

Water Enterprise Capital Improvement Program
Quarterly Reports Fiscal Year 2021-2022

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DATE: January 14, 2022

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

FROM: Dennis J. Herrera, General Manager *DJH*

RE: Water Enterprise Capital Improvement Program
Quarterly Report (1st Quarter / FY 2021-2022)

Enclosed please find the Water Enterprise Capital Improvement Program (WECIP) Quarterly Report for the 1st Quarter (Q1) of Fiscal Year (FY) 2021-2022. The primary intent of the report is to provide the Commission, stakeholders, and the public with a status summary of the Water Enterprise Capital Improvement Program based on data for the period of July 1, 2021 to September 30, 2021. This quarterly report provides a summary update on both Regional and Local Water Enterprise CIP projects.

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.

Quarterly Report Format Changes

In response to the Commission's request for improved tracking of program history and project performance status reporting for greater accountability, starting with the Q1 FY21-22 Quarterly Reports, staff incorporated the following revisions to the format of the CIP Quarterly Reports across all capital programs with the exception of the Water System Improvement Program Quarterly Reports, since that program is ninety-nine percent complete:

- This report includes an Executive Summary, which provides a high level summary of the program current status and key update that may be newsworthy or noticeable to the Commission, Stakeholders, and public.

London N. Breed
Mayor

Anson Moran
President

Newsha Ajami
Vice President

Sophie Maxwell
Commissioner

Tim Paulson
Commissioner

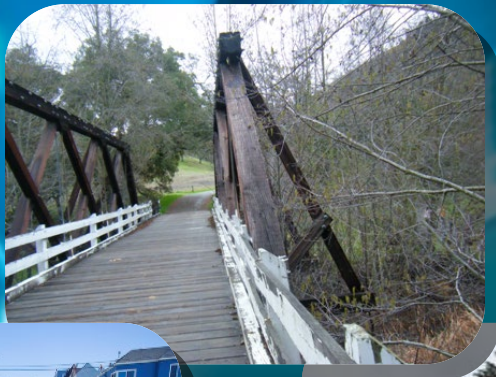
Ed Harrington
Commissioner

Dennis J. Herrera
General Manager

- This report now includes a new section titled as “Budget and Schedule Trend Summary,” (Section 5 of this report). The intent of this section is to provide a comprehensive view of each project’s budget and schedule status at milestones from initiation throughout implementation as projects are progressing toward completion. The new Budget and Schedule Trend Summary Table (Table 5) contains all approved Water Enterprise CIP Projects that are active in any of planning, design, bid and award, or construction phases of the project.
- The Cost Summary Table 3.1 in Section 3 of this report contains a new column, titled “Cost Variance Over Reporting Period,” intended to highlight forecasted budget changes during the reporting period and to provide new quarterly information “at a glance”.
- The Project Performance Summary Table 6, in Section 6 of the report, includes an additional column titled “% Cost Changes.” To move away from “traffic light” indicators but still provide useful information, projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted to visually draw attention to these projects.
- Project Status Reports are now provided in Section 7 of the report; the project order in this Section 7 is consistent with the order of projects listed in Tables 5 and 6 to facilitate consistent sequencing of projects throughout the report.



San Francisco
Water Power Sewer
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QUARTERLY REPORT

Water Enterprise Capital Improvement Program
Q1 FY 2021 | 2022
July 2021 — September 2021

Published: January 14, 2022



EXECUTIVE SUMMARY

This quarterly report provides a summary update on both Regional and Local Water Enterprise CIP projects. The primary intent of the report is to provide the Commission, stakeholders, and the public with a status summary of the Water Enterprise Capital Improvement Program based on data for the period of July 1, 2021 to September 30, 2021.

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.

Program Current Status:

Overall steady progress continued on the ongoing Water Enterprise CIP Projects. As of the end of the reporting period, the Regional Water Enterprise CIP includes 25 projects as follows: one (1) project not initiated, twenty (20) projects in planning or design, three (3) projects in construction, and one (1) project in closeout.

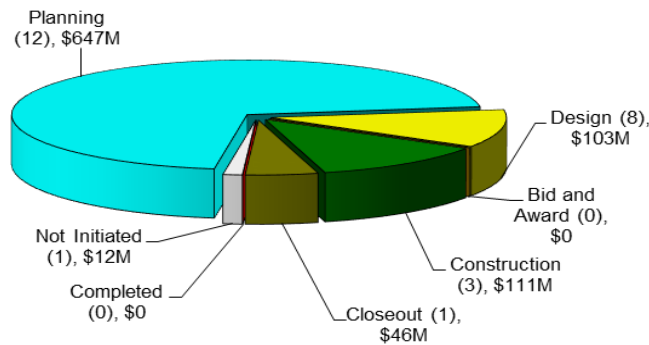


Figure A Total Current Approved Budget for Regional Projects Active in Each Phase

As of the end of the reporting period, the Local Water Enterprise CIP includes 11 projects as follows: three (3) projects in multiple phases, five (5) projects in planning or design, and three (3) projects in construction.

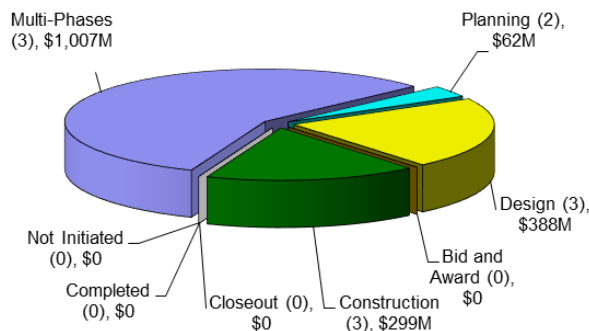


Figure B Total Current Approved Budget for Local Projects Active in Each Phase

The following Tables provides a high- level summary of the cost and schedule status for these programs.

Table A. Program Cost Summary

Programs	Expenditures To Date (\$ Million) (A)	Current Approved Budget (\$ Million) (B)	Q1/FY21-22 Forecasted Costs (\$ Million) (C)	Cost Variance (\$ Million) (D = B - C)	Variance Over Reporting Period* (\$ Million) (E)
Regional Program	\$164.26	\$918.79	\$951.76	(\$32.97)	(\$32.97)
Local Program	\$636.29	\$1,755.36	\$1,800.44	(\$45.07)	(\$45.07)
Programs Total	\$800.56	\$2,674.16	\$2,752.19	(\$78.04)	(\$78.04)

* Negative number reflects cost increases since last quarter, and positive number reflects cost reduction since last quarter.

Table B 2021 Approved vs. Current Forecast Schedule Dates

Programs	2021 Approved Project Start	Actual Start	2021 Approved Completion	Current Forecast Completion	Schedule Variance (Months)
Regional Program	01/01/09	01/01/09✓	06/29/35	06/29/35	-
Local Program	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	-

Program Key Update:

The key update for the Regional Water Enterprise Capital Improvement Program includes:

- 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 with the Conceptual Engineering and 10% design for the Sunol Valley Water Treatment Plant (SVWTP) Ozone project. The third round of treatability testing was nearly complete as the team awaits laboratory analysis in order to begin drafting the summary report. This analysis is expected to provide information to help mitigate bromate and halo acetic acid (HAA, a regulated disinfection byproduct) formation.
- Contractor has demobilized and is addressing the remaining punch list items for San Andreas Pipeline No. 2 Lockbar Replacement project. Final Completion anticipated to be achieved early next quarter.
- The Alternatives Analysis Report for the Crystal Springs Pipeline No. 2 (CSPL2) Reach 5 project was presented to the Technical Steering Committee and the recommended alternative was approved to be moved forward to the Conceptual Engineering phase. For the CSPL2

Reaches 2 and 3 project, geotechnical and survey work continued. Exploratory excavations for corrosion assessment were completed and a report is being drafted.

- The Southern Skyline Boulevard Ridge Trail Extension project team completed the 100% Design plans and technical specifications.
- Sunol Yard (Contract A): The draft project close-out dossier was prepared and is being reviewed. Watershed Center (Contract B): The construction work on the building interior electrical, HVAC, pond filter system, insulation, drywall, painting, bathroom tiling, bathroom fixtures, aquarium, and topping slab continued. Construction work on the exterior roofing system, PV system, pond and stream, pathways, bench seating, irrigation and electrical systems, Temple forecourt, site paving and PG&E power continued. Coordination on the exhibits, public art piece, bluestone paver etching and building exterior glass continued.

The key update for the Local Water Enterprise Capital Improvement Program includes:

- The forecast mileage for FY22 is 7.5 miles. The Capital Improvement Plan (CIP) Budget for FY22 is \$53M. Projects currently under construction during Q1 FY22 include the City streets of Pierce Street, Castro Street, 17th Street, Baker Street, 19th Avenue, and Casitas.
- Construction Notice to Proceed was issued to Ranger Pipelines on September 27, 2021 for the College Hill Reservoir Outlet. The overall construction duration is 755 calendar days with a substantial completion date of August 22, 2023. The Contractor has completed many of the major construction submittals including health and safety plan, baseline schedule, reservoir shutdown request, and material submittals and is mobilizing for initial clearing and grubbing and potholing activities in late November 2021.
- Schematic design will be completed by Public Works by the end of the year for the New CDD Headquarters. The Request for Proposals for design services was re-advertised in August with proposals due in October. The Construction Management/General Contractor (CM/GC) Request for Qualifications/Proposals (RFQ/P) is scheduled to be re-advertised before the end of the year.
- The San Francisco Westside Recycled Water project made substantial progress on three construction contracts:
 - At the treatment facility (Contract A): Miscellaneous electrical and mechanical work continued, and a revised start-up testing and commissioning sequence was submitted and reviewed by the project team. Classroom training sessions for operations, engineering, and maintenance staff were initiated, and work on the Operations Manual and Standard Operating Procedures (SOPs) continued.
 - Distribution Pump Station and Reservoir (Contract B): The reservoir water tightness test was completed. Electrical and mechanical work inside the pump station continued.
 - Irrigation System Retrofit (Contract D): The installation of a new pipeline on Transverse Drive was completed. The cross-connection control testing of Golden Gate Park continued, while the testing of the DeYoung and Legion of Honor museums were completed.

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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 every two years (with minor modifications in the off years) and integrated with the SFPUC's Financial Plan and rate-setting.

Biannual 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 to maintain facilities in 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

I. Regional WECIP Quarterly Report

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 July 1, 2021 and September 30, 2021. This document serves as the first (1st) Quarterly Report in Fiscal Year 2021-2022 (FY22) 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.

Going forward, changes to the approved baseline program and project scopes, schedules, and budgets will be proposed as part of the 10-year CIP that is updated every two years and approved by the SFPUC Commission. The proposed revisions to the program will become the new baseline for project scopes, schedules, and budgets in the beginning of the new fiscal year following SFPUC Commission approval.

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

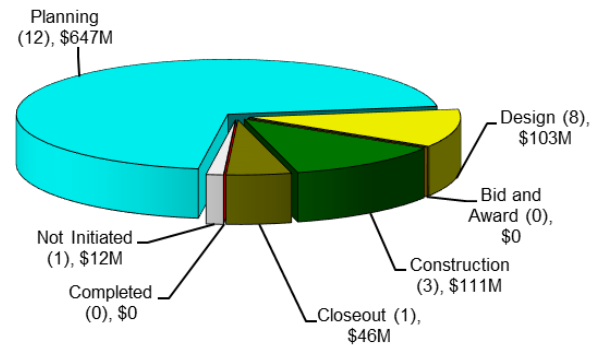


Figure 2.1 Total Current Approved Budget for Regional Projects Active in Each Phase

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

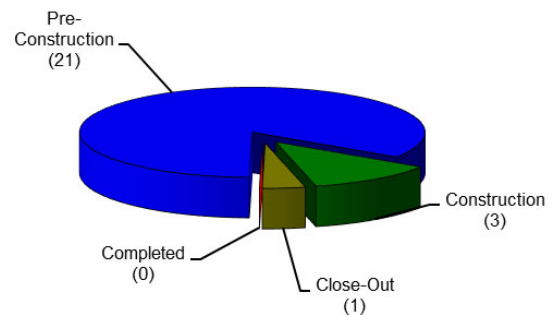


Figure 2.2 Number of Regional Projects in Pre-construction, Construction, and Post-construction

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

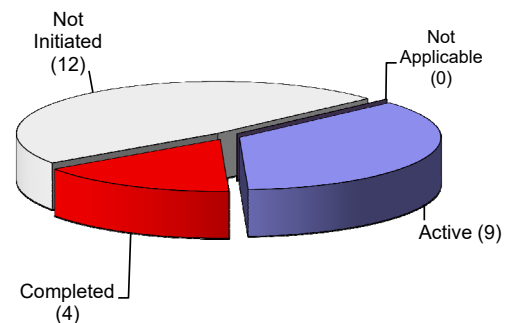


Figure 2.3 Regional Program Environmental Review

3. CAPITAL IMPROVEMENT PROGRAM COST SUMMARY

Table 3 provides an overall program-level cost summary of the Regional Water Program. It shows by categories of projects the Expenditures to Date, Current Approved Budgets, Q1/FY21-22 Forecasted Costs, Cost Variance between the Current Approved Budgets and Forecasted Costs, and Variance Over Reporting Period (difference between cost forecasts reported in Q4/FY20-21 and Q1/FY21-22).

The total Current Approved Budget (including Regional and Local Programs) and Current Forecasted Cost at completion are \$2,674.2 million, and \$2,752.2 million, respectively. The Current Approved Budget and Forecasted Cost at completion for only the Regional Water Program (including construction contingency) are \$918.8 million and \$951.8 million, respectively.

The overall Regional Water Program negative Cost Variance of \$32.9M in Table 3 can be attributed to the following factors:

- 10015071 Corrosion Control forecasted cost increased by \$11.6M due to increase of PG&E requirements and resulting higher costs for new power facilities at multiple sites.
- 10030771 SA-1 Service Road/Ingoing Road forecasted cost increased by \$6.2M due to the updated construction cost and additional slope stabilization work that is required.
- 10034526 Millbrae Warehouse Settlement & Admin. Bldg. HVAC forecasted cost increased by \$10.6M due to the projected increase in construction associated with relocating HVAC system and addressing some seismic design issues.
- 10015124 Sunol Long Term Improvements forecast cost increased by \$4.5M due to additional scope items requested for the Alameda Creek Watershed Center.

Please refer to the section of II.3 of this report for more details about the reported cost variance for the Local Water Program

Table 3 Program Cost Summary

Programs	Expenditures To Date (\$ Million) (A)	Current Approved Budget (\$ Million) (B)	Q1/FY21-22 Forecasted Costs (\$ Million) (C)	Cost Variance (\$ Million) (D = B - C)	Variance Over Reporting Period* (\$ Million) (D)
Regional Water Program	\$164.26	\$918.79	\$951.76	(\$32.97)	(\$32.97)
Water Treatment	\$12.84	\$295.80	\$295.80	-	-
Water Transmission	\$52.50	\$217.01	\$228.64	(\$11.64)	(\$11.64)
Water Supply & Storage	\$5.07	\$81.86	\$81.86	-	-
Watershed & Lands Management	\$7.43	\$43.45	\$49.70	(\$6.25)	(\$6.25)
Buildings and Grounds	\$86.43	\$280.67	\$295.75	(\$15.08)	(\$15.08)
Local Water Program	\$636.29	\$1,755.36	\$1,800.44	(\$45.07)	(\$45.07)
PROGRAM TOTAL	\$800.56	\$2,674.16	\$2,752.19	(\$78.04)	(\$78.04)

* Negative number is reflecting cost increases since last quarter, and positive number is reflecting cost reduction since last quarter.

4. CAPITAL IMPROVEMENT PROGRAM SCHEDULE SUMMARY

Figure 4 compares the 2021 Approved Schedule and the Current Forecast Schedule for the Regional Water CIP. As shown in Table 4, the 2021 Approved and Forecasted Schedule completion for the overall Water Enterprise CIP (including Regional and Local Programs) are each in June 2035. The 2021 Approved and Forecasted Schedule completion for the Regional Water CIP alone are also each in June 2035.

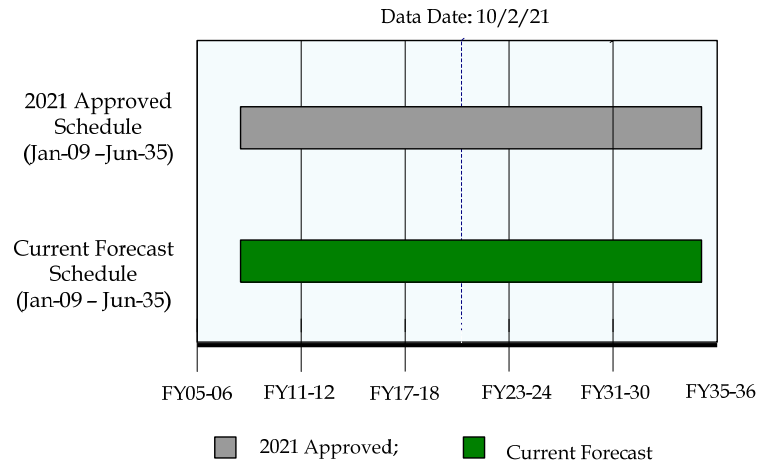


Figure 4. Regional Program Schedule Summary

Table 4. 2021 Approved vs. Current Forecast Schedule Dates

Program	2021 Approved Project Start	Actual Start	2021 Approved Completion	Current Forecast Completion	Schedule Variance (Months)
Regional Program	01/01/09	01/01/09✓	06/29/35	06/29/35	-
Local Program	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. BUDGET AND SCHEDULE TREND SUMMARY

Starting with the Q1 FY21-22 Quarterly Report, a revised report format includes a new Table 5, titled Budget and Schedule Trend Summary. This Table 5 contains all approved Regional Water projects that are active and in any of the planning, design, bid and award, or construction phases of the project. The table excludes any projects that are either Not-Initiated, On-Hold, in Close-Out, or Completed.

During the reporting period, the following Regional projects achieved major project milestones:

- The SVWTP Polymer Feed Facility completed the 65% design.
- The Corrosion Control Phase 2 subproject completed 95% design.
- The Southern Skyline Blvd Ridge Trail Extension completed 100% design.

Table 5. Budget and Schedule Trend Summary

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
WECIP - Regional														
Water Treatment														
10033123 SVWTP Ozone	FY21-30		06/27/17		10/22/21		04/15/22		01/06/23		01/02/24		Q1-FY21-22	
	\$165.1	06/30/27	\$115	09/09/24	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$165.1	06/30/27
10015064 SVWTP Phase 3 and 4	FY21-30		03/03/14		06/30/22		10/04/22		03/15/23		03/12/24		Q1-FY21-22	
	\$70.1	06/30/26	\$7.1	10/01/18	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$70.1	06/30/26
10037628 SVWTP Polymer Feed Facility	FY21-30		07/16/16 ²		06/30/19 ²		08/17/20 ²		04/21/22		11/08/22		Q1-FY21-22	
	\$7.5	09/27/24	N/A	N/A	N/A	N/A	N/A	N/A	TBD	TBD	TBD	TBD	\$7.5	09/27/24
10037349 HTWTP Improvements Capital	FY21-30		11/02/20		06/29/21		10/13/21		05/20/22		12/30/22		Q1-FY21-22	
	\$14.4	06/28/24	\$14.4	06/28/24	\$14.4	06/28/24	TBD	TBD	TBD	TBD	TBD	TBD	\$14.4	06/28/24
10037350 Regional Groundwater Treatment Improvement	FY21-30		08/13/20		08/13/24		03/04/25		11/10/25		04/27/26		Q1-FY21-22	
	\$38.6	12/27/29	\$38.6	12/27/29	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$38.6	12/27/29
Water Transmission														
10034578 CSPL2 Reach 5 Lining Replacement	FY21-30		02/25/19		10/25/21		02/22/22		10/28/22		07/11/23		Q4 - FY21-22	
	\$13	11/30/22	\$12.8	11/30/22	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$13.0	09/19/25

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. For SVWTP Polymer Feed, project initiation, CER, and 35% Design were completed under WSIP - Closeout - Sunol Valley. Future milestones for this project are to be completed under WECIP.

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
10035029 As-Needed Pipeline Repairs	FY21-30		10/22/16		06/30/21		10/20/21		06/13/22		03/22/23		Q1-FY21-22	
	\$6.8	08/25/28	\$6.8	08/25/28	\$6.8	08/25/28	TBD	TBD	TBD	TBD	TBD	TBD	\$6.8	08/25/28
10036839 BDPL4 PCCP Repair	FY21-30		05/01/20		12/30/21		02/04/22 ²		03/07/22		07/12/22		Q1-FY21-22	
	\$54.7	11/22/23	\$54.7	11/22/23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$54.7	11/22/23
10036840 BDPL 1-4 Lining Repair	FY21-30		09/12/16		06/30/21		4/30/22 ²		07/31/22		03/24/23		Q1-FY21-22	
	\$9.3	8/25/28	\$9.3	8/25/28	\$9.3	8/25/28	TBD	TBD	TBD	TBD	TBD	TBD	\$9.3	08/25/28
10015071 Corrosion Control <i>Phase I</i> <i>Phase II</i> <i>Phase III</i>	FY21-30		01/01/10		07/01/12 (Phase I) 12/29/17 (Phase II) 07/31/23 (Phase III)		12/31/13 (Phase I) 12/31/18 (Phase II) 08/30/24 (Phase III)		07/30/15 (Phase I) 11/30/21 (Phase II) 08/30/24 (Phase III)		12/30/18 (Phase I) 08/01/22 (Phase II) 08/01/25 (Phase III)		Q1-FY21-22	
	\$24.9	12/29/34	\$24.9	12/29/34	\$24.9	12/29/34	\$24.9	12/29/34	\$24.9	12/29/34	\$24.9	12/29/34	\$36.5	01/31/28
10015076 San Antonio Pump Station MCC Upgrades	FY21-30		05/12/16		NA ³		01/11/22		03/31/22		06/05/23		Q1-FY21-22	
	\$12.5	03/19/25	\$7.2	01/27/23	NA	NA	TBD	TBD	TBD	TBD	TBD	TBD	\$12.5	03/19/25
10015081 CSPL2 Reaches 2 and 3 Rehabilitation	FY21-30		09/12/16		04/04/22		08/19/22		08/09/23		03/12/24		Q4 - FY21-22	
	\$55.9	10/10/23	\$55.9	10/10/23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$50.0	06/12/26
Water Supply & Storage														
10036998 Turner Dam and Reservoir Improvements	FY21-30		10/01/20		06/30/27		06/29/28		12/31/30		01/02/32		Q1-FY21-22	
	\$7.5	06/29/35	\$7.5	06/29/35	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$7.5	06/29/35

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. This represents a project milestone of 50% Design.
3. For San Antonio Pump Station MCC, CER was not needed.

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
10015091 Pilarcitos Dam Improvements	FY21-30		04/07/14		06/30/23		02/08/24		02/07/25		01/02/26		Q1-FY21-22	
	\$30.1	06/29/29	\$25.7	09/05/25	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$30.1	06/29/29
10015092 San Andreas Dam Facility Improvements <i>Scope I</i> <i>Scope II</i>	FY21-30		12/11/13 ³		09/29/23 ³		09/30/24 ³		05/26/26 ³		07/1/27 (Scope I) 07/2/29 (Scope II)		Q1-FY21-22	
	\$32.2	12/30/33	\$26.8	04/20/27	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$32.2	12/30/33
Watershed & Lands Management														
10015110 EBRPD Water System	FY21-30		06/02/14		01/31/19		08/09/19 ²		12/02/19		05/10/21		Q1-FY21-22	
	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22
10015108 Sneath Lane Gate/North San Andreas	FY21-30		02/01/21		01/31/22		10/16/24		05/09/25		01/02/26		Q1-FY21-22	
	\$6.7	01/27/28	\$6.7	01/27/28	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$6.7	08/02/27
10015113 Southern Skyline Blvd Ridge Trail Extension	FY21-30		10/31/12		03/09/15		9/10/15 ²		01/05/18		05/02/22		Q1-FY21-22	
	\$21.8	09/11/23	\$18.7	02/25/19	\$18.7	02/25/19	\$18.7	02/25/19	\$19.3	07/22/21	TBD	TBD	\$21.8	09/11/23
10030771 SA-1 Service Road/Ingoing Road	FY21-30		06/30/16		12/30/21		05/18/22		02/27/23		01/02/24		Q1-FY21-22	
	\$9.6	12/31/26	\$9.6	12/31/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$15.8	12/31/26
Buildings and Grounds														
10033555 Rollins Road Building Renovations	FY21-30		03/01/18		05/31/19		11/16/20		01/28/21		04/01/21		Q1-FY21-22	
	\$5.2	06/30/22	\$17.9	01/31/22	\$17.9	01/31/22	\$5.2	06/30/22	\$5.2	06/30/22	\$5.2	06/30/22	\$5.2	06/30/22

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. This represents a project milestone of 50% Design.
3. For San Andreas Dam Facility Improvements, all milestones except Awarded Construction represent the same date for both scopes.

