



# QUARTERLY REPORT

# Local Projects Q1 FY 2017 | 2018 July 2017 — September 2017

Rebuilding Today for a Better Tomorrow

Published: 11/07/2017

rogram - Loca emen

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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 The WSIP is structured to costmanner. 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 nonpotable 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, and 2017, 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, and February 14, 2017, respectively. Refer to Appendix A for a scope description of all the local projects included in the WSIP.

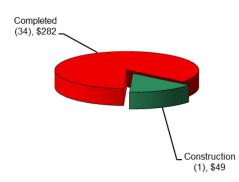
Program Revision	Commission Approval	Budget (\$Million)	Schedule <sup>(*)</sup>
2003 (Original)	March 1, 2003	\$3,628	03/15/16
2005 (Baseline)	November 29, 2005	\$4,343	06/30/14
2007 (Revised)	February 26, 2008	\$4,392	12/18/14
2009 (Revised)	July 28, 2009	\$4,586	12/04/15
2011 (Revised)	July 12, 2011	\$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 (Latest Approved)	February 14, 2017	\$4,845	12/20/19

\* Final Program Completion Date

# 2. PROGRAM STATUS

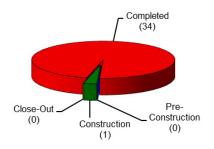
This first (1st) Quarterly Report for Fiscal Year (FY) 2017-2018 presents the progress made on the WSIP local projects between July 1, 2017 and September 30, 2017. The program's schedule and budget were last approved by the San Francisco Public Utilities Commission (SFPUC or Commission) on February 14, 2017. 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, 2017. The number of projects currently active in each phase is shown in parentheses.



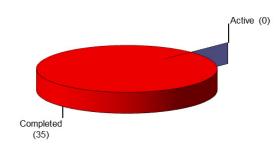
#### Figure 2.1 Total Approved Budget for Projects Active in Each Phase (\$Million)

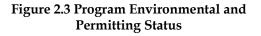
Figure 2.2 shows the number of local projects in the following stages of the program as of September 30, 2017: Pre-construction, Construction, and Post-construction.



### 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, 2017.





### 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, 2016 Approved, Current Approved and Q1/FY17-18 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 \$4,845.5 million and \$4,876.1 million, respectively (\$30.6 million over Current Approved Budget). The Current Approved WSIP Budget and Forecasted Cost at completion for the Local Improvement Projects (including construction contingency) are \$331.4 million. Appendix Refer to В for a graphical representation of how the WSIP budget and actual expenditures have changed over time.

Cost Categories	Expenditures To Date (\$ Million) (A)	2005 Baseline Budget (\$ Million) (B)	2016 Approved Budget (\$ Million) (C)	Current Approved Budget <sup>(7)</sup> (\$ Million) (D)	Q1/FY17-18 Forecasted Costs (\$ Million) (E)	Cost Variance (\$ Million) (F = D - E)
Local Improvement Projects	\$325	\$444	\$325.8	\$325.8	\$325.7	\$0.2
Construction Costs <sup>(1)</sup>	\$232	\$259	\$232.3	\$232.3	\$232.3	-
Program Delivery Costs <sup>(2)</sup>	\$92	\$91	\$92.3	\$92.3	\$92.2	\$0.2
Other Costs <sup>(3)</sup>	\$1	\$94	\$1.2	\$1.2	\$1.2	-
Construction Contingency for Local Improvement Projects <sup>(4)</sup>	\$6	\$30	\$5.6	\$5.6	\$5.7	(\$0.2)
LOCAL PROGRAM WITH CONTINGENCY	\$331	\$474	\$331.4	\$331.4	\$331.4	-
Regional Improvement Projects	\$3,256	\$3,375	\$3,498.9	\$3,498.9	\$3,525.6	(\$26.7)
Support Projects <sup>(5)</sup>	\$213	\$33	\$262.2	\$262.2	\$266.1	(\$3.9)
Local Water Supply Projects <sup>(6, 8)</sup>	\$88	-	\$281.3	\$281.3	\$281.3	-
Finance	\$462	\$552	\$471.7	\$471.7	\$471.7	-
PROGRAM TOTAL	\$4,351	\$4,343	\$4,845.5	\$4,845.5	\$4,876.1	(\$30.6)

**Table 3.1 Program Cost Summary** 

Notes:

1. **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.

2. **Delivery Costs** include project management, planning, environmental (CEQA, permitting, construction compliance), design, construction management, and engineering support during construction.

3. Other Costs include environmental mitigation, art enrichment, security improvements, and real estate expenses.

- 4. 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 2014 Approved Budget for construction contingency includes all change orders and trends as identified at the time of the March 2014 Revised WSIP, as well as additional contingency funding allocated to cover the 65% confidence level risks identified at the time of the March 2014 Revised WSIP. For projects in pre-construction, the 2014 Approved Budget for construction contingency includes 10% of the estimated construction base bid.
- 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 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.

7. The budget approved as part of the March 2016 Revised WSIP, plus any additional budget changes approved by the Commission as part of additional contingencies on construction contract.

8. The WSIP Local Water Supply projects underwent a September 2013 re-baseline. Only the original WSIP portion of the rebaselined costs is reported here. The remaining budget is funded under the Water Enterprise CIP and will be managed outside the purview of the WSIP.

Table 3.2 provides the status of construction contingencies. For each sub-program, it shows the 2016 Approved Contingency; the Current Approved Contingency; the Q1/FY17-18 Forecasted Change Orders; the Q1/FY17-18 Forecasted Trends; Project Savings Moved to Contingency/ Funds Moved out of Contingency; the Q1/FY17-18 Forecasted Construction Contingency; and the Remaining Contingency as of the end of the reporting quarter. As of September 30, 2017, 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	2016 Approved Contingency <sup>(1)</sup> (\$ Million) (A)	Current Approved Contingency <sup>(2,3)</sup> (\$ Million) (B)	Q1/FY17-18 Forecasted Change Orders <sup>(3)</sup> (\$ Million) (C)	Q1/FY17-18 Forecasted Trends <sup>(4)</sup> (\$ Million) (D)	Project Savings (+) Moved to Contingency/ Funds () Moved out of Contingency <sup>(5)</sup> (\$ Million) (E)	Current Forecasted Contingency (\$ Million) (F = B+ E)	Q1/FY17-18 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:

- 2. Contingency included in March 2016 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 2016 Revised WSIP.

<sup>1.</sup> Contingency included in March 2016 Revised WSIP.

### Q1-FY2017-2018 (07/01/17 - 09/30/17)

The Program Management project includes programmatic activities that span multiple regions and benefit several WSIP projects (Table 3.5). 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 preconstruction 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 construction program-level 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 \$112.8 million, which is \$2.5 million over the Current Approved Budget of \$110.3 million.

Category	Expenditures To Date (\$ Million) (A)	2016 Approved Budget (\$ Million) (B)	Current Approved Budget (\$ Million) (C)	Q1/FY17-18 Forecasted Cost* (\$ Million) (D)	Cost Variance (\$ Million) (E = C-D)
Management Support	\$35.4	\$41.3	\$41.3	\$42.8	(\$1.5)
Project Labor Agreement	\$3.5	\$3.8	\$3.8	\$3.8	-
Planning and Project Development	\$17.8	\$18.3	\$18.3	\$18.3	-
Program Controls	\$18.6	\$19.8	\$19.8	\$19.8	-
Program Construction Management	\$27.0	\$27.0	\$27.0	\$28.0	(\$1.0)
Program Management Total	\$102.3	\$110.3	\$110.3	\$112.8	(\$2.5)

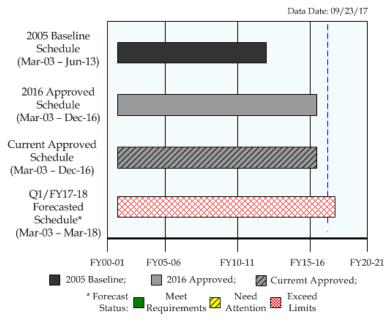
Table 3.3 Status of Program Management Project Cost Breakdown

\* 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, 2016 Approved, Current Approved, and Q1/FY17-18 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 Schedule completion for the overall WSIP (including Regional and Local Programs) and for the Regional Program is December 2019, and the current Forecasted Schedule completion is May 2021 behind Current (17 months Approved Schedule). The Approved Schedule completion for the WSIP Local Program is December 2016, and the current Forecasted Schedule completion is March 2018 (15 months behind Current Approved Schedule).



**Figure 4.1 Program Schedule Summary** 

Refer to Appendix C for a graphical presentation of the WSIP Approved Project-Level Schedule.

Category	2005 Baseline Start	2016 Approved Start	Current* Approved Start	Actual Start	2005 Baseline Finish	2016 Approved Finish	Current* Approved Finish	Q1/FY17-18 Forecasted Finish	Schedule Variance (Months)
Local** Program	03/01/03	03/31/03	03/31/03	03/01/03√	06/28/13	12/30/16	12/30/16	03/30/18	15.0 (Late)
Regional Program	03/01/03	03/31/03	03/31/03	03/01/03√	06/30/14	12/20/19	12/20/19	05/15/21	16.8 (Late)
Overall WSIP	03/01/03	03/01/03	03/01/03	03/01/03√	06/30/14	12/20/19	12/20/19	05/15/21	16.8 (Late)

#### Table 4.1 2016 Approved vs. Q1/FY17-18 Forecasted Schedule Dates

\* The budget and schedule approved as part of the April 2016 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

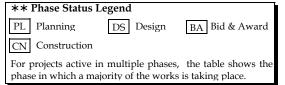
#### Q1-FY2017-2018 (07/01/17 - 09/30/17)

# **5. PROJECT PERFORMANCE SUMMARY\***

All costs are shown in \$1,000s as of 09/23/17

Project Name	Active Phase (**)	2005 Baseline Budget (a)	2016 Approved Budget (b)	Current Approved Budget (c)	Q1/FY17-18 Forecasted Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d)	Cost Status (+)	2005 Baseline Completion (g)	2016 Approved Completion (h)	Current Approved Completion (i)	Q1/FY17-18 Forecasted Completion (j)	Schedule Variance (k = i - j)	Schedule Status (+)	Project Data Sheet
Pump Stations / Tar	nks														
CUW30901 - Lake Merced Pump Station Essential Upgrades	CN	\$ 69,093	\$ 49,296	\$ 49,296	\$ 49,296	\$ 48,833	-	*	07/15/11	12/30/16	12/30/16	03/30/18	15.0 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)



#### + 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 / Tan	ks Project Stat	tus: Construction	Environmental St (Cat	-				
Project Cost:		Project Schedu	le:					
Approved	\$49.30 N	Approved Jan-06		Dec-16				
Forecast*	\$49.30 N	1 Forecast* Jan-06	orecast* Jan-06 🔀 🕅 🕅 🕅					
Actual	\$48.83 N	1 Project Percent C	Complete: 99.3%					
Approved; Actual Co	ost; * 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√	01/31/18				

### **Progress and Status:**

The new CT boards continue to operate without any failures. Additional CT board testing was planned but has been delayed due to system operational constraints. A full change out to the new CT boards will occur once the team determines the boards to be reliable.

Two existing Sutro pump discharge gate valves had shown premature wear/damage during previous shutdown inspection. Under negotiated agreement with the original gate manufacturer, two new Sutro discharge valves have been ordered to replace the existing ones. The valves were fabricated and slated for factory inspection in late August. Unfortunately hurricane Harvey occurred and impacted the valve factory. The team is working with the factory to reschedule the factory inspections in early next quarter. Project substantial completion was achieved on 2/28/13.

### **Issues and Challenges:**

The project final completion and closeout have been impacted due to the additional time needed to validate the effectiveness and reliability of the CT boards and the additional time to procure the new Sutro replacement valves.

The Contractor and CM team continue to finalize close out documentation and outstanding schedule and cost modifications.



