



HETCH HETCHY
WATER SYSTEM IMPROVEMENT PROGRAM



QUARTERLY REPORT

Local Projects
Q1 FY 2018 | 2019
July 2018 — September 2018

Rebuilding Today for a Better Tomorrow

Published: 11/06/2018

Quarterly Report - Q1 FY2018/2019

Water System Improvement Program - Local Projects

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1. PROGRAM DESCRIPTION

The Water System Improvement Program (WSIP) is a \$4.8 billion, multi-year capital program to upgrade the City of San Francisco's regional and local drinking water systems. The program will deliver improvements that enhance the City's ability to provide reliable, affordable, high quality drinking water to its 26 wholesale customers and regional retail customers in Alameda, Santa Clara, and San Mateo Counties, and to its 800,000 retail customers in San Francisco, in an environmentally sustainable manner. The WSIP is structured to cost-effectively meet water quality requirements, improve seismic and delivery reliability, and achieve water supply goals.

Built in the early to mid-1900s, many components of the water system are nearing the end of their working life, with crucial facilities crossing, or in close proximity to, three major earthquake faults. The San Francisco Public Utilities Commission (SFPUC) initiated the WSIP to repair, replace, and seismically upgrade the system's deteriorating pipelines, tunnels, dams, reservoirs, pump stations, storage tanks, and treatment facilities.

The program consists of 35 local projects located within San Francisco and 52 regional projects (including the Vegetation Restoration of WSIP Construction Sites project which was added to the program in October 2012) spread over seven different counties from the Sierra foothills to San Francisco. Local projects only benefit San Francisco residents, whereas regional projects benefit both City residents and the 26 wholesale agencies that receive water from the SFPUC. The management of local projects is divided into 4 sub-programs - Reservoirs, Pump Stations / Tanks, Pipelines / Valves, and Miscellaneous.

The Local program originally included local water supply projects. These projects provide access to groundwater supplies for the potable system, deliver recycled water supplies for non-

potable uses, and address water quality and water level issues at Lake Merced. The management and implementation of the five (5) local water supply projects was transferred from the WSIP to the Water Enterprise Capital Improvement Program (CIP) as of July 1, 2011.

The WSIP is funded through the issuance of revenue bonds. Local Measures A and E, which were approved by San Francisco voters in November 2002, allowed for the financing of improvements to the City's water system using revenue bonds and/or other forms of revenue financing. Increases in the water rates of retail and wholesale customers will be used to pay back the debt service on the bonds.

The program budget and schedule were originally adopted by the San Francisco Public Utilities Commission on March 1, 2003. The program at the time was referred to as the Capital Improvement Program (CIP). The scope of the CIP was changed significantly following the adoption of Levels of Service (LOS) goals in early 2005. The program changes were so substantial that the program was renamed the WSIP and a new program budget and schedule were adopted on November 29, 2005. Since the scope of the 2005 Revised WSIP is in general representative of the program being implemented today, the 2005 budget and schedule are considered the "Baseline Budget and Schedule."

Subsequently, the WSIP Baseline Budget and Schedule were revised in 2007, 2009, 2011, 2013, 2014, 2015, 2016, 2017, and 2018, and these revisions were approved by the San Francisco Public Utilities Commission on February 26, 2008, July 28, 2009, July 12, 2011, April 23, 2013, April 22, 2014, December 8, 2015, April 26, 2016, February 14, 2017, and April 10, 2018, respectively. Refer to Appendix A for a scope description of all the local projects included in the WSIP.

Program Revision	Commission Approval	Budget (\$Million)	Schedule(*)
2003 (Original)	March 1, 2003	\$3,628	03/15/16
2005 (Baseline)	November 29, 2005	\$4,343	06/30/14
2007 (Revised)	February 26, 2008	\$4,392	12/18/14
2009 (Revised)	July 28, 2009	\$4,586	12/04/15
2011 (Revised)	July 12, 2011	\$4,586	07/29/16
2013 (Revised)	April 23, 2013	\$4,640	04/11/19
2014 (Revised)	April 22, 2014	\$4,765	05/24/19
2015 (Revised)	December 8, 2015	\$4,765	05/24/19
2016 (Revised)	April 26, 2016	\$4,845	12/20/19
2017 (Revised)	February 14, 2017	\$4,845	12/20/19
2018 (Latest Approved)	April 10, 2018	\$4,788	12/30/21

* Final Program Completion Date

2. PROGRAM STATUS

This first (1st) Quarterly Report for Fiscal Year (FY) 2018-2019 presents the progress made on the WSIP local projects between July 1, 2018 and September 30, 2018. The program’s schedule and budget were last approved by the San Francisco Public Utilities Commission (SFPUC or Commission) on April 10, 2018. The progress made on the regional projects of the WSIP is presented in a separate quarterly report.

Figure 2.1 shows the total Approved Budget for the local projects remaining in each phase of the program as of September 30, 2018. The number of projects currently active in each phase is shown in parentheses.

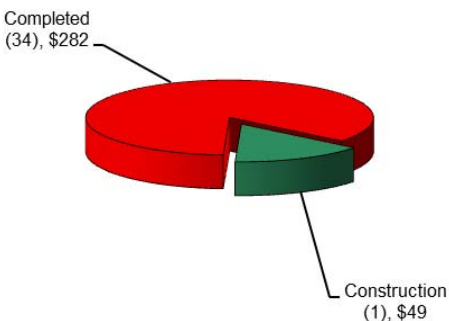


Figure 2.1 Total Approved Budget for Projects Active in Each Phase (\$Million)

Figure 2.2 shows the number of local projects in the following stages of the program as of

September 30, 2018: Pre-construction, Construction, and Post-construction.

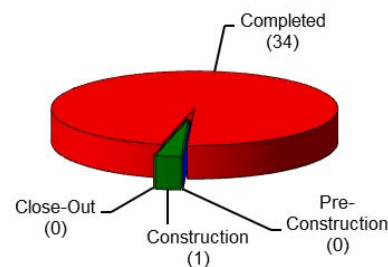


Figure 2.2 Number of Projects in Pre-construction, Construction, and Post-construction

Figure 2.3 summarizes the environmental review and permitting status of the WSIP 35 local projects as of September 30, 2018.

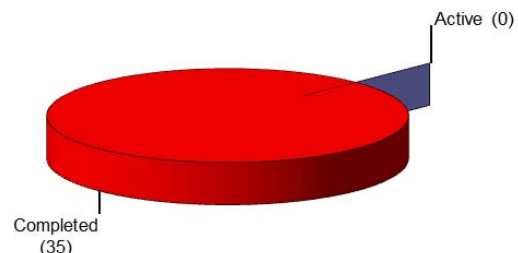


Figure 2.3 Program Environmental and Permitting Status

3. PROGRAM COST SUMMARY

Table 3.1 provides an overall program-level cost summary of the WSIP Local Program. It shows the Expenditures to Date; the 2005 Baseline, 2018 Approved, Current Approved and Q1/FY18-19 Forecasted Budgets; and the Cost Variance between the Current Approved and Forecasted Budgets. The total Current Approved WSIP Budget (including Regional and Local Programs,

Local Water Supply Projects, and Financing Costs), and current Forecasted Cost at completion are \$4,787.8 million. The Current Approved WSIP Budget and Forecasted Cost at completion for the Local Improvement Projects (including construction contingency) are \$331.4 million. Refer to Appendix B for a graphical representation of how the WSIP budget and actual expenditures have changed over time.

Table 3.1 Program Cost Summary

Cost Categories	Expenditures To Date (\$ Million) (A)	2005 Baseline Budget (\$ Million) (B)	2018 Approved Budget (\$ Million) (C)	Current Approved Budget ⁽⁷⁾ (\$ Million) (D)	Q1/FY18-19 Forecasted Costs (\$ Million) (E)	Cost Variance (\$ Million) (F = D - E)
Local Improvement Projects	\$325	\$353	\$325.7	\$325.7	\$325.7	-
Construction Costs ⁽¹⁾	\$232	\$259	\$232.3	\$232.3	\$232.3	-
Program Delivery Costs ⁽²⁾	\$92	\$91	\$92.2	\$92.2	\$92.2	-
Other Costs ⁽³⁾	\$1	\$4	\$1.2	\$1.2	\$1.2	-
Construction Contingency for Local Improvement Projects ⁽⁴⁾	\$6	\$30	\$5.7	\$5.7	\$5.7	-
LOCAL PROGRAM WITH CONTINGENCY	\$331	\$383	\$331.4	\$331.4	\$331.4	-
Regional Improvement Projects	\$3,365	\$3,375	\$3,536.9	\$3,536.9	\$3,535.5	\$1.4
Support Projects ⁽⁵⁾	\$223	\$33	\$266.1	\$266.1	\$267.6	(\$1.4)
Local Water Supply Projects ^(6, 8)	\$112	-	\$281.3	\$281.3	\$281.3	-
Finance	\$372	\$552	\$372.0	\$372.0	\$372.0	-
PROGRAM TOTAL	\$4,404	\$4,343	\$4,787.8	\$4,787.8	\$4,787.8	-

Notes:

- Construction Costs** include the Construction Base Bid and owner-provided equipment/material. Those costs do not include any construction contingency. That contingency is reflected as a separate cost category.
- Delivery Costs** include project management, planning, environmental (CEQA, permitting, construction compliance), design, construction management, and engineering support during construction.
- Other Costs** include environmental mitigation, art enrichment, security improvements, and real estate expenses.
- Expenditures to Date for Construction Contingency for Local Improvement projects corresponds to the Total Approved Change Orders on those projects. For projects with ongoing or completed construction, the 2018 Approved Budget for construction contingency includes all change orders and trends as identified at the time of the March 2018 Revised WSIP.
- Support Projects** include (1) System Security Upgrades, (2) Programmatic EIR, (3) Bioregional Habitat Restoration, (4) Vegetation Restoration of WSIP Construction Sites, (5) Long Term Mitigation Endowment, (6) Program Management, and (7) Watershed and Environmental Improvement Program. Please note that the costs reflected above for support projects include total project costs, including "Construction", "Delivery" and "Other" costs.
- Local Water Supply Projects managed as part of the Water Enterprise Capital Improvement Program (CIP) are (1) Lake Merced Water Level Restoration, (2) San Francisco Groundwater Supply, (3) San Francisco Westside Recycled Water, (4) Harding Park Recycled Water, and (5) San Francisco Eastside Recycled Water.
- The budget approved as part of the March 2018 Revised WSIP, plus any additional budget changes approved by the Commission as part of additional contingencies on construction contract.
- The WSIP Local Water Supply projects underwent a September 2013 re-baseline. Only the original WSIP portion of the re-baselined costs is reported here. The remaining budget is funded under the Water Enterprise CIP and is managed outside the purview of the WSIP.
- The original \$522M estimate of financing cost was based on a memorandum to the Commission dated November 23, 2005.

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10. The financing cost budget of \$372M that was included in the March 2018 Revised WSIP includes all financing costs appropriated to date.
11. The actual financing cost is assumed to match the budgeted financing cost. Final reconciliation of all associated financing costs will occur upon WSIP completion.

Table 3.2 provides the status of construction contingencies. For each sub-program, it shows the 2018 Approved Contingency; the Current Approved Contingency; the Q1/FY18-19 Forecasted Change Orders; the Q1/FY18-19 Forecasted Trends; Project Savings Moved to Contingency/ Funds Moved out of Contingency; the Q1/FY18-19 Forecasted Construction

Contingency; and the Remaining Contingency as of the end of the reporting quarter. As of September 30, 2018, the Forecasted Construction Contingency is \$3.7 million and the Total Forecasted Remaining Contingency is \$0.0 million.

Table 3.2 Status of Construction Contingency

Sub Program	2018 Approved Contingency ⁽¹⁾ (\$ Million) (A)	Current Approved Contingency ^(2,3) (\$ Million) (B)	Q1/FY18-19 Forecasted Change Orders ⁽³⁾ (\$ Million) (C)	Q1/FY18-19 Forecasted Trends ⁽⁴⁾ (\$ Million) (D)	Project Savings (+) Moved to Contingency/ Funds (-) Moved out of Contingency ⁽⁵⁾ (\$ Million) (E)	Current Forecasted Contingency (\$ Million) (F = B+ E)	Q1/FY18-19 Forecasted Remaining Contingency (\$ Million) (G = F-C-D)
Reservoirs	-	-	-	-	-	-	-
Pump Stations / Tanks	\$3.71	\$3.71	\$3.71	-	-	\$3.71	-
Pipelines / Valves	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-
Local Total	\$3.71	\$3.71	\$3.71	-	-	\$3.71	-

Notes:

1. Contingency included in March 2018 Revised WSIP.
2. Contingency included in March 2018 Revised WSIP and any contingency approved by the Commission thereafter.
3. Forecasted Change Orders include Approved, Pending, and Potential Change Orders.
 - Approved Change Orders are changes that have received all required approvals, including that of the City Controller.
 - Pending Change Orders are changes that have been negotiated and approved by the SFPUC but have to be approved by the City Controller.
 - Potential Change Orders are changes that have been requested and entered into CMIS but are still being negotiated.
4. Trends are any expected impact that the CM team believes has a high probability of becoming a change but are yet to be entered into CMIS as a Potential Change.
5. Values only reflect savings realized following Commission adoption of the March 2018 Revised WSIP.

The Program Management project includes programmatic activities that span multiple regions and benefit several WSIP projects (Table 3.3). The project provides funding for the following functions and resources: SFPUC Staff assigned to the management of the overall program; consultants supporting SFPUC staff at the program level (program, project and pre-construction management consultant, program construction management consultant, program control consultant); labor relations, including management of the project labor agreement; communication and public outreach; programmatic legal support; real estate acquisitions; program controls, including the tracking and reporting of all WSIP efforts; and program-level construction management activities associated with quality assurance, risk management, the Supplier Quality Surveillance (SQS) Program, operations assistance, safety, and training.

The activities under the Program Management project are organized into five categories that are tracked and monitored on a monthly basis. These categories are Management Support, Project Labor Agreement, Planning and Project Development, Program Control, and Program Construction Management.

The spending pattern for the project is very similar from month to month as the project primarily funds program-level positions occupied by both SFPUC staff and consultants. The Forecasted Total Program Management Cost is \$114.1 million, which is \$1.4 million over the Current Approved Budget of \$112.7 million due to the transfer of savings from other projects into Director’s Reserve.

Table 3.3 Status of Program Management Project Cost Breakdown

Category	Expenditures To Date (\$ Million) (A)	2018 Approved Budget (\$ Million) (B)	Current Approved Budget (\$ Million) (C)	Q1/FY18-19 Forecasted Cost* (\$ Million) (D)	Cost Variance (\$ Million) (E = C-D)
Management Support	\$36.8	\$42.8	\$42.8	\$44.2	(\$1.4)
Project Labor Agreement	\$3.7	\$3.8	\$3.8	\$3.8	-
Planning and Project Development	\$17.9	\$18.3	\$18.3	\$18.3	-
Program Controls	\$19.4	\$19.8	\$19.8	\$19.8	-
Program Construction Management	\$27.3	\$28.0	\$28.0	\$28.0	-
Program Management Total	\$105.1	\$112.7	\$112.7	\$114.1	(\$1.4)

* Increase to Program Management Forecast Cost Variance is due to transfer of savings from other projects into Director's Reserve.

4. PROGRAM SCHEDULE SUMMARY

Figure 4.1 and Table 4.1 compare the 2005 Baseline, 2018 Approved, Current Approved, and Q1/FY18-19 Forecasted Schedules for the WSIP Local Program. Refer to the “Cost and Schedule Status” notes in Section 5 for the criteria associated with the three color-coded Forecast Status levels in Figure 4.1 - Meet Requirements, Need Attention, and Exceed Limits.

The Current Approved and Forecasted Schedule completion for the overall WSIP (including Regional and Local Programs) are in December 2021. The Current Approved and Forecasted Schedule completion for the WSIP Local Program are July 2018 and March 2019, respectively (8 months behind schedule). Refer to Appendix C for a graphical presentation of the WSIP Approved Project-Level Schedule.

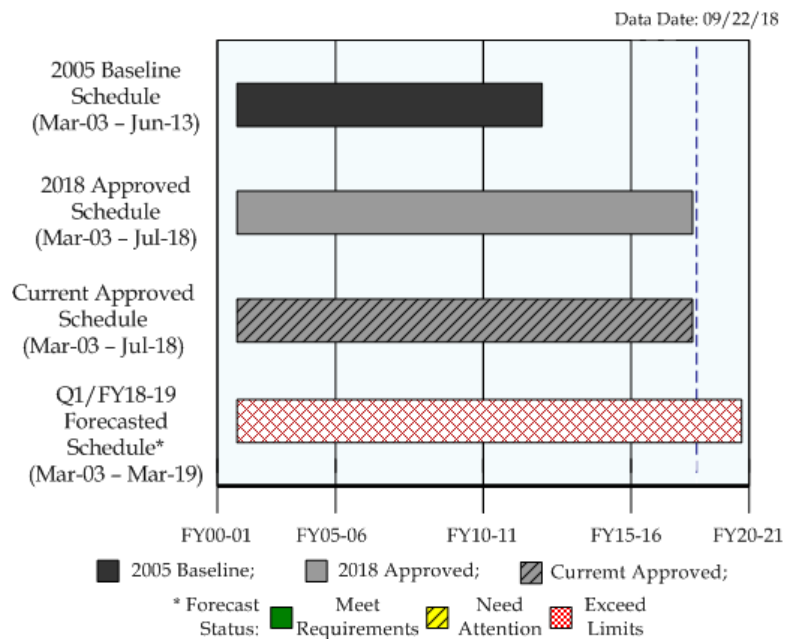


Figure 4.1 Program Schedule Summary

Table 4.1 2018 Approved vs. Q1/FY18-19 Forecasted Schedule Dates

Category	2005 Baseline Start	2018 Approved Start	Current* Approved Start	Actual Start	2005 Baseline Finish	2018 Approved Finish	Current* Approved Finish	Q1/FY18-19 Forecasted Finish	Schedule Variance (Months)
Local** Program	03/01/03	03/31/03	03/31/03	03/01/03✓	06/28/13	7/31/18	7/31/18	03/29/19	7.9 (Late)
Regional Program	03/01/03	03/31/03	03/31/03	03/01/03✓	06/30/14	12/30/21	12/30/21	12/30/21	-
Overall WSIP	03/01/03	03/01/03	03/01/03	03/01/03✓	06/30/14	12/30/21	12/30/21	12/30/21	-

* The budget and schedule approved as part of the March 2018 Revised WSIP, plus any additional budget and schedule changes approved by the Commission as part of additional contingencies on construction contracts.

** Excluding Local Water Supply Projects

5. PROJECT PERFORMANCE SUMMARY*

All costs are shown in \$1,000s as of 09/22/18

Project Name	Active Phase (**)	2005 Baseline Budget (a)	2018 Approved Budget (b)	Current Approved Budget (c)	Q1/FY18-19 Forecasted Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d)	Cost Status (+)	2005 Baseline Completion (g)	2018 Approved Completion (h)	Current Approved Completion (i)	Q1/FY18-19 Forecasted Completion (j)	Schedule Variance (k = i - j)	Schedule Status (+)	Project Data Sheet
Pump Stations / Tanks															
CUW30901 - Lake Merced Pump Station Essential Upgrades	CN	\$ 69,093	\$ 49,296	\$ 49,296	\$ 49,296	\$ 48,951	-	★	07/15/11	07/31/18	07/31/18	03/29/19	7.9 mo. Late	●	See Section 6

* Excludes projects with completed construction and projects that are no longer active (i.e., deleted projects, closed projects, and projects combined with other projects)

**** Phase Status Legend**

- PL Planning DS Design BA Bid & Award
- CN Construction

For projects active in multiple phases, the table shows the phase in which a majority of the works is taking place.











+ Cost and Schedule Status

- ★ Meet Requirements: Forecasted Cost/Schedule is within Current Approved Budget/Schedule.
- ⚠ Need Attention: Forecasted Cost is over Current Approved Budget by greater than 1% and less than 10%. Or Forecasted Schedule is over Current Approved Schedule by greater than 2 months and less than 6 months and less than 10%.
- Exceed Limits: Forecasted Cost is over Current Approved Budget by 10% or more. Or Forecasted Schedule is over Current Approved Schedule by greater than 6 months or 10% or more.

6. PROJECTS NOT WITHIN BUDGET AND/OR SCHEDULE

CUW30901 - Lake Merced Pump Station Essential Upgrades

Project Description: This project will rebuild the Lake Merced pump station. Specific improvements include a new reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

Region: Pump Stations / Tanks	Project Status: Construction	Environmental Status: Completed (CatEx)
Project Cost: Approved  \$49.30 M Forecast*  \$49.30 M Actual  \$48.95 M		Project Schedule: Approved Jan-06  Jul-18 Forecast* Jan-06  Mar-19 Project Percent Complete: 99.9%
 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits		

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	12/28/07✓	10/20/08✓	06/01/09✓	12/31/18

Progress and Status:

The project team completed a full change out to the latest (revision 5) CT boards in all the station’s pump starter equipment and successfully tested pump startup/shutdown on utility power and on generator power in late September. This completes the corrective repairs to address reliability concerns with the pump starter equipment.

Two existing Sutro pump discharge gate valves had shown premature wear/damage from previous shutdown inspection. Under a negotiated agreement with the original gate manufacturer two new Sutro discharge valves have been ordered to replace the existing ones. The valves will be replaced sequentially to minimize operational outage. The first of the two replacement valves has been delivered and successfully installed. The second valve successfully completed factory witness testing in late September. Delivery and installation is anticipated to be completed early next quarter. This would complete the remaining contract work on this project.

Project substantial completion was achieved on 2/28/13.

Issues and Challenges:

The project final completion and closeout have been delayed due to a series of operational system constraints to complete the change out to the newer CT boards and to install the Sutro replacement valves. Final completion is currently anticipated to be achieved by next quarter.



Completed Lake Merced Pump Station Buildings

7. On-Going Construction

Construction Contract	Schedule			Budget		Variance (Approved - Forecast)		Actual % Complete
	NTP Date	Approved Construction Final Completion*	Q1/FY18-19 Forecasted Construction Final Completion**	Approved Contract Cost +	Q1/FY18-19 Forecasted Cost++	Schedule (Cal. Days)	Cost	
Pump Stations / Tanks								
CUW30901 - Lake Merced Pump Station Essential Upgrades Project	06/01/09	12/30/15	12/31/18	\$ 35,293,022	\$ 35,293,022	(1,097)	-	100.0%

Program Total for On-Going Construction	Approved Contract Cost	Q1/FY18-19 Forecasted Cost*	Variance	
			Cost	Percent
	\$ 35,293,022	\$ 35,293,022	\$0	0 %

Note:

* Approved Construction Final Completion Date includes approved change orders.
 ** The Forecasted Construction Final Completion Date includes all approved, pending, and potential change orders and trends.

+ Approved Contract Cost includes awarded contract amount and approved change orders.
 ++ The Forecasted Cost includes awarded contract amount and all approved, pending, and potential change orders.

8. PROJECTS IN CLOSE-OUT

No projects are currently in close-out.

