • Carried out "Zero Trash, Zero Excuse" public education campaign • San Jose's comprehensive ordinance to ban Styrofoam has now been replicated in most Santa Clara County cities. • Successfully advocated Sunnyvale adopting and strengthening its smoking ordinance, which places the city on a path to reduce tobacco litter and second hand smoke.
B7	**2014**	**San Jose Parks Foundation**	**Trash Free Coyote Creek Education and Outreach Project**	The "Trash Free Coyote Creek Education and Outreach Project" is (1) to reach out to neighborhood and civic groups, trail users and businesses to educate them about the potential for cleaning up and keeping the Coyote Creek clean through volunteer cleanups and (2) to enlist their participation in creek cleanups and weekly creek inspections to create a Trash Free Coyote Creek.	**$42,199**	**$59,339**	**Closed Sept. 30, 2015**	• 150 people attend a day-long Coyote Creek Howl conference held at San Jose State University • 9 informative brochures produced on topics such as birds, plants, geology of Coyote Creek • 32 presentations to community organizations •1-2 email newsletters a month to about 1,000
				B7 Sub-Total	**$354,390**	**$788,452**		

Appendix C: Cumulative Partnerships and Grants Information for Projects A2, B3, B7 and D3 continued

D3	**2014**	**Resource Conservation District of Santa Cruz County**	**Uvas Creek Steelhead Spawning Habitat**	Improve in-stream habitat in multiple locations along a 3.7 mile reach 1 below Uvas Dam.	**$446,755**	**$592,905**	**In progress**	
D3	**2014**	**Acterra**	**McClellan Ranch Preserve Meadow Enhancement Project**	A collaborative volunteer-based project to remove invasive plants and establish "island" of native plants within a riparian meadow adjacent to Stevens Creek.	**$164,200**	**$426,452**	**Completed June 30, 2017**	• 3 years of vegetation survey data showing a decrease in invasive plant population, including Italian thistle. • Close to 12,000 native plants installed covering more than 1 acre of the meadow. • Increased habitat value and diversity as result of planting over 30 different types of native plants. This has led to increased native wildlife (more native insects, birds, and pollinators have been seen). • More than 3,500 community members engaged through 352 volunteer events; contributing 7,427 volunteer hours.