Completed Lake Merced Pump Station Buildings

# 7. On-Going Construction

		Schedule				Buc	dget	Varia (Approved)		
Construction Contract	NTP Date	Approved Construction Final Completion* Q1/FY17-18 Forecasted Construction Final Completion*		Approv Contra Cost +	ct	Q1/FY17-18 Forecasted Cost++	Schedule (Cal. Days)	Cost	Actual % Complete	
Pump Stations / Tanks										
CUW30901 - Lake Merced Pump Station Essential Upgrades Project	06/01/09	12/30/15	12/30/15 01/31/18		/18 \$ 35,293,022		\$ 35,293,022	(763)	-	100.0%
	Г	Program TotalApprofor On-GoingContracConstruction\$ 35,29				Q1/FY17-18	Varia	ance		
				ontra	ct Cost	For	ecasted Cost*	Cost	Percent	
				\$ 35,2	93,022	\$	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	2016 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2005 Baseline Project Budget	2016 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	10/31/06	03/27/08	03/27/08	03/27/08	\$ 4,823,675	\$ 4,126,498	\$ 4,126,498	\$ 4,126,498
Pump Station Upgrades CUW31401 - La Grande Tank	06/07/07	12/18/08	12/18/08	12/18/08	\$ 7,919,543	\$ 6,987,728	\$ 6,987,728	\$ 6,987,728
Seismic Upgrade CUW31801 - Forest Hill Tank	01/05/07	08/31/07	08/31/07	08/31/07	\$ 3,204,561	\$ 2,936,199	\$ 2,936,199	\$ 2,936,199
Rehab & Seismic Upgrade 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	08/08/09	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	\$ 10,000,011	\$ 10,000,011	\$ 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	2016 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2005 Baseline Project Budget	2016 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	\$ 3,978,924	\$ 3,978,924	\$ 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.

#### \$180 \$160 \$140 \$120 (\$ Millions) \$100 \$80 \$60 \$40 \$20 FY 07-08 F١ F١ FΥ F FY 12-13 FY 13-14 FY 15-16 FY 16-17 FY 17-18 FY 11-12 05-06 06-07 08-09 09-10 10-11 14-15 Actual Total Cost \$25 **\$**43 \$50 **\$**73 \$43 \$32 \$19 \$23 \$21 \$24 \$14 \$16 2005 Approved Budget \$52 \$52 \$51 **\$**35 **\$**61 \$66 **\$18** \$15 2007 Approved Budget **\$**52 \$64 \$77 **\$**71 \$18 \$0 \$38 **S**0 \$49 \$112 2009 Approved Budget \$71 \$101 2011 Approved Budget \$49 \$155 \$48 \$70 \$19 **S**0 2013 Approved Budget \$29 **\$41** \$30 **\$**51 **\$67** \$33 2014 Approved Budget \$29 \$47 \$42 \$47 \$59 2016 Approved Budget \$84 \$24 \$42 Current Forecast (Remaining Cost) \$46 Percentage Spent\*\* 72% 83% 79% 95% 60% 66% 40% 70% 72% 51% 58% 38%

# 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 FY16-17 and cost projections (Current Forecast) in Q1/FY17-18 through program completion in March 2018. Actual annual expenditures have ranged from 38% to 95% of planned expenditures.

		APPE	NDIX C. WSIP App	roved P	roject-L	evel Scl	hedule				
Project Name	Start	Finish	FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4	FY2009 FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FV2011 FQ1 FQ2 FQ3 FQ4	FY2012 FQ1 FQ2 FQ3 FQ4	FY2013 FY2014 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FC	FY2015 24 FQ1 FQ2 FQ3 FQ4	FY2016 FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 Q4
Local Improvement Projects	02-Jan-01 1	30-Dec-16 0									
Reservoirs	02-Jan-01 1	31-Mar-16 0									
CUW30701 Summit Reservoir Rehabilitation (Compl	02-Jan-01 1	28-Sep-12 0:									
CUW31001 New Northwest Reservoir (Deleted)		30-Jun-08 08		i .							
CUW31901 Hunters Point Reservoir Rehab & Seism											
CUW33401 Stanford Heights Reservoir Rehabilitatio	17-Aug-04 (	01-Apr-11 0:									
CUW33501 Potrero Heights Reservoir Rehabilitation	01-May-03	11-Aug-08 0		-							
CUW33701 Sutro Reservoir Rehab & Seismic Upgra	06-Nov-06	31-Mar-160									
Pump Stations / Tanks	02-Jul-01 12	30-Dec-16 0									
CUW30601 Crocker Amazon Pump Station Upgrade	14-Jan-02 1	27-Mar-08 0									
CUW30901 Lake Merced Pump Station Essential Ur		30-Dec-16 0									
CUW31401 La Grande Tank Seismic Upgrade (Com											
CUW31801 Forest Hill Tank Rehab & Seismic Upgra											
CUW32001 Forest Hill Pump Station Upgrades (Con									<b>_</b>		
CUW32101 Forest Knolls Pump Station Upgrades (C											
CUW32201 Lincoln Park Pump Station Upgrades (C											
CUW32301 Alemany Pump Station Upgrades (McLa											
CUW32401 Mount Davidson Pump Station Upgrade:		0									
CUW32501 Palo Alto Pump Station Upgrades (Com		16-Nov-10 (									
CUW32601 Sky View - Aqua Vista Pump Station Up		11-Aug-09 0									
CUW32701 Summit Pump Station Upgrades (Comp		•									
CUW32801 McLaren #1 Tank Rehab & Seismic Upg											
CUW32901 Potrero Heights Tank Seismic Upgrade (											
CUW33001 Forest Knolls Tank Seismic Upgrade (Co		18-Jan-12 05									
CUW33101 Lincoln Park Tank Seismic Upgrade (Cor				-							
CUW33201 McLaren #2 Tank Rehab & Seismic Upg											
CUW33301 Mount Davidson Tank Seismic Upgrade											
CUW33801 La Grande Pump Station Upgrades (Cor											
CUW33901 Potrero Heights Pump Station Upgrades				÷							
CUW34001 Vista Francisco Pump Station Upgrades		-									
Pipelines / Valves		24-Sep-12 0.									
CUW30401 North University Mound System Upgrade	-	-									
CUW30801 Key Motorized and Other Critical Valves											
CUW3101 Sunset Circulation Improvements (Comp		•									
CUW31201 Lincoln Way Transmission Line (Complet	-			<u> </u>		<u>.                                    </u>					
CUW31301 Noe Valley Transmission Main - Phase 2	-										
CUW31501 East / West Transmission Main (Comple											
CUW31601 Fulton @ 6th (Completed)		11-Aug-08 0									
Miscellaneous		11-Aug-09 0									
	-	•									
CUW30301 Vehicle Service Facility Equipment Safet	-	-									
CUW30501 Fire Protection @ CDD (Completed)	15-Apr-02 1	30-Jan-07 05									
Planning Design Environmental Right-of-W	ay 🗖	Bid & A	Award ruction Management	Constr						P	age 20

# APPENDIX D. PROJECTS WITHIN BUDGET AND SCHEDULE

No projects are currently within budget and schedule.

# APPENDIX E. LIST OF ACRONYMS

AAR	Alternative Analysis Report
AB	Assembly Bill
ACAMS	Access Control and Alarm
	Monitoring System
ACDD	Alameda Creek Diversion Dam
ACDT	Alameda Creek Diversion Tunnel
BART	Bay Area Rapid Transit
BAWSCA	Bay Area Water Supply and
	Conservation Agency
BDPL	Bay Division Pipeline
BHR	Bioregional Habitat Restoration
BO	Biological Opinion
CATEX	Categorical Exemption
CCSF	City and County of San Francisco
CDD	City Distribution Division
CDRP	Calaveras Dam Replacement Project
CEQA	California Environmental Quality Act
CER	Conceptual Engineering Report
CIP	Capital Improvement Program
CM	Construction Management
CMB	Construction Management Bureau
CMD	Contract Monitoring Division
CMIS	Construction Management
<u> </u>	Information System
CO	Change Order
CPI	Cost Performance Index
CSPS	Crystal Springs Pump Station
CSSA	Crystal Springs/San Andreas
DB	Design, Build
DBO DSOD	Design, Build, Operate
D30D	Division of Safety of Dams (State of California)
DVSS	Digital Video Surveillance System
EBMUD	East Bay Municipal Utility District
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EV	Earned Value
EVM	Earned Value Management
FY	Fiscal Year
GM	General Manager
HH	Hetch Hetchy
HTLTIP	Harry Tracy Long Term
	Improvements Project
HTWTP	Harry Tracy Water Treatment Plant
IS	Initial Study
	2

LCSD	Lower Crystal Springs Dam
LCSDI	Lower Crystal Springs Dam
	Improvements
LMPS	Lake Merced Pump Station
LOS	Levels of Service
MG	Million Gallons
MGD	Million Gallons per Day
MND	Mitigated Negative Declaration
NEG DEG	C Negative Declaration (also shown as
	ND)
NEPA	National Environmental Policy Act
NIT	New Irvington Tunnel
NMFS	National Marine Fisheries Service
	(under NOAA)
NOAA	National Oceanic and Atmospheric
	Agency
NOP	Notice of Preparation
NOT	Notice of Termination
NTP	Notice to Proceed
PCCP	Pre-stressed Concrete Cylinder Pipe
PCE	Project Controls Engineer
PE	Project Engineer
PEIR	Program Environmental Impact
	Report
PG&E	Pacific Gas and Electric Company
PPSU	Peninsula Pipeline Seismic Upgrade
QA	Quality Assurance
RFI	Request For Information
RFQ	Request For Qualifications
ROW	Right-of-Way
SABPL	San Antonio Backup Pipeline
SAPL	San Antonio Pipeline
SAPS	San Antonio Pump Station
SCADA	Supervisory Control and Data
	Acquisition
SFPUC	San Francisco Public Utilities
OIDI	Commission
SJPL	San Joaquin Pipeline
SMC	San Mateo County
SMP	Surface Mining Permit
SPI	Schedule Performance Index
SQS	Supplier Quality Surveillance
SSBPL	Sunset Supply Branch Pipeline
SSPL	Sunset Supply Pipeline
SVWTP	Sunol Valley Water Treatment Plant

- SWPPP Stormwater Pollution Prevention Plan
- **TBD** To be determined
- **TBM** Tunnel Boring Machine
- TWR Treated Water Reservoir
- **UM** University Mound
- UV Ultra Violet
- **VFD** Variable Frequency Drive
- WEIP Watershed Environmental
- Improvement Program
- WSIP Water System Improvement Program

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# QUARTERLY REPORT

# Local Projects Q2 FY 2017 | 2018 October 2017 — December 2017

Rebuilding Today for a Better Tomorrow

Published: 02/06/2018

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# TABLE OF CONTENTS

- 1. **Program Description**
- 2. Program Status
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  - 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 The WSIP is structured to costmanner. 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 nonpotable 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, and 2017, 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, and February 14, 2017, respectively. Refer to Appendix A for a scope description of all the local projects included in the WSIP.

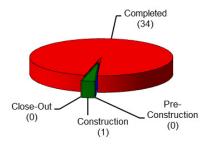
Program Revision	Commission Approval	Budget (\$Million)	Schedule <sup>(*)</sup>	
2003 (Original)	March 1, 2003	\$3,628	03/15/16	
2005 (Baseline)	November 29, 2005	\$4,343	06/30/14	
2007 (Revised)	February 26, 2008	\$4,392	12/18/14	
2009 (Revised)	July 28, 2009	\$4,586	12/04/15	
2011 (Revised)	July 12, 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 (Latest Approved)	February 14, 2017	\$4,845	12/20/19	

\* Final Program Completion Date

# 2. PROGRAM STATUS

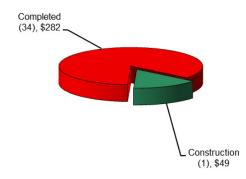
This second (2nd) Quarterly Report for Fiscal Year (FY) 2017-2018 presents the progress made on the WSIP local projects between October 1, 2017 and December 31, 2017. The program's schedule and budget were last approved by the San Francisco Public Utilities Commission (SFPUC or Commission) on February 14, 2017. 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, 2017. The number of projects currently active in each phase is shown in parentheses.



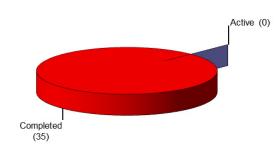
#### Figure 2.2 Number of Projects in Pre-construction, Construction, and Post-construction

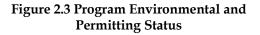
Figure 2.3 summarizes the environmental review and permitting status of the WSIP 35 local projects as of December 31, 2017.