9. COMPLETED PROJECTS

Project Title	2005 Baseline Project Completion	2018 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2005 Baseline Project Budget	2018 Approved Project Budget	Current Approved Project Budget	Project Expenditures To Date
Reservoirs								
CUW30701 - Summit Reservoir Rehabilitation	12/08/06	09/28/12	09/28/12	09/28/12	\$ 14,927,859	\$ 12,294,537	\$ 12,294,537	\$ 12,294,537
CUW31901 - Hunters Point Reservoir Rehab & Seismic Upgrade	05/04/12	10/31/12	10/31/12	10/31/12	\$ 8,122,861	\$ 3,086,717	\$ 3,086,717	\$ 3,086,717
CUW33401 - Stanford Heights Reservoir Rehabilitation	03/05/10	04/01/11	04/01/11	04/01/11	\$ 19,172,308	\$ 23,626,142	\$ 23,626,142	\$ 23,626,142
CUW33501 - Potrero Heights Reservoir Rehabilitation	07/13/07	08/11/08	08/11/08	08/11/08	\$ 7,610,033	\$ 6,836,736	\$ 6,836,736	\$ 6,836,736
CUW33701 - Sutro Reservoir Rehab & Seismic Upgrade	07/15/11	03/31/16	03/31/16	03/31/16	\$ 31,372,263	\$ 39,468,198	\$ 39,468,198	\$ 39,462,621
Pump Stations / Tanks								
CUW30601 - Crocker Amazon Pump Station Upgrades	10/31/06	03/27/08	03/27/08	03/27/08	\$ 4,823,675	\$ 4,126,498	\$ 4,126,498	\$ 4,126,498
CUW31401 - La Grande Tank Seismic Upgrade	06/07/07	12/18/08	12/18/08	12/18/08	\$ 7,919,543	\$ 6,987,728	\$ 6,987,728	\$ 6,987,728
CUW31801 - Forest Hill Tank Rehab & Seismic Upgrade	01/05/07	08/31/07	08/31/07	08/31/07	\$ 3,204,561	\$ 2,936,199	\$ 2,936,199	\$ 2,936,199
CUW32001 - Forest Hill Pump Station Upgrades	12/02/11	07/01/14	07/01/14	07/01/14	\$ 4,446,263	\$ 6,389,792	\$ 6,389,792	\$ 6,389,792
CUW32101 - Forest Knolls Pump Station Upgrades	07/03/08	01/18/12	01/18/12	01/18/12	\$ 5,779,776	\$ 6,196,751	\$ 6,196,751	\$ 6,196,751
CUW32201 - Lincoln Park Pump Station Upgrades	06/01/07	08/11/08	08/11/08	08/11/08	\$ 4,762,027	\$ 4,345,215	\$ 4,345,215	\$ 4,345,215
CUW32301 - Alemany Pump Station Upgrades (McLaren Park)	07/10/09	08/30/13	08/30/13	08/30/13	\$ 10,391,557	\$ 29,095,501	\$ 29,095,501	\$ 29,095,501
CUW32401 - Mount Davidson Pump Station Upgrades	08/06/09	03/30/11	03/30/11	03/30/11	\$ 5,223,489	\$ 4,281,116	\$ 4,281,116	\$ 4,281,116
CUW32501 - Palo Alto Pump Station Upgrades	04/10/09	11/16/10	11/16/10	11/16/10	\$ 5,225,506	\$ 6,126,470	\$ 6,126,470	\$ 6,126,470
CUW32601 - Sky View - Aqua Vista Pump Station Upgrade	07/11/08	08/11/09	08/11/09	08/11/09	\$ 5,717,647	\$ 4,751,094	\$ 4,751,094	\$ 4,751,094
CUW32701 - Summit Pump Station Upgrades	03/20/08	08/11/08	08/11/08	08/11/08	\$ 6,396,784	\$ 6,532,376	\$ 6,532,376	\$ 6,532,376
CUW32801 - McLaren #1 Tank Rehab & Seismic Upgrade	10/10/08	08/11/08	08/11/08	08/11/08	\$ 5,354,512	\$ 4,659,741	\$ 4,659,741	\$ 4,659,741
CUW32901 - Potrero Heights Tank Seismic Upgrade	07/13/07	08/11/08	08/11/08	08/11/08	\$ 1,281,714	\$ 1,084,863	\$ 1,084,863	\$ 1,084,863
CUW33001 - Forest Knolls Tank Seismic Upgrade	07/03/08	01/18/12	01/18/12	01/18/12	\$ 3,536,899	\$ 3,438,912	\$ 3,438,912	\$ 3,438,912
CUW33101 - Lincoln Park Tank Seismic Upgrade	06/01/07	08/11/08	08/11/08	08/11/08	\$ 3,085,460	\$ 2,690,656	\$ 2,690,656	\$ 2,690,656
CUW33201 - McLaren #2 Tank Rehab & Seismic Upgrade	10/10/08	08/11/08	08/11/08	08/11/08	\$ 5,329,017	\$ 4,458,201	\$ 4,458,201	\$ 4,458,201
CUW33301 - Mount Davidson Tank Seismic Upgrade	08/06/09	03/30/11	03/30/11	03/30/11	\$ 3,927,838	\$ 2,568,414	\$ 2,568,414	\$ 2,568,414
CUW33801 - La Grande Pump Station Upgrades	11/05/10	03/29/13	03/29/13	03/29/13	\$ 5,311,335	\$ 4,776,418	\$ 4,776,418	\$ 4,776,418
CUW33901 - Potrero Heights Pump Station Upgrades	07/13/07	08/11/08	08/11/08	08/11/08	\$ 733,242	\$ 605,670	\$ 605,670	\$ 605,670
CUW34001 - Vista Francisco Pump Station Upgrades	05/07/10	01/31/13	01/31/13	01/31/13	\$ 5,680,792	\$ 5,141,127	\$ 5,141,127	\$ 5,141,127
Pipelines / Valves								
CUW30401 - North University Mound System Upgrade	05/07/10	06/30/11	06/30/11	06/30/11	\$ 23,114,504	\$ 10,000,010	\$ 10,000,010	\$ 10,000,010
CUW30801 - Key Motorized and Other Critical Valves	11/06/07	08/11/08	08/11/08	08/11/08	\$ 11,447,747	\$ 10,984,746	\$ 10,984,746	\$ 10,984,746

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Project Title	2005 Baseline Project Completion	2018 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2005 Baseline Project Budget	2018 Approved Project Budget	Current Approved Project Budget	Project Expenditures To Date
Pipelines / Valves								
CUW31101 - Sunset Circulation Improvements	07/06/06	07/06/06	07/06/06	07/06/06	\$ 8,224,379	\$ 7,073,164	\$ 7,073,164	\$ 7,073,164
CUW31201 - Lincoln Way Transmission Line	02/09/07	09/24/12	09/24/12	09/24/12	\$ 14,788,970	\$ 13,781,922	\$ 13,781,922	\$ 13,781,922
CUW31301 - Noe Valley Transmission Main - Phase 2	02/11/11	06/03/11	06/03/11	06/03/11	\$ 11,956,364	\$ 5,641,390	\$ 5,641,390	\$ 5,641,390
CUW31501 - East / West Transmission Main	04/10/09	03/21/11	03/21/11	03/21/11	\$ 22,955,659	\$ 27,754,505	\$ 27,754,505	\$ 27,754,505
CUW31601 - Fulton @ 6th	08/08/08	08/11/08	08/11/08	08/11/08	\$ 4,842,437	\$ 4,713,931	\$ 4,713,931	\$ 4,713,931
Miscellaneous								
CUW30301 - Vehicle Service Facility Equipment Safety Upgrade	07/02/09	08/11/09	08/11/09	08/11/09	\$ 5,245,082	\$ 3,978,923	\$ 3,978,923	\$ 3,978,923
CUW30501 - Fire Protection @ CDD	06/30/06	01/30/07	01/30/07	01/30/07	\$ 1,988,892	\$ 1,675,476	\$ 1,675,476	\$ 1,675,476
TOTAL					\$ 283,900,996	\$ 282,109,138	\$ 282,109,138	\$ 282,103,560

APPENDICES

- A PROJECT DESCRIPTIONS**
- B WSIP BUDGET AND EXPENDITURES HISTOGRAM**
- C WSIP APPROVED PROJECT-LEVEL SCHEDULE**
- D PROJECTS WITHIN BUDGET AND SCHEDULE**
- E LIST OF ACRONYMS**

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APPENDIX A. PROJECT DESCRIPTIONS**Reservoirs****CUW30701 - Summit Reservoir Rehabilitation (Completed)**

This project consists of the upgrade of the existing Summit Reservoir to meet current seismic standards and conform to all State Public Health requirements. The project includes a new inlet/outlet structure to correct circulation problems.

CUW31001 - New Northwest Reservoir (Deleted)

This project is the construction of a new 5MG reservoir in the northeast zone of San Francisco. This reservoir will provide both fire protection and pressurized supply to areas currently served from the Sunset and Lombard Zones.

CUW31901 - Hunters Point Reservoir Rehab & Seismic Upgrade (Completed)

This project is the upgrade of the existing Hunters Point Reservoir to meet current seismic standards and conform to all State Health requirements, and includes correction of circulation problems and new inlet/outlet structure.

CUW33401 - Stanford Heights Reservoir Rehabilitation (Completed)

This project consists of the upgrade of the existing Stanford Heights Reservoir to meet current seismic standards and conform to all State Public Health requirements. The project includes a new inlet/outlet structure to correct circulation problems.

CUW33501 - Potrero Heights Reservoir Rehabilitation (Completed)

This project is the upgrade of the existing Potrero Heights Reservoir to meet current seismic standards and conform to all State Health requirements, and includes correction of circulation problems and a new inlet/outlet structure.

CUW33701 - Sutro Reservoir Rehab & Seismic Upgrade (Completed)

This project is the upgrade of the existing Sutro

Reservoir to meet current seismic standards and conform to all State Health requirements and includes the correction of circulation problems, and a new inlet/outlet structure.

Pump Stations / Tanks**CUW30601 - Crocker Amazon Pump Station Upgrades (Completed)**

This project will rebuild the Crocker-Amazon pump station, including a reinforced concrete structure, three pumps, stand-by generator, hydropneumatic tanks, security fencing, monitoring and disinfection systems, and landscaping.

CUW30901 - Lake Merced Pump Station Essential Upgrades

This project will rebuild the Lake Merced pump station. Specific improvements include a new reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW31401 - La Grande Tank Seismic Upgrade (Completed)

The project will include the replacement of the La Grande tank, including a concrete tank foundation, new 350,000 gal steel tank, inlet/outlet piping, valves, security fencing, water quality monitoring systems, and demolition of the existing facility.

CUW31801 - Forest Hill Tank Rehab & Seismic Upgrade (Completed)

This project is the seismic upgrade of the Forest Hill concrete tank, including seismic work, new foundation, inlet/outlet, valves, retaining wall, security fencing, monitoring system, and site improvements.

CUW32001 - Forest Hill Pump Station Upgrades (Completed)

This project will rebuild the Forest Hill pump station. Specific improvements include a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW32101 - Forest Knolls Pump Station Upgrades (Completed)

This project will rebuild the Forest Knolls pump station, including a reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, water quality monitoring and sampling systems, and landscaping.

CUW32201 - Lincoln Park Pump Station Upgrades (Completed)

This project will rebuild the Lincoln Park pump station. Specific improvements include a new reinforced concrete structure, pumps, a stand-by generator, security fencing, tanks, SCADA, monitoring and disinfection systems, and landscaping.

CUW32301 - Alemany Pump Station Upgrades (McLaren Park) (Completed)

This project will rebuild the Alemany Pump Station, including a reinforced concrete structure, pumps, stand-by generators, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW32401 - Mount Davidson Pump Station Upgrades (Completed)

This project will rebuild the Mount Davidson pump station. Specific improvements include a new reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW32501 - Palo Alto Pump Station Upgrades (Completed)

This project will rebuild the Palo Alto Pump Station, including a seismically reinforced concrete structure, pumps, replacement of hydro pneumatic tanks, a stand-by generator, security fencing, SCADA, landscaping, and demolition of the existing facility.

CUW32601 - Sky View - Aqua Vista Pump Station Upgrade (Completed)

This project will rebuild the Sky View-Aqua Vista pump station, including a reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, water quality monitoring and

sampling systems, and landscaping.

CUW32701 - Summit Pump Station Upgrades (Completed)

This project will rebuild the Summit Pump Station, including a reinforced concrete structure, retaining walls, pumps, inlet-outlet piping, seismic reinforcing of existing generator building, security fencing, SCADA, landscaping, and demolition of the existing facility.

CUW32801 - McLaren #1 Tank Rehab & Seismic Upgrade (Completed)

This project consists of the rehabilitation and seismic upgrade of the McLaren #1 Tank including seismic bracing, interior lining replacement, cathodic protection, new exterior coating, lead paint abatement, new inlet/drain/overflow piping and valves, security fencing, electrical improvements, paving, and landscaping.

CUW32901 - Potrero Heights Tank Seismic Upgrade (Completed)

This project is the demolition of the existing Potrero Heights Tank. The tank became nonessential upon completion of the Sunset Circulation Improvements Project.

CUW33001 - Forest Knolls Tank Seismic Upgrade (Completed)

This project is the replacement of the Forest Knolls Tank, including a new 100,000 gallon concrete tank, inlet/outlet piping, valves, security fencing, monitoring systems, demolition, and site improvements.

CUW33101 - Lincoln Park Tank Seismic Upgrade (Completed)

The project consists of the replacement of the Lincoln Park tank. Specific improvements include a new 100,000G concrete tank, inlet/outlet piping, valves, security fencing, monitoring systems, demolition, and site improvements.

CUW33201 - McLaren #2 Tank Rehab & Seismic Upgrade (Completed)

This project consists of the rehabilitation and seismic upgrade of the McLaren #2 tank,

including seismic bracing, interior lining replacement, cathodic protection, new exterior coating, lead paint abatement, new inlet/drain/overflow piping and valves, security fencing, electrical improvements, paving, and landscaping.

CUW33301 - Mount Davidson Tank Seismic Upgrade (Completed)

The project consists of the seismic retrofit of the existing 75,000G Mount Davidson tank. Specific improvements include a drilled pier foundation, inlet/outlet piping, valves, security fencing, monitoring systems, demolition, and site improvements.

CUW33801 - La Grande Pump Station Upgrades (Completed)

This project will rebuild the La Grande pump station, including a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW33901 - Potrero Heights Pump Station Upgrades (Completed)

This project is the demolition of the existing Potrero Heights Pump Station. The pump station became nonessential upon completion of the Sunset Circulation Improvements Project.

CUW34001 - Vista Francisco Pump Station Upgrades (Completed)

This project will rebuild the Vista Francisco pump station, including a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

Pipelines / Valves

CUW30401 - North University Mound System Upgrade (Completed)

This project will improve the supply reliability of the University Mound (UM) system, linking the two independent University Mound and Sunset Supply systems. In order to diminish the impact on the neighborhoods, sewer, domestic water distribution main, and pavement replacement

work has been added to the scope.

CUW30801 - Key Motorized and Other Critical Valves (Completed)

This project consists of installing motorized valves at several critical locations. These valves will assist during emergency shutdowns after events such as main breaks, earthquakes, and other situations requiring immediate system isolation.

CUW31101 - Sunset Circulation Improvements (Completed)

This project improved the operation of the Sunset Zone by allowing McLaren tanks to feed the Potrero Heights System. This improved circulation and created a more reliable water supply for the Potrero System.

CUW31201 - Lincoln Way Transmission Line (Completed)

This project is a new transmission main to serve as a backup to the deteriorated Sunset main from Sunset Reservoir to 5th Avenue and Lincoln Way. Under this project, approximately 13,000 LF of 48-inch steel pipe will be constructed.

CUW31301 - Noe Valley Transmission Main, Phase 2 (Completed)

This project is a new transmission main that will extend the Noe Valley main. The existing main, which ends at Sanchez and 20th Streets, needs to be extended to supply additional pressure to areas where low pressure is a problem.

CUW31501 - East / West Transmission Main (Completed)

This project is a new main from Alemany PS to the western part of the City. This transmission main will enable the SFPUC to move water from the east side of the City into the Sunset system in the event of a peninsula pipeline failure or emergency.

CUW31601 - Fulton @ Sixth Ave - 30" Main Replacement (Completed)

This project consists of construction of a 30" main to replace the deteriorated Richmond supply main in the Golden Gate Park from Lincoln Way

at 6th Avenue to Fulton at 6th. The main will extend the Sunset zone to increase the pressure and supply at the northern end of the zone.

Miscellaneous

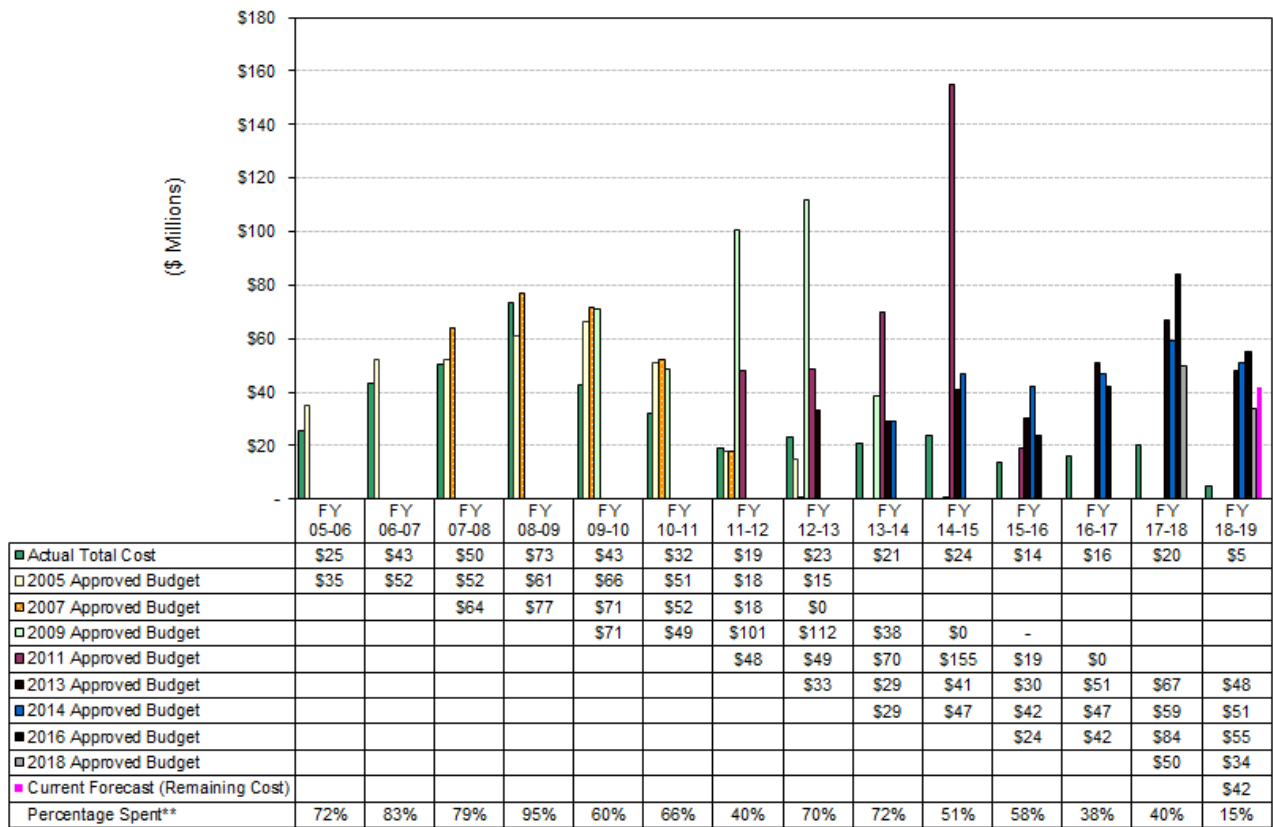
CUW30301 - Vehicle Service Facility Equipment Safety Upgrade (Completed)

This project will upgrade the vehicle service center, machine shop, and various other City Distribution Division (CDD) shops to correct seismic deficiencies and comply with worker safety standards and health department regulations.

CUW30501 - Fire Protection @ CDD (Completed)

This project covers the final phase of construction to complete the fire detection and monitoring systems needed at the City Distribution Division facilities.

APPENDIX B. BUDGET AND EXPENDITURE HISTOGRAM*



All costs are shown in \$ Millions.

* The histogram does not reflect budget and expenditures prior to FY 2005-2006. The histogram includes budget and expenditures for Local Water Supply Projects.

** Percentage Spent calculated as Actual Expenditures over the most current Approved Budget for each individual Fiscal Year.

Figure B1 Annual Budgeted Spending Plans vs. Actual Expenditures

Figure B compares the spending plans associated with the various WSIP Approved Budgets to Actual Expenditures. It shows total annual expenditures from FY05-06 through Q1/FY18-19 and cost projections (Current Forecast) in Q1/FY18-19 through program completion in December 2018. Actual annual expenditures have ranged from 38% to 95% of planned expenditures.

APPENDIX D. PROJECTS WITHIN BUDGET AND SCHEDULE

No projects are currently within budget and schedule.

