


DATE: August 17, 2021

TO: Commissioner, Sophie Maxwell, President
Commissioner, Anson Moran, Vice President
Commissioner, Tim Paulson
Commissioner, Ed Harrington
Commissioner, Newsha Ajami

FROM: Michael Carlin, Acting General Manager 

RE: Water Enterprise Capital Improvement Program
Quarterly Report (4th Quarter / FY 2020-2021)

Enclosed is the Water Enterprise Capital Improvement Program (WECIP) Quarterly Report for the period ending on June 30, 2021. This quarterly report provides a summary update on both Regional and Local Water Enterprise CIP projects.

The information in the report allows appropriate review of the scope, schedule, and budget of projects to ensure level of service (LOS) goals and objectives are met and to measure progress of the program. Status updates for active projects allow for timely and proactive review of projects so corrective action may be taken if needed. In addition, quarterly updates to you and our stakeholders highlight program accomplishments and share activities that may be newsworthy or noticeable to the public due to improved service or impacts from construction.

This quarterly report incorporates all the changes made to the Regional Water Enterprise CIP projects and the Local Water Enterprise CIP projects in the Water Enterprise Capital Improvement Program 2021 Revised Baseline, presented to and adopted by this Commission on April 13, 2021 under Resolution No. 21-0055.

London N. Breed
Mayor

Sophie Maxwell
President

Anson Moran
Vice President

Tim Paulson
Commissioner

Ed Harrington
Commissioner

Newsha Ajami
Commissioner

Michael Carlin
Acting
General Manager

The highlights for this reporting period are as follows:

1. Regional Water Enterprise Capital Improvement Program:

- In general, there were minor schedule impacts to projects in planning, design, and construction due to the need for consultants and contractors to submit revised site-specific Health and Safety Plans and implement protocols to address COVID-19 requirements.
- The planning work continued for the Sunol Valley Water Treatment Plant (SVWTP) Ozone project including development of design criteria for flow rates and hydraulics, structural design criteria, Ozone building configuration, in-plant electrical power requirements, and facility layout. Two criteria for the Ozone facility were selected during the reporting period, including the number of ozone generators and the configuration for the ozone cooling and carriage water system. The Geotechnical Interpretive Report was finalized. The Round 1 and 2 treatability testing work was completed. The Round 3 treatability testing work started.
- Construction of the San Andreas Pipeline No. 2 Lockbar Replacement project achieved Final Completion and the project is in closeout. The Commission accepted the work and authorize final payment to the contractor for the construction contract at its regular meeting on July 13, 2021.
- Excavation and corrosion assessment were completed for the Crystal Springs Pipeline No. 2 Reach 5 project. A draft Alternatives Analysis Report identifying the recommended alternative is being circulated for review. For the CSPL2 Reaches 2 and 3 project, geotechnical and survey work continued, and exploratory excavations for corrosion assessment will be performed next quarter.
- The Pilarcitos Dam Improvements project team completed the dam embankment stability analysis and coordinated with DSOD for review. In addition, the spillway hydraulic analysis was also completed.
- The Final Environmental Impact Report for the Southern Skyline Boulevard Ridge Trail Extension Project was approved by the Planning Commission, and the project was subsequently approved by the San Francisco Public Utilities Commission on May 11.
- Sunol Yard (Contract A): The as-built drawings and O&M manuals were turned over to Operations. The preparation of the project close-out dossier continued. Watershed Center (Contract B): The construction work on the architectural concrete walls, roof decking, sewage holding tank, rain harvest tank, and rough grading was completed during the reporting period. The construction work on the interior utilities, wall framing, HVAC and duct systems, and aquarium systems continued. The public art piece design work continued.
- No proposals were received during the bid opening of the Request for Proposals (RFP) PRO.0186 for consultant services for the Millbrae Yard Laboratory and Shops project. Discussion is ongoing regarding the contracting strategy in acquiring specialized services for the project moving forward.

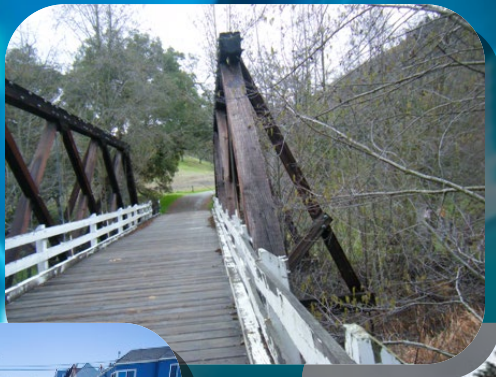
2. Local/In-City Water Enterprise Capital Improvement Program:

- At the start of FY21, the forecast mileage for FY21 was 11.5 miles, which correlated to the approved FY21 Capital Improvement Plan (CIP) Budget for 11.5 miles for FY20-FY21. Due to challenges with the COVID-19 pandemic, delays from joint projects lead by other agencies, and CIP funding limitations a total of only 8.4 miles were replaced. Projects currently under construction include the City streets of Geary between Van Ness and Kearny, L-Taraval between Sunset and SF Zoo, Pierce Street, Castro Street, 21st Street, 17th Street, Baker Street, 19th Avenue, and Casitas.
- The San Francisco Westside Recycled Water project made substantial progress on three construction contracts. At the treatment facility being constructed at Oceanside Plant, power, lighting, and instrumentation conduits and panels were installed. At the distribution pump station, concrete work was completed and pumps were installed. In Golden Gate Park, two backflow preventors were installed and the cross connection control testing began in April 2021.
- For the recycled water treatment facility, the ultraviolet light disinfection test protocol, the revised Engineering Report, and the Cross Connection Control Test Plan were submitted to the State Department of Drinking Water (DDW) for review. Project Operations Notification was also submitted to the State Regional Water Quality Control Board and the EPA. Work on the development of standard operating procedures (SOPs) and operator training modules began.
- Construction bids were opened for the College Hill Reservoir Outlet project on April 22; the lowest responsive bid received was below the engineer's estimate. The Commission awarded the contract on June 8.
- Proposals for design services for the New CDD Headquarters were received by May 18; these design services will supplement ongoing services from the Bureau of Architecture (BOA), Public Works. The Construction Management/General Contractor (CM/GC) Request for Qualifications/Proposals (RFQ/P) was advertised on June 18.

Enclosure



San Francisco
Water Power Sewer
Services of the San Francisco Public Utilities Commission



QUARTERLY REPORT

Water Enterprise Capital Improvement Program
Q4 FY 2020 | 2021
April 2021 — June 2021

Published: August 2, 2021

Quarterly Report

Water Enterprise Capital Improvement Program

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I. Regional Capital Improvement Program



1. CAPITAL IMPROVEMENT PROGRAM DESCRIPTION

The San Francisco Public Utilities Commission (SFPUC) Water Enterprise manages a complex water supply system stretching from the Sierra Nevada to San Francisco featuring a series of reservoirs, tunnels, pipelines, and treatment systems. Two unique features of this system stand out: the drinking water provided is among the highest quality in the world, and water deliveries are made to most customers without the use of power (gravity flow) while generating power at the same time.

The SFPUC is the third largest municipal utility in California, serving 2.7 million residential, commercial, and industrial customers in the Bay Area. Approximately one-third of the delivered water goes to retail customers in San Francisco, while wholesale deliveries to 26 suburban agencies in Alameda, Santa Clara, and San Mateo counties comprise the other two-thirds.

The Regional Water System consists of water storage and treatment facilities; water transmission infrastructure; buildings and structures for facilities and employees; communications systems; and watersheds and Rights-of-Way (ROW) lands in San Mateo, Santa Clara, and Alameda Counties as well as western San Joaquin County. The Regional Water System also includes numerous assets in San Francisco that are operated in conjunction with the regional system. The Regional Water System Capital Improvement Program (Regional Water CIP) part of the SFPUC's Ten Year Capital Improvement Program (10-Year CIP), is a 10-year proposed appropriations plan including planned projects to physically improve the assets within the Regional Water System. The 10-Year CIP is updated each year and integrated with the SFPUC's Financial Plan and rate-setting.

Annual updates to the Regional Water CIP also account for post-Water System Improvement Program (post-WSIP) conditions, including

deferred projects not in WSIP and new projects needed to continue meeting level of service goals and maintaining a state of good repair.

The capital planning process is used to inform the Regional Water CIP with updates to master plans, asset condition assessment, and review of levels of service. There are six (6) groupings of projects in the Regional Water CIP. The categories are:

- Water Treatment
- Water Transmission
- Water Supply and Storage
- Watershed and Lands Management
- Communications and Monitoring
- Buildings and Grounds

A project is formally initiated (Project Initiation) when the planning process begins, a project manager is assigned, and the project's initial Approved Budget consistent with the most recently adopted Regional Water CIP is established.

Projects move from the planning, design, and environmental review phase to contract-award and construction phase when Project Approval occurs through an action by the Commission, usually at the same time CEQA findings are adopted. The Commission may also make decisions about a project's scope, budget, or schedule during annual review and approval of the Regional Water CIP. While a project is active, additional budget modifications outside of the annual CIP process require approval of the Assistant General Manager (AGM) for the Water Enterprise. When and if these budget modifications occur, the modified budget becomes the new Approved Project Budget.

Outside of formal budget adjustments, the project manager regularly estimates and records the anticipated final project cost and schedule as the Forecasted Cost and Forecasted Schedule. Minor modifications to scope or schedule must be approved by increasing levels of management, with major modifications requiring approval by the Program Director and

AGMs of Infrastructure and Water Enterprise. Most scope, schedule, and budget changes must be pre-approved by the Change Control Board which consists of managers within the Water Enterprise and Infrastructure Division. Final Project Closeout must be approved by the AGMs for Infrastructure and Water Enterprise.

2. CAPITAL IMPROVEMENT PROGRAM STATUS

This Quarterly Report presents the progress made on Regional Water projects between April 1, 2021 and June 30, 2021. This document serves as the fourth (4th) Quarterly Report in Fiscal Year 2020-2021 (FY21) published for the Water Enterprise Capital Improvement Program.

On April 13, 2021, the SFPUC approved the Water Enterprise CIP 2021 Revised Baseline budget of \$918.8 million for Regional projects and \$1,755.4 million for Local projects (2021 Approved Baseline). The 2021 Approved Baseline is a subset of the Regional and Local Water Enterprise 10-year CIP for FY2021-2030 and includes individual projects over \$5 million that were then currently active or intended to be active by June 30, 2022 at the time proposed to the Commission on April 13, 2021. The status of projects included in the 2021 Approved Baseline are discussed in this quarterly report.

Figure 2.1 shows the total Current Approved Budget for the 25 Regional projects in each phase of the program as of June 30, 2021. The number of projects currently active in each phase is shown in parentheses.

Figure 2.2 shows the number of Regional projects in the following stages as of June 30, 2021: Pre-construction, Construction, and Post-construction.

Figure 2.3 summarizes the environmental review status of the 25 Regional projects as of June 30, 2021.

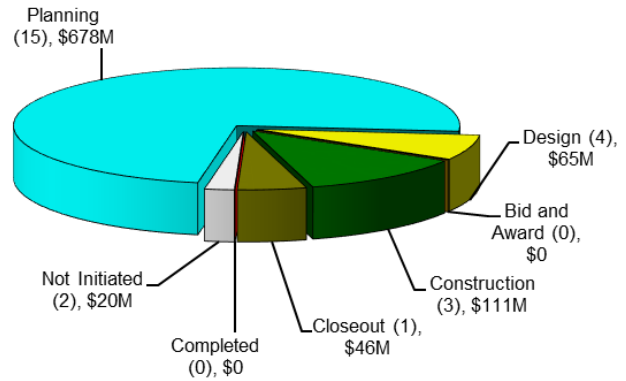


Figure 2.1 Total Current Approved Budget for Regional Projects Active in Each Phase

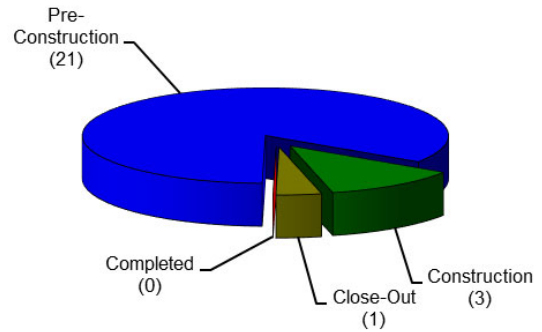


Figure 2.2 Number of Regional Projects in Pre-construction, Construction, and Post-construction

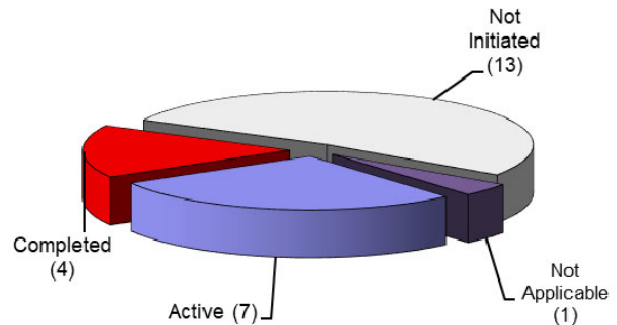


Figure 2.3 Regional Program Environmental Review

3. CAPITAL IMPROVEMENT PROGRAM COST SUMMARY

Table 3.1 provides an overall program-level cost summary of the WECIP Regional Program. It shows the Expenditures to Date; 2021 Approved, Current Approved and Q4/FY20-21 Forecasted Budgets; and the Cost Variance between the Current Approved and Forecasted Budgets.

The total Current Approved Budget (including Regional and Local Programs) and Current Forecasted Cost at completion are each \$2,674.2 million. The Current Approved Budget and Forecasted Cost at completion for only the Regional Program (including construction contingency) are each \$918.8 million.

Table 3.1 Program Cost Summary

Cost Categories	Expenditures To Date (\$ Million) (A)	2021 Approved Budget (\$ Million) (C)	Current Approved Budget ⁽⁵⁾ (\$ Million) (D)	Q4/FY20-21 Forecasted Costs (\$ Million) (E)	Cost Variance (\$ Million) (F = D - E)
Regional Improvement Projects	\$146.98	\$866.61	\$865.09	\$864.46	\$0.63
Construction Costs ⁽¹⁾	\$73.12	\$571.73	\$570.21	\$574.73	(\$4.52)
Program Delivery Costs ⁽²⁾	\$73.56	\$283.18	\$283.18	\$277.92	\$5.26
Other Costs ⁽³⁾	\$0.30	\$11.70	\$11.70	\$11.81	(\$0.11)
Construction Contingency for Regional Projects ⁽⁴⁾	\$6.49	\$52.18	\$53.70	\$54.33	(\$0.63)
Regional Program with Contingency	\$153.47	\$918.79	\$918.79	\$918.79	
Local Improvement Projects	\$605.13	\$1,755.36	\$1,755.36	\$1,755.36	-
PROGRAM TOTAL	\$758.60	\$2,674.16	\$2,674.16	\$2,674.16	-

Notes:

- Construction Costs** include the Construction Base Bid and owner-provided equipment/material for all regional and support projects. Those costs do not include any construction contingency. That contingency is reflected as a separate cost category.
- Delivery Costs** include project management, planning, environmental (CEQA, permitting, construction compliance), design, construction management, and engineering support during construction.
- Other Costs** include environmental mitigation, art enrichment, security improvements, and real estate expenses.
- Expenditures to Date for Construction Contingency for Regional projects correspond to the Total Approved Change Orders on those projects. For projects with ongoing or completed construction, the 2021 Approved Budget for construction contingency includes all change orders and trends as identified at the time of the March 2021 Revised WECIP, as well as additional contingency funding allocated to cover the 80% confidence level risks identified at the time of the March 2021 Revised WECIP. For projects in pre-construction, the 2021 Approved Budget for construction contingency includes 10% of the estimated construction base bid.
- The budget approved as part of the March 2020 Revised WSIP, plus any additional budget changes approved by the Commission as part of additional contingencies on construction contracts.

4. CAPITAL IMPROVEMENT PROGRAM SCHEDULE SUMMARY

Figure 4.1 and Table 4.1 compare the 2021 Approved Schedule and the Current Forecast Schedule for the Regional Water CIP. 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.

As shown in Table 4.1, the 2021 Approved and Forecasted Schedule completion for the overall Water CIP (including Regional and Local Programs) are each in June 2035. The 2021 Approved and Forecasted Schedule completion for the Regional CIP alone are also each in June 2035.