### 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, 2017: Pre-construction, Construction, and Post-construction.





# 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, 2016 Approved, Current Approved and Q2/FY17-18 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 \$4,845.5 million and \$4,887.5 million, respectively (\$42.0 million over Current Approved Budget). The Current Approved WSIP Budget and Forecasted Cost at completion for the Local Improvement Projects (including construction contingency) are \$331.4 million. Appendix Refer to В for a graphical representation of how the WSIP budget and actual expenditures have changed over time.

Cost Categories	Expenditures To Date (\$ Million) (A)	2005 Baseline Budget (\$ Million) (B)	2016 Approved Budget (\$ Million) (C)	Current Approved Budget <sup>(7)</sup> (\$ Million) (D)	Q2/FY17-18 Forecasted Costs (\$ Million) (E)	Cost Variance (\$ Million) (F = D - E)
Local Improvement Projects	\$325	\$353	\$325.8	\$325.8	\$325.7	\$0.2
Construction Costs <sup>(1)</sup>	\$232	\$259	\$232.3	\$232.3	\$232.3	\$0.0
Program Delivery Costs <sup>(2)</sup>	\$92	\$91	\$92.3	\$92.3	\$92.2	\$0.2
Other Costs <sup>(3)</sup>	\$1	\$4	\$1.2	\$1.2	\$1.2	-
Construction Contingency for Local Improvement Projects (4)	\$6	\$30	\$5.6	\$5.6	\$5.7	(\$0.2)
LOCAL PROGRAM WITH CONTINGENCY	\$331	\$383	\$331.4	\$331.4	\$331.4	\$0.0
Regional Improvement Projects	\$3,290	\$3,375	\$3,498.9	\$3,498.9	\$3,536.9	(\$38.1)
Support Projects <sup>(5)</sup>	\$217	\$33	\$262.2	\$262.2	\$266.1	(\$3.9)
Local Water Supply Projects <sup>(6, 8)</sup>	\$101	-	\$281.3	\$281.3	\$281.3	-
Finance	\$462	\$552	\$471.7	\$471.7	\$471.7	-
PROGRAM TOTAL	\$4,402	\$4,343	\$4,845.5	\$4,845.5	\$4,887.5	(\$42.0)

**Table 3.1 Program Cost Summary** 

Notes:

1. **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.

2. **Delivery Costs** include project management, planning, environmental (CEQA, permitting, construction compliance), design, construction management, and engineering support during construction.

3. Other Costs include environmental mitigation, art enrichment, security improvements, and real estate expenses.

- 4. 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 2014 Approved Budget for construction contingency includes all change orders and trends as identified at the time of the March 2014 Revised WSIP, as well as additional contingency funding allocated to cover the 65% confidence level risks identified at the time of the March 2014 Revised WSIP. For projects in pre-construction, the 2014 Approved Budget for construction contingency includes 10% of the estimated construction base bid.
- 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 Environmental Improvement Program. Please note that the costs reflected above for support projects include total project costs, including "Construction", "Delivery" and "Other" costs.

6. 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.

7. The budget approved as part of the March 2016 Revised WSIP, plus any additional budget changes approved by the Commission as part of additional contingencies on construction contract.

8. The WSIP Local Water Supply projects underwent a September 2013 re-baseline. Only the original WSIP portion of the rebaselined costs is reported here. The remaining budget is funded under the Water Enterprise CIP and will be managed outside the purview of the WSIP.

Table 3.2 provides the status of construction contingencies. For each sub-program, it shows the 2016 Approved Contingency; the Current Approved Contingency; the Q2/FY17-18 Forecasted Change Orders; the Q2/FY17-18 Forecasted Trends; Project Savings Moved to Contingency/ Funds Moved out of Contingency; the Q2/FY17-18 Forecasted Construction Contingency; and the Remaining Contingency as of the end of the reporting quarter. As of December 31, 2017, 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	2016 Approved Contingency <sup>(1)</sup> (\$ Million) (A)	Current Approved Contingency <sup>(2,3)</sup> (\$ Million) (B)	Q2/FY17-18 Forecasted Change Orders <sup>(3)</sup> (\$ Million) (C)	Q2/FY17-18 Forecasted Trends <sup>(4)</sup> (\$ Million) (D)	Project Savings (+) Moved to Contingency/ Funds () Moved out of Contingency <sup>(5)</sup> (\$ Million) (E)	Current Forecasted Contingency (\$ Million) (F = B+ E)	Q2/FY17-18 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:

- 2. Contingency included in March 2016 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 2016 Revised WSIP.

<sup>1.</sup> Contingency included in March 2016 Revised WSIP.

# Q2-FY2017-2018 (10/01/17 - 12/31/17)

The Program Management project includes programmatic activities that span multiple regions and benefit several WSIP projects (Table 3.5). 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 preconstruction 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 construction program-level 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 \$112.7 million, which is \$2.5 million over the Current Approved Budget of \$110.3 million.

Category	Expenditures To Date (\$ Million) (A)	2016 Approved Budget (\$ Million) (B)	Current Approved Budget (\$ Million) (C)	Q2/FY17-18 Forecasted Cost* (\$ Million) (D)	Cost Variance (\$ Million) (E = C-D)
Management Support	\$36.0	\$41.3	\$41.3	\$42.8	(\$1.5)
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	\$18.7	\$19.8	\$19.8	\$19.8	-
Program Construction Management	\$27.0	\$27.0	\$27.0	\$28.0	(\$1.0)
Program Management Total	\$103.0	\$110.3	\$110.3	\$112.7	(\$2.5)

#### Table 3.3 Status of Program Management Project Cost Breakdown

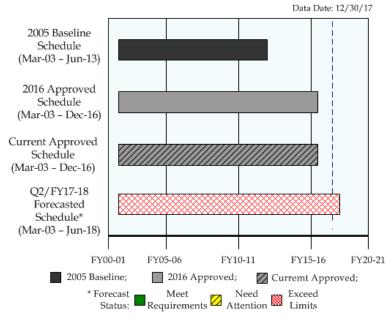
\* Increase to Program Management Forecast Cost Variance is due to transfer of savings from other projects into Director's Reserve.

#### 4. PROGRAM SCHEDULE SUMMARY

Figure 4.1 and Table 4.1 compare the 2005 Baseline, 2016 Approved, Current Approved, and Q2/FY17-18 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 Schedule completion for the overall WSIP (including Regional and Local Programs) and for the Regional Program is December 2019, and the current Forecasted Schedule completion is December 2021 (24 months behind Current Approved Schedule). The Approved Schedule

completion is June 2018 (18 months behind Current Approved Schedule). Refer to Appendix C for a graphical presentation of the WSIP Approved Project-Level Schedule.



completion for the WSIP Local Program is December 2016, and the current Forecasted Schedule

**Figure 4.1 Program Schedule Summary** 

Category	2005 Baseline Start	2016 Approved Start	Current* Approved Start	Actual Start	2005 Baseline Finish	2016 Approved Finish	Current* Approved Finish	Q2/FY17-18 Forecasted Finish	Schedule Variance (Months)
Local** Program	03/01/03	03/31/03	03/31/03	03/01/03√	06/28/13	12/30/16	12/30/16	06/29/18	18.0 (Late)
Regional Program	03/01/03	03/31/03	03/31/03	03/01/03√	06/30/14	12/20/19	12/20/19	12/30/21	24.4 (Late)
Overall WSIP	03/01/03	03/01/03	03/01/03	03/01/03√	06/30/14	12/20/19	12/20/19	12/30/21	24.4 (Late)

\* The budget and schedule approved as part of the April 2016 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

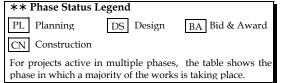
#### Q2-FY2017-2018 (10/01/17 - 12/31/17)

# **5. PROJECT PERFORMANCE SUMMARY\***

All costs are shown in 1,000 as of 12/30/17

Project Name	Active Phase (**)	2005 Baseline Budget (a)	2016 Approved Budget (b)	Current Approved Budget (c)	~ /	Expenditures To Date (e)	Cost Variance (f= c - d)	Cost Status (+)	2005 Baseline Completion (g)	2016 Approved Completion (h)	Current Approved Completion (i)	Q2/FY17-18 Forecasted Completion (j)	Schedule Variance (k = i - j)	Schedule Status (+)	Project Data Sheet
Pump Stations / Tar	nks														
CUW30901 - Lake Merced Pump Station Essential Upgrades	CN	\$ 69,093	\$ 49,296	\$ 49,296	\$ 49,296	\$ 48,853	-	*	07/15/11	12/30/16	12/30/16	06/29/18	18.0 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)



#### + 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 / Tanl	S Project State	tus: Construction	Environmental Status: Completed (CatEx)				
Project Cost:		Project Schedu	ıle:				
Approved	\$49.30 N	Approved Jan-06	5	Dec-16			
Forecast*	\$49.30 N	I Forecast* Jan-06	5 \$222222222222222222222222222222222222				
Actual	Actual \$48.85 M Project Percent Complete: 99.3%						
Approved; Actual Co	st; * 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√	03/30/18			

#### **Progress and Status:**

The new CT boards continue to operate without any failures. Additional CT board tests to complete the reliability testing have been delayed due to system/equipment operational constraints. A full change out to the new CT boards will occur once the team determines the boards to be reliable.

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. The valves have been fabricated and factory inspection of the first is slated for early January 2018. The second valve will undergo factory inspection after the first valve is installed and fully tested. Project substantial completion was achieved on 2/28/13.

#### **Issues and Challenges:**

The project final completion and closeout have been impacted due to the additional time needed to validate the effectiveness and reliability of the CT boards and the additional time to procure the new Sutro replacement valves.

The Contractor and CM team continue to finalize close out documentation and outstanding schedule and cost modifications.



Completed Lake Merced Pump Station Buildings

# 7. On-Going Construction

		Schedule			Buc	lget	Variance (Approved - Forecast)		
Construction Contract	NTP Date	Approved Construction Final Completion*		Cost	act	Q2/FY17-18 Forecasted Cost++	Schedule (Cal. Days)	Cost	Actual % Complete
Pump Stations / Tanks									
CUW30901 - Lake Merced Pump Station Essential Upgrades Project	06/01/09	12/30/15	03/30/18	\$ 35,293,	,022	\$ 35,293,022	(821)	-	100.0%
				roved		Q2/FY17-18	Variance		
		for On-Goin	ig Contra	ct Cost	For	ecasted Cost*	Cost	Percent	
		Constructio	n \$ 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	2016 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2005 Baseline Project Budget	2016 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	10/31/06	03/27/08	03/27/08	03/27/08	\$ 4,823,675	\$ 4,126,498	\$ 4,126,498	\$ 4,126,498
Pump Station Upgrades 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	08/08/09	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	\$ 10,000,011	\$ 10,000,011	\$ 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	2016 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2005 Baseline Project Budget	2016 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	\$ 3,978,924	\$ 3,978,924	\$ 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.

#### \$180 \$160 \$140 \$120 (\$ Millions) \$100 \$80 \$60 \$40 \$20 FY 13-14 07-08 08-09 17-18 05-06 06-07 09-10 10-11 11-12 12-13 14-15 15-16 16-17 \$25 \$43 \$50 \$73 \$43 \$32 \$19 \$23 \$21 \$24 \$14 \$16 \$14 Actual Total Cost 2005 Approved Budget \$35 \$52 \$52 \$61 \$66 \$51 \$18 \$15 2007 Approved Budget \$64 \$77 \$71 \$52 \$18 \$0 2009 Approved Budget \$71 \$49 \$101 \$112 \$38 \$0 2011 Approved Budget \$48 \$49 \$70 \$155 \$19 \$0 \$33 \$29 \$51 2013 Approved Budget \$41 \$30 \$67 2014 Approved Budget \$29 \$47 \$42 \$47 \$59 \$24 \$42 \$84 2016 Approved Budget \$42 Current Forecast (Remaining Cost) 72% 83% 79% 95% 60% 66% 40% 70% 72% 51% 58% 38% Percentage Spent\*\*

# 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/FY17-18 and cost projections (Current Forecast) in Q2/FY17-18 through program completion in June 2018. Actual annual expenditures have ranged from 38% to 95% of planned expenditures.