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
10034526 Millbrae Warehouse Settlement & Admin. Bldg. HVAC	FY21-30		1/3/17		12/29/17 (Scope I) 01/2/18 (Scope II)		12/29/18(Scope I) 02/11/22 (Scope II)		08/03/20(Scope I) 07/27/22 (Scope II)		03/09/21 (Scope I) 01/10/23(Scope II)		Q1-FY21-22	
<i>Scope I</i> <i>Scope II</i>	\$5.5	11/30/23	\$5.5	11/30/23	\$5.5	11/30/23	\$5.5	11/30/23	\$5.5	11/30/23	\$5.5	11/30/23	\$16.1	09/30/24
10015124 Sunol Long Term Improvements	FY21-30		01/01/09		04/27/12		05/28/13 (Scope I) 08/07/14 (Scope II)		03/30/15 (Scope I) 10/02/15 (Scope II)		11/08/16 (Scope I) 12/10/19 (Scope II)		Q4 - FY21-22	
<i>Scope I</i> <i>Scope II</i>	\$91.7	09/01/21	\$91.7	09/01/21	\$91.7	09/01/21	\$91.7	09/01/21	\$91.7	09/01/21	\$91.7	09/01/21	\$104.9	08/14/23
10015128 Millbrae Yard Laboratory and Shop Improvements	FY21-30		11/02/15		10/03/22		04/17/23		07/19/24		02/11/25		Q1-FY21-22	
	\$169.6	03/31/28	\$24.5	05/03/23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$169.6	03/30/29

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).

6. PROGRAM PERFORMANCE SUMMARY*

All costs are shown in \$1,000s as of 10/02/21

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Water Treatment											
10033123 - SVWTP Ozone (CUW27202)	PL	\$ 165,130	\$ 165,130	\$ 165,130	\$ 4,522	-	0%	06/30/27	06/30/27	06/30/27	0
10015064 - SVWTP Phase 3 and 4	PL	\$ 70,132	\$ 70,132	\$ 70,132	\$ 7,824	-	0%	06/30/26	06/30/26	06/30/26	0
10037628 - SVWTP Polymer Feed Facility	DS	\$ 7,537	\$ 7,537	\$ 7,537	\$ 117	-	0%	09/27/24	09/27/24	09/27/24	0
10037349 - HTWTP Improvements Capital	DS	\$ 14,404	\$ 14,404	\$ 14,404	\$ 251	-	0%	06/28/24	06/28/24	06/28/24	0
10037350 - Regional Groundwater Treatment Improvement	PL	\$ 38,600	\$ 38,600	\$ 38,600	\$ 125	-	0%	12/27/29	12/27/29	12/27/29	0
Water Transmission											
10034578 - CSPL2 Reach 5 Lining Replacement	PL	\$ 13,031	\$ 13,031	\$ 13,031	\$ 783	-	0%	09/19/25	09/19/25	09/19/25	0
10035029 - As-Needed Pipeline Repairs	DS	\$ 6,795	\$ 6,795	\$ 6,795	\$ 184	-	0%	08/25/28	08/25/28	08/25/28	0
10036839 - BDPL4 PCCP Repair	PL	\$ 54,750	\$ 54,750	\$ 54,750	\$ 152	-	0%	11/22/23	11/22/23	11/22/23	0
10036840 - BDPL 1-4 Lining Repair	DS	\$ 9,350	\$ 9,350	\$ 9,350	\$ 155	-	0%	08/25/28	08/25/28	08/25/28	0

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

**** Phase Status Legend**

PL Planning DS Design
 BA Bid & Award CN Construction MP Multiple-Phase

Footnotes:

- (+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
- (+++) **Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.**

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Water Transmission											
10015071 - Corrosion Control	DS	\$ 24,900	\$ 24,900	\$ 36,536	\$ 7,483	(\$11,636)	-47%	12/29/34	12/29/34	01/31/28	2524
10015076 - San Antonio Pump Station MCC Upgrades	DS	\$ 12,500	\$ 12,500	\$ 12,500	\$ 726	-	0%	03/19/25	03/19/25	03/19/25	0
10015081 - CSPL2 Reaches 2 and 3 Rehabilitation	PL	\$ 50,041	\$ 50,041	\$ 50,041	\$ 1,494	-	0%	06/12/26	06/12/26	06/12/26	0
Water Supply & Storage											
10036998 - Turner Dam and Reservoir Improvements	PL	\$ 7,500	\$ 7,500	\$ 7,500	\$ 338	-	0%	06/29/35	06/29/35	06/29/35	0
10015091 - Pilarcitos Dam Improvements	PL	\$ 30,087	\$ 30,087	\$ 30,087	\$ 3,462	-	0%	06/29/29	06/29/29	06/29/29	0
10015092 - San Andreas Dam Facility Improvements	PL	\$ 32,195	\$ 32,195	\$ 32,195	\$ 1,268	-	0%	12/30/33	12/30/33	12/30/33	0
Watershed & Lands Management											
10015110 - EBRPD WATER SYSTEM	CN	\$ 5,376	\$ 5,376	\$ 5,376	\$ 1,754	-	0%	10/31/22	10/31/22	10/31/22	0
10015108 - Sneath Lane Gate/North San Andreas	PL	\$ 6,698	\$ 6,698	\$ 6,698	\$ 43	-	0%	01/27/28	01/27/28	08/02/27	178

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

** Phase Status Legend			
PL	Planning	DS	Design
BA	Bid & Award	CN	Construction
MP	Multiple-Phase		

Footnotes:

- (+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
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Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Watershed & Lands Management											
10015113 - Southern Skyline Blvd Ridge Trail Extension	DS	\$ 21,805	\$ 21,805	\$ 21,805	\$ 5,186	-	0%	09/11/23	09/11/23	09/11/23	0
10030771 - SA-1 Service Road/Ingoing Road	PL	\$ 9,568	\$ 9,568	\$ 15,817	\$ 446	(\$6,249)	-65%	12/31/26	12/31/26	12/31/26	0
Buildings and Grounds											
10033555 - Rollins Road Building Renovations (CUW27703)	CN	\$ 5,192	\$ 5,192	\$ 5,192	\$ 2,912	-	0%	06/30/22	06/30/22	06/30/22	0
10034526 - Millbrae Warehouse Settlement & Admin. Bldg. HVAC	DS	\$ 5,500	\$ 5,500	\$ 16,080	\$ 537	(\$10,580)	-192%	11/30/23	11/30/23	09/30/24	(305)
10015124 - Sunol Long Term Improvements	CN	\$ 100,414	\$ 100,414	\$ 104,914	\$ 81,002	(\$4,500)	-4%	09/13/22	09/13/22	08/14/23	(335)
10015128 - Millbrae Yard Laboratory and Shop Improvements	PL	\$ 169,563	\$ 169,563	\$ 169,563	\$ 1,974	-	0%	03/31/28	03/31/28	03/30/29	(364)

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

** Phase Status Legend			
PL	Planning	DS	Design
BA	Bid & Award	CN	Construction
MP	Multiple-Phase		

Footnotes:

- (+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
- (+++) **Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.**







I. Regional WECIP Quarterly Report

7. PROJECTS STATUS REPORT

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	 \$4.52 M	Project Percent Complete: 2.6%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/02/23	08/09/23	01/02/24	12/31/26

Progress and Status:

During this reporting period, the planning work is drawing to a close, with the Conceptual Engineering and 10% design almost complete. The third round of treatability testing was nearly completed in the quarter, and the team awaits laboratory analysis in order to begin drafting the summary report. This analysis is expected to provide information to help mitigate bromate and halo acetic acid (HAA, a regulated disinfection byproduct) formation.

Issues and Challenges:

None at this time.









Example of Ozone Generator Unit

10015064 - 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
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Project Cost:		Project Schedule:	
Approved  \$70.13 M	Approved Mar-14  Jun-26		
Forecast  \$70.13 M	Forecast Mar-14  Jun-26		
Actual  \$7.82 M	Project Percent Complete: 11.1%		
			

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 background Technical Memoranda prepared for some of the scope items and to collect information needed to start planning phase. Site visits necessary 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

10037628 - SVWTP Polymer Feed Facility

Project Description: 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. Planning and some design were performed under the Water System Improvement Program (WSIP); this project will finish design and construct the improvements.

Program: Water Treatment	Project Status: Design	Environmental Status: Not Initiated
Project Cost:		Project Schedule:
Approved  \$7.54 M	Approved Mar-21  Sep-24	
Forecast  \$7.54 M	Forecast Jul-21  Sep-24	
Actual  \$0.12 M	Project Percent Complete: 0.0%	
		

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	04/01/22	08/01/22	02/02/23	06/01/24

Progress and Status:

The project has completed the 65% design. Due to the higher than anticipated engineer’s estimate, the project is using Value Engineering to further evaluate cost saving alternatives prior to proceeding with the 95% design.

Issues and Challenges:







None at this time.



Sunol Valley Water Treatment Plant Basins 1-5

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: Design	Environmental Status: Active
Project Cost:		Project Schedule:
Approved  \$14.40 M	Approved Nov-20  Jun-24	
Forecast  \$14.40 M	Forecast Nov-20  Jun-24	
Actual  \$0.25 M	Project Percent Complete: 17.6%	
		

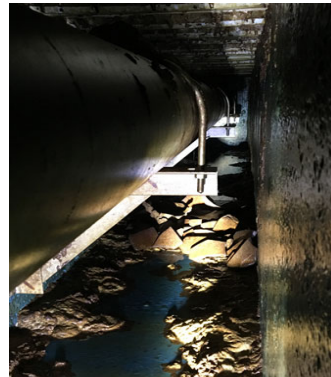
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/29/22	07/20/22	12/30/22	12/30/23

Progress and Status:

The 50% design to replace the plastic underdrains of Filters 1 through 6 with stainless steel underdrains was completed this quarter, and the 95% design is anticipated to be completed next quarter.

Issues and Challenges:

None at this time.








Filter Gullet beneath Plastic Underdrains with Failed Grout

10037350 - Regional Groundwater Treatment Improvement

Project Description: 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. Planning and some design were performed under the Water System Improvement Program (WSIP); this project will finish design and construct the improvements.

Program: Water Treatment	Project Status: Planning	Environmental Status: Not Initiated
---------------------------------	---------------------------------	--

Project Cost:		Project Schedule:	
Approved	 \$38.60 M	Approved Aug-20	 Dec-29
Forecast	 \$38.60 M	Forecast Aug-20	 Dec-29
Actual	\$0.13 M	Project Percent Complete: 0.2%	
			

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:

A draft Regional Groundwater Treatment Evaluation report was prepared this quarter. The report will be reviewed and finalized next quarter. In addition, a Request for Proposals is being drafted to procure a consultant to assist with the planning, design, engineering services during construction, and closeout of the project.

Issues and Challenges:







None at this time.



Typical well station equipment

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
Project Cost: Approved  \$13.03 M Forecast  \$13.03 M Actual  \$0.78 M		Project Schedule: Approved Feb-19  Sep-25 Forecast Feb-19  Sep-25 Project Percent Complete: 6.0%
		

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 highest scoring alternative in the alternatives analysis, lining replacement of the existing pipeline with cement mortar lining, was approved by the Technical Steering Committee during the quarter, and the Alternatives Analysis Report is now being finalized. The scope of work to draft the Conceptual Engineering Report is being prepared as a task order for the new pipeline engineering consultant. Estimated NTP for the task order is next quarter.

Issues and Challenges:







None at this time.



Typical coal tar lining failure

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: Design	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  \$0.18 M	Project Percent Complete: 33.7%	
		

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	01/04/23	10/13/22	03/22/23	02/21/28

Progress and Status:

The Conceptual Engineering Report was finalized this quarter and design will begin next quarter. A consultant is being procured to further analyze alternatives for safe personnel entry procedures in active pipelines. Temporary and permanent safe entry measures are being considered. If permanent safe entry measures such as the addition of multiple in-line valves for more secured pipeline isolation are selected, there may be cost and schedule impacts.



Typical Pipeline Repair with WEKO Seals





Issues and Challenges:

None at this time.

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
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Project Cost:		Project Schedule:	
Approved	 \$54.75 M	Approved May-20	 Nov-23
Forecast	 \$54.75 M	Forecast May-20	 Nov-23
Actual	\$0.15 M	Project Percent Complete: 0.5%	

 Approved;  Actual Cost;  Forecast

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 interim improvements was submitted during the quarter. The new pipeline consultant under the newly approved professional services contract will review this technical memorandum, all existing inspection reports, and background information and will prepare a needs assessment report. The scope, budget and schedule may change depending on the discovery of any new leaks or areas of concern.



Location of leak on BDPL4 PCCP in Redwood City






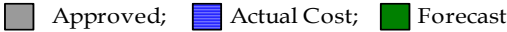
Issues and Challenges:

None at this time.

I. Regional WECIP Quarterly Report

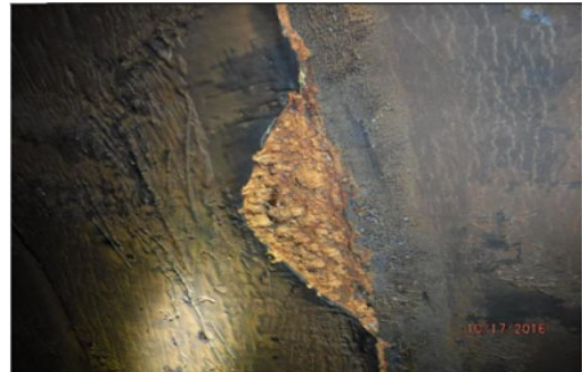
10036840 - BDPL 1-4 Lining Repair

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: Water Transmission		Project Status: Design		Environmental Status: Active	
Project Cost:			Project Schedule:		
Approved		\$9.35 M	Approved Sep-16		Aug-28
Forecast		\$9.35 M	Forecast Sep-16		Aug-28
Actual		\$0.16 M	Project Percent Complete: 3.4%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	11/30/22	10/18/22	03/24/23	01/04/28	

Progress and Status:

The Conceptual Engineering Report was finalized this quarter and design will begin next quarter. A consultant is being procured to further analyze alternatives for safe personnel entry procedures in active pipelines. Temporary and permanent safe entry measures are being considered. If permanent safe entry measures such as the addition of multiple in-line valves for more secured pipeline isolation are selected, there may be cost and schedule impacts.



Typical Lining Defect

Issues and Challenges:

None at this time.

10015071 - 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: Active (CatEx)	
Project Cost:			Project Schedule:		
Approved		\$24.90 M	Approved Jan-16		Dec-34
Forecast		\$36.54 M	Forecast Jan-16		Jan-28
Actual		\$7.48 M	Project Percent Complete: 45.0%		
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	01/31/22	02/08/22	08/01/22	07/31/24	

Progress and Status:

The Corrosion Control Phase 2 sub-project is at 95% design and was presented during the quarter to the Technical Steering Committee and Change Control Board for approval. The project team continues to develop the 100% design. The Bid and Award Phase will start in the third quarter, early next year. The categorical exemption environmental permit is being modified to reflect a change in the number of sites from 14 sites to 11 sites.

Issues and Challenges:

The variance in the forecast schedule and budget is due to the project team not receiving a response from PG&E for new power facilities at three (3) of the fourteen (14) sites within the design period. In order to not delay construction for the other sites, in the event this information is not received by bid date, construction at these three (3) sites will be postponed until the next phase. There is a higher cost than included in the previous cost estimate for power at each of the sites due to PG&E’s change of decision to now require all new electrical connections to provide facilities to step down the power. The Technical Steering Committee requested that the Phase 3 for the project be accelerated in order to complete cathodic protection installations at an earlier date; impacts from these changes will be evaluated and included in









Deep Anode Installation – Corrosion Phase 1

the future 10-Year CIP proposal.

10015076 - 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	 \$0.73 M	Project Percent Complete: 6.7%	
			

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:

During this reporting period, the design team continued with the 65% design and further established the design criteria. A geotechnical consultant is needed to update seismic design parameters to current code for the structural design. While seismic improvements were made to the entire facility under the WSIP contract WD-2566 completing in 2012, the MCCs and some of the internal walls may require additional seismic improvements triggered by the construction and to bring the facility up to current code. The project team is working towards getting a task order in place to support this design effort.



San Antonio Pump Station building looking southeast







Issues and Challenges:

None at this time.

10015081 - 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	 \$1.49 M	Project Percent Complete: 1.7%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	09/21/23	12/13/23	05/23/24	12/16/25

Progress and Status:

A JOC contractor completed excavation of the pipeline at two locations identified as having potential for corrosion, and a corrosion investigation was conducted. The draft report is being prepared and is anticipated to be available next quarter. San Francisco Public Works is undertaking additional surveying and geotechnical investigation work, the results of which will be included in the draft Conceptual Engineering Report.



Portion of CSPL2 that will be re-lined







Issues and Challenges:

None at this time.

I. Regional WECIP Quarterly Report

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.

Program: Water Supply & Storage		Project Status: Planning		Environmental Status: Not Initiated (EIR)	
Project Cost:			Project Schedule:		
Approved		\$7.50 M	Approved Oct-20		Jun-35
Forecast		\$7.50 M	Forecast Oct-20		Jun-35
Actual		\$0.34 M	Project Percent Complete: 2.4%		
					
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:

A preliminary spillway condition assessment was presented during the reporting period. The assessment indicated that additional investigation is needed to better understand the condition of the subdrain system and the spillway subgrade. The geotechnical investigation work plan for the site will be submitted together with the dam alteration permit application to the Department of Safety of Dams (DSOD) early next quarter. Environmental clearance and DSOD review for the geotechnical investigation will continue in the next two quarters.

Issues and Challenges:

None at this time.






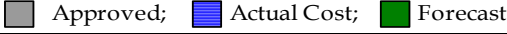


Spillway drain inspection crew inserting camera for visual inspection of drain holes

10015091 - 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 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 Pilarcitos Dam and Reservoir facilities, including the dam and forebay outlet structure, spillway, outlet tunnel, and outlet pipeline, and will perform necessary upgrades identified during the Planning Phase.

Program: Water Supply & Storage	Project Status: Planning	Environmental Status: Not Initiated (MND)
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Project Cost:		Project Schedule:	
Approved	 \$30.09 M	Approved Apr-14	 Jun-29
Forecast	 \$30.09 M	Forecast Apr-14	 Jun-29
Actual	 \$3.46 M	Project Percent Complete: 19.7%	
			

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:

The project team completed the draft report for the overall condition and needs assessment for the dam embankment, spillway, forebay outlet, and forebay outlet works; findings were presented to stakeholders in a workshop. The report will be finalized early next quarter. Findings indicated that the dam embankment, spillway, and forebay outlet works all have deficiencies, do not meet all performance objectives, and require improvements. Nine alternatives were identified to address the deficiencies. These alternatives will be analyzed and then screened for further evaluation during the Alternative Analysis Report (AAR) phase, which will start in the next quarter.



Spillway cleaning and mapping for condition assessment






Issues and Challenges:

None at this time.

10015092 - 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, including the dam, spillway, emergency outlet, and ancillary facilities, and perform necessary upgrades identified during the Planning Phase.

Program: Water Supply & Storage	Project Status: Planning	Environmental Status: Not Initiated (Various)
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Project Cost:		Project Schedule:	
Approved	 \$32.20 M	Approved Dec-13	 Dec-33
Forecast	 \$32.20 M	Forecast Dec-13	 Dec-33
Actual	 \$1.27 M	Project Percent Complete: 3.2%	

 Approved;  Actual Cost;  Forecast

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:

The project team completed the draft report for the overall condition and needs assessment for the dam embankment, spillway, and emergency drawdown outlet structures. Next quarter, a workshop to present the results will be held and the report will be finalized. Findings indicated that the facilities do not meet all performance objectives and require improvements. Nine alternatives that were identified to address the deficiencies. Will be analyzed and then screened for further evaluation during the Alternative Analysis Report (AAR) phase, which will start in the next quarter. In the meantime, the geotechnical investigation work will be initiated in the AAR phase early next quarter, and a workplan will be submitted together with the dam alteration permit application to DSOD. Environmental clearance and DSOD review for the geotechnical investigation will continue in the next two quarters.

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









Launching of barge for the Bathymetric Survey

that the alternatives analysis include analysis of the interdependence of all system components. This interdependence analysis may change the assumptions for construction sequencing. For the geotechnical investigation work, additional time is required for DSOD to review and approve the workplan and also due to the limited construction windows (based on environmental permits) in which to perform geotechnical investigation. The schedule will be reforecast when these schedule impacts are better understood.

10015110 - 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. The project purpose is to provide a reliable water supply for potable use at the EBRPD facilities within 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		\$1.75 M	Project Percent Complete: 27.0%		
					
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:

During this reporting period, the Contractor completed a pre-construction investigation to determine the levels of Naturally Occurring Asbestos (NOA) at the job site as a requirement for Bay Area Air Quality Management District (BAAQMD) to approve an Asbestos Dust Mitigation Plan (ADMP). Groundbreaking construction work will commence after the ADMP is approved by BAAQMD. The Contractor continues to prepare the job site to start work as soon as the plan is approved.



Sunol Regional Wilderness Park High Valley Area

Issues and Challenges:






The review and approval of the ADMP by the BAAQMD has taken longer than anticipated. While the contractor is performing as much other work as possible and is considering how to optimize and expedite the sequence of work, this may impact the construction schedule. Impacts will be evaluated and reported in the forecast next quarter.

I. Regional WECIP Quarterly Report

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: Watershed & Lands Management	Project Status: Planning	Environmental Status: Not Initiated
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Project Cost:		Project Schedule:	
Approved	 \$6.70 M	Approved Feb-21	 Jan-28
Forecast	 \$6.70 M	Forecast Feb-21	 Aug-27
Actual	 \$0.04 M	Project Percent Complete: 3.1%	

 Approved;  Actual Cost;  Forecast

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

Progress and Status:
This quarter, San Francisco Public Works continued work on the conceptual engineering report.







Issues and Challenges:
None at this time.



Sneath Lane Trailhead

10015113 - 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		\$5.19 M	Project Percent Complete: 27.4%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	05/11/21✓	11/01/21	05/02/22	08/01/23	

Progress and Status:

During the past quarter, the project team completed the 100% design documents, incorporating National Environmental Policy Act (NEPA) requirements into the documents in order to qualify for Federal grant funding under Caltrans’ Local Assistance program. As part of the NEPA review process, notices were sent to representatives of local Native American tribes to inform them of the results of the archaeological survey that was performed for the project. The Tamien Tribe has requested a consultation.



View of southern trail alignment

Issues and Challenges:






None at this time.

I. Regional WECIP Quarterly Report

10030771 - 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	 \$15.82 M	Forecast Jun-16	 Dec-26
Actual	 \$0.45 M	Project Percent Complete: 2.2%	

 Approved;  Actual Cost;  Forecast

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/15/23	07/25/23	01/02/24	12/30/25

Progress and Status:

The project team continues to develop the Conceptual Engineering Report (CER) this quarter and intends to complete the CER early next year. This quarter, the replacement and installation of debris boom in San Andreas Reservoir has been added to the scope due to its past failure. The draft CER this quarter also elaborates the change in road re-alignment at east shore road to avoid a habitat zone for butterflies. A consultant, Saylor, is on board to provide an independent engineer’s estimate for the project at CER level.









Project Map – SA-1 Service Road/Ingoing Road

Issues and Challenges:

The variance in the forecast cost is due to 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 existing project scope. The project team will evaluate potential means to reduce the project cost to bring the cost back to the baseline.

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, in order to relocate personnel at 1657 Rollins Road to Millbrae Yard campus following the completion of the Millbrae Yard Lab & Shops Project, and decrease this project’s scope to minor necessary tenant improvements. 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 to accommodate the Rollins Road building staff.

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		\$2.91 M	Project Percent Complete: 56.6%		
					
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, interior and exterior electrical work as well as exterior lighting installation was largely completed. Additionally, rolling gates were delivered and installed. Next quarter, the JOC contractor will mobilize to perform the remaining scope of work, including security hardware installation and software integration, testing, and training.

Issues and Challenges:

None at this time.









View of newly installed fence on north property line

I. Regional WECIP Quarterly Report

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		
Project Cost:		Project Schedule:		
Approved 	\$5.50 M	Approved Jan-17 	Nov-23	
Forecast 	\$16.08 M	Forecast Jan-17 	Sep-24	
Actual 	\$0.54 M	Project Percent Complete: 9.1%		
				
Key Milestones:	Environmental** Approval	Bid+ Advertisement	Construction+ NTP	Construction+ Final Completion
Current Forecast	(A) 08/31/20✓ (B) 01/31/23	(A) 09/01/20✓ (B) 10/25/22	(A) 06/16/21✓ (B) 04/03/23	03/08/22 03/29/24

+ 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:

The construction phase for the Millbrae Warehouse is 95% complete. In addition to approximately \$250k savings in construction hard cost, the currently anticipated substantial completion date is ahead of schedule by 3 months. The Millbrae Administration Building HVAC Upgrades subproject will be presented to the Technical Steering Committee next quarter for approval of a proposed engineering solution to mitigate the building's seismic vulnerability by installing the HVAC infrastructure outside the building. When approved, the project team will proceed with design. An independent consultant has provided a high-level estimate during the quarter for the new concept for externally located HVAC equipment. The project will also be presented to the Change Control Board due to changes required in scope, budget and schedule for the new concept. The Memorandum of Understanding with San Francisco Public Works multi-discipline engineers for design support was modified during the quarter, and the modifications are being finalized. The project team anticipates starting the design phase early next year.









Existing Millbrae Administration Building

Issues and Challenges:

The variances in the forecast cost and schedule are due to the need to relocate the HVAC system outdoors due to building seismic and structural load requirements, and also increased ventilation requirements for some laboratory analyses. The design changes and additional construction scope for the relocation have significantly increased the cost forecast. The design team is investigating options to reduce the cost.