APPENDIX E. LIST OF ACRONYMS

AAR	Alternative Analysis Report	IVP	Irvington Portal
AB	Assembly Bill	JOC	Job Order Contract
ACAMS	Access Control and Alarm Monitoring System	LCSD	Lower Crystal Springs Dam
ACDD	Alameda Creek Diversion Dam	LCSDI	Lower Crystal Springs Dam Improvements
ACDT	Alameda Creek Diversion Tunnel	LMPS	Lake Merced Pump Station
ACWD	Alameda County Water District	LOS	Levels of Service
AWP	Alameda West Portal	MG	Million Gallons
BART	Bay Area Rapid Transit	MGD	Million Gallons per Day
BAWSCA	Bay Area Water Supply and Conservation Agency	MND	Mitigated Negative Declaration
BDPL	Bay Division Pipeline	MOU	Memorandum of Understanding
BHR	Bioregional Habitat Restoration	NEG DEC	Negative Declaration (also shown as ND)
BO	Biological Opinion	NEPA	National Environmental Policy Act
CATEX	Categorical Exemption	NIT	New Irvington Tunnel
CCSF	City and County of San Francisco	NMFS	National Marine Fisheries Service (under NOAA)
CDD	City Distribution Division	NOAA	National Oceanic and Atmospheric Agency
CDRP	Calaveras Dam Replacement Project	NOT	Notice of Termination
CEQA	California Environmental Quality Act	NTP	Notice to Proceed
CER	Conceptual Engineering Report	O&M	Operation and Maintenance
CIP	Capital Improvement Program	PCCP	Pre-stressed Concrete Cylinder Pipe
CM	Construction Management	PCE	Project Controls Engineer
CMB	Construction Management Bureau	PE	Project Engineer
CMD	Contract Monitoring Department	PEIR	Program Environmental Impact Report
CMD	Contract Monitoring Division	PG&E	Pacific Gas and Electric Company
CMIS	Construction Management Information System	PPSU	Peninsula Pipeline Seismic Upgrade
CO	Change Order	QA	Quality Assurance
CPI	Cost Performance Index	RFI	Request For Information
CSPS	Crystal Springs Pump Station	ROW	Right-of-Way
CSSA	Crystal Springs/San Andreas	SABPL	San Antonio Backup Pipeline
DB	Design, Build	SAPL	San Antonio Pipeline
DSOD	Division of Safety of Dams (State of California)	SAPS	San Antonio Pump Station
DVSS	Digital Video Surveillance System	SCADA	Supervisory Control and Data Acquisition
EBMUD	East Bay Municipal Utility District	SFPUC	San Francisco Public Utilities Commission
EIR	Environmental Impact Report	SJPL	San Joaquin Pipeline
EIS	Environmental Impact Statement	SMC	San Mateo County
EV	Earned Value	SMP	Surface Mining Permit
EVM	Earned Value Management	SPI	Schedule Performance Index
FY	Fiscal Year	SQS	Supplier Quality Surveillance
HH	Hetch Hetchy	SSBPL	Sunset Supply Branch Pipeline
HTLTIP	Harry Tracy Long Term Improvements Project		
HTWTP	Harry Tracy Water Treatment Plant		

SSPL	Sunset Supply Pipeline
SVWTP	Sunol Valley Water Treatment Plant
TBD	To be determined
TBM	Tunnel Boring Machine
TWR	Treated Water Reservoir
UM	University Mound
UPS	Uninterruptable Power Supply
UV	Ultra Violet
VFD	Variable Frequency Drive
WEIP	Watershed Environmental Improvement Program
WSIP	Water System Improvement Program

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WATER SYSTEM IMPROVEMENT PROGRAM



QUARTERLY REPORT

Local Projects
Q2 FY 2018 | 2019
October 2018 — December 2018

Rebuilding Today for a Better Tomorrow

Published: 02/05/2019

Quarterly Report - Q2 FY2018/2019

Water System Improvement Program - Local Projects

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1. PROGRAM DESCRIPTION

The Water System Improvement Program (WSIP) is a \$4.8 billion, multi-year capital program to upgrade the City of San Francisco's regional and local drinking water systems. The program will deliver improvements that enhance the City's ability to provide reliable, affordable, high quality drinking water to its 26 wholesale customers and regional retail customers in Alameda, Santa Clara, and San Mateo Counties, and to its 800,000 retail customers in San Francisco, in an environmentally sustainable manner. The WSIP is structured to cost-effectively meet water quality requirements, improve seismic and delivery reliability, and achieve water supply goals.

Built in the early to mid-1900s, many components of the water system are nearing the end of their working life, with crucial facilities crossing, or in close proximity to, three major earthquake faults. The San Francisco Public Utilities Commission (SFPUC) initiated the WSIP to repair, replace, and seismically upgrade the system's deteriorating pipelines, tunnels, dams, reservoirs, pump stations, storage tanks, and treatment facilities.

The program consists of 35 local projects located within San Francisco and 52 regional projects (including the Vegetation Restoration of WSIP Construction Sites project which was added to the program in October 2012) spread over seven different counties from the Sierra foothills to San Francisco. Local projects only benefit San Francisco residents, whereas regional projects benefit both City residents and the 26 wholesale agencies that receive water from the SFPUC. The management of local projects is divided into 4 sub-programs - Reservoirs, Pump Stations / Tanks, Pipelines / Valves, and Miscellaneous.

The Local program originally included local water supply projects. These projects provide access to groundwater supplies for the potable system, deliver recycled water supplies for non-

potable uses, and address water quality and water level issues at Lake Merced. The management and implementation of the five (5) local water supply projects was transferred from the WSIP to the Water Enterprise Capital Improvement Program (CIP) as of July 1, 2011.

The WSIP is funded through the issuance of revenue bonds. Local Measures A and E, which were approved by San Francisco voters in November 2002, allowed for the financing of improvements to the City's water system using revenue bonds and/or other forms of revenue financing. Increases in the water rates of retail and wholesale customers will be used to pay back the debt service on the bonds.

The program budget and schedule were originally adopted by the San Francisco Public Utilities Commission on March 1, 2003. The program at the time was referred to as the Capital Improvement Program (CIP). The scope of the CIP was changed significantly following the adoption of Levels of Service (LOS) goals in early 2005. The program changes were so substantial that the program was renamed the WSIP and a new program budget and schedule were adopted on November 29, 2005. Since the scope of the 2005 Revised WSIP is in general representative of the program being implemented today, the 2005 budget and schedule are considered the "Baseline Budget and Schedule."

Subsequently, the WSIP Baseline Budget and Schedule were revised in 2007, 2009, 2011, 2013, 2014, 2015, 2016, 2017, and 2018, and these revisions were approved by the San Francisco Public Utilities Commission on February 26, 2008, July 28, 2009, July 12, 2011, April 23, 2013, April 22, 2014, December 8, 2015, April 26, 2016, February 14, 2017, and April 10, 2018, respectively. Refer to Appendix A for a scope description of all the local projects included in the WSIP.

Program Revision	Commission Approval	Budget (\$Million)	Schedule(*)
2003 (Original)	March 1, 2003	\$3,628	03/15/16
2005 (Baseline)	November 29, 2005	\$4,343	06/30/14
2007 (Revised)	February 26, 2008	\$4,392	12/18/14
2009 (Revised)	July 28, 2009	\$4,586	12/04/15
2011 (Revised)	July 12, 2011	\$4,586	07/29/16
2013 (Revised)	April 23, 2013	\$4,640	04/11/19
2014 (Revised)	April 22, 2014	\$4,765	05/24/19
2015 (Revised)	December 8, 2015	\$4,765	05/24/19
2016 (Revised)	April 26, 2016	\$4,845	12/20/19
2017 (Revised)	February 14, 2017	\$4,845	12/20/19
2018 (Latest Approved)	April 10, 2018	\$4,788	12/30/21

* Final Program Completion Date

2. PROGRAM STATUS

This second (2nd) Quarterly Report for Fiscal Year (FY) 2018-2019 presents the progress made on the WSIP local projects between October 1, 2018 and December 31, 2018. The program’s schedule and budget were last approved by the San Francisco Public Utilities Commission (SFPUC or Commission) on April 10, 2018. The progress made on the regional projects of the WSIP is presented in a separate quarterly report.

Figure 2.1 shows the total Approved Budget for the local projects remaining in each phase of the program as of December 31, 2018. The number of projects currently active in each phase is shown in parentheses.

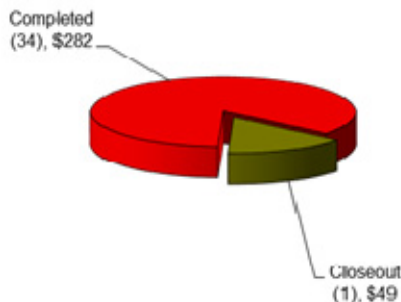


Figure 2.1 Total Approved Budget for Projects Active in Each Phase (\$Million)

Figure 2.2 shows the number of local projects in the following stages of the program as of

December 31, 2018: Pre-construction, Construction, and Post-construction.

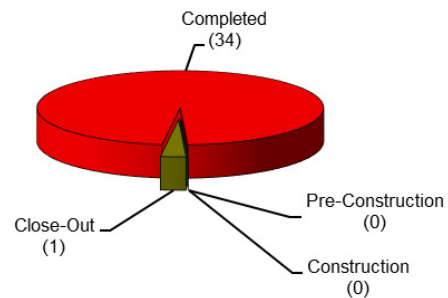


Figure 2.2 Number of Projects in Pre-construction, Construction, and Post-construction

Figure 2.3 summarizes the environmental review and permitting status of the WSIP 35 local projects as of December 31, 2018.

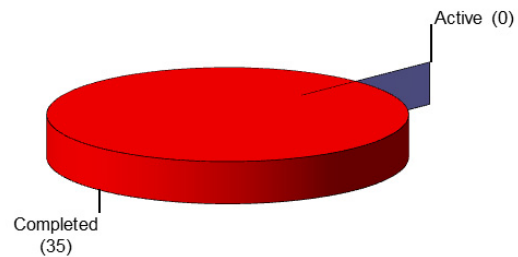


Figure 2.3 Program Environmental and Permitting Status

3. PROGRAM COST SUMMARY

Table 3.1 provides an overall program-level cost summary of the WSIP Local Program. It shows the Expenditures to Date; the 2005 Baseline, 2018 Approved, Current Approved and Q2/FY18-19 Forecasted Budgets; and the Cost Variance between the Current Approved and Forecasted Budgets. The total Current Approved WSIP Budget (including Regional and Local Programs,

Local Water Supply Projects, and Financing Costs), and current Forecasted Cost at completion are \$4,787.8 million. The Current Approved WSIP Budget and Forecasted Cost at completion for the Local Improvement Projects (including construction contingency) are \$331.4 million. Refer to Appendix B for a graphical representation of how the WSIP budget and actual expenditures have changed over time.

Table 3.1 Program Cost Summary

Cost Categories	Expenditures To Date (\$ Million) (A)	2005 Baseline Budget (\$ Million) (B)	2018 Approved Budget (\$ Million) (C)	Current Approved Budget ⁽⁷⁾ (\$ Million) (D)	Q2/FY18-19 Forecasted Costs (\$ Million) (E)	Cost Variance (\$ Million) (F = D - E)
Local Improvement Projects	\$325	\$353	\$325.7	\$325.7	\$325.7	-
Construction Costs ⁽¹⁾	\$232	\$259	\$232.3	\$232.3	\$232.3	-
Program Delivery Costs ⁽²⁾	\$92	\$91	\$92.2	\$92.2	\$92.3	(\$0.1)
Other Costs ⁽³⁾	\$1	\$4	\$1.2	\$1.2	\$1.1	\$0.1
Construction Contingency for Local Improvement Projects ⁽⁴⁾	\$6	\$30	\$5.7	\$5.7	\$5.7	-
LOCAL PROGRAM WITH CONTINGENCY	\$331	\$383	\$331.4	\$331.4	\$331.4	-
Regional Improvement Projects	\$3,382	\$3,375	\$3,536.9	\$3,536.9	\$3,535.5	\$1.4
Support Projects ⁽⁵⁾	\$224	\$33	\$266.1	\$266.1	\$267.6	(\$1.4)
Local Water Supply Projects ^(6, 8)	\$113	-	\$281.3	\$281.3	\$281.3	-
Finance	\$372	\$552	\$372.0	\$372.0	\$372.0	-
PROGRAM TOTAL	\$4,422	\$4,343	\$4,787.8	\$4,787.8	\$4,787.8	-

Notes:

- Construction Costs** include the Construction Base Bid and owner-provided equipment/material. Those costs do not include any construction contingency. That contingency is reflected as a separate cost category.
- Delivery Costs** include project management, planning, environmental (CEQA, permitting, construction compliance), design, construction management, and engineering support during construction.
- Other Costs** include environmental mitigation, art enrichment, security improvements, and real estate expenses.
- Expenditures to Date for Construction Contingency for Local Improvement projects corresponds to the Total Approved Change Orders on those projects. For projects with ongoing or completed construction, the 2018 Approved Budget for construction contingency includes all change orders and trends as identified at the time of the March 2018 Revised WSIP.
- Support Projects** include (1) System Security Upgrades, (2) Programmatic EIR, (3) Bioregional Habitat Restoration, (4) Vegetation Restoration of WSIP Construction Sites, (5) Long Term Mitigation Endowment, (6) Program Management, and (7) Watershed and Environmental Improvement Program. Please note that the costs reflected above for support projects include total project costs, including "Construction", "Delivery" and "Other" costs.
- Local Water Supply Projects managed as part of the Water Enterprise Capital Improvement Program (CIP) are (1) Lake Merced Water Level Restoration, (2) San Francisco Groundwater Supply, (3) San Francisco Westside Recycled Water, (4) Harding Park Recycled Water, and (5) San Francisco Eastside Recycled Water.
- The budget approved as part of the March 2018 Revised WSIP, plus any additional budget changes approved by the Commission as part of additional contingencies on construction contract.
- The WSIP Local Water Supply projects underwent a September 2013 re-baseline. Only the original WSIP portion of the re-baselined costs is reported here. The remaining budget is funded under the Water Enterprise CIP and is managed outside the purview of the WSIP.
- The original \$522M estimate of financing cost was based on a memorandum to the Commission dated November 23, 2005.

10. The financing cost budget of \$372M that was included in the March 2018 Revised WSIP includes all financing costs appropriated to date.
11. The actual financing cost is assumed to match the budgeted financing cost. Final reconciliation of all associated financing costs will occur upon WSIP completion.

Table 3.2 provides the status of construction contingencies. For each sub-program, it shows the 2018 Approved Contingency; the Current Approved Contingency; the Q2/FY18-19 Forecasted Change Orders; the Q2/FY18-19 Forecasted Trends; Project Savings Moved to Contingency/ Funds Moved out of Contingency;

the Q2/FY18-19 Forecasted Construction Contingency; and the Remaining Contingency as of the end of the reporting quarter. As of December 31, 2018, the Forecasted Construction Contingency is \$3.7 million, and the Total Forecasted Remaining Contingency is \$0.

Table 3.2 Status of Construction Contingency

Sub Program	2018 Approved Contingency ⁽¹⁾ (\$ Million) (A)	Current Approved Contingency ^(2,3) (\$ Million) (B)	Q2/FY18-19 Forecasted Change Orders ⁽³⁾ (\$ Million) (C)	Q2/FY18-19 Forecasted Trends ⁽⁴⁾ (\$ Million) (D)	Project Savings (+) Moved to Contingency/ Funds (-) Moved out of Contingency ⁽⁵⁾ (\$ Million) (E)	Current Forecasted Contingency (\$ Million) (F = B+ E)	Q2/FY18-19 Forecasted Remaining Contingency (\$ Million) (G = F-C-D)
Reservoirs	-	-	-	-	-	-	-
Pump Stations / Tanks	\$3.71	\$3.71	\$3.71	-	-	\$3.71	-
Pipelines / Valves	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-
Local Total	\$3.71	\$3.71	\$3.71	-	-	\$3.71	-

Notes:

1. Contingency included in March 2018 Revised WSIP.
2. Contingency included in March 2018 Revised WSIP and any contingency approved by the Commission thereafter.
3. Forecasted Change Orders include Approved, Pending, and Potential Change Orders.
 - Approved Change Orders are changes that have received all required approvals, including that of the City Controller.
 - Pending Change Orders are changes that have been negotiated and approved by the SFPUC but have to be approved by the City Controller.
 - Potential Change Orders are changes that have been requested and entered into CMIS but are still being negotiated.
4. Trends are any expected impact that the CM team believes has a high probability of becoming a change but are yet to be entered into CMIS as a Potential Change.
5. Values only reflect savings realized following Commission adoption of the March 2018 Revised WSIP.

The Program Management project includes programmatic activities that span multiple regions and benefit several WSIP projects (Table 3.3). The project provides funding for the following functions and resources: SFPUC Staff assigned to the management of the overall program; consultants supporting SFPUC staff at the program level (program, project and pre-construction management consultant, program construction management consultant, program control consultant); labor relations, including management of the project labor agreement; communication and public outreach; programmatic legal support; real estate acquisitions; program controls, including the tracking and reporting of all WSIP efforts; and program-level construction management activities associated with quality assurance, risk management, the Supplier Quality Surveillance (SQS) Program, operations assistance, safety, and training.

The activities under the Program Management project are organized into five categories that are tracked and monitored on a monthly basis. These categories are Management Support, Project Labor Agreement, Planning and Project Development, Program Control, and Program Construction Management.

The spending pattern for the project is very similar from month to month as the project primarily funds program-level positions occupied by both SFPUC staff and consultants. The Forecasted Total Program Management Cost is \$114.1 million, which is \$1.4 million over the Current Approved Budget of \$112.7 million due to the transfer of savings from other projects into Director’s Reserve.

Table 3.3 Status of Program Management Project Cost Breakdown

Category	Expenditures To Date (\$ Million) (A)	2018 Approved Budget (\$ Million) (B)	Current Approved Budget (\$ Million) (C)	Q2/FY18-19 Forecasted Cost* (\$ Million) (D)	Cost Variance (\$ Million) (E = C-D)
Management Support	\$37.0	\$42.8	\$42.8	\$44.2	(\$1.4)
Project Labor Agreement	\$3.7	\$3.8	\$3.8	\$3.8	-
Planning and Project Development	\$17.9	\$18.3	\$18.3	\$18.3	-
Program Controls	\$19.5	\$19.8	\$19.8	\$19.8	-
Program Construction Management	\$27.7	\$28.0	\$28.0	\$27.9	-
Program Management Total	\$105.8	\$112.7	\$112.7	\$114.2	(\$1.4)

* Increase to Program Management Forecast Cost Variance is due to transfer of savings from other projects into Director's Reserve.

4. PROGRAM SCHEDULE SUMMARY

Figure 4.1 and Table 4.1 compare the 2005 Baseline, 2018 Approved, Current Approved, and Q2/FY18-19 Forecasted Schedules for the WSIP Local Program. Refer to the “Cost and Schedule Status” notes in Section 5 for the criteria associated with the three color-coded Forecast Status levels in Figure 4.1 – Meet Requirements, Need Attention, and Exceed Limits.

The Current Approved and Forecasted Schedule completion for the overall WSIP (including Regional and Local Programs) are in December 2021. The Current Approved and Forecasted Schedule completion for the WSIP Local Program are July 2018 and March 2019, respectively (8-month behind schedule). Refer to Appendix C for a graphical presentation of the WSIP Approved Project-Level Schedule.

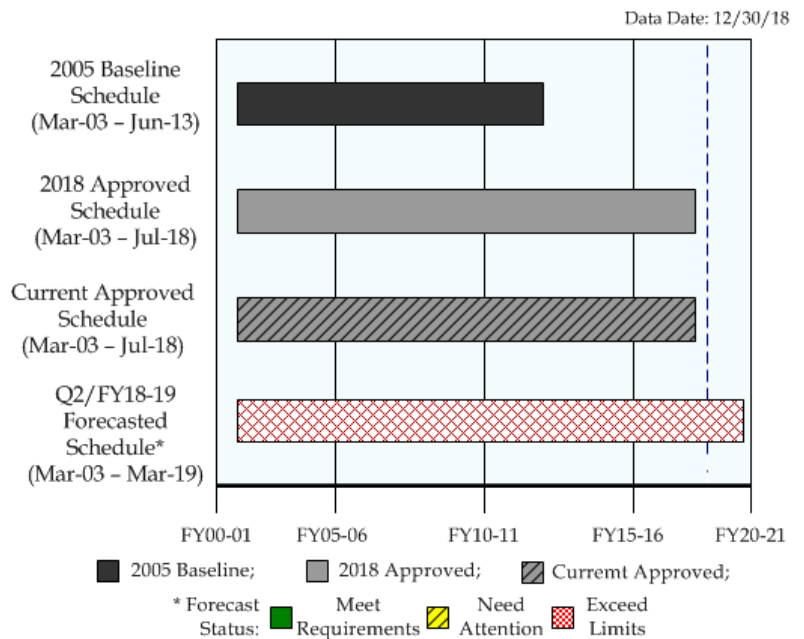


Figure 4.1 Program Schedule Summary

Table 4.1 2018 Approved vs. Q2/FY18-19 Forecasted Schedule Dates

Category	2005 Baseline Start	2018 Approved Start	Current* Approved Start	Actual Start	2005 Baseline Finish	2018 Approved Finish	Current* Approved Finish	Q2/FY18-19 Forecasted Finish	Schedule Variance (Months)
Local** Program	03/01/03	03/31/03	03/31/03	03/01/03✓	06/28/13	7/31/18	7/31/18	03/29/19	7.9 (Late)
Regional Program	03/01/03	03/31/03	03/31/03	03/01/03✓	06/30/14	12/30/21	12/30/21	12/30/21	-
Overall WSIP	03/01/03	03/01/03	03/01/03	03/01/03✓	06/30/14	12/30/21	12/30/21	12/30/21	-

* The budget and schedule approved as part of the March 2018 Revised WSIP, plus any additional budget and schedule changes approved by the Commission as part of additional contingencies on construction contracts.

** Excluding Local Water Supply Projects

5. PROJECT PERFORMANCE SUMMARY

No projects to report under this section.

6. PROJECTS NOT WITHIN BUDGET AND/OR SCHEDULE

No projects to report under this section.

7. ON-GOING CONSTRUCTION

No projects are currently active in construction.