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# APPENDIX D. PROJECTS WITHIN BUDGET AND SCHEDULE

No projects are currently within budget and schedule.

# APPENDIX E. LIST OF ACRONYMS

AAR	Alternative Analysis Report
AB	Assembly Bill
ACAMS	Access Control and Alarm
	Monitoring System
ACDD	Alameda Creek Diversion Dam
ACDT	Alameda Creek Diversion Tunnel
ACWD	Alameda County Water District
BART	Bay Area Rapid Transit
BAWSCA	Bay Area Water Supply and
	Conservation Agency
BDPL	Bay Division Pipeline
BHR	Bioregional Habitat Restoration
BO	Biological Opinion
CATEX	Categorical Exemption
CCSF	City and County of San Francisco
CDD	City Distribution Division
CDRP	Calaveras Dam Replacement Project
CEQA	California Environmental Quality Act
CER	Conceptual Engineering Report
CIP	Capital Improvement Program
CM	Construction Management
CMB	Construction Management Bureau
CMD	Contract Monitoring Department
CMD	Contract Monitoring Division
CMIS	Construction Management
	Information System
CO	Change Order
CPI	Cost Performance Index
CSPS	Crystal Springs Pump Station
CSSA	Crystal Springs/San Andreas
DB	Design, Build
DSOD	Division of Safety of Dams (State of
	California)
DVSS	Digital Video Surveillance System
EBMUD	East Bay Municipal Utility District
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EV	Earned Value
EVM	Earned Value Management
FY	Fiscal Year
HH	Hetch Hetchy
HTLTIP	Harry Tracy Long Term
	Improvements Project
HTWTP	Harry Tracy Water Treatment Plant
JOC	Job Order Contract

LOOD	
LCSD	Lower Crystal Springs Dam
LCSDI	Lower Crystal Springs Dam
	Improvements
LMPS	Lake Merced Pump Station
LOS	Levels of Service
MG	Million Gallons
MGD	Million Gallons per Day
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
NEG DEC	C Negative Declaration (also shown as
	ND)
NEPA	National Environmental Policy Act
NIT	New Irvington Tunnel
NMFS	National Marine Fisheries Service
NOAA	(under NOAA)
NOAA	National Oceanic and Atmospheric Agency
NOT	Notice of Termination
NTP	Notice to Proceed
РССР	Pre-stressed Concrete Cylinder Pipe
PCE	Project Controls Engineer
PE	Project Engineer
PEIR	Program Environmental Impact
	Report
PG&E	Pacific Gas and Electric Company
PPSU	Peninsula Pipeline Seismic Upgrade
QA	Quality Assurance
RFI	Request For Information
ROW	Right-of-Way
SABPL	San Antonio Backup Pipeline
SAPL	San Antonio Pipeline
SAPS	San Antonio Pump Station
SCADA	Supervisory Control and Data
	Acquisition
SFPUC	San Francisco Public Utilities
	Commission
SJPL	San Joaquin Pipeline
SMC	San Mateo County
SMP	Surface Mining Permit
SPI	Schedule Performance Index
SQS	Supplier Quality Surveillance
SSBPL	Sunset Supply Branch Pipeline
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
- UV Ultra Violet
- **VFD** Variable Frequency Drive
- WEIP Watershed Environmental
- Improvement Program
- WSIP Water System Improvement Program

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# QUARTERLY REPORT

# Local Projects Q3 FY 2017 | 2018 January 2018 — March 2018

Rebuilding Today for a Better Tomorrow

Published: 05/01/2018

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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 The WSIP is structured to costmanner. 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 nonpotable 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.

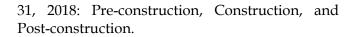
Program Revision	Commission Approval	Budget (\$Million)	Schedule <sup>(*)</sup>
2003 (Original)	March 1, 2003	\$3,628	03/15/16
2005 (Baseline)	November 29, 2005	\$4,343	06/30/14
2007 (Revised)	February 26, 2008	\$4,392	12/18/14
2009 (Revised)	July 28, 2009	\$4,586	12/04/15
2011 (Revised)	July 12, 2011	\$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

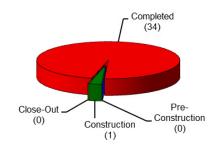
\* Final Program Completion Date

# 2. PROGRAM STATUS

This third (3rd) Quarterly Report for Fiscal Year (FY) 2017-2018 presents the progress made on the WSIP local projects between January 1, 2018 and March 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.

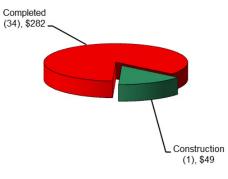
Figure 2.1 shows the total Approved Budget for the local projects remaining in each phase of the program as of March 31, 2018. The number of projects currently active in each phase is shown in parentheses.





#### 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, 2018.



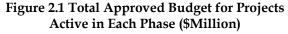


Figure 2.2 shows the number of local projects in the following stages of the program as of March

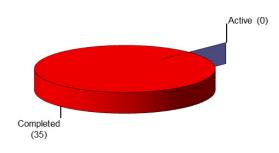


Figure 2.3 Program Environmental and Permitting Status

# 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/FY17-18 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.

Cost Categories	Expenditures To Date (\$ Million) (A)	2005 Baseline Budget (\$ Million) (B)	2018 Approved Budget (\$ Million) (C)	Current Approved Budget (7) (\$ Million) (D)	Q3/FY17-18 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 <sup>(3)</sup>	\$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	\$3,316	\$3,375	\$3,536.9	\$3,536.9	\$3,536.9	-
Support Projects (5)	\$219	\$33	\$266.1	\$266.1	\$266.1	-
Local Water Supply Projects <sup>(6, 8)</sup>	\$103	-	\$281.3	\$281.3	\$281.3	-
Finance	\$372	\$552	\$372.0	\$372.0	\$372.0	-
PROGRAM TOTAL	\$4,342	\$4,343	\$4,787.8	\$4,787.8	\$4,787.8	-

#### **Table 3.1 Program Cost Summary**

Notes:

1. **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.

2. **Delivery Costs** include project management, planning, environmental (CEQA, permitting, construction compliance), design, construction management, and engineering support during construction.

3. **Other Costs** include environmental mitigation, art enrichment, security improvements, and real estate expenses.

4. 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.
- 6. 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.
- 7. 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.
- 8. The WSIP Local Water Supply projects underwent a September 2013 re-baseline. Only the original WSIP portion of the rebaselined costs is reported here. The remaining budget is funded under the Water Enterprise CIP and is managed outside the purview of the WSIP.

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/FY17-18 Forecasted Change Orders; the Q3/FY17-18 Forecasted Trends; Project Savings Moved to Contingency/ Funds Moved out of Contingency; the Q3/FY17-18 Forecasted Construction Contingency; and the Remaining Contingency as of the end of the reporting quarter. As of March 31, 2018, the Forecasted Construction Contingency is \$3.7 million and the Total Forecasted Remaining Contingency is \$0.0 million.

Sub Program	2018 Approved Contingency <sup>(1)</sup> (\$ Million) (A)	Current Approved Contingency <sup>(2,3)</sup> (\$ Million) (B)	Q3/FY17-18 Forecasted Q3/FY17-18 Change Forecasted		Project Savings (+) Moved to Contingency/ Funds () Moved out of Contingency <sup>(5)</sup> (\$ Million) (E)	Current Forecasted Contingency (\$ Million) (F = B+ E)	Q3/FY17-18 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	-

#### Table 3.2 Status of Construction Contingency

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.

## Q3-FY2017-2018 (01/01/18 - 03/31/18)

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 preconstruction 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 construction program-level 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 Budget and Forecasted Total Program Management Cost are \$112.7 million.

Category	Expenditures To Date (\$ Million) (A)	2018 Approved Budget (\$ Million) (B)	Current Approved Budget (\$ Million) (C)	Q3/FY17-18 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	-

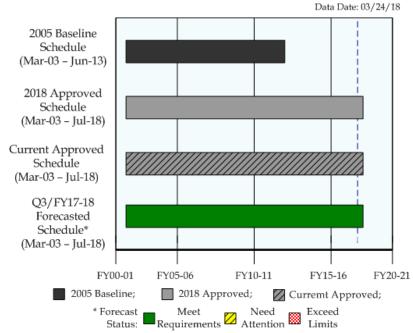
#### Table 3.3 Status of Program Management Project Cost Breakdown

\* 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/FY17-18 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) is in December 2021. The Current Approved and Forecasted Schedule completion for the WSIP Local Program is July 2018. Refer to Appendix C for a graphical presentation of the WSIP Approved Project-Level Schedule.



**Figure 4.1 Program Schedule Summary** 

Category	2005 Baseline Start	2018 Approved Start	Current* Approved Start	Actual Start	2005 Baseline Finish	2018 Approved Finish	Current* Approved Finish	Q3/FY17-18 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	7/31/18	-
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

#### Q3-FY2017-2018 (01/01/18 - 03/31/18)

# **5. PROJECT PERFORMANCE SUMMARY\***

All costs are shown in \$1,000s as of 03/24/18

Project Name	Active Phase (**)	2005 Baseline Budget (a)	2018 Approved Budget (b)	Current Approved Budget (c)	Q3/FY17-18 Forecasted Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d)	Cost Status (+)	2005 Baseline Completion (g)	2018 Approved Completion (h)	Approved	Q3/FY17-18 Forecasted Completion (j)	Schedule	Schedule Status (+)	Project Data Sheet
Pump Stations / Tar	nks														
CUW30901 - Lake Merced Pump Station Essential Upgrades	CN	\$ 69,093	\$ 49,296	\$ 49,296	\$ 49,296	\$ 48,862	-	*	07/15/11	07/31/18	07/31/18	07/31/18	-	*	See Appendix D

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



#### + 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

All projects are within the current approved budget and schedule.

# 7. On-Going Construction

		Schedule			Buc	dget	Varia (Approved)		
Construction Contract	NTP Date	Approved Construction Final Completion* Q3/FY17-18 Forecasted Construction Final Completion*		Cost	act	Q3/FY17-18 Forecasted Cost++	Schedule (Cal. Days)	Cost	Actual % Complete
Pump Stations / Tanks									
CUW30901 - Lake Merced Pump Station Essential Upgrades Project	06/01/09	12/30/15	04/30/18	\$ 35,293,	,022	\$ 35,293,022	(852)	-	100.0%
		Program Total Appro			oved Q3/FY17-18		Variance		
		for On-Goir	<u>ها</u>	act Cost	For	ecasted Cost*	Cost	Percent	
		Construction		293,022	93,022 \$ 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	12/08/06	09/28/12	09/28/12	09/28/12	\$ 14,927,859	\$ 12,294,537	\$ 12,294,537	\$ 12,294,537
Reservoir Rehabilitation CUW31901 - Hunters Point	05/04/12	10/31/12	10/31/12	10/31/12	\$ 8,122,861	\$ 3,086,717	\$ 3,086,717	\$ 3,086,717
Reservoir Rehab & Seismic Upgrade	00/04/12	10/ 51/ 12	10/ 51/ 12	10/ 51/ 12	φ 0,122,001	\$ 3,000,717	\$ 3,000,717	\$ 3,000,717
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	07/13/07	08/11/08	08/11/08	08/11/08	\$ 7,610,033	\$ 6,836,736	\$ 6,836,736	\$ 6,836,736
Reservoir Rehabilitation CUW33701 - Sutro Reservoir	07/15/11	03/31/16	03/31/16	03/31/16	\$ 31,372,263	\$ 39,468,198	\$ 39,468,198	\$ 39,462,621
Rehab & Seismic Upgrade <b>Pump Stations /</b>		, ,				, ,	, ,	, . , .
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	07/10/09	08/30/13	08/30/13	08/30/13	\$ 10,391,557	\$ 29,095,501	\$ 29,095,501	\$ 29,095,501
Station Upgrades (McLaren Park)	- / -/	00/00/10			,,	\$ 29,090,001	φ 29,090,001	φ 29,090,001
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	10/10/08	08/11/08	08/11/08	08/11/08	\$ 5,354,512	\$ 4,659,741	\$ 4,659,741	\$ 4,659,741
Rehab & Seismic Upgrade CUW32901 - Potrero Heights	07/13/07	08/11/08	08/11/08	08/11/08	\$ 1,281,714	\$ 1,084,863	\$ 1,084,863	\$ 1,084,863
Tank Seismic Upgrade CUW33001 - Forest Knolls								\$ 1,004,003
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

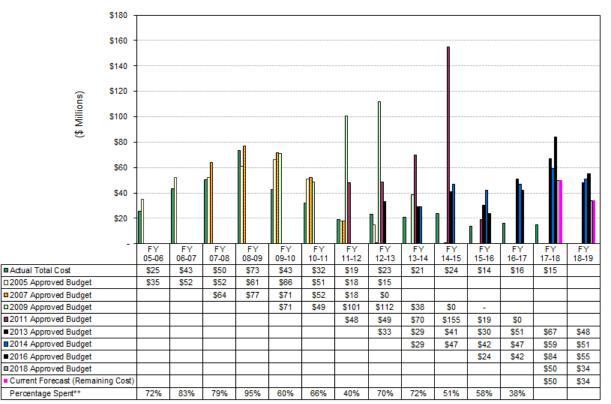
## CUW30301 - Vehicle Service Facility Equipment Safety Upgrade (Completed)

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 Q3/FY17-18 and cost projections (Current Forecast) in Q3/FY17-18 through program completion in July 2018. Actual annual expenditures have ranged from 38% to 95% of planned expenditures.