10015124 - 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		\$104.91 M	Forecast Jan-09		Aug-23
Actual		\$81.00 M	Project Percent Complete: 82.7%		
					
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✓ 08/14/22	

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

Progress and Status:

Sunol Yard (Contract A): The draft project close-out dossier was prepared and is being reviewed.

Watershed Center (Contract B): The construction work on the building interior electrical, HVAC, pond filter system, insulation, drywall, painting, bathroom tiling, bathroom fixtures, aquarium, and topping slab continued. Construction work on the exterior roofing system, PV system, pond and stream, pathways, bench seating, irrigation and electrical systems, Temple forecourt, site paving and PG&E power continued. Coordination on the exhibits, public art piece, bluestone paver etching and building exterior glass continued.



Drywall and Framing of the History Alcove and Interpretative Display Areas

the interior exhibits is also delayed due to extended time to procure services from the vendor. Additional scope was requested during the quarter for the Watershed Center, including overflow parking space, a backup power system, an exterior exhibit, picnic area restoration, purchase of compositing toilets and exhibit revisions. The \$4.5M project budget variance is due to the work related to this additional scope requested for the Watershed Center.

Issues and Challenges:

The forecasted schedule exceeds the approved completion date for several reasons. The bluestone etching work is delayed due to a nationwide shortage of sandblasting stencil materials and difficulties in procurement and shipment of bluestone pavers and boulders. Additionally, manufacturing and shipping of building exterior glass that is specially designed to deter birds is delayed. The design and installation of

10015128 - 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. 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-29
Actual		\$1.97 M	Project Percent Complete: 1.2%		
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	04/11/24	N/A	04/15/25	03/31/28	

Progress and Status:

The project is currently in the Conceptual Engineering Report (CER) phase. The draft alternative options study was completed during the quarter. The scope of work for the utility survey and for potholing of the existing transmission water line adjacent to the proposed location of the new laboratory/office building was developed. An independent construction cost estimate prepared in draft during the quarter is currently being reviewed. Preparation of the new PRO.0221 - Request for Proposals (RFP) for engineering design support services has started; this will be a new contract without architectural design services since those services will be provided by Public Works. The site and tree surveys for the entire Millbrae Yard campus have started as well. Cost proposals prepared by Public Works as-needed consultants for laboratory and office building detailed programming and concept design, site utility, geotechnical exploration, LEED and MEP engineering design support were received during the quarter and are currently being reviewed.



Existing Administration Building

Issues and Challenges:

In reviewing the proposed construction schedule, Public Work’s Bureau of Construction Management proposed extending the construction duration from 30 months to 36 months to be better aligned with recent building projects. The close-out phase is also recommended to be extended from 6 months to 12 months due to the likelihood of longer time needed to complete punchlist items for this complex building project.

8. 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								
10015110 - 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								
10015124 - 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.

9. 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				
10015080- 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

10. COMPLETED PROJECTS

There are no completed projects.

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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 every two years (with minor modifications in the off years) 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**.

II. Local WECIP Quarterly Report

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 July 1, 2021 and September 30, 2021. This document serves as the first (1st) Quarterly Report in Fiscal Year 2021-2022 (FY22) 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.

Going forward, changes to the approved baseline program and project scopes, schedules, and budgets will be proposed as part of the 10-year CIP that is updated every two years and approved by the SFPUC Commission. The proposed revisions to the program will become the new baseline for project scopes, schedules, and budgets in the beginning of the new fiscal year following SFPUC Commission approval.

Figure 2.1 shows the total Current Approved Budget for the Local projects in each phase of

the program as of September 30, 2021. The number of projects currently active in each phase is shown in parentheses.

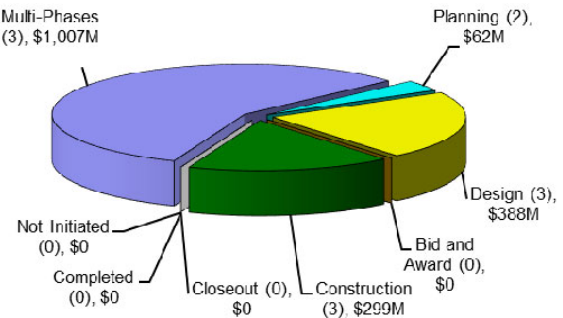


Figure 2.1 Total Current Approved Budget for Local Projects Active in Each Phase

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

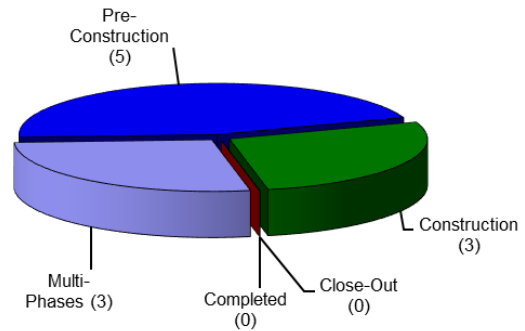


Figure 2.2 Number of Local Projects in Pre-construction, Construction, and Post-construction

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

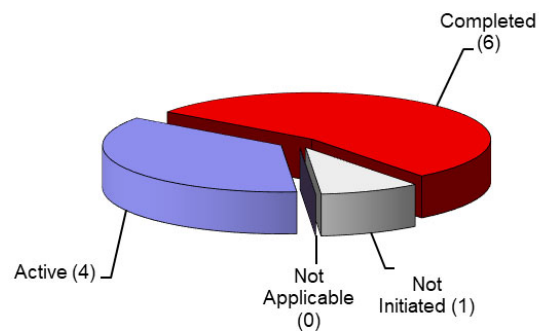
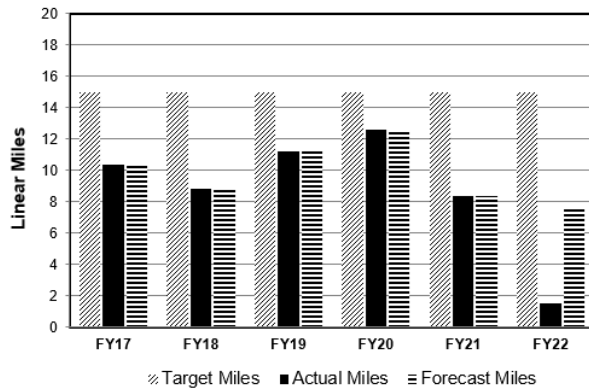


Figure 2.3 Local Program Environmental Status

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 FY17. At the end of FY22, 7.5 miles of pipe are forecasted to be replaced.



	FY17	FY18	FY19	FY20	FY21	FY22
Target Miles	15.0	15.0	15.0	15.0	15.0	15.0
Actual Miles	10.4	8.8	11.2	12.6	8.4	1.5
Forecast Miles						7.5

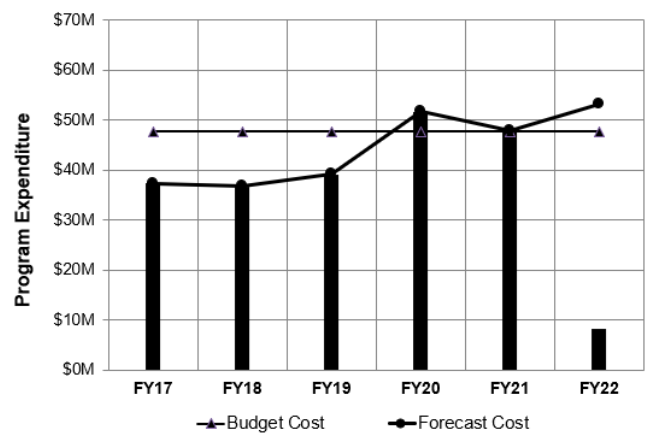
Figure 2.4 Water Conveyance/Distribution System Program - Linear Miles by Fiscal Year

Water main replacement projects with construction underway in the 1st quarter of FY22 included the City streets of Pierce Street, Castro Street, 17th Street, Baker Street, 19th Avenue, and Casitas. Projects anticipated to start in the 2nd 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 issue notice to proceed next quarter:

- Prospect: Installation of 4,200 feet of 8-inch diameter ductile iron water distribution mains and 3,300 feet of 24-inch diameter ductile iron and Earthquake Resistant Ductile Iron Pipe (ERDIP) water

transmission mains on Prospect, Fair and Coso Avenues and Coleridge Street. This project is part of a phased program to improve the reliability of the water distribution system from College Hill Reservoir to San Francisco General Hospital to withstand a major seismic event.

- L-Taraval Segment B: Installation of 22,000 feet (4.4 miles) of 8-inch diameter ductile iron water distribution mains on Taraval Street from Sunset to West Portal as part of the L-Taraval Transit Improvement Project.



	FY17	FY18	FY19	FY20	FY21	FY22
Budget	\$47.7M	\$47.7M	\$47.7M	\$47.7M	\$47.7M	\$47.7M
Actual Expenditure	\$37.3M	\$36.8M	\$39.2M	\$51.7M	\$47.8M	\$8.2M
Forecast Expenditure						\$53.1M

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 annual amount of \$47.7M over the next three years to account for the delayed start of several large streetscape improvement projects mentioned above. The budgeted cost per mile has been updated for FY22 from \$3.18 million per mile to \$5.4 million per mile for replacement of water distribution mains. The updated cost per mile for streetscape, transit, or ERDIP type projects is approximately \$8 million per mile.

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The updated cost per mile for water main replacement projects is 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 estimates.

3. CAPITAL IMPROVEMENT PROGRAM COST SUMMARY

Table 3 provides an overall program-level cost summary by categories of projects for the Water Enterprise CIP Local Program. It shows the Expenditures to Date, Current Approved Budgets, Q1/FY21-22 Forecasted Costs, Cost Variance between the Current Approved Budgets and Forecasted Costs, and Variance Over Reporting Period (difference between cost forecasts reported in Q4/FY20-21 and Q1/FY21-22).

The total Current Approved Budget (including Regional and Local Programs) and Current Forecasted Cost at completion are \$2,674.2 million and \$2,752.2 million, respectively. The Current Approved Budget and Forecasted Cost at completion for only the Local Water Program (including construction contingency) are \$1,755.4 million and \$1,800.4 million, respectively.

The overall Local Water Program negative Cost Variance of \$45M in Table 3 can be attributed to the following factors:

- 10033818 Town of Sunol Pipeline forecasted cost increased by \$1.7M due to the change in construction method from tunneling to open cut trench, requiring CEQA updates and schedule extension.
- 10037249 New CDD Headquarters forecasted cost increased by \$43.4M due to increase in construction escalation cost associated with contracting delays and current market conditions.

Please refer to the section of I.3 of this report for more details about the reported cost variance for the Regional Water Program.

Table 3. Program Cost Summary

Programs	Expenditures To Date (\$ Million)	Current Approved Budget (\$ Million)	Q1/FY21-22 Forecasted Costs (\$ Million)	Cost Variance (\$ Million)	Variance Over Reporting Period* (\$ Million)
	(A)	(B)	(C)	(D = B - C)	(E)
Local Program	\$636.29	\$1,755.36	\$1,800.44	(\$45.07)	(\$45.07)
Local Water Conveyance/ Distribution System	\$314.01	\$810.58	\$812.24	(\$1.66)	(\$1.66)
Local Water Supply	\$242.03	\$312.54	\$312.54	-	-
Local Tanks/Reservoir Improvements	\$1.09	\$19.28	\$19.28	-	-
Pump Stations	\$0.33	\$6.53	\$6.53	-	-
Buildings and Grounds	\$2.65	\$350.19	\$393.60	(\$43.41)	(\$43.41)
Emergency Firefighting Water System	\$76.18	\$256.25	\$256.25	-	-
Regional Program	\$164.26	\$918.79	\$951.76	(\$32.97)	(\$32.97)
PROGRAM TOTAL	\$800.56	\$2,674.16	\$2,752.19	(\$78.04)	(\$78.04)

* Negative number reflects cost increases since last quarter, and positive number reflects cost reduction since last quarter.

4. CAPITAL IMPROVEMENT PROGRAM SCHEDULE SUMMARY

Figure 4 compares the 2021 Approved Schedule and the Current Forecast Schedule for the Local Water CIP. As shown in Table 4, the 2021 Approved and Forecasted Schedule completion for the overall Water Enterprise CIP (including Regional and Local Programs) are each in June 2035. The 2021 Approved and Forecasted Schedule completion for the Local CIP are each in December 2028.

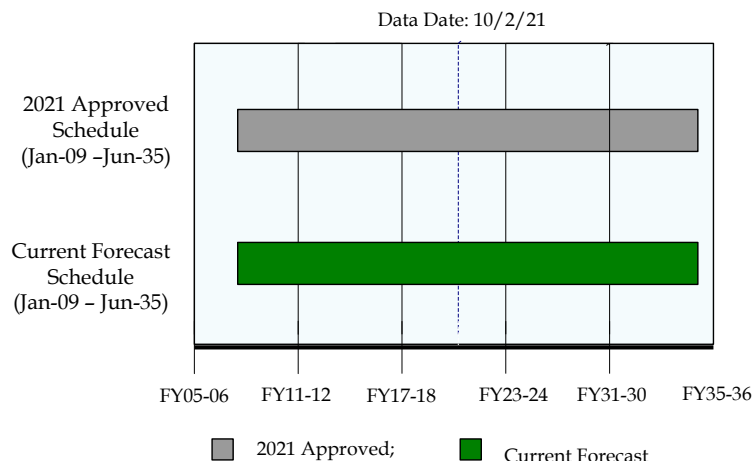


Figure 4. Local Program Schedule Summary

Table 4 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 Program	03/03/03	03/03/03✓	12/29/28	12/29/28	-
Regional Program	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. BUDGET AND SCHEDULE TREND SUMMARY

Starting with the Q1 FY21-22 Quarterly Report, a revised report format includes a new Table 5, titled Budget and Schedule Trend Summary. This Table 5 contains all approved Local Water projects that are active and in any of the planning, design, bid and award, or construction phases of the project. The table excludes any projects that are either Not-Initiated, On-Hold, in Close-Out, or Completed.

During this quarter (Q1 FY21-22), the following major milestones were achieved, and the project cost and schedule forecasts were updated based on the updated milestone cost estimates accordingly for the following Local Water projects:

- The Construction Notice to Proceed was issued for the College Hill Reservoir Outlet project.
- The Harding Park Pump Station project was initiated.

Table 5. Budget and Schedule Trend Summary

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
WECIP - Local														
Local Water Conveyance/Distribution System														
10033816 Potable Emergency Firefighting Water System ²	FY21-30		8/12/19		N/A		N/A		N/A		N/A		Q1 - FY21-22	
	\$55.0	06/30/28	\$44.8	06/30/28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$55.0	06/30/28
10033818 Town of Sunol Pipeline	FY21-30		06/17/19		11/01/21		05/10/22 ³		03/21/23		12/04/23		Q1-FY21-22	
	\$5.0	04/03/23	\$5.0	04/03/23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$6.7	04/07/25
19063 Local Water Conveyance / Distribution System ⁴	FY21-30		N/A		Various		Various		Various		Various		Q1 - FY21-22	
	\$750.6	06/30/28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$750.6	06/30/28
Local Water Supply														
10015239 Lake Merced Water Level Restoration	FY21-30		06/16/03		04/30/10		01/26/22		04/27/22		01/12/23		Q4 - FY21-22	
	\$32.7	01/31/19	\$32.7	01/31/19	\$32.7	01/31/19	TBD	TBD	TBD	TBD	TBD	TBD	\$32.7	01/30/26
10015240 San Francisco Groundwater Supply	FY21-30		06/16/03		12/08/06		10/19/10		03/11/16		08/22/17		Q1-FY21-22	
	\$66.5	06/30/22	\$39.8	02/27/14	\$49.8	09/08/14	\$49.8	09/08/14	\$66.5	06/25/18	\$66.5	06/25/18	\$66.5	06/30/22

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. Potable Emergency Firefighting Water System: This project will fund construction phase of PEFWS pipelines in the next several years.
3. Town of Sunol first Design milestone is 65%
4. Local Water Conveyance/Distribution System: This is a Renew and Replacement Program where the corresponding CIP budget and forecast completion date are updated every 2 years during the CIP budget update cycle.

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
10015242 San Francisco Westside Recycled Water	FY21-30		03/03/03		05/15/09		12/08/14		06/29/16		10/17/17		Q1-FY21-22	
	\$213.3	04/06/23	\$201.3	04/18/08	\$149.6	09/25/13	\$186.2	12/18/19	\$186.2	12/18/19	\$186.2	12/18/19	\$213.3	04/06/23
Local Tank/Reservoir Improvements														
10015223 College Hill Reservoir Outlet ²	FY21-30		01/24/13		10/14/16		12/15/16		02/15/19		06/08/21		Q1 - FY21-22	
	\$19.3	01/29/24	\$16.3	09/28/21	\$16.3	09/28/21	\$16.3	09/28/21	\$16.3	09/28/21	\$19.3	01/29/24	\$19.3	04/24/24
Buildings and Grounds														
10015223 New CDD Headquarters	FY21-30		02/01/20		08/31/21		12/30/21		12/29/23		03/08/22		Q1 - FY21-22	
	\$350.2	06/28/28	\$350.2	06/28/28	\$393.6	06/28/28	TBD	TBD	TBD	TBD	TBD	TBD	\$393.6	06/28/28
Pump Stations														
10015231 Harding Park PS	FY21-30		07/06/21		09/26/22		03/31/23		09/30/23		07/01/24		Q1-FY21-22	
	\$6.5	04/03/26	\$6.5	04/03/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$6.5	04/03/26
Emergency Firefighting Water System														
EFWSPL EFWS Pipelines ³	FY21-30		04/01/11		Various		Various		Various		Various		Q1 - FY21-22	
	\$205.3	12/29/28	\$31.6	09/29/17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$205.3	12/29/28
EFWSPPS EFWS Pump Stations ⁴	FY21-30		04/01/11		Various		Various		Various		Various		Q1 - FY21-22	
	\$45.2	12/29/28	\$17.5	09/26/16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$45.2	12/29/28

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. College Hill Reservoir Outlet: Planning through 65% Design was achieved under a different program in Local Water Conveyance/Distribution System.
3. EFWS Pipelines: EFWS Pipelines include multiple projects.
4. EFWS Pump Stations: EFWS Pump Stations include multiple projects.

6. PROGRAM PERFORMANCE SUMMARY*

All costs are shown in \$1,000s as of 10/02/21

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Local Water Conveyance/Distribution System											
10033816 - Potable Emergency Firefighting Water System	PL	\$ 55,000	\$ 55,000	\$ 55,000	\$ 817	-	0%	06/30/28	06/30/28	06/30/28	0
10033818 - Town of Sunol Pipeline	DS	\$ 5,000	\$ 5,000	\$ 6,663	\$ 2,137	(\$1,663)	-33%	04/03/23	04/03/23	04/07/25	(735)
19063 - Local Water Conveyance/Distribution System	MP	\$ 750,581	\$ 750,581	\$ 750,581	\$ 311,055	-	0%	06/30/28	06/30/28	06/30/28	0
Local Water Supply											
10015239 - Lake Merced Water Level Restoration	DS	\$ 32,668	\$ 32,668	\$ 32,668	\$ 4,579	-	0%	01/30/26	01/30/26	01/30/26	0
10015240 - San Francisco Groundwater Supply	CN	\$ 66,552	\$ 66,552	\$ 66,552	\$ 62,245	-	0%	06/30/22	06/30/22	06/30/22	0
10015242 - San Francisco Westside Recycled Water	CN	\$ 213,316	\$ 213,316	\$ 213,316	\$ 175,205	-	0%	01/12/23	01/12/23	01/12/23	0

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

** Phase Status Legend			
PL	Planning	DS	Design
BA	Bid & Award	CN	Construction
MP	Multiple-Phase		

Footnotes:
(+) CIP Approved Budget and Project Completion Date: The budget and schedule approved as part of 10-year CIP for FY21-30.
(++) Current Approved Budget and Schedule: The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
(+++) Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Local Tanks/Reservoir Improvements											
10015223 - College Hill Reservoir Outlet	CN	\$ 19,283	\$ 19,283	\$ 19,283	\$ 1,094	-	0%	01/29/24	01/29/24	04/24/24	(86)
Pump Stations											
10015231 - HARDING PARK PS	PL	\$ 6,527	\$ 6,527	\$ 6,527	\$ 333	-	0%	04/03/26	04/03/26	04/03/26	0
Buildings and Grounds											
10037249 - New CDD Headquarters	DS	\$ 350,192	\$ 350,192	\$ 393,601	\$ 2,649	(\$43,409)	-12%	06/28/28	06/28/28	06/28/28	0
Emergency Firefighting Water System											
EFWS PL - EFWS Pipelines	MP	\$ 205,263	\$ 205,263	\$ 205,263	\$ 31,626	-	0%	12/29/28	12/29/28	12/29/28	0
EFWS PS - EFWS Pump Stations	MP	\$ 45,245	\$ 45,245	\$ 45,245	\$ 39,088	-	0%	12/29/28	12/29/28	12/29/28	0

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

** Phase Status Legend			
PL	Planning	DS	Design
BA	Bid & Award	CN	Construction
MP	Multiple-Phase		







Footnotes:
(+) CIP Approved Budget and Project Completion Date: The budget and schedule approved as part of 10-year CIP for FY21-30.
(++) Current Approved Budget and Schedule: The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
(+++) Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.

7. PROJECTS STATUS REPORT

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  \$0.82 M	Project Percent Complete: 0.8%
	

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	08/12/19✓	N/A	TBD	12/31/25

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. Construction completion expected December 2025.

Issues and Challenges:

None at this time.









Earthquake Resistant Ductile Iron Pipe with flexible joints (demonstrated) used in the project

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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)	
Project Cost:			Project Schedule:		
Approved		\$5.00 M	Approved Jun-19		Apr-23
Forecast		\$6.66 M	Forecast Jun-19		Apr-25
Actual		\$2.14 M	Project Percent Complete: 41.5%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	02/01/23	07/12/23	01/13/24	10/09/24	

Progress and Status:

During this reporting period the project completed the 10% design of the open cut trenching across the Arroyo de la Laguna creek. The project team continues toward development of the design criteria and 65% design. The Highway 680 Crossing construction continues, with SFPUC inspectors monitoring the work.

Issues and Challenges:







The variance to the forecast schedule and cost is due to the change in construction method from tunneling to open cut trench, as explained in the last quarter. This change in scope triggers the need to update the CEQA documents, environmental permits, and real estate negotiations. This change is anticipated to delay the project by two years and to add soft costs and escalation costs for construction.



Exposed Town of Sunol Pipeline crossing Arroyo de la Laguna Creek

19063 - 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: Approved  \$750.58 M Forecast  \$750.58 M Actual  \$311.06 M		Project Schedule: Approved Jul-10  Jun-28 Forecast Jul-10  Jun-28 Project Percent Complete: 36.4%
		

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:

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. The forecast mileage for FY22 is 7.5 miles. The budgeted cost per mile has been updated for FY22 from \$3.18 million per mile to \$5.4 million per mile for replacement of water distribution mains. The updated cost per mile for streetscape, transit, or ERDIP type projects is approximately \$8 million per mile. The increased cost per mile is attributed to changes in SFPW’s pavement restoration, ADA curb ramps, permitting requirements in the City, increased material and labor costs, support costs when working under SFMTA’s overhead catenary system, and increased complexity in working in crowded utility corridors. These factors continue to increase the overall cost of pipe replacement projects.

Projects under construction in the next quarter are on the City streets of Pierce Street, Castro Street, 17th Street, Baker Street, 19th Avenue, and Casitas.







Issues and Challenges:

None at this time.

II. Local WECIP Quarterly Report

10015239 - 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		\$4.58 M	Project Percent Complete: 16.0%		
					
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	10/05/21 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): SFPUC and Daly City have restarted regulatory coordination with the Regional Water Quality Control Board (RWQCB) in order to facilitate project discharge permitting. Daly City, with facilitation of SFPUC is working with Department of Public Works' (SFPW) staff to facilitate application for and authorization of a major encroachment permit. The encroachment permit would authorize construction of the structure allowing for diversion of approved flows to Lake Merced. This structure would be constructed underneath existing John Muir Drive within an SFPW ROW. During the quarter, Daly City also completed the required legal descriptions for parcels that will need to be transferred from the SFPUC to Daly City as part of the project.

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 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. As part of the evaluation, the Recycled Water Project team is working with other SFPUC staff to prepare an evaluation of connection alternatives and an operational narrative in order to evaluate the viability of various options to efficiently deliver water to Lake Merced.

Issues and Challenges:

None at this time.

10015240 - 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  \$62.24 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✓ 10/02/21

+ 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), the Contractor has submitted all the as-builts. This will be the last report for Contract A.

For Phase 2 (Contract C), during the quarter the contractor continued working on punchlist items (subject to Operations’ verification); closeout documents; processing of remaining change orders, including miscellaneous change orders for completion of the project, deductive bid items, extended warranties, and miscellaneous work; preparation of as-builts; and the operational and maintenance manuals.



North Lake Well Station







Issues and Challenges:

None at this time.