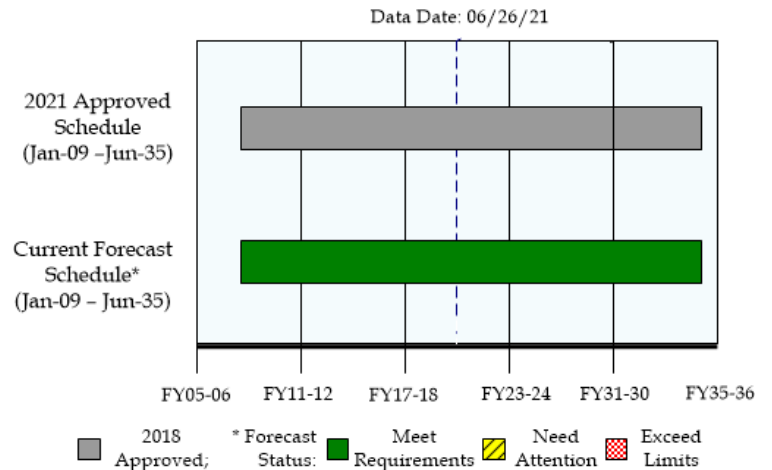


Figure 4.1 Program Schedule Summary

Table 4.1 2021 Approved vs. Current Forecast Schedule Dates

Sub-Program	2019 Approved Project Start	Actual Start	2021 Approved Completion	Current Forecast Completion	Schedule Variance (Months)
Regional Projects	01/01/09	01/01/09✓	06/29/35	06/29/35	-
Local Projects	03/03/03	03/03/03✓	12/29/28	12/29/28	-
Overall Water Enterprise CIP	03/03/03	03/03/03✓	06/29/35	06/29/35	-

5. PROJECT PERFORMANCE SUMMARY*

All costs are shown in \$1,000s as of 06/26/21

Project Name	Active Phase (**)	Appropriated Budget To Date (a)	Current Approved Budget (b)	Current Forecasted Cost (c)	Expenditures To Date (d)	Cost Variance (e= b - c)	Cost Status (+)	Current Approved Completion (g)	Current Forecasted Completion (h)	Schedule Variance (i = g - h)	Schedule Status (+)	Project Data Sheet
Water Treatment												
10033123 - SVWTP Ozone (CUW27202)	PL	\$ 7,319	\$ 165,130	\$ 165,130	\$ 3,668	-	★	06/30/27	06/30/27	-	★	See Section 10
CUW272020402 - SVWTP Phase 3 and 4	PL	\$ 8,091	\$ 70,132	\$ 70,132	\$ 7,720	-	★	06/30/26	06/30/26	-	★	See Section 10
10037349 - HTWTP Improvements Capital	PL	\$ 577	\$ 14,404	\$ 14,404	\$ 70	-	★	06/28/24	06/28/24	-	★	See Section 10
10037350 - Regional Groundwater Treatment Improvement	PL	\$ 2,200	\$ 38,600	\$ 38,600	\$ 48	-	★	12/27/29	12/27/29	-	★	See Section 10
Water Transmission												
10034578 - CSPL2 Reach 5 Lining Replacement	PL	\$ 2,031	\$ 13,031	\$ 13,031	\$ 683	-	★	09/19/25	09/19/25	-	★	See Section 10
10035029 - As-Needed Pipeline Repairs	PL	\$ 1,800	\$ 6,795	\$ 6,795	\$ 147	-	★	08/25/28	08/25/28	-	★	See Section 10
10036839 - BDPL4 PCCP Repair	PL	\$ 500	\$ 54,750	\$ 54,750	\$ 73	-	★	11/22/23	11/22/23	-	★	See Section 10
10036840 - BDPL 1-4 Lining Repair	PL	\$ 500	\$ 9,350	\$ 9,350	\$ 110	-	★	08/25/28	08/25/28	-	★	See Section 10
CUW27301 - Corrosion Control	DS	\$ 10,450	\$ 24,900	\$ 24,900	\$ 7,102	-	★	12/29/34	12/29/34	-	★	See Section 10

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

**** Phase Status Legend**

- PL Planning DS Design BA Bid & Award
- CN Construction NA Not Applicable MP Multi-Phases

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

+ Cost and Schedule Status

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

I. Regional WECIP Quarterly Report

Q4-FY2020-2021 (04/01/21 - 06/30/21)

All costs are shown in \$1,000s as of 06/26/21

Project Name	Active Phase (**)	Appropriated Budget To Date (a)	Current Approved Budget (b)	Current Forecasted Cost (c)	Expenditures To Date (d)	Cost Variance (e= b - c)	Cost Status (+)	Current Approved Completion (g)	Current Forecasted Completion (h)	Schedule Variance (i = g - h)	Schedule Status (+)	Project Data Sheet
Water Transmission												
CUW2730404 - San Antonio Pump Station MCC Upgrades	DS	\$ 3,347	\$ 12,500	\$ 12,500	\$ 632	-	★	03/19/25	03/19/25	-	★	See Section 10
CUW2730505 - CSPL2 Reaches 2 and 3 Rehabilitation	PL	\$ 2,520	\$ 50,041	\$ 50,041	\$ 1,393	-	★	06/12/26	06/12/26	-	★	See Section 10
Water Supply & Storage												
10036998 - Turner Dam and Reservoir Improvements	PL	\$ 1,500	\$ 7,500	\$ 7,500	\$ 207	-	★	06/29/35	06/29/35	-	★	See Section 10
CUW2740102 - Pilarcitos Dam Improvements	PL	\$ 6,680	\$ 30,087	\$ 30,087	\$ 3,332	-	★	06/29/29	06/29/29	-	★	See Section 10
CUW2740103 - San Andreas Dam Facility Improvements	PL	\$ 24,366	\$ 32,195	\$ 32,195	\$ 914	-	★	12/30/33	12/30/33	-	★	See Section 10
Watershed & Lands Management												
CUW2751401 - EBRPD WATER SYSTEM	CN	\$ 5,076	\$ 5,376	\$ 5,376	\$ 1,374	-	★	10/31/22	10/31/22	-	★	See Section 10
10015108 - Sneath Lane Gate/North San Andreas	PL	\$ 173	\$ 6,698	\$ 6,698	\$ 13	-	★	01/27/28	01/27/28	-	★	See Section 10
CUW2751801 - Southern Skyline Blvd Ridge Trail Extension	DS	\$ 5,846	\$ 21,805	\$ 21,805	\$ 4,850	-	★	09/11/23	09/11/23	-	★	See Section 10
CUW2752201 - SA-1 Service Road/Ingoing Road	PL	\$ 962	\$ 9,568	\$ 9,568	\$ 294	-	★	12/31/26	12/31/26	-	★	See Section 10

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

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PL Planning DS Design BA Bid & Award
CN Construction NA Not Applicable MP Multi-Phases

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- Exceed Limits: Forecasted Cost is over Approved Budget by 10% or more. Or Forecasted Schedule is over Approved Schedule by greater than 6 months or 10% or more.

All costs are shown in \$1,000s as of 06/26/21

Project Name	Active Phase (**)	Appropriated Budget To Date (a)	Current Approved Budget (b)	Current Forecasted Cost (c)	Expenditures To Date (d)	Cost Variance (e= b - c)	Cost Status (+)	Current Approved Completion (g)	Current Forecasted Completion (h)	Schedule Variance (i = g - h)	Schedule Status (+)	Project Data Sheet
Buildings and Grounds												
10033555 - Rollins Road Building Renovations (CUW27703)	CN	\$ 5,192	\$ 5,192	\$ 5,192	\$ 2,371	-	★	06/30/22	06/30/22	-	★	See Section 10
10034526 - Millbrae Warehouse Settlement & Admin. Bldg. HVAC	DS	\$ 2,580	\$ 5,500	\$ 5,500	\$ 363	-	★	11/30/23	11/30/23	-	★	See Section 10
CUW27701 - Sunol Long Term Improvements	CN	\$ 107,155	\$ 100,414	\$ 100,414	\$ 74,833	-	★	09/13/22	09/13/22	-	★	See Section 10
CUW2770304 - Millbrae Yard Laboratory and Shop Improvements	PL	\$ 2,487	\$ 169,563	\$ 169,563	\$ 1,833	-	★	03/31/28	03/31/28	-	★	See Section 10

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

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- Exceed Limits: Forecasted Cost is over Approved Budget by 10% or more. Or Forecasted Schedule is over Approved Schedule by greater than 6 months or 10% or more.

6. PROJECTS NOT WITHIN BUDGET AND/OR SCHEDULE

All projects are currently within Budget and Schedule.

7. On-Going Construction*

Construction Contract	Schedule			Budget		Variance (Approved - Forecast)		Actual % Complete
	NTP Date	Approved Construction Final Completion**	Current Forecasted Construction Final Completion	Approved Contract Cost	Current Forecasted Cost**	Schedule (Cal. Days)	Cost	
Watershed & Lands Management								
CUW2751401 - WD-2865 PUC Sunol Rgnl WP WTR Sys	05/10/21	05/28/22	05/28/22	\$ 2,634,808	\$ 2,634,808	-	-	0.0%
Buildings and Grounds								
CUW27701 - WD-2794B Sunol Long Term Improvements - Watershed Center	03/09/20	03/16/22	03/16/22	\$ 29,440,773	\$ 29,440,773	-	-	43.0%

Program Total for On-Going Construction	Approved	Current	Variance	
	Contract Cost	Forecasted Cost	Cost	Percent
	\$ 32,075,581	\$ 32,075,581	\$0	0 %

Note: * This table reflects Active Construction Contracts with an original contract amount greater than \$1M.

** The Forecasted Cost includes all approved, pending, and potential change orders; and Final Completion includes all approved, pending, and potential change orders, and trends.

8. PROJECTS IN CLOSE-OUT

Project Title	Current Approved Construction Phase Completion	Actual Construction Phase Completion	Current Approved Construction Phase Budget	Construction Phase Expenditures To Date
Water Transmission				
CUW2730504 - San Andreas Pipeline No. 2 Replacement	06/07/21	04/13/21	\$ 35,517,646	\$ 32,540,499
TOTAL			\$ 35,517,646	\$ 32,540,499

9. COMPLETED PROJECTS











There are no completed projects.

I. Regional WECIP Quarterly Report

10. PROJECTS WITHIN BUDGET AND SCHEDULE

10033123 - SVWTP Ozone (CUW27202)

Project Description: In recent years, SFPUC's Sunol Valley Water Treatment Plant (SVWTP) has experienced more frequent taste and odor (T&O) events from seasonal algal blooms than had occurred historically. This project's objective is to install ozone treatment facilities as a long-term solution to control T&O events encountered in the raw water supply from both the San Antonio and Calaveras Reservoir sources. This project will improve the reliability to meet water quality goals especially during warm months and during Hetch Hetchy shutdowns.

Program: Water Treatment	Project Status: Planning	Environmental Status: Not Initiated (CatEx)		
Project Cost:		Project Schedule:		
Approved	 \$165.13 M	Approved Jun-17		Jun-27
Forecast*	 \$165.13 M	Forecast* Jun-17		Jun-27
Actual	 \$3.67 M	Project Percent Complete: 2.3%		
 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits				
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/02/23	08/09/23	12/21/23	12/19/26

Progress and Status:

The planning work continued to develop criteria for basin design flow rates and hydraulics, structural requirements, ozone building configuration, in-plant electrical power requirements, and facility layout. Two criteria for the ozone facility were selected during the reporting period, including the number of ozone generators and the configuration of the ozone cooling and carriage water systems. The Geotechnical Interpretive Report was finalized. The Round 1 and 2 treatability testing work was completed. The Round 3 treatability testing work started.













Example of Ozone Generator Unit

Issues and Challenges:

None at this time.

CUW272020402 - SVWTP Phase 3 and 4

Project Description: The primary objective of the SVWTP Phase 3 and 4 Project is to improve regional water delivery reliability by addressing various deficiencies and needs for improvements at the Sunol Valley Water Treatment Plant (SVWTP). Many of the scoped upgrades were identified through condition assessments, Operations staff’s observations, reviews of levels of service, feasibility studies, and alternative analyses.

Program: Water Treatment	Project Status: Planning	Environmental Status: Not Initiated
Project Cost: Approved  \$70.13 M Forecast*  \$70.13 M Actual  \$7.72 M		Project Schedule: Approved Mar-14  Jun-26 Forecast* Mar-14  Jun-26 Project Percent Complete: 4.7%
 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits		

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	10/31/22	01/24/24	07/01/24	12/31/25

Progress and Status:

The project team continued analyzing and delineating the current total of twenty-five (25) scope items and developing the project delivery strategies and the work plan. The project team continued to review Technical Memoranda prepared for some of the scope items. Site visits to further refine scope requirements will occur during the next reporting period.

Issues and Challenges:

None at this time.








Concrete Scaling within SVWTP Sedimentation Basin to be Repaired by Project

I. Regional WECIP Quarterly Report

10037349 - HTWTP Improvements Capital

Project Description: Twenty-one sub-projects have been identified to improve the performance, efficiency and reliability of the Harry Tracy Water Treatment Plant (HTWTP). However, one of the projects, the filter underdrains, has become a priority because two of the underdrains have recently failed and a third is showing signs of imminent failure. Although 21 projects have been identified, funding is only available for the filter underdrain project, which has been deemed the highest priority. The remaining projects will be deferred to a future round of CIP planning.

Program: Water Treatment		Project Status: Planning		Environmental Status: Not Initiated	
Project Cost:			Project Schedule:		
Approved		\$14.40 M	Approved Nov-20		Jun-24
Forecast*		\$14.40 M	Forecast* Nov-20		Jun-24
Actual		\$0.07 M	Project Percent Complete: 2.7%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	06/29/22	07/22/22	12/30/22	12/30/23	

Progress and Status:

The Conceptual Engineering Report was finalized for the replacement of the existing plastic underdrains of Filters 1-6 with stainless steel underdrains. The design phase was initiated during the quarter. Fifty percent design milestone is anticipated to be completed within the next quarter.

Issues and Challenges:

None at this time.








Filter Gullet beneath Plastic Underdrains with Failed Grout

10037350 - Regional Groundwater Treatment Improvement

Project Description: The purpose of this project is to improve the performance of the Regional Groundwater Wells and treatment systems in the South Westside Basin for reliable use during dry years. In normal and wet years, the SFPUC will supply treated surface water to Daly City, San Bruno, and Cal Water to be used in place of their typical groundwater supply, thereby increasing the volume of groundwater in storage that can be pumped as supplemental water in dry years. This project will address emerging well water quality issues that require treatment, will provide additional reliability for treatment systems at the wells, and will evaluate the potential for a consolidated treatment facility (through Alternatives Analysis only).

Program: Water Treatment	Project Status: Planning	Environmental Status: Not Initiated
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Project Cost:		Project Schedule:	
Approved	 \$38.60 M	Approved Aug-20	 Dec-29
Forecast*	 \$38.60 M	Forecast* Aug-20	 Dec-29
Actual	\$0.05 M	Project Percent Complete: 0.1%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	11/03/25	01/29/26	06/18/26	06/25/29

Progress and Status:

The final workshop to review the various treatment options was held with Operations. Responses to comments on the final draft report on the various treatment options are being prepared and the final report will be available in the next quarter.

Issues and Challenges:

None at this time.









Typical Well Pump

I. Regional WECIP Quarterly Report

10034578 - CSPL2 Reach 5 Lining Replacement

Project Description: Crystal Springs Pipeline No. 2 (CSPL2) runs from Crystal Springs Pump Station to University Mound Reservoir. It delivers potable and emergency water supply to San Francisco and to several cities along the peninsula. Reach 5 of CSPL2, 60 inches in diameter and located in the Cities of South San Francisco and San Bruno between Millbrae Yard and Baden Pump Station, is over 80 years old and has extensive lining failures. This project would replace approximately 3.3 miles of coal tar lining with cement mortar or dielectric lining, upgrade about 30 appurtenances to meet current standards, and improve access and shutdown flexibility for maintenance by installing five manway structures and one 48-inch diameter valve on San Andreas Pipeline No. 1 (SAPL1) near Baden Pump Station.

Program: Water Transmission	Project Status: Planning	Environmental Status: Active
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Project Cost:		Project Schedule:	
Approved	 \$13.03 M	Approved Feb-19	 Sep-25
Forecast*	 \$13.03 M	Forecast* Feb-19	 Sep-25
Actual	 \$0.68 M	Project Percent Complete: 5.6%	
			

Key Milestones:	Environmental** Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	See Note	04/24/23	10/02/23	03/21/25

** Environmental CatEx was obtained under project CUW2730504 - SAPL2 Lockbar Replacement on 06/20/17.

Progress and Status:

The alternatives for this project were scored by the scoring committee. The highest scoring alternative, lining replacement of the existing pipeline with cement mortar lining, will be presented to the Technical Steering Committee to be moved forward to the Conceptual Engineering Phase next quarter.









CSPL2 Reach 5 Alignment inside the Golden Gate National Cemetery

Issues and Challenges:

None at this time.

10035029 - As-Needed Pipeline Repairs

Project Description: Water Supply and Treatment Division’s (WSTD) maintenance and inspection program inspects the regional pipeline system on an ongoing basis. However, when repairs are identified to be needed following inspections and when emergency repairs are needed, a contractor is not readily available to perform the repairs. This project will increase system reliability by reducing the duration and number of outages since a pre-qualified, as-needed contractor will be available to complete repairs immediately following inspections or in emergencies. This project will repair/replace regional pipeline segments that will be inspected over the next five years, in addition to any emergency repairs that may be needed. The construction contract for this project will be combined with Project 10036840, BDPL1-4-B Lining Repair to provide a sufficient guaranteed scope.

Program: Water Transmission	Project Status: Planning	Environmental Status: Active
Project Cost:		Project Schedule:
Approved  \$6.80 M	Approved Oct-16  Aug-28	
Forecast*  \$6.80 M	Forecast* Oct-16  Aug-28	
Actual  \$0.15 M	Project Percent Complete: 4.3%	
		

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	09/22/22	10/18/22	03/27/23	02/26/28

Progress and Status:

The Conceptual Engineering Report was circulated for review and presented to the Technical Steering Committee; approval was granted to proceed with the design phase. In preparing the pipeline repair design and contract documents, consideration will be given to assure safe entry into the pipelines for personnel and to coordinate regional transmission pipeline shutdowns to ensure water demands are met during the construction period.



Typical Pipeline Repair with WEKO Seals






Issues and Challenges:

None at this time.

I. Regional WECIP Quarterly Report

10036839 - BDPL4 PCCP Repair

Project Description: Historically, when prestressed concrete cylinder pipe (PCCP) fails due to wrapped wire breaks, the failure can result in widespread damage to the pipe and ground surface due to multiple wires breaking at the same time along the pressurized pipe. From recent inspections of Bay Division Pipeline No. 4 (BDPL4) Segment D, constructed of PCCP, a large number of defects were found in the last mile of pipe that parallels Edgewood Road in Redwood City; this project will address those defects. This project will increase system reliability by rehabilitating approximately 350 feet of 84-inch diameter BDPL4 PCCP in Redwood City.

Program: Water Transmission		Project Status: Planning		Environmental Status: Active	
Project Cost:			Project Schedule:		
Approved		\$54.75 M	Approved May-20		Nov-23
Forecast*		\$54.75 M	Forecast* May-20		Nov-23
Actual		\$0.07 M	Project Percent Complete: 0.5%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	03/31/22	04/22/22	09/29/22	05/26/23	

Progress and Status:

A draft technical memorandum with recommendations for proposed improvements is being finalized and is anticipated to be distributed later this year. While project field investigations were being performed during the past quarter, several new leaks were discovered. The pipeline was dewatered for an internal inspection, and temporary repairs were performed. Further investigation is needed to identify the cause of the leaks and to determine if changes to the project scope, budget and schedule are needed.

Issues and Challenges:











None at this time.



Excavation of Pipeline to Locate Source of Leak

10036840 - BDPL 1-4 Lining Repair

Project Description: Water Supply and Treatment Division’s (WSTD) ongoing pipeline inspection program has identified segments of the Bay Division Pipeline Nos. 1 through 4 (BDPL 1-4) that require lining repairs and replacement. This project will retain an as-needed contractor to repair or replace sections of lining that are identified by WSTD over the next 5-years.

Program: <i>Water Transmission</i>	Project Status: <i>Planning</i>	Environmental Status: <i>Active</i>
Project Cost:		Project Schedule:
Approved  \$9.35 M	Approved Sep-16  Aug-28	
Forecast*  \$9.35 M	Forecast* Sep-16  Aug-28	
Actual  \$0.11 M	Project Percent Complete: <i>1.4%</i>	
 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits		

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	08/24/22	10/18/22	03/24/23	01/04/28

Progress and Status:

The Conceptual Engineering Report was circulated for review and presented to the Technical Steering Committee. Approval has been given to proceed with the design phase. In preparing the lining repair design and contract documents, consideration will be given to assure safe entry into the pipelines for personnel and to coordinate regional transmission pipeline shutdowns to ensure water demands are met during the construction period.