Section         Object	lame	Start	Finish	FY2017 FY2008 FY2009 FY2010 FY2011 FY2012 FY2013 FY2014 FY2015 FY2016 F04 F01 F02 F03 F04 F01 F02 F03 F02 F03 F04 F01 F02 F03 F02 F03 F04 F01 F02 F03	FY201
Reserve         02-bit	ocal Improvement Projects	02-Jan-01	31-Jul-18		-01  -02
CUW3001         Summ Reservor Rehabitation (Concellence)         82-59-12         Image: Concellence         Image: Concelence         Image: Conce         Image: Concel	1 5				
CUV30101       New Northwest Reservoir (Diebited)       SNume(B)       Nume(B)       Nume(B)<					
CUV3001         Hutter Port Reservor Retabilition         1.0.4.12         Image: Cover Setup Section Party Sectin Party Sectin Party Sectim Party Sectim Party Section Party Se					
CUV3301         Starford Heights Reservor Rehabilition         1-Aug-01         0-Aug-01           CUV3301         Star Reservor Rehabilition         0-Aug-01         3-Aug-02           CUV3301         Star Reservor Rehabilition         0-Aug-01         3-Aug-02           CUV3301         Star Reservor Rehabilition         0-Aug-01         3-Aug-02           CUV30001         Color Anazon Pump Station Upgrade (2m)         3-Aug-02           CUV30001         Cade Mercod Pump Station Upgrade (2m)         3-Aug-02           CUV30001         Cade Mercod Pump Station Upgrade (2m)         3-Aug-02           CUV30001         Forst Krolls Pump Station Upgrades (2m)         3-Aug-02           CUV30001         Forst Krolls Tark Stamon Upgrades (2m)         3-Aug-02           CUV30001         Forst Krolls Tark Stamon Upgrades (2m)         3-Aug-02           CUV30001         Forst Krolls Tark Stamon					
CUV3301       Potero Heighis Reservor Rehabilitation       01.489-04 <td></td> <td></td> <td></td> <td></td> <td></td>					
CUW3201         Subre Restroy Retails 4. Semiculogn         0:5:::::::::::::::::::::::::::::::::::	· · · · · · · · · · · · · · · · · · ·	0			
Pump Stations / Tanks       02-Jubit       02-Jubit </td <td></td> <td>-</td> <td></td> <td></td> <td></td>		-			
CUW3001       Cocker Amazon Pump Station Uggade       13-Jan-80       3-Jan-80       3-Jan-90       3-Jan-90 <t< td=""><td></td><td></td><td></td><td></td><td></td></t<>					
CUW3001       Lake Merced Pump Station Exemit Ugg 21,4m6       31,4m18         CUW3101       Excred Fark Seismic Uggad (Coll 1),1m108       01,4m1         CUW3201       Forest Hill Tark Rehab & Seismic Uggad (Coll 1),1m108       01,4m1         CUW3201       Forest Hill Tark Rehab & Seismic Uggad (Coll 1),1m108       01,4m1         CUW3201       Forest Hill Tark Rehab & Seismic Uggad (Coll 1),1m108       01,4m1         CUW3201       Forest Hill Tark Rehab & Seismic Uggad (Coll 1),1m208       01,4m1         CUW3201       Mont Davidson Pump Station Uggrades (Coll 1),1m208       0,3m4,11         CUW32021       Mont Davidson Pump Station Uggrades (Coll 1),1m208       0,3m4,11         CUW32021       Mont Davidson Pump Station Uggrades (Coll 1),1m208       0,3m4,11         CUW32021       Mont Davidson Pump Station Uggrades (Coll 1),1m208       0,3m4,11         CUW32021       Mont Davidson Pump Station Uggrades (Coll 1),1m208       0,3m4,11         CUW3201       Mont Pump Station Uggrades (Coll 1),1m208       0,3m4,11         CUW3201       Mont Pump Station Uggrades (Coll 1),1m208       0,3m4,11         CUW3201       Mont Davidson Tark Seismic Uggrade (Coll 1),1m208       0,3m4,11         CUW3201       Mont Davidson Tark Seismic Uggrade (Coll 1),1m208       0,3m4,11         CUW3201       Mont Davidson Tark Seismic Uggrade (Coll 1),1	*				
CUV3101       LG Gande Tank Seisme Upgrade (Con       0:Jul-10       15-Dec;04         CUV3201       Forest Hill Tunk Rebab & Seismic Upgrade (Coi       0:Jul-14       0:Jul-14         CUV3201       Forest Knöl Pump Station Upgrades (Coi       0:Jul-14       0:Jul-14         CUV3201       Forest Knöl Pump Station Upgrades (Coi       0:Jul-14       0:Jul-14         CUV3201       Forest Knöl Pump Station Upgrades (Coi       1:Jul-26       0:Jul-26         CUV32021       Locoh Park Yump Station Upgrades (Coi       1:Jul-26       0:Jul-26         CUV32021       North Davidos Pump Station Upgrades (Coi       1:Jul-26       0:Jul-26         CUV32021       Sation Upgrades (Coi       1:Jul-26       0:Jul-26       0:Jul-26         CUV32021       Sation Upgrades (Coi       0:Jul-26       0:Jul-26       0:Jul-26         CUV32021       Sation Upgrades (Coi       0:Jul-26       0:Jul-26       0:Jul-26         CUV32021       Summit Pump Station Upgrades (Coi       0:Jul-26       0:Jul-26       0:Jul-26       0:Jul-26         CUV32021       Summit Pump Station Upgrades (Coi       0:Jul-26       0:Jul-26       0:Jul-26       0:Jul-26         CUV32021       Summit Pump Station Upgrades (Coi       0:Jul-26       0:Jul-26       0:Jul-26       0:Jul-26       0:J					
CUW3101       Forest Hill Tank Rehab & Seismic Upgrades (Co       11-Julo3       01-Jul-13         CUW3201       Forest Knolls Pump Station Upgrades (C)       01-Jul-13       01-Jul-13         CUW3201       Lincin Park Pump Station Upgrades (C)       01-Jul-13       0-Aug-13         CUW3201       Lincin Park Pump Station Upgrades (C)       01-Jul-13       0-Aug-13         CUW3201       Muant Pump Station Upgrades (C)       01-Jul-13       0-Aug-13         CUW3201       Nucl Rowtson Pump Station Upgrades (C)       10-Aug-14       0-Aug-13         CUW3201       Sky View - Aque Vista Pump Station Upgrades (Com)       10-Aug-14       0-Aug-14         CUW3201       Sky View - Aque Vista Pump Station Upgrades (Com)       10-Aug-14       0-Aug-14       0-Aug-14         CUW3201       Sky View - Aque Vista Pump Station Upgrades (COm)       10-Aug-14       0-Aug-14       0-Aug-14         CUW3201       Nucler ent Zam Kelba & Seismic Upgrade (CO       11-Aug-14       0-Aug-14       0-Aug-14       0-Aug-14         CUW3201       Nucler ent Zam Kelba & Seismic Upgrade (CO       11-Aug-14       0-Aug-14       0-Aug-14       0-Aug-14       0-Aug-14         CUW3301       Lacon Park Tank Seismic Upgrade (CO       11-Aug-14       0-Aug-14       0-Aug-14       0-Aug-14       0-Aug-14       0-Aug-14					
CUW32001       Forest Hill Pump Station Uggrades (Co       01-Jul 43       01-Jul 44         CUW3201       Lincoh Park Rung Station Uggrades (Co       01-Jul 43       11-Auge 44         CUW3201       Lincoh Park Rung Station Uggrades (Co       01-Jul 43       11-Auge 44         CUW3201       Lincoh Park Rung Station Uggrades (Co       01-Jul 43       03-Aug 13         CUW3201       Munt Davidson Pump Station Uggrades (Co       13-Auge 44       10-Auge 44         CUW3201       Munt Davidson Pump Station Uggrades (Co       13-Auge 44       10-Auge 44         CUW3201       Munt Davidson Pump Station Uggrades (Co       13-Auge 44       10-Auge 44         CUW3201       Summ R Pump Station Uggrades (Co       13-Auge 48       10-Auge 44         CUW3201       Poters Heights Tark Selsmic Uggrade (Co       11-Auge 48       10-Auge 44         CUW3201       Poters Heights Tark Selsmic Uggrade (Co       11-Auge 48       10-Auge 44         CUW3201       Poters Heights Tark Selsmic Uggrade (Co       11-Auge 48       10-Auge 44         CUW3201       Poters Heights Pump Station Uggrade (Co       11-Auge 48       10-Auge 44         CUW3201       Nuclarer #1 Tark Rehab & Selsmic Uggrade (Co       11-Auge 48       10-Auge 44         CUW3201       Nuclarer #1 Tark Rehab & Selsmic Uggrade (Co       11-Auge 48					
CUW32010       Forest Knolls Pump Station Upgrades (C       0.1-ul-03       18-Jan-12       1			-		
CUW32201 Lincoh Park Pump Station Upgrades (McLa 13-bc-44       30-Aug-13         CUW32201 Alemany Pump Station Upgrades (Com 13-bc-44       30-Aug-13         CUW32201 Palo Alto Pump Station Upgrades (Com 13-bc-44       13-bc-44         CUW32201 Valora Davidson Fump Station Upgrades (Com 13-bc-44       13-bc-44         CUW32201 Valora Pump Station Upgrades (Com 13-bc-44       11-Aug-08         CUW32201 Summt Pump Station Upgrades (Com 02-Sep-03       11-Aug-08         CUW32201 McLaren #1 Tank Rehab & Seismic Upgrade (O-11-bc-40)       11-Aug-08         CUW3201 McLaren #2 Tank Rehab & Seismic Upgrade (Com 11-bc-40)       11-Aug-08         CUW33001 Forest Knolls Tank Seismic Upgrade (Com 11-bc-40)       11-Aug-08         CUW33001 McLaren #2 Tank Rehab & Seismic Upgrade (Com 0-1-bc-40)       11-Aug-08         CUW33001 Mourt Davidson Tank Seismic Upgrade (Com 0-1-bc-40)       11-Aug-08         CUW33001 Mourt Davidson Tank Seismic Upgrade (Com 0-1-bc-40)       11-Aug-08         CUW33001 Mourt Davidson Tank Seismic Upgrade (Com 0-1-bc-40)       11-Aug-08         CUW33001 Mourt Davidson Tank Seismic Upgrade (Com 0-1-bc-40)       11-Aug-08         CUW33001 Mourt Davidson Tank Seismic Upgrade (Com 0-1-bc-40)       11-Aug-08         CUW33001 Mourt Davidson Tank Seismic Upgrade (Com 0-1-bc-40)       11-Aug-08         CUW33001 North University Mound System Upgrade (2-0-bc-40)       24-bc-40       24-bc-40      <					
CUW32301       Alemany Pump Station Upgrades (McLa       13-Dec-04       30-Aug-13         CUW32401       Mount Davidson Pump Station Upgrades (Com       13-Dec-04       16-Nu-10         CUW3201       Bay Mey - Aqua Vist Pump Station Upgrades (Com       13-Dec-04       16-Nu-10         CUW3201       Sky View - Aqua Vist Pump Station Upgrades (Com       02-Dec-05       30-Mu-11         CUW3201       McLaren #1 Tank Rehab & Seismic Upgrade (Com       02-Sen-03       11-Aug-08         CUW3201       McLaren #1 Tank Rehab & Seismic Upgrade (Com       01-Jul-03       11-Aug-08         CUW3201       Licon Park Tank Seismic Upgrade (Com       01-Jul-03       11-Aug-08         CUW3301       Licon Park Tank Seismic Upgrade (Com       01-Jul-03       11-Aug-08         CUW3301       Licon Park Tank Seismic Upgrade (Com       01-Jul-03       11-Aug-08         CUW3301       Licon Park Rehab & Seismic Upgrade (Com       01-Jul-03       11-Aug-08         CUW3301       La Grande Pump Station Upgrades       20-Dec-05       30-Mur-11         CUW3301       La Grande Pump Station Upgrades       21-Jul-04       11-Aug-08         CUW3301       La Grande Pump Station Upgrades       21-Jul-04       11-Aug-08         CUW3401       North Davierskin Aug-10       0-Jul-04       11-Aug-08       11-A					
CUW32401       Mount Davidson Pump Station Upgrades (20       30-bee-05       80-Mar-11         CUW32501       Sky View - Aqua Vista Pump Station Upgrades (Comp 1-2bee-04       16-Nov-100         CUW3201       Sky View - Aqua Vista Pump Station Upgrades (Comp 0-2bee-04       16-Nov-100         CUW3201       Sky View - Aqua Vista Pump Station Upgrades (Comp 0-2bee-04       16-Nov-100         CUW3201       Sky Tewn - Aqua Vista Pump Station Upgrades (Comp 0-2bee-04       16-Nov-100         CUW3201       Potrero Heights Tank Seismic Upgrade (Col 1-1-40-08       16-Nov-100         CUW33001       Forest Knolls Tank Seismic Upgrade (Col 1-1-40-08       16-Nov-100         CUW3301       Mount Davidson Tank Seismic Upgrade (Col 1-1-40-02       16-Nov-100         CUW3301       Mount Davidson Tank Seismic Upgrade (Col 1-1-40-02       16-Nov-100         CUW3301       Notare Hart Rehab & Seismic Upgrade (Col 1-1-40-02       16-Nov-100         CUW3301       Notare Tank Rehab & Seismic Upgrade (Col 1-1-40-02       16-Nov-100         CUW3301       Notare Tank Seismic Upgrade (Col 1-1-40-02       16-Nov-100			-		
CUW32501       Palo Alto Pump Station Upgrades (Com       13-Dec-04       16-Nov-10         CUW32601       Sky View - Aqua Vista Pump Station Upgrades (Com       11-Aug-09         CUW32601       Sky Teken Varia Pump Station Upgrades (Com       02-Apg-01         CUW32601       McLaren #1 Tank Rehab & Seismic Upgrade (Co       01-Aug-08         CUW32001       Poterso Holgits Tank Seismic Upgrade (Co       01-Aug-08         CUW33001       Inced Mexi Seismic Upgrade (Co       11-Aug-08         CUW33001       Rotare #2 Tank Rehab & Seismic Upgrade       01-Aug-08         CUW33001       Inced Mexi Mouth Davidson Upgrades (Cor       02-Aug-04         CUW33001       Inced Mexi Mouth Davidson Upgrades (Cor       02-Aug-04         CUW33001       Vesta Francisco Pump Station Upgrade       01-Aug-08         CUW33001       Vesta Francisco Pump Station Upgrade       02-Apr-01         CUW33001       Vesta Francisco Pump Station Upgrade       24-Apr-04         CUW33001       North University Mound System Upgrad       24-Apr-04         CUW33010       North Univesity Mound System Upgr					