II. Local WECIP Quarterly Report

10015242 - 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  \$175.21 M	Project Percent Complete: 83.8%	
		

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): Miscellaneous electrical and mechanical work continued in Building 580 and 581. Work on the chemical trench across the Oceanside Plant (OSP) yard continued, along with installation of the channel glass façade at Building 580. A revised draft of the start-up test and commissioning sequence and schedule was submitted and reviewed by the project team; start-up activities are scheduled to begin in October 2021. The State Department of Drinking Water (DDW) submitted their comments on the ultraviolet light disinfection test protocol. Classroom training sessions for operations, engineering, and maintenance staff were initiated, with three sessions held this quarter. Work continued on the development of the Operations Manual and Standard Operating Procedures for the new treatment facility.

Distribution Pump Station and Reservoir (Contract B): The structural work on the compost wall was completed. Waterproofing on the reservoir roof was

installed. A reservoir water tightness test was conducted. Electrical and mechanical/HVAC work inside the new pump station continued.

Pipeline (Contract C) is complete.

Irrigation System Retrofit (Contract D): The installation of purple quick connect couplers and valve tags continued. The installation of a new pipeline on Transverse Drive was completed. Multiple gate valves were installed, and various minor plumbing modifications completed. The cross-connection control testing of Golden Gate Park continued, while the testing of the DeYoung and Legion of Honor Museums was completed this quarter.







Issues and Challenges:

None at this time.

10015223 - 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: Construction	Environmental Status: Completed (CatEx)
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Project Cost: Approved  \$19.28 M Forecast  \$19.28 M Actual  \$1.09 M	Project Schedule: Approved Jan-13  Jan-24 Forecast Jan-13  Apr-24 Project Percent Complete: 6.0%
	

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	11/20/19✓	02/24/21✓	09/27/21✓	10/21/23

Progress and Status:

Construction Notice to Proceed was issued to Ranger Pipelines on September 27, 2021. The overall construction duration is 755 calendar days with a substantial completion date of August 22, 2023.

Issues and Challenges:

The variance in the project schedule is due to unanticipated delay in notice to proceed and also due to adjusting the length of the project's closeout phase to 6 months. Notice to proceed was delayed due to additional time needed to certify the construction contract and also due to the need for project subcontractors to establish supplier IDs in the City financial payment system.






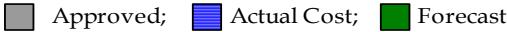


Aerial View of College Hill Reservoir

II. Local WECIP Quarterly Report

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		\$0.33 M	Project Percent Complete: 2.6%		
					
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 scope of work and cost proposal for Needs Assessment and Alternatives Analysis were finalized during the quarter. Additionally, the funding transfer to DPW completed in the quarter. Needs Assessment work will begin next quarter.

Issues and Challenges:

None at this time.

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: Design		Environmental Status: Active	
Project Cost:			Project Schedule:		
Approved		\$350.19 M	Approved Feb-20		Jun-28
Forecast		\$393.60 M	Forecast Feb-20		Jun-28
Actual		\$2.65 M	Project Percent Complete: 9.8%		
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	06/30/23	06/18/21✓	10/01/23	12/31/27	

Progress and Status:

The project team achieved 50% schematic design in July and completed review of floor plans. The PRO. 0232 Design Services RFP to be used for this project was rebid in September to avoid protracted legal delays and allow the project team to revise minimum qualifications to increase the bidding pool. The SFPUC chose to rebid the contract after the previous request for bids in April was cancelled due to two of the four Proposers unable to proceed through the evaluation process. Responses are due October 14. The WD-2879R CM/GC RFP is scheduled to be rebid; the SFPUC chose to rebid this contract after two of the four teams proposed Key Team Members that failed to meet minimum qualifications.

Issues and Challenges:

There has been impact to the schedule from the failure of the initial requests for bid proposals for design services and construction management to garner successful bids, and consequent need for rebidding for these contracted services. It will result in a delayed start for the next phase of design, but may not have an









Aerial Rendering of Campus

overall impact on the project if we phase design documents and start construction on schedule. Due to the rising cost of escalation, the project cost is forecasted to increase by \$43.4M.

II. Local WECIP Quarterly Report

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:			Project Schedule:		
Approved		\$205.26 M	Approved Apr-11		Dec-28
Forecast		\$205.26 M	Forecast Apr-11		Dec-28
Actual		\$31.63 M	Project Percent Complete: 23.3%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	Various	Various	Various	Various	

Progress and Status:

- 19th Avenue Pipeline:
Construction completion expected December 2022.
- Clarendon Supply:
Construction completion expected July 2022.
- Emergency Firefighting Water System 2050 Planning Study:
Study completion expected December 2021.
- Fireboat Manifolds:
Alternatives Analysis Review completion expected March 2022.
- Potable Emergency Firefighting Water System Pipeline:
Construction completion expected July 2027.
- Terry Francois Blvd (TFB) Mission South Pipeline:
Construction completion expected December 2021.
- Street Valve Motorization:
This project has been cancelled.







Issues and Challenges:

None at this time.

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
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Project Cost:		Project Schedule:	
Approved	 \$45.25 M	Approved Apr-11	 Dec-28
Forecast	 \$45.25 M	Forecast Apr-11	 Dec-28
Actual	 \$39.09 M	Project Percent Complete: 93.7%	
			

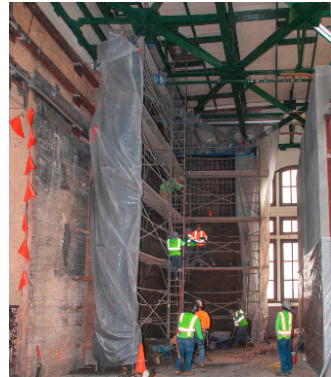
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	Various	Various	Various	Various

Progress and Status:

- Pump Station #2:
Construction completion expected December 2022.
- PEFWS PS - Lake Merced:
Planning completion expected December 2022. CER for LMPS will be part of the Pipeline CER. Draft in May 2022, Final in July 2022.

Issues and Challenges:

None at this time.



Roof installation of Pump Station No. 2

8. 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 Supply								
10015240 - WD-2809 SF Groundwater Supply Phase 2	08/07/17	08/26/19	12/31/21	\$ 11,685,130	\$ 11,732,708	(858)	(\$47,578)	98.0%
10015242 - 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)	-	80.6%
10015242 - WD-2776 Westside Recycled Water Treatment Facility	10/16/17	03/18/21	04/05/22	\$ 92,413,186	\$ 92,413,186	(383)	-	90.0%
10015242 - WD-2852R Westside Recycled Irrigation Retrofits and Improvements	01/25/21	06/23/22	06/23/22	\$ 2,483,525	\$ 2,483,525	-	-	38.1%
Emergency Firefighting Water System								
- WD-2861 Clarendon Supply	02/01/21	12/24/21	12/24/21	\$ 2,685,720	\$ 2,685,720	-	-	7.0%
- WD-2687R Pump Station # 2	12/12/17	12/30/21	12/30/22	\$ 20,623,887	\$ 20,623,887	(365)	-	69.6%

Program Total for On-Going Construction	Approved Contract Cost	Current Forecasted Cost	Variance	
			Cost	Percent
	\$ 205,658,957	\$ 206,931,216	(\$1,272,258)	(0.6%)

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.

9. 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				
10029710- Pump Station #1	04/30/19	04/30/19	\$ 9,827,981	\$ 9,549,140
TOTAL			\$ 9,827,981	\$ 9,549,140

10. COMPLETED PROJECTS

There are no completed projects.

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.

10015064 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.

10037628 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.

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).

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.

10015071 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. .

10015076 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.

10015080 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.

10015081 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.

10015091 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.

10015092 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.

10015113 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.

10030771 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.

10015124 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.

10015128 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.

19063 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

10015239 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.

10015240 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.

10015242 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

10015223 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

□

10015231 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

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Appendix C. Water Enterprise Proposed Project-Level Schedules

Regional Programs

Project Name	Start	Finish	FY2022				FY2023				FY2024				FY2025				FY2026				FY2027				FY2028				FY2029				FY2030
			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	29-Jun-35																																	
Water Treatment	03-Mar-14	27-Dec-29																																	
10015064 SVWTP Phases 3 and 4	03-Mar-14	30-Jun-26																																	
10033123 SVWTP Ozone (CUW27202)	27-Jun-17	30-Jun-27																																	
10037349 HTWTP Improvements Capital	02-Nov-20	28-Jun-24																																	
10037350 Regional Groundwater Treatment Improvements	13-Aug-20	27-Dec-29																																	
10037628 SVWTP Polymer Feed Facility	08-Mar-21	27-Sep-24																																	
Water Transmission	01-Jan-16	29-Dec-34																																	
10015071 Corrosion Control	01-Jan-16	29-Dec-34																																	
10015076 San Antonio Pump Station MCC Upgrades	12-May-16	19-Mar-25																																	
10015080 San Andreas Pipeline No. 2 Replacement	01-Mar-16	08-Dec-21																																	
10015081 CSPL2 Reaches 2 and 3 Rehabilitation	22-Oct-16	12-Jun-26																																	
10034578 CSPL2 Reach 5 Lining Replacement	25-Feb-19	19-Sep-25																																	
10035029 As-Needed Pipeline Repair	01-Jul-20	25-Aug-28																																	
10036839 Pre-Stressed Concrete Cylinder Pipe (PCCP) Repair	01-May-20	22-Nov-23																																	
10036840 BDPL 1-4 Lining Repair	12-Sep-16	25-Aug-28																																	
Water Supply & Storage	11-Dec-13	29-Jun-35																																	
10015091 Pilarcitos Dam Improvements	07-Apr-14	29-Jun-29																																	
10015092 San Andreas Dam Facility Improvements	11-Dec-13	30-Dec-33																																	
10015232 Merced Manor Reservoir Facilities Repairs	04-Jan-22	30-Jun-31																																	
10036998 Turner Dam and Reservoir Improvements	01-Oct-20	29-Jun-35																																	
Watershed and Lands Management	31-Oct-12	27-Jan-28																																	
10015108 Sneath Lane Gate/North San Andreas	01-Feb-21	27-Jan-28																																	
10015110 EBRPD Water System	02-Jun-14	31-Oct-22																																	
10015113 Southern Skyline Blvd Ridge Trail Extension	31-Oct-12	11-Sep-23																																	
10030771 San Andreas Service Road Upgrades	30-Jun-16	31-Dec-26																																	
Buildings and Grounds	01-Jan-09	31-Mar-28																																	
10014124 Sunol Long Term Improvements	01-Jan-09	13-Sep-22																																	
10015128 Millbrae Yard Laboratory and Shop Improvements	02-Nov-15	31-Mar-28																																	
10033555 Rollins Road Building Renovations (CUW27703)	01-Mar-18	30-Jun-22																																	
10034526 Millbrae Warehouse Settlement & Admin. Bldg. HVAC	03-Jan-17	30-Nov-23																																	

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

Appendix C. 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	30-Dec-28																																	
Local Water Conveyance / Distribution System	01-Jul-10	30-Jun-28																																	
10033816 Potable Emergency Firefighting Water System	12-Aug-19	30-Jun-28	[Gantt bar showing phases: Planning, Design, Bid & Award, Construction, Closeout]																																
10033818 Town of Sunol Pipeline	17-Jun-19	03-Apr-23	[Gantt bar showing phases: Planning, Design, Bid & Award, Construction, Closeout]																																
19063 Local Water Conveyance/Distribution System	01-Jul-10	30-Jun-28	[Gantt bar showing phases: Construction, Closeout]																																
Local Water Supply	03-Mar-03	30-Jan-26																																	
10015239 Lake Merced Water Level Restoration	16-Jun-03	30-Jan-26	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
10015240 San Francisco Groundwater Supply	16-Jun-03	30-Jun-22	[Gantt bar showing phases: Construction, Closeout]																																
10015242 San Francisco Westside Recycled Water	03-Mar-03	12-Jan-23	[Gantt bar showing phases: Construction, Closeout]																																
Local Tanks/Reservoir Improvements	24-Jan-13	29-Jan-24																																	
10015223 College Hill Reservoir Outlet	24-Jan-13	29-Jan-24	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
Pump Stations	06-Jul-21	03-Apr-26																																	
10015231 Harding Park PS	06-Jul-21	03-Apr-26	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
Buildings and Grounds	01-Feb-20	28-Jun-28																																	
10037249 New CDD Headquarters	01-Feb-20	28-Jun-28	[Gantt bar showing phases: Planning, Design, Bid & Award, Construction, Closeout]																																
Emergency Firefighting Water System (EFWS)	01-Apr-11	30-Dec-28																																	
10015480 2014 AUXILIARY WATER SUPPLY SYSTEM*	06-Nov-14	30-Dec-22	[Gantt bar showing phases: Construction, Closeout]																																
10015482 AUXILIARY WATER SUPPLY SYSTEM*	01-Apr-11	30-Jun-22	[Gantt bar showing phases: Construction, Closeout]																																
EFWSPS EFWS Pump Stations	01-Apr-11	30-Dec-28	[Gantt bar showing phases: Construction, Closeout]																																
EFWSPL EFWS Pipelines	01-Apr-11	29-Dec-28	[Gantt bar showing phases: Construction, 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

DATE: February 28, 2022

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

FROM: Dennis J. Herrera, General Manager 

RE: Water Enterprise Capital Improvement Program
Quarterly Report (2nd Quarter / FY 2021-2022)

Enclosed please find the Water Enterprise Capital Improvement Program (WECIP) Quarterly Report for the 2nd Quarter (Q2) of Fiscal Year (FY) 2021-2022. The primary intent of the report is to provide the Commission, stakeholders, and the public with a status summary of the Water Enterprise Capital Improvement Program based on data for the period of October 1, 2021 to December 31, 2021. This quarterly report provides a summary update on both Regional and Local Water Enterprise CIP projects.

London N. Breed
Mayor

Anson Moran
President

Newsha Ajami
Vice President

Sophie Maxwell
Commissioner

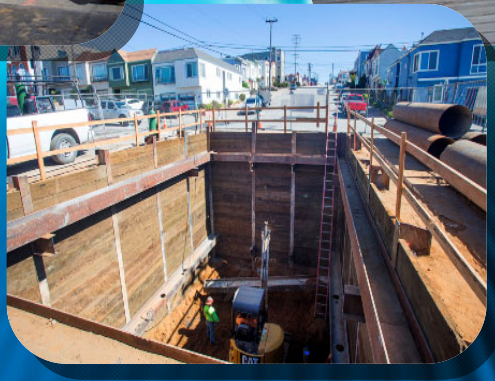
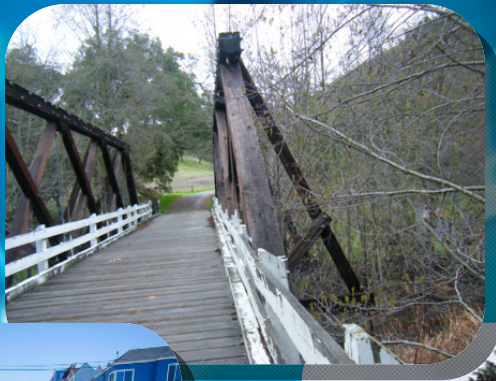
Tim Paulson
Commissioner

Dennis J. Herrera
General Manager

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



QUARTERLY REPORT

Water Enterprise Capital Improvement Program
Q2 FY 2021 | 2022
October 2021 — December 2021

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EXECUTIVE SUMMARY

This quarterly report provides a summary update on both Regional and Local Water Enterprise CIP projects. The primary intent of the report is to provide the Commission, stakeholders, and the public with a status summary of the Water Enterprise Capital Improvement Program based on data for the period of October 1, 2021 to December 31, 2021.

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.

This quarterly report also includes schedule and cost forecasting of the FY23-FY32 10-year Capital Improvement Plan that is being presented to the San Francisco Public Utilities Commission for approval on February 8, 2022. Changes to the approved baseline program and project scopes, schedules, and budgets have been proposed as part of this FY23-FY32 10-year CIP and, if approved, will become the new baseline for project scopes, schedules, and budgets at the start of FY23, on July 1, 2022. Going forward, changes to the approved baseline will continue to be proposed as part of the 10-year CIP that is updated every two years and approved by the SFPUC Commission. The proposed revisions to the program will become the new baseline for project scopes, schedules, and budgets in the beginning of the new fiscal year following SFPUC Commission approval.

Program Current Status:

Overall steady progress continued on the ongoing Water Enterprise CIP projects. As of the end of the reporting period, the Regional Water Enterprise CIP includes 25 projects in various phases as follows: one (1) project not initiated, twenty (20) projects in planning or design, three (3) projects in construction, and one (1) project completed.

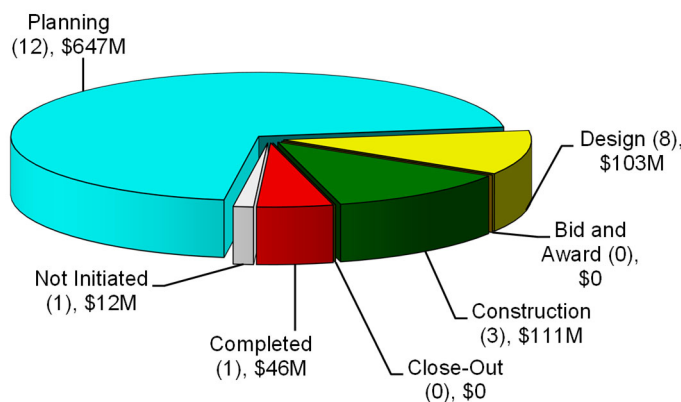


Figure A Total Current Approved Budget for Regional Projects Active in Each Phase

As of the end of the reporting period, the Local Water Enterprise CIP includes 11 projects in various phases as follows: three (3) projects in multiple phases, five (5) projects in planning or design, and three (3) projects in construction.

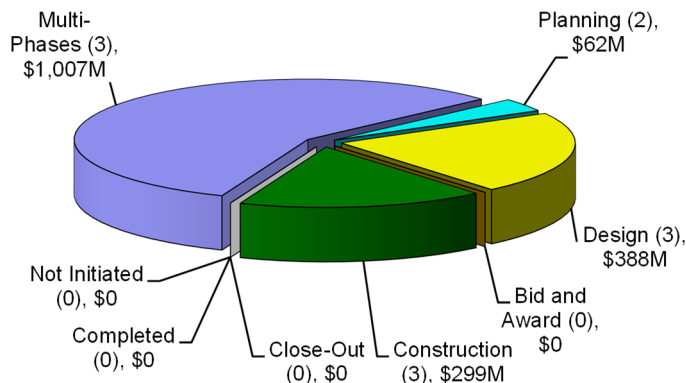


Figure B Total Current Approved Budget for Local Projects Active in Each Phase

The following Tables provide a high-level summary of the cost and schedule status for the Regional and Local programs.

Table A. Program Cost Summary

Programs	Expenditures To Date (\$ Million) (A)	Current Approved Budget (\$ Million) (B)	Q2/FY21-22 Forecasted Costs (\$ Million) (C)	Cost Variance (\$ Million) (D = B - C)	Variance Over Reporting Period* (\$ Million) (E)
Regional Program	\$171.89	\$918.79	\$1,030.28	(\$111.49)	(\$78.52)
Local Program	\$731.36	\$1,755.36	\$2,271.39	(\$516.03)	(\$470.95)
Programs Total	\$903.25	\$2,674.16	\$3,301.67	(\$627.52)	(\$549.48)

* Negative number reflects cost increases since last quarter, and positive number reflects cost reduction since last quarter.

Table B. Current Approved vs. Current Forecast Schedule Dates

Programs	Current Approved Project Start	Actual Start	Current Approved Completion	Current Forecast Completion	Schedule Variance (Months)
Regional Program	01/01/09	01/01/09✓	06/29/35	06/29/35	-
Local Program	03/03/03	03/03/03✓	12/29/28	06/30/32	42.0 (Late)
Overall Water Enterprise CIP	03/03/03	03/03/03✓	06/29/35	06/29/35	-

Program Key Update:

The key update for the Regional Water Enterprise Capital Improvement Program includes:

- 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 overall forecasted cost and schedule at completion for the Regional Program have been updated to reflect budget and schedule to be presented to the Commission for approval on February 8, 2022. The overall forecasted budget is \$111.5M higher than the current Approved budget
- For the Sunol Valley Water Treatment Plant (SVWTP) Ozone project, the Final Conceptual Engineering Report (CER) was issued and a presentation was given to Operations and Water Quality staff. The conceptual design was also presented to the Civic Design Review Committee with the SF Arts Commission and received approval. The third round of treatability lab testing was completed, and the draft technical memo was issued for review.
- For the San Andreas -1 Service Road/Ingoing Road project, work continued on the Conceptual Engineering Report (CER) in this quarter, and the project team intends to complete the CER early next year. This quarter, the replacement and installation of a new debris boom in San Andreas Reservoir has been added to the scope due to the past failure of the existing debris boom. The draft CER this quarter also elaborates the road re-alignment at San Andreas Service Road (South) in order to avoid a habitat zone for butterflies. The project is scheduled for presentation to the Technical Steering Committee early next year for approval to move forward from the Planning Phase to the Design Phase.
- The Alternatives Analysis Report for the Crystal Springs Pipeline No. 2 (CSPL2) Reach 5 Lining project was finalized. A task order with the new pipeline engineering consultant to draft the Conceptual Engineering Report is anticipated to be issued early next quarter.
- For the CSPL2 Reaches 2 and 3 project, additional geotechnical and survey work continued, and the results will be included in the draft Conceptual Engineering Report (CER). A corrosion report was completed and concluded that there are no major corrosion issues with the pipeline.
- The federal grant for the Southern Skyline Boulevard Ridge Trail Extension project, administered through CalTrans, requires compliance with National Environmental Protection Act, including additional review of Americans with Disabilities Act (ADA) requirements and reviews by federal agencies including the Fish and Wildlife Services (FWS). This has triggered additional evaluations, consultations, and delays to advertising the contract.
- Construction for the Alameda Creek Watershed Center (Contract B of the Sunol Long Term Improvements project) included completion of concrete work on the pond and stream, site paving, access stairs and ramps to the picnic area, pathway grading, drywall, and bathroom tiling. Construction on the building interior electrical, pond filter system, painting, bathroom fixtures, aquarium systems, concrete topping slabs, exterior photo-voltaic power system, pathways, irrigation, and electrical systems continued. Coordination continued on the exhibits, public art piece, bluestone paver etching, and building exterior glass installation.

The key update for the Local Water Enterprise Capital Improvement Program includes:

- The overall forecasted cost and schedule at completion for the Local Program have been updated to reflect the budget and schedule to be presented to the Commission for approval on February 8, 2022. The overall forecasted budget is \$516M higher than the current Approved budget, while schedule forecast extends the Program completion date by 42 months.

- For the Local Water Conveyance/Distribution System, the forecast mileage for replacement or improvement in FY22 is 7.5 miles. The budget for FY22 is \$53M. Projects under construction during Q2 FY22 included the City streets of Pierce Street, Castro Street, 17th Street, Baker Street, 19th Avenue, Casitas, Vicente, College Hill, Prospect, and L-Taraval Segment B. The forecasted cost includes additional budget for FY31 and FY32.
- For College Hill Reservoir Outlet, construction Notice to Proceed was issued to Ranger Pipelines last quarter. The contractor and project team continued to work on pre-construction submittals and site investigation during this quarter. Coordination with Operations is ongoing to prepare for initial reservoir draining and cleaning to expose the reservoir isolation point.
- For the New CDD Headquarters project, the schematic design was completed by Public Works during the quarter. The Request for Proposals for design services is scheduled for award in the next quarter. The Construction Management/General Contractor (CM/GC) Request for Qualifications/Proposals (RFQ/P) was rebid in the end of December 2021. Responses are due next quarter.
- The San Francisco Westside Recycled Water project made substantial progress on three construction contracts:
 - At the treatment facility (Contract A): Miscellaneous electrical and mechanical work continued in Buildings 580 and 581. Work on the chemical trench across the Oceanside Plant (OSP) yard was completed. The installation of the channel glass facade at Building 580 was also completed. Limited start-up activities began in October 2021. Work continued on development of the Operations Manual and Standard Operating Procedures for the new treatment facility.
 - Distribution Pump Station and Reservoir (Contract B): Electrical and mechanical/HVAC work inside the new pump station continued. Hydrostatic testing of pipeline components was completed.
 - Irrigation System Retrofit (Contract D): The installation of purple quick connect couplers and valve tags continued. Multiple gate valves were installed, and various minor plumbing modifications were completed. The cross-connection control testing of Golden Gate Park continued.

Quarterly Report

Water Enterprise Capital Improvement Program

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II. LOCAL CAPITAL IMPROVEMENT PROGRAM

1. Capital Improvement Program Description
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APPENDICES

- A. Project Descriptions
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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 and 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 every two years (with minor modifications in the off years) and integrated with the SFPUC's Financial Plan and rate-setting.

Biannual 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 to maintain facilities in 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 October 1, 2021 and December 31, 2021. This document serves as the second (2nd) Quarterly Report in Fiscal Year 2021-2022 (FY22) 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.

Going forward, changes to the approved baseline program, including any changes to continuing projects' scopes, schedules, and budgets, will be proposed as part of the bi-annually updated 10- year CIP as approved by the SFPUC Commission. The proposed revisions to the program will become the new baseline for new and continuing projects' scopes, schedules, and budgets in the beginning of the new fiscal year following SFPUC Commission approval.

Figure 2.1 shows the total Current Approved Budget for the 25 Regional projects in each phase of the program as of December 31, 2021.

The number of projects currently active in each phase is shown in parentheses.