D3	**2014**	**Santa Clara County Open Space Authority**	**Coyote Valley Open Preserve South Valley Meadow Restoration Project**	To restore the hydrologic function and habitat value to an 8.5 acre seasonal wet meadow and riparian complex by restoring more than 800 yards of altered drainages, reseeding approximately 4.5 acres with a climate-smart native plant palette, and providing an extension of connected lowland California Tiger Salamander habitat into Coyote Valley.	**$256,576**	**$579,386**	**Completed June 30, 2017**	Awaiting final report
D3	**2014**	**Acterra**	**Foothills Park Riparian Enhancement Project**	To monitor, restore and enrich wildlife habitat along the Park's 4 miles of riparian corridors in the upper San Francisquito watershed, including Los Trancos Creek and Buckeye Creek.	**$126,300**	**$293,753**	**Completed June 30, 2017**	**• More than 1,300 community members engaged through 94 volunteer events; contributing 4,380 volunteer hours • 4 miles of creek monitored during 21 sediment monitoring days • 4 miles of creekside vegetation surveyed for pre and post project comparison • 2,755 linear feet of invasives removes • 1025 native plants installed • Over 24 native species planted • 200 willow cutting installed • Increased native plant species richness along Los Trancos and Buckeye Creeks • Decreased invasive plant populations including target noxious weeds**
D3	**2014**	**West Valley College**	**Vasona Creek at West Valley College: Stream Stabilization and Habitat Enhancement Phase 2**	Restore 400 linear feet of Vasona Creek within West Valley College Campus in order to eliminate gully erosion, protect heritage trees, and restore hydrology.	**$300,000**	**$421,732**	**Closed Nov. 15, 2016**	**• 740 linear feet of severely eroded and deeply cut channel reconstructed • 0.2 acres of native riparian vegetation seeded and planted • 432 native plants installed, including 85 willows alongside channel • 36 Dusky Footed Woodrat nests protected in construction area, 15 nests relocated • 10-year Monitoring, Maintenance and Reporting Plan • Created an active college administration/faculty "Stream Team" integrating project into curriculum • Created a natural outdoor "classroom" and living laboratory in newly restored creek corridor • Raised student and public awareness of environmental issues and restoration • Extensive public engagement with community workshops, and volunteer efforts**
D3	**2015**	**County of Santa Clara**	**Calero County Park Oak Cove & North Shore Trails**	Construct approximately 5 miles natural-surface multi-use trails adjacent to Calero Reservoir.	**$200,000**	**$344,687**	**In progress**	
D3	**2015**	**Santa Clara County Open Space Authority**	**Outdoor Learning Center and Creek Side Valley Loop Trail**	Construct an Outdoor Learning Center within the 348-acre Coyote Valley Open Space Reserve, to serve as an outdoor classroom, a meeting location for educational and interpretive programs. This project also incorporated a 0.6 miles of ADA accessible trail.	**$200,000**	**$541,780**	**In progress**	
D3	**2015**	**West Valley College**	**Vasona Creek Trail**	The project will provide 0.33 miles of new ADA accessible trails within the West Valley College Campus.	**$171,000**	**$465,725**	**In progress**	
D3	**2015**	**San Francisco Bay Bird Observatory**	**Active Vegetation Management at Levees around South Bay Salt Pond**	The partnership will create transitional and upland habitats and provide the habitat structure needed by several federally listed species and state Species of Special Concern. Creating native plant communities on a 15-acre site will require 2 years of preparation and 4 years of phased implementation, maintenance, and monitoring. The project supports multiple Safe, Clean Water Program projects. It restores wildlife habitat; strengthens the South Bay Salt Ponds Restoration Partnership and revitalizes wetland habitat. The work also builds upon the strong existing partnership between the District and the U.S. Fish and Wildlife Service to improve habitat on salt pond levees.	**$690,000**	**$1,327,106**	**In progress**	
D3	**2015**	**Trout Unlimited**	**Lower Uvas-Carnaderos Creek Agricultural Wet Fort Alternative Design**	This partnership will result in the design of a free span bridge and the abandonment of the existing bridge. This would eliminate the fish migration barrier and improve water quality and riparian conditions. The District's contribution will provide a matching fund for a state grant application.	**$24,450**	**$107,115**	**In progress**	
D3	**2016**	**West Valley College**	**West Valley College Wildcat Creek Native Vegetation Enhancement**	Remove approximately 2 acres of invasive, non-native vegetation within the WVC campus and re-vegetate the area with native species, propagated from a collection of native vegetation planted on campus during past native re-vegetation efforts on campus.	**$165,000**	**$247,707**	**In progress**	
D3	**2016**	**Acterra**	**Arastradero Creek Watershed Enhancement**	Install 2,000 linear feet of swale-and-berm structures on contour in the basin feeding Arastradero Creek, and low step structures to raise the groundwater table; remove invasive plant species along 1,000 linear feet of Arastradero Creek and plant a diversity of native species in their place to increase native vegetation and support wildlife.	**$107,561**	**$217,566**	**In progress**	
D3	**2016**	**Acterra**	**Byrne Preserve Riparian Enhancement**	Restore a degraded tributary to Moody Creek located in Byrne Preserve. The work includes community engagement and education, monitoring of vegetation and channel geometry, invasive plant removal, and native plant re-vegetation.	**$136,469**	**$240,056**	**In progress**	