8. PROJECTS IN CLOSE-OUT

Project Title	2005 Baseline Construction Phase Completion	2018 Approved Construction Phase Completion	Current Approved Construction Phase Completion	Actual Construction Phase Completion	2005 Approved Project Completion	2018 Approved Project Completion	Current Approved Project Completion	Forecasted Project Completion	2005 Baseline Construction Phase Budget	2018 Approved Construction Phase Budget	Current Approved Construction Phase Budget	Construction Phase Expenditures To Date
Pump Stations/ Tanks												
CUW30901 - Lake Merced Pump Station Essential Upgrades	10/14/10	04/30/18	04/30/18	12/14/18	07/15/11	07/31/18	07/31/18	03/29/19	\$ 59,125,000	\$ 37,205,349	\$ 37,205,349	\$ 36,856,597
TOTAL									\$ 59,125,000	\$ 37,205,349	\$ 37,205,349	\$ 36,856,597

9. COMPLETED PROJECTS

Project Title	2005 Baseline Project Completion	2018 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2005 Baseline Project Budget	2018 Approved Project Budget	Current Approved Project Budget	Project Expenditures To Date
Reservoirs								
CUW30701 - Summit Reservoir Rehabilitation	12/08/06	09/28/12	09/28/12	09/28/12	\$ 14,927,859	\$ 12,294,537	\$ 12,294,537	\$ 12,294,537
CUW31901 - Hunters Point Reservoir Rehab & Seismic Upgrade	05/04/12	10/31/12	10/31/12	10/31/12	\$ 8,122,861	\$ 3,086,717	\$ 3,086,717	\$ 3,086,717
CUW33401 - Stanford Heights Reservoir Rehabilitation	03/05/10	04/01/11	04/01/11	04/01/11	\$ 19,172,308	\$ 23,626,142	\$ 23,626,142	\$ 23,626,142
CUW33501 - Potrero Heights Reservoir Rehabilitation	07/13/07	08/11/08	08/11/08	08/11/08	\$ 7,610,033	\$ 6,836,736	\$ 6,836,736	\$ 6,836,736
CUW33701 - Sutro Reservoir Rehab & Seismic Upgrade	07/15/11	03/31/16	03/31/16	03/31/16	\$ 31,372,263	\$ 39,468,198	\$ 39,468,198	\$ 39,462,621
Pump Stations / Tanks								
CUW30601 - Crocker Amazon Pump Station Upgrades	10/31/06	03/27/08	03/27/08	03/27/08	\$ 4,823,675	\$ 4,126,498	\$ 4,126,498	\$ 4,126,498
CUW31401 - La Grande Tank Seismic Upgrade	06/07/07	12/18/08	12/18/08	12/18/08	\$ 7,919,543	\$ 6,987,728	\$ 6,987,728	\$ 6,987,728
CUW31801 - Forest Hill Tank Rehab & Seismic Upgrade	01/05/07	08/31/07	08/31/07	08/31/07	\$ 3,204,561	\$ 2,936,199	\$ 2,936,199	\$ 2,936,199
CUW32001 - Forest Hill Pump Station Upgrades	12/02/11	07/01/14	07/01/14	07/01/14	\$ 4,446,263	\$ 6,389,792	\$ 6,389,792	\$ 6,389,792
CUW32101 - Forest Knolls Pump Station Upgrades	07/03/08	01/18/12	01/18/12	01/18/12	\$ 5,779,776	\$ 6,196,751	\$ 6,196,751	\$ 6,196,751
CUW32201 - Lincoln Park Pump Station Upgrades	06/01/07	08/11/08	08/11/08	08/11/08	\$ 4,762,027	\$ 4,345,215	\$ 4,345,215	\$ 4,345,215
CUW32301 - Alemany Pump Station Upgrades (McLaren Park)	07/10/09	08/30/13	08/30/13	08/30/13	\$ 10,391,557	\$ 29,095,501	\$ 29,095,501	\$ 29,095,501
CUW32401 - Mount Davidson Pump Station Upgrades	08/06/09	03/30/11	03/30/11	03/30/11	\$ 5,223,489	\$ 4,281,116	\$ 4,281,116	\$ 4,281,116
CUW32501 - Palo Alto Pump Station Upgrades	04/10/09	11/16/10	11/16/10	11/16/10	\$ 5,225,506	\$ 6,126,470	\$ 6,126,470	\$ 6,126,470
CUW32601 - Sky View - Aqua Vista Pump Station Upgrade	07/11/08	08/11/09	08/11/09	08/11/09	\$ 5,717,647	\$ 4,751,094	\$ 4,751,094	\$ 4,751,094
CUW32701 - Summit Pump Station Upgrades	03/20/08	08/11/08	08/11/08	08/11/08	\$ 6,396,784	\$ 6,532,376	\$ 6,532,376	\$ 6,532,376
CUW32801 - McLaren #1 Tank Rehab & Seismic Upgrade	10/10/08	08/11/08	08/11/08	08/11/08	\$ 5,354,512	\$ 4,659,741	\$ 4,659,741	\$ 4,659,741
CUW32901 - Potrero Heights Tank Seismic Upgrade	07/13/07	08/11/08	08/11/08	08/11/08	\$ 1,281,714	\$ 1,084,863	\$ 1,084,863	\$ 1,084,863
CUW33001 - Forest Knolls Tank Seismic Upgrade	07/03/08	01/18/12	01/18/12	01/18/12	\$ 3,536,899	\$ 3,438,912	\$ 3,438,912	\$ 3,438,912
CUW33101 - Lincoln Park Tank Seismic Upgrade	06/01/07	08/11/08	08/11/08	08/11/08	\$ 3,085,460	\$ 2,690,656	\$ 2,690,656	\$ 2,690,656
CUW33201 - McLaren #2 Tank Rehab & Seismic Upgrade	10/10/08	08/11/08	08/11/08	08/11/08	\$ 5,329,017	\$ 4,458,201	\$ 4,458,201	\$ 4,458,201
CUW33301 - Mount Davidson Tank Seismic Upgrade	08/06/09	03/30/11	03/30/11	03/30/11	\$ 3,927,838	\$ 2,568,414	\$ 2,568,414	\$ 2,568,414
CUW33801 - La Grande Pump Station Upgrades	11/05/10	03/29/13	03/29/13	03/29/13	\$ 5,311,335	\$ 4,776,418	\$ 4,776,418	\$ 4,776,418
CUW33901 - Potrero Heights Pump Station Upgrades	07/13/07	08/11/08	08/11/08	08/11/08	\$ 733,242	\$ 605,670	\$ 605,670	\$ 605,670
CUW34001 - Vista Francisco Pump Station Upgrades	05/07/10	01/31/13	01/31/13	01/31/13	\$ 5,680,792	\$ 5,141,127	\$ 5,141,127	\$ 5,141,127
Pipelines / Valves								
CUW30401 - North University Mound System Upgrade	05/07/10	06/30/11	06/30/11	06/30/11	\$ 23,114,504	\$ 10,000,010	\$ 10,000,010	\$ 10,000,010
CUW30801 - Key Motorized and Other Critical Valves	11/06/07	08/11/08	08/11/08	08/11/08	\$ 11,447,747	\$ 10,984,746	\$ 10,984,746	\$ 10,984,746

WSIP Quarterly Report

Project Title	2005 Baseline Project Completion	2018 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2005 Baseline Project Budget	2018 Approved Project Budget	Current Approved Project Budget	Project Expenditures To Date
Pipelines / Valves								
CUW31101 - Sunset Circulation Improvements	07/06/06	07/06/06	07/06/06	07/06/06	\$ 8,224,379	\$ 7,073,164	\$ 7,073,164	\$ 7,073,164
CUW31201 - Lincoln Way Transmission Line	02/09/07	09/24/12	09/24/12	09/24/12	\$ 14,788,970	\$ 13,781,922	\$ 13,781,922	\$ 13,781,922
CUW31301 - Noe Valley Transmission Main - Phase 2	02/11/11	06/03/11	06/03/11	06/03/11	\$ 11,956,364	\$ 5,641,390	\$ 5,641,390	\$ 5,641,390
CUW31501 - East / West Transmission Main	04/10/09	03/21/11	03/21/11	03/21/11	\$ 22,955,659	\$ 27,754,505	\$ 27,754,505	\$ 27,754,505
CUW31601 - Fulton @ 6th	08/08/08	08/11/08	08/11/08	08/11/08	\$ 4,842,437	\$ 4,713,931	\$ 4,713,931	\$ 4,713,931
Miscellaneous								
CUW30301 - Vehicle Service Facility Equipment Safety Upgrade	07/02/09	08/11/09	08/11/09	08/11/09	\$ 5,245,082	\$ 3,978,923	\$ 3,978,923	\$ 3,978,923
CUW30501 - Fire Protection @ CDD	06/30/06	01/30/07	01/30/07	01/30/07	\$ 1,988,892	\$ 1,675,476	\$ 1,675,476	\$ 1,675,476
TOTAL					\$ 283,900,996	\$ 282,109,138	\$ 282,109,138	\$ 282,103,560

APPENDICES

- A PROJECT DESCRIPTIONS**
- B WSIP BUDGET AND EXPENDITURES HISTOGRAM**
- C WSIP APPROVED PROJECT-LEVEL SCHEDULE**
- D PROJECTS WITHIN BUDGET AND SCHEDULE**
- E LIST OF ACRONYMS**

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APPENDIX A. PROJECT DESCRIPTIONS**Reservoirs****CUW30701 - Summit Reservoir Rehabilitation (Completed)**

This project consists of the upgrade of the existing Summit Reservoir to meet current seismic standards and conform to all State Public Health requirements. The project includes a new inlet/outlet structure to correct circulation problems.

CUW31001 - New Northwest Reservoir (Deleted)

This project is the construction of a new 5MG reservoir in the northeast zone of San Francisco. This reservoir will provide both fire protection and pressurized supply to areas currently served from the Sunset and Lombard Zones.

CUW31901 - Hunters Point Reservoir Rehab & Seismic Upgrade (Completed)

This project is the upgrade of the existing Hunters Point Reservoir to meet current seismic standards and conform to all State Health requirements, and includes correction of circulation problems and new inlet/outlet structure.

CUW33401 - Stanford Heights Reservoir Rehabilitation (Completed)

This project consists of the upgrade of the existing Stanford Heights Reservoir to meet current seismic standards and conform to all State Public Health requirements. The project includes a new inlet/outlet structure to correct circulation problems.

CUW33501 - Potrero Heights Reservoir Rehabilitation (Completed)

This project is the upgrade of the existing Potrero Heights Reservoir to meet current seismic standards and conform to all State Health requirements, and includes correction of circulation problems and a new inlet/outlet structure.

CUW33701 - Sutro Reservoir Rehab & Seismic Upgrade (Completed)

This project is the upgrade of the existing Sutro

Reservoir to meet current seismic standards and conform to all State Health requirements and includes the correction of circulation problems, and a new inlet/outlet structure.

Pump Stations / Tanks**CUW30601 - Crocker Amazon Pump Station Upgrades (Completed)**

This project will rebuild the Crocker-Amazon pump station, including a reinforced concrete structure, three pumps, stand-by generator, hydropneumatic tanks, security fencing, monitoring and disinfection systems, and landscaping.

CUW30901 - Lake Merced Pump Station Essential Upgrades

This project will rebuild the Lake Merced pump station. Specific improvements include a new reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW31401 - La Grande Tank Seismic Upgrade (Completed)

The project will include the replacement of the La Grande tank, including a concrete tank foundation, new 350,000 gal steel tank, inlet/outlet piping, valves, security fencing, water quality monitoring systems, and demolition of the existing facility.

CUW31801 - Forest Hill Tank Rehab & Seismic Upgrade (Completed)

This project is the seismic upgrade of the Forest Hill concrete tank, including seismic work, new foundation, inlet/outlet, valves, retaining wall, security fencing, monitoring system, and site improvements.

CUW32001 - Forest Hill Pump Station Upgrades (Completed)

This project will rebuild the Forest Hill pump station. Specific improvements include a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW32101 - Forest Knolls Pump Station Upgrades (Completed)

This project will rebuild the Forest Knolls pump station, including a reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, water quality monitoring and sampling systems, and landscaping.

CUW32201 - Lincoln Park Pump Station Upgrades (Completed)

This project will rebuild the Lincoln Park pump station. Specific improvements include a new reinforced concrete structure, pumps, a stand-by generator, security fencing, tanks, SCADA, monitoring and disinfection systems, and landscaping.

CUW32301 - Alemany Pump Station Upgrades (McLaren Park) (Completed)

This project will rebuild the Alemany Pump Station, including a reinforced concrete structure, pumps, stand-by generators, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW32401 - Mount Davidson Pump Station Upgrades (Completed)

This project will rebuild the Mount Davidson pump station. Specific improvements include a new reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW32501 - Palo Alto Pump Station Upgrades (Completed)

This project will rebuild the Palo Alto Pump Station, including a seismically reinforced concrete structure, pumps, replacement of hydro pneumatic tanks, a stand-by generator, security fencing, SCADA, landscaping, and demolition of the existing facility.

CUW32601 - Sky View - Aqua Vista Pump Station Upgrade (Completed)

This project will rebuild the Sky View-Aqua Vista pump station, including a reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, water quality monitoring and

sampling systems, and landscaping.

CUW32701 - Summit Pump Station Upgrades (Completed)

This project will rebuild the Summit Pump Station, including a reinforced concrete structure, retaining walls, pumps, inlet-outlet piping, seismic reinforcing of existing generator building, security fencing, SCADA, landscaping, and demolition of the existing facility.

CUW32801 - McLaren #1 Tank Rehab & Seismic Upgrade (Completed)

This project consists of the rehabilitation and seismic upgrade of the McLaren #1 Tank including seismic bracing, interior lining replacement, cathodic protection, new exterior coating, lead paint abatement, new inlet/drain/overflow piping and valves, security fencing, electrical improvements, paving, and landscaping.

CUW32901 - Potrero Heights Tank Seismic Upgrade (Completed)

This project is the demolition of the existing Potrero Heights Tank. The tank became nonessential upon completion of the Sunset Circulation Improvements Project.

CUW33001 - Forest Knolls Tank Seismic Upgrade (Completed)

This project is the replacement of the Forest Knolls Tank, including a new 100,000 gallon concrete tank, inlet/outlet piping, valves, security fencing, monitoring systems, demolition, and site improvements.

CUW33101 - Lincoln Park Tank Seismic Upgrade (Completed)

The project consists of the replacement of the Lincoln Park tank. Specific improvements include a new 100,000G concrete tank, inlet/outlet piping, valves, security fencing, monitoring systems, demolition, and site improvements.

CUW33201 - McLaren #2 Tank Rehab & Seismic Upgrade (Completed)

This project consists of the rehabilitation and seismic upgrade of the McLaren #2 tank,

including seismic bracing, interior lining replacement, cathodic protection, new exterior coating, lead paint abatement, new inlet/drain/overflow piping and valves, security fencing, electrical improvements, paving, and landscaping.

CUW33301 - Mount Davidson Tank Seismic Upgrade (Completed)

The project consists of the seismic retrofit of the existing 75,000G Mount Davidson tank. Specific improvements include a drilled pier foundation, inlet/outlet piping, valves, security fencing, monitoring systems, demolition, and site improvements.

CUW33801 - La Grande Pump Station Upgrades (Completed)

This project will rebuild the La Grande pump station, including a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW33901 - Potrero Heights Pump Station Upgrades (Completed)

This project is the demolition of the existing Potrero Heights Pump Station. The pump station became nonessential upon completion of the Sunset Circulation Improvements Project.

CUW34001 - Vista Francisco Pump Station Upgrades (Completed)

This project will rebuild the Vista Francisco pump station, including a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

Pipelines / Valves

CUW30401 - North University Mound System Upgrade (Completed)

This project will improve the supply reliability of the University Mound (UM) system, linking the two independent University Mound and Sunset Supply systems. In order to diminish the impact on the neighborhoods, sewer, domestic water distribution main, and pavement replacement

work has been added to the scope.

CUW30801 - Key Motorized and Other Critical Valves (Completed)

This project consists of installing motorized valves at several critical locations. These valves will assist during emergency shutdowns after events such as main breaks, earthquakes, and other situations requiring immediate system isolation.

CUW31101 - Sunset Circulation Improvements (Completed)

This project improved the operation of the Sunset Zone by allowing McLaren tanks to feed the Potrero Heights System. This improved circulation and created a more reliable water supply for the Potrero System.

CUW31201 - Lincoln Way Transmission Line (Completed)

This project is a new transmission main to serve as a backup to the deteriorated Sunset main from Sunset Reservoir to 5th Avenue and Lincoln Way. Under this project, approximately 13,000 LF of 48-inch steel pipe will be constructed.

CUW31301 - Noe Valley Transmission Main, Phase 2 (Completed)

This project is a new transmission main that will extend the Noe Valley main. The existing main, which ends at Sanchez and 20th Streets, needs to be extended to supply additional pressure to areas where low pressure is a problem.

CUW31501 - East / West Transmission Main (Completed)

This project is a new main from Alemany PS to the western part of the City. This transmission main will enable the SFPUC to move water from the east side of the City into the Sunset system in the event of a peninsula pipeline failure or emergency.

CUW31601 - Fulton @ Sixth Ave - 30" Main Replacement (Completed)

This project consists of construction of a 30" main to replace the deteriorated Richmond supply main in the Golden Gate Park from Lincoln Way

at 6th Avenue to Fulton at 6th. The main will extend the Sunset zone to increase the pressure and supply at the northern end of the zone.

Miscellaneous

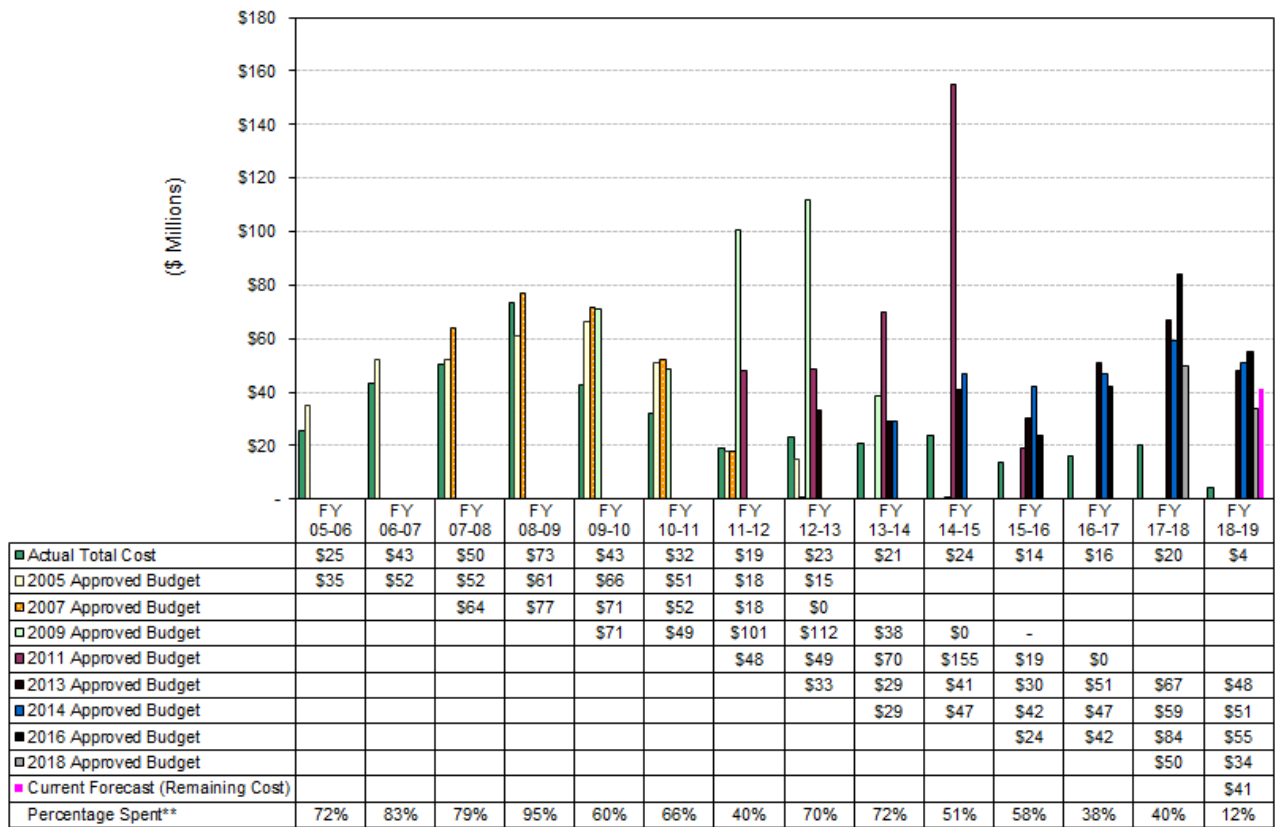
CUW30301 - Vehicle Service Facility Equipment Safety Upgrade (Completed)

This project will upgrade the vehicle service center, machine shop, and various other City Distribution Division (CDD) shops to correct seismic deficiencies and comply with worker safety standards and health department regulations.

CUW30501 - Fire Protection @ CDD (Completed)

This project covers the final phase of construction to complete the fire detection and monitoring systems needed at the City Distribution Division facilities.

APPENDIX B. BUDGET AND EXPENDITURE HISTOGRAM*



All costs are shown in \$ Millions.

* The histogram does not reflect budget and expenditures prior to FY 2005-2006. The histogram includes budget and expenditures for Local Water Supply Projects.

** Percentage Spent calculated as Actual Expenditures over the most current Approved Budget for each individual Fiscal Year.

Figure B1 Annual Budgeted Spending Plans vs. Actual Expenditures

Figure B compares the spending plans associated with the various WSIP Approved Budgets to Actual Expenditures. It shows total annual expenditures from FY05-06 through Q2/FY18-19 and cost projections (Current Forecast) in Q2/FY18-19 through program completion in December 2018. Actual annual expenditures have ranged from 38% to 95% of planned expenditures.

APPENDIX C. WSIP Approved Project-Level Schedule

Project Name	Start	Finish	FY2008				FY2009				FY2010				FY2011				FY2012				FY2013				FY2014				FY2015				FY2016				FY2017				FY2018				FY2019			
			FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4								
Local Improvement Projects	02-Jan-01	31-Jul-18																																																
Reservoirs	02-Jan-01	31-Mar-16																																																
CUW30701 Summit Reservoir Rehabilitation (Comple	02-Jan-01	28-Sep-12																																																
CUW31001 New Northwest Reservoir (Deleted)	30-Jun-08	30-Jun-08																																																
CUW31901 Hunters Point Reservoir Rehab & Seismi	01-Feb-08	31-Oct-12																																																
CUW33401 Stanford Heights Reservoir Rehabilitation	17-Aug-04	01-Apr-11																																																
CUW33501 Potrero Heights Reservoir Rehabilitation	01-May-03	11-Aug-08																																																
CUW33701 Sutro Reservoir Rehab & Seismic Upgra	06-Nov-06	31-Mar-16																																																
Pump Stations / Tanks	02-Jul-01	31-Jul-18																																																
CUW30601 Crocker Amazon Pump Station Upgrade:	14-Jan-02	27-Mar-08																																																
CUW30901 Lake Merced Pump Station Essential Up	23-Jan-06	31-Jul-18																																																
CUW31401 La Grande Tank Seismic Upgrade (Com	02-Jul-01	18-Dec-08																																																
CUW31801 Forest Hill Tank Rehab & Seismic Upgr	03-Mar-03	31-Aug-07																																																
CUW32001 Forest Hill Pump Station Upgrades (Com	11-Jul-08	01-Jul-14																																																
CUW32101 Forest Knolls Pump Station Upgrades (C	01-Jul-03	18-Jan-12																																																
CUW32201 Lincoln Park Pump Station Upgrades (C	04-Feb-02	11-Aug-08																																																
CUW32301 Alemany Pump Station Upgrades (McLai	13-Dec-04	30-Aug-13																																																
CUW32401 Mount Davidson Pump Station Upgrades	20-Dec-05	30-Mar-11																																																
CUW32501 Palo Alto Pump Station Upgrades (Comp	13-Dec-04	16-Nov-10																																																
CUW32601 Sky View - Aqua Vista Pump Station Upg	14-Jun-04	11-Aug-09																																																
CUW32701 Summit Pump Station Upgrades (Compl	02-Sep-03	11-Aug-08																																																
CUW32801 McLaren #1 Tank Rehab & Seismic Upg	17-Aug-04	11-Aug-08																																																
CUW32901 Potrero Heights Tank Seismic Upgrade (01-Jul-03	11-Aug-08																																																
CUW33001 Forest Knolls Tank Seismic Upgrade (Co	01-Jul-03	18-Jan-12																																																
CUW33101 Lincoln Park Tank Seismic Upgrade (Cor	11-Feb-02	11-Aug-08																																																
CUW33201 McLaren #2 Tank Rehab & Seismic Upg	27-Aug-04	11-Aug-08																																																
CUW33301 Mount Davidson Tank Seismic Upgrade	20-Dec-05	30-Mar-11																																																
CUW33801 La Grande Pump Station Upgrades (Con	05-Jun-07	29-Mar-13																																																
CUW33901 Potrero Heights Pump Station Upgrades	01-Jul-03	11-Aug-08																																																
CUW34001 Vista Francisco Pump Station Upgrades	27-Jun-06	31-Jan-13																																																
Pipelines / Valves	02-Apr-01	24-Sep-12																																																
CUW30401 North University Mound System Upgrade	24-Oct-05	30-Jun-11																																																
CUW30801 Key Motorized and Other Critical Valves (01-Jul-03	11-Aug-08																																																
CUW31101 Sunset Circulation Improvements (Comp	02-Apr-01	06-Jul-06																																																
CUW31201 Lincoln Way Transmission Line (Comple	05-Apr-02	24-Sep-12																																																
CUW31301 Noe Valley Transmission Main - Phase 2	06-Oct-06	03-Jun-11																																																
CUW31501 East / West Transmission Main (Comple	01-Oct-03	21-Mar-11																																																
CUW31601 Fulton @ 6th (Completed)	19-Jul-04	11-Aug-08																																																
Miscellaneous	15-Apr-02	11-Aug-09																																																
CUW30301 Vehicle Service Facility Equipment Safety	15-Apr-02	11-Aug-09																																																
CUW30501 Fire Protection @ CDD (Completed)	15-Apr-02	30-Jan-07																																																



APPENDIX D. PROJECTS WITHIN BUDGET AND SCHEDULE

No projects to report under this section.