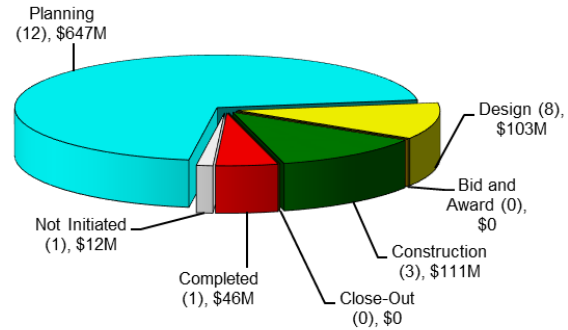


Figure 2.1 Total Current Approved Budget for Regional Projects Active in Each Phase

Figure 2.2 shows the number of Regional projects in the following stages as of December 31, 2021: Pre-construction, Construction, and Post-construction.

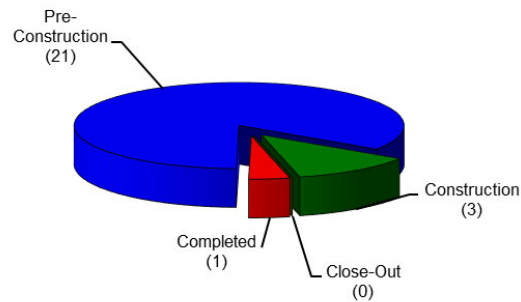


Figure 2.2 Number of Regional Projects in Pre-construction, Construction, and Post-construction

Figure 2.3 summarizes the environmental review status of the 25 Regional projects as of December 31, 2021.

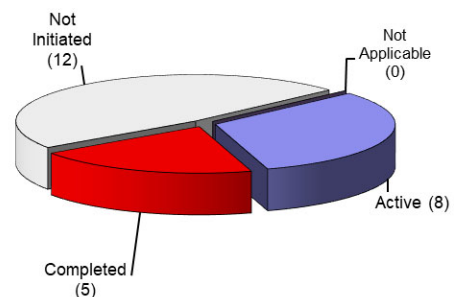


Figure 2.3 Regional Program Environmental Review

3. CAPITAL IMPROVEMENT PROGRAM COST SUMMARY

Table 3 provides an overall program-level cost summary of the Regional Water Program. It shows by categories of projects the Expenditures to Date, Current Approved Budgets, Q2/FY21-22 Forecasted Costs, Cost Variance between the Current Approved Budgets and Forecasted Costs, and Variance Over Reporting Period (difference between cost forecasts reported in Q1/FY21-22 and Q2/FY21-22).

The total Current Approved Budget (including Regional and Local Programs) and Current Forecasted Cost at completion are \$2,674.2 million, and \$3,301.7 million, respectively. The Current Approved Budget and Forecasted Cost at completion for only the Regional Water Program (including construction contingency) are \$918.8 million and \$1,030.3 million, respectively.

Note that during Q2/FY21-22 the project teams were requested to forecast any major changes in budget, scope and schedule that should be included as a proposed change in the FY23-32 10-Year CIP budget proposal. Thus, the forecasts that are included in this Q2 report are the same as the changes to project budgets and schedules that are included in the 10-Year CIP budget

proposal that was presented to the Commission for approval on February 8, 2022. These forecasted changes will become the approved budgets and schedules after full approval of the SFPUC's budgets starting in Q1/FY22-23.

The overall Regional Water Program negative Cost Variance of \$111.5M in Table 3 can be attributed to the following projects; reasons for the project variances are reported in Section 7:

- 10015081 CSPL2 Reaches 2 and 3 Rehabilitation forecasted cost increased by \$32.8M.
- 10033123 SVWTP Ozone forecasted cost increased by \$27.7M.
- 10015071 Corrosion Control forecasted cost increased by \$11.6M.
- 10037628 SVWTP Polymer Feed Facility forecasted cost increased by \$11.5M.
- 10034578 CSPL2 Reach 5 Lining Replacement forecasted cost increased by \$10.7M.
- 10034526 Millbrae Warehouse Settlement & Admin. Bldg. HVAC forecasted cost increased by \$10.6M.

Please refer to the section of II.3 of this report for more details about the reported cost variance for the Local Water Program

Table 3 Program Cost Summary

Programs	Expenditures To Date (\$ Million) (A)	Current Approved Budget (\$ Million) (B)	Q2/FY21-22 Forecasted Costs (\$ Million) (C)	Cost Variance (\$ Million) (D = B - C)	Variance Over Reporting Period* (\$ Million) (D)
Regional Water Program	\$171.89	\$918.79	\$1,030.28	(\$111.49)	(\$78.52)
Water Treatment	\$13.53	\$295.80	\$324.90	(\$29.10)	(\$29.10)
Water Transmission	\$53.50	\$217.01	\$274.42	(\$57.42)	(\$45.78)
Water Supply & Storage	\$5.39	\$81.86	\$81.86	-	-
Watershed & Lands Management	\$7.79	\$43.45	\$53.34	(\$9.89)	(\$3.65)
Buildings and Grounds	\$91.68	\$280.67	\$295.75	(\$15.08)	-
Local Water Program	\$731.36	\$1,755.36	\$2,271.39	(\$516.03)	(\$470.95)
PROGRAM TOTAL	\$903.25	\$2,674.16	\$3,301.67	(\$627.52)	(\$549.48)

* Negative number is reflecting cost increases since last quarter, and positive number is reflecting cost reduction since last quarter.

4. CAPITAL IMPROVEMENT PROGRAM SCHEDULE SUMMARY

Figure 4 compares the 2021 Approved Schedule and the Current Forecast Schedule for the Regional Water CIP. As shown in Table 4, the 2021 Approved and Forecasted Schedule completion for the overall Water Enterprise CIP (including Regional and Local Programs) are each in June 2035. The 2021 Approved and Forecasted Schedule completion for the Regional Water CIP alone are also each in June 2035.

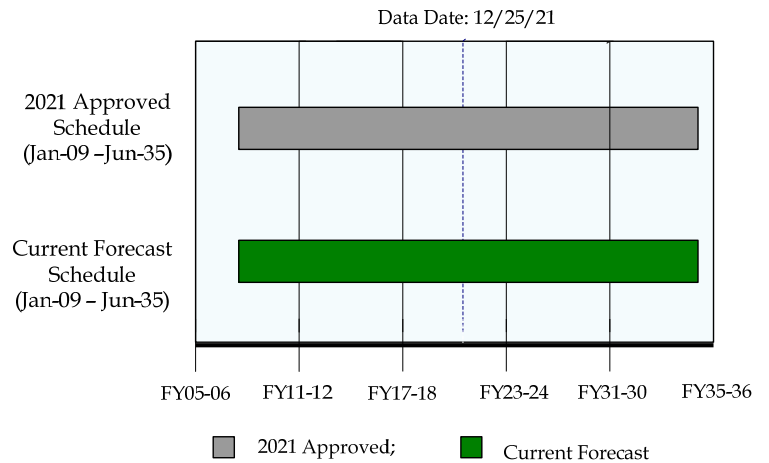


Figure 4. Regional Program Schedule Summary

Table 4. 2021 Approved vs. Current Forecast Schedule Dates

Program	2021 Approved Project Start	Actual Start	2021 Approved Completion	Current Forecast Completion	Schedule Variance (Months)
Regional Program	01/01/09	01/01/09✓	06/29/35	06/29/35	-
Local Program	03/03/03	03/03/03✓	12/29/28	06/30/32	42.0 (Late)
Overall Water Enterprise CIP	03/03/03	03/03/03✓	06/29/35	06/29/35	-

5. BUDGET AND SCHEDULE TREND SUMMARY

Starting with the Q1 FY21-22 Quarterly Report, a revised report format includes a new Table 5, titled Budget and Schedule Trend Summary. This Table 5 contains all approved Regional Water projects that are active and in any of the planning, design, bid and award, or construction phases of the project. The table excludes any projects that are either Not-Initiated, On-Hold, in Close-Out, or Completed.

During the reporting period, the following Regional projects achieved major project milestones:

- The HTWTP Improvements Capital completed the 35% design.
- The Corrosion Control Phase 2 subproject completed 95% design.

Table 5. Budget and Schedule Trend Summary

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
WECIP - Regional														
Water Treatment														
10033123 SVWTP Ozone	FY21-30		06/27/17		12/30/21		05/10/22		01/06/23		12/15/23		Q2-FY21-22	
	\$165.1	06/30/27	\$115	09/09/24	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$192.8	06/30/28
10015064 SVWTP Phase 3 and 4	FY21-30		03/03/14		07/29/22		11/02/22		04/13/23		07/25/23		Q2-FY21-22	
	\$70.1	06/30/26	\$7.1	10/01/18	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$60.1	05/17/27
10037628 SVWTP Polymer Feed Facility	FY21-30		07/16/16 ²		06/30/19 ²		08/17/20 ²		07/29/22		11/08/22		Q2-FY21-22	
	\$7.5	09/27/24	N/A	N/A	N/A	N/A	N/A	N/A	TBD	TBD	TBD	TBD	\$19.1	08/01/25
10037349 HTWTP Improvements Capital	FY21-30		11/02/20		06/29/21		10/22/21		06/01/22		11/22/22		Q2-FY21-22	
	\$14.4	06/28/24	\$14.4	06/28/24	\$14.4	06/28/24	\$14.4	06/28/24	TBD	TBD	TBD	TBD	\$14.4	06/28/24
10037350 Regional Groundwater Treatment Improvement	FY21-30		08/13/20		02/28/25		10/30/25		11/23/26		06/29/27		Q2-FY21-22	
	\$38.6	12/27/29	\$38.6	12/27/29	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$38.6	2/26/30
Water Transmission														
10034578 CSPL2 Reach 5 Lining Replacement	FY21-30		02/25/19		05/31/22		09/21/22		06/05/23		01/09/24		Q2-FY21-22	
	\$13	11/30/22	\$12.8	11/30/22	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$23.7	04/07/26

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. For SVWTP Polymer Feed, project initiation, CER, and 35% Design were completed under WSIP - Closeout - Sunol Valley. Future milestones for this project are to be completed under WECIP.

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
10035029 As-Needed Pipeline Repairs	FY21-30		10/22/16		06/30/21		3/28/2023 ²		10/31/23		03/12/24		Q2-FY21-22	
	\$6.8	08/25/28	\$6.8	08/25/28	\$6.8	08/25/28	TBD	TBD	TBD	TBD	TBD	TBD	\$7.7	08/25/28
10036839 BDPL4 PCCP Repair	FY21-30		05/01/20		06/10/22		8/18/22 ²		01/31/23		12/12/23		Q2-FY21-22	
	\$54.7	11/22/23	\$54.7	11/22/23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$54.7	5/28/25
10036840 BDPL 1-4 Lining Repair	FY21-30		09/12/16		06/30/21		2/21/23 ²		09/25/23		03/12/23		Q2-FY21-22	
	\$9.3	8/25/28	\$9.3	8/25/28	\$9.3	8/25/28	TBD	TBD	TBD	TBD	TBD	TBD	\$10.8	08/25/28
10015071 Corrosion Control	FY21-30		01/01/10		07/01/12 (Phase I) 12/29/17 (Phase II) 07/31/23 (Phase III)		12/31/13 (Phase I) 12/31/18 (Phase II) 08/30/24 (Phase III)		07/30/15 (Phase I) 11/30/21 (Phase II) 08/30/24 (Phase III)		12/30/18 (Phase I) 12/13/22 (Phase II) 08/01/25 (Phase III)		Q2-FY21-22	
	<i>Phase I</i>													
	<i>Phase II</i> <i>Phase III</i>	\$24.9	12/29/34	\$24.9	12/29/34	\$24.9	12/29/34	\$24.9	12/29/34	\$36.5	1/31/28	\$24.9	12/29/34	\$36.5
10015076 San Antonio Pump Station MCC Upgrades	FY21-30		05/12/16		NA ³		12/30/21 ⁴		03/31/22		03/28/23		Q2-FY21-22	
	\$12.5	03/19/25	\$7.2	01/27/23	NA	NA	TBD	TBD	TBD	TBD	TBD	TBD	\$12.5	03/19/25
10015081 CSPL2 Reaches 2 and 3 Rehabilitation	FY21-30		09/12/16		06/30/22		11/18/22		11/07/23		05/28/24		Q2-FY21-22	
	\$50.0	10/10/23	\$55.9	10/10/23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$82.8	02/18/27
Water Supply & Storage														
10036998 Turner Dam and Reservoir Improvements	FY21-30		10/01/20		06/30/27		06/29/28		12/31/30		10/21/31		Q2-FY21-22	
	\$7.5	06/29/35	\$7.5	06/29/35	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$7.5	06/29/35

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. This represents a project milestone of 50% Design.
3. For San Antonio Pump Station MCC, CER was not needed.
4. For San Antonio Pump Station MCC 35% Design was replaced with 65%

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
10015091 Pilarcitos Dam Improvements	FY21-30		04/07/14		06/30/23		02/08/24		02/07/25		11/12/25		Q2-FY21-22	
	\$30.1	06/29/29	\$25.7	09/05/25	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$30.1	06/29/29
10015092 San Andreas Dam Facility Improvements <i>Scope I</i> <i>Scope II</i>	FY21-30		12/11/13 ³		09/29/23 ³		09/30/24 ³		05/26/26 ³		05/4/27 (Scope I) 04/10/29 (Scope II)		Q2-FY21-22	
	\$32.2	12/30/33	\$26.8	04/20/27	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$32.2	12/30/33
Watershed & Lands Management														
10015110 EBRPD Water System	FY21-30		06/02/14		01/31/19		08/09/19 ²		12/02/19		05/10/21		Q2-FY21-22	
	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22	\$5.6	10/31/22
10015108 Sneath Lane Gate/North San Andreas	FY21-30		02/01/21		01/31/22		10/16/24		05/09/25		10/28/25		Q2-FY21-22	
	\$6.7	01/27/28	\$6.7	01/27/28	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$6.7	08/02/27
10015113 Southern Skyline Blvd Ridge Trail Extension	FY21-30		10/31/12		03/09/15		9/10/15 ²		01/05/18		05/24/22		Q2-FY21-22	
	\$21.8	09/11/23	\$18.7	02/25/19	\$18.7	02/25/19	\$18.7	02/25/19	\$19.3	07/22/21	TBD	TBD	\$25.3	02/02/24
10030771 SA-1 Service Road/Ingoing Road	FY21-30		06/30/16		12/30/21		10/31/22		10/30/23		04/09/24		Q2-FY21-22	
	\$9.6	12/31/26	\$9.6	12/31/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$15.8	12/31/26
Buildings and Grounds														
10033555 Rollins Road Building Renovations	FY21-30		03/01/18		05/31/19		11/16/20		01/28/21		04/01/21		Q2-FY21-22	
	\$5.2	06/30/22	\$17.9	01/31/22	\$17.9	01/31/22	\$5.2	06/30/22	\$5.2	06/30/22	\$5.2	06/30/22	\$5.2	06/30/22

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. This represents a project milestone of 50% Design.
3. For San Andreas Dam Facility Improvements, all milestones except Awarded Construction represent the same date for both scopes.

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
10034526 Millbrae Warehouse Settlement & Admin. Bldg. HVAC	FY21-30		1/3/17		12/29/17 (Scope I) 01/2/18 (Scope II)		12/29/18(Scope I) 08/12/22 (Scope II)		08/03/20(Scope I) 03/29/23 (Scope II)		03/09/21 (Scope I) 08/8/23(Scope II)		Q2-FY21-22	
	Scope I Scope II	\$5.5	11/30/23	\$5.5	11/30/23	\$5.5	11/30/23	\$5.5	11/30/23	\$5.5	11/30/23	\$5.5	11/30/23	\$16.1
10015124 Sunol Long Term Improvements	FY21-30		01/01/09		04/27/12		05/28/13 (Scope I) 08/07/14 (Scope II)		03/30/15 (Scope I) 10/02/15 (Scope II)		11/08/16 (Scope I) 12/10/19 (Scope II)		Q2-FY21-22	
	Scope I Scope II	\$91.7	09/01/21	\$91.7	09/01/21	\$91.7	09/01/21	\$91.7	09/01/21	\$91.7	09/01/21	\$91.7	09/01/21	\$104.9
10015128 Millbrae Yard Laboratory and Shop Improvements	FY21-30		11/02/15		10/03/22		04/17/23		07/19/24		02/11/25		Q2-FY21-22	
		\$169.6	03/31/28	\$24.5	05/03/23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$169.6

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).

6. PROJECT FORMANCE SUMMARY*

All costs are shown in \$1,000s as of 12/25/21

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Water Treatment											
10033123 - SVWTP Ozone (CUW27202)	PL	\$ 165,130	\$ 165,130	\$ 192,816	\$ 4,991	(\$27,686)	-17%	06/30/27	06/30/27	06/30/28	(366)
10015064 - SVWTP Phase 3 and 4	PL	\$ 70,132	\$ 70,132	\$ 60,035	\$ 7,848	\$ 10,097	14%	06/30/26	06/30/26	05/17/27	(321)
10037628 - SVWTP Polymer Feed Facility	DS	\$ 7,537	\$ 7,537	\$ 19,046	\$ 141	(\$11,509)	-153%	09/27/24	09/27/24	08/01/25	(308)
10037349 - HTWTP Improvements Capital	DS	\$ 14,404	\$ 14,404	\$ 14,404	\$ 317	-	0%	06/28/24	06/28/24	06/28/24	-
10037350 - Regional Groundwater Treatment Improvement	PL	\$ 38,600	\$ 38,600	\$ 38,600	\$ 237	-	0%	12/27/29	12/27/29	02/26/30	(61)
Water Transmission											
10034578 - CSPL2 Reach 5 Lining Replacement	PL	\$ 13,031	\$ 13,031	\$ 23,697	\$ 814	(\$10,666)	-82%	09/19/25	09/19/25	04/07/26	(200)
10035029 - As-Needed Pipeline Repairs	DS	\$ 6,795	\$ 6,795	\$ 7,724	\$ 228	(\$929)	-14%	08/25/28	08/25/28	08/25/28	-
10036839 - BDPL4 PCCP Repair	PL	\$ 54,750	\$ 54,750	\$ 54,750	\$ 198	-	0%	11/22/23	11/22/23	05/28/25	(553)
10036840 - BDPL 1-4 Lining Repair	DS	\$ 9,350	\$ 9,350	\$ 10,764	\$ 174	(\$1,414)	-15%	08/25/28	08/25/28	08/25/28	-

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

**** Phase Status Legend**

PL	Planning	DS	Design
BA	Bid & Award	CN	Construction
MP	Multiple-Phase		

Footnotes:

- (+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
- (+++) **Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.**

I. Regional WECIP Quarterly Report

Q2-FY2021-2022 (10/01/21 - 12/31/21)

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Water Transmission											
10015071 - Corrosion Control	DS	\$ 24,900	\$ 24,900	\$ 36,536	\$ 7,648	(\$11,636)	-47%	12/29/34	12/29/34	01/31/28	2,524
10015076 - San Antonio Pump Station MCC Upgrades	DS	\$ 12,500	\$ 12,500	\$ 12,500	\$ 817	-	0%	03/19/25	03/19/25	03/19/25	-
10015081 - CSPL2 Reaches 2 and 3 Rehabilitation	PL	\$ 50,041	\$ 50,041	\$ 82,813	\$ 1,600	(\$32,772)	-65%	06/12/26	06/12/26	02/18/27	(251)
Water Supply & Storage											
10036998 - Turner Dam and Reservoir Improvements	PL	\$ 7,500	\$ 7,500	\$ 7,500	\$ 422	-	0%	06/29/35	06/29/35	06/29/35	-
10015091 - Pilarcitos Dam Improvements	PL	\$ 30,087	\$ 30,087	\$ 30,087	\$ 3,564	-	0%	06/29/29	06/29/29	06/29/29	-
10015092 - San Andreas Dam Facility Improvements	PL	\$ 32,195	\$ 32,195	\$ 32,195	\$ 1,399	-	0%	12/30/33	12/30/33	12/30/33	-
Watershed & Lands Management											
10015110 - EBRPD WATER SYSTEM	CN	\$ 5,376	\$ 5,376	\$ 5,553	\$ 1,911	(\$177)	-3%	10/31/22	10/31/22	10/31/22	-
10015108 - Sneath Lane Gate/North San Andreas	PL	\$ 6,698	\$ 6,698	\$ 6,698	\$ 80	-	0%	01/27/28	01/27/28	08/02/27	178

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

**** Phase Status Legend**

PL	Planning	DS	Design
BA	Bid & Award	CN	Construction
MP	Multiple-Phase		

Footnotes:

- (+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
- (+++) **Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.**

I. Regional WECIP Quarterly Report

Q2-FY2021-2022 (10/01/21 - 12/31/21)

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Watershed & Lands Management											
10015113 - Southern Skyline Blvd Ridge Trail Extension	DS	\$ 21,805	\$ 21,805	\$ 25,274	\$ 5,215	(\$3,469)	-16%	09/11/23	09/11/23	02/02/24	(144)
10030771 - SA-1 Service Road/Ingoing Road	PL	\$ 9,568	\$ 9,568	\$ 15,817	\$ 589	(\$6,249)	-65%	12/31/26	12/31/26	12/31/26	-
Buildings and Grounds											
10033555 - Rollins Road Building Renovations (CUW27703)	CN	\$ 5,192	\$ 5,192	\$ 5,192	\$ 3,032	-	0%	06/30/22	06/30/22	06/30/22	-
10034526 - Millbrae Warehouse Settlement & Admin. Bldg. HVAC	DS	\$ 5,500	\$ 5,500	\$ 16,080	\$ 1,051	(\$10,580)	-192%	11/30/23	11/30/23	09/30/24	(305)
10015124 - Sunol Long Term Improvements	CN	\$ 100,414	\$ 100,414	\$ 104,914	\$ 84,773	(\$4,500)	-4%	09/13/22	09/13/22	08/14/23	(335)
10015128 - Millbrae Yard Laboratory and Shop Improvements	PL	\$ 169,563	\$ 169,563	\$ 169,563	\$ 2,824	-	0%	03/31/28	03/31/28	03/30/29	(364)

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

** Phase Status Legend			
PL	Planning	DS	Design
BA	Bid & Award	CN	Construction
MP	Multiple-Phase		

Footnotes:
(+) CIP Approved Budget and Project Completion Date: The budget and schedule approved as part of 10-year CIP for FY21-30.
(++) Current Approved Budget and Schedule: The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
(+++) Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.







I. Regional WECIP Quarterly Report

7. PROJECTS STATUS REPORT

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)
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Project Cost:		Project Schedule:	
Approved	 \$165.13 M	Approved Jun-17	 Jun-27
Forecast	 \$192.82 M	Forecast Jun-17	 Jun-28
Actual	 \$4.99 M	Project Percent Complete: 3.0%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/02/23	08/09/23	01/02/24	07/01/27

Progress and Status:

During this reporting period, the Final Conceptual Engineering Report (CER) was issued and presented to Operations and Water Quality staff. The conceptual design was presented to the Civic Design Review and received approval. The design kickoff meetings were held. The third round of treatability lab testing was completed, and the draft technical memo was issued for review. The Project Management Plan was updated.

Issues and Challenges:

The variance in the forecast budget is due to refinements to the conceptual design and resulting increase to Project scope since the Alternative Analysis Report. The scope refinements and increases include a relocation and bypassing of the existing raw water pipelines, more detailed ozone components, additions to the contactor basin configuration, and increases in estimated material costs, contingencies and escalation. Several scope items were identified, analyzed, and then eliminated for cost savings, including space for a future generator in the Ozone building and overflow chemical tanks. The Team will continue to look for cost savings during the design. The variance in the forecast schedule is to allow an additional 6 months for the relocation and bypassing of existing raw water pipelines and an additional 6 months for start-up, testing, training, project turnover, and closeout.









Ozone – Existing Facilities at the Project Site

10015064 - 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 (CatEx)
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Project Cost:		Project Schedule:	
Approved 	\$70.13 M	Approved Mar-14 	Jun-26
Forecast 	\$60.03 M	Forecast Mar-14 	May-27
Actual 	\$7.85 M	Project Percent Complete: 11.3%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	04/03/23	(A) 06/08/23 (B) 10/10/24	(A) 11/14/23 (B) 03/21/25	11/14/24 08/04/25

Progress and Status:

The draft project delivery strategy for the 25 scope items and the workplan were developed and reviewed during the quarter. The final workplan is still being developed. Site visits were scheduled for January 2022. During the next reporting period the workplan will be finalized and work on the combined AAR/CER will begin.

Issues and Challenges:

The variance in the cost and schedule forecasts are due to the project being re-sequenced and rescoped into two projects: SVWTP Short Term Improvements and SVWTP Long Term Improvements. The cost forecast of \$60M is for the SVWTP Short Term Improvement project proposed budget, and the remaining budget of \$10M will be the proposed budget for the SVWTP Long Term Improvements project in the FY23/32 10-Year CIP. The variance in schedule forecast is due to multiple construction projects that will increase the project duration.



SVWTP Pipeline Corrosion

I. Regional WECIP Quarterly Report

10037628 - SVWTP Polymer Feed Facility

Project Description: 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.

Program: Water Treatment	Project Status: Design	Environmental Status: Not Initiated (CatEx)		
Project Cost:		Project Schedule:		
Approved	\$7.54 M	Approved Mar-21		Sep-24
Forecast	\$19.05 M	Forecast Jul-21		Aug-25
Actual	\$0.14 M	Project Percent Complete: 0.2%		
 Approved; Actual Cost; Forecast				
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	04/01/22	08/01/22	02/02/23	01/30/25

Progress and Status:

The 65% design included several permanent structures that were not considered in the conceptual engineering cost estimate; this resulted in a significant project cost increase. In response, during the quarter the design team developed value engineering options to reduce the project cost and presented these options to Operations staff for selection of a preferred option. The Team prepared meeting minutes and started preparing a memo on the options, cost savings, and schedule impacts.