Typical Lining Defect











Issues and Challenges:

None at this time.

I. Regional WECIP Quarterly Report

CUW27301 - Corrosion Control

Project Description: This project will implement the corrosion protection and control program as recommended in the Corrosion Control Master Plan completed in August 2010. Sites identified with worst levels of corrosion were bundled up in the masterplan into four phases. Each phase will take several years for implementation. The scope for all phases will be similar, but the number of sites will vary at each phase. Phase 1 construction work for ten sites was completed and accepted on August 27, 2019. Phase 2 has fourteen sites and is currently in the design phase. Phase 3 is anticipated to include work at eighteen sites and to begin planning in 2025. The number of sites and locations for Phase 4 will be determined from the corrosion database resulting from WST's annual inspection reports. Planning phase for Phase 4 will commence after Phase 3 is completed.

Program: Water Transmission		Project Status: Design		Environmental Status: Not Applicable	
Project Cost:			Project Schedule:		
Approved		\$24.90 M	Approved Jan-16		Dec-34
Forecast*		\$24.90 M	Forecast* Jan-16		Dec-34
Actual		\$7.10 M	Project Percent Complete: 28.7%		
 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	06/29/18✓	08/27/21	02/01/22	12/29/23	

Progress and Status:

The Corrosion Control Phase 2 sub-project is currently in design. The project team is developing the design from 95% to 100% for eleven (11) of the fourteen (14) sites. Stanford University has signed the Purchase and Sale Agreement for the Temporary Construction Easement (TCE) deed for one (1) site. The TCE is needed for staging materials during construction at this one site located in the south east corner of Quarry Road and El Camino Real, Santa Clara, California.

Issues and Challenges:

The project team has not received response from PG&E for new power facilities at three (3) of the fourteen (14) sites. In order to not delay construction for the other sites, if this information is not received by bid date, construction at these three (3) sites will be postponed until the next phase.








Deep Anode Installation – Corrosion Phase 1

CUW2730404 - San Antonio Pump Station MCC Upgrades

Project Description: The San Antonio Pump Station (SAPS) is one of the key facilities in the Sunol Valley; it was constructed in 1965 and modified in 1990. The existing motor control centers (MCC) MCC-A, MCC-B, and MCC-C have been in service since the 1960's and they are approaching the end of their useful life. In order to maintain reliable operation at SAPS, the existing MCCs are being replaced and facility walls are being seismically retrofitted. In order to accommodate the retrofit work, the communications system is being relocated to an adjacent room and the HVAC will be replaced in affected rooms. In addition, a new propane generator will replace the existing diesel generator to serve as reliable backup power to the facility.

Program: Water Transmission	Project Status: Design	Environmental Status: Not Initiated (CatEx)
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Project Cost:	Project Schedule:
Approved  \$12.50 M	Approved May-16  Mar-25
Forecast*  \$12.50 M	Forecast* May-16  Mar-25
Actual  \$0.63 M	Project Percent Complete: 7.5%

 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	04/14/22	12/07/22	06/05/23	10/09/24

Progress and Status:

The design team continued with the 65% design of the project. Several meetings were held with stakeholders to finalize the design requirements for all the electrical and Instrumentation and Controls (I&C) work. A site survey was also initiated to finalize the locations for the generator and for other auxiliary equipment.

Issues and Challenges:

None at this time.








San Antonio Pump Station building looking southeast

I. Regional WECIP Quarterly Report

CUW2730505 - CSPL2 Reaches 2 and 3 Rehabilitation

Project Description: Crystal Springs Pipeline No. 2 (CSPL2) spans from Crystal Springs Pump Station to University Mound Reservoir. It delivers potable water supply to San Francisco and several cities along the Peninsula. Reaches 2 and 3 of CSPL2 in the Town of Hillsborough, unincorporated areas of San Mateo County, the City of San Mateo, and the City of Burlingame are over 80 years old and deteriorated in some locations with Reach 2 located on slopes that are eroding and Reach 3 containing extensive lining failures. This project would realign Reach 2 to the existing abandoned CSPL1 alignment, replace the coal tar lining of Reach 3, and improve access to the pipeline.

Program: Water Transmission	Project Status: Planning	Environmental Status: Not Initiated (MND)
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Project Cost:		Project Schedule:	
Approved	 \$50.04 M	Approved Sep-16	 Jun-26
Forecast*	 \$50.04 M	Forecast* Sep-16	 Jun-26
Actual	 \$1.39 M	Project Percent Complete: 1.7%	

 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	04/27/23	07/11/23	12/18/23	12/16/25

Progress and Status:

San Francisco Public Works is performing additional surveying and geotechnical investigation work to be included in the draft Conceptual Engineering Report. A JOC contractor is scheduled to begin excavation for the corrosion investigation work early next quarter.

Issues and Challenges:

None at this time.













CSPL2 alignment along creek bank

10036998 - Turner Dam and Reservoir Improvements

Project Description: Turner Dam is a 195-foot-high earth embankment dam that was completed in 1965 and impounds San Antonio Reservoir in the East Bay. The dam is regulated by the California Division of Safety of Dams (DSOD). This project is to investigate the seismic stability and hydraulic performance of the Turner Dam and San Antonio Reservoir facilities and to perform necessary upgrades identified during the Planning Phase. The scope of work will be confirmed once Condition and Needs Assessments, and Alternative Analysis of the dam, outlet structures, and spillway are complete.

Program: Water Supply & Storage	Project Status: Planning	Environmental Status: Not Initiated (EIR)
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Project Cost:		Project Schedule:	
Approved 	\$7.50 M	Approved Oct-20 	Jun-35
Forecast* 	\$7.50 M	Forecast* Oct-20 	Jun-35
Actual 	\$0.21 M	Project Percent Complete: 1.6%	
 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/30/31	07/01/31	01/02/32	12/29/34

Progress and Status:

As part of the spillway condition assessment, design team completed a sub-drain inspection and a Ground Penetrating Radar (GPR) survey. A preliminary spillway condition assessment will be presented in the next quarter. A geotechnical investigation work plan for the site, including the dam embankment, spillway, and access road, was developed. Next quarter, this plan will be reviewed by the project team to ensure its coordination with environmental requirements, and then submitted to DSOD for review and approval.



Sub-Drain Inspection at the Turner Dam Spillway











Issues and Challenges:

None at this time.

I. Regional WECIP Quarterly Report

CUW2740102 - Pilarcitos Dam Improvements

Project Description: The Pilarcitos Dam is an earthen embankment dam that was built in 1866 and raised in 1874; it is the SFPUC's oldest dam regulated by the California Division of Safety of Dams (DSOD). This project will investigate the seismic stability and hydraulic performance of the Pilarcitos Dam and Reservoir facilities and perform necessary upgrades identified during the Planning Phase. The scope of work will be confirmed following the completion of the Condition and Needs Assessments, and Alternative Analysis for the dam and forebay outlet structure, spillway, outlet tunnel, and outlet pipeline.

Program: Water Supply & Storage		Project Status: Planning		Environmental Status: Not Initiated (MND)	
Project Cost:			Project Schedule:		
Approved		\$30.09 M	Approved Apr-14		Jun-29
Forecast*		\$30.09 M	Forecast* Apr-14		Jun-29
Actual		\$3.33 M	Project Percent Complete: 11.1%		
 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	06/30/25	07/09/25	01/02/26	12/31/28	

Progress and Status:

During the reporting period, the project team completed the dam embankment stability analysis and coordinated with DSOD for its review. In addition, the spillway hydraulic analysis was also completed. Overall condition and needs assessment for the dam embankment, forebay outlet structure, spillway, outlet tunnel, and outlet pipeline is currently underway, and preliminary results will be available in the next quarter.

Issues and Challenges:











None at this time.



Pilarcitos spillway

CUW2740103 - San Andreas Dam Facility Improvements

Project Description: The San Andreas dam is a 105-foot-high earthen embankment dam that was built in 1870; it impounds San Andreas Reservoir that is the raw water source for the Harry Tracy Water Treatment Plant, and it is regulated by the California Division of Safety of Dams (DSOD). This project will investigate the seismic stability and hydraulic performance of the San Andreas Dam and Reservoir facilities and perform necessary upgrades identified during the Planning Phase. The objectives are to perform Condition and Needs Assessments and Alternatives Analyses of the dam, spillway, emergency outlet, and ancillary facilities; to develop retrofit options if required; and to implement the selected alternatives.

Program: Water Supply & Storage	Project Status: Planning	Environmental Status: Not Initiated (Various)
Project Cost: Approved  \$32.20 M Forecast*  \$32.20 M Actual  \$0.91 M		Project Schedule: Approved Dec-13  Dec-33 Forecast* Dec-13  Dec-33 Project Percent Complete: 3.2%
 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits		

Key Milestones:	Environmental** Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	(A) 07/02/24 (B) 12/31/26	01/04/27 01/02/29	07/01/27 07/02/29	06/29/29 06/30/33

** (A) CatEx; (B) MND

Progress and Status:

Design consultant completed the preliminary condition and needs assessment for the spillway and the emergency drawdown outlet structures. Preliminary embankment stability analysis and dam seismic hazard analysis continued during the quarter. A geotechnical investigation workplan for the dam embankment, spillway, and outlet works was developed. Environmental clearance and DSOD review and approval were all initiated. A bathymetric survey was completed during the reporting period.



Launching of barge for the Bathymetric Survey

Issues and Challenges:











The baseline schedule assumes the work on the spillway and emergency drawdown outlet structures will proceed independently of, and two years earlier than, the work on the dam embankment. However, based on the preliminary findings, it is recommended that alternatives analyze the interdependence of all system components, which may change the assumptions for construction sequencing. In addition, per the discussion with DSOD, their review and approval process for the geotechnical investigation for the entire project will take a minimum of 6 months. While this will not impact the schedule for the Condition and Needs Assessment phase, it will prolong the duration of the Alternatives Analysis phase. The schedule will be reforecast due to these

schedule impacts and provided in future quarterly reports.

I. Regional WECIP Quarterly Report

CUW2751401 - EBRPD WATER SYSTEM

Project Description: As a mitigation for the Calaveras Dam Replacement Project, the SFPUC agreed to construct new potable water distribution facilities for the Sunol Regional Wilderness Park (SRP), managed by the East Bay Regional Park District (EBRPD). The EBRPD owns and maintains a water system located at SRP Headquarters which previously supplied potable water to four park facilities, as well as drinking water fountains and picnic areas interspersed throughout the park. Currently, the water system serves non-potable water for use by EBRPD employees only. Since the system stopped producing potable water due to supply and sanitary deficiencies, EBRPD has been supplying park visitors with bottled water trucked in by a contracted vendor. The project purpose is to provide a reliable water supply for potable use at the EBRPD facilities and to provide potable uses at the SRP.

Program: Watershed & Lands Management	Project Status: Construction	Environmental Status: Completed		
Project Cost:		Project Schedule:		
Approved	 \$5.38 M	Approved Jun-14		Oct-22
Forecast*	 \$5.38 M	Forecast* Jun-14		Oct-22
Actual	 \$1.37 M	Project Percent Complete: 26.2%		
 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits				
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	11/05/20✓	10/09/20✓	05/10/21✓	05/28/22

Progress and Status:

Due to more time needed to obtain environmental permits and with the intent to avoid delay, two separate Notice to Proceeds (NTPs) were issued to the contractor (Cratus, Inc.) during the quarter. The first one was issued on May 10, 2021 for non-ground disturbance activities (activities not involving any manipulation of the environment) such as preparing required submittals. The second NTP followed on June 14, 2021, after the environmental permits were acquired, and allowed the contractor to proceed on all construction activities (including "ground disturbance activities"). The contractor mobilized to the site, and will proceed with construction activities in the next reporting period.



Sunol Regional Wilderness Park High Valley Area






Issues and Challenges:

None at this time.

10015108 - Sneath Lane Gate/North San Andreas

Project Description: The 2001 Peninsula Watershed Management Plan identified the need for a new trail connection between San Mateo County’s Crystal Springs Regional Trail (North San Andreas) to Golden Gate National Recreation Area's Sweeney Ridge property at the Sneath Lane Gate. The trail is a critical connection among existing regional trails, and will provide access to hikers, bikers and equestrians.

Program: <i>Water Supply & Storage</i>	Project Status: <i>Planning</i>	Environmental Status: <i>Not Initiated</i>
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Project Cost:		Project Schedule:	
Approved 	\$6.70 M	Approved Feb-21 	Jan-28
Forecast* 	\$6.70 M	Forecast* Feb-21 	Jan-28
Actual	\$0.01 M	Project Percent Complete: <i>0.4%</i>	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	01/31/25	02/02/26	07/31/26	07/30/27

Progress and Status:

The planning phase work continued this quarter. San Francisco Public Works began its work on the conceptual engineering report.

Issues and Challenges:

None at this time.









Sneath Lane Trailhead

I. Regional WECIP Quarterly Report

CUW2751801 - Southern Skyline Blvd Ridge Trail Extension

Project Description: The Bay Area Ridge Trail project was started in 1987 by the Bay Area Ridge Trail Council to create an approximately 550-mile long continuous trail for hikers, mountain bicyclists, and equestrians along the ridgelines overlooking San Francisco Bay. The objective of this project is to provide access to the Peninsula watershed, to enhance educational opportunities, and to ensure watershed protection. This proposed trail extension project would construct a 6-mile long trail on the Peninsula Watershed in San Mateo County between Highway 92 and the Golden Gate National Recreation Area's (GGNRA) Phleger Estate. The project would consist of 8 to 10-foot wide, all-weather surface trails; retaining structures to stabilize cut and/or fill slopes; drainage facilities; two parking lots; two prefabricated restrooms along the trail; site security features; and landscape restoration.

Program: Watershed & Lands Management	Project Status: Design	Environmental Status: Active (EIR)		
Project Cost:		Project Schedule:		
Approved	 \$21.81 M	Approved Oct-12		Sep-23
Forecast*	 \$21.81 M	Forecast* Oct-12		Sep-23
Actual	 \$4.85 M	Project Percent Complete: 23.6%		
				
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	05/11/21✓	07/20/21	12/20/21	03/15/23

Progress and Status:

During this quarter the Planning Department certified the Southern Skyline Blvd Ridge Trail Extension Final Environmental Impact Report (EIR) on April 29, and the San Francisco Public Utilities Commission adopted the findings and approved the project on May 11. Next quarter, the project team will prepare the construction contract for bid advertisement.



View of southern trail alignment







Issues and Challenges:

None at this time.

CUW2752201 - SA-1 Service Road/Ingoing Road

Project Description: The SFPUC has identified landslide and erosion damage that have destabilized service roads (East Shore Service Road and West Shore Service Road) and adjacent areas in three locations on San Francisco Peninsula Watershed lands situated along the San Andreas Reservoir in San Mateo County. The project is to evaluate and repair the damage, and to implement long term solutions for SFPUC staff and contractors to continue to use the roads to access, operate, and maintain SFPUC facilities and watershed lands. Construction for these locations can be done through phases to accommodate budget cash flow.

Program: Watershed & Lands Management	Project Status: Planning	Environmental Status: Not Initiated (MND)
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Project Cost:		Project Schedule:	
Approved 	\$9.57 M	Approved Jun-16 	Dec-26
Forecast* 	\$9.57 M	Forecast* Jun-16 	Dec-26
Actual 	\$0.29 M	Project Percent Complete: 2.2%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	03/16/23	07/25/23	01/02/24	01/01/25

Progress and Status:

The Alternative Analysis Report (AAR) was completed this quarter. The project team initiated the Conceptual Engineering Report (CER). Slope stabilization requirements will be further defined in the CER. A geotechnical survey and flight survey for the project were completed during the quarter. The biological survey and the habitat survey, both needed for environmental permit documentation, are underway. A third party estimator has been hired to provide independent estimates at the CER phase.

Issues and Challenges:

The construction cost estimate produced for the AAR was higher than the approved baseline construction cost estimate due to increased scope recommended for slope stabilization and also due to further definition of the project scope. The forecast will not be changed until an updated engineer’s estimate is provided at the CER phase. In addition, the project team will evaluate potential means to reduce the project cost to bring the cost back to the baseline.













Project Map – SA-1 Service Road/Ingoing Road

I. Regional WECIP Quarterly Report

10033555 - Rollins Road Building Renovations (CUW27703)

Project Description: The SFPUC purchased a property that was previously leased long-term on Rollins Road in Burlingame, San Mateo County, in September 2017, securing ownership of an additional 10,000 square feet of office space for the SFPUC Water Enterprise (WE). A capital project was initiated in 2018 for tenant improvements. In June 2020, the project scope for the 1657 Rollins Road was decreased significantly, and the scope of the Millbrae Yard Lab & Shop Project was increased. The program for Rollins Road Building Renovation Project will be achieved at the Millbrae Yard by adding two additional floors to the laboratory building as part of its Phase 1 project. The expanded laboratory building will accommodate the Rollins Road building staff. As a result of the scope change, personnel at 1657 Rollins Road will relocate to Millbrae Yard campus following the completion of the Millbrae Yard Lab & Shops Project.

Program: Buildings and Grounds	Project Status: Construction	Environmental Status: Completed (CatEx)		
Project Cost:		Project Schedule:		
Approved	 \$5.19 M	Approved Mar-18		Jun-22
Forecast*	 \$5.19 M	Forecast* Mar-18		Jun-22
Actual	 \$2.37 M	Project Percent Complete: 46.3%		
 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits				
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	10/30/20✓	N/A	12/08/20✓	12/30/21

Progress and Status:

During this quarter, Notice to Proceed was issued for supplemental JOC task orders to perform exterior electrical, lighting, and security work. Next quarter, the JOC contractor will mobilize to perform the remaining scope of work.

Issues and Challenges:

None at this time.













View of newly installed fence on north property line

10034526 - Millbrae Warehouse Settlement & Admin. Bldg. HVAC

Project Description: This project will construct improvements for two buildings located at the Millbrae Yard facility, the Millbrae Warehouse and the Administration Building. The Millbrae Warehouse Settlement project will provide a long-term repair for the displacement (settlement) of the slab between the loading dock and the offices. The slab settlement resulted from expansive clay layers located seven feet below the top of the existing concrete slab. For the Millbrae Administration Building HVAC Upgrades, this project will provide long-term reliable and economical improvements to heating and cooling systems.