APPENDIX E. LIST OF ACRONYMS

AAR	Alternative Analysis Report	MG	Million Gallons
ACAMS	Access Control and Alarm Monitoring System	MGD	Million Gallons per Day
ACDD	Alameda Creek Diversion Dam	MND	Mitigated Negative Declaration
ACDT	Alameda Creek Diversion Tunnel	MOA	Memorandum of Agreement
AWP	Alameda West Portal	MOU	Memorandum of Understanding
BART	Bay Area Rapid Transit	N/A	Not Applicable
BAWSCA	Bay Area Water Supply and Conservation Agency	NEG DEC	Negative Declaration (also shown as ND)
BDPL	Bay Division Pipeline	NEPA	National Environmental Policy Act
BHR	Bioregional Habitat Restoration	NIT	New Irvington Tunnel
CATEX	Categorical Exemption	NMFS	National Marine Fisheries Service (under NOAA)
CCSF	City and County of San Francisco	NOAA	National Oceanic and Atmospheric Agency
CDD	City Distribution Division	NTP	Notice to Proceed
CDRP	Calaveras Dam Replacement Project	O&M	Operation and Maintenance
CEQA	California Environmental Quality Act	PCCP	Pre-stressed Concrete Cylinder Pipe
CER	Conceptual Engineering Report	PEIR	Program Environmental Impact Report
CIP	Capital Improvement Program	PG&E	Pacific Gas and Electric Company
CM	Construction Management	RFI	Request For Information
CMB	Construction Management Bureau	ROW	Right-of-Way
CMIS	Construction Management Information System	SABPL	San Antonio Backup Pipeline
CO	Change Order	SAPL	San Antonio Pipeline
CPI	Cost Performance Index	SAPS	San Antonio Pump Station
CSPS	Crystal Springs Pump Station	SCADA	Supervisory Control and Data Acquisition
CSSA	Crystal Springs/San Andreas	SCC	Scheduled Subproject Completion
DB	Design, Build	SFPUC	San Francisco Public Utilities Commission
DSOD	Division of Safety of Dams (State of California)	SJPL	San Joaquin Pipeline
DVSS	Digital Video Surveillance System	SMC	San Mateo County
EBMUD	East Bay Municipal Utility District	SMP	Surface Mining Permit
EIR	Environmental Impact Report	SPI	Schedule Performance Index
EIS	Environmental Impact Statement	SQS	Supplier Quality Surveillance
EV	Earned Value	SSBPL	Sunset Supply Branch Pipeline
EVM	Earned Value Management	SSPL	Sunset Supply Pipeline
FY	Fiscal Year	SVWTP	Sunol Valley Water Treatment Plant
HH	Hetch Hetchy	TBD	To be determined
HHWP	Hetch Hetchy Water and Power	TBM	Tunnel Boring Machine
HTWTP	Harry Tracy Water Treatment Plant	TWR	Treated Water Reservoir
IVP	Irvington Portal	UM	University Mound
JOC	Job Order Contract	UPS	Uninterruptable Power Supply
LCSD	Lower Crystal Springs Dam	UV	Ultra Violet
LCSDI	Lower Crystal Springs Dam Improvements	VFD	Variable Frequency Drive
LOS	Levels of Service		

WEIP Watershed Environmental
Improvement Program

WSIP Water System Improvement Program

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HETCH HETCHY
WATER SYSTEM IMPROVEMENT PROGRAM



QUARTERLY REPORT

Local Projects
Q3 FY 2018 | 2019
January 2019 — March 2019

Rebuilding Today for a Better Tomorrow

Published: 05/07/2019

Quarterly Report - Q3 FY2018/2019

Water System Improvement Program - Local Projects

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1. PROGRAM DESCRIPTION

The Water System Improvement Program (WSIP) is a \$4.8 billion, multi-year capital program to upgrade the City of San Francisco's regional and local drinking water systems. The program will deliver improvements that enhance the City's ability to provide reliable, affordable, high quality drinking water to its 26 wholesale customers and regional retail customers in Alameda, Santa Clara, and San Mateo Counties, and to its 800,000 retail customers in San Francisco, in an environmentally sustainable manner. The WSIP is structured to cost-effectively meet water quality requirements, improve seismic and delivery reliability, and achieve water supply goals.

Built in the early to mid-1900s, many components of the water system are nearing the end of their working life, with crucial facilities crossing, or in close proximity to, three major earthquake faults. The San Francisco Public Utilities Commission (SFPUC) initiated the WSIP to repair, replace, and seismically upgrade the system's deteriorating pipelines, tunnels, dams, reservoirs, pump stations, storage tanks, and treatment facilities.

The program consists of 35 local projects located within San Francisco and 52 regional projects (including the Vegetation Restoration of WSIP Construction Sites project which was added to the program in October 2012) spread over seven different counties from the Sierra foothills to San Francisco. Local projects only benefit San Francisco residents, whereas regional projects benefit both City residents and the 26 wholesale agencies that receive water from the SFPUC. The management of local projects is divided into 4 sub-programs - Reservoirs, Pump Stations / Tanks, Pipelines / Valves, and Miscellaneous.

The Local program originally included local water supply projects. These projects provide access to groundwater supplies for the potable system, deliver recycled water supplies for non-

potable uses, and address water quality and water level issues at Lake Merced. The management and implementation of the five (5) local water supply projects was transferred from the WSIP to the Water Enterprise Capital Improvement Program (CIP) as of July 1, 2011.

The WSIP is funded through the issuance of revenue bonds. Local Measures A and E, which were approved by San Francisco voters in November 2002, allowed for the financing of improvements to the City's water system using revenue bonds and/or other forms of revenue financing. Increases in the water rates of retail and wholesale customers will be used to pay back the debt service on the bonds.

The program budget and schedule were originally adopted by the San Francisco Public Utilities Commission on March 1, 2003. The program at the time was referred to as the Capital Improvement Program (CIP). The scope of the CIP was changed significantly following the adoption of Levels of Service (LOS) goals in early 2005. The program changes were so substantial that the program was renamed the WSIP and a new program budget and schedule were adopted on November 29, 2005. Since the scope of the 2005 Revised WSIP is in general representative of the program being implemented today, the 2005 budget and schedule are considered the "Baseline Budget and Schedule."

Subsequently, the WSIP Baseline Budget and Schedule were revised in 2007, 2009, 2011, 2013, 2014, 2015, 2016, 2017, and 2018, and these revisions were approved by the San Francisco Public Utilities Commission on February 26, 2008, July 28, 2009, July 12, 2011, April 23, 2013, April 22, 2014, December 8, 2015, April 26, 2016, February 14, 2017, and April 10, 2018, respectively. Refer to Appendix A for a scope description of all the local projects included in the WSIP.

Program Revision	Commission Approval	Budget (\$Million)	Schedule(*)
2003 (Original)	March 1, 2003	\$3,628	03/15/16
2005 (Baseline)	November 29, 2005	\$4,343	06/30/14
2007 (Revised)	February 26, 2008	\$4,392	12/18/14
2009 (Revised)	July 28, 2009	\$4,586	12/04/15
2011 (Revised)	July 12, 2011	\$4,586	07/29/16
2013 (Revised)	April 23, 2013	\$4,640	04/11/19
2014 (Revised)	April 22, 2014	\$4,765	05/24/19
2015 (Revised)	December 8, 2015	\$4,765	05/24/19
2016 (Revised)	April 26, 2016	\$4,845	12/20/19
2017 (Revised)	February 14, 2017	\$4,845	12/20/19
2018 (Latest Approved)	April 10, 2018	\$4,788	12/30/21

* Final Program Completion Date

2. PROGRAM STATUS

This third (3rd) Quarterly Report for Fiscal Year (FY) 2018-2019 presents the progress made on the WSIP local projects between January 1, 2019 and March 31, 2019. The program’s schedule and budget were last approved by the San Francisco Public Utilities Commission (SFPUC or Commission) on April 10, 2018. The progress made on the regional projects of the WSIP is presented in a separate quarterly report.

Figure 2.1 shows the total Approved Budget for the local projects remaining in each phase of the program as of March 31, 2019. The number of projects currently active in each phase is shown in parentheses.

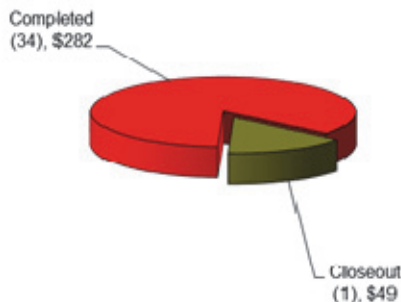


Figure 2.1 Total Approved Budget for Projects Active in Each Phase (\$Million)

Figure 2.2 shows the number of local projects in the following stages of the program as of March

31, 2019: Pre-construction, Construction, and Post-construction.

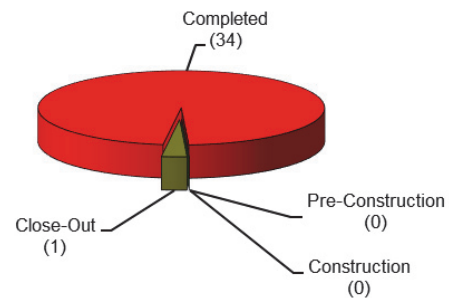


Figure 2.2 Number of Projects in Pre-construction, Construction, and Post-construction

Figure 2.3 summarizes the environmental review and permitting status of the WSIP 35 local projects as of March 31, 2019.

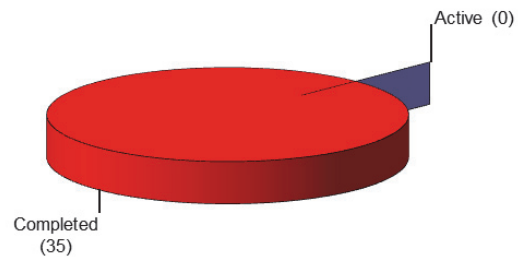


Figure 2.3 Program Environmental and Permitting Status

3. PROGRAM COST SUMMARY

Table 3.1 provides an overall program-level cost summary of the WSIP Local Program. It shows the Expenditures to Date; the 2005 Baseline, 2018 Approved, Current Approved and Q3/FY18-19 Forecasted Budgets; and the Cost Variance between the Current Approved and Forecasted Budgets. The total Current Approved WSIP Budget (including Regional and Local Programs,

Local Water Supply Projects, and Financing Costs), and current Forecasted Cost at completion are \$4,787.8 million. The Current Approved WSIP Budget and Forecasted Cost at completion for the Local Improvement Projects (including construction contingency) are \$331.4 million. Refer to Appendix B for a graphical representation of how the WSIP budget and actual expenditures have changed over time.

Table 3.1 Program Cost Summary

Cost Categories	Expenditures To Date (\$ Million) (A)	2005 Baseline Budget (\$ Million) (B)	2018 Approved Budget (\$ Million) (C)	Current Approved Budget ⁽⁷⁾ (\$ Million) (D)	Q3/FY18-19 Forecasted Costs (\$ Million) (E)	Cost Variance (\$ Million) (F = D - E)
Local Improvement Projects	\$325	\$353	\$325.7	\$325.7	\$325.7	-
Construction Costs ⁽¹⁾	\$232	\$259	\$232.3	\$232.3	\$232.3	-
Program Delivery Costs ⁽²⁾	\$92	\$91	\$92.2	\$92.2	\$92.3	(\$0.1)
Other Costs ⁽³⁾	\$1	\$4	\$1.2	\$1.2	\$1.1	\$0.1
Construction Contingency for Local Improvement Projects ⁽⁴⁾	\$6	\$30	\$5.7	\$5.7	\$5.7	-
LOCAL PROGRAM WITH CONTINGENCY	\$331	\$383	\$331.4	\$331.4	\$331.4	-
Regional Improvement Projects	\$3,398	\$3,375	\$3,536.9	\$3,536.9	\$3,537.4	(\$0.5)
Support Projects ⁽⁵⁾	\$225	\$33	\$266.1	\$266.1	\$265.6	\$0.5
Local Water Supply Projects ^(6, 8)	\$138	-	\$281.3	\$281.3	\$281.3	-
Finance	\$372	\$552	\$372.0	\$372.0	\$372.0	-
PROGRAM TOTAL	\$4,465	\$4,343	\$4,787.8	\$4,787.8	\$4,787.8	-

Notes:

- Construction Costs** include the Construction Base Bid and owner-provided equipment/material. Those costs do not include any construction contingency. That contingency is reflected as a separate cost category.
- Delivery Costs** include project management, planning, environmental (CEQA, permitting, construction compliance), design, construction management, and engineering support during construction.
- Other Costs** include environmental mitigation, art enrichment, security improvements, and real estate expenses.
- Expenditures to Date for Construction Contingency for Local Improvement projects corresponds to the Total Approved Change Orders on those projects. For projects with ongoing or completed construction, the 2018 Approved Budget for construction contingency includes all change orders and trends as identified at the time of the March 2018 Revised WSIP.
- Support Projects** include (1) System Security Upgrades, (2) Programmatic EIR, (3) Bioregional Habitat Restoration, (4) Vegetation Restoration of WSIP Construction Sites, (5) Long Term Mitigation Endowment, (6) Program Management, and (7) Watershed and Environmental Improvement Program. Please note that the costs reflected above for support projects include total project costs, including "Construction", "Delivery" and "Other" costs.
- Local Water Supply Projects managed as part of the Water Enterprise Capital Improvement Program (CIP) are (1) Lake Merced Water Level Restoration, (2) San Francisco Groundwater Supply, (3) San Francisco Westside Recycled Water, (4) Harding Park Recycled Water, and (5) San Francisco Eastside Recycled Water.
- The budget approved as part of the March 2018 Revised WSIP, plus any additional budget changes approved by the Commission as part of additional contingencies on construction contract.
- The WSIP Local Water Supply projects underwent a September 2013 re-baseline. Only the original WSIP portion of the re-baselined costs is reported here. The remaining budget is funded under the Water Enterprise CIP and is managed outside the purview of the WSIP.
- The original \$522M estimate of financing cost was based on a memorandum to the Commission dated November 23, 2005.

10. The financing cost budget of \$372M that was included in the March 2018 Revised WSIP includes all financing costs appropriated to date.
11. The actual financing cost is assumed to match the budgeted financing cost. Final reconciliation of all associated financing costs will occur upon WSIP completion.

Table 3.2 provides the status of construction contingencies. For each sub-program, it shows the 2018 Approved Contingency; the Current Approved Contingency; the Q3/FY18-19 Forecasted Change Orders; the Q3/FY18-19 Forecasted Trends; Project Savings Moved to Contingency/ Funds Moved out of Contingency;

the Q3/FY18-19 Forecasted Construction Contingency; and the Remaining Contingency as of the end of the reporting quarter. As of March 31, 2019, the Forecasted Construction Contingency is \$3.7 million, and the Total Forecasted Remaining Contingency is \$0.

Table 3.2 Status of Construction Contingency

Sub Program	2018 Approved Contingency ⁽¹⁾ (\$ Million) (A)	Current Approved Contingency ^(2,3) (\$ Million) (B)	Q3/FY18-19 Forecasted Change Orders ⁽³⁾ (\$ Million) (C)	Q3/FY18-19 Forecasted Trends ⁽⁴⁾ (\$ Million) (D)	Project Savings (+) Moved to Contingency/ Funds (-) Moved out of Contingency ⁽⁵⁾ (\$ Million) (E)	Current Forecasted Contingency (\$ Million) (F = B+ E)	Q3/FY18-19 Forecasted Remaining Contingency (\$ Million) (G = F-C-D)
Reservoirs	-	-	-	-	-	-	-
Pump Stations / Tanks	\$3.71	\$3.71	\$3.71	-	-	\$3.71	-
Pipelines / Valves	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-
Local Total	\$3.71	\$3.71	\$3.71	-	-	\$3.71	-

Notes:

1. Contingency included in March 2018 Revised WSIP.
2. Contingency included in March 2018 Revised WSIP and any contingency approved by the Commission thereafter.
3. Forecasted Change Orders include Approved, Pending, and Potential Change Orders.
 - Approved Change Orders are changes that have received all required approvals, including that of the City Controller.
 - Pending Change Orders are changes that have been negotiated and approved by the SFPUC but have to be approved by the City Controller.
 - Potential Change Orders are changes that have been requested and entered into CMIS but are still being negotiated.
4. Trends are any expected impact that the CM team believes has a high probability of becoming a change but are yet to be entered into CMIS as a Potential Change.
5. Values only reflect savings realized following Commission adoption of the March 2018 Revised WSIP.

The Program Management project includes programmatic activities that span multiple regions and benefit several WSIP projects (Table 3.3). The project provides funding for the following functions and resources: SFPUC Staff assigned to the management of the overall program; consultants supporting SFPUC staff at the program level (program, project and pre-construction management consultant, program construction management consultant, program control consultant); labor relations, including management of the project labor agreement; communication and public outreach; programmatic legal support; real estate acquisitions; program controls, including the tracking and reporting of all WSIP efforts; and program-level construction management activities associated with quality assurance, risk management, the Supplier Quality Surveillance (SQS) Program, operations assistance, safety, and training.

The activities under the Program Management project are organized into five categories that are tracked and monitored on a monthly basis. These categories are Management Support, Project Labor Agreement, Planning and Project Development, Program Control, and Program Construction Management.

The spending pattern for the project is very similar from month to month as the project primarily funds program-level positions occupied by both SFPUC staff and consultants. The Current Approved and the Forecasted Total Program Management Cost are \$112.7 million.

Table 3.3 Status of Program Management Project Cost Breakdown

Category	Expenditures To Date (\$ Million) (A)	2018 Approved Budget (\$ Million) (B)	Current Approved Budget (\$ Million) (C)	Q3/FY18-19 Forecasted Cost* (\$ Million) (D)	Cost Variance (\$ Million) (E = C-D)
Management Support	\$36.3	\$42.8	\$42.8	\$42.8	-
Project Labor Agreement	\$3.5	\$3.8	\$3.8	\$3.8	-
Planning and Project Development	\$17.9	\$18.3	\$18.3	\$18.3	-
Program Controls	\$18.9	\$19.8	\$19.8	\$19.8	-
Program Construction Management	\$27.3	\$28.0	\$28.0	\$28.0	-
Program Management Total	\$103.9	\$112.7	\$112.7	\$112.7	-

* Increase to Program Management Forecast Cost Variance is due to transfer of savings from other projects into Director's Reserve.

4. PROGRAM SCHEDULE SUMMARY

Figure 4.1 and Table 4.1 compare the 2005 Baseline, 2018 Approved, Current Approved, and Q3/FY18-19 Forecasted Schedules for the WSIP Local Program. Refer to the “Cost and Schedule Status” notes in Section 5 for the criteria associated with the three color-coded Forecast Status levels in Figure 4.1 – Meet Requirements, Need Attention, and Exceed Limits.

The Current Approved and Forecasted Schedule completion for the overall WSIP (including Regional and Local Programs) are in December 2021. The Current Approved and Forecasted Schedule completion for the WSIP Local Program are July 2018 and July 2019, respectively (12-month behind schedule). Refer to Appendix C for a graphical presentation of the WSIP Approved Project-Level Schedule.

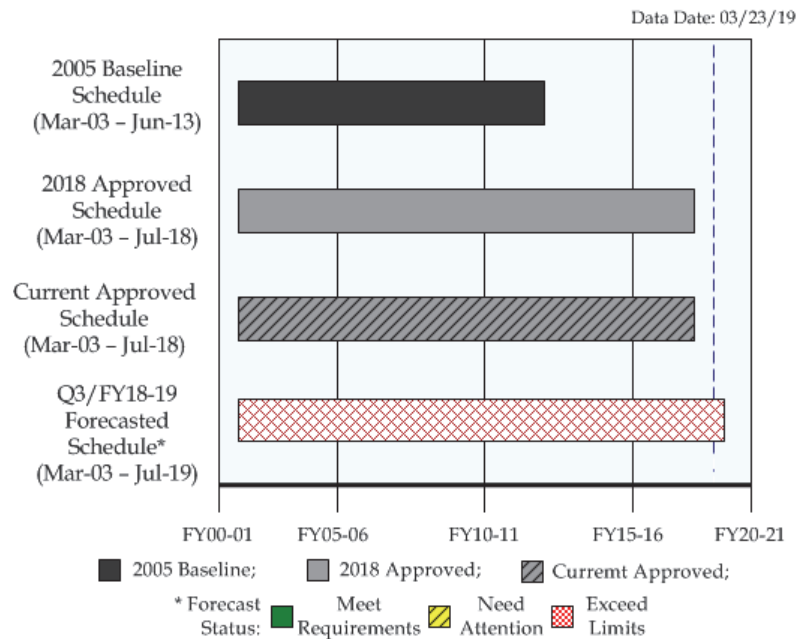


Figure 4.1 Program Schedule Summary

Table 4.1 2018 Approved vs. Q3/FY18-19 Forecasted Schedule Dates

Category	2005 Baseline Start	2018 Approved Start	Current* Approved Start	Actual Start	2005 Baseline Finish	2018 Approved Finish	Current* Approved Finish	Q3/FY18-19 Forecasted Finish	Schedule Variance (Months)
Local** Program	03/01/03	03/31/03	03/31/03	03/01/03✓	06/28/13	7/31/18	7/31/18	07/29/19	11.9 (Late)
Regional Program	03/01/03	03/31/03	03/31/03	03/01/03✓	06/30/14	12/30/21	12/30/21	12/30/21	-
Overall WSIP	03/01/03	03/01/03	03/01/03	03/01/03✓	06/30/14	12/30/21	12/30/21	12/30/21	-

* The budget and schedule approved as part of the March 2018 Revised WSIP, plus any additional budget and schedule changes approved by the Commission as part of additional contingencies on construction contracts.

** Excluding Local Water Supply Projects

5. PROJECT PERFORMANCE SUMMARY

No projects to report under this section.

6. PROJECTS NOT WITHIN BUDGET AND/OR SCHEDULE

No projects to report under this section.

7. ON-GOING CONSTRUCTION

No projects are currently active in construction.