Issues and Challenges:







The variance in the forecast budget is due to the 65% design engineer's estimate which included further developments in the design including building systems, foundation and structural steel systems, polymer system and components, missed items in the previous engineer's estimates, and increases in contingencies and escalation costs. The variance in the forecast schedule is to allow 6 months for the redesign to incorporate a selected value engineering option, and an additional 5 months for startup, testing, training, facility turnover, and closeout.



Example of a Polymer Blending Unit

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.

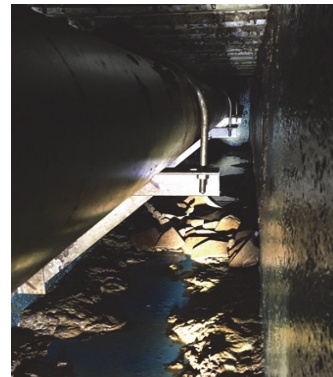
Program: Water Treatment		Project Status: Design		Environmental Status: Active (CatEx)	
Project Cost:			Project Schedule:		
Approved		\$14.40 M	Approved Nov-20		Jun-24
Forecast		\$14.40 M	Forecast Nov-20		Jun-24
Actual		\$0.32 M	Project Percent Complete: 18.3%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	06/29/22	07/20/22	12/30/22	12/30/23	

Progress and Status:

The 95% design to replace the plastic underdrains of Filters 1 through 6 with stainless steel underdrains was completed this quarter. The 100% design is anticipated to be completed next quarter.

Issues and Challenges:

None at this time.








Filter Gullet beneath Plastic Underdrains with Failed Grout

I. Regional WECIP Quarterly Report

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 (CatEx)
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Project Cost:		Project Schedule:	
Approved	 \$38.60 M	Approved Aug-20	 Dec-29
Forecast	 \$38.60 M	Forecast Aug-20	 Feb-30
Actual	\$0.24 M	Project Percent Complete: 0.4%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	01/20/27	04/07/27	08/30/27	08/29/29

Progress and Status:

Final comments were received for the draft Regional Groundwater Treatment Evaluation report that reviewed several options for providing centralized treatment facilities for the regional groundwater wells; this report is being finalized this quarter. A Request for Proposals to procure a consultant to assist with the planning, design, engineering services during construction and closeout of the project is being prepared.

Issues and Challenges:

The variance in the forecast schedule is due to the lengthy amount of time required to procure a consultant to provide services for planning, design, construction, and closeout.









Typical Granular Activated Carbon Vessel that may be Used to Treat Regional Groundwater

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: Completed (CatEx)
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Project Cost:		Project Schedule:	
Approved 	\$13.03 M	Approved Feb-19 	Sep-25
Forecast 	\$23.70 M	Forecast Feb-19 	Apr-26
Actual 	\$0.81 M	Project Percent Complete: 6.0%	
			

Key Milestones:	Environmental** Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	See Note	10/20/23	03/04/24	09/30/25

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

Progress and Status:

The Alternatives Analysis Report was finalized. The preferred alternative includes removal of the coal tar lining and replacement with cement mortar lining. The preferred alternative also includes improvements to an additional 34 appurtenances and a higher threshold of cleanliness for coal tar removal than previously assumed. Also added to the project scope is the potential repair for sections of 3 parallel pipelines (San Andreas Pipeline No. 2, San Andreas Pipeline No. 3 and the Sunset Supply Pipeline) due to possible corrosion, currently being investigated. The scope of work for a task order to draft the Conceptual Engineering Report was approved, and the task order is being processed for the new pipeline engineering consultant. NTP for the task order is anticipated to be issued early next quarter.



Typical lining failure

to the lengthy amount of time required to procure a consultant to assist with the planning phase and future design phase.









Issues and Challenges:

The variance in the budget is due to the addition of scope during the alternatives analysis, including the improvement of additional 34 appurtenances, removal of the coal tar lining to the highest level of cleanliness, and the potential repair of sections of 3 parallel pipelines (San Andreas Pipeline No. 2, San Andreas Pipeline No. 3 and the Sunset Supply Pipeline) due to possible corrosion. The variance in the schedule is due

I. Regional WECIP Quarterly Report

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: Design		Environmental Status: Active (CatEx)	
Project Cost:			Project Schedule:		
Approved		\$6.80 M	Approved Oct-16		Aug-28
Forecast		\$7.72 M	Forecast Oct-16		Aug-28
Actual		\$0.23 M	Project Percent Complete: 7.7%*		
 Approved;  Actual Cost;  Forecast			* It was inadvertently overstated % complete in September report.		
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	03/24/23	12/18/23	05/21/24	02/21/28	

Progress and Status:

Design of the pipeline lining repair has begun. The requirements for temporary and permanent worker safe entry measures in active pipelines are being considered by SFPUC staff for the entire system, and this may impact the project scope if facilities such as valves need to be added for workers to safely enter pipelines in order to perform the repairs.

Issues and Challenges:

The variance between the approved and forecast cost is due to the additional budget needed to accommodate safe entry requirements and minor design improvements since budget approval; if additional valves need to be installed for safe entry, there will be further cost increase.








Typical Internal Pipeline Repair with WEKO Seals

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 (CatEx)
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Project Cost:		Project Schedule:	
Approved	 \$54.75 M	Approved May-20	 Nov-23
Forecast	 \$54.75 M	Forecast May-20	 May-25
Actual	\$0.20 M	Project Percent Complete: 0.6%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/30/23	07/25/23	12/22/23	11/27/24

Progress and Status:

A task order for the pipeline consultant under the newly approved professional services contract is being prepared. The consultant will review the recently submitted technical memorandum, all existing inspection reports, and background information and will then prepare a needs assessment report.

Issues and Challenges:

The variance in schedule is due to the ongoing discovery of new leaks in the pipeline and the potential need to change or add segments of pipeline to repair. With the discovery of new leaks, various immediate and short-term as well as long-term solutions are being considered and will be further evaluated in the Needs Assessment.









Location of leak on BDPL4 PCCP in Redwood City

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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: Water Transmission		Project Status: Design		Environmental Status: Active (CatEx)	
Project Cost:			Project Schedule:		
Approved		\$9.35 M	Approved Sep-16		Aug-28
Forecast		\$10.76 M	Forecast Sep-16		Aug-28
Actual		\$0.17 M	Project Percent Complete: 3.5%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	08/19/22	12/14/23	05/16/24	01/04/28	

Progress and Status:

Design of the pipeline lining repair has begun. The requirements for temporary and permanent worker safe entry measures in active pipelines are being considered by the SFPUC, and this may impact the project scope if facilities such as valves need to be added for workers to safely enter pipelines in order to perform the repairs.

Issues and Challenges:

The variance between the approved and forecast cost is due to the additional budget needed to accommodate the safe entry requirements that are being evaluated. This variance is for minor improvements; if additional valves need to be installed for safe entry, there will be an additional cost increase.






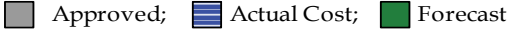


Typical Pipeline Entry for Inspections

10015071 - 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: Active (CatEx)
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Project Cost:		Project Schedule:	
Approved 	\$24.90 M	Approved Jan-16 	Dec-34
Forecast 	\$36.54 M	Forecast Jan-16 	Jan-28
Actual 	\$7.65 M	Project Percent Complete: 46.1%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	01/31/22	07/11/22	01/05/23	01/06/25

Progress and Status:

The project team is developing 100% design and contract documents for the Corrosion Control Phase 2 sub-project. The 95% design was presented in October to the Technical Steering Committee and Change Control Board for approval of the scope change from 14 sites to 11 sites, for additional costs due to PG&E requirements, and for schedule extension of Phase 2 due to encroachment permits and PG&E-related delays.

Issues and Challenges:

The variance in the forecast schedule for the Phase 2 contract is due to delays from PG&E’s response for new power facilities at three (3) of the fourteen (14) sites. The variance in forecast cost is due to the higher cost for power at each site due to PG&E’s decision to require step-down facilities at all new power connections. The Phase 3 project is being accelerated in order to complete cathodic protection installations at an earlier date and also to save on escalation costs.






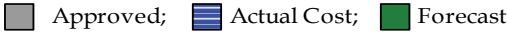


Deep Anode Installation – Corrosion Phase 1

I. Regional WECIP Quarterly Report

10015076 - 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)	
Project Cost:			Project Schedule:		
Approved		\$12.50 M	Approved May-16		Mar-25
Forecast		\$12.50 M	Forecast May-16		Mar-25
Actual		\$0.82 M	Project Percent Complete: 10.5%		
					
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:

During this reporting period, the design team completed the 65% design. The design is being reviewed by stakeholders and design leads. A geotechnical consultant was obtained, and a kickoff meeting held with the team. Updated seismic parameters are expected to be provided in the next quarter.

Issues and Challenges:

None at this time.








San Antonio Pump Station building looking southeast

10015081 - 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 	\$82.81 M	Forecast Sep-16 	Feb-27
Actual 	\$1.60 M	Project Percent Complete: 2.3%	

 Approved;  Actual Cost;  Forecast

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	12/21/23	03/14/24	08/21/24	08/21/26

Progress and Status:

A corrosion report was completed and no major corrosion issues with the pipeline were found. San Francisco Public Works is continuing with additional surveying and geotechnical investigation work, the results of which will be included in the draft Conceptual Engineering Report (CER).

Issues and Challenges:

The variance from the approved budget is due to the baseline budget being prepared very early in the planning phase using unit costs derived from similar, previously bid pipeline projects. The proposed budget is based on unit costs from more recently bid pipeline projects and is more representative of current market conditions. The variance in the schedule is due to the lengthy amount of time required to procure a consultant to assist with the planning phase and future design phase.









CSPL2 Gully Crossing with Limited Vehicle Access

I. Regional WECIP Quarterly Report

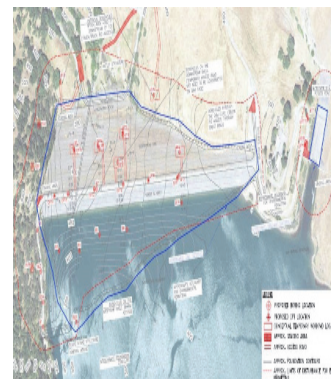
10036998 - Turner Dam and Reservoir Improvements

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)	
Project Cost:			Project Schedule:		
Approved		\$7.50 M	Approved Oct-20		Jun-35
Forecast		\$7.50 M	Forecast Oct-20		Jun-35
Actual		\$0.42 M	Project Percent Complete: 3.6%		
					
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:

The project team completed the preliminary Probable Maximum Flood study. An aerial photographic survey will be performed in the near future to create a high-resolution map that will help confirm the study's findings; this data will be used to create design criteria that will govern the design phase. The geotechnical investigation workplan together with the dam alteration permit application was submitted to Division of Safety of Dams (DSOD). The environmental permit for geotechnical investigations is being applied for to facilitate geotechnical investigation work in the next two quarters.



Turner Dam Geotechnical Exploration Plan







Issues and Challenges:

None at this time.

10015091 - 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: <i>Water Supply & Storage</i>	Project Status: <i>Planning</i>	Environmental Status: <i>Not Initiated (MND)</i>
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Project Cost:		Project Schedule:	
Approved 	\$30.09 M	Approved Apr-14 	Jun-29
Forecast 	\$30.09 M	Forecast Apr-14 	Jun-29
Actual 	\$3.56 M	Project Percent Complete: <i>19.8%</i>	
			

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:

The project team completed the overall condition and needs assessment for the project. During the reporting period, the project team conducted a kickoff meeting to initiate the Alternative Analysis phase.

Issues and Challenges:

Based on the findings from the condition and needs assessment, additional time will be needed to complete the alternatives analysis; this may extend the project completion date more than 1 year beyond the date that was originally included in the baseline schedule. The project team is currently evaluating the impacts to the schedule. Since the project is in early planning phase, no changes to the schedule forecast are reported at this time.









Spillway cleaning and mapping for condition assessment

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10015092 - 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:		Project Schedule:		
Approved	 \$32.20 M	Approved Dec-13	 Dec-33	
Forecast	 \$32.20 M	Forecast Dec-13	 Dec-33	
Actual	 \$1.40 M	Project Percent Complete: 4.4%		
				
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

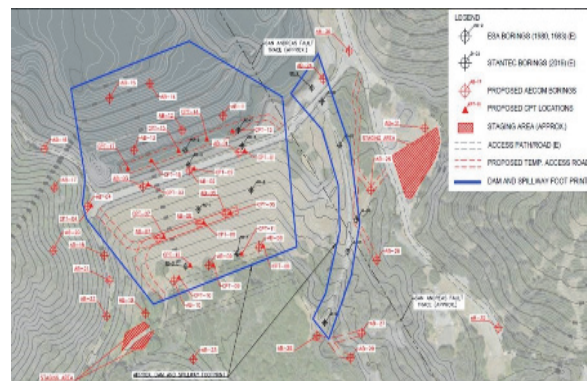
** (A) CatEx; (B) MND

Progress and Status:

The project team completed the overall condition and needs assessment for the project. During the reporting period, the project team conducted a kickoff meeting to initiate the Alternative Analysis phase. The geotechnical investigation workplan together with the dam alteration permit application was submitted to Division of Safety of Dams (DSOD). The environmental permit for geotechnical investigations is being applied for to facilitate geotechnical investigation work in the next two quarters.

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 the alternatives analysis include analysis of the interdependence of all system components. This interdependence analysis may change the assumptions for construction sequencing. For the geotechnical investigation work, additional time is required for DSOD to review and approve the workplan and also due to the limited construction windows (based on environmental permits) in which to perform geotechnical investigation. Since the project is in early planning phase, no changes to the schedule forecast are









San Andreas Geotechnical Exploration Plan

reported at this time.

10015110 - 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	 \$5.55 M	Forecast Jun-14		Oct-22
Actual	 \$1.91 M	Project Percent Complete: 27.7%		
				
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:

During this reporting period, the Bay Area Air Quality Management District (BAAQMD) provided additional comment to the Asbestos Dust Mitigation Plan (ADMP), requesting additional wind data be provided. The Contractor provided the requested additional information and updated the plan accordingly. The ADMP is anticipated to be approved by February, and groundbreaking work will commence thereafter. The Contractor's schedule will be updated, and impacts evaluated, upon ADMP approval. The Contractor continues to prepare the job site to start work as soon as the ADMP is approved.



Sunol Regional Wilderness Park High Valley Area

Issues and Challenges:







The forecasted budget exceeds the approved due to the additional support needed for the Naturally Occurring Asbestos (NOA) monitoring required by the ADMP. The forecasted schedule does not exceed the approved completion date at this time; however, the project will be reviewed for schedule impacts due to the additional time needed for the Contractor to obtain the ADMP approval.

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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: Watershed & Lands Management	Project Status: Planning	Environmental Status: Not Initiated (CatEx)
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Project Cost:		Project Schedule:	
Approved	 \$6.70 M	Approved Feb-21	 Jan-28
Forecast	 \$6.70 M	Forecast Feb-21	 Aug-27
Actual	 \$0.08 M	Project Percent Complete: 5.0%	
			

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

Progress and Status:

During this reporting period, the design team submitted the Draft Conceptual Engineering Report. The project is scheduled for presentation to the Technical Steering Committee early next year for approval to move forward from Planning Phase to Environmental Phase.

Issues and Challenges:







The most recent engineer's estimate for construction exceeds the approved construction budget. Value engineering options will be identified in the design phase. Since the project is in early planning phase, no changes to the schedule forecast are reported at this time.



Sneath Lane Trailhead

10015113 - 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  \$25.27 M	Forecast Oct-12  Feb-24	
Actual  \$5.21 M	Project Percent Complete: 28.2%	
		

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	05/11/21✓	03/30/22	08/09/22	11/08/23

Progress and Status:

During this reporting period, an independent cost estimate was received for the 100% design documents. For the federal grant, the project team prepared required documents. The federal grant administered through CalTrans has triggered the need to comply with National Environmental Protection Act permitting requirements, including additional review of Americans with Disabilities Act (ADA) requirements and reviews by federal agencies including the Fish and Wildlife Services (FWS). This has triggered additional evaluations, consultations, and delays to advertising the contract.



View of southern trail alignment







Issues and Challenges:

The variance in the forecast schedule is due to delays in NEPA approval. If a FWS formal consultation is required, preparation of a biological opinion on the question of environmental impact on federally listed species is likely to extend the environmental phase by 6 to 8 months.

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10030771 - 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)	
Project Cost:			Project Schedule:		
Approved		\$9.57 M	Approved Jun-16		Dec-26
Forecast		\$15.82 M	Forecast Jun-16		Dec-26
Actual		\$0.59 M	Project Percent Complete: 2.6%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	06/15/23	01/24/24	06/26/24	06/24/26	

Progress and Status:

During the reporting period, the project team performed final review of the Conceptual Engineering Report (CER), which is scheduled to be completed early next quarter. A third-party construction cost estimate was developed with total costs higher than in the engineer's estimate. The project engineer is reviewing to evaluate differences in the estimates. The project is scheduled for presentation to the Technical Steering Committee in early January 2022 to obtain approval to move forward from Planning Phase to Design Phase.

Issues and Challenges:







The variance between the budget and the forecast cost is due to increased scope recommended in the CER for slope stabilization, limitations to the construction window for reservoir drawdown, and further definition of the existing project scope since 2018.



Project Map – SA-1 Service Road/Ingoing Road

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	 \$3.03 M	Project Percent Complete: 61.7%		
				
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	10/30/20✓	N/A	12/08/20✓	06/30/22

Progress and Status:

During this reporting period, the JOC contractor completed installation of access control devices and their integration. Next quarter, the access control system will be commissioned and accepted.

Issues and Challenges:

The forecasted construction completion date exceeds the approved completion date because supply chain issues have delayed the delivery of the security cameras for more than 6 months. Security camera delivery is now anticipated in March 2022. Installation of the cameras and commissioning of the security systems software is delayed until the security cameras are delivered.









View of newly installed fence on north property line

I. Regional WECIP Quarterly Report

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 (MND)	
Project Cost:			Project Schedule:		
Approved		\$5.50 M	Approved Jan-17		Nov-23
Forecast		\$16.08 M	Forecast Jan-17		Sep-24
Actual		\$1.05 M	Project Percent Complete: 25.2%		
					
Key Milestones:	Environmental** Approval	Bid+ Advertisement	Construction+ NTP	Construction+ Final Completion	
Current Forecast	(A) 08/31/20✓ (B) 01/12/22	(A) 09/01/20✓ (B) 05/22/23	(A) 06/16/21✓ (B) 11/01/23	11/24/21✓ 09/27/24	

+ 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 was completed in November 2021 for the sub-project Millbrae Warehouse Loading Dock Repair. For the Millbrae Administration Building HVAC Upgrades sub-project, the project team presented a major scope change to the Technical Steering Committee and Change Control Board in October 2021. This proposed scope change includes relocation of the HVAC systems outdoors to mitigate the building's seismic vulnerability. The project team received approval to accept the scope change and move forward to Design Phase. The outdoor HVAC installation concept was presented to the Arts Commission in December 2021. The project team will present to the Arts Commission again in early 2022 to address their comments.



Existing Millbrae Administration Building

Issues and Challenges:







The variances in the forecast cost and schedule from the approved baseline are due to the need to relocate the HVAC system outdoors due to building seismic and structural load requirements, and also increased ventilation requirements for some laboratory analyses. The design changes and additional construction scope for the relocation have significantly increased the cost

forecast. The design team is investigating options to reduce costs. Additional time is forecasted to be needed for the redesign of the HVAC system, Arts Commission review of the outdoor structure, changes to the environmental permit, and negotiations with SFPW for design services.

10015124 - 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	 \$104.91 M	Forecast Jan-09	 Aug-23
Actual	 \$84.77 M	Project Percent Complete: 84.9%	
			

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✓ 08/14/22

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

Progress and Status:

Sunol Yard (Contract A): The project close-out dossier is being finalized.

Watershed Center (Contract B): The construction work on the pond and stream concrete pouring, site paving, installation of access stairs and ramps to the picnic area, pathway grading, drywall construction, and bathroom tiling was completed during the reporting period. Construction work on the building interior continued, including: electrical work, pond filter system, HVAC, painting, bathroom fixtures, aquarium systems, and fish quarantine room. Construction work on the exterior continued, including: solar power system, pathways, Temple forecourt, drainage and irrigation systems, and electrical systems. Coordination on the exhibits, public art piece, bluestone paver etching and building exterior glass continued.



Installation of Solar Panels and Skylight on Roof

Issues and Challenges:







The forecasted schedule exceeds the approved completion date for several reasons. Procurement of bluestone pavers, boulders, and stencil materials as well as bird-proof glass has been significantly delayed. The design and installation of the interior exhibits is also delayed due to extended time to procure services

from the vendor; an additional 5 months is needed to complete the exhibit hardware and programming work, and an additional 6 months has been added to the close-out phase to allow for training, start-up and maintenance planning with operations and Natural Resources and Lands Management staff. The forecasted cost exceeds the approved budget due to the addition of scope requested for overflow parking space, backup power system, picnic area restoration, purchase of compositing toilets, and exhibit revisions.

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10015128 - 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-29
Actual		\$2.82 M	Project Percent Complete: 1.3%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	07/27/23	N/A	04/15/25	03/31/28	

Progress and Status:

The project is in the Conceptual Engineering Report (CER) phase. Two options of a single building with combined laboratory and office spaces versus two separate buildings for the laboratory and offices were considered for potential cost savings, and the single building option was selected to move forward. Consulting and geotechnical services task orders were approved. Survey drawings from SFPW Bureau of Street Use and Mapping have been completed. An independent construction cost estimate was performed and is being reviewed. A kickoff meeting with the laboratory architect was held. Utility mapping and as-built information were requested from the City of Millbrae. Preparation of the conceptual building layouts such as laboratory area, cubicles, laboratory future expansion and functions, storage, lockers, and other laboratory and shop structure components is in progress.



Existing Administration Building

months to 36 months to be better align with recent building projects. The close-out phase is also recommended to be extended from 6 months to 12 months due to the likelihood of longer time needed to complete start-up and close-out activities for this complex building project.

Issues and Challenges:

In reviewing the proposed construction schedule, Public Work's Bureau of Construction Management proposed extending the construction duration from 30

8. 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								
10015110 - 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								
10015124 - WD-2794B Sunol Long Term Improvements - Watershed Center	03/09/20	03/16/22	08/14/22	\$ 28,995,937	\$ 30,722,562	(151)	(\$1,726,625)	50.0%

Program Total for On-Going Construction	Approved	Current	Variance	
	Contract Cost	Forecasted Cost	Cost	Percent
	\$ 31,630,745	\$ 33,357,370	(\$1,726,625)	(5.5%)

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.

9. PROJECTS IN CLOSE-OUT

There are no active projects currently in closeout phase.

10. COMPLETED PROJECTS

Project Title	Approved Project Completion	Actual Project Completion	Approved Project Budget	Project Expenditures To Date
Water Transmission				
CUW2730504 - San Andreas Pipeline No. 2 Replacement	12/08/21	12/08/21	\$ 45,642,000	\$ 42,021,723
TOTAL			\$ 45,642,000	\$ 42,021,723

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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 and 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 every two years (with minor modifications in the off years) 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**.

II. Local WECIP Quarterly Report

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 October 1, 2021 and December 31, 2021. This document serves as the second (2nd) Quarterly Report in Fiscal Year 2021-2022 (FY22) 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.

Going forward, changes to the approved baseline program, including any changes to continuing projects' scopes, schedules, and budgets, will be proposed as part of the bi-annually updated 10- year CIP as approved by the SFPUC Commission. The proposed revisions to the program will become the new baseline for new and continuing projects' scopes, schedules, and budgets in the beginning of the new fiscal year following SFPUC Commission approval.

Figure 2.1 shows the total Current Approved Budget for the Local projects in each phase of the program as of December 31, 2021. The number of projects currently active in each phase is shown in parentheses.

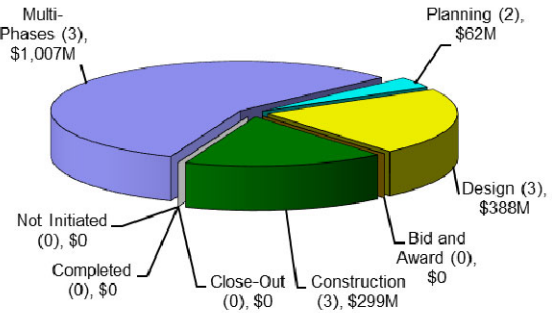


Figure 2.1 Total Current Approved Budget for Local Projects Active in Each Phase

Figure 2.2 shows the number of Local projects in the following phases as of December 31, 2021: Pre-construction, Construction, and Post-construction.