D3	**2016**	**Midpeninsula Regional Open Space District**	**Hendrys Creek Restoration Project**	Enhance 3/4 miles of the watershed through removing 14 in-stream structures; invasive plants from 4.44 acres of canyon; and by installing 0.33 acres of watershed specific, contract grown riparian and upload plants along the impacted creek banks and former road; and seeding 1.5 acres with native grasses, acorns and buckeye seeds on the former building pads, and improving the road located along the creek and tributaries.	**$484,650**	**$762,546**	**In progress**	
D3	**2016**	**Loma Prieta Resource Conservation District**	**Sycamore Alluvial Woodland Restoration Phase II—Feasibility**	This project includes a propagation study designed to test techniques to produce California sycamore seedlings vegetatively for use in a pilot restoration project. Study results will be shared through a high-quality PowerPoint presentation and distributed to all interested parties in the broader restoration and nursery community.	**$79,953**	**$127,705**	**In progress**	
D3	**2016**	**Working Partnerships**	**Coyote Creek Invasive Plant Removal and Revegetation**	Prepare a plan for a project to remove invasive plants from the Coyote Creek Watershed and re-vegetate areas of the creek with native plants. The project will hire homeless individuals or formerly homeless individuals in transition housing to do the work.	**$24,750**	**$33,000**	**In progress**	
D3	**2016**	**City of Mountain View**	**Permanente Creek Watershed Enhancement Project**	Project will involve the removal of trash and non-native invasive plants along 2,350 linear feet of Permanente Creek. 1,000 local watershed plants will be revegetated along the creek providing habitat enhancement for multiple riparian species, special emphasis will be placed on enhancing habitat for 2 special status species: burrowing owls (foraging habitat) and the San Francisco common yellowthroat (nesting and foraging habitat). This project will provide a unique educational opportunity for the local community, businesses and several educational establishments who will volunteer on this project along with Santa Clara Valley Audubon Society and Acterra.	**$43,920**	**$64,582**	**In progress**	
D3	**2016**	**Save The Bay**	**Palo Alto Baylands Tidal Lagoon Transition Zone Habitat Restoration Project**	Save The Bay will restore and enhance 1.25 acres of high value tidal marsh transition zone habitat at this site immediately adjacent to existing tidal salt marsh in the Palo Alto Baylands Nature Preserve. It will create or improve crucial habitat that provides connectivity and refugia for waterfowl, shorebirds, and other species such as the federally- endangered Ridgway's Rail and salt marsh harvest mouse. Our project is ready to implement and will increase the adaptive capacity and resilience of tidal marsh species by enhancing the plant community and wildlife habitat both now and in light of future predicted sea level rise scenarios.	**$95,868**	**$235,335**	**In progress**	
D3	**2016**	**City of Santa Clara**	**Ulistac Restoration 2016 Project**	Ulistac Natural Area is a 40 open space preserve bordering Guadalupe Creek. Ulistac Restoration 2016 Project will improve trails and ramp access to the levee, restore 1.2 acres of riparian habitat along the Guadalupe River and enhance 1.26 acres of Live Oak Woodland habitat through removal of invasive non-native plants and trees, planting of native species, and documentation of native tree survival. Grant matching funds (25%) will be provided through City of Santa Clara CIP fund #3179 ($25,000) and volunteer labor donation (6450 hours, or $77,400 equivalent), in cooperation with Ulistac Natural Area Restoration & Education Project, Inc. and partnership with Santa Clara University Department of Environmental Studies and Sciences and Santa Clara Audubon Society. (Authorized by City Resolution #16-8301.)	**$165,249**	**$374,533**	**In progress**	