8. PROJECTS IN CLOSE-OUT

Project Title	2005 Baseline Construction Phase Completion	2018 Approved Construction Phase Completion	Current Approved Construction Phase Completion	Actual Construction Phase Completion	2005 Approved Project Completion	2018 Approved Project Completion	Current Approved Project Completion	Forecasted Project Completion	2005 Baseline Construction Phase Budget	2018 Approved Construction Phase Budget	Current Approved Construction Phase Budget	Construction Phase Expenditures To Date
Pump Stations / Tanks												
CUW30901 - Lake Merced Pump Station Essential Upgrades	10/14/10	04/30/18	04/30/18	12/14/18	07/15/11	07/31/18	07/31/18	07/29/19	\$ 59,125,000	\$ 37,205,349	\$ 37,205,349	\$ 36,860,611
TOTAL									\$ 59,125,000	\$ 37,205,349	\$ 37,205,349	\$ 36,860,611

9. COMPLETED PROJECTS

Project Title	2005 Baseline Project Completion	2018 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2005 Baseline Project Budget	2018 Approved Project Budget	Current Approved Project Budget	Project Expenditures To Date
Reservoirs								
CUW30701 - Summit Reservoir Rehabilitation	12/08/06	09/28/12	09/28/12	09/28/12	\$ 14,927,859	\$ 12,294,537	\$ 12,294,537	\$ 12,294,537
CUW31901 - Hunters Point Reservoir Rehab & Seismic Upgrade	05/04/12	10/31/12	10/31/12	10/31/12	\$ 8,122,861	\$ 3,086,717	\$ 3,086,717	\$ 3,086,717
CUW33401 - Stanford Heights Reservoir Rehabilitation	03/05/10	04/01/11	04/01/11	04/01/11	\$ 19,172,308	\$ 23,626,142	\$ 23,626,142	\$ 23,626,142
CUW33501 - Potrero Heights Reservoir Rehabilitation	07/13/07	08/11/08	08/11/08	08/11/08	\$ 7,610,033	\$ 6,836,736	\$ 6,836,736	\$ 6,836,736
CUW33701 - Sutro Reservoir Rehab & Seismic Upgrade	07/15/11	03/31/16	03/31/16	03/31/16	\$ 31,372,263	\$ 39,468,198	\$ 39,468,198	\$ 39,462,621
Pump Stations / Tanks								
CUW30601 - Crocker Amazon Pump Station Upgrades	10/31/06	03/27/08	03/27/08	03/27/08	\$ 4,823,675	\$ 4,126,498	\$ 4,126,498	\$ 4,126,498
CUW31401 - La Grande Tank Seismic Upgrade	06/07/07	12/18/08	12/18/08	12/18/08	\$ 7,919,543	\$ 6,987,728	\$ 6,987,728	\$ 6,987,728
CUW31801 - Forest Hill Tank Rehab & Seismic Upgrade	01/05/07	08/31/07	08/31/07	08/31/07	\$ 3,204,561	\$ 2,936,199	\$ 2,936,199	\$ 2,936,199
CUW32001 - Forest Hill Pump Station Upgrades	12/02/11	07/01/14	07/01/14	07/01/14	\$ 4,446,263	\$ 6,389,792	\$ 6,389,792	\$ 6,389,792
CUW32101 - Forest Knolls Pump Station Upgrades	07/03/08	01/18/12	01/18/12	01/18/12	\$ 5,779,776	\$ 6,196,751	\$ 6,196,751	\$ 6,196,751
CUW32201 - Lincoln Park Pump Station Upgrades	06/01/07	08/11/08	08/11/08	08/11/08	\$ 4,762,027	\$ 4,345,215	\$ 4,345,215	\$ 4,345,215
CUW32301 - Alemany Pump Station Upgrades (McLaren Park)	07/10/09	08/30/13	08/30/13	08/30/13	\$ 10,391,557	\$ 29,095,501	\$ 29,095,501	\$ 29,095,501
CUW32401 - Mount Davidson Pump Station Upgrades	08/06/09	03/30/11	03/30/11	03/30/11	\$ 5,223,489	\$ 4,281,116	\$ 4,281,116	\$ 4,281,116
CUW32501 - Palo Alto Pump Station Upgrades	04/10/09	11/16/10	11/16/10	11/16/10	\$ 5,225,506	\$ 6,126,470	\$ 6,126,470	\$ 6,126,470
CUW32601 - Sky View - Aqua Vista Pump Station Upgrade	07/11/08	08/11/09	08/11/09	08/11/09	\$ 5,717,647	\$ 4,751,094	\$ 4,751,094	\$ 4,751,094
CUW32701 - Summit Pump Station Upgrades	03/20/08	08/11/08	08/11/08	08/11/08	\$ 6,396,784	\$ 6,532,376	\$ 6,532,376	\$ 6,532,376
CUW32801 - McLaren #1 Tank Rehab & Seismic Upgrade	10/10/08	08/11/08	08/11/08	08/11/08	\$ 5,354,512	\$ 4,659,741	\$ 4,659,741	\$ 4,659,741
CUW32901 - Potrero Heights Tank Seismic Upgrade	07/13/07	08/11/08	08/11/08	08/11/08	\$ 1,281,714	\$ 1,084,863	\$ 1,084,863	\$ 1,084,863
CUW33001 - Forest Knolls Tank Seismic Upgrade	07/03/08	01/18/12	01/18/12	01/18/12	\$ 3,536,899	\$ 3,438,912	\$ 3,438,912	\$ 3,438,912
CUW33101 - Lincoln Park Tank Seismic Upgrade	06/01/07	08/11/08	08/11/08	08/11/08	\$ 3,085,460	\$ 2,690,656	\$ 2,690,656	\$ 2,690,656
CUW33201 - McLaren #2 Tank Rehab & Seismic Upgrade	10/10/08	08/11/08	08/11/08	08/11/08	\$ 5,329,017	\$ 4,458,201	\$ 4,458,201	\$ 4,458,201
CUW33301 - Mount Davidson Tank Seismic Upgrade	08/06/09	03/30/11	03/30/11	03/30/11	\$ 3,927,838	\$ 2,568,414	\$ 2,568,414	\$ 2,568,414
CUW33801 - La Grande Pump Station Upgrades	11/05/10	03/29/13	03/29/13	03/29/13	\$ 5,311,335	\$ 4,776,418	\$ 4,776,418	\$ 4,776,418
CUW33901 - Potrero Heights Pump Station Upgrades	07/13/07	08/11/08	08/11/08	08/11/08	\$ 733,242	\$ 605,670	\$ 605,670	\$ 605,670
CUW34001 - Vista Francisco Pump Station Upgrades	05/07/10	01/31/13	01/31/13	01/31/13	\$ 5,680,792	\$ 5,141,127	\$ 5,141,127	\$ 5,141,127
Pipelines / Valves								
CUW30401 - North University Mound System Upgrade	05/07/10	06/30/11	06/30/11	06/30/11	\$ 23,114,504	\$ 10,000,010	\$ 10,000,010	\$ 10,000,010
CUW30801 - Key Motorized and Other Critical Valves	11/06/07	08/11/08	08/11/08	08/11/08	\$ 11,447,747	\$ 10,984,746	\$ 10,984,746	\$ 10,984,746

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Project Title	2005 Baseline Project Completion	2018 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2005 Baseline Project Budget	2018 Approved Project Budget	Current Approved Project Budget	Project Expenditures To Date
Pipelines / Valves								
CUW31101 - Sunset Circulation Improvements	07/06/06	07/06/06	07/06/06	07/06/06	\$ 8,224,379	\$ 7,073,164	\$ 7,073,164	\$ 7,073,164
CUW31201 - Lincoln Way Transmission Line	02/09/07	09/24/12	09/24/12	09/24/12	\$ 14,788,970	\$ 13,781,922	\$ 13,781,922	\$ 13,781,922
CUW31301 - Noe Valley Transmission Main - Phase 2	02/11/11	06/03/11	06/03/11	06/03/11	\$ 11,956,364	\$ 5,641,390	\$ 5,641,390	\$ 5,641,390
CUW31501 - East / West Transmission Main	04/10/09	03/21/11	03/21/11	03/21/11	\$ 22,955,659	\$ 27,754,505	\$ 27,754,505	\$ 27,754,505
CUW31601 - Fulton @ 6th	08/08/08	08/11/08	08/11/08	08/11/08	\$ 4,842,437	\$ 4,713,931	\$ 4,713,931	\$ 4,713,931
Miscellaneous								
CUW30301 - Vehicle Service Facility Equipment Safety Upgrade	07/02/09	08/11/09	08/11/09	08/11/09	\$ 5,245,082	\$ 3,978,923	\$ 3,978,923	\$ 3,978,923
CUW30501 - Fire Protection @ CDD	06/30/06	01/30/07	01/30/07	01/30/07	\$ 1,988,892	\$ 1,675,476	\$ 1,675,476	\$ 1,675,476
TOTAL					\$ 283,900,996	\$ 282,109,138	\$ 282,109,138	\$ 282,103,560

APPENDICES

- A PROJECT DESCRIPTIONS**
- B WSIP BUDGET AND EXPENDITURES HISTOGRAM**
- C WSIP APPROVED PROJECT-LEVEL SCHEDULE**
- D PROJECTS WITHIN BUDGET AND SCHEDULE**
- E LIST OF ACRONYMS**

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APPENDIX A. PROJECT DESCRIPTIONS**Reservoirs****CUW30701 - Summit Reservoir Rehabilitation (Completed)**

This project consists of the upgrade of the existing Summit Reservoir to meet current seismic standards and conform to all State Public Health requirements. The project includes a new inlet/outlet structure to correct circulation problems.

CUW31001 - New Northwest Reservoir (Deleted)

This project is the construction of a new 5MG reservoir in the northeast zone of San Francisco. This reservoir will provide both fire protection and pressurized supply to areas currently served from the Sunset and Lombard Zones.

CUW31901 - Hunters Point Reservoir Rehab & Seismic Upgrade (Completed)

This project is the upgrade of the existing Hunters Point Reservoir to meet current seismic standards and conform to all State Health requirements, and includes correction of circulation problems and new inlet/outlet structure.

CUW33401 - Stanford Heights Reservoir Rehabilitation (Completed)

This project consists of the upgrade of the existing Stanford Heights Reservoir to meet current seismic standards and conform to all State Public Health requirements. The project includes a new inlet/outlet structure to correct circulation problems.

CUW33501 - Potrero Heights Reservoir Rehabilitation (Completed)

This project is the upgrade of the existing Potrero Heights Reservoir to meet current seismic standards and conform to all State Health requirements, and includes correction of circulation problems and a new inlet/outlet structure.

CUW33701 - Sutro Reservoir Rehab & Seismic Upgrade (Completed)

This project is the upgrade of the existing Sutro

Reservoir to meet current seismic standards and conform to all State Health requirements and includes the correction of circulation problems, and a new inlet/outlet structure.

Pump Stations / Tanks**CUW30601 - Crocker Amazon Pump Station Upgrades (Completed)**

This project will rebuild the Crocker-Amazon pump station, including a reinforced concrete structure, three pumps, stand-by generator, hydropneumatic tanks, security fencing, monitoring and disinfection systems, and landscaping.

CUW30901 - Lake Merced Pump Station Essential Upgrades

This project will rebuild the Lake Merced pump station. Specific improvements include a new reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW31401 - La Grande Tank Seismic Upgrade (Completed)

The project will include the replacement of the La Grande tank, including a concrete tank foundation, new 350,000 gal steel tank, inlet/outlet piping, valves, security fencing, water quality monitoring systems, and demolition of the existing facility.

CUW31801 - Forest Hill Tank Rehab & Seismic Upgrade (Completed)

This project is the seismic upgrade of the Forest Hill concrete tank, including seismic work, new foundation, inlet/outlet, valves, retaining wall, security fencing, monitoring system, and site improvements.

CUW32001 - Forest Hill Pump Station Upgrades (Completed)

This project will rebuild the Forest Hill pump station. Specific improvements include a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW32101 - Forest Knolls Pump Station Upgrades (Completed)

This project will rebuild the Forest Knolls pump station, including a reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, water quality monitoring and sampling systems, and landscaping.

CUW32201 - Lincoln Park Pump Station Upgrades (Completed)

This project will rebuild the Lincoln Park pump station. Specific improvements include a new reinforced concrete structure, pumps, a stand-by generator, security fencing, tanks, SCADA, monitoring and disinfection systems, and landscaping.

CUW32301 - Alemany Pump Station Upgrades (McLaren Park) (Completed)

This project will rebuild the Alemany Pump Station, including a reinforced concrete structure, pumps, stand-by generators, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW32401 - Mount Davidson Pump Station Upgrades (Completed)

This project will rebuild the Mount Davidson pump station. Specific improvements include a new reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW32501 - Palo Alto Pump Station Upgrades (Completed)

This project will rebuild the Palo Alto Pump Station, including a seismically reinforced concrete structure, pumps, replacement of hydro pneumatic tanks, a stand-by generator, security fencing, SCADA, landscaping, and demolition of the existing facility.

CUW32601 - Sky View - Aqua Vista Pump Station Upgrade (Completed)

This project will rebuild the Sky View-Aqua Vista pump station, including a reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, water quality monitoring and

sampling systems, and landscaping.

CUW32701 - Summit Pump Station Upgrades (Completed)

This project will rebuild the Summit Pump Station, including a reinforced concrete structure, retaining walls, pumps, inlet-outlet piping, seismic reinforcing of existing generator building, security fencing, SCADA, landscaping, and demolition of the existing facility.

CUW32801 - McLaren #1 Tank Rehab & Seismic Upgrade (Completed)

This project consists of the rehabilitation and seismic upgrade of the McLaren #1 Tank including seismic bracing, interior lining replacement, cathodic protection, new exterior coating, lead paint abatement, new inlet/drain/overflow piping and valves, security fencing, electrical improvements, paving, and landscaping.

CUW32901 - Potrero Heights Tank Seismic Upgrade (Completed)

This project is the demolition of the existing Potrero Heights Tank. The tank became nonessential upon completion of the Sunset Circulation Improvements Project.

CUW33001 - Forest Knolls Tank Seismic Upgrade (Completed)

This project is the replacement of the Forest Knolls Tank, including a new 100,000 gallon concrete tank, inlet/outlet piping, valves, security fencing, monitoring systems, demolition, and site improvements.

CUW33101 - Lincoln Park Tank Seismic Upgrade (Completed)

The project consists of the replacement of the Lincoln Park tank. Specific improvements include a new 100,000G concrete tank, inlet/outlet piping, valves, security fencing, monitoring systems, demolition, and site improvements.

CUW33201 - McLaren #2 Tank Rehab & Seismic Upgrade (Completed)

This project consists of the rehabilitation and seismic upgrade of the McLaren #2 tank,

including seismic bracing, interior lining replacement, cathodic protection, new exterior coating, lead paint abatement, new inlet/drain/overflow piping and valves, security fencing, electrical improvements, paving, and landscaping.

CUW33301 - Mount Davidson Tank Seismic Upgrade (Completed)

The project consists of the seismic retrofit of the existing 75,000G Mount Davidson tank. Specific improvements include a drilled pier foundation, inlet/outlet piping, valves, security fencing, monitoring systems, demolition, and site improvements.

CUW33801 - La Grande Pump Station Upgrades (Completed)

This project will rebuild the La Grande pump station, including a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW33901 - Potrero Heights Pump Station Upgrades (Completed)

This project is the demolition of the existing Potrero Heights Pump Station. The pump station became nonessential upon completion of the Sunset Circulation Improvements Project.

CUW34001 - Vista Francisco Pump Station Upgrades (Completed)

This project will rebuild the Vista Francisco pump station, including a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

Pipelines / Valves

CUW30401 - North University Mound System Upgrade (Completed)

This project will improve the supply reliability of the University Mound (UM) system, linking the two independent University Mound and Sunset Supply systems. In order to diminish the impact on the neighborhoods, sewer, domestic water distribution main, and pavement replacement

work has been added to the scope.

CUW30801 - Key Motorized and Other Critical Valves (Completed)

This project consists of installing motorized valves at several critical locations. These valves will assist during emergency shutdowns after events such as main breaks, earthquakes, and other situations requiring immediate system isolation.

CUW31101 - Sunset Circulation Improvements (Completed)

This project improved the operation of the Sunset Zone by allowing McLaren tanks to feed the Potrero Heights System. This improved circulation and created a more reliable water supply for the Potrero System.

CUW31201 - Lincoln Way Transmission Line (Completed)

This project is a new transmission main to serve as a backup to the deteriorated Sunset main from Sunset Reservoir to 5th Avenue and Lincoln Way. Under this project, approximately 13,000 LF of 48-inch steel pipe will be constructed.

CUW31301 - Noe Valley Transmission Main, Phase 2 (Completed)

This project is a new transmission main that will extend the Noe Valley main. The existing main, which ends at Sanchez and 20th Streets, needs to be extended to supply additional pressure to areas where low pressure is a problem.

CUW31501 - East / West Transmission Main (Completed)

This project is a new main from Alemany PS to the western part of the City. This transmission main will enable the SFPUC to move water from the east side of the City into the Sunset system in the event of a peninsula pipeline failure or emergency.

CUW31601 - Fulton @ Sixth Ave - 30" Main Replacement (Completed)

This project consists of construction of a 30" main to replace the deteriorated Richmond supply main in the Golden Gate Park from Lincoln Way

at 6th Avenue to Fulton at 6th. The main will extend the Sunset zone to increase the pressure and supply at the northern end of the zone.

Miscellaneous

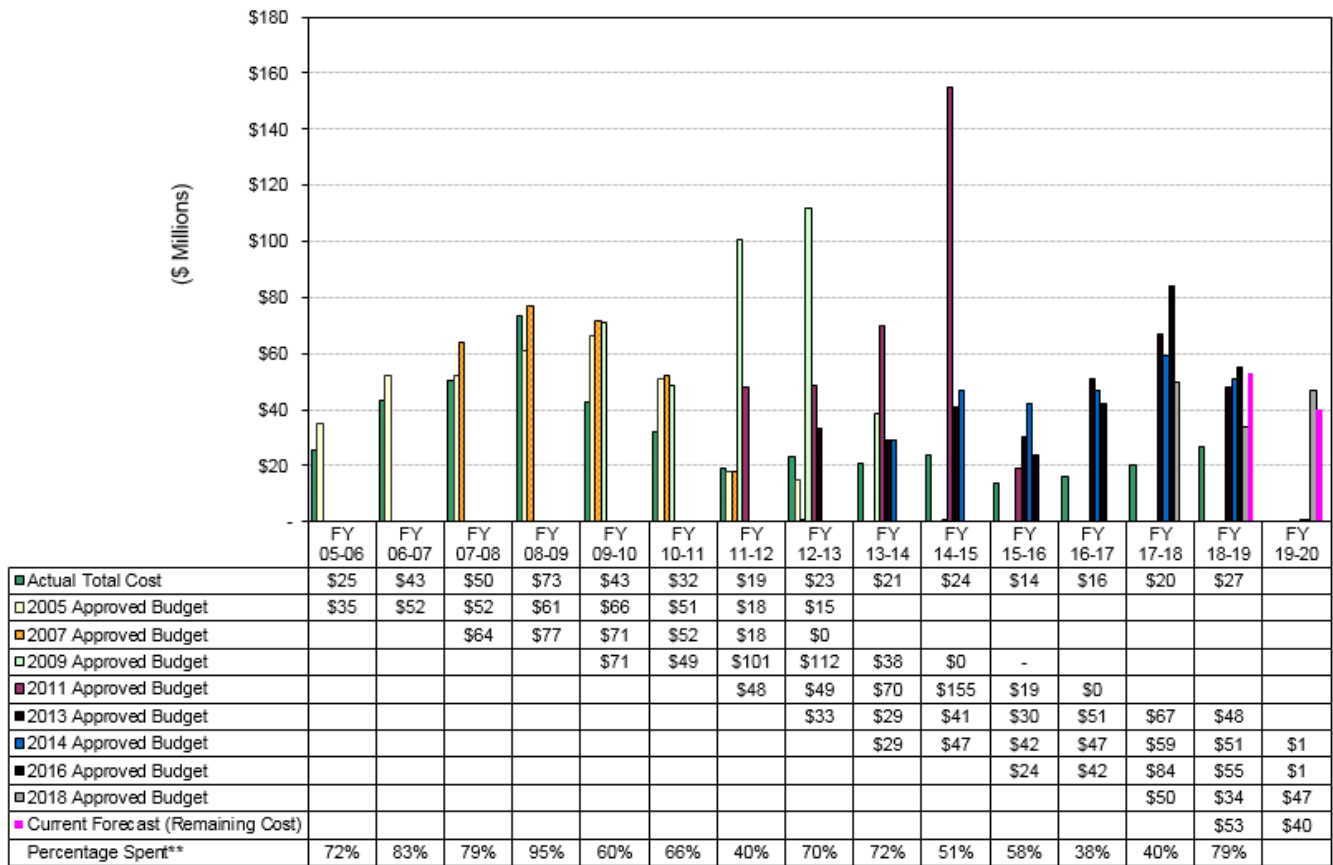
CUW30301 - Vehicle Service Facility Equipment Safety Upgrade (Completed)

This project will upgrade the vehicle service center, machine shop, and various other City Distribution Division (CDD) shops to correct seismic deficiencies and comply with worker safety standards and health department regulations.

CUW30501 - Fire Protection @ CDD (Completed)

This project covers the final phase of construction to complete the fire detection and monitoring systems needed at the City Distribution Division facilities.

APPENDIX B. BUDGET AND EXPENDITURE HISTOGRAM*



All costs are shown in \$ Millions.

* The histogram does not reflect budget and expenditures prior to FY 2005-2006. The histogram includes budget and expenditures for Local Water Supply Projects.

** Percentage Spent calculated as Actual Expenditures over the most current Approved Budget for each individual Fiscal Year.

Figure B: Annual Budgeted Spending Plans vs. Actual Expenditures

Figure B compares the spending plans associated with the various WSIP Approved Budgets to Actual Expenditures. It shows total annual expenditures from FY05-06 through Q3/FY18-19 and cost projections (Current Forecast) in Q3/FY18-19 through program completion. Actual annual expenditures have ranged from 38% to 95% of planned expenditures.

APPENDIX D. PROJECTS WITHIN BUDGET AND SCHEDULE

No active projects to report under this section.