CUW32601       Sky View - Aqua Vista Pump Station Upg ades (Comp       11-Aug-08       11-Aug-08         CUW3201       Summit Pump Station Upg ades (Comp       02-Sep-03       11-Aug-08         CUW32020       Potrero Heights Tark Seismic Upgrade (C       01-Jul-03       11-Aug-08         CUW3201       Forest Krolls Tark Seismic Upgrade (C       01-Jul-03       18-Jan-12         CUW3301       Lincoln Park Tark Seismic Upgrade (C       01-Jul-03       18-Jan-12         CUW3301       MicLaren #1 Tark Rehab & Seismic Upgrade (C       01-Jul-03       11-Aug-08         CUW3301       MicLaren #2 Tark Rehab & Seismic Upgrade (C       01-Jul-03       11-Aug-08         CUW3301       MicLaren #2 Tark Rehab & Seismic Upgrade (C       01-Jul-03       11-Aug-08         CUW3301       MicLaren #2 Tark Rehab & Seismic Upgrade (C       01-Jul-03       11-Aug-08         CUW3301       MicLaren #2 Tark Rehab & Seismic Upgrade (C       01-Jul-03       11-Aug-08         CUW3301       MicLaren #2 Tark Rehab & Seismic Upgrade (C       01-Jul-03       11-Aug-08         CUW3301       North Unviewsity Mound System Upgrade (C       01-Jul-03       11-Aug-08         CUW3401       North University Mound System Upgrade (C       01-Jul-03       11-Aug-08         CUW31012       Lincoln Way Transmission Main - Phase 2       <					
CUW32701       Summit Pump Station Upgrades (Com       02-Sep-03       11-Aug-08         CUW32801       McLaren #T Tank Rehab & Seismic Upgrade (Co       10-Ju-03       11-Aug-08         CUW33001       Forest Knolls Tank Seismic Upgrade (Co       01-Ju-03       18-Ju-12         CUW3301       Forest Knolls Tank Seismic Upgrade (Co       01-Ju-03       18-Ju-12         CUW3301       Incoln Park Tank Seismic Upgrade (Co       01-Ju-03       18-Ju-12         CUW3301       MucLaren #Z Tank Rehab & Seismic Upgrade       20-Duc-05       30-Mar-11         CUW3301       Muclaren #Z Tank Rehab & Seismic Upgrade       01-Ju-03       11-Aug-08         CUW3301       La Grande Pump Station Upgrades       01-Ju-03       11-Aug-08         CUW3301       Vista Francisco Pump Station Upgrades       01-Ju-03       11-Aug-08         CUW34001       Vista Francisco Pump Station Upgrades       01-Ju-03       11-Aug-08         CUW34001       Vista Francisco Pump Station Upgrades       01-Ju-03       11-Aug-08         CUW34001       Vista Francisco Pump Station Upgrades       01-Ju-03       11-Aug-08         CUW3401       North University Mound System Upgrade       20-Apr-01       24-Sep-12         CUW3101       Sune Lincoln Way Transmission Main - Phase 2       0-Apr-01       24-Sep-12					
CUW32801       McLaren #1 Tank Rehab & Seismic Upg 17-Jug-04       I1-Aug-08         CUW32901       Potrero Heights Tank Seismic Upgrade (C       01-Jul-03       II-Aug-08         CUW33001       Forest Knolls Tank Seismic Upgrade (CC       01-Jul-03       II-Aug-08         CUW33001       McLaren #2 Tank Rehab & Seismic Upgrade (CC       01-Jul-03       II-Aug-08         CUW3301       McLaren #2 Tank Rehab & Seismic Upgrade (CC       01-Jul-03       II-Aug-08         CUW3301       Mount Davidson Tank Seismic Upgrade 20-Dec-05       30-Mar-11         CUW33001       Potrero Heights Pump Station Upgrades (Co       01-Jul-03       I1-Aug-08         CUW33001       Vister Francisco Pump Station Upgrades       01-Jul-03       I1-Aug-08         CUW33001       North University Mound System Upgrade       20-Apr-01       24-Sp-01         CUW33001       Key Motorized and Other Critical Valves       01-Jul-03       I1-Aug-08         CUW3101       North University Mound System Upgrade       20-Apr-01       24-Sp-01         CUW3101       North Vay Transmission Main - Phase 2       0-Go-02-0       24-Sp-02       24-Sp-02         CUW3101       Nee Vallor ge (th Complete)       0-Jul-04       11-Aug-08       1         Miscellanceus       0-Go-02-0       2-Apr-01       2-Apr-01       4-Go-					
CUW32901       Potero Heights Tank Seismic Upgrade       01-Ju-03       I1-Aug-08         CUW33001       Forest Knolls Tank Seismic Upgrade (Co       01-Ju-03       I8-Jan-12         CUW33001       Fank Rahe Seismic Upgrade (Co       11-Feb-02       I1-Aug-08         CUW33201       Molcaren #Z Tank Rehab Seismic Upgrade       20-De-05       30-Mar-11         CUW33201       Molent Davidson Tank Seismic Upgrade       20-De-05       30-Mar-11         CUW33201       La Grande Pump Station Upgrades (Co       05-Jun-07       29-Mar-13         CUW33201       Vista Francisco Pump Station Upgrades       01-Ju-03       I1-Aug-08         CUW33001       Vista Francisco Pump Station Upgrades       01-Ju-03       I1-Aug-08         Pipelines / Valves       02-Apr-01       24-Sep-12       02-Mar-04         CUW30101       North University Mound System Upgrade       24-Oct-05       30-Jun-11         CUW30201       Key Motrized and Other Critical Valves       01-Ju-03       I1-Aug-08         CUW31201       Nore Valley Transmission Main Compie       02-Apr-01       02-Apr-01         CUW31201       Nore Valley Transmission Main Compie       03-Jun-11       02-Mar-01         CUW31201       Nore Valley Transmission Main Compie       01-Aug-08       1-Mag-08         CUW31501 </td <td></td> <td>-</td> <td></td> <td></td> <td></td>		-			
CUW33001 Forest Knols Tank Seismic Upgrade (Co       01-lul-03       18-Jan-12         CUW33101 Lincoln Park Tank Seismic Upgrade (Co       11-fe-b-22       11-Aug-08         CUW33201 McLaren #2 Tank Rehab & Seismic Upgrade (Co       27-Aug-04       11-Aug-08         CUW33201 Mount Davidson Tank Seismic Upgrade (Co       05-lun-07       29-Mar-13         CUW33301 Potren Heights Pump Station Upgrades (Co       05-lun-07       29-Mar-13         CUW33001 Vista Francisco Pump Station Upgrades (Co       01-Ju-03       11-Aug-08         CUW33001 Vista Francisco Pump Station Upgrades (Co       27-lun-06       31-Jan-13         Pipetines/ Valves       02-Apr-01       24-Sep-12         CUW30001 Key Motorized and Other Critical Valves       01-Ju-03       11-Aug-08         CUW31201 Lincoh Way Transmission Line (Complet       05-Apr-01       24-Sep-12         CUW31201 Lincoh Way Transmission Main (Comple       05-Apr-02       24-Sep-12         CUW31201 Lincoh Way Transmission Main (Comple       06-Apr-04       24-Sep-12         CUW31201 Lincoh Way Transmission Main (Comple       05-Apr-02       24-Sep-12         CUW31201 Lincoh Way Transmission Main (Comple       06-Apr-04       21-Mar-11         CUW31201 Lincoh Way Transmission Main (Comple       01-Aug-08       11-Aug-08         Miscellaneous       15-Apr-02       11-Aug-08<		<u> </u>	-		
CUW33101 Lincoln Park Tank Seismic Upgrade (Co       11-Feb-02       11-Aug-08         CUW33201 McLaren #2 Tank Rehab & Seismic Upgrade       27-Aug-04       11-Aug-08         CUW33301 Mount Davidson Tank Seismic Upgrade       20-be-05       30-Mar-11         CUW33001 Potrero Heights Pump Station Upgrades       01-Jul-01       11-Aug-08         CUW34001 Vista Francisco 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         CUW34001 North University Mound System Upgrad       24-Cu-05       30-Jun-11         CUW3101 North University Mound System Upgrade       01-Jul-03       11-Aug-08         CUW3101 North University Mound System Upgrad       02-Apr-01       62-Lu-05         CUW3101 North University Mound System Upgrad       01-Jul-03       11-Aug-08         CUW3101 North University Mound System Upgrad       01-Jul-03       11-Aug-08         CUW31201 Lincoln Way Transmission Line (Comple       05-Apr-02       24-Sep-12         CUW31301 Nee Valley Transmission Main -Phase 2       06-Oct-06       03-Jun-11         CUW31501 East / West Transmission Main -Phase 2       06-Oct-06       03-Jun-11         CUW31601 Futlon @ 6th (Completed)       19-Jul-04       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 (Co       05-Jum-07       29-Mar-13         CUW34001 Vista Francisco Pump Station Upgrades       01-Ju-03       11-Aug-08         CUW33001 Noturt University Mound System Upgrades       27-Jum-06       31-Jan-13         Pipelines / Valves       02-Apr-01       24-Sep-12         CUW33001 Noth University Mound System Upgrade       24-Oct-05       30-Jum-11         CUW33001 Noth University Mound System Upgrade       24-Oct-05       30-Jum-11         CUW31001 Sunset Circulation Improvements (Comp       02-Apr-01       05-Jum-02         CUW31201 Lincoh Way Transmission Line (Complet       05-Apr-02       24-Sep-12         CUW31301 Nee Valley Transmission Main - Phase 2       06-Oct-06       03-Jum-11         CUW3101 Nee Valley Transmission Main Comple       01-Oct-03       21-Mar-11         CUW3101 Nee Valley Transmission Main Comple       01-Oct-03       21-Mar-11 <td></td> <td></td> <td></td> <td></td> <td></td>					
CUW33301       Mount Davidson Tank Seismic Upgrade       20-Dec-05       30-Mar-11         CUW33801       La Grande Pump Station Upgrades (Cor       05-Jun-07       29-Mar-13         CUW33901       Potero 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         CUW30401       North University Mound System Upgrade       02-Apr-01       06-Jul-06         CUW31001       Key Motorized and Other Critical Valves       01-Jul-03       11-Aug-08         CUW31001       Norte Valves       02-Apr-01       06-Jul-06         CUW31001       Norte Valves Transmission Line (Complet       05-Apr-02       24-Sep-12         CUW31001       Note Valvey Transmission Main (Complet       05-Apr-02       24-Sep-12         CUW31001       Note Valvey Transmission Main (Complet       01-Jul-03       11-Aug-08         CUW31001       Note Valvey Transmission Main (Complet       01-Jul-04       11-Aug-08         CUW3001       Vehicle Service Facility Equipment Safet       15-Apr-02       11-Aug-09         Miscellaneous       15-Ap			-		
CUW33801 La Grande Pump Station Upgrades (co.05-Jun-0729-Mar-13CUW33901 Potrero Heights Pump Station Upgrade01-Jul-0311-Aug-08CUW34001 Vista Francisco Pump Station Upgrade27-Jun-0631-Jan-13Pipelines / Valves02-Apr-0124-Sep-12CUW30401 North University Mound System Upgrade24-Oct-0530-Jun-11CUW30401 North University Mound System Upgrade24-Oct-0530-Jun-11CUW30401 North University Mound System Upgrade02-Apr-0104-Jul-03CUW30401 North University Mound System Upgrade02-Apr-0106-Jul-06CUW30401 Sunset Circulation Improvements (Comp02-Apr-0106-Jul-06CUW31201 Lincoln Way Transmission Line (Complete)05-Apr-0224-Sep-12CUW31601 Fulton @ 6th (Completed)19-Jul-0411-Aug-08Miscellaneous15-Apr-0211-Aug-08CUW30301 Vehicle Service Facility Equipment Safet15-Apr-0215-Apr-0211-Aug-09CUW30301 Vehicle Service Facility Equipment Safet15-Apr-0215-Apr-0211-Aug-09CUW30301 Vehicle Service Facility Equipment Safe15-Apr-0215			-		
CUW33901 Potero Heights Pump Station Upgrades01-Jul-0311-Aug-08CUW34001 Vista Francisco Pump Station Upgrades27-Jun-0631-Jan-13Pipelines / Valves02-Apr-0124-Sep-12CUW30401 North University Mound System Upgradt24-Oct-0530-Jun-11CUW30801 Key Motorized and Other Critical Valves01-Jul-0311-Aug-08CUW3101 Sunset Circulation Improvements (Comp02-Apr-0106-Jul-06CUW31201 Lincoln Way Transmission Line (Complet)05-Apr-0224-Sep-12CUW31501 East / West Transmission Main (Comple01-Out-0321-Mar-111CUW31501 Fulton @ 6th (Completed)19-Jul-0411-Aug-08Miscellaneous15-Apr-0211-Aug-08CUW30301 Vehicle Service Facility Equipment Safet15-Apr-0215-Apr-0211-Aug-09					
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## Q3-FY2017-2018 (01/01/18 - 03/31/18)