D3	**2016**	**Friends of Stevens Creek Trail**	**Stevens Creek Steelhead Passage Improvement Project**	Conduct a Phase 1 study plan to (1) analyze alternatives and identify a preferred alternative for improving fish passage and (2) develop alternatives and identify a preferred alternative to improve fish migration at project sites.	**$52,162**	**$75,332**	**In progress**	
D3	**2016**	**San Francisco Bay Bird Observatory**	**Establishing Forster's Tern Nesting Colonies for the South Bay Salt Pond Restoration Project Using Innovative Technologies**	This project will deploy and maintain 300 decoys and 6 electronic call systems during the 2017 and 2018 breeding seasons (March-August) to attract birds to nest. Findings will be shared with the Don Edwards San Francisco Bay National Wildlife Refuge and the South Bay Salt Pond (SBSP) Restoration Project's outreach program; through Project's website, newsletter, and presentations at stakeholder meetings. Using innovative technologies, this project aims to re-establish a healthy nesting population of at-risk Forster's terns in Alviso Pond A16 on the Don Edwards San Francisco Bay National Wildlife Refuge. Benefits of this project include attraction of 50 or more Forster's tern breeding pairs to Alviso Pond A16 and establishment of nesting colonies with nest success rates of 60% or more.	**$217,032**	**$294,074**	**In progress**	
D3	**2016**	**City of San José**	**Evergreen Creek Corridor Restoration**	The City will correct the poor placement of outlets in the sedimentation basin above the project sites and restore vegetation. District funded work will focus on removing 6.2 acres of non-native landscape; establishing irrigation and planting native plants along Quimby Creek and Upper Fowler Creek.	**$191,041**	**$502,039**	**In progress**	
D3	**2016**	**Children's Discovery Museum of San Jose**		CDM is developing a 27,500 square foot outdoor space named Bill's Backyard: Bridge to Nature. It will feature a tree structure to climb up, a hillside to roll down with tunnels to crawl through, a dig pit to shovel in, a dry creek bed to explore that mimics the adjacent Guadalupe River, and areas to build with natural materials like willows, reeds and grasses. Families will also have the chance to see demonstration projects and sustainability solutions up-close, providing xeriscape ideas to consider for use in their own backyards, such as permeable hardscape, drought-tolerant and native plants, rain gardens to retain surface water, water collection systems and solar panels. The District funds will support the work for eliminating all grass and plant native plants for increased bio-diversity in the riparian environment and attract beneficial insects, migratory birds, small mammals and even Monarch butterflies.	**$142,771**	**$404,240**	**In progress**	
D3	**2016**	**Santa Clara Valley Chapter of the California Native Plant Society**	**Plant Pathogen Training and Education at CNPS Nursery**	Develop instructional/training videos to educate nursery professionals in pathogen control Best management practices (BMPs); promote safe use of California native plants through outreach and education events hosted by the California Native Plant Society (CNPS) throughout Santa Clara Valley Watersheds, and provide a demonstration and training sites at CNPS Nursery in Hidden Villa, Los Altos Hills, to implement plant pathogen control BMPs onsite, to share successes and lessons with other nurseries, and train volunteers and the larger community in pathogen control best practices.	**$50,574**	**$83,505**	**In progress**	
D3	**2016**	**Campus Community Association**	**Metcalf Ponds Parkway Lakes Steelhead Habitat and Passage Improvement Project**	Conduct a planning study to evaluate alternatives to improve steelhead trout habitat and passage in the Metcalf Ponds reaches of Coyote Creek by separating the creek from the ponds, revegetating the restored creek with native riparian vegetation, and configuring the channel to optimize its habitat value while preserving the ponds' water management functions of the water district.	**$31,684**	**$42,278**	**In progress**	
				D3 Sub-Total	**$4,567,965**	**$8,805,138**		
				Combined Total	**$7,637,745**	**$14,051,518**		