APPENDIX E. LIST OF ACRONYMS

AAR	Alternative Analysis Report	LCSDI	Lower Crystal Springs Dam Improvements
AC	Asphalt Concrete	LOS	Levels of Service
ACAMS	Access Control and Alarm Monitoring System	MG	Million Gallons
ACDD	Alameda Creek Diversion Dam	MGD	Million Gallons per Day
ACDT	Alameda Creek Diversion Tunnel	MND	Mitigated Negative Declaration
ADAS	Automated Data Acquisition System	MOA	Memorandum of Agreement
AWP	Alameda West Portal	MOU	Memorandum of Understanding
BART	Bay Area Rapid Transit	N/A	Not Applicable
BAWSCA	Bay Area Water Supply and Conservation Agency	NEG DEC	Negative Declaration (also shown as ND)
BDPL	Bay Division Pipeline	NEPA	National Environmental Policy Act
BHR	Bioregional Habitat Restoration	NIT	New Irvington Tunnel
CATEX	Categorical Exemption	NMFS	National Marine Fisheries Service (under NOAA)
CCSF	City and County of San Francisco	NOAA	National Oceanic and Atmospheric Agency
CDD	City Distribution Division	NTP	Notice to Proceed
CDRP	Calaveras Dam Replacement Project	O&M	Operation and Maintenance
CEQA	California Environmental Quality Act	PCCP	Pre-stressed Concrete Cylinder Pipe
CER	Conceptual Engineering Report	PEIR	Program Environmental Impact Report
CIP	Capital Improvement Program	PG&E	Pacific Gas and Electric Company
CM	Construction Management	PV	Photovoltaic
CMB	Construction Management Bureau	RFI	Request For Information
CMIS	Construction Management Information System	ROW	Right-of-Way
CO	Change Order	SABPL	San Antonio Backup Pipeline
CPI	Cost Performance Index	SAPL	San Antonio Pipeline
CSPS	Crystal Springs Pump Station	SAPS	San Antonio Pump Station
CSSA	Crystal Springs/San Andreas	SCADA	Supervisory Control and Data Acquisition
DB	Design, Build	SCC	Scheduled Subproject Completion
DSOD	Division of Safety of Dams (State of California)	SFPUC	San Francisco Public Utilities Commission
DVSS	Digital Video Surveillance System	SJPL	San Joaquin Pipeline
EBMUD	East Bay Municipal Utility District	SMC	San Mateo County
EIR	Environmental Impact Report	SMP	Surface Mining Permit
EIS	Environmental Impact Statement	SPI	Schedule Performance Index
EV	Earned Value	SQS	Supplier Quality Surveillance
EVM	Earned Value Management	SSBPL	Sunset Supply Branch Pipeline
FTE	Full-Time Equivalent	SSPL	Sunset Supply Pipeline
FY	Fiscal Year	SVWTP	Sunol Valley Water Treatment Plant
HH	Hetch Hetchy	TBD	To be determined
HHWP	Hetch Hetchy Water and Power	TBM	Tunnel Boring Machine
HTWTP	Harry Tracy Water Treatment Plant	TM	Technical Memorandum
IVP	Irvington Portal		
JOC	Job Order Contract		
LCSD	Lower Crystal Springs Dam		

TWR	Treated Water Reservoir
UM	University Mound
UPS	Uninterruptable Power Supply
UV	Ultra Violet
VFD	Variable Frequency Drive
WEIP	Watershed Environmental Improvement Program
WSIP	Water System Improvement Program
WSTD	Water Supply and Treatment Division

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HETCH HETCHY
WATER SYSTEM IMPROVEMENT PROGRAM



QUARTERLY REPORT

Local Projects
Q4 FY 2018 | 2019
April 2019 — June 2019

Rebuilding Today for a Better Tomorrow

Published: 07/29/2019

Quarterly Report - Q4 FY2018/2019

Water System Improvement Program - Local Projects

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- A. Project Descriptions
- B. WSIP Budget and Expenditures Histogram
- C. WSIP Approved Project-Level Schedule
- D. Projects Within Budget and Schedule
- E. List of Acronyms



1. PROGRAM DESCRIPTION

The Water System Improvement Program (WSIP) is a \$4.8 billion, multi-year capital program to upgrade the City of San Francisco's regional and local drinking water systems. The program will deliver improvements that enhance the City's ability to provide reliable, affordable, high quality drinking water to its 26 wholesale customers and regional retail customers in Alameda, Santa Clara, and San Mateo Counties, and to its 800,000 retail customers in San Francisco, in an environmentally sustainable manner. The WSIP is structured to cost-effectively meet water quality requirements, improve seismic and delivery reliability, and achieve water supply goals.

Built in the early to mid-1900s, many components of the water system are nearing the end of their working life, with crucial facilities crossing, or in close proximity to, three major earthquake faults. The San Francisco Public Utilities Commission (SFPUC) initiated the WSIP to repair, replace, and seismically upgrade the system's deteriorating pipelines, tunnels, dams, reservoirs, pump stations, storage tanks, and treatment facilities.

The program consists of 35 local projects located within San Francisco and 52 regional projects (including the Vegetation Restoration of WSIP Construction Sites project which was added to the program in October 2012) spread over seven different counties from the Sierra foothills to San Francisco. Local projects only benefit San Francisco residents, whereas regional projects benefit both City residents and the 26 wholesale agencies that receive water from the SFPUC. The management of local projects is divided into 4 sub-programs - Reservoirs, Pump Stations / Tanks, Pipelines / Valves, and Miscellaneous.

The Local program originally included local water supply projects. These projects provide access to groundwater supplies for the potable system, deliver recycled water supplies for non-

potable uses, and address water quality and water level issues at Lake Merced. The management and implementation of the five (5) local water supply projects was transferred from the WSIP to the Water Enterprise Capital Improvement Program (CIP) as of July 1, 2011.

The WSIP is funded through the issuance of revenue bonds. Local Measures A and E, which were approved by San Francisco voters in November 2002, allowed for the financing of improvements to the City's water system using revenue bonds and/or other forms of revenue financing. Increases in the water rates of retail and wholesale customers will be used to pay back the debt service on the bonds.

The program budget and schedule were originally adopted by the San Francisco Public Utilities Commission on March 1, 2003. The program at the time was referred to as the Capital Improvement Program (CIP). The scope of the CIP was changed significantly following the adoption of Levels of Service (LOS) goals in early 2005. The program changes were so substantial that the program was renamed the WSIP and a new program budget and schedule were adopted on November 29, 2005. Since the scope of the 2005 Revised WSIP is in general representative of the program being implemented today, the 2005 budget and schedule are considered the "Baseline Budget and Schedule."

Subsequently, the WSIP Baseline Budget and Schedule were revised in 2007, 2009, 2011, 2013, 2014, 2015, 2016, 2017, and 2018, and these revisions were approved by the San Francisco Public Utilities Commission on February 26, 2008, July 28, 2009, July 12, 2011, April 23, 2013, April 22, 2014, December 8, 2015, April 26, 2016, February 14, 2017, and April 10, 2018, respectively. Refer to Appendix A for a scope description of all the local projects included in the WSIP.

Program Revision	Commission Approval	Budget (\$Million)	Schedule(*)
2003 (Original)	March 1, 2003	\$3,628	03/15/16
2005 (Baseline)	November 29, 2005	\$4,343	06/30/14
2007 (Revised)	February 26, 2008	\$4,392	12/18/14
2009 (Revised)	July 28, 2009	\$4,586	12/04/15
2011 (Revised)	July 12, 2011	\$4,586	07/29/16
2013 (Revised)	April 23, 2013	\$4,640	04/11/19
2014 (Revised)	April 22, 2014	\$4,765	05/24/19
2015 (Revised)	December 8, 2015	\$4,765	05/24/19
2016 (Revised)	April 26, 2016	\$4,845	12/20/19
2017 (Revised)	February 14, 2017	\$4,845	12/20/19
2018 (Latest Approved)	April 10, 2018	\$4,788	12/30/21

* Final Program Completion Date

2. PROGRAM STATUS

This fourth (4th) Quarterly Report for Fiscal Year (FY) 2018-2019 presents the progress made on the WSIP local projects between April 1, 2019 and June 30, 2019. The program’s schedule and budget were last approved by the San Francisco Public Utilities Commission (SFPUC or Commission) on April 10, 2018. The progress made on the regional projects of the WSIP is presented in a separate quarterly report.

Figure 2.1 shows the total Approved Budget for the local projects remaining in each phase of the program as of June 30, 2019. The number of projects currently active in each phase is shown in parentheses.

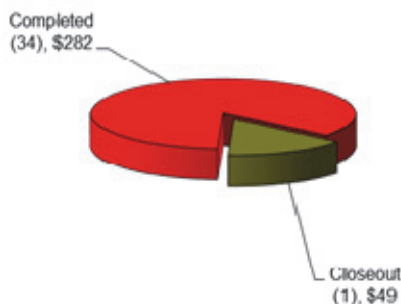


Figure 2.1 Total Approved Budget for Projects Active in Each Phase (\$Million)

Figure 2.2 shows the number of local projects in the following stages of the program as of June 30,

2019: Pre-construction, Construction, and Post-construction.

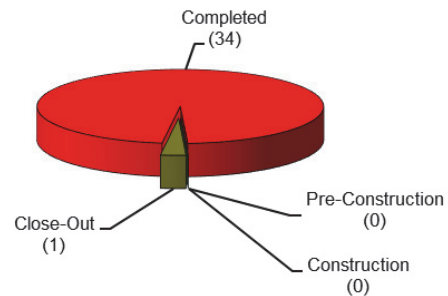


Figure 2.2 Number of Projects in Pre-construction, Construction, and Post-construction

Figure 2.3 summarizes the environmental review and permitting status of the WSIP 35 local projects as of June 30, 2019.

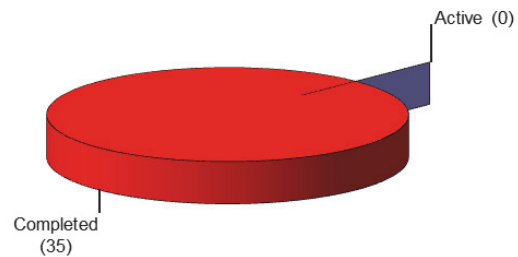


Figure 2.3 Program Environmental and Permitting Status

3. PROGRAM COST SUMMARY

Table 3.1 provides an overall program-level cost summary of the WSIP Local Program. It shows the Expenditures to Date; the 2005 Baseline, 2018 Approved, Current Approved and Q4/FY18-19 Forecasted Budgets; and the Cost Variance between the Current Approved and Forecasted Budgets. The total Current Approved WSIP Budget (including Regional and Local Programs,

Local Water Supply Projects, and Financing Costs), and current Forecasted Cost at completion are \$4,787.8 million. The Current Approved WSIP Budget and Forecasted Cost at completion for the Local Improvement Projects (including construction contingency) are \$331.4 million. Refer to Appendix B for a graphical representation of how the WSIP budget and actual expenditures have changed over time.

Table 3.1 Program Cost Summary

Cost Categories	Expenditures To Date (\$ Million) (A)	2005 Baseline Budget (\$ Million) (B)	2018 Approved Budget (\$ Million) (C)	Current Approved Budget ⁽⁷⁾ (\$ Million) (D)	Q4/FY18-19 Forecasted Costs (\$ Million) (E)	Cost Variance (\$ Million) (F = D - E)
Local Improvement Projects	\$325	\$353	\$325.7	\$325.7	\$325.7	-
Construction Costs ⁽¹⁾	\$232	\$259	\$232.3	\$232.3	\$232.3	-
Program Delivery Costs ⁽²⁾	\$92	\$91	\$92.2	\$92.2	\$92.3	(\$0.1)
Other Costs ⁽³⁾	\$1	\$4	\$1.2	\$1.2	\$1.1	\$0.1
Construction Contingency for Local Improvement Projects ⁽⁴⁾	\$6	\$30	\$5.7	\$5.7	\$5.7	-
LOCAL PROGRAM WITH CONTINGENCY	\$331	\$383	\$331.4	\$331.4	\$331.4	-
Regional Improvement Projects	\$3,405	\$3,375	\$3,536.9	\$3,536.9	\$3,537.4	(\$0.5)
Support Projects ⁽⁵⁾	\$225	\$33	\$266.1	\$266.1	\$265.6	\$0.5
Local Water Supply Projects ^(6, 8)	\$144	-	\$281.3	\$281.3	\$281.3	-
Finance	\$372	\$552	\$372.0	\$372.0	\$372.0	-
PROGRAM TOTAL	\$4,478	\$4,343	\$4,787.8	\$4,787.8	\$4,787.8	-

Notes:

- Construction Costs** include the Construction Base Bid and owner-provided equipment/material. Those costs do not include any construction contingency. That contingency is reflected as a separate cost category.
- Delivery Costs** include project management, planning, environmental (CEQA, permitting, construction compliance), design, construction management, and engineering support during construction.
- Other Costs** include environmental mitigation, art enrichment, security improvements, and real estate expenses.
- Expenditures to Date for Construction Contingency for Local Improvement projects corresponds to the Total Approved Change Orders on those projects. For projects with ongoing or completed construction, the 2018 Approved Budget for construction contingency includes all change orders and trends as identified at the time of the March 2018 Revised WSIP.
- Support Projects** include (1) System Security Upgrades, (2) Programmatic EIR, (3) Bioregional Habitat Restoration, (4) Vegetation Restoration of WSIP Construction Sites, (5) Long Term Mitigation Endowment, (6) Program Management, and (7) Watershed and Environmental Improvement Program. Please note that the costs reflected above for support projects include total project costs, including "Construction", "Delivery" and "Other" costs.
- Local Water Supply Projects managed as part of the Water Enterprise Capital Improvement Program (CIP) are (1) Lake Merced Water Level Restoration, (2) San Francisco Groundwater Supply, (3) San Francisco Westside Recycled Water, (4) Harding Park Recycled Water, and (5) San Francisco Eastside Recycled Water.
- The budget approved as part of the March 2018 Revised WSIP, plus any additional budget changes approved by the Commission as part of additional contingencies on construction contract.
- The WSIP Local Water Supply projects underwent a September 2013 re-baseline. Only the original WSIP portion of the re-baselined costs is reported here. The remaining budget is funded under the Water Enterprise CIP and is managed outside the purview of the WSIP.
- The original \$522M estimate of financing cost was based on a memorandum to the Commission dated November 23, 2005.

10. The financing cost budget of \$372M that was included in the March 2018 Revised WSIP includes all financing costs appropriated to date.
11. The actual financing cost is assumed to match the budgeted financing cost. Final reconciliation of all associated financing costs will occur upon WSIP completion.

Table 3.2 provides the status of construction contingencies. For each sub-program, it shows the 2018 Approved Contingency; the Current Approved Contingency; the Q4/FY18-19 Forecasted Change Orders; the Q4/FY18-19 Forecasted Trends; Project Savings Moved to Contingency/ Funds Moved out of Contingency;

the Q4/FY18-19 Forecasted Construction Contingency; and the Remaining Contingency as of the end of the reporting quarter. As of June 30, 2019, the Forecasted Construction Contingency is \$3.7 million, and the Total Forecasted Remaining Contingency is \$0.

Table 3.2 Status of Construction Contingency

Sub Program	2018 Approved Contingency ⁽¹⁾ (\$ Million) (A)	Current Approved Contingency ^(2,3) (\$ Million) (B)	Q4/FY18-19 Forecasted Change Orders ⁽³⁾ (\$ Million) (C)	Q4/FY18-19 Forecasted Trends ⁽⁴⁾ (\$ Million) (D)	Project Savings (+) Moved to Contingency/ Funds (-) Moved out of Contingency ⁽⁵⁾ (\$ Million) (E)	Current Forecasted Contingency (\$ Million) (F = B+ E)	Q4/FY18-19 Forecasted Remaining Contingency (\$ Million) (G = F-C-D)
Reservoirs	-	-	-	-	-	-	-
Pump Stations / Tanks	\$3.71	\$3.71	\$3.71	-	-	\$3.71	-
Pipelines / Valves	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-
Local Total	\$3.71	\$3.71	\$3.71	-	-	\$3.71	-

Notes:

1. Contingency included in March 2018 Revised WSIP.
2. Contingency included in March 2018 Revised WSIP and any contingency approved by the Commission thereafter.
3. Forecasted Change Orders include Approved, Pending, and Potential Change Orders.
 - Approved Change Orders are changes that have received all required approvals, including that of the City Controller.
 - Pending Change Orders are changes that have been negotiated and approved by the SFPUC but have to be approved by the City Controller.
 - Potential Change Orders are changes that have been requested and entered into CMIS but are still being negotiated.
4. Trends are any expected impact that the CM team believes has a high probability of becoming a change but are yet to be entered into CMIS as a Potential Change.
5. Values only reflect savings realized following Commission adoption of the March 2018 Revised WSIP.

The Program Management project includes programmatic activities that span multiple regions and benefit several WSIP projects (Table 3.3). The project provides funding for the following functions and resources: SFPUC Staff assigned to the management of the overall program; consultants supporting SFPUC staff at the program level (program, project and pre-construction management consultant, program construction management consultant, program control consultant); labor relations, including management of the project labor agreement; communication and public outreach; programmatic legal support; real estate acquisitions; program controls, including the tracking and reporting of all WSIP efforts; and program-level construction management activities associated with quality assurance, risk management, the Supplier Quality Surveillance (SQS) Program, operations assistance, safety, and training.

The activities under the Program Management project are organized into five categories that are tracked and monitored on a monthly basis. These categories are Management Support, Project Labor Agreement, Planning and Project Development, Program Control, and Program Construction Management.

The spending pattern for the project is very similar from month to month as the project primarily funds program-level positions occupied by both SFPUC staff and consultants. The Current Approved and the Forecasted Total Program Management Cost are \$112.7 million.

Table 3.3 Status of Program Management Project Cost Breakdown

Category	Expenditures To Date (\$ Million) (A)	2018 Approved Budget (\$ Million) (B)	Current Approved Budget (\$ Million) (C)	Q4/FY18-19 Forecasted Cost* (\$ Million) (D)	Cost Variance (\$ Million) (E = C-D)
Management Support	\$37.1	\$42.8	\$42.8	\$42.8	-
Project Labor Agreement	\$3.7	\$3.8	\$3.8	\$3.8	-
Planning and Project Development	\$18.0	\$18.3	\$18.3	\$18.3	-
Program Controls	\$19.8	\$19.8	\$19.8	\$19.8	-
Program Construction Management	\$27.7	\$28.0	\$28.0	\$27.9	-
Program Management Total	\$106.3	\$112.7	\$112.7	\$112.7	-

* Increase to Program Management Forecast Cost Variance is due to transfer of savings from other projects into Director's Reserve.

4. PROGRAM SCHEDULE SUMMARY

Figure 4.1 and Table 4.1 compare the 2005 Baseline, 2018 Approved, Current Approved, and Q4/FY18-19 Forecasted Schedules for the WSIP Local Program. Refer to the “Cost and Schedule Status” notes in Section 5 for the criteria associated with the three color-coded Forecast Status levels in Figure 4.1 - Meet Requirements, Need Attention, and Exceed Limits.

The Current Approved and Forecasted Schedule completion for the overall WSIP (including Regional and Local Programs) are in December 2021. The Current Approved and Forecasted Schedule completion for the WSIP Local Program are July 2018 and September 2019, respectively (14-month behind schedule). Refer to Appendix C for a graphical presentation of the WSIP Approved Project-Level Schedule.

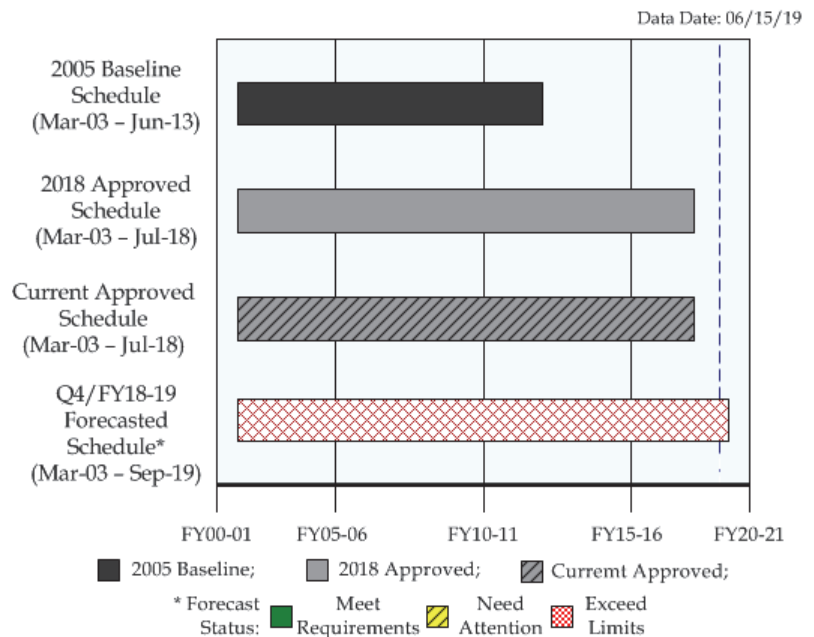


Figure 4.1 Program Schedule Summary

Table 4.1 2018 Approved vs. Q4/FY18-19 Forecasted Schedule Dates

Category	2005 Baseline Start	2018 Approved Start	Current* Approved Start	Actual Start	2005 Baseline Finish	2018 Approved Finish	Current* Approved Finish	Q4/FY18-19 Forecasted Finish	Schedule Variance (Months)
Local** Program	03/01/03	03/31/03	03/31/03	03/01/03✓	06/28/13	7/31/18	7/31/18	09/30/19	14.0 (Late)
Regional Program	03/01/03	03/31/03	03/31/03	03/01/03✓	06/30/14	12/30/21	12/30/21	12/30/21	-
Overall WSIP	03/01/03	03/01/03	03/01/03	03/01/03✓	06/30/14	12/30/21	12/30/21	12/30/21	-

* The budget and schedule approved as part of the March 2018 Revised WSIP, plus any additional budget and schedule changes approved by the Commission as part of additional contingencies on construction contracts.

** Excluding Local Water Supply Projects

5. PROJECT PERFORMANCE SUMMARY

No projects to report under this section.

6. PROJECTS NOT WITHIN BUDGET AND/OR SCHEDULE

No projects to report under this section.

7. ON-GOING CONSTRUCTION

No projects are currently active in construction.