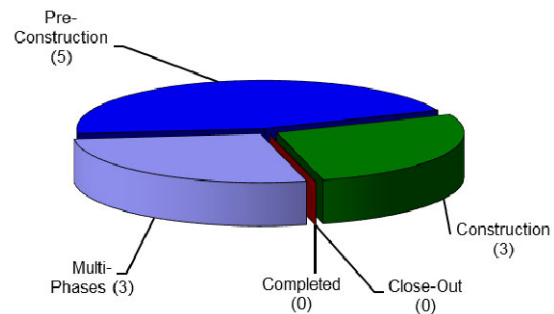


Figure 2.2 Number of Local Projects in Pre-construction, Construction, and Post-construction

Figure 2.3 summarizes the environmental review status of the Local projects as of December 31, 2021.

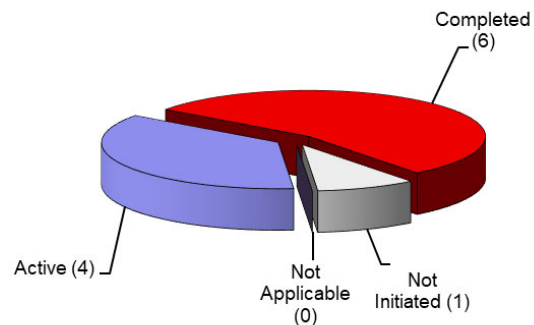
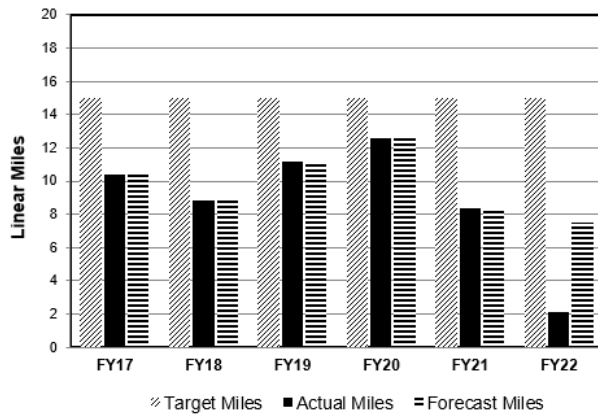


Figure 2.3 Local Program Environmental Status

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 FY17. At the end of FY22, 7.5 miles of pipe are forecasted to be replaced.



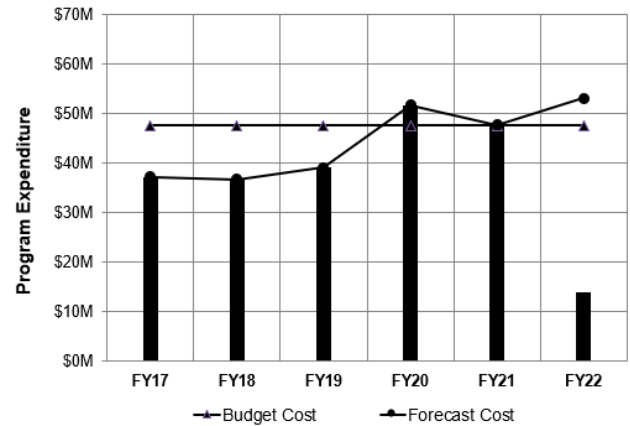
	FY17	FY18	FY19	FY20	FY21	FY22
Target Miles	15.0	15.0	15.0	15.0	15.0	15.0
Actual Miles	10.4	8.8	11.2	12.6	8.4	2.1
Forecast Miles						7.5

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

Water main replacement projects with construction underway in the 2nd quarter of FY22 included the City streets of Pierce Street, Castro Street, 17th Street, Baker Street, 19th Avenue, Casitas, Vicente, College Hill, Prospect, and L-Taraval Segment B. Water main replacement projects which achieved substantial completion during the 2nd quarter of FY21-22 included 21st Street. Projects anticipated to start in the 3rd quarter of FY21-22 include Diamond Street. Below are highlights of key projects scheduled to issue notice to proceed next quarter:

- Diamond: Installation of 9,100 feet of 8-inch diameter, 3,000 feet of 12-inch diameter, and 1,600 feet of 16-inch diameter ductile iron

water distribution mains on Diamond Street from 27th Street to Diamond Heights Boulevard, on 28th. from Douglass Street to Noe Street, on Duncan Street from Douglas Street to Noe Street, on Valley Street from Diamond Street to Noe Street, and on Noe Street from Duncan Street to Valley Street.



	FY17	FY18	FY19	FY20	FY21	FY22
Budget	\$47.7M	\$47.7M	\$47.7M	\$47.7M	\$47.7M	\$47.7M
Actual Expenditure	\$37.3M	\$36.8M	\$39.2M	\$51.7M	\$47.8M	\$13.9M
Forecast Expenditure						\$53.1M

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

Figure 2.5 above shows the annual total program expenditure by fiscal year for the pipeline replacement program. Program expenditures are forecast to be higher than the budgeted annual amount of \$47.7M over the next three years to account for the delayed start of several large streetscape improvement projects mentioned above. The budgeted cost per mile has been updated for FY22 from \$3.18 million per mile to \$5.4 million per mile for replacement of water distribution mains. The updated cost per mile for streetscape, transit, or ERDIP type projects is approximately \$8 million per mile. The updated cost per mile for water main replacement projects is due to the following factors:

- The program has previously focused on replacing smaller, less expensive distribution

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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, curb ramps that comply with disability requirements, and permitting requirements in the City continue to increase the cost of pipe replacement projects over earlier estimates.

3. CAPITAL IMPROVEMENT PROGRAM COST SUMMARY

Table 3 provides an overall program-level cost summary by categories of projects for the Water Enterprise CIP Local Program. It shows the Expenditures to Date, Current Approved Budgets, Q2/FY21-22 Forecasted Costs, Cost Variance between the Current Approved Budgets and Forecasted Costs, and Variance Over Reporting Period (difference between cost forecasts reported in Q1/FY21-22 and Q2/FY21-22).

Note that during Q2/FY21-22 the project teams were requested to forecast any major changes in budget, scope and schedule that should be included as a proposed change in the FY23-32 10-Year CIP budget proposal. Thus, the forecasts that are included in this Q2 report are the same as the changes to project budgets and schedules that are included in the 10-Year CIP budget proposal that was presented to the Commission for approval on February 8, 2022. These forecasted changes will become the approved budgets and schedules after full approval of the SFPUC's budgets starting in Q1/FY22-23.

The total Current Approved Budget (including Regional and Local Programs) and Current Forecasted Cost at completion are \$2,674.2 million and \$3,301.7 million, respectively. The Current Approved Budget and Forecasted Cost at completion for only the Local Water Program (including construction contingency) are \$1,755.4 million and \$2,271.4 million, respectively.

The overall Local Water Program negative Cost Variance of \$516.0M in Table 3 can be attributed to the following projects; reasons for the project variances are reported in Section 7:

- 19063 Local Water Conveyance/Distribution System forecasted cost increased by \$461.0M.
- 10037249 New CDD Headquarters forecasted cost increased by \$43.4M.
- 10015239 Lake Merced Water Level Restoration forecasted cost increased by \$10.0M.
- 10033818 Town of Sunol Pipeline forecasted cost increased by \$1.7M.

Please refer to the section of I.3 of this report for more details about the reported cost variance for the Regional Water Program.

Table 3. Program Cost Summary

Programs	Expenditures To Date (\$ Million) (A)	Current Approved Budget (\$ Million) (B)	Q2/FY21-22 Forecasted Costs (\$ Million) (C)	Cost Variance (\$ Million) (D = B - C)	Variance Over Reporting Period* (\$ Million) (E)
Local Program	\$731.36	\$1,755.36	\$2,271.39	(\$516.03)	(\$470.95)
Local Water Conveyance/ Distribution System	\$401.21	\$810.58	\$1,273.20	(\$462.62)	(\$460.96)
Local Water Supply	\$248.05	\$312.54	\$322.54	(\$10.00)	(\$10.00)
Local Tanks/Reservoir Improvements	\$1.30	\$19.28	\$19.28	-	-
Pump Stations	\$0.35	\$6.53	\$6.53	-	-
Buildings and Grounds	\$3.11	\$350.19	\$393.60	(\$43.41)	-
Emergency Firefighting Water System	\$77.35	\$256.25	\$256.25	-	\$0.00
Regional Program	\$171.89	\$918.79	\$1,030.28	(\$111.49)	(\$78.52)
PROGRAM TOTAL	\$903.25	\$2,674.16	\$3,301.67	(\$627.52)	(\$549.48)

* Negative number reflects cost increases since last quarter, and positive number reflects cost reduction since last quarter.

4. CAPITAL IMPROVEMENT PROGRAM SCHEDULE SUMMARY

Figure 4 compares the 2021 Approved Schedule and the Current Forecast Schedule for the Local Water CIP. As shown in Table 4, the 2021 Approved and Forecasted Schedule completion for the overall Water Enterprise CIP (including Regional and Local Programs) are each in June 2035. The 2021 Approved and Forecasted Schedule completion for the Local CIP are in December 2028 and June 2032, respectively.

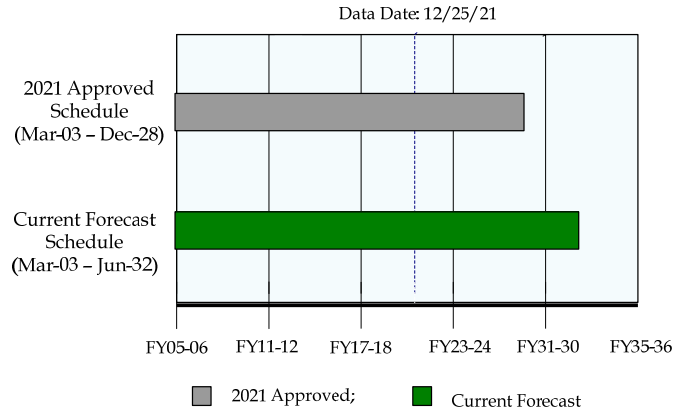


Figure 4. Local Program Schedule Summary

Table 4 2021 Approved vs. Current Forecast Schedule Dates

Sub-Program	2021 Approved Project Start	Actual Start	2021 Approved Completion	Current Forecast Completion	Schedule Variance (Months)
Local Program	03/03/03	03/03/03✓	12/29/28	06/30/32	42.0 (Late)
Regional Program	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. BUDGET AND SCHEDULE TREND SUMMARY

Starting with the Q1 FY21-22 Quarterly Report, a revised report format includes a new Table 5, titled Budget and Schedule Trend Summary. This Table 5 contains all approved Local Water projects that are active and in any of the planning, design, bid and award, or construction phases of the project. The table excludes any projects that are either Not-Initiated, On-Hold, in Close-Out, or Completed.

During this quarter (Q2 FY21-22), the following major milestones were achieved, and the project cost and schedule forecasts were accordingly updated based on the updated milestone cost estimates for the following Local Water project:

- None this quarter.

Table 5. Budget and Schedule Trend Summary

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
WECIP - Local														
Local Water Conveyance/Distribution System														
10033816 Potable Emergency Firefighting Water System ²	FY21-30		8/12/19		N/A		N/A		N/A		N/A		Q2 - FY21-22	
	\$55.0	06/30/28	\$44.8	06/30/28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$55.0	06/30/28
10033818 Town of Sunol Pipeline	FY21-30		06/17/19		11/01/21		06/17/22 ³		03/21/23		12/04/23		Q2 - FY21-22	
	\$5.0	04/03/23	\$5.0	04/03/23	\$5.0	04/03/23	TBD	TBD	TBD	TBD	TBD	TBD	\$6.7	04/04/25
19063 Local Water Conveyance / Distribution System ⁴	FY21-30		N/A		Various		Various		Various		Various		Q2 - FY21-22	
	\$750.6	06/30/28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,211.5	06/30/32
Local Water Supply														
10015239 Lake Merced Water Level Restoration	FY21-30		06/16/03		04/30/10		01/26/22		04/27/22		01/12/23		Q2 - FY21-22	
	\$32.7	01/31/19	\$32.7	01/31/19	\$32.7	01/31/19	TBD	TBD	TBD	TBD	TBD	TBD	\$42.7	03/03/27
10015240 San Francisco Groundwater Supply	FY21-30		06/16/03		12/08/06		10/19/10		03/11/16		08/22/17		Q2 - FY21-22	
	\$66.5	06/30/22	\$39.8	02/27/14	\$49.8	09/08/14	\$49.8	09/08/14	\$66.5	06/25/18	\$66.5	06/25/18	\$66.5	06/30/23

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. Potable Emergency Firefighting Water System: This project will fund construction phase of PEFWS pipelines in the next several years.
3. Town of Sunol first Design milestone is 65%.
4. Local Water Conveyance/Distribution System: This is a Renew and Replacement Program where the corresponding CIP budget and forecast completion date are updated every 2 years during the CIP budget update cycle.

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
10015242 San Francisco Westside Recycled Water	FY21-30		03/03/03		05/15/09		12/08/14		06/29/16		10/17/17		Q2 - FY21-22	
	\$213.3	01/12/23	\$201.3	04/18/08	\$149.6	09/25/13	\$186.2	12/18/19	\$186.2	12/18/19	\$186.2	12/18/19	\$213.3	04/06/23
Local Tank/Reservoir Improvements														
10015223 College Hill Reservoir Outlet ²	FY21-30		01/24/13		10/14/16		12/15/16		02/15/19		06/08/21		Q2 - FY21-22	
	\$19.3	01/29/24	\$16.3	09/28/21	\$16.3	09/28/21	\$16.3	09/28/21	\$16.3	09/28/21	\$19.3	01/29/24	\$19.3	04/24/24
Pump Stations														
10015231 Harding Park PS	FY21-30		07/06/21		09/26/22		03/31/23		11/30/23		07/01/24		Q2 - FY21-22	
	\$6.5	04/03/26	\$6.5	04/03/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$6.5	04/03/26
Buildings and Grounds														
10037249 New CDD Headquarters	FY21-30		02/01/20		08/31/21		12/30/21		12/29/23		03/08/22		Q2 - FY21-22	
	\$350.2	06/28/28	\$350.2	06/28/28	\$393.6	06/28/28	TBD	TBD	TBD	TBD	TBD	TBD	\$393.6	06/28/28
Emergency Firefighting Water System														
EFWSPL EFWS Pipelines ³	FY21-30		04/01/11		Various		Various		Various		Various		Q2 - FY21-22	
	\$205.3	12/29/28	\$31.6	09/29/17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$205.3	12/29/28
EFWSPPS EFWS Pump Stations ⁴	FY21-30		04/01/11		Various		Various		Various		Various		Q2 - FY21-22	
	\$45.2	12/29/28	\$17.5	09/26/16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$45.2	12/29/28

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. College Hill Reservoir Outlet: Planning through 65% Design was achieved under a different program in Local Water Conveyance/Distribution System.
3. EFWS Pipelines: EFWS Pipelines include multiple projects.
4. EFWS Pump Stations: EFWS Pump Stations include multiple projects.

6. PROJECT FORMANCE SUMMARY*

All costs are shown in \$1,000s as of 12/25/21

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Local Water Conveyance/Distribution System											
10033816 - Potable Emergency Firefighting Water System	PL	\$ 55,000	\$ 55,000	\$ 55,000	\$ 819	-	0%	06/30/28	06/30/28	06/30/28	-
10033818 - Town of Sunol Pipeline	DS	\$ 5,000	\$ 5,000	\$ 6,663	\$ 2,264	(\$1,663)	-33%	04/03/23	04/03/23	04/04/25	(732)
19063 - Local Water Conveyance/Distribution System	MP	\$ 750,581	\$ 750,581	\$ 1,211,536	\$ 398,124	(\$460,955)	-61%	06/30/28	06/30/28	06/30/32	(1,461)
Local Water Supply											
10015239 - Lake Merced Water Level Restoration	DS	\$ 32,668	\$ 32,668	\$ 42,668	\$ 4,666	(\$10,000)	-31%	01/30/26	01/30/26	03/03/27	(397)
10015240 - San Francisco Groundwater Supply	CN	\$ 66,552	\$ 66,552	\$ 66,552	\$ 63,514	-	0%	06/30/22	06/30/22	06/30/23	(365)
10015242 - San Francisco Westside Recycled Water	CN	\$ 213,316	\$ 213,316	\$ 213,316	\$ 179,874	-	0%	01/12/23	01/12/23	04/06/23	(84)

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

**** Phase Status Legend**

PL	Planning	DS	Design
BA	Bid & Award	CN	Construction
MP	Multiple-Phase		

Footnotes:

- (+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
- (+++) **Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.**

II. Local WECIP Quarterly Report

Q2-FY2021-2022 (10/01/21 - 12/31/21)

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Local Tanks/Reservoir Improvements											
10015223 - College Hill Reservoir Outlet	CN	\$ 19,283	\$ 19,283	\$ 19,283	\$ 1,299	-	0%	01/29/24	01/29/24	04/24/24	(86)
Pump Stations											
10015231 - Harding Park PS	PL	\$ 6,527	\$ 6,527	\$ 6,527	\$ 346	-	0%	04/03/26	04/03/26	04/03/26	-
Buildings and Grounds											
10037249 - New CDD Headquarters	DS	\$ 350,192	\$ 350,192	\$ 393,601	\$ 3,107	(\$43,409)	-12%	06/28/28	06/28/28	06/28/28	-
Emergency Firefighting Water System											
EFWS PL - EFWS Pipelines	MP	\$ 205,263	\$ 205,263	\$ 205,263	\$ 32,285	-	0%	12/29/28	12/29/28	12/29/28	-
EFWS PS - EFWS Pump Stations	MP	\$ 45,245	\$ 45,245	\$ 45,245	\$ 39,514	-	0%	12/30/28	12/30/28	12/29/28	1

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

** Phase Status Legend

PL	Planning	DS	Design
BA	Bid & Award	CN	Construction
MP	Multiple-Phase		

Footnotes:







- (+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
- (+++) **Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.**

7. PROJECTS STATUS REPORT

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)
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Project Cost:	Project Schedule:
Approved  \$55.00 M	Approved Aug-19  Jun-28
Forecast  \$55.00 M	Forecast Aug-19  Jun-28
Actual  \$0.82 M	Project Percent Complete: 0.8%
	

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	08/12/19✓	N/A	TBD	12/31/25

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. Construction completion expected December 2025.

Issues and Challenges:

None at this time.









Earthquake Resistant Ductile Iron Pipe with flexible joints (demonstrated) used in the project

II. Local WECIP Quarterly Report

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)		
Project Cost:		Project Schedule:		
Approved 	\$5.00 M	Approved Jun-19 	Apr-23	
Forecast 	\$6.66 M	Forecast Jun-19 	Apr-25	
Actual 	\$2.26 M	Project Percent Complete: 44.1%		
				
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	02/01/23	07/12/23	01/13/24	10/09/24

Progress and Status:

During this reporting period the project team continues toward development of the design criteria and 65% design. The environmental team finalized the project description and held a kickoff meeting to commence preparation of the CEQA Addendum. The Highway 680 Crossing construction is on hold until Caltrans can update their Temporary Construction Encroachment (TEC) permit with the SFPUC for changed access route for the revised Town of Sunol Pipeline construction work.

Issues and Challenges:







The variance to the forecast schedule and cost is due to the change in construction method from tunneling to open cut trench, as explained in the last quarter. This change in scope triggers the need to update the CEQA documents, environmental permits, and real estate negotiations. This change is anticipated to delay the project by two years and to add soft costs and escalation costs for construction.



Exposed Town of Sunol Pipeline crossing Arroyo de la Laguna Creek

19063 - 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		1,211.54 M	Forecast Jul-10		Jun-32
Actual		\$398.12 M	Project Percent Complete: 37.6%		
					
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:

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.







Issues and Challenges:

SFPUC’s Capital Improvement Plan has been updated with an overall main replacement budget increase from \$750M to \$1.2B. The forecasted cost increase of \$450M is attributed to the budget period extending from 2028 to 2032 along with the increased cost per mile for main replacement.

II. Local WECIP Quarterly Report

10015239 - 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 	\$42.67 M	Forecast Jun-03  Mar-27
Actual 	\$4.67 M	Project Percent Complete: 16.0%
		

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	01/10/22 N/A 09/13/22	08/04/22 06/13/17✓ 03/14/24	08/24/26 07/07/17✓ 10/08/24

+ 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): SFPUC and Daly City are coordinating with the Regional Water Quality Control Board (RWQCB) for project discharge permitting. Daly City, through the SFPUC, is negotiating with SFPW for a major encroachment permit for construction of the diversion structure for the approved flows to Lake Merced. This structure would be constructed under John Muir Drive within the City's right of way.

Aeration Mixing System (Contract B): No additional evaluations or decisions have been made to determine whether to proceed with the Aeration Mixing Phase II at this time.

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

Issues and Challenges:

Daly City has provided an updated project schedule which currently shows a delay of 1 year, with Bid and









Lake Merced

Award delayed to October 2022. This delay is primarily due to the impact of the pandemic, as well as challenges with acquiring project funding during this period. Following discussions between SFPUC and Daly City regarding project benefits, SFPUC has agreed to provide additional contribution to construction costs in the amount of an additional \$10M.

10015240 - 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-23	
Actual  \$63.51 M	Project Percent Complete: 96.3%	
		

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✓ 06/30/22

+ 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 2 (Contract C), during the quarter the contractor continued to finalize punch list items (subject to Operation’s verifications); continued to review closeout documents; continued to process remaining change orders, including deductive bid items, extended warranties, and miscellaneous change order work; and continued to prepare as-built drawings and operational and maintenance manuals. Operations continued to field verify punch list items that had been completed and also verified spare parts delivery to Owner.



North Lake Well Station







Issues and Challenges:

Phase 2 project final completion has been delayed due to additional time needed to complete punch list items and compile closeout documents. An additional 18-month construction duration is currently being forecasted to allow time to complete the work.

II. Local WECIP Quarterly Report

10015242 - 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		Apr-23
Actual		\$179.87 M	Project Percent Complete: 84.5%		
					
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✓	07/29/22 06/30/22 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): Miscellaneous electrical and mechanical work continued in Building 580 and 581. Work on the chemical trench across the Oceanside Plant (OSP) yard was completed. The installation of the channel glass façade at Building 580 was also completed. Limited start-up activities began in October 2021. Work continued on the development of the Operations Manual and Standard Operating Procedures for the new treatment facility. Distribution Pump Station and Reservoir (Contract B): Electrical and mechanical/HVAC work inside the new pump station continued. Hydrostatic testing of pipeline components was completed. Pipeline (Contract C) is complete. Irrigation System Retrofit (Contract D): The installation of purple quick connect couplers and valve tags continued. Multiple gate valves were installed, and various minor plumbing modifications completed. The cross-connection control testing of Golden Gate Park continued.







Issues and Challenges:

For Contract B, Distribution Pump Station and Reservoir, PG&E notified the SFPUC that the project's secondary power service agreement would not be honored; this will impact the budget and schedule for facility completion, start-up, and operation. SFPUC Management is in discussions with PG&E to resolve this issue. For Contract D, Irrigation System Retrofit, field conditions were found to differ from construction documents, and it was determined that a tree would need to be removed to complete the work. The public process related to tree removal will lead to a project delay. The impacts from these issues will be further evaluated and reported on when more information is available.

10015223 - 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: Construction	Environmental Status: Completed (CatEx)
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Project Cost:		Project Schedule:	
Approved  \$19.28 M	Forecast  \$19.28 M	Approved Jan-13  Jan-24	Forecast Jan-13  Apr-24
Actual  \$1.30 M		Project Percent Complete: 17.2%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	11/20/19✓	02/24/21✓	09/27/21✓	10/21/23

Progress and Status:

The contractor and project team are working on pre-construction submittals and site investigation. Coordination with Operations is ongoing to prepare for initial reservoir draining and cleaning and to expose the reservoir isolation point. The construction field office was delivered to the worksite during the reporting period.



Aerial View of College Hill Reservoir






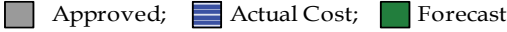
Issues and Challenges:

The variance in the project schedule is due to unanticipated delay in notice to proceed and also due to adjusting the length of the project's closeout phase to 6 months. Notice to proceed was delayed due to additional time needed to certify the construction contract and also due to the need for project subcontractors to establish supplier IDs in the City financial payment system.

II. Local WECIP Quarterly Report

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		\$0.35 M	Project Percent Complete: 4.9%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	TBD	02/02/24	10/04/24	10/03/25	

Progress and Status:

An internal kick-off meeting for preparation of the Needs Assessment was held. The design team requested, received, and began review of background documentation.

Issues and Challenges:

None at this time.

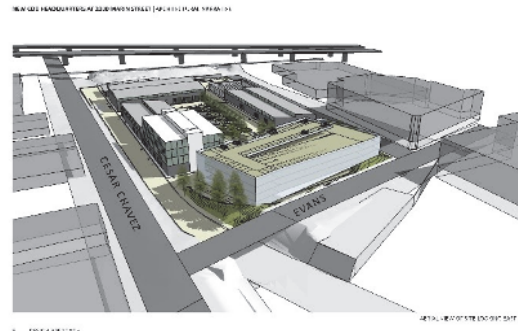
10037249 - New CDD Headquarters

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: Design		Environmental Status: Active	
Project Cost:			Project Schedule:		
Approved		\$350.19 M	Approved Feb-20		Jun-28
Forecast		\$393.60 M	Forecast Feb-20		Jun-28
Actual		\$3.11 M	Project Percent Complete: 1.3%*		
Approved;		Actual Cost;		Forecast	
* It was inadvertently overstated % complete in September report.					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	06/30/23	06/18/21✓	10/01/23	12/31/27	

Progress and Status:

The project team completed 100% Schematic Design on schedule, within the reporting quarter. Design development will proceed following award of the design contract in the next quarter. The Request for Proposals for Construction Management/General Contractor construction contract was readvertised in the reporting period with the goal to increase the number of respondents. Responses are due February 9, 2022.