Note: The grantees are responsible for ensuring their projects comply with CEQA and the District is a reviewer of the CEQA documents prepared by the grantees.

Safe, Clean Water and Natural Flood Protection Program
Appendix D: Capital Projects Confidence Levels (Re: Outside Agencies) Fiscal Year 2016-2017

Partners and Outside Agencies	A1 Main and Madrone Avenue Pipelines Restoration	A3 Pipeline Reliability Project (Scheduled to Start)	C1 Anderson Dam Seismic Retrofit	D4 Fish Habitat and Passage Improvement		D6 Creek Restoration and Stabilization	E4 Upper Penitencia Creek Flood Protection	E5 San Francisquito Creek Flood Protection		E6 Upper Llagas Creek Flood Protection	E7 San Francisco Bay Shoreline Study		E8 Upper Guadalupe River Flood Protection		Permanente Creek Flood Protection	Sunnyvale East/ West Channels Flood Protection	Berryessa Creek Flood Protection	Coyote Creek Flood Protection
				Almaden Lake	Bolsa Road			S.F. Bay to 101	Upstream of 101		EIAs 1-10	EIA 11	Reach 6	Reaches 7-12				
Additional Funding Sources																		
U.S. Army Corps of Engineers (Funding)			M		H		L		M	L	L	L		L			H	M
State Grants					H		M											M
San Francisco Bay Restoration Authority (Measure AA)											H	H						
Other								M	M									
Regulatory Permitting																		
U.S. Army Corps of Engineers (Permits)			M		H	H	M	H	M	M			H	H	H	M	H	M
California Department of Fish and Wildlife	M		M		H	H	M	H	M	H			H	M	H	M		M
California Department of Industrial Relations/CA Occupational Safety			M															
Department of Water Resources Division of Safety Dams			M															
Federal Energy Regulatory Commission			M															
Mine Safety and Health Administration			M															
National Marine Fisheries Service			M		H		M	H	M	M			H	M		M		M
San Francisco Bay Regional Water Quality Control Board	M		M			H	M	H	M			M	M	M	H	L	L	M
Central Coast Regional Water Quality Control Board					H					H								
San Francisco Bay Conser-vation and Development Commission								H	M			M				M		
San Francisco Bay Conser-vation and Development Commission	M		M															
United States Fish and Wildlife Service	M		M		H		M	H	M	L		H	M	M	H	M		M
Valley Habitat Plan	H		H		H		M			M								M
Cities																		
Cupertino															H			
East Palo Alto								H	H									

Partners and Outside Agencies	A1 Main and Madrone Avenue Pipelines Restoration	A3 Pipeline Reliability Project (Scheduled to Start)	C1 Anderson Dam Seismic Retrofit	D4 Fish Habitat and Passage Improvement		D6 Creek Restoration and Stabilization	E4 Upper Penitencia Creek Flood Protection	E5 San Francisquito Creek Flood Protection		E6 Upper Llagas Creek Flood Protection	E7 San Francisco Bay Shoreline Study		E8 Upper Guadalupe River Flood Protection		Permanente Creek Flood Protection	Sunnyvale East/ West Channels Flood Protection	Berryessa Creek Flood Protection	Coyote Creek Flood Protection
				Almaden Lake	Bolsa Road			S.F. Bay to 101	Upstream of 101		EIAs 1-10	EIA 11	Reach 6	Reaches 7-12				
Gilroy					H													
Los Altos						H									H			
Menlo Park									H									
Milpitas																	H	
Morgan Hill	H		M							H								
Mountain View						H					H				H			
Palo Alto								H	H		M							
San Jose				H			H				M	M	M	L			H	H
Saratoga																		
Sunnyvale											M					H		
Counties																		
Santa Clara County	H		M		M		H	H	H	M				L	H	H	H	H
San Mateo County								H	H									
Other Agencies																		
California Department of Transportation (Caltrans)								H	H	M				L		H		
California State Coastal Conservancy											H	H						
Gate of Heaven Cemetery (Diocese of San Jose)															H			
Department of Water Resources								H	H	M								
Federal Emergency Management Agency									M	M						M		
Peninsula Corridor Joint Power Boards (Caltrain)														M				
Midpeninsula Regional Open Space District											M				H			
NASA Moffett Field											L							
PG&E	H					M	M	M	M	M		H		L	M	M	M	
San Francisquito Creek Joint Powers Authority								H	H		M							
San Mateo County Flood Control District								H	H									
Union Pacific Railroad					L					M		L		L	H		H	
State Office of Historical Preservation					M										M		H	
Santa Clara Valley Transportation Authority (VTA)																	H	

Note: Empty cells are not applicable to that project.