Program: Buildings and Grounds	Project Status: Design	Environmental Status: Active
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Project Cost:		Project Schedule:	
Approved	 \$5.50 M	Approved Jan-17	 Nov-23
Forecast*	 \$5.50 M	Forecast* Jan-17	 Nov-23
Actual	 \$0.36 M	Project Percent Complete: 6.9%	
 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits			

Key Milestones:	Environmental** Approval	Bid+ Advertisement	Construction+ NTP	Construction+ Final Completion
Current Forecast	10/29/21	(A) 09/01/20✓ (B) 11/23/21	(A) 06/16/21✓ (B) 03/01/22	06/30/22 02/28/23

+ Project includes multiple construction contracts: (A) WD-2870 (I) Millbrae Warehouse Settlement; (B) WD-2869 Millbrae Admin Building HVAC Upgrade

** The CatEx was approved in 2017, however it needs to be modified to include tree removal for the HVAC Upgrades only.

Progress and Status:

Construction Phase started for the Millbrae Warehouse Settlement subproject. Notice To Proceed (NTP) was issued for the Millbrae Loading Dock Repair subproject. Field work will start in July.

During the 35% design development of the Millbrae Administration Building HVAC Upgrades subproject, the project team considered that the existing building may not be designed for the new HVAC system's structural load and seismic requirements. The team is evaluating the option to install the new HVAC equipment outdoors to avoid increasing the seismic load on the building. The impact of this potential change will be further evaluated next quarter.



Existing Millbrae Administration Building











Issues and Challenges:

None at this time.

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CUW27701 - Sunol Long Term Improvements

Project Description: The project includes redevelopment of the existing Sunol Yard and construction of a Watershed Center near the Sunol Water Temple. The project will demolish six existing dilapidated structures at the Sunol Yard and construct a LEED Gold administration building, shops, fuel station, backup generator system, truck wash station, paving and site restoration. The SFPUC Alameda Creek Watershed Center (Center) will be a gathering place for increasing the awareness and appreciation of the natural, cultural, scenic, historic and recreational resources of the Alameda Creek watershed. Consistent with the SFPUC Water Enterprise Environmental Stewardship Policy, and as described in the SFPUC Alameda Watershed Management Plan, the Center will enhance public awareness and provide education opportunities related to water quality, water supply, conservation and environmental stewardship issues.

Program: Buildings and Grounds	Project Status: Construction	Environmental Status: Completed (MND)		
Project Cost:		Project Schedule:		
Approved	 \$100.41 M	Approved Jan-09		Sep-22
Forecast*	 \$100.41 M	Forecast* Jan-09		Sep-22
Actual	 \$74.83 M	Project Percent Complete: 76.0%		
 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits				
Key Milestones:	Environmental Approval	Bid+ Advertisement	Construction+ NTP	Construction+ Final Completion
Current Forecast	12/02/15✓	(A) 03/01/16✓ (B) 08/30/19✓	(A) 01/17/17✓ (B) 03/09/20✓	09/15/20✓ 03/16/22

+ Project includes multiple construction contracts: (A) Sunol Yard; and (B) Watershed Center

Progress and Status:

Sunol Yard (Contract A): The as-built drawings and O&M manuals were turned over to Operations. The preparation of the project close-out dossier continued. Watershed Center (Contract B): The construction work on the architectural concrete walls, roof decking, sewage holding tank, rain harvest tank, and rough grading was completed during the reporting period. The construction work on the interior utilities, wall framing, HVAC and duct systems, and aquarium systems continued. The public art piece design work continued.



View of Future Watershed Center Entrance

Issues and Challenges:

The team received comments regarding ADA compliance concerning the text font size used on the exhibit signage; this change will require either an increase in the size of the signs themselves or a 50% reduction in the sign content. There is a delay to the bluestone etching work due to shortage of materials. The impacts from these issues will be reported in the next quarter.

CUW2770304 - Millbrae Yard Laboratory and Shop Improvements

Project Description: SFPUC has determined that the existing Millbrae Administration Building must remain operational following a major earthquake, and therefore needs to be retrofitted or replaced to meet essential facility requirements. SFPUC also wants to expand the existing Millbrae Administration Building to merge and house the Water Enterprise staff and equipment from the Rollins Road Facility. This project is necessary to provide Water Enterprise personnel a long term and sustainable campus and facilitate the consolidation of work groups for increased staff efficiency. This project will also alleviate shortage of program space, increase efficiency of operations, improve employee working environment with improved heating, ventilation, and air conditioning, improve employee health and safety, and enhance site and building security. The Millbrae Yard campus improvements will be implemented in three phases. Phase 1 includes a new laboratory and new south shop building; Phase 2 includes demolition of the existing Administration Building and construction of a new consolidated Administration Building; Phase 3 includes new covered storage for materials and equipment. This project includes planning for all three phases, but only design and construction for Phase 1.

Program: Buildings and Grounds	Project Status: Planning	Environmental Status: Active (MND)		
Project Cost:		Project Schedule:		
Approved	█ \$169.56 M	Approved Nov-15	█	Mar-28
Forecast*	█ \$169.56 M	Forecast* Nov-15	█	Mar-28
Actual	█ \$1.83 M	Project Percent Complete: 1.1%		
█ Approved; █ Actual Cost; * Forecast Status: █ Meet Requirements █ Need Attention █ Exceed Limits				
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	07/27/23	11/06/24	04/15/25	10/02/27

Progress and Status:

The project is currently in the Conceptual Engineering Report (CER) phase. The scope of work for site and pipeline survey and potholing is being developed. A scope is also being developed to analyze the laboratory building layout and whether the laboratory and office spaces should be combined in the same building or housed in separate adjacent buildings. Coordination has also started with the real estate team regarding the Millbrae Yard property boundary, Caltrain easement along the east side, and current leases within the south side of the Millbrae Yard. In April of this quarter, no proposals were received in response to the Request for Proposals (RFP) for consultant planning and design services under contract PRO.0186. Discussion began thereafter and is ongoing regarding potential changes to the contracting strategy to acquire specialized services needed for the project design and engineering support during construction.



Existing Administration Building

Issues and Challenges:

The delay to acquiring consultant specialized services will delay completion of the CER phase. The project team is evaluating strategies to mitigate potential costs and schedule impacts for the delay and will provide updates on any impacts in future quarterly reports.

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II. Local Capital Improvement Program



1. CAPITAL IMPROVEMENT PROGRAM DESCRIPTION

The San Francisco Public Utilities Commission (SFPUC) Water Enterprise manages a complex water supply system stretching from the Sierra to San Francisco featuring a series of reservoirs, tunnels, pipelines, and treatment systems. Two unique features of this system stand out: the drinking water provided is among the highest quality in the world, and water deliveries are made to most customers without the use of power (gravity flow) while generating power at the same time.

The SFPUC is the third largest municipal utility in California, serving 2.7 million residential, commercial, and industrial customers in the Bay Area. Approximately one-third of the delivered water goes to retail customers in San Francisco, while wholesale deliveries to 27 suburban agencies in Alameda, Santa Clara, and San Mateo counties comprise the other two-thirds.

The Local Water System is located primarily within the City and County of San Francisco and consists of water storage and treatment facilities; water transmission and distribution infrastructure; buildings and structures for facilities and employees; communications systems; and various lands in the City and County of San Francisco. In addition, the Local Water System includes several other small retail systems in Alameda, Santa Clara and San Mateo Counties where the SFPUC directly retails water to various customers. Groundwater in San Francisco is under the jurisdiction of the SFPUC; the Westside Basin is the only viable aquifer for municipal use. Additionally, the Local Water System includes the Emergency Firefighting Water System (EFWS) used for fire suppression in San Francisco and developer-funded assets that have been conveyed to the SFPUC.

The Local Water System Capital Improvement Program (Local Water CIP) is a 10-year proposed appropriations plan of scheduled projects to physically improve the system assets

and maintain level of service goals. This Local Water CIP is updated each year and integrated with the SFPUC's 10-year Financial Plan and rate-setting.

There are seven (7) groupings of projects in the Local Water CIP in addition to a separate set of programmatic projects used for feasibility planning, for future capital projects, and for implementation of permit compliance activities. The categories are:

- Local Water Supply
- Local Water Conveyance/Distribution
- Local Reservoirs and Tanks Improvements
- Pump Station Improvements
- Automated Water Meter Reading
- Buildings and Grounds Improvements
- Emergency Firefighting Water System

A project is formally initiated (Project Initiation) when the planning process begins, a project manager is assigned, and the project's initial **Approved Budget** consistent with the most recently adopted Local Water CIP is established.

Projects move from the planning, design, and environmental review phase to contract-award and construction phase when **Project Approval** occurs through an action by the Commission, usually at the same time CEQA findings are adopted. The Commission may also make decisions about a project's scope, budget, or schedule during annual review and approval of the Local Water CIP.

While a project is active, additional budget modifications outside of the annual CIP process require approval of the Assistant General Manager (AGM) for the Water Enterprise. When and if these budget modifications occur, the modified budget becomes the new **Approved Project Budget**.

Outside of formal budget adjustments, the project manager regularly estimates and records the anticipated final project cost and schedule as the **Forecasted Cost and Forecasted Schedule**.

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Minor modifications to scope or schedule must be approved by increasing levels of management, with major modifications requiring approval by the Program Director and AGMs of Infrastructure and Water Enterprise. Most scope, schedule, and budget changes must be pre-approved by the Change Control Board which consists of managers within the Water Enterprise and Infrastructure Division. Final Project Closeout must be approved by the AGMs for Infrastructure and Water Enterprise.

2. CAPITAL IMPROVEMENT PROGRAM STATUS

This Quarterly Report presents the progress made on Local Water projects between April 1, 2021 and June 30, 2021. This document serves as the fourth (4th) Quarterly Report in Fiscal Year 2020-2021 (FY21) published for the Water Enterprise Capital Improvement Program.

On April 13, 2021, the SFPUC approved the Water Enterprise CIP 2021 Revised Baseline budget of \$918.8 million for Regional projects and \$1,755.4 million for Local projects (2021 Approved Baseline). The 2021 Approved Baseline is a subset of the Regional and Local Water Enterprise 10-year CIP for FY2021-2030 and includes individual projects over \$5 million that were then currently active or intended to be active by June 30, 2022 at the time proposed to the Commission on April 13, 2021. The status of projects included in the 2021 Approved Baseline are discussed in this quarterly report.

Figure 2.1 shows the total Current Approved Budget for the Local projects in each phase of the program as of June 30, 2021. The number of projects currently active in each phase is shown in parentheses.

Figure 2.2 shows the number of Local projects in the following stages as of June 30, 2021: Pre-construction, Construction, and Post-construction.

Figure 2.3 summarizes the environmental review status of the Local projects as of June 30, 2021.

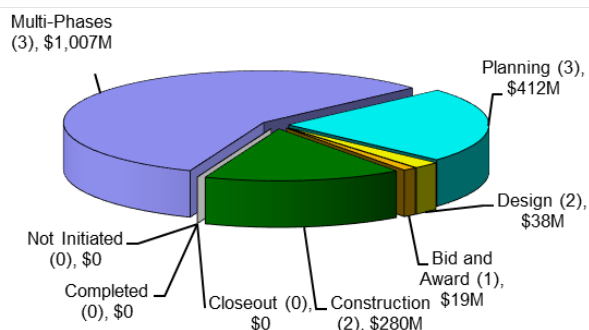


Figure 2.1 Total Current Approved Budget for Local Projects Active in Each Phase

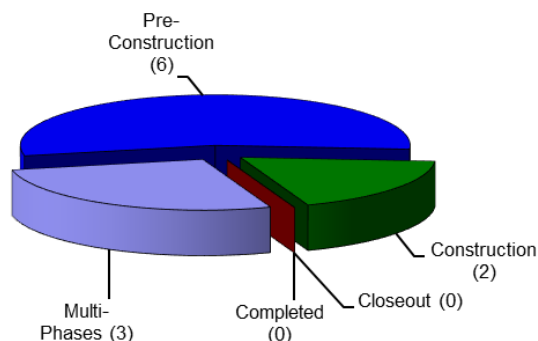


Figure 2.2 Number of Local Projects in Pre-construction, Construction, and Post-construction

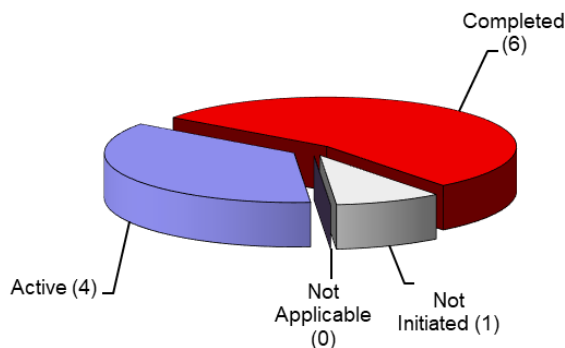
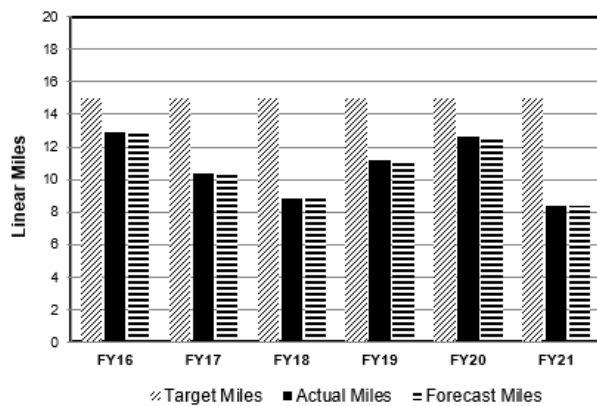


Figure 2.3 Local Program Environmental Status

The Local Water Conveyance/Distribution System Program has an annual goal to replace or improve a target of 15 miles of water mains in San Francisco. Figure 2.4 shows the planned and actual miles of pipeline projects that have reached substantial completion since FY16. At the end of FY21, 11.5 miles of pipe were forecasted to be replaced and their construction to have achieved substantial completion by the start of FY22. However, challenges related to the COVID-19 pandemic caused delays to construction as well as delays to starting new construction projects, and thus a total of only 8.4 miles of pipe were replaced during FY21.



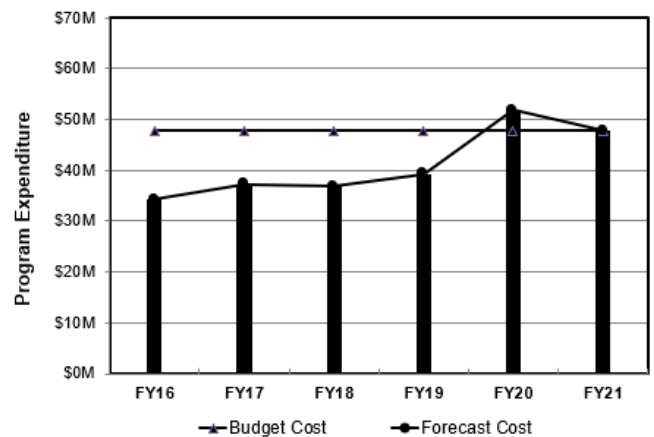
	FY16	FY17	FY18	FY19	FY20	FY21
Target Miles	15.0	15.0	15.0	15.0	15.0	15.0
Actual Miles	12.9	10.4	8.8	11.2	12.6	8.4
Forecast Miles						8.4

Figure 2.4 Water Conveyance/Distribution System Program - Linear Miles by Fiscal Year

Water main replacement projects with construction underway in the 4th quarter of FY21 included the City streets of Pierce Street, Castro Street, 17th Street, Baker Street, 19th Avenue, and Casitas. Pipelines were replaced and water work was completed during the 4th quarter of FY21 on L-Taraval between Sunset and SF Zoo, 21st Street, and Geary between Van Ness and Kearny. Projects achieving substantial completion, including all paving restoration and curb ramp improvements during this quarter include L-Taraval between Sunset and SF Zoo.

Projects anticipated to start replacement of water pipelines in the 1st quarter of FY22 include Wawona Area Stormwater Improvement and Vicente Street Water Main Replacement (Vicente) as well as College Hill Reservoir and Pipeline (College Hill). Below are highlights of key projects scheduled to start next quarter:

- College Hill: Installation of 1,690 feet of 8-inch to 36-inch diameter seismically reliable welded steel and Earthquake Resistant Ductile Iron Pipe (ERDIP) distribution and transmission water mains associated with the inlet and outlet pipelines of College Hill Reservoir and surrounding area.



	FY16	FY17	FY18	FY19	FY20	FY21
Budget	\$47.7M	\$47.7M	\$47.7M	\$47.7M	\$47.7M	\$47.7M
Actual Expenditure	\$34.2M	\$37.3M	\$36.8M	\$39.2M	\$51.7M	\$47.8M
Forecast Expenditure						\$47.8M

Figure 2.5 Water Conveyance/Distribution System Program - Expenditure by Fiscal Year

Figure 2.5 shows the annual total program expenditure by fiscal year for the pipeline replacement program. Program expenditures are forecast to be higher than the budgeted amount of \$47.7M over the next three years to account for the delayed start of several large streetscape improvement projects mentioned above. Additionally, future program expenditure will exceed the budgeted amount of

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\$3.18 million per mile of pipeline replaced due to the following factors:

- The program has previously focused on replacing smaller, less expensive distribution mains to coordinate with San Francisco Public Works' (SFPW) Paving Program.
- Projects will increasingly include more expensive and/or larger diameter pipe replacement for larger distribution mains as well as special earthquake-resistant pipe installation to increase seismic reliability of the City's local water distribution.
- Projects along designated state highway routes such as Van Ness Avenue, 19th Avenue, and Lombard Street are significantly more expensive due to CalTrans permitting requirements, which include costly utility protection requirements and restricted work hours.
- Changes in SFPW's pavement restoration, ADA curb ramps, and permitting requirements in the City continue to increase the cost of pipe replacement projects over earlier estimations.

3. CAPITAL IMPROVEMENT PROGRAM COST SUMMARY

Table 3.1 provides an overall program-level cost summary of the Water Enterprise CIP Local Program. It shows the Expenditures to Date; 2021 Approved, Current Approved and Q4/FY20-21 Forecasted Budgets; and the Cost Variance between the Current Approved and Forecasted Budgets.

The total Current Approved Budget (including Regional and Local Programs) and Current Forecasted Cost at completion are each \$2,674.2 million. The Current Approved Budget and Forecasted Cost at completion for only the Local Program (including construction contingency) are each \$1,755.4 million.