## APPENDIX D. PROJECTS WITHIN BUDGET AND 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 / Tar	nks Project Stat	tus: Construction	Environmental Status: Completed (CatEx)						
Project Cost:		Project Schedu	le:						
Approved	\$49.30 N	Approved Jan-06		Jul-18					
Forecast*	\$49.30 N	1 Forecast* Jan-06	5 Jul-18						
Actual									
🔲 Approved; 📄 Actual Cost; * Forecast Status: 🚺 Meet Requirements ሯ 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√	04/30/18					

## **Progress and Status:**

The new CT boards continue to operate without any failures. Additional CT board tests to complete the reliability testing have been delayed due to system/equipment operational constraints. A full change out to the new CT boards will occur once the team determines the boards to be reliable.

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. The valves will be replaced sequentially to minimize operational outage. The first of the two replacement valves was delivered on site late this quarter. Replacement of this first valve is scheduled to occur the beginning of next quarter. The second valve will then undergo factory inspection and delivery after the first valve is installed and fully tested.

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

### **Issues and Challenges:**

The project final completion and closeout have been impacted due to the additional time needed to validate the effectiveness and reliability of the CT boards and the additional time to procure the new Sutro replacement valves.

The Contractor and CM team continue to finalize close out documentation and outstanding schedule and cost modifications.



Completed Lake Merced Pump Station Buildings

## APPENDIX E. LIST OF ACRONYMS

AAR	Alternative Analysis Report
AB	Assembly Bill
ACAMS	Access Control and Alarm
	Monitoring System
ACDD	Alameda Creek Diversion Dam
ACDT	Alameda Creek Diversion Tunnel
ACWD	Alameda County Water District
AWP	Alameda West Portal
BART	Bay Area Rapid Transit
BAWSCA	Bay Area Water Supply and
	Conservation Agency
BDPL	Bay Division Pipeline
BHR	Bioregional Habitat Restoration
BO	Biological Opinion
CATEX	Categorical Exemption
CCSF	City and County of San Francisco
CDD	City Distribution Division
CDRP	Calaveras Dam Replacement Project
CEQA	California Environmental Quality Act
CER	Conceptual Engineering Report
CIP	Capital Improvement Program
CM	Construction Management
CMB	Construction Management Bureau
CMD	Contract Monitoring Department
CMD	Contract Monitoring Division
CMIS	Construction Management
	Information System
CO	Change Order
CPI	Cost Performance Index
CSPS	Crystal Springs Pump Station
CSSA	Crystal Springs/San Andreas
DB	Design, Build
DSOD	Division of Safety of Dams (State of
DUCC	California)
DVSS	Digital Video Surveillance System
EBMUD	East Bay Municipal Utility District
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EV	Earned Value
EVM	Earned Value Management
FY	Fiscal Year
НН иті тір	Hetch Hetchy
HTLTIP	Harry Tracy Long Term
HTWTP	Improvements Project
111 // 11	Harry Tracy Water Treatment Plant

IVP	Irvington Portal
JOC	Job Order Contract
LCSD	Lower Crystal Springs Dam
LCSDI	Lower Crystal Springs Dam
	Improvements
LMPS	Lake Merced Pump Station
LOS	Levels of Service
MG	Million Gallons
MGD	Million Gallons per Day
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
NEG DE	C Negative Declaration (also shown as
	ND)
NEPA	National Environmental Policy Act
NIT	New Irvington Tunnel
NMFS	National Marine Fisheries Service
	(under NOAA)
NOAA	National Oceanic and Atmospheric
	Agency
NOT	Notice of Termination
NTP	Notice to Proceed
O&M	Operation and Maintenance
PCCP	Pre-stressed Concrete Cylinder Pipe
PCE	Project Controls Engineer
PE	Project Engineer
PEIR	Program Environmental Impact
	Report
PG&E	Pacific Gas and Electric Company
PPSU	Peninsula Pipeline Seismic Upgrade
QA	Quality Assurance
RFI	Request For Information
ROW	Right-of-Way
SABPL	San Antonio Backup Pipeline
SAPL	San Antonio Pipeline
SAPS	San Antonio Pump Station
SCADA	Supervisory Control and Data
SFPUC	Acquisition San Francisco Public Utilities
SFLOC	Commission
SIPI	
SJPL SMC	San Joaquin Pipeline San Mateo County
SMC	Surface Mining Permit
SPI	Schedule Performance Index
SQS	Supplier Quality Surveillance
SQS SSBPL	
SSDL	Sunset Supply Branch Pipeline

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

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# QUARTERLY REPORT

## Local Projects Q4 FY 2017 | 2018 April 2018 — June 2018

Rebuilding Today for a Better Tomorrow

Published: 08/21/2018

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  - **A. Project Descriptions**
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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 The WSIP is structured to costmanner. 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 nonpotable 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.

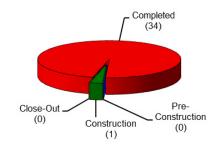
Program Revision	Commission Approval	Budget (\$Million)	Schedule <sup>(*)</sup>
2003 (Original)	March 1, 2003	\$3,628	03/15/16
2005 (Baseline)	November 29, 2005	\$4,343	06/30/14
2007 (Revised)	February 26, 2008	\$4,392	12/18/14
2009 (Revised)	July 28, 2009	\$4,586	12/04/15
2011 (Revised)	July 12, 2011	\$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

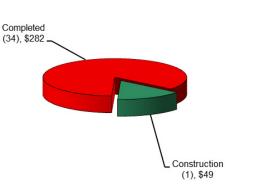
## 2. PROGRAM STATUS

This fourth (4th) Quarterly Report for Fiscal Year (FY) 2017-2018 presents the progress made on the WSIP local projects between April 1, 2018 and June 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 June 30, 2018. The number of projects currently active in each phase is shown in parentheses. 2018: Pre-construction, Construction, and Post-construction.



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



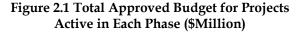
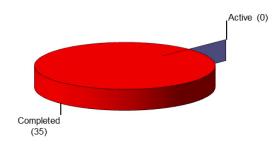
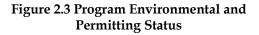


Figure 2.2 shows the number of local projects in the following stages of the program as of June 30,

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





## 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/FY17-18 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.

Cost Categories	Expenditures To Date (\$ Million) (A)	2005 Baseline Budget (\$ Million) (B)	2018 Approved Budget (\$ Million) (C)	Current Approved Budget (7) (\$ Million) (D)	Q4/FY17-18 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 <sup>(3)</sup>	\$1	\$4	\$1.2	\$1.2	\$1.2	-
Construction Contingency for Local Improvement Projects <sup>(4)</sup>	\$6	\$30	\$5.7	\$5.7	\$5.7	-
LOCAL PROGRAM WITH CONTINGENCY	\$331	\$383	\$331.4	\$331.4	\$331.4	-
Regional Improvement Projects	\$3,347	\$3,375	\$3,536.9	\$3,536.9	\$3,536.9	-
Support Projects (5)	\$221	\$33	\$266.1	\$266.1	\$266.1	-
Local Water Supply Projects <sup>(6, 8)</sup>	\$107	-	\$281.3	\$281.3	\$281.3	-
Finance	\$372(11)	\$552(9)	\$372.0(10)	\$372.0(10)	\$372.0(10)	-

### **Table 3.1 Program Cost Summary**

Notes:

1. **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.