Appendix E: Cumulative Trash Removal Data for Projects B1-B4, B6 and B7

E-1: Estimated volume of trash removed by project for Projects B1, B2, B4, B6 and B7[1]

Project	Estimated amount of trash and debris removed in Tons and Cubic Yards (CY)[2]							
	FY14		FY15		FY16		FY17	
	Est. Tons	Est. CY	Est. Tons	Est. CY	Est. Tons	Est. CY	Est. Tons	Est. CY
B1: Impaired Water Bodies Improvement (KPI #3: Trash accumulation point mapping and removal)[3]	n/a		n/a		7.8	78	0	0
B2: Interagency Urban Runoff Program (KPI#1: Trash booms)[4]	0.3	3	0.35	3.5	1.05	10.5	1.5	15
B2: Interagency Urban Runoff Program (Hot spot cleanup)	2	17	0	0	10	99	0.3	3
B4: Good Neighbor Program: Encampment Cleanup[5]	713	9,982	1,214	16,996	790	11,060	907	12,698
B6: Good Neighbor Program: Remove Graffiti and Litter	53	742	126	1,764	100	1,400	82	1,148
B7: Volunteer Cleanup Efforts and Education (KPI #2: Cleanup day events)[6]	43	430	42	416	43	427	46	460
Estimated Totals	**811**	**11,174**	**1,382**	**19,180**	**952**	**13,075**	**1,037**	**14,324**

[1]Grants and partnership trash removal information for Projects B3 and B7 are included in Table E-4.
[2]Some estimates may have slightly varied from past annual reports due to a refinement of the conversion from cubic yards to tons.
[3]The trash accumulation point mapping started in FY16. Due to high flows during the winter of FY17, re-mapping was delayed and conducted in May and June 2017. Trash identified as part of this mapping effort will be cleaned in FY18.
[4]The San Francisco Bay Regional Water Quality Control Board has requested that all stormwater permittees report trash in volume rather than weight. Volume is a more meaningful measure of the trash present because it is not affected by the weight of wet vs. dry trash. For Projects B1 and B2, volume is visually estimated in the field and likely includes some vegetation and debris. Where data was only collected in weight, a conversion was used based on a solid waste calculator estimating 10 cubic yards per ton. Prior conversions were not consistent; as a result, the numbers in this table may not match previously reported numbers.
[5]Tons were converted to cubic yards using an estimate of 14 cubic yards per ton, which is based on a comparison with industry standard conversions and a watershed field operations field experiment and analysis. Project B4 and B6 quantities are based on landfill weights measured in tons.
[6]Project B7 grants and partnerships (KPI #1) and Adopt-A-Creek Program (KPI #2) are not included. Grants and partnerships information is included in Table E-4. Data is currently not available for the Adopt-A-Creek Program because the trash is removed by volunteers who do not consistently measure or report their results. Volunteers use number of bags and approximate weights to estimate pounds. Using pounds simplifies measurement for volunteers and is consistent with the efforts of other jurisdictions implementing Coastal Clean Up and National River Clean Up days. Pounds were converted to tons (2,000 pounds = 1 US ton). Tons were then converted to cubic yards using an estimate of 10 cubic yards per ton.