Table 3.1 Program Cost Summary

Cost Categories	Expenditures To Date (\$ Million) (A)	2021 Approved Budget (\$ Million) (C)	Current Approved Budget ⁽⁵⁾ (\$ Million) (D)	Q4/FY20-21 Forecasted Costs (\$ Million) (E)	Cost Variance (\$ Million) (F = D - E)
Local Improvement Projects	\$602.31	\$1,702.31	\$1,702.31	\$1,702.55	(\$0.24)
Construction Costs ⁽¹⁾	\$379.59	\$1,213.20	\$1,211.90	\$1,210.51	\$1.39
Program Delivery Costs ⁽²⁾	\$221.31	\$481.70	\$483.00	\$483.29	(\$0.29)
Other Costs ⁽³⁾	\$1.41	\$7.41	\$7.41	\$8.74	(\$1.33)
Construction Contingency for Local Projects ⁽⁴⁾	\$2.81	\$53.05	\$53.06	\$52.82	\$0.24
Local Program with Contingency	\$605.13	\$1,755.36	\$1,755.36	\$1,755.36	-
Regional Improvement Projects	\$153.47	\$918.79	\$918.79	\$918.79	-
PROGRAM TOTAL	\$758.60	\$2,674.16	\$2,674.16	\$2,674.16	-

Notes:

- Construction Costs** include the Construction Base Bid and owner-provided equipment/material for all regional and support projects. Those costs do not include any construction contingency. That contingency is reflected as a separate cost category.
- Delivery Costs** include project management, planning, environmental (CEQA, permitting, construction compliance), design, construction management, and engineering support during construction.
- Other Costs** include environmental mitigation, art enrichment, security improvements, and real estate expenses.
- Expenditures to Date for Construction Contingency for Regional projects correspond to the Total Approved Change Orders on those projects. For projects with ongoing or completed construction, the 2021 Approved Budget for construction contingency includes all change orders and trends as identified at the time of the March 2021 Revised WECIP, as well as additional contingency funding allocated to cover the 80% confidence level risks identified at the time of the March 2021 Revised WECIP. For projects in pre-construction, the 2021 Approved Budget for construction contingency includes 10% of the estimated construction base bid.
- The budget approved as part of the March 2020 Revised WSIP, plus any additional budget changes approved by the Commission as part of additional contingencies on construction contracts.

4. CAPITAL IMPROVEMENT PROGRAM SCHEDULE SUMMARY

Figure 4.1 and Table 4.1 compare the 2021 Approved Schedule and the Current Forecast Schedule for the Local Water CIP. 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.

As shown in Table 4.1, the 2021 Approved and Forecasted Schedule completion for the overall Water CIP (including Regional and Local Programs) are each in June 2035. The 2021 Approved and Forecasted Schedule completion for the Local CIP are both each in December 2028.

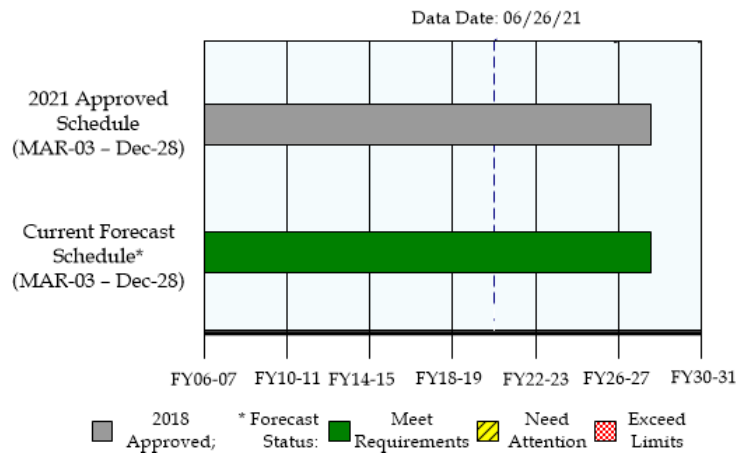


Table 4.1 2021 Approved vs. Current Forecast Schedule Dates

Sub-Program	2018 Approved Project Start	Actual Start	2021 Approved Completion	Current Forecast Completion	Schedule Variance (Months)
Local Projects	03/03/03	03/03/03✓	12/29/28	12/29/28	-
Regional Projects	01/01/09	01/01/09✓	06/29/35	06/29/35	-
Overall Water Enterprise CIP	03/03/03	03/03/03✓	06/29/35	06/29/35	-

5. PROJECT PERFORMANCE SUMMARY*

All costs are shown in \$1,000s as of 06/26/21

Project Name	Active Phase (**)	Appropriated Budget To Date (a)	Current Approved Budget (b)	Current Forecasted Cost (c)	Expenditures To Date (d)	Cost Variance (e= b - c)	Cost Status (+)	Current Approved Completion (g)	Current Forecasted Completion (h)	Schedule Variance (i = g - h)	Schedule Status (+)	Project Data Sheet
Local Water Conveyance/ Distribution System												
10033816 - Potable Emergency Firefighting Water System	PL	\$ 12,000	\$ 55,000	\$ 55,000	\$ 743	-	★	06/30/28	06/30/28	-	★	See Section 10
10033818 - Town of Sunol Pipeline	DS	\$ 3,925	\$ 5,000	\$ 5,000	\$ 2,006	-	★	04/03/23	04/03/23	-	★	See Section 10
CUW28000 - Local Water Conveyance/Distribution System	MP	\$ 438,693	\$ 750,581	\$ 750,581	\$ 298,851	-	★	06/30/28	06/30/28	-	★	See Section 10
Local Water Supply												
CUW30101 - Lake Merced Water Level Restoration	DS	\$ 32,868	\$ 32,668	\$ 32,668	\$ 4,534	-	★	01/30/26	01/30/26	-	★	See Section 10
CUW30102 - San Francisco Groundwater Supply	CN	\$ 68,701	\$ 66,552	\$ 66,552	\$ 62,087	-	★	06/30/22	06/30/22	-	★	See Section 10
CUW30201 - San Francisco Westside Recycled Water	CN	\$ 206,319	\$ 213,316	\$ 213,316	\$ 160,924	-	★	01/12/23	01/12/23	-	★	See Section 10
Local Tanks/Reservoir Improvements												
CUW28301 - College Hill Reservoir Outlet	BA	\$ 7,365	\$ 19,283	\$ 19,283	\$ 1,025	-	★	01/29/24	01/29/24	-	★	See Section 10

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

**** Phase Status Legend**

PL Planning	DS Design	BA Bid & Award
CN Construction	NA Not Applicable	MP Multi-Phases

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

+ Cost and Schedule Status

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

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Q4-FY2020-2021 (04/01/21 - 06/30/21)

All costs are shown in \$1,000s as of 06/26/21

Project Name	Active Phase (**)	Appropriated Budget To Date (a)	Current Approved Budget (b)	Current Forecasted Cost (c)	Expenditures To Date (d)	Cost Variance (e= b - c)	Cost Status (+)	Current Approved Completion (g)	Current Forecasted Completion (h)	Schedule Variance (i = g - h)	Schedule Status (+)	Project Data Sheet
Pump Stations												
10015231 - HARDING PARK PS	PL	\$ 910	\$ 6,527	\$ 6,527	\$ 215	-	★	04/03/26	04/03/26	-	★	See Section 10
Buildings and Grounds												
10037249 - New CDD Headquarters	PL	\$ 10,000	\$ 350,192	\$ 350,192	\$ 170	-	★	06/28/28	06/28/28	-	★	See Section 10
Emergency Firefighting Water System												
Pipelines												
EFWS PL - EFWS Pipelines	MP	\$ 39,490	\$ 205,263	\$ 205,263	\$ 30,324	-	★	12/29/28	12/29/28	-	★	See Section 10
Pump Stations												
EFWS PS - EFWS Pump Stations	MP	\$ 49,388	\$ 45,245	\$ 45,245	\$ 38,788	-	★	12/29/28	12/29/28	-	★	See Section 10

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

** Phase Status Legend

PL Planning DS Design BA Bid & Award
CN Construction NA Not Applicable MP Multi-Phases

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

+ Cost and Schedule Status

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

6. PROJECTS NOT WITHIN BUDGET AND/OR SCHEDULE

All projects are currently within Approved Budget and Schedule.

7. On-Going Construction*

Construction Contract	Schedule			Budget		Variance (Approved - Forecast)		Actual % Complete
	NTP Date	Approved Construction Final Completion**	Current Forecasted Construction Final Completion	Approved Contract Cost	Current Forecasted Cost**	Schedule (Cal. Days)	Cost	
Local Water Conveyance/Distribution System								
10014974 - WD-2811 17TH STREET/CLAYTON/ORD	05/26/20	07/09/22	01/24/22	\$ 6,663,324	\$ 6,948,360	166	(\$285,036)	42.8%
10032578 - WD-2842 CASITAS AVE FROM LANSDALE TO YERBA BUENA	02/08/21	04/19/22	04/19/22	\$ 3,539,250	\$ 3,539,250	-	-	9.5%
10035043 - WD-2834 GEARY RAPID EAST of VAN NESS	07/22/19	10/26/21	11/12/21	\$ 4,214,400	\$ 4,069,400	(17)	\$ 145,000	64.2%
CUW280PR42 - WD-2616 BAKER STREET /SUTTER STREET	10/19/20	03/27/22	03/27/22	\$ 3,701,180	\$ 3,701,180	-	-	18.7%
CUW280PR48 - WD-2739 CASTRO STREET 19TH/26TH STREET	08/17/20	08/16/22	08/16/22	\$ 10,858,087	\$ 11,497,837	-	(\$639,750)	53.5%
CUW280PR73 - WD-2775 19TH AVE/VICENTE/LINCOLN	10/19/20	01/09/23	01/09/23	\$ 6,606,915	\$ 6,606,915	-	-	6.8%
CUW280PR74 - WD-2693 21ST STREET/FORD/HANCOCK	05/26/20	12/30/21	12/30/21	\$ 3,970,422	\$ 4,208,422	-	(\$238,000)	50.8%

Note: * This table reflects Active Construction Contracts with an original contract amount greater than \$1M.

** The Forecasted Cost includes all approved, pending, and potential change orders; and Final Completion includes all approved, pending, and potential change orders, and trends.

Construction Contract	Schedule			Budget		Variance (Approved - Forecast)		Actual % Complete
	NTP Date	Approved Construction Final Completion**	Current Forecasted Construction Final Completion	Approved Contract Cost	Current Forecasted Cost**	Schedule (Cal. Days)	Cost	
Local Water Supply								
CUW30102 - WD-2809 SF Groundwater Supply Phase 2	08/07/17	08/26/19	12/31/21	\$ 11,685,130	\$ 11,685,130	(858)	-	96.7%
CUW30201 - WD-2852R Westside Recycled Irrigation Retrofits and Improvements	01/25/21	06/23/22	06/23/22	\$ 2,483,525	\$ 2,483,525	-	-	0.0%
CUW30201 - WD-2776 Westside Recycled Water Treatment Facility	10/16/17	03/18/21	04/05/22	\$ 92,413,186	\$ 92,413,186	(383)	-	84.5%
CUW30201 - WD-2797 Westside Recycled Water Pump Station and Reservoir	07/01/19	05/20/21	10/08/21	\$ 17,707,924	\$ 17,707,924	(141)	-	65.5%
Emergency Firefighting Water System								
CUWAW2AW29 - WD-2861 Clarendon Supply	02/01/21	12/24/21	12/24/21	\$ 2,685,720	\$ 2,685,720	-	-	7.0%
CUWAWSAW04/CUWAW2AW24 - WD-2687R Pump Station # 2	12/12/17	12/30/21	12/30/21	\$ 20,623,887	\$ 20,623,887	-	-	69.6%

Program Total for On-Going Construction	Approved	Current	Variance	
	Contract Cost	Forecasted Cost	Cost	Percent
	\$ 187,152,950	\$ 188,170,736	(\$1,017,786)	(0.5%)

Note: * This table reflects Active Construction Contracts with an original contract amount greater than \$1M.

** The Forecasted Cost includes all approved, pending, and potential change orders; and Final Completion includes all approved, pending, and potential change orders, and trends.

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8. PROJECTS IN CLOSE-OUT

Project Title	Current Approved Construction Phase Completion	Actual Construction Phase Completion	Current Approved Construction Phase Budget	Construction Phase Expenditures To Date
Emergency Firefighting Water System				
CUWAWSAW05 - Pump Station #1	04/30/19	04/30/19	\$ 9,827,981	\$ 9,549,140
TOTAL			\$ 9,827,981	\$ 9,549,140

9. COMPLETED PROJECTS











There are no completed projects

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10. PROJECTS WITHIN BUDGET AND SCHEDULE

10033816 - Potable Emergency Firefighting Water System

Project Description: This project, the Potable Emergency Firefighting Water System (PEFWS) proposes to design and construct earthquake-resistant water pipelines in western San Francisco, particularly the Sunset and Richmond areas. These pipelines will connect to the existing potable water distribution system to help deliver water to businesses, institutions, and residences during normal operations. It will also be designed to provide high-pressure fire suppression water when needed after a major earthquake or other emergency. When so needed, it will be isolated from the remainder of the potable distribution system by strategically located valves and can then be pumped to achieve pressures comparable to the existing conventional Emergency Firefighting Water System (EFWS), which is located in other areas of San Francisco. The system will be capable of pumping potable water, but also switching to non-potable water in Lake Merced for a much larger supply. The proposed overall project will install over 14 miles of seismically resilient pipelines in multiple phases as funding is provided. The system will be capable of providing water to the SFFD firefighters at the high pressure needed to combat large fires after a seismic event. The proposed pipelines will be fed by pump stations delivering 30,000 gallons per minute with services to the Richmond and Sunset Districts.

Program: Local Water Conveyance/Distribution System	Project Status: Planning	Environmental Status: Completed (CatEx)		
Project Cost:		Project Schedule:		
Approved	 \$55.00 M	Approved Aug-19		Jun-28
Forecast*	 \$55.00 M	Forecast* Aug-19		Jun-28
Actual	 \$0.74 M	Project Percent Complete: 0.8%		
 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits				
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	N/A	N/A	TBD	TBD

Progress and Status:

Under the EFWS Pipelines project during this quarter, the configuration, routes, and construction sequencing for the multiple PEFWS pipeline contracts were analyzed. The project funding in this project will fund construction of PEFWS pipelines in the next several years. These pipelines are in planning phase.

Issues and Challenges:

None at this time.









Earthquake Resistant Ductile Iron Pipe with flexible joints that may be used in the PEFWS projects

10033818 - Town of Sunol Pipeline

Project Description: Since 2000 the SFPUC has replaced the majority of the Town of Sunol pipeline system through the Town of Sunol Fire Suppression project, except for two segments. This project will complete the replacement of the last two segments of the system, by replacing sections of the pipeline that crosses the Arroyo de Laguna Creek (Creek Crossing) and under Highway 680. The upstream section of pipeline that feeds the Town of Sunol is exposed under the creek and in danger of failing under Highway 680. Pipeline failure at either location has significant consequences, since all fire and potable water in the Town of Sunol is dependent on the rehabilitation of this 12-inch diameter line. This project will reduce maintenance from pipe breaks and have less main flushing which may lower impact on operating expenses.

Program: Local Water Conveyance/Distribution System	Project Status: Design	Environmental Status: Active (MND)
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Project Cost:		Project Schedule:	
Approved 	\$5.00 M	Approved Jun-19 	Apr-23
Forecast* 	\$5.00 M	Forecast* Jun-19 	Apr-23
Actual 	\$2.01 M	Project Percent Complete: 43.9%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	TBD	07/13/21	01/05/22	10/04/22

Progress and Status:

During this reporting period, the project design team completed the sizing of the tunnel based on geotechnical investigation. It was concluded that a larger diameter tunneling machine and casing would be required than originally anticipated, which would substantially increase the construction cost. The team evaluated that the alternative of open-cut trenching across Arroyo de la Laguna would be much less expensive than the microtunneling alternative. Thus, the team stopped the 65% design for the microtunneling and restarted the 10% design for the alternative open-cut trenching across Arroyo de la Laguna. Coordination with the various Caltrans projects in the area continued to be discussed with Caltrans. The Highway 680 Crossing construction by Alameda County Transportation Agency has also started.



Exposed Town of Sunol Pipeline crossing Arroyo de la Laguna Creek

the completion of the Mitigated Negative Declaration (MND), environmental permits, and real estate negotiations. The new forecast will be available in the next quarterly report.







Issues and Challenges:

Due to the substantial increase in construction costs for the 65% tunneling design, the project is currently evaluating the cost and schedule to complete the project using open-cut trenching instead. While this will reduce the construction cost significantly, the duration will be increased for at least thirty months for

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CUW28000 - Local Water Conveyance/Distribution System

Project Description: This long-term program funds management of linear assets in San Francisco’s potable water distribution system between transmission or storage and final customer service connection. The Linear Asset Management Program replaces and renews feeder and distribution mains for the 1,230 miles of pipe in San Francisco’s drinking water distribution system. The SFPUC’s goal is to replace 10 to 15 miles of pipe per year, depending on funding availability. Improvements include replacement, rehabilitation, relining, and cathodic protection of all pipe size categories to extend or renew pipeline useful life. Coordination with construction projects by other City agencies, especially SFPUC Sewer and SFPW Paving, is emphasized to optimize efficiencies and minimize customer disruptions. Some street improvement projects led by other agencies (CalTrans, SFMTA, SFCTA, SFPW) are more expensive to implement due to their complexity, traffic and transit impacts, and multi-agency coordination. Starting in FY21-22, separate funding for 4 miles of main replacement at a cost of \$6.0M per mile has been provided for the L-Taraval Transit Project. Additionally, in FY21-22, a new Better Market Street Project has been created to provide separate funding for the water main replacement along the Market Street Corridor to be constructed over a period of 7 years with the assumption of 0.5 miles per year.

Program: Local Water Conveyance/Distribution System		Project Status: Multiple Phases		Environmental Status: Active (Various)	
Project Cost:			Project Schedule:		
Approved		\$750.58 M	Approved Jul-10		Jun-28
Forecast*		\$750.58 M	Forecast* Jul-10		Jun-28
Actual		\$298.85 M	Project Percent Complete: 33.8%		
					
Key Milestones:	Environmental Approval	Bid+ Advertisement	Construction+ NTP	Construction+ Final Completion	
Current Forecast	Various	Various	Various	Various	

+ The Programmatic Project includes multiple active and upcoming construction contracts (Refer to Section 7 for the active construction status).