8. PROJECTS IN CLOSE-OUT

Project Title	2005 Baseline Construction Phase Completion	2018 Approved Construction Phase Completion	Current Approved Construction Phase Completion	Actual Construction Phase Completion	2005 Approved Project Completion	2018 Approved Project Completion	Current Approved Project Completion	Forecasted Project Completion	2005 Baseline Construction Phase Budget	2018 Approved Construction Phase Budget	Current Approved Construction Phase Budget	Construction Phase Expenditures To Date
Pump Stations / Tanks												
CUW30901 - Lake Merced Pump Station Essential Upgrades	10/14/10	04/30/18	04/30/18	12/14/18	07/15/11	07/31/18	07/31/18	09/30/19	\$ 59,125,000	\$ 37,205,349	\$ 37,205,349	\$ 36,860,611
TOTAL									\$ 59,125,000	\$ 37,205,349	\$ 37,205,349	\$ 36,860,611

9. COMPLETED PROJECTS

Project Title	2005 Baseline Project Completion	2018 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2005 Baseline Project Budget	2018 Approved Project Budget	Current Approved Project Budget	Project Expenditures To Date
Reservoirs								
CUW30701 - Summit Reservoir Rehabilitation	12/08/06	09/28/12	09/28/12	09/28/12	\$ 14,927,859	\$ 12,294,537	\$ 12,294,537	\$ 12,294,537
CUW31901 - Hunters Point Reservoir Rehab & Seismic Upgrade	05/04/12	10/31/12	10/31/12	10/31/12	\$ 8,122,861	\$ 3,086,717	\$ 3,086,717	\$ 3,086,717
CUW33401 - Stanford Heights Reservoir Rehabilitation	03/05/10	04/01/11	04/01/11	04/01/11	\$ 19,172,308	\$ 23,626,142	\$ 23,626,142	\$ 23,626,142
CUW33501 - Potrero Heights Reservoir Rehabilitation	07/13/07	08/11/08	08/11/08	08/11/08	\$ 7,610,033	\$ 6,836,736	\$ 6,836,736	\$ 6,836,736
CUW33701 - Sutro Reservoir Rehab & Seismic Upgrade	07/15/11	03/31/16	03/31/16	03/31/16	\$ 31,372,263	\$ 39,468,198	\$ 39,468,198	\$ 39,462,621
Pump Stations / Tanks								
CUW30601 - Crocker Amazon Pump Station Upgrades	10/31/06	03/27/08	03/27/08	03/27/08	\$ 4,823,675	\$ 4,126,498	\$ 4,126,498	\$ 4,126,498
CUW31401 - La Grande Tank Seismic Upgrade	06/07/07	12/18/08	12/18/08	12/18/08	\$ 7,919,543	\$ 6,987,728	\$ 6,987,728	\$ 6,987,728
CUW31801 - Forest Hill Tank Rehab & Seismic Upgrade	01/05/07	08/31/07	08/31/07	08/31/07	\$ 3,204,561	\$ 2,936,199	\$ 2,936,199	\$ 2,936,199
CUW32001 - Forest Hill Pump Station Upgrades	12/02/11	07/01/14	07/01/14	07/01/14	\$ 4,446,263	\$ 6,389,792	\$ 6,389,792	\$ 6,389,792
CUW32101 - Forest Knolls Pump Station Upgrades	07/03/08	01/18/12	01/18/12	01/18/12	\$ 5,779,776	\$ 6,196,751	\$ 6,196,751	\$ 6,196,751
CUW32201 - Lincoln Park Pump Station Upgrades	06/01/07	08/11/08	08/11/08	08/11/08	\$ 4,762,027	\$ 4,345,215	\$ 4,345,215	\$ 4,345,215
CUW32301 - Alemany Pump Station Upgrades (McLaren Park)	07/10/09	08/30/13	08/30/13	08/30/13	\$ 10,391,557	\$ 29,095,501	\$ 29,095,501	\$ 29,095,501
CUW32401 - Mount Davidson Pump Station Upgrades	08/06/09	03/30/11	03/30/11	03/30/11	\$ 5,223,489	\$ 4,281,116	\$ 4,281,116	\$ 4,281,116
CUW32501 - Palo Alto Pump Station Upgrades	04/10/09	11/16/10	11/16/10	11/16/10	\$ 5,225,506	\$ 6,126,470	\$ 6,126,470	\$ 6,126,470
CUW32601 - Sky View - Aqua Vista Pump Station Upgrade	07/11/08	08/11/09	08/11/09	08/11/09	\$ 5,717,647	\$ 4,751,094	\$ 4,751,094	\$ 4,751,094
CUW32701 - Summit Pump Station Upgrades	03/20/08	08/11/08	08/11/08	08/11/08	\$ 6,396,784	\$ 6,532,376	\$ 6,532,376	\$ 6,532,376
CUW32801 - McLaren #1 Tank Rehab & Seismic Upgrade	10/10/08	08/11/08	08/11/08	08/11/08	\$ 5,354,512	\$ 4,659,741	\$ 4,659,741	\$ 4,659,741
CUW32901 - Potrero Heights Tank Seismic Upgrade	07/13/07	08/11/08	08/11/08	08/11/08	\$ 1,281,714	\$ 1,084,863	\$ 1,084,863	\$ 1,084,863
CUW33001 - Forest Knolls Tank Seismic Upgrade	07/03/08	01/18/12	01/18/12	01/18/12	\$ 3,536,899	\$ 3,438,912	\$ 3,438,912	\$ 3,438,912
CUW33101 - Lincoln Park Tank Seismic Upgrade	06/01/07	08/11/08	08/11/08	08/11/08	\$ 3,085,460	\$ 2,690,656	\$ 2,690,656	\$ 2,690,656
CUW33201 - McLaren #2 Tank Rehab & Seismic Upgrade	10/10/08	08/11/08	08/11/08	08/11/08	\$ 5,329,017	\$ 4,458,201	\$ 4,458,201	\$ 4,458,201
CUW33301 - Mount Davidson Tank Seismic Upgrade	08/06/09	03/30/11	03/30/11	03/30/11	\$ 3,927,838	\$ 2,568,414	\$ 2,568,414	\$ 2,568,414
CUW33801 - La Grande Pump Station Upgrades	11/05/10	03/29/13	03/29/13	03/29/13	\$ 5,311,335	\$ 4,776,418	\$ 4,776,418	\$ 4,776,418
CUW33901 - Potrero Heights Pump Station Upgrades	07/13/07	08/11/08	08/11/08	08/11/08	\$ 733,242	\$ 605,670	\$ 605,670	\$ 605,670
CUW34001 - Vista Francisco Pump Station Upgrades	05/07/10	01/31/13	01/31/13	01/31/13	\$ 5,680,792	\$ 5,141,127	\$ 5,141,127	\$ 5,141,127
Pipelines / Valves								
CUW30401 - North University Mound System Upgrade	05/07/10	06/30/11	06/30/11	06/30/11	\$ 23,114,504	\$ 10,000,010	\$ 10,000,010	\$ 10,000,010
CUW30801 - Key Motorized and Other Critical Valves	11/06/07	08/11/08	08/11/08	08/11/08	\$ 11,447,747	\$ 10,984,746	\$ 10,984,746	\$ 10,984,746

WSIP Quarterly Report

Project Title	2005 Baseline Project Completion	2018 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2005 Baseline Project Budget	2018 Approved Project Budget	Current Approved Project Budget	Project Expenditures To Date
Pipelines / Valves								
CUW31101 - Sunset Circulation Improvements	07/06/06	07/06/06	07/06/06	07/06/06	\$ 8,224,379	\$ 7,073,164	\$ 7,073,164	\$ 7,073,164
CUW31201 - Lincoln Way Transmission Line	02/09/07	09/24/12	09/24/12	09/24/12	\$ 14,788,970	\$ 13,781,922	\$ 13,781,922	\$ 13,781,922
CUW31301 - Noe Valley Transmission Main - Phase 2	02/11/11	06/03/11	06/03/11	06/03/11	\$ 11,956,364	\$ 5,641,390	\$ 5,641,390	\$ 5,641,390
CUW31501 - East / West Transmission Main	04/10/09	03/21/11	03/21/11	03/21/11	\$ 22,955,659	\$ 27,754,505	\$ 27,754,505	\$ 27,754,505
CUW31601 - Fulton @ 6th	08/08/08	08/11/08	08/11/08	08/11/08	\$ 4,842,437	\$ 4,713,931	\$ 4,713,931	\$ 4,713,931
Miscellaneous								
CUW30301 - Vehicle Service Facility Equipment Safety Upgrade	07/02/09	08/11/09	08/11/09	08/11/09	\$ 5,245,082	\$ 3,978,923	\$ 3,978,923	\$ 3,978,923
CUW30501 - Fire Protection @ CDD	06/30/06	01/30/07	01/30/07	01/30/07	\$ 1,988,892	\$ 1,675,476	\$ 1,675,476	\$ 1,675,476
TOTAL					\$ 283,900,996	\$ 282,109,138	\$ 282,109,138	\$ 282,103,560

APPENDICES

- A PROJECT DESCRIPTIONS**
- B WSIP BUDGET AND EXPENDITURES HISTOGRAM**
- C WSIP APPROVED PROJECT-LEVEL SCHEDULE**
- D PROJECTS WITHIN BUDGET AND SCHEDULE**
- E LIST OF ACRONYMS**

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APPENDIX A. PROJECT DESCRIPTIONS**Reservoirs****CUW30701 - Summit Reservoir Rehabilitation (Completed)**

This project consists of the upgrade of the existing Summit Reservoir to meet current seismic standards and conform to all State Public Health requirements. The project includes a new inlet/outlet structure to correct circulation problems.

CUW31001 - New Northwest Reservoir (Deleted)

This project is the construction of a new 5MG reservoir in the northeast zone of San Francisco. This reservoir will provide both fire protection and pressurized supply to areas currently served from the Sunset and Lombard Zones.

CUW31901 - Hunters Point Reservoir Rehab & Seismic Upgrade (Completed)

This project is the upgrade of the existing Hunters Point Reservoir to meet current seismic standards and conform to all State Health requirements, and includes correction of circulation problems and new inlet/outlet structure.

CUW33401 - Stanford Heights Reservoir Rehabilitation (Completed)

This project consists of the upgrade of the existing Stanford Heights Reservoir to meet current seismic standards and conform to all State Public Health requirements. The project includes a new inlet/outlet structure to correct circulation problems.

CUW33501 - Potrero Heights Reservoir Rehabilitation (Completed)

This project is the upgrade of the existing Potrero Heights Reservoir to meet current seismic standards and conform to all State Health requirements, and includes correction of circulation problems and a new inlet/outlet structure.

CUW33701 - Sutro Reservoir Rehab & Seismic Upgrade (Completed)

This project is the upgrade of the existing Sutro

Reservoir to meet current seismic standards and conform to all State Health requirements and includes the correction of circulation problems, and a new inlet/outlet structure.

Pump Stations / Tanks**CUW30601 - Crocker Amazon Pump Station Upgrades (Completed)**

This project will rebuild the Crocker-Amazon pump station, including a reinforced concrete structure, three pumps, stand-by generator, hydropneumatic tanks, security fencing, monitoring and disinfection systems, and landscaping.

CUW30901 - Lake Merced Pump Station Essential Upgrades

This project will rebuild the Lake Merced pump station. Specific improvements include a new reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW31401 - La Grande Tank Seismic Upgrade (Completed)

The project will include the replacement of the La Grande tank, including a concrete tank foundation, new 350,000 gal steel tank, inlet/outlet piping, valves, security fencing, water quality monitoring systems, and demolition of the existing facility.

CUW31801 - Forest Hill Tank Rehab & Seismic Upgrade (Completed)

This project is the seismic upgrade of the Forest Hill concrete tank, including seismic work, new foundation, inlet/outlet, valves, retaining wall, security fencing, monitoring system, and site improvements.

CUW32001 - Forest Hill Pump Station Upgrades (Completed)

This project will rebuild the Forest Hill pump station. Specific improvements include a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW32101 - Forest Knolls Pump Station Upgrades (Completed)

This project will rebuild the Forest Knolls pump station, including a reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, water quality monitoring and sampling systems, and landscaping.

CUW32201 - Lincoln Park Pump Station Upgrades (Completed)

This project will rebuild the Lincoln Park pump station. Specific improvements include a new reinforced concrete structure, pumps, a stand-by generator, security fencing, tanks, SCADA, monitoring and disinfection systems, and landscaping.

CUW32301 - Alemany Pump Station Upgrades (McLaren Park) (Completed)

This project will rebuild the Alemany Pump Station, including a reinforced concrete structure, pumps, stand-by generators, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW32401 - Mount Davidson Pump Station Upgrades (Completed)

This project will rebuild the Mount Davidson pump station. Specific improvements include a new reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW32501 - Palo Alto Pump Station Upgrades (Completed)

This project will rebuild the Palo Alto Pump Station, including a seismically reinforced concrete structure, pumps, replacement of hydro pneumatic tanks, a stand-by generator, security fencing, SCADA, landscaping, and demolition of the existing facility.

CUW32601 - Sky View - Aqua Vista Pump Station Upgrade (Completed)

This project will rebuild the Sky View-Aqua Vista pump station, including a reinforced concrete structure, pumps, a stand-by generator, security fencing, SCADA, water quality monitoring and

sampling systems, and landscaping.

CUW32701 - Summit Pump Station Upgrades (Completed)

This project will rebuild the Summit Pump Station, including a reinforced concrete structure, retaining walls, pumps, inlet-outlet piping, seismic reinforcing of existing generator building, security fencing, SCADA, landscaping, and demolition of the existing facility.

CUW32801 - McLaren #1 Tank Rehab & Seismic Upgrade (Completed)

This project consists of the rehabilitation and seismic upgrade of the McLaren #1 Tank including seismic bracing, interior lining replacement, cathodic protection, new exterior coating, lead paint abatement, new inlet/drain/overflow piping and valves, security fencing, electrical improvements, paving, and landscaping.

CUW32901 - Potrero Heights Tank Seismic Upgrade (Completed)

This project is the demolition of the existing Potrero Heights Tank. The tank became nonessential upon completion of the Sunset Circulation Improvements Project.

CUW33001 - Forest Knolls Tank Seismic Upgrade (Completed)

This project is the replacement of the Forest Knolls Tank, including a new 100,000 gallon concrete tank, inlet/outlet piping, valves, security fencing, monitoring systems, demolition, and site improvements.

CUW33101 - Lincoln Park Tank Seismic Upgrade (Completed)

The project consists of the replacement of the Lincoln Park tank. Specific improvements include a new 100,000G concrete tank, inlet/outlet piping, valves, security fencing, monitoring systems, demolition, and site improvements.

CUW33201 - McLaren #2 Tank Rehab & Seismic Upgrade (Completed)

This project consists of the rehabilitation and seismic upgrade of the McLaren #2 tank,

including seismic bracing, interior lining replacement, cathodic protection, new exterior coating, lead paint abatement, new inlet/drain/overflow piping and valves, security fencing, electrical improvements, paving, and landscaping.

CUW33301 - Mount Davidson Tank Seismic Upgrade (Completed)

The project consists of the seismic retrofit of the existing 75,000G Mount Davidson tank. Specific improvements include a drilled pier foundation, inlet/outlet piping, valves, security fencing, monitoring systems, demolition, and site improvements.

CUW33801 - La Grande Pump Station Upgrades (Completed)

This project will rebuild the La Grande pump station, including a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

CUW33901 - Potrero Heights Pump Station Upgrades (Completed)

This project is the demolition of the existing Potrero Heights Pump Station. The pump station became nonessential upon completion of the Sunset Circulation Improvements Project.

CUW34001 - Vista Francisco Pump Station Upgrades (Completed)

This project will rebuild the Vista Francisco pump station, including a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

Pipelines / Valves

CUW30401 - North University Mound System Upgrade (Completed)

This project will improve the supply reliability of the University Mound (UM) system, linking the two independent University Mound and Sunset Supply systems. In order to diminish the impact on the neighborhoods, sewer, domestic water distribution main, and pavement replacement

work has been added to the scope.

CUW30801 - Key Motorized and Other Critical Valves (Completed)

This project consists of installing motorized valves at several critical locations. These valves will assist during emergency shutdowns after events such as main breaks, earthquakes, and other situations requiring immediate system isolation.

CUW31101 - Sunset Circulation Improvements (Completed)

This project improved the operation of the Sunset Zone by allowing McLaren tanks to feed the Potrero Heights System. This improved circulation and created a more reliable water supply for the Potrero System.

CUW31201 - Lincoln Way Transmission Line (Completed)

This project is a new transmission main to serve as a backup to the deteriorated Sunset main from Sunset Reservoir to 5th Avenue and Lincoln Way. Under this project, approximately 13,000 LF of 48-inch steel pipe will be constructed.

CUW31301 - Noe Valley Transmission Main, Phase 2 (Completed)

This project is a new transmission main that will extend the Noe Valley main. The existing main, which ends at Sanchez and 20th Streets, needs to be extended to supply additional pressure to areas where low pressure is a problem.

CUW31501 - East / West Transmission Main (Completed)

This project is a new main from Alemany PS to the western part of the City. This transmission main will enable the SFPUC to move water from the east side of the City into the Sunset system in the event of a peninsula pipeline failure or emergency.

CUW31601 - Fulton @ Sixth Ave - 30" Main Replacement (Completed)

This project consists of construction of a 30" main to replace the deteriorated Richmond supply main in the Golden Gate Park from Lincoln Way

at 6th Avenue to Fulton at 6th. The main will extend the Sunset zone to increase the pressure and supply at the northern end of the zone.

Miscellaneous

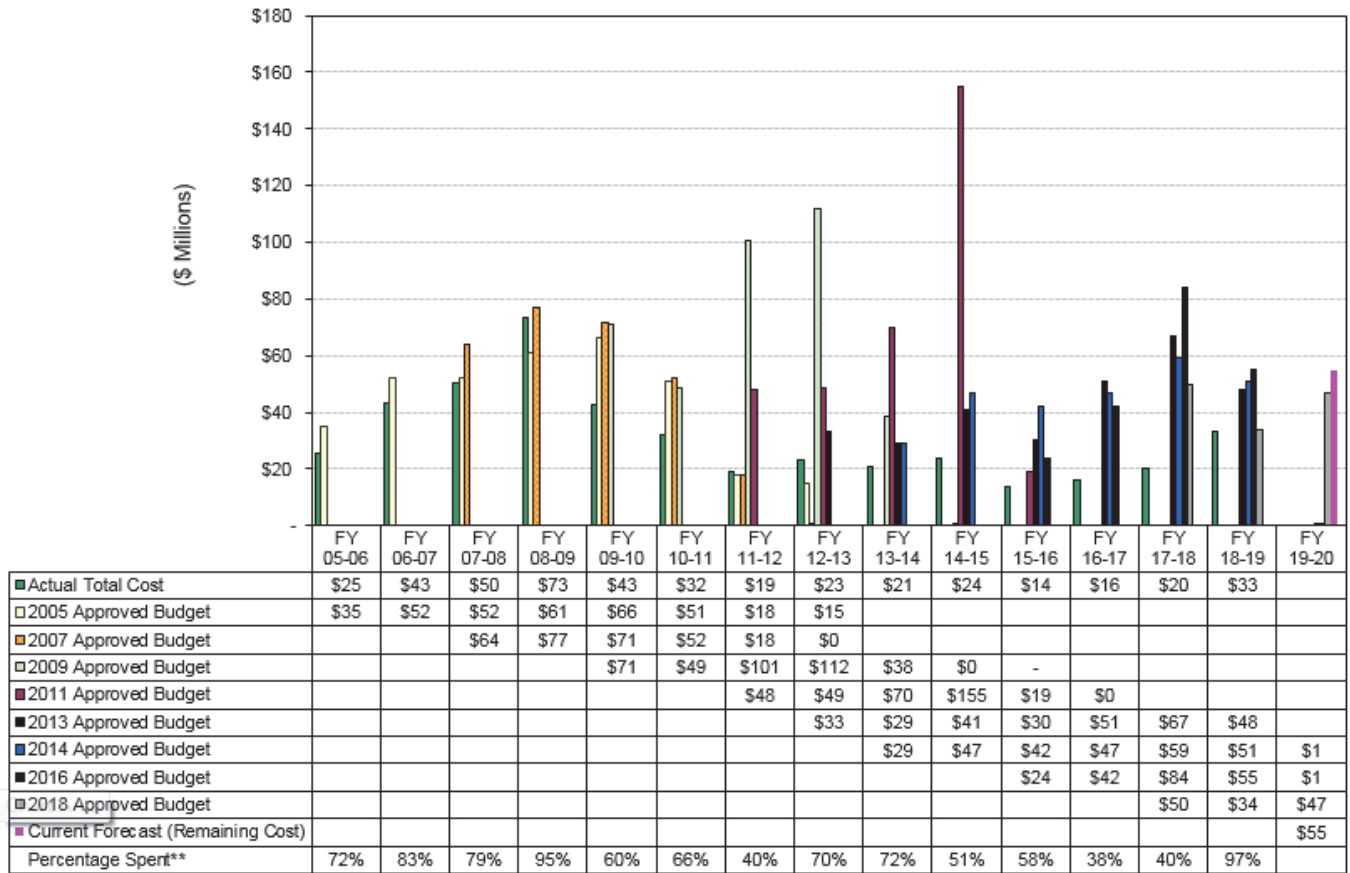
CUW30301 - Vehicle Service Facility Equipment Safety Upgrade (Completed)

This project will upgrade the vehicle service center, machine shop, and various other City Distribution Division (CDD) shops to correct seismic deficiencies and comply with worker safety standards and health department regulations.

CUW30501 - Fire Protection @ CDD (Completed)

This project covers the final phase of construction to complete the fire detection and monitoring systems needed at the City Distribution Division facilities.

APPENDIX B. BUDGET AND EXPENDITURE HISTOGRAM*



All costs are shown in \$ Millions.

* The histogram does not reflect budget and expenditures prior to FY 2005-2006. The histogram includes budget and expenditures for Local Water Supply Projects.

** Percentage Spent calculated as Actual Expenditures over the most current Approved Budget for each individual Fiscal Year.

Figure B: Annual Budgeted Spending Plans vs. Actual Expenditures

Figure B compares the spending plans associated with the various WSIP Approved Budgets to Actual Expenditures. It shows total annual expenditures from FY05-06 through FY18-19 and cost projections (Current Forecast) in FY19-20 through program completion. Actual annual expenditures have ranged from 38% to 97% of planned expenditures.

APPENDIX D. PROJECTS WITHIN BUDGET AND SCHEDULE

No active projects to report under this section.

APPENDIX E. LIST OF ACRONYMS

AAR	Alternative Analysis Report	LCSDI	Lower Crystal Springs Dam Improvements
AC	Asphalt Concrete	LOS	Levels of Service
ACAMS	Access Control and Alarm Monitoring System	MG	Million Gallons
ACDD	Alameda Creek Diversion Dam	MGD	Million Gallons per Day
ACDT	Alameda Creek Diversion Tunnel	MND	Mitigated Negative Declaration
ADAS	Automated Data Acquisition System	MOA	Memorandum of Agreement
AWP	Alameda West Portal	MOU	Memorandum of Understanding
BART	Bay Area Rapid Transit	N/A	Not Applicable
BAWSCA	Bay Area Water Supply and Conservation Agency	NEG DEC	Negative Declaration (also shown as ND)
BDPL	Bay Division Pipeline	NEPA	National Environmental Policy Act
BHR	Bioregional Habitat Restoration	NIT	New Irvington Tunnel
CATEX	Categorical Exemption	NMFS	National Marine Fisheries Service (under NOAA)
CCSF	City and County of San Francisco	NOAA	National Oceanic and Atmospheric Agency
CDD	City Distribution Division	NTP	Notice to Proceed
CDRP	Calaveras Dam Replacement Project	O&M	Operation and Maintenance
CEQA	California Environmental Quality Act	PCCP	Pre-stressed Concrete Cylinder Pipe
CER	Conceptual Engineering Report	PEIR	Program Environmental Impact Report
CIP	Capital Improvement Program	PG&E	Pacific Gas and Electric Company
CM	Construction Management	PV	Photovoltaic
CMB	Construction Management Bureau	RFI	Request For Information
CMIS	Construction Management Information System	ROW	Right-of-Way
CO	Change Order	SABPL	San Antonio Backup Pipeline
CPI	Cost Performance Index	SAPL	San Antonio Pipeline
CSPS	Crystal Springs Pump Station	SAPS	San Antonio Pump Station
CSSA	Crystal Springs/San Andreas	SCADA	Supervisory Control and Data Acquisition
DB	Design, Build	SCC	Scheduled Subproject Completion
DSOD	Division of Safety of Dams (State of California)	SFPUC	San Francisco Public Utilities Commission
DVSS	Digital Video Surveillance System	SJPL	San Joaquin Pipeline
EBMUD	East Bay Municipal Utility District	SMC	San Mateo County
EIR	Environmental Impact Report	SMP	Surface Mining Permit
EIS	Environmental Impact Statement	SPI	Schedule Performance Index
EV	Earned Value	SQS	Supplier Quality Surveillance
EVM	Earned Value Management	SSBPL	Sunset Supply Branch Pipeline
FTE	Full-Time Equivalent	SSPL	Sunset Supply Pipeline
FY	Fiscal Year	SVWTP	Sunol Valley Water Treatment Plant
HH	Hetch Hetchy	TBD	To be determined
HHWP	Hetch Hetchy Water and Power	TBM	Tunnel Boring Machine
HTWTP	Harry Tracy Water Treatment Plant	TM	Technical Memorandum
IVP	Irvington Portal		
JOC	Job Order Contract		
LCSD	Lower Crystal Springs Dam		

TWR	Treated Water Reservoir
UM	University Mound
UPS	Uninterruptable Power Supply
UV	Ultra Violet
VFD	Variable Frequency Drive
WEIP	Watershed Environmental Improvement Program
WSIP	Water System Improvement Program
WSTD	Water Supply and Treatment Division

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