E-2: Estimated volume of trash removed by watershed for Projects B1, B2, B4, and B6[1]

San Francisco Bay Watersheds	Estimated cubic yards (CY) of trash and debris removed[2]			
	FY14	FY15	FY16	FY17
Lower Peninsula	93	273	284	206
West Valley	84	683	334	156
Guadalupe	2,310	1,525	2,366	2,420
Coyote	8,254	15,328	9,189	9,234
Pajaro	416	1,075	1,283	1,835
Estimated Totals	**11,157**	**18,884**	**13,456**	**13,851**

[1]Watershed information is not reported for Projects B3 and B7.
[2]Some estimates may have slightly varied from past annual reports due to a refinement of the conversion from tons to cubic yards and the timing of collecting the annual estimates.

E-3: Estimated cost of trash removal activities for Projects B4, B6, and B7[1]

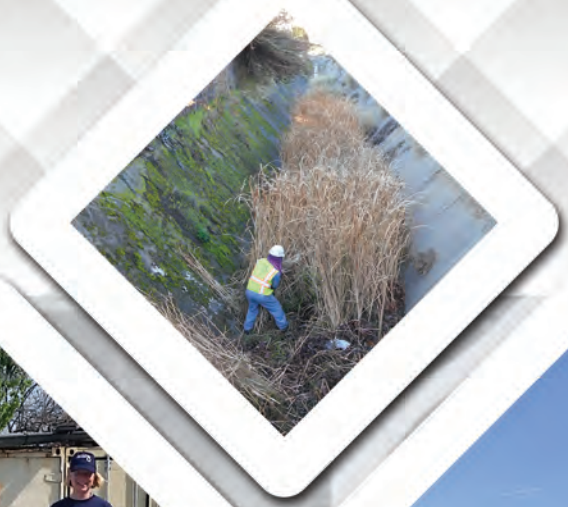
Project	Estimated costs for trash removal			
	FY14	FY15	FY16	FY17
B4: Good Neighbor Program: Encampment Cleanup	$786,000	$1,341,000	$930,000	$1,018,873
B6: Good Neighbor Program: Remove Graffiti and Litter	$125,345	$303,846	$426,960	$358,678
B7: Volunteer Cleanup Efforts and Education[2]	$109,925	$103,633	$98,717	$94,837
Estimated Totals	**$1,021,270**	**$1,748,479**	**$1,455,677**	**$1,472,388**

[1]Cost information for trash removal activities are not available for Projects B1 and B2 because project budgets are tracked as a whole and not by specific KPI. Grants and partnership cost information for Projects B3 and B7 are included in Table E-4.
[2]The Project B7 grant information is included in Table E-4.

E-4: Trash removal information from partnerships and grants for Projects B3 and B7

Estimated amount of trash and debris removed in Pounds, Tons, and Cubic Yards (CY) [1]									
Project	Grant Cycle	Grantee/community partner	Grant Project Name	Amount Awarded	Total Project Cost	Status	Estimated Amount of Trash Removed		
							Pounds	Tons	CY
Pollution Prevention Partnerships and Grants (B3)	FY14	San Jose Parks Foundation	Trash Free Coyote Creek Cleanup and Surveillance Project	$26,783	$80,760	Closed (9/30/15)	80,000	41	410
	FY16	South Bay Clean Creeks Coalition	South Bay Creek Cleanup Program	$60,000	$80,000	Closed (6/30/17)	n/a	10	100
Support Volunteer Cleanup Efforts and Education (B7)	FY14	Acterra	Acterra Lower Peninsula Healthy Creeks Project	$68,600	$179,910	Closed (9/30/16)	18,180	9	n/a
		Clean Water Fund	ReThink Disposable: Preventing Riparian Trash at the Source	$82,133	$174,036	Completed (12/31/16)	n/a	1	n/a
		City of Sunnyvale	Schools Goin' Green	$32,250	$47,448	Closed (6/30/16)	4,189	2	n/a
		Save the Bay	Clean Bay Project	$60,000	$241,243	Closed (6/30/16)	2,200	1	n/a
Estimated Total[1]							**64 tons**		

[1]Estimated total is only shown in tons because that is the one measurement that is used for each project.



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