Progress and Status:

City Distribution Division (CDD) and Engineering Management Bureau are performing design; CDD with Construction Management Bureau are managing construction. The environmental review is completed on a project-by-project basis as design work is completed. CDD is coordinating with Wastewater Enterprise sewer replacement projects as well as San Francisco Public Works paving projects to avoid conflicts, reduce construction costs, and minimize disruption in commercial and residential areas. At the start of FY21, the forecast mileage for FY21 was 11.5 miles, which correlated to the approved FY21 Capital Improvement Plan (CIP) Budget for 11.5 miles for FY21-FY22. Due to challenges with the COVID-19 pandemic, delays from joint projects lead by other agencies, and CIP funding limitations, a total of only 8.4 miles were replaced during FY21. Projects currently under construction include the City streets of Geary between Van Ness and Kearny, L-Taraval between Sunset and SF Zoo, Pierce



Water Main Replacement at Castro and 21st Street







Street, Castro Street, 21st Street, 17th Street, Baker Street, 19th Avenue, and Casitas.

Issues and Challenges:

None at this time.

CUW30101 - Lake Merced Water Level Restoration

Project Description: The project consists of three subprojects. (1) The City of Daly City is proposing and working in coordination with the SFPUC to implement the Vista Grande Drainage Basin Improvements project to address storm related flooding in the Vista Grande Watershed Drainage Basin while providing the benefit of restoring connection to the natural watershed of Lake Merced. (2) In addition, the SFPUC is implementing a Demonstration/Full Scale Aeration Mixing Project to evaluate whether additional lake mixing might result in improved dissolved oxygen concentrations in the Lake and finally (3) The SFPUC is evaluating diversion of highly treated recycled water from the new Westside Recycled Water facility into Lake Merced to increase and stabilize lake levels.

Program: Local Water Supply	Project Status: Design	Environmental Status: Active (Various)
Project Cost:		Project Schedule:
Approved  \$32.67 M	Approved Jun-03  Jan-26	
Forecast*  \$32.67 M	Forecast* Jun-03  Jan-26	
Actual  \$4.53 M	Project Percent Complete: 14.3%	
		

Key Milestones:	Environmental** Approval	Bid+ Advertisement	Construction+ NTP	Construction+ Final Completion
Current Forecast	(A) 07/31/18✓ (B) 11/10/16✓ (C) 08/25/22	10/01/21 N/A 09/13/22	07/08/22 06/13/17✓ 03/14/23	07/29/25 07/07/17✓ 10/08/23

+ Project includes multiple construction contracts. (A) Vista Grande Drainage Basin Improvement managed by Daly City ; (B) Lake Merced Aeration Mixing System - Phase 1 JOC Contract; (C) Lake Merced Aeration Mixing System - Phase 2

** (A) EIR/EIS; (B) CatEx; (C) MND

Progress and Status:

Vista Grande Drainage Basin Improvement Project (Contract A): Daly City and SFPUC continue to evaluate temporary and permanent interests in real estate that might support planned construction activities. SFPUC and Daly City have restarted regulatory coordination with the Regional Water Quality Control Board (RWQCB) in order to facilitate project discharge permitting. Bid and Award is currently scheduled for early 2022.

Aeration Mixing System (Contract B): In August 2017 the SFPUC implemented a demonstration project to improve the dissolved oxygen levels in the lower portion of the lake, which typically run below 5 mg/l due to seasonal lake stratification. In February 2019 staff finalized and submitted to the RWQCB a report summarizing the testing and data monitoring from the aeration system, and received comments back on the report from RWQCB staff. Due to the above-mentioned delays in the Vista Grande Drainage Basin Project, no additional evaluations or decisions have been made to determine whether to proceed with the Aeration



South Lake Merced

Mixing Phase II.

Lake Merced Recycled Water Diversion (Contract C): SFPUC is continuing preliminary design and water quality evaluation of the proposal to divert excess recycled water from the new Westside Recycled Water Plant into Lake Merced to manage lake levels.







Issues and Challenges:

None at this time.

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CUW30102 - San Francisco Groundwater Supply

Project Description: This project consists of two phases, which combined will provide an annual average of 4 mgd of groundwater to San Francisco’s municipal water supply, and improvements at the existing San Francisco Zoo Well No. 5. Phase 1 is divided in two separate contracts. Under Contract A work to build four new groundwater well stations in the western part of San Francisco is currently in the final construction phase. Contract B work to install buried piping to connect three of these well stations to the Sunset Reservoir was completed and accepted on December 21, 2015. Groundwater from the fourth well station was piped to the nearby Lake Merced Pump Station, where it was distributed to both the Sunset Reservoir and Sutro Reservoir. Phase 2 includes Contract C work to install buried piping and convert two existing irrigation well facilities in Golden Gate Park to groundwater supply wells; this contract is currently in the final construction phase, and would be implemented after completion of the CUW30201, San Francisco Westside Recycled Water Project. Improvements at the existing San Francisco Zoo Well No. 5 were completed and accepted on February 15, 2007.

Program: Local Water Supply	Project Status: Construction	Environmental Status: Completed (EIR)
Project Cost:		Project Schedule:
Approved  \$66.55 M	Approved Jun-03  Jun-22	
Forecast*  \$66.55 M	Forecast* Jun-03  Jun-22	
Actual  \$62.09 M	Project Percent Complete: 95.2%	
		

Key Milestones:	Environmental Approval	Bid+ Advertisement	Construction+ NTP	Construction+ Final Completion
Current Forecast	12/19/13✓	(A) 05/01/14✓ (B) 03/10/14✓ (C) 08/17/16✓	(A) 03/16/15✓ (B) 08/04/14✓ (C) 08/07/17✓	03/31/21✓ 12/21/15✓ 12/31/21

+ Project includes multiple construction contracts.

(A) San Francisco Groundwater Supply Well Stations Phase 1; (B) San Francisco Groundwater Supply Pipeline Phase 1; (C) San Francisco Groundwater Supply Phase 2

Progress and Status:

For Phase 1 well station construction (Contract A), final completion was declared at the end of last quarter, on 3/31/2021. The contractor continued preparation of final as-built drawings during the reporting quarter. The Commission resolved to approve close out of the project at its May 11 regular meeting.

For Phase 2 (Contract C), the contractor continued working on punchlist items; closeout documents; processing of remaining change orders, including change orders relating to COVID cost impact, deductive bid items, extended warranties, and miscellaneous work; preparation of as-builts; and the submittal of operational and maintenance manuals.









North Lake Well Station

Issues and Challenges:

None at this time.

CUW30201 - San Francisco Westside Recycled Water

Project Description: This project consists of a new recycled water treatment facility located at the SFPUC’s existing Oceanside Plant, along with the associated distribution system components, to produce and deliver an annual average of approximately 1.6 mgd of recycled water to Golden Gate Park, Lincoln Park, and the Presidio. The treatment process includes membrane filtration, reverse osmosis, and ultraviolet light disinfection. A new pump station and reservoir will be constructed in Golden Gate Park to deliver water to Lincoln Park and the Presidio. Approximately 8 miles of new recycled water pipeline connect the treatment facility to the new reservoir in Golden Gate Park and extends to the Lincoln Park and Presidio points of connection. The project also includes the retrofitting of the existing irrigation systems to bring them into compliance with Title 22 regulations. The treatment facility includes additional capacity to serve potential future customers, such as the SF Zoo.

Program: Local Water Supply	Project Status: Construction	Environmental Status: Completed (EIR)
Project Cost:		Project Schedule:
Approved  \$213.32 M	Approved Mar-03  Jan-23	
Forecast*  \$213.32 M	Forecast* Mar-03  Jan-23	
Actual  \$160.92 M	Project Percent Complete: 42.8%	
		

Key Milestones:	Environmental Approval	Bid+ Advertisement	Construction+ NTP	Construction+ Final Completion
Current Forecast	09/03/15✓	(A) 12/29/16✓ (B) 12/19/18✓ (C) 07/15/16✓ (D) 02/25/20✓	(A) 10/18/17✓ (B) 07/01/19✓ (C) 02/21/17✓ (D) 01/25/21✓	04/05/22 04/29/22 08/19/18✓ 06/23/22

+ Project includes multiple construction contracts. (A) Recycled Water Treatment Facilities; (B) Pump Station and Reservoir; (C) Pipeline; (D) Irrigation System Retrofit. Contract (D) was previously advertised on 09/13/19.

Progress and Status:

Treatment Facility (Contract A): Electrical work in Building 580 continued, with installation of power and instrumentation and control conduits, control panels, and lighting. Work on the elevator system also continued. Work in Building 510 included the installation chemical pipelines, and power and instrumentation conduits and lighting. The first draft of the start-up test and commissioning sequence and schedule was submitted and reviewed by the project team. The ultraviolet light disinfection test protocol was submitted to the State Department of Drinking Water (DDW) for review. The revised Engineering Report, and Cross Connection Control Test Plan were also submitted to the State DDW. Project Operations Notification was also submitted to the State Regional Water Quality Control Board and the EPA. Work on the development of standard operating procedures (SOPs) and operator training modules began.

Distribution Pump Station and Reservoir (Contract B): Concrete work at the pump station was completed. The pumps were installed, and installation of mechanical piping began.

Pipeline (Contract C) is complete.

Irrigation System Retrofit (Contract D): The installation of purple quick connect couplers and valve tags began, with several sections of Golden Gate Park completed by the end of the quarter. Two backflow preventors were installed. The cross connection control testing of Golden Gate Park began in April 2021.











Issues and Challenges:

None at this time.

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CUW28301 - College Hill Reservoir Outlet

Project Description: The College Hill Reservoir is located in San Francisco's Bernal Heights residential district and is a critical reservoir responsible for delivering water to the eastern and northern areas of San Francisco including General Hospital, Upper Market Street, Civic Center, and City Hall. The College Hill Reservoir, constructed in 1870 and San Francisco's oldest water reservoir, was seismically retrofitted in 2001. SFPUC is currently undertaking a phased program to improve the seismic reliability of the water distribution system from College Hill Reservoir to SF General Hospital to withstand a major seismic event. This project addresses essential seismic improvements within the reservoir including installation of a new control valve vault; replacement of reservoir inlet and outlet piping; reservoir roof replacement; miscellaneous piping, security, site access, electrical, instrumentation, and water quality improvements; and replacement of the first section of transmission pipelines for the College Hill system up to Cortland Avenue.

Program: Local Tanks/Reservoir Improvements	Project Status: Bid and Award	Environmental Status: Completed (CatEx)		
Project Cost: Approved  \$19.28 M Forecast*  \$19.28 M Actual  \$1.02 M		Project Schedule: Approved Jan-13  Jan-24 Forecast* Jan-13  Jan-24 Project Percent Complete: 5.2%		
 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits				
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	11/20/19✓	02/24/21✓	08/09/21	09/02/23

Progress and Status:

Bid opening occurred on April 22, 2021. A total of four bids ranging from \$12,180,497 to \$20,589,800 were received. The Engineer's Estimate was \$12,500,000 to \$13,500,00. On June 8, 2021, the SFPUC Commission awarded the construction contract to Ranger Pipelines for a total contract price of \$12,180,497. Construction Notice to Proceed is estimated for August 2021.

Issues and Challenges:







None at this time.



Aerial View of College Hill Reservoir

10015231 - HARDING PARK PS

Project Description: The Harding Park irrigation pump station and recycled water storage tank was commissioned in 2012. The pump station draws recycled water from an underground reservoir and delivers the pressurized water to the Tournament Players Club (TPC) Harding Park golf course. In the summer of 2016, the pump station was taken off-line because electrical terminations in the pump station control panel had corroded. This resulted in an arc flash event, which damaged the main switch, making the pump station inoperable. Temporary repairs have been made, allowing for the facility to resume operation. The primary objective of the Harding Park Pump Station Project is to implement a permanent solution to the electrical system deficiencies and improve pump station reliability.

Program: Pump Stations	Project Status: Planning	Environmental Status: Not Initiated
Project Cost:		Project Schedule:
Approved 	\$6.53 M	Approved Jul-21  Apr-26
Forecast* 	\$6.53 M	Forecast* May-21  Apr-26
Actual 	\$0.21 M	Project Percent Complete: 0.4%
		

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	N/A	02/02/24	10/04/24	10/03/25

Progress and Status:

The project team started developing the scope of work for Needs Assessment and Alternatives Analysis and solicited a cost proposal from Department of Public Works for engineering support.

Issues and Challenges:

None at this time.

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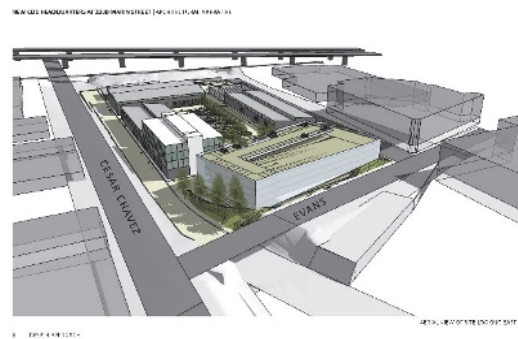
10037249 - New CDD Headquarters

Project Description: The City Distribution Division (CDD) oversees the retail water distribution system within the City and County of San Francisco and is responsible for the physical infrastructure of San Francisco’s potable water, Emergency Firefighting Water System (EFWS), recycled water distribution, and ground water systems. CDD’s responsibilities include 24/7 emergency response to water main breaks and two-alarm or larger fires in addition to day-to-day operations and maintenance of over 1,250 miles of water mains; 12 reservoirs; 9 pump stations; 7 hydro-pneumatic stations; 6 tanks; the water meter program serving over 176,000 customers; CDD’s physical buildings, equipment and fleet; and over 1,100 acres of grounds throughout the City. The buildings and facilities at the existing main CDD campus are functionally obsolete, in disrepair and are not in compliance with current building codes, and do not meet standards for safety, accessibility and environmental requirements. The campus requires full replacement. New buildings will provide greater reliability, safety, security, and higher productivity. This project builds an entirely new campus located at 2000 Marin Street in San Francisco for the CDD staff and facilities.

Program: Buildings and Grounds		Project Status: Planning		Environmental Status: Active	
Project Cost:			Project Schedule:		
Approved		\$350.19 M	Approved Feb-20		Jun-28
Forecast*		\$350.19 M	Forecast* Feb-20		Jun-28
Actual		\$0.17 M	Project Percent Complete: 0.2%		
Approved; Actual Cost; * Forecast Status: Meet Requirements Need Attention Exceed Limits					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	06/30/23	06/18/21✓	07/03/23	12/31/27	

Progress and Status:

Schematic Design is underway. Proposals in response to the RFP for PRO.0198 Design Services were received during the quarter on May 18. PRO.0198 Design Services is intended to supplement services from the Bureau of Architecture, Public Works. This project will be delivered through a Construction Management/General Contractor (CM/GC) contract. The CM/GC RFQ/P was advertised on June 18, 2021. Bids are due in early August 2021.













Aerial Rendering of Campus

Issues and Challenges:

None at this time.

EFWS PL - EFWS Pipelines

Project Description: These projects include construction of various pipelines using ESER bond funds.

Program: Emergency Firefighting Water System	Project Status: Multiple Phases	Environmental Status: Completed
Project Cost: Approved  \$205.26 M Forecast*  \$205.26 M Actual  \$30.32 M		Project Schedule: Approved Apr-11  Dec-28 Forecast* Apr-11  Dec-28 Project Percent Complete: 20.5%
 Approved;  Actual Cost; * Forecast Status:  Meet Requirements  Need Attention  Exceed Limits		

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	Various	Various	Various	Various

Progress and Status:

- Clarendon Supply:
Construction Notice-to-Proceed (NTP) was issued last quarter on February 1, 2021. Construction activity this quarter has been delayed while awaiting results of a tree removal appeal.
- 19th Avenue Pipeline:
This project is part of Public Works’ Contract 2652J, 19th Avenue Roadway Improvements. The goal of this project is to install two pipe segments on 19th Avenue: a new 20-inch diameter Emergency Firefighting Water System (EFWS) pipeline on 19th Avenue from Irving St to Kirkham St and a new 36-inch diameter welded steel Potable Emergency Firefighting Water System (PEFWS) pipeline on 19th Ave from Vicente Street to Sloat Blvd. Construction continues and completion is expected in December 2022.
- Terry Francois Blvd (TFB) Mission South Pipeline:
Construction continues and is on track to be completed by July 2021 for the new 20-inch diameter EFWS pipeline on TFB from Mission Rock Street to Warriors Way.
- Street Valve Motorization:
Project team is coordinating with other project teams on specifications for construction contract.
- EFWS Studies:
Future fire water demands and seawater supply studies were completed in June 2021 and were shared with the Board of Supervisors in response to a commitment made to the Civil Grand Jury. Future EFWS development study is expected to be completed by December 2021.
- PEFWS Pipeline:
Design for the PEFWS pipeline continues. On Vicente Street from 19th Ave to 25th Ave, a new 36-inch

diameter welded steel PEFWS pipeline will be installed as part of the Wastewater Enterprise Construction Contract, WW-711. The contract was awarded, and NTP is expected in July 2021. This pipe will connect to the PEFWS pipeline installed on 19th Avenue.

- AWSS PS/Pipeline - Lake Merced:
Project is in the planning phase.
- Fireboat Manifolds:
Planning in progress. The project includes installation of new fireboat manifolds and pipelines at Fort Mason and near Pier 33.5.







Issues and Challenges:

None at this time.

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EFWS PS - EFWS Pump Stations

Project Description: These projects include construction of various pump stations using ESER bond funds.

Program: Emergency Firefighting Water System		Project Status: Multiple Phases		Environmental Status: Completed	
Project Cost:			Project Schedule:		
Approved		\$45.25 M	Approved Apr-11		Dec-28
Forecast*		\$45.25 M	Forecast* Apr-11		Dec-28
Actual		\$38.79 M	Project Percent Complete: 93.7%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	Various	Various	Various	Various	

Progress and Status:

- Pump Station #2:

Construction continued for Pump Station #2, contract WD-2687. Construction completion expected in December 2021.

- PEFWS PS - Lake Merced:

Planning in progress. The conclusion from the final draft AAR is to proceed with the Central Pump Station site. The final draft AAR is being circulated for signature approval, expected July 2021.

Issues and Challenges:

None at this time.



Roof installation of Pump Station No. 2

APPENDICES

A PROJECT DESCRIPTIONS

B APPROVED PROJECT-LEVEL SCHEDULE

C LIST OF ACRONYMS

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APPENDIX A. PROJECT DESCRIPTION

REGIONAL PROJECTS

Water Treatment

10033123 SVWTP Ozone (CUW27202)

In recent years, SFPUC's Sunol Valley Water Treatment Plant (SVWTP) has experienced more frequent taste and odor (T&O) events from seasonal algal blooms than had occurred historically. This project's objective is to install ozone treatment facilities as a long-term solution to control T&O events encountered in the raw water supply from both the San Antonio and Calaveras Reservoir sources. This project will improve the reliability to meet water quality goals especially during warm months and during Hetch Hetchy shutdowns.