2. **Delivery Costs** include project management, planning, environmental (CEQA, permitting, construction compliance), design, construction management, and engineering support during construction.

3. **Other Costs** include environmental mitigation, art enrichment, security improvements, and real estate expenses.

4. 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.
- 6. 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.

7. 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.

- 8. The WSIP Local Water Supply projects underwent a September 2013 re-baseline. Only the original WSIP portion of the rebaselined costs is reported here. The remaining budget is funded under the Water Enterprise CIP and is managed outside the purview of the WSIP.
- 9. 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/FY17-18 Forecasted Change Orders; the Q4/FY17-18 Forecasted Trends; Project Savings Moved to Contingency/ Funds Moved out of Contingency; the Q4/FY17-18 Forecasted Construction Contingency; and the Remaining Contingency as of the end of the reporting quarter. As of June 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 <sup>(1)</sup> (\$ Million) (A)	Current Approved Contingency <sup>(2,3)</sup> (\$ Million) (B)	Q4/FY17-18 Forecasted Change Orders <sup>(3)</sup> (\$ Million) (C)	Q4/FY17-18 Forecasted Trends <sup>(4)</sup> (\$ Million) (D)	Project Savings (+) Moved to Contingency/ Funds () Moved out of Contingency <sup>(5)</sup> (\$ Million) (E)	Current Forecasted Contingency (\$ Million) (F = B+ E)	Q4/FY17-18 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:

- 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.

<sup>1.</sup> Contingency included in March 2018 Revised WSIP.

## Q4-FY2017-2018 (04/01/18 - 06/30/18)

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 preconstruction 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 construction program-level 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 Budget and Forecasted Total Program Management Cost are \$112.7 million.

Category	Expenditures To Date (\$ Million) (A)	2018 Approved Budget (\$ Million) (B)	Current Approved Budget (\$ Million) (C)	Q4/FY17-18 Forecasted Cost* (\$ Million) (D)	Cost Variance (\$ Million) (E = C-D)
Management Support	\$36.6	\$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	\$19.0	\$19.8	\$19.8	\$19.8	-
Program Construction Management	\$27.3	\$28.0	\$28.0	\$28.0	-
Program Management Total	\$104.2	\$112.7	\$112.7	\$112.7	-

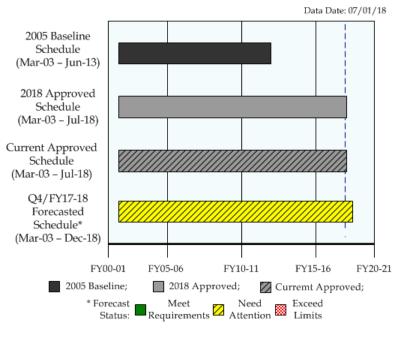
#### Table 3.3 Status of Program Management Project Cost Breakdown

\* 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/FY17-18 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) is in December 2021. The Current Approved and Forecasted Schedule completion for the WSIP Local Program are July 2018 and December 2018, respectively (5 months behind schedule). Refer to Appendix C for a graphical presentation of the WSIP Approved Project-Level Schedule.



**Figure 4.1 Program Schedule Summary** 

Category	2005 Baseline Start	2018 Approved Start	Current* Approved Start	Actual Start	2005 Baseline Finish	2018 Approved Finish	Current* Approved Finish	Q4/FY17-18 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	12/31/18	5.0 (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	-

#### Table 4.1 2018 Approved vs. Q4/FY17-18 Forecasted Schedule Dates

\* 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

#### Q4-FY2017-2018 (04/01/18 - 06/30/18)

## **5. PROJECT PERFORMANCE SUMMARY\***

All costs are shown in \$1,000s as of 07/01/18

Project Name	Active Phase (**)	2005 Baseline Budget (a)	2018 Approved Budget (b)	Current Approved Budget (c)	~ /	Expenditures To Date (e)	Cost Variance (f= c - d)	Cost Status (+)	2005 Baseline Completion (g)	2018 Approved Completion (h)	Approved	Q4/FY17-18 Forecasted Completion (j)	Schedule	Schedule Status (+)	Project Data Sheet
Pump Stations / Tar	nks														
CUW30901 - Lake Merced Pump Station Essential Upgrades	CN	\$ 69,093	\$ 49,296	\$ 49,296	\$ 49,296	\$ 48,901	-	*	07/15/11	07/31/18	07/31/18	12/31/18	5.0 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)



#### + 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 / Tar	ks Project Stat	tus: Construction	Environmental Status: Completed (CatEx)							
Project Cost:		Project Schedu	ıle:							
Approved	\$49.30 N	Approved Jan-06	6	Jul-18						
Forecast*	\$49.30 N	A Forecast* Jan-06	6 ////////////////////////////////////							
Actual \$48.90 M Project Percent Complete: 99.9%										
Approved; Actual Co	🔲 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√	09/28/18						

### **Progress and Status:**

The two new CT test boards continue to operate without any failures. A full change out to the newer CT boards is anticipated to occur next quarter once the operational system/equipment constraints at the pump station are over.

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. The valves will be replaced sequentially to minimize operational outage. The first of the two replacement valves have been delivered and successfully installed. Replacement of the second valve is scheduled to occur the next quarter once the operational system/equipment constraints at the pump station are over.

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 replace the Sutro replacement valves.



Completed Lake Merced Pump Station Buildings

## 7. On-Going Construction

	Schedule					Buc	dget	Variance (Approved - Forecast)		
Construction Contract	NTP Date	Approved Construction Final Completion* Q4/FY17-18 Forecasted Construction Final Completion**		Approv Contra Cost +	ict Forecasted		Schedule (Cal. Days)	Cost	Actual % Complete	
Pump Stations / Tanks										
CUW30901 - Lake Merced Pump Station Essential Upgrades Project	06/01/09	12/30/15 09/28/18		\$ 35,293,022 \$ 3		\$ 35,293,022	(1,003)	-	100.0%	
	Г	for On-Going Contrac		tal Appro			Q4/FY17-18	Variance		
				Contra	ct Cost Fore		ecasted Cost*	Cost	Percent	
				93,022 \$ 35,293,022		<b>\$0</b>	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	10/01/07	00 /07 /00	02 (27 (00	00 / 07 / 00	¢ 4.000 (FF			
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	07/10/09	08/30/13	08/30/13	08/30/13	\$ 10,391,557	\$ 29,095,501	\$ 29,095,501	\$ 29,095,501
Park) CUW32401 - Mount Davidson	08/06/09	03/30/11	03/30/11	03/30/11	\$ 5,223,489	\$ 4,281,116	\$ 4,281,116	\$ 4,281,116
Pump Station Upgrades CUW32501 - Palo Alto Pump	04/10/09	11/16/10	11/16/10	11/16/10	\$ 5,225,506	\$ 6,126,470	\$ 6,126,470	\$ 6,126,470
Station Upgrades 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	03/20/08	08/11/08	08/11/08	08/11/08	\$ 6,396,784	\$ 6,532,376	\$ 6,532,376	\$ 6,532,376
Station Upgrades 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	07/13/07	08/11/08	08/11/08	08/11/08	\$ 1,281,714	\$ 1,084,863	\$ 1,084,863	\$ 1,084,863
Tank Seismic Upgrade CUW33001 - Forest Knolls	07/03/08	01/18/12	01/18/12	01/18/12	\$ 3,536,899	\$ 3,438,912	\$ 3,438,912	\$ 3,438,912
Tank Seismic Upgrade CUW33101 - Lincoln Park	06/01/07	08/11/08	08/11/08	08/11/08	\$ 3,085,460	\$ 2,690,656	\$ 2,690,656	\$ 2,690,656
Tank Seismic Upgrade 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

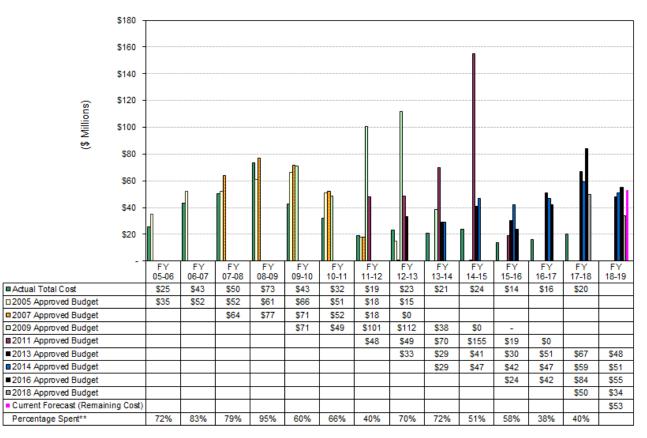
## CUW30301 - Vehicle Service Facility Equipment Safety Upgrade (Completed)

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 Q4/FY17-18 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.

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· · · · · · · · · · · · · · · · · · ·

## APPENDIX D. PROJECTS WITHIN BUDGET AND SCHEDULE

No projects are currently within budget and schedule.

## APPENDIX E. LIST OF ACRONYMS

AAR	Alternative Analysis Report
AB	Assembly Bill
ACAMS	Access Control and Alarm
	Monitoring System
ACDD	Alameda Creek Diversion Dam
ACDT	Alameda Creek Diversion Tunnel
ACWD	Alameda County Water District
AWP	Alameda West Portal
BART	Bay Area Rapid Transit
BAWSCA	Bay Area Water Supply and
	Conservation Agency
BDPL	Bay Division Pipeline
BHR	Bioregional Habitat Restoration
BO	Biological Opinion
CATEX	Categorical Exemption
CCSF	City and County of San Francisco
CDD	City Distribution Division
CDRP	Calaveras Dam Replacement Project
CEQA	California Environmental Quality Act
CER	Conceptual Engineering Report
CIP	Capital Improvement Program
CM	Construction Management
CMB	Construction Management Bureau
CMD	Contract Monitoring Department
CMD	Contract Monitoring Division
CMIS	Construction Management
	Information System
CO	Change Order
CPI	Cost Performance Index
CSPS	Crystal Springs Pump Station
CSSA	Crystal Springs/San Andreas
DB	Design, Build
DSOD	Division of Safety of Dams (State of
DUCC	California)
DVSS	Digital Video Surveillance System
EBMUD	East Bay Municipal Utility District
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EV	Earned Value
EVM	Earned Value Management
FY	Fiscal Year
НН иті тір	Hetch Hetchy
HTLTIP	Harry Tracy Long Term
HTWTP	Improvements Project
111 // 11	Harry Tracy Water Treatment Plant

IVP	Irvington Portal
JOC	Job Order Contract
LCSD	Lower Crystal Springs Dam
LCSDI	Lower Crystal Springs Dam
	Improvements
LMPS	Lake Merced Pump Station
LOS	Levels of Service
MG	Million Gallons
MGD	Million Gallons per Day
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
NEG DE	C Negative Declaration (also shown as
	ND)
NEPA	National Environmental Policy Act
NIT	New Irvington Tunnel
NMFS	National Marine Fisheries Service
	(under NOAA)
NOAA	National Oceanic and Atmospheric
	Agency
NOT	Notice of Termination
NTP	Notice to Proceed
O&M	Operation and Maintenance
PCCP	Pre-stressed Concrete Cylinder Pipe
PCE	Project Controls Engineer
PE	Project Engineer
PEIR	Program Environmental Impact
	Report
PG&E	Pacific Gas and Electric Company
PPSU	Peninsula Pipeline Seismic Upgrade
QA	Quality Assurance
RFI	Request For Information
ROW	Right-of-Way
SABPL	San Antonio Backup Pipeline
SAPL	San Antonio Pipeline
SAPS	San Antonio Pump Station
SCADA	Supervisory Control and Data
<b>CEDU</b> C	Acquisition
SFPUC	San Francisco Public Utilities
	Commission
SJPL	San Joaquin Pipeline
SMC	San Mateo County
SMP	Surface Mining Permit
SPI	Schedule Performance Index
SQS	Supplier Quality Surveillance
SSBPL	Sunset Supply Branch Pipeline

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

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