10037349 HTWTP Improvements Capital

Twenty-one sub-projects have been identified to improve the performance, efficiency and reliability of the Harry Tracy Water Treatment Plant (HTWTP). However, one of the projects, the filter underdrains, has become a priority because two of the underdrains have recently failed and a third is showing signs of imminent failure. Although 21 projects have been identified, funding is only available for the filter underdrain project, which has been deemed the highest priority. The remaining projects will be deferred to a future round of CIP planning.

10037350 Regional Groundwater Treatment Improvement

The purpose of this project is to improve the performance of the Regional Groundwater Wells and treatment systems in the South Westside Basin for reliable use during dry years. In normal and wet years, the SFPUC will supply treated surface water to Daly City, San Bruno, and Cal Water to be used in place of their typical groundwater supply, thereby increasing the volume of groundwater in storage that can be pumped as supplemental water in dry years. This project will address emerging well water quality issues that require treatment, will provide additional reliability for treatment systems at the

wells, and will evaluate the potential for a consolidated treatment facility (through Alternatives Analysis only).

CUW2720204/02 SVWTP Phase 3 and 4

The primary objective of the SVWTP Phase 3 and 4 Project is to improve regional water delivery reliability by addressing various deficiencies and needs for improvements at the Sunol Valley Water Treatment Plant (SVWTP). Many of the scoped upgrades were identified through condition assessments, Operations staff's observations, reviews of levels of service, feasibility studies, and alternative analyses.

CUW2720205 SVWTP Polymer Feed

At the Sunol Valley Water Treatment Plant (SVWTP), the new flocculation/sedimentation basin built in 2013 as well as the other 4 existing basins that are each rated at a capacity of 40 million gallons per day (mgd) were not able to achieve their capacity under all operating and water quality scenarios. A basin optimization plan was prepared to address the performance; it recommended adding a flocculant aid polymer system. The project will build a polymer feed facility that will serve all five sedimentation basins to optimize plant water production. The funding for the project is provided under WECIP and WSIP. The WSIP funding for this project, \$2.19M, is included with other Sunol Valley closeout projects and will complete the Planning phase and a portion of the Design phase. The remaining funding for the project is provided under Water Enterprise 10-year CIP, \$7,537,000.

Water Transmission

10034578 CSPL2 Reach 5 Lining Replacement

Crystal Springs Pipeline No. 2 (CSPL2) runs from Crystal Springs Pump Station to University Mound Reservoir. It delivers potable and emergency water supply to San Francisco and to several cities along the peninsula. Reach 5 of CSPL2, 60 inches in diameter and located in the Cities of South San Francisco and San Bruno between Millbrae Yard and Baden Pump Station, is over 80 years old and has extensive lining

failures. This project would replace approximately 3.3 miles of coal tar lining with cement mortar or dielectric lining, upgrade about 30 appurtenances to meet current standards, and improve access and shutdown flexibility for maintenance by installing five manway structures and one 48-inch diameter valve on San Andreas Pipeline No. 1 (SAPL1) near Baden Pump Station.

10035029 As Needed Pipeline Repairs

Water Supply and Treatment Division's (WSTD) maintenance and inspection program inspects the regional pipeline system on an ongoing basis. However, when repairs are identified to be needed following inspections and when emergency repairs are needed, a contractor is not readily available to perform the repairs. This project will increase system reliability by reducing the duration and number of outages since a pre-qualified, as-needed contractor will be available to complete repairs immediately following inspections or in emergencies. This project will repair/replace regional pipeline segments that will be inspected over the next five years, in addition to any emergency repairs that may be needed. The construction contract for this project will be combined with Project 10036840, BDPL1-4-B Lining Repair to provide a sufficient guaranteed scope.

10036839- Pre-Stressed Concrete Cylinder Pipe (PCCP) Repair

Historically, when prestressed concrete cylinder pipe (PCCP) fails due to wrapped wire breaks, the failure can result in widespread damage to the pipe and ground surface due to multiple wires breaking at the same time along the pressurized pipe. From recent inspections of Bay Division Pipeline No. 4 (BDPL4) Segment D, constructed of PCCP, a large number of defects were found in the last mile of pipe that parallels Edgewood Road in Redwood City; this project will address those defects. This project will increase system reliability by rehabilitating approximately 350 feet of 84-inch diameter BDPL4 PCCP in Redwood City.

10036840 BDPL 1 4 Lining Repair

Water Supply and Treatment Division's (WSTD)

ongoing pipeline inspection program has identified segments of the Bay Division Pipeline Nos. 1 through 4 (BDPL 1-4) that require lining repairs and replacement. This project will retain an as-needed contractor to repair or replace sections of lining that are identified by WSTD over the next 5-years.

CUW27301 Corrosion Control

This project will implement the corrosion protection and control program as recommended in the Corrosion Control Master Plan completed in August 2010. Sites identified with worst levels of corrosion were bundled up in the masterplan in four phases. Each phase will take several years for implementation. The scope for all phases will be similar, but the number of sites will vary at each phase. Phase 1 construction work for ten sites was completed and accepted on August 27, 2019. Phase 2 has fourteen sites and is currently in the design phase. Phase 3 is anticipated to include work at eighteen sites and to begin planning in 2025. The number of sites and locations for Phase 4 will be determined from the corrosion database resulting from WST's annual inspection reports. Planning phase for Phase 4 will commence after Phase 3 is completed. .

CUW2730404 San Antonio Pump Station MCC Upgrades

The San Antonio Pump Station (SAPS) is one of the key facilities in the Sunol Valley; it was constructed in 1965 and modified in 1990. The existing motor control centers (MCC) MCC-A, MCC-B, and MCC-C have been in service since the 1960's and they are approaching the end of their useful life. In order to maintain reliable operation at SAPS, the existing MCCs are being replaced and facility walls are being seismically retrofitted. In order to accommodate the retrofit work, the communications system is being relocated to an adjacent room and the HVAC will be replaced in affected rooms. In addition, a new propane generator will replace the existing diesel generator to serve as reliable backup power to the facility.

CUW2730504 San Andreas Pipeline No. 2 Replacement

San Andreas Pipeline No. 2 (SAPL2) provides key water supply redundancy from the Harry Tracy Water Treatment Plant (HTWTP) to the Sunset Reservoir. The lock bar steel sections of SAPL2 between the HTWTP and the Golden Gate National Cemetery are almost 90 years old, pitted, deteriorated, and in need of replacement. This project will replace/rehabilitate approximately 6,500 linear feet of SAPL2 in the City of San Bruno. In addition, as part of this project, two valves will be installed on SAPL1 and CSPL2 near the Baden Valve Lot to improve access to these pipelines.

CUW2730505 CSPL2 Reaches 2 and 3 Rehabilitation

Crystal Springs Pipeline No. 2 (CSPL2) spans from Crystal Springs Pump Station to University Mound Reservoir. It delivers potable water supply to San Francisco and several cities along the Peninsula. Reaches 2 and 3 of CSPL2 in the Town of Hillsborough, unincorporated areas of San Mateo County, the City of San Mateo, and the City of Burlingame are over 80 years old and deteriorated in some locations with Reach 2 located on slopes that are eroding and Reach 3 containing extensive lining failures. This project would realign Reach 2 to the existing abandoned CSPL1 alignment, replace the coal tar lining of Reach 3, and improve access to the pipeline.

Water Supply & Storage

10015232 Merced Manor Reservoir Facilities Repairs

The Merced Manor Reservoir was upgraded in 2004 to seismically strengthen and repair the roof structure and foundations. After the completion of the upgrade, spalling of concrete at various locations on the roof structure was observed over the years due to the constant temperature gradient experienced in the roof structure. The design of the seismic retrofit of Merced Manor Reservoir was done without the benefit of the lessons learned from later roof retrofits and construction at Sunset North Basin and University Mound North Basin where the effect of temperature load on the roof due to expansion and contraction was analyzed and designed to accommodate the temperature loading. The scope

of this project includes performing structural analysis of the effect of temperature gradient on the existing roof structure design; developing design modifications of the roof structure to accommodate the expansion and contraction loads; and construction of the roof modifications and repair of the spalled concrete.

10036998 Turner Dam and Reservoir Improvements

Turner Dam is a 195-foot-high earth embankment dam that was completed in 1965 and impounds San Antonio Reservoir in the East Bay. The dam is regulated by the California Division of Safety of Dams (DSOD). This project is to investigate the seismic stability and hydraulic performance of the Turner Dam and San Antonio Reservoir facilities and to perform necessary upgrades identified during the Planning Phase. The scope of work will be confirmed once Condition and Needs Assessments, and Alternative Analysis of the dam, outlet structures, and spillway are complete.

CUW2740102 Pilarcitos Dam Improvements

The Pilarcitos Dam is an earthen embankment dam that was built in 1866 and raised in 1874; it is the SFPUC's oldest dam regulated by the California Division of Safety of Dams (DSOD). This project will investigate the seismic stability and hydraulic performance of the Pilarcitos Dam and Reservoir facilities and perform necessary upgrades identified during the Planning Phase. The scope of work will be confirmed following the completion of the Condition and Needs Assessments, and Alternative Analysis for the dam and forebay outlet structure, spillway, outlet tunnel, and outlet pipeline.

CUW2740103 San Andreas Dam Facility Improvements

The San Andreas dam is a 105-foot-high earthen embankment dam that was built in 1870; it impounds San Andreas Reservoir that is the raw water source for the Harry Tracy Water Treatment Plant, and it is regulated by the California Division of Safety of Dams (DSOD). This project will investigate the seismic stability and hydraulic performance of the San Andreas Dam and Reservoir facilities and perform

necessary upgrades identified during the Planning Phase. The objectives are to perform Condition and Needs Assessments and Alternatives Analyses of the dam, spillway, emergency outlet, and ancillary facilities; to develop retrofit options if required; and to implement the selected alternatives.

WATERSHED & LANDS MANAGEMENT

10015110 EBRPD WATER SYSTEM

As a mitigation for the Calaveras Dam Replacement Project, the SFPUC agreed to construct new potable water distribution facilities for the Sunol Regional Wilderness Park (SRP), managed by the East Bay Regional Park District (EBRPD). The EBRPD owns and maintains a water system located at SRP Headquarters which previously supplied potable water to four park facilities, as well as drinking water fountains and picnic areas interspersed throughout the park. Currently, the water system serves non-potable water for use by EBRPD employees only. Since the system stopped producing potable water due to supply and sanitary deficiencies, EBRPD has been supplying park visitors with bottled water trucked in by a contracted vendor. The project purpose is to provide a reliable water supply for potable use at the EBRPD facilities and to provide potable uses at the SRP.

10015108 Sneath Lane Gate/North San Andreas

The 2001 Peninsula Watershed Management Plan identified the need for a new trail connection between San Mateo County's Crystal Springs Regional Trail (North San Andreas) to Golden Gate National Recreation Area's Sweeney Ridge property at the Sneath Lane Gate. The trail is a critical connection among existing regional trails, and will provide access to hikers, bikers and equestrians.

CUW2751801 Southern Skyline Blvd Ridge Trail Extension

The Bay Area Ridge Trail project was started in 1987 by the Bay Area Ridge Trail Council to create an approximately 550-mile long continuous trail for hikers, mountain bicyclists, and equestrians along the ridgelines overlooking San Francisco

Bay. The objective of this project is to provide access to the Peninsula watershed, to enhance educational opportunities, and to ensure watershed protection. This proposed trail extension project would construct a 6-mile long trail on the Peninsula Watershed in San Mateo County between Highway 92 and the Golden Gate National Recreation Area's (GGNRA) Phleger Estate. The project would consist of 8 to 10-foot wide, all-weather surface trails; retaining structures to stabilize cut and/or fill slopes; drainage facilities; two parking lots; two prefabricated restrooms along the trail; site security features; and landscape restoration.

CUW2752201 SA 1 Service Road/Ingoing Road

The SFPUC has identified landslide and erosion damage that have destabilized service roads (East Shore Service Road and West Shore Service Road) and adjacent areas in three locations on San Francisco Peninsula Watershed lands situated along the San Andreas Reservoir in San Mateo County. The project is to evaluate and repair the damage, and to implement long term solutions for SFPUC staff and contractors to continue to use the roads to access, operate, and maintain SFPUC facilities and watershed lands. Construction for these locations can be done through phases to accommodate budget cash flow.

Buildings and Grounds

10033555 Rollins Road Building Renovations (CUW27703)

The SFPUC purchased a property that was previously leased long-term on Rollins Road in Burlingame, San Mateo County, in September 2017, securing ownership of an additional 10,000 square feet of office space for the SFPUC Water Enterprise (WE). A capital project was initiated in 2018 for tenant improvements. In June 2020, the project scope for the 1657 Rollins Road was decreased significantly, and the scope of the Millbrae Yard Lab & Shop Project was increased. The program for Rollins Road Building Renovation Project will be achieved at the Millbrae Yard by adding two additional floors to the laboratory building as part of its Phase 1 project. The expanded laboratory building will

accommodate the Rollins Road building staff. As a result of the scope change, personnel at 1657 Rollins Road will relocate to Millbrae Yard campus following the completion of the Millbrae Yard Lab & Shops Project.

10034526 Millbrae Warehouse Settlement & Admin. Bldg. HVAC

This project will construct improvements for two buildings located at the Millbrae Yard facility, the Millbrae Warehouse and the Administration Building. The Millbrae Warehouse Settlement project will provide a long-term repair for the displacement (settlement) of the slab between the loading dock and the offices. The slab settlement resulted from expansive clay layers located seven feet below the top of the existing concrete slab. For the Millbrae Administration Building HVAC Upgrades, this project will provide long-term reliable and economical improvements to heating and cooling systems.

Two separate construction contracts will be used for the Millbrae Warehouse Settlement repairs and the Administration Building HVAC Upgrades. Construction for the Millbrae Warehouse loading dock repair is forecasted to begin in 2021 whereas the Millbrae Administration Building HVAC Upgrades construction is forecasted to begin in 2022.

CUW27701 Sunol Long Term Improvements

The project includes redevelopment of the existing Sunol Yard and construction of a Watershed Center near the Sunol Water Temple. Most of the existing structures at the Sunol Yard date back to 1930 and were converted from the original purpose, residence and barn, to office and shop spaces. The structures contain lead-based paint, asbestos, bats, and bat guano, and did not meet current building, health, or safety codes. The project will demolish six existing dilapidated structures at the Sunol Yard and construct a LEED Gold administration building, shops, fuel station, backup generator system, truck wash station, paving and site restoration.

The SFPUC Alameda Creek Watershed Center (Center) will be a gathering place for increasing the awareness and appreciation of the natural, cultural, scenic, historic and recreational

resources of the Alameda Creek watershed. Consistent with the SFPUC Water Enterprise Environmental Stewardship Policy, and as described in the SFPUC Alameda Watershed Management Plan, the Center will enhance public awareness and provide education opportunities related to water quality, water supply, conservation and environmental stewardship issues.

This project is comprised of the following related projects: CUW2630601, Sunol Master Plan Support covering the planning and partial environmental and design phases, \$5,764,341, and CUW27701 (10015124), Sunol Long Term Improvements, covering partial environmental and design phases and the construction phase, \$100,414,000. The preconstruction phases were combined with the Sunol Yard and Center scope. The construction work was separated into two phases with the Sunol Yard under Phase A and the Center under Phase B. The Sunol Yard construction work was completed in September 5, 2020 with a total construction amount of \$37,584,195 and included Phase A and JOC work. The Phase B construction notice to proceed was issued January 17, 2020 under WD-2794B for a contract amount of \$27,577,000. The total project cost is \$106,178,000.

CUW2770304 Millbrae Yard Laboratory and Shop Improvements

SFPUC has determined that the existing Millbrae Administration Building must remain operational following a major earthquake, and therefore needs to be retrofitted or replaced to meet essential facility requirements. SFPUC also wants to expand the existing Millbrae Administration Building to merge and house the Water Enterprise staff and equipment from the Rollins Road Facility. This project is necessary to provide Water Enterprise personnel a long term and sustainable campus and facilitate the consolidation of work groups for increased staff efficiency. This project will also alleviate shortage of program space, increase efficiency of operations, improve employee working environment with improved heating, ventilation, and air conditioning, improve employee health and safety, and enhance site and building security. A recent

planning study has identified several alternatives to meet the project goals.

The selected alternative for the Millbrae Yard campus improvements will be implemented in three phases. Phase 1 includes a new laboratory and new south shop building to alleviate Water Enterprise undersized and outdated workspaces and desire to relocate mission-critical functions to code-compliant structures. Phase 2 includes demolition of the existing Administration Building and construction of a new consolidated Administration Building adjacent to the new laboratory building to accommodate other Water Enterprise staff. Phase 3 includes new covered storage for materials and equipment.

In May 2020, the scope for the Rollins Road Project was significantly decreased, and the scope of the Millbrae Yard Lab & Shop Project was increased. This project will provide additional space in the laboratory building by constructing two additional floors on top of it to accommodate the relocation of all personnel from Rollins Road Facility.

LOCAL PROJECTS

Local Water Conveyance/Distribution System

10033816 Potable Emergency Firefighting Water System

This project, the Potable Emergency Firefighting Water System (PEFWS) proposes to design and construct earthquake-resistant water pipelines in western San Francisco, particularly the Sunset and Richmond areas. These pipelines will connect to the existing potable water distribution system to help deliver water to businesses, institutions, and residences during normal operations. It will also be designed to provide high-pressure fire suppression water when needed after a major earthquake or other emergency. When so needed, it will be isolated from the remainder of the potable distribution system by strategically located valves and can then be pumped to achieve pressures comparable to the existing conventional Emergency Firefighting Water System (EFWS), which is located in other areas of San Francisco. The system will be capable of pumping potable water, but also switching to non-potable water in Lake Merced for a much larger supply. This project also includes Lake Merced and Sunset Reservoir pump stations, which will increase water pressure when needed for fire suppression. Pipeline alignment, diameter, and related features will be determined during the planning phase, as will pump station schematic design. Phased construction scheduling and associated budgets will be determined in conjunction with finalizing these pipeline and pump station details. The PEFWS will bring a seismically resilient high-pressure firefighting water system to the western neighborhoods of San Francisco, while also creating a seismically resilient pipeline that can supply drinking water to the west side during non-fire situations. The proposed overall project will install over 14 miles of seismically resilient pipelines in multiple phases as funding is provided. The system will be capable of providing water to the SFFD firefighters at the high pressure needed to combat large fires after a seismic event. The proposed pipelines will be fed by pump stations delivering 30,000 gallons per minute with services to the Richmond and Sunset

Districts.

10033818 Town of Sunol Pipeline

Since 2000 the SFPUC has replaced the majority of the Town of Sunol pipeline system through the Town of Sunol Fire Suppression project, except for two segments. This project will complete the replacement of the last two segments of the system, by replacing sections of the pipeline that crosses the Arroyo de Laguna Creek (Creek Crossing) and under Highway 680.

The upstream section of pipeline that feeds both the potable line and fire suppression line to the Town of Sunol is exposed under the creek and in danger of failing under Highway 680. Pipeline failure at either location has significant consequences, since all fire and potable water in the Town of Sunol is dependent on the rehabilitation of this 12" line. This project will reduce maintenance from pipe breaks and have less main flushing which may lower impact on operating expenses.

CUW28000 Local Water Conveyance/Distribution System

This long-term program funds management of linear assets in San Francisco's potable water distribution system between transmission or storage and final customer service connection. The Linear Asset Management Program replaces and renews feeder and distribution mains for the 1,230 miles of pipe in San Francisco's drinking water distribution system. The SFPUC's goal is to replace 10 to 15 miles of pipe per year, depending on funding availability. Improvements include replacement, rehabilitation, relining, and cathodic protection of all pipe size categories to extend or renew pipeline useful life. Coordination with construction projects by other City agencies, especially SFPUC Sewer and SFPW Paving, is emphasized to optimize efficiencies and minimize customer disruptions. Some street improvement projects led by other agencies (CalTrans, SFMTA, SFCTA, SFPW) are more expensive to implement due to their complexity, traffic and transit impacts, and multi-agency coordination. Starting in FY21-22, separate funding for 4 miles of main replacement at a cost of \$6.0M per mile has been provided for the L-Taraval Transit Project, where

Additionally, in FY21-22, a new Better Market Street Project has been created to provide separate funding for the water main replacement along the Market Street Corridor to be constructed over a period of 7 years with the assumption of 0.5 miles per year.

Local Water Supply

CUW30101 Lake Merced Water Level Restoration

The project consists of three subprojects. (1) The City of Daly City is proposing and working in coordination with the SFPUC to implement the Vista Grande Drainage Basin Improvements project to address storm related flooding in the Vista Grande Watershed Drainage Basin while providing the benefit of restoring connection to the natural watershed of Lake Merced. (2) In addition, the SFPUC is implementing a Demonstration/Full Scale Aeration Mixing Project to evaluate whether additional lake mixing might result in improved dissolved oxygen concentrations in the Lake and finally (3) The SFPUC is evaluating diversion of highly treated recycled water from the new Westside Recycled Water facility into Lake Merced to increase and stabilize lake levels.

CUW30102 San Francisco Groundwater Supply

This project consists of two phases, which combined will provide an annual average of 4 mgd of groundwater to San Francisco's municipal water supply, and improvements at the existing San Francisco Zoo Well No. 5. Phase 1 is divided in two separate contracts, which are Contracts A & B. Contract A work for building four new groundwater well stations in the western part of San Francisco is currently in the final construction phase. Contract B work for installing buried piping to connect three of these well stations to the Sunset Reservoir was completed and accepted on December 21, 2015. Groundwater from the fourth well station was piped to the nearby Lake Merced Pump Station, where it was distributed to both the Sunset Reservoir and Sutro Reservoir. Phase 2 has Contract C work for installing buried piping and converting two existing irrigation well facilities in Golden Gate Park to groundwater supply wells is currently in the final construction

phase, and would be implemented after completion of the CUW30201, San Francisco Westside Recycled Water Project. Improvements at the existing San Francisco Zoo Well No. 5 were completed and accepted on February 15, 2007.

CUW30201 San Francisco Westside Recycled Water

This project consists of a new recycled water treatment facility located at the SFPUC's existing Oceanside Plant, along with the associated distribution system components, to produce and deliver an annual average of approximately 1.6 mgd of recycled water to Golden Gate Park, Lincoln Park, and the Presidio. The treatment process includes membrane filtration, reverse osmosis, and ultraviolet light disinfection. A new pump station and reservoir will be constructed in Golden Gate Park to deliver water to Lincoln Park and the Presidio. Approximately 8 miles of new recycled water pipeline connect the treatment facility to the new reservoir in Golden Gate Park and extends to the Lincoln Park and Presidio points of connection. The project also includes the retrofitting of the existing irrigation systems to bring them into compliance with Title 22 regulations. The treatment facility includes additional capacity to serve potential future customers, such as the SF Zoo.

Local Tanks/Reservoir Improvements

CUW28301 College Hill Reservoir Outlet

The College Hill Reservoir is located in San Francisco's Bernal Heights residential district and is a critical reservoir responsible for delivering water to the eastern and northern areas of San Francisco including General Hospital, Upper Market Street, Civic Center, and City Hall. The College Hill Reservoir, constructed in 1870 and San Francisco's oldest water reservoir, was seismically retrofitted in 2001. SFPUC is currently undertaking a phased program to improve the seismic reliability of the water distribution system from College Hill Reservoir to SF General Hospital to withstand a major seismic event. This project addresses essential seismic improvements within the reservoir including installation of a new control valve vault; replacement of reservoir

inlet and outlet piping; reservoir roof replacement; miscellaneous piping, security, site access, electrical, instrumentation, and water quality improvements; and replacement of the first section of transmission pipelines for the College Hill system up to Cortland Avenue.

Pump Stations

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CUW28404 HARDING PARK PS

The Harding Park irrigation pump station and recycled water storage tank was commissioned in 2012. The pump station draws recycled water from an underground reservoir and delivers the pressurized water to the Tournament Players Club (TPC) Harding Park golf course. In the summer of 2016, the pump station was taken off-line because electrical terminations in the pump station control panel had corroded. This resulted in an arc flash event, which damaged the main switch, making the pump station inoperable. Temporary repairs have been made, allowing for the facility to resume operation. The primary objective of the Harding Park Pump Station Project is to implement a permanent solution to the electrical system deficiencies and improve pump station reliability.

Buildings and Grounds

10037249 New CDD Headquarters

The City Distribution Division (CDD) oversees the retail water distribution system within the City and County of San Francisco and is responsible for the physical infrastructure of San Francisco's potable, auxiliary water supply and ground water systems. CDD's responsibilities include 24/7 emergency response to water main breaks and two-alarm or larger fires in addition to day-to-day operations and maintenance of over 1,250 miles of water mains, 12 reservoirs, 9 pump stations, 7 hydro-pneumatic stations, 6 tanks, the water meter program serving over 176,000 customers, and maintain CDD's physical plant, equipment and fleet and over 1,100 acres of grounds through the City.

The buildings and facilities at the existing CDD campus are functionally obsolete, in disrepair and are not in compliance with current building codes, and do not meet standards for safety,

accessibility and environmental requirements. The campus requires full replacement. New buildings will provide greater reliability, safety, security, and higher productivity.

Emergency Firefighting Water System

EFWS PL Emergency Firefighting Water System (EFWS) Pipelines

The Emergency Firefighting Water System (EFWS) includes several methods of delivering water to suppress fires during emergency situations. EFWS is vital for protecting against the loss of life, homes, and businesses from fire following an earthquake and non-earthquake multiple-alarm fires.

One EFWS component is a high-pressure fire-suppression water system, formerly known as Auxiliary Water Supply System (AWSS), which was originally built in the decade following the catastrophic 1906 San Francisco earthquake. It consists of a resilient 135-mile high-pressure pipeline network, a high elevation reservoir, two large capacity tanks, two high-pressure seawater pumping stations, and manifolds that allow fireboats to inject Bay water into the City's pipelines.

The Potable Emergency Firefighting Water System (PEFWS) will bring a seismically resilient high-pressure firefighting water system to the western neighborhoods of San Francisco, while also creating a seismically resilient pipeline that supplies drinking water to the west side during non-fire situations. The proposed overall project will install over 14 miles of seismically resilient pipelines in multiple phases as funding is provided. The system will be capable of providing water to the SFFD firefighters at the high pressure needed to combat large fires after a seismic event. The proposed pipelines will be fed by pump stations delivering 30,000 gallons per minute with services to the Richmond and Sunset Districts.

Fireboat manifolds allow fire boats to pump seawater from the bay into the EFWS. Existing fireboat manifolds at Fort Mason and Pier 33 ½ are located on piers of unknown condition and are likely susceptible to seismically induced failures. Rehabilitation of manifolds and

connector pipelines is required at Fort Mason and Pier 33 ½ to provide adequate access for firefighters.

EFWS PS Emergency Firefighting Water System (EFWS) Pump Stations

The Emergency Firefighting Water System (EFWS) includes several methods of delivering water to suppress fires during emergency situations. EFWS is vital for protecting against the loss of life, homes, and businesses from fire following an earthquake and non-earthquake multiple-alarm fires.

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The Potable Emergency Firefighting Water System (PEFWS) will bring a seismically resilient high-pressure firefighting water system to the western neighborhoods of San Francisco, while also creating a seismically resilient pipeline that can supply drinking water to the west side during non-fire situations. The proposed overall project will install over 14 miles of seismically resilient pipelines in multiple phases as funding is provided. The system will be capable of providing water to the SFFD firefighters at the high pressure needed to combat large fires after a seismic event. The proposed pipelines will be fed by pump stations delivering 30,000 gallons per minute with services to the Richmond and Sunset Districts.

Appendix B. Water Enterprise Proposed Project-Level Schedules Regional Programs

Project Name	Start	Finish	FY2021				FY2022				FY2023				FY2024				FY2025				FY2026				FY2027				FY2028				FY2029
			FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1
Water Regional Improvement Projects	01-Jan-09 A	29-Jun-35																																	
Water Treatment	03-Mar-14 A	27-Dec-29																																	
10033123 SVWTP Ozone (CUW27202)	27-Jun-17 A	30-Jun-27																																	
CUW2720204/02 SVWTP Phases 3 and 4	03-Mar-14 A	30-Jun-26																																	
CUW2720205 SVWTP Polymer Feed Facility	05-Apr-21	28-Oct-24																																	
CUW2720301HTWTP Improvements Capital	02-Nov-20 A	28-Jun-24																																	
CUW2720304 Regional Groundwater Treatment Improvements	13-Aug-20 A	27-Dec-29																																	
Water Transmission	01-Jan-16 A	29-Dec-34																																	
10034578 CSPL2 Reach 5 Lining Replacement	25-Feb-19 A	19-Sep-25																																	
10035029 As-Needed Pipeline Repair	01-Jul-20 A	25-Aug-28																																	
10036839 Pre-Stressed Concrete Cylinder Pipe (PCCP) Repair	01-May-20 A	22-Nov-23																																	
10036840 BDPL 1-4 Lining Repair	12-Sep-16 A	25-Aug-28																																	
CUW2730101 Corrosion Control	01-Jan-16 A	29-Dec-34																																	
CUW2730404 San Antonio Pump Station MCC Upgrades	12-May-16 A	19-Mar-25																																	
CUW2730504 San Andreas Pipeline No. 2 Replacement	01-Mar-16 A	08-Dec-21																																	
CUW2730505 CSPL2 Reaches 2 and 3 Rehabilitation	22-Oct-16 A	12-Jun-26																																	
Water Supply & Storage	11-Dec-13 A	29-Jun-35																																	
10015232 Merced Manor Reservoir Facilities Repairs	04-Jan-22	30-Jun-31																																	
10036998 Turner Dam and Reservoir Improvements	01-Oct-20 A	29-Jun-35																																	
CUW2740102 Pilarcitos Dam Improvements	07-Apr-14 A	29-Jun-29																																	
CUW2740103 San Andreas Dam Facility Improvements	11-Dec-13 A	30-Dec-33																																	
Watershed and Lands Management	31-Oct-12 A	27-Jan-28																																	
10015108 Sneath Lane Gate/North San Andreas	01-Feb-21 A	27-Jan-28																																	
10015110 EBRPD Water System	02-Jun-14 A	31-Oct-22																																	
CUW2751801 Southern Skyline Blvd Ridge Trail Extension	31-Oct-12 A	11-Sep-23																																	
CUW2752201 San Andreas Service Road Upgrades	30-Jun-16 A	31-Dec-26																																	
Buildings and Grounds	01-Jan-09 A	31-Mar-28																																	
10033555 Rollins Road Building Renovations (CUW27703)	01-Mar-18 A	30-Jun-22																																	
10034526 Millbrae Warehouse Settlement & Admin. Bldg. HVAC	03-Jan-17 A	30-Nov-23																																	
CUW27701 Sunol Long Term Improvements	01-Jan-09 A	13-Sep-22																																	
CUW2770304 Millbrae Yard Laboratory and Shop Improvements	02-Nov-15 A	31-Mar-28																																	



Appendix B. Water Enterprise Proposed Project-Level Schedules Local Programs

Project Name	Start	Finish	FY2021				FY2022				FY2023				FY2024				FY2025				FY2026				FY2027				FY2028				FY2029
			FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1
Water Local Improvement Projects	03-Mar-03 A	29-Dec-28																																	
Local Water Conveyance / Distribution System	01-Jul-10 A	30-Jun-28																																	
10033816 Potable Emergency Firefighting Water System	12-Aug-19 A	30-Jun-28	[Gantt bar showing phases: Planning, Design, Bid & Award, Construction, Closeout]																																
10033818 Town of Sunol Pipeline	17-Jun-19 A	03-Apr-23	[Gantt bar showing phases: Planning, Design, Bid & Award, Construction, Closeout]																																
CUW28000 Local Water Conveyance/Distribution System	01-Jul-10 A	30-Jun-28	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
Local Water Supply	03-Mar-03 A	30-Jan-26																																	
CUW30101 Lake Merced Water Level Restoration	16-Jun-03 A	30-Jan-26	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
CUW30102 San Francisco Groundwater Supply	16-Jun-03 A	30-Jun-22	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
CUW30201 San Francisco Westside Recycled Water	03-Mar-03 A	12-Jan-23	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
Local Tanks/Reservoir Improvements	24-Jan-13 A	29-Jan-24																																	
CUW28301 College Hill Reservoir Outlet	24-Jan-13 A	29-Jan-24	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
Pump Stations	06-Jul-21	03-Apr-26																																	
CUW28404 Harding Park PS	06-Jul-21	03-Apr-26	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
Buildings and Grounds	01-Feb-20 A	28-Jun-28																																	
10037249 New CDD Headquarters	01-Feb-20 A	28-Jun-28	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
Emergency Firefighting Water System (EFWS)	01-Apr-11 A	29-Dec-28																																	
CUWAW200 2014 AUXILIARY WATER SUPPLY SYSTEM*	06-Nov-14 A	30-Dec-22	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
CUWAWS01 AUXILIARY WATER SUPPLY SYSTEM*	01-Apr-11 A	30-Sep-21	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
EFWSPS EFWS Pump Stations	01-Apr-11 A	29-Dec-28	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
EFWSPL EFWS Pipelines	01-Apr-11 A	29-Dec-28	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																

- Project Management
- Design
- Construction Mgmt
- Planning
- Right-of-Way
- Construction
- Environmental
- Bid & Award
- Closeout

APPENDIX C. LIST OF ACRONYMS

AAR	Alternative Analysis Report	MCP	Main Control Panel
ADEIR	Administrative Draft of the Environmental Impact Report	MG	Million Gallons
AWMP	Automated Water Meter Program	MGD	Million Gallons per Day
AWSS	Auxiliary Water Supply System	MIB	2-Methylisoborneol
BARR	Bay Area Regional Reliability	MND	Mitigated Negative Declaration
BRT	Bus Rapid Transit	MOU	Memorandum of Understanding
C&M	Construction and Maintenance	MW	Megawatt
CalTrans	California Department of Transportation	NEPA	National Environmental Policy Act
CATEX	Categorical Exemption	NLWS	North Lake Well Station
CDD	City Distribution Division	NRD	Natural Resources Division
CEQA	California Environmental Quality Act	NTP	Notice to Proceed
CER	Conceptual Engineering Report	O&M	Operation and Maintenance
CIP	Capital Improvement Program	PAC	Powdered Activated Carbon
CM	Construction Management	PAH	Polycyclic Aromatic Hydrocarbons
CM/GC	Construction Manager/General Contractor	PEFWS	Potable Emergency Firefighting Water System
CMB	Construction Management Bureau	PMF	Probable Maximum Flood
COVID-19	Coronavirus Disease of 2019	PREP	Potable Reuse Exploratory Plan
CSPL2	Crystal Springs Pipeline Number 2	PRGC	Pacific Rod and Gun Club
DCU	Data Collection Unit	PS	Pump Station
DDW	Department of Drinking Water (State of California)	PUC	Public Utilities Commission
DFI	Dam Facility Improvements	RF	Radio Frequency
DIP	Ductile Iron Pipe	RFP	Request for Proposal
DSOD	Division of Safety of Dams (State of California)	RFQ	Request for Qualifications
EFWS	Emergency Firefighting Water System	ROW	Right-of-Way
EIR	Environmental Impact Report	RWOCB	Regional Water Quality Control Board
EIS	Environmental Impact Statement	RWS	Regional Water System
EMB	Engineering Management Bureau	SAD	San Andreas Dam
ESER	Earthquake Safety and Emergency Response	SAPL1	San Antonio Pipeline Number 1
FCC	Federal Communications Commission	SAPL2	San Antonio Pipeline Number 2
FY	Fiscal Year	SAPS	San Antonio Pump Station
GGNRA	Golden Gate National Recreation Area	SCADA	Supervisory Control and Data Acquisition
GGP	Golden Gate Park	SF	San Francisco
GPR	Ground Penetrating Radar	SFPUC	San Francisco Public Utilities Commission
HTWTP	Harry Tracy Water Treatment Plant	SFPW	San Francisco Public Works (formerly SFDPW)
HVAC	Heating, Ventilation, and Air Conditioning	SOP	Standard Operating Procedure
I&C	Instrumentation and Controls	STATEX	Statutory Exemption
ITS	Information Technology Services	SVWTP	Sunol Valley Water Treatment Plant
IOC	Job Order Contract	SWWS	South Windmill Well Station
MCC	Motor Control Centers	T&O	Taste and Odor
		TBD	To be determined
		TCE	Temporary Construction Easement
		TFB	Terry Francois Boulevard

Appendices

UV	Ultra Violet
VNBRT	Van Ness Bus Rapid Transit
WE	Water Enterprise
WECIP	Water Enterprise Capital Improvement Program
WQD	Water Quality Division
WSIP	Water System Improvement Program
WSTD	Water Supply and Treatment Division