Aerial Rendering of Campus






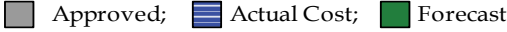
Issues and Challenges:

The project is proceeding with awarding contracts to advance the project. Impacts to the schedule will be assessed after NTPs are issued and opportunities to make up time are evaluated. Due to the rising cost of escalation, the project cost is forecasted to increase by \$43.4M.

II. Local WECIP Quarterly Report

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 (Various)	
Project Cost:			Project Schedule:		
Approved		\$205.26 M	Approved Apr-11		Dec-28
Forecast		\$205.26 M	Forecast Apr-11		Dec-28
Actual		\$32.28 M	Project Percent Complete: 25.6%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	Various	Various	Various	Various	

Progress and Status:

- 19th Avenue Pipeline:
Construction completion expected December 2023.
- Clarendon Supply:
Construction completion expected July 2022.
- Emergency Firefighting Water System 2050 Planning Study:
Study was completed December 2021.
- Fireboat Manifolds:
Alternatives Analysis Review will be incorporated in Conceptual Engineering Review (CER) which is expected to be completed by August 2022.
- Potable Emergency Firefighting Water System Pipeline:
Construction completion expected July 2027.
- Terry Francois Blvd (TFB) Mission South Pipeline:
Construction completion expected March 2022.
- Vicente Potable EFWS Pipeline: Construction completion expected July 2024.







Issues and Challenges:

None at this time.

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 (Various)
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Project Cost:		Project Schedule:	
Approved	 \$45.25 M	Approved Apr-11	 Dec-28
Forecast	 \$45.25 M	Forecast Apr-11	 Dec-28
Actual	 \$39.51 M	Project Percent Complete: 95.3%	
			

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

Progress and Status:

- Pump Station #2:
Construction completion expected December 2022.
- PEFWS PS - Lake Merced:
Planning completion expected December 2022. CER for LMPS will be part of the Pipeline CER. Draft in May 2022, Final in July 2022.

Issues and Challenges:

None at this time.



Roof installation of Pump Station No. 2

8. 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								
19063 - WD-2811 17TH STREET/CLAYTON/ORD	05/26/20	07/09/22	06/28/22	\$ 6,663,324	\$ 7,037,359	11	(\$374,035)	54.8%
19063 - WD-2842 CASITAS AVE FROM LANSDALE TO YERBA BUENA	02/08/21	04/19/22	04/19/22	\$ 3,920,659	\$ 4,140,909	-	(\$220,250)	55.2%
19063 - WD-2717 COLLEGE HILL/PROSPECT/SANTA MARIA	09/27/21	10/21/23	10/21/23	\$ 12,180,497	\$ 12,180,497	-	-	0.0%
19063 - WD-2616 BAKER STREET /SUTTER STREET	10/19/20	03/27/22	05/24/22	\$ 3,701,180	\$ 3,943,930	(58)	(\$242,750)	56.4%
19063 - WD-2739 CASTRO STREET 19TH/26TH STREET	08/17/20	08/16/22	08/16/22	\$ 10,915,782	\$ 11,768,587	-	(\$852,805)	91.4%
19063 - WD-2775 19TH AVE/VICENTE/LINCOLN	10/19/20	01/09/23	01/09/23	\$ 6,606,915	\$ 6,749,915	-	(\$143,000)	15.8%
19063 - WD-2806 VICENTE 19TH TO 25TH AVE	07/26/21	04/07/24	02/11/24	\$ 6,267,815	\$ 6,267,815	56	-	0.9%

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								
10015240 - WD-2809 SF Groundwater Supply Phase 2	08/07/17	08/26/19	06/30/22	\$ 11,685,130	\$ 11,732,708	(1,039)	(\$47,578)	98.0%
10015242 - WD-2852R Westside Recycled Irrigation Retrofits and Improvements	01/25/21	06/23/22	06/23/22	\$ 2,483,525	\$ 2,483,525	-	-	38.1%
10015242 - WD-2776 Westside Recycled Water Treatment Facility	10/16/17	03/18/21	04/05/22	\$ 92,413,186	\$ 92,413,186	(383)	-	90.0%
Emergency Firefighting Water System								
- WD-2861 Clarendon Supply	02/01/21	07/29/22	07/29/22	\$ 2,706,081	\$ 2,706,081	-	-	20.8%
- WD-2687R Pump Station # 2	12/12/17	12/30/22	12/30/22	\$ 20,623,887	\$ 20,623,887	-	-	85.8%

Program Total for On-Going Construction	Approved Contract Cost		Current Forecasted Cost		Variance	
					Cost	Percent
	\$ 180,167,981		\$ 182,048,399		(\$1,880,418)	(1.0%)

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.

II. Local WECIP Quarterly Report

9. 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				
10029710- Pump Station #1	04/30/19	04/30/19	\$ 9,827,981	\$ 9,549,140
TOTAL			\$ 9,827,981	\$ 9,549,140

10. COMPLETED PROJECTS

Project Title	Approved Project Completion	Actual Project Completion	Approved Project Budget	Project Expenditures To Date
Emergency Firefighting Water System				
EFWS PL - EFWS Pipelines				
10035860 - Fillmore Haight	06/30/21	06/30/21	\$ 501,460	\$ 79,909
CUWAWSAW14 - Gate Valve Motors - Pipeline	03/31/21	09/30/21	\$ 637,491	\$ 570,011
CUWAWSAW19 - Clarendon Supply (ESER 2010 Partial Funding)	03/31/21	12/30/21	\$ 947,653	\$ 947,653
TOTAL			\$ 2,086,604	\$ 1,597,573

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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.

10015064 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.

10037628 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.

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).

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.

10015071 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. .

10015076 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.

10015080 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.

10015081 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.

10015091 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.

10015092 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.

10015113 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.

10030771 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.

10015124 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 on 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.

10015128 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.

19063 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

10015239 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.

10015240 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.

10015242 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

10015223 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

10015231 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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Appendix B. Water Enterprise Approved Project-Level Schedules Regional Programs

Project Name	Start	Finish	FY2022				FY2023				FY2024				FY2025				FY2026				FY2027				FY2028				FY2029				FY2030	
			FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2
Water Regional Improvement Projects																																				
Water Treatment																																				
10015064 SVWTP Phases 3 and 4	03-Mar-14	30-Jun-26																																		
10033123 SVWTP Ozone (CUW27202)	27-Jun-17	30-Jun-27																																		
10037349 HTWTP Improvements Capital	02-Nov-20	28-Jun-24																																		
10037350 Regional Groundwater Treatment Improvements	13-Aug-20	27-Dec-29																																		
10037628 SVWTP Polymer Feed Facility	08-Mar-21	27-Sep-24																																		
Water Transmission																																				
10015071 Corrosion Control	01-Jan-16	29-Dec-34																																		
10015076 San Antonio Pump Station MCC Upgrades	12-May-16	19-Mar-25																																		
10015080 San Andreas Pipeline No. 2 Replacement	01-Mar-16	08-Dec-21																																		
10015081 CSPL2 Reaches 2 and 3 Rehabilitation	22-Oct-16	12-Jun-26																																		
10034578 CSPL2 Reach 5 Lining Replacement	25-Feb-19	19-Sep-25																																		
10035029 As-Needed Pipeline Repair	01-Jul-20	25-Aug-28																																		
10036839 Pre-Stressed Concrete Cylinder Pipe (PCCP) Repair	01-May-20	22-Nov-23																																		
10036840 BDPL 1-4 Lining Repair	12-Sep-16	25-Aug-28																																		
Water Supply & Storage																																				
10015091 Pilarcitos Dam Improvements	07-Apr-14	29-Jun-29																																		
10015092 San Andreas Dam Facility Improvements	11-Dec-13	30-Dec-33																																		
10015232 Merced Manor Reservoir Facilities Repairs	04-Jan-22	30-Jun-31																																		
10036998 Turner Dam and Reservoir Improvements	01-Oct-20	29-Jun-35																																		
Watershed and Lands Management																																				
10015108 Sneath Lane Gate/North San Andreas	01-Feb-21	27-Jan-28																																		
10015110 EBRPD Water System	02-Jun-14	31-Oct-22																																		
10015113 Southern Skyline Blvd Ridge Trail Extension	31-Oct-12	11-Sep-23																																		
10030771 San Andreas Service Road Upgrades	30-Jun-16	31-Dec-26																																		
Buildings and Grounds																																				
10014124 Sunol Long Term Improvements	01-Jan-09	13-Sep-22																																		
10015128 Millbrae Yard Laboratory and Shop Improvements	02-Nov-15	31-Mar-28																																		
10033555 Rollins Road Building Renovations (CUW27703)	01-Mar-18	30-Jun-22																																		
10034526 Millbrae Warehouse Settlement & Admin. Bldg. HVAC	03-Jan-17	30-Nov-23																																		



Appendix B. Water Enterprise Approved 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	30-Dec-28																																	
Local Water Conveyance / Distribution System	01-Jul-10	30-Jun-28																																	
10033816 Potable Emergency Firefighting Water System	12-Aug-19	30-Jun-28	[Gantt bar with phases: Planning, Design, Bid & Award, Construction, Closeout]																																
10033818 Town of Sunol Pipeline	17-Jun-19	03-Apr-23	[Gantt bar with phases: Planning, Design, Bid & Award, Construction, Closeout]																																
19063 Local Water Conveyance/Distribution System	01-Jul-10	30-Jun-28	[Gantt bar with phases: Design, Bid & Award, Construction, Closeout]																																
Local Water Supply	03-Mar-03	30-Jan-26																																	
10015239 Lake Merced Water Level Restoration	16-Jun-03	30-Jan-26	[Gantt bar with phases: Design, Bid & Award, Construction, Closeout]																																
10015240 San Francisco Groundwater Supply	16-Jun-03	30-Jun-22	[Gantt bar with phases: Design, Bid & Award, Construction, Closeout]																																
10015242 San Francisco Westside Recycled Water	03-Mar-03	12-Jan-23	[Gantt bar with phases: Design, Bid & Award, Construction, Closeout]																																
Local Tanks/Reservoir Improvements	24-Jan-13	29-Jan-24																																	
10015223 College Hill Reservoir Outlet	24-Jan-13	29-Jan-24	[Gantt bar with phases: Design, Bid & Award, Construction, Closeout]																																
Pump Stations	06-Jul-21	03-Apr-26																																	
10015231 Harding Park PS	06-Jul-21	03-Apr-26	[Gantt bar with phases: Design, Bid & Award, Construction, Closeout]																																
Buildings and Grounds	01-Feb-20	28-Jun-28																																	
10037249 New CDD Headquarters	01-Feb-20	28-Jun-28	[Gantt bar with phases: Planning, Design, Bid & Award, Construction, Closeout]																																
Emergency Firefighting Water System (EFWS)	01-Apr-11	30-Dec-28																																	
10015480 2014 AUXILIARY WATER SUPPLY SYSTEM*	06-Nov-14	30-Dec-22	[Gantt bar with phases: Design, Bid & Award, Construction, Closeout]																																
10015482 AUXILIARY WATER SUPPLY SYSTEM*	01-Apr-11	30-Jun-22	[Gantt bar with phases: Design, Bid & Award, Construction, Closeout]																																
EFWSPS EFWS Pump Stations	01-Apr-11	30-Dec-28	[Gantt bar with phases: Design, Bid & Award, Construction, Closeout]																																
EFWSPL EFWS Pipelines	01-Apr-11	29-Dec-28	[Gantt bar with 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

DATE: May 16, 2022

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

FROM: Dennis J. Herrera, General Manager 

RE: Water Enterprise Capital Improvement Program
Quarterly Report (3rd Quarter / FY 2021-2022)

Enclosed please find the Water Enterprise Capital Improvement Program (WECIP) Quarterly Report for the 3rd Quarter (Q3) of Fiscal Year (FY) 2021-2022. The primary intent of the report is to provide the Commission, stakeholders, and the public with a status summary of the Water Enterprise Capital Improvement Program based on data for the period of January 1, 2022 to March 31, 2022. This quarterly report provides a summary update on both Regional and Local Water Enterprise CIP projects.

London N. Breed
Mayor

Anson Moran
President

Newsha Ajami
Vice President

Sophie Maxwell
Commissioner

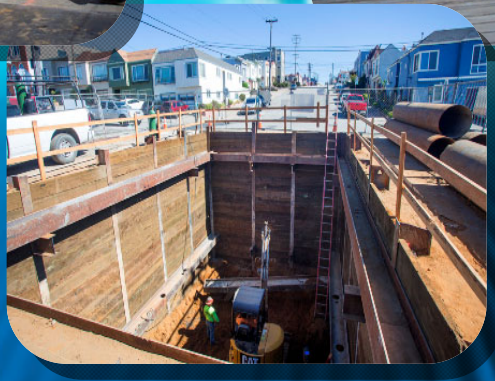
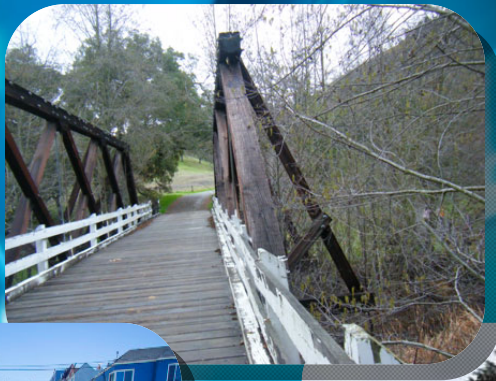
Tim Paulson
Commissioner

Dennis J. Herrera
General Manager

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



QUARTERLY REPORT

Water Enterprise Capital Improvement Program
Q3 FY 2021 | 2022
January 2022 — March 2022

Published: May 16, 2022

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EXECUTIVE SUMMARY

This quarterly report provides a summary update on both Regional and Local Water Enterprise CIP projects. The primary intent of the report is to provide the Commission, stakeholders, and the public with a status summary of the Water Enterprise Capital Improvement Program based on data for the period of January 1, 2022 to March 31, 2022.

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 by Resolution No. 21-0055.

This quarterly report also includes schedule and cost forecasting of the FY23-FY32 10-year Capital Improvement Plan that was presented to and approved by the San Francisco Public Utilities Commission on February 8, 2022. Changes to the approved baseline program and project scopes, schedules, and budgets that were proposed as part of this FY23-32 10-year CIP will become the new baseline for project scopes, schedules, and budgets at the start of FY23, on July 1, 2022. Going forward, changes to the approved baseline will continue to be proposed as part of the 10-year CIP that is updated every two years and approved by the SFPUC Commission. The proposed revisions to the program will become the new baseline for project scopes, schedules, and budgets in the beginning of the new fiscal year following SFPUC Commission approval.

Program Current Status:

Overall steady progress continued on the ongoing Water Enterprise CIP projects. As of the end of the reporting period, the Regional Water Enterprise CIP includes 25 projects in various phases as follows: one (1) project not initiated, twenty (20) projects in planning, design or bid and award, three (3) projects in construction, and one (1) project completed.

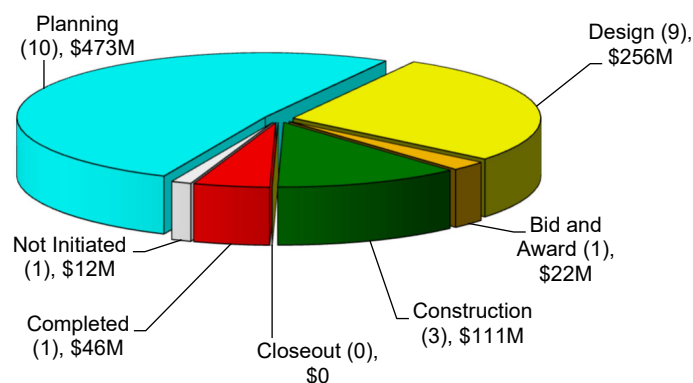


Figure A Total Current Approved Budget for Regional Projects Active in Each Phase

As of the end of the reporting period, the Local Water Enterprise CIP includes 11 projects in various phases as follows: three (3) projects in multiple phases, five (5) projects in planning or design, and three (3) projects in construction.

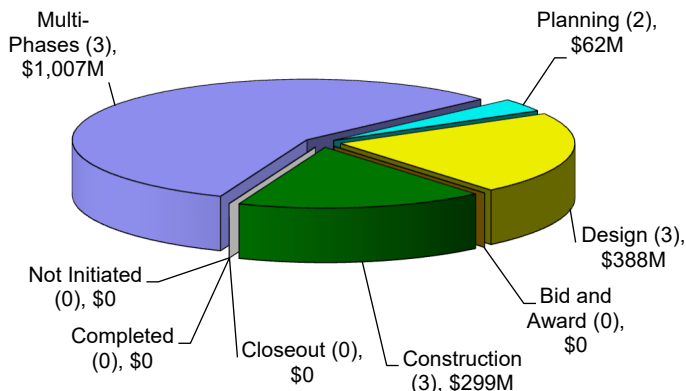


Figure B Total Current Approved Budget for Local Projects Active in Each Phase

The following Tables provide a high-level summary of the cost and schedule status for the Regional and Local programs. There were no new cost variances for any of the projects in the Regional and Local programs during the quarter.

Table A. Program Cost Summary

Programs	Expenditures To Date (\$ Million) (A)	Current Approved Budget (\$ Million) (B)	Q3/FY21-22 Forecasted Costs (\$ Million) (C)	Cost Variance (\$ Million) (D = B - C)	Variance Over Reporting Period* (\$ Million) (E)
Regional Program	\$184.23	\$918.79	\$1,030.28	(\$111.49)	-
Local Program	\$761.90	\$1,755.37	\$2,271.39	(\$516.03)	-
Programs Total	\$946.13	\$2,674.16	\$3,301.67	(\$627.52)	-

* Negative number reflects cost increases since last quarter, and positive number reflects cost reduction since last quarter.

One project in the Regional program, and no projects in the Local program, had a schedule variance during the quarter. The change in variance during the quarter did not impact the forecasted programs' completion dates.

Table B. Current Approved vs. Current Forecast Schedule Dates

Programs	Current Approved Project Start	Actual Start	Current Approved Completion	Current Forecast Completion	Schedule Variance (Months)
Regional Program	01/01/09	01/01/09✓	06/29/35	06/29/35	-
Local Program	03/03/03	03/03/03✓	12/29/28	06/30/32	42.0 (Late)
Overall Water Enterprise CIP	03/03/03	03/03/03✓	06/29/35	06/29/35	-

Program Key Updates:

The key updates for the Regional Water Enterprise Capital Improvement Program include:

- COVID-19-related issues continued to cause minor impacts to projects in planning, design, and construction during the quarter due to labor shortages and procurement delays.
- The overall forecasted cost and schedule at completion for the Regional Program have been updated to reflect the FY23-FY32 10-year Capital Improvement Plan's budget and schedule that were approved by the Commission during the quarter, on February 8, 2022. The overall forecasted budget is \$111.5M higher than the current approved budget.
- For the Sunol Valley Water Treatment Plant (SVWTP) Ozone project, the Conceptual Engineering Report (CER) was approved by the Technical Steering Committee, and the design phase was initiated.
- This quarter, the San Andreas -1 Service Road/Ingoing Road project started the design phase after the Technical Steering Committee (TSC) approved the CER, and the environmental permit process commenced.
- For the Crystal Springs Pipeline No. 2 (CSPL2) Reach 5 Lining Replacement, the new pipeline consultant was authorized to initiate preparation of the CER; planning for survey work and geotechnical studies have begun.
- For the Crystal Springs Pipeline No. 2 (CSPL2) Reaches 2 and 3 Rehabilitation, geotechnical field investigation, survey work, and drafting of the CER continued this quarter.
- The Regional Groundwater Treatment Evaluation report was finalized this quarter and considers several options for providing centralized treatment facilities for the regional groundwater wells. Preparation of a Request for Proposals to procure a consultant to assist with the planning, design, and engineering services during construction and closeout of the project continued.
- For the Alameda Creek Watershed Center (Contract B of the Sunol Long Term Improvements project), work on the building interior continued, including electrical work, pond filter system, HVAC, aquarium systems, fish quarantine room, floor polishing, wood slat ceilings, and doors. Construction work on the exterior also continued, including "granite-crete" pathways, planting, bluestone boulders, outdoor lighting, eagle sculpture, and fencing. Work on the windows, irrigation system, temple forecourt, photovoltaic panels, and access stairs and ramps to the picnic area were completed.

The key updates for the Local Water Enterprise Capital Improvement Program include:

- The overall forecasted cost and schedule at completion for the Local Program have been updated to reflect the FY23-FY32 10-year Capital Improvement Plan's budget and schedule that were approved by the Commission on February 8, 2022. The overall forecasted budget is \$516M higher than the current approved budget, while the schedule forecast extends the program completion date by 42 months.
- For the Local Water Conveyance/Distribution System, the forecast mileage for replacement or improvement in FY22 is 7.5 miles. Projects under construction Q3 include Pierce Street, Castro

Street, 17th Street, Baker Street, 19th Avenue, Casitas Avenue, Vicente Street, College Hill Reservoir pipelines, Prospect Avenue, and L-Taraval Segment B (Taraval Street).

- For College Hill Reservoir Outlet project, the contractor has mobilized on site, and construction activities are underway. SFPUC City Distribution Division Operations staff have completed reservoir draining and shutdown activities and are working with the contractor to install pipeline appurtenances to control water leakage during pipeline improvements within and adjacent to the reservoir. Major construction activities are anticipated to start next quarter.
- For the New City Distribution Division Headquarters project, the design contract was awarded by the Commission during this quarter subject to Board of Supervisors approval to be sought next quarter. Design is anticipated to start next quarter after Board of Supervisors approval of the contract. The Construction Management by General Contractor (CM/GC) contract deadline for submittal of proposals was extended to March 23, 2022, and three proposals were received.
- The San Francisco Westside Recycled Water project made substantial progress on its three construction contracts:
 - At the treatment facility (Contract A), miscellaneous electrical and mechanical work continued within Buildings 580 and 581. Wastewater Enterprise Operations staff were trained by the manufacturers on new equipment during the quarter. Work continued during the quarter on the development of the Operations Manual for the new treatment facility. The Standard Operating Procedures for the new treatment facility were submitted to Wastewater Enterprise Operations for review.
 - Distribution Pump Station and Reservoir (Contract B): Electrical and mechanical/HVAC work continued. Site grading was performed in preparation for paving. A preliminary start-up testing plan was submitted and reviewed. Project staff drafted a proposed change order for interim power supply to the facility to address lack of permanent PG&E power service.
 - Irrigation System Retrofit (Contract D): The installation of purple quick connect couplers and valve tags continued. Multiple gate valves were installed, and various minor plumbing modifications completed. The cross-connection control testing of irrigation piping within Golden Gate Park continued. Notice of Intent for coverage under the Recycled Water General Order to the San Francisco Bay Regional Water Quality Control Board was submitted.

Quarterly Report

Water Enterprise Capital Improvement Program

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5. Budget and Schedule Trend Summary
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7. Project Status Report
8. On-Going Construction
9. Projects in Closeout
10. Completed Projects

II. LOCAL CAPITAL IMPROVEMENT PROGRAM

1. Capital Improvement Program Description
2. Capital Improvement Program Status
3. Capital Improvement Program Cost Summary
4. Capital Improvement Program Schedule Summary
5. Budget and Schedule Trend Summary
6. Project Performance Summary
7. Project Status Report
8. On-Going Construction
9. Projects in Closeout
10. Completed Projects

APPENDICES

- A. Project Descriptions
- B. Project Level Approved Schedule
- C. List of Acronyms

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I. Regional Capital Improvement Program

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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 and 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 every two years (with minor modifications in the off years) and integrated with the SFPUC's Financial Plan and rate-setting.

Biannual 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 to maintain facilities in 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 January 1, 2022 and March 31, 2022. This document serves as the third (3rd) Quarterly Report in Fiscal Year 2021-2022 (FY22) 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.

Going forward, changes to the approved baseline program, including any changes to continuing projects' scopes, schedules, and budgets, will be proposed as part of the bi-annually updated 10- year CIP to be approved by the SFPUC Commission. The proposed revisions to the program will become the new baseline for new and continuing projects' scopes, schedules, and budgets in the beginning of the new fiscal year following SFPUC Commission approval.

Figure 2.1 shows the total Current Approved Budget for the 25 Regional projects in each

phase of the program as of March 31, 2022. The number of projects currently active in each phase is shown in parentheses.

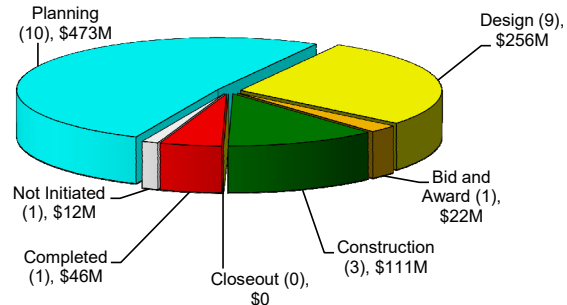


Figure 2.1 Total Current Approved Budget for Regional Projects Active in Each Phase

Figure 2.2 shows the number of Regional projects in the following stages as of March 31, 2022: Pre-construction, Construction, and Post-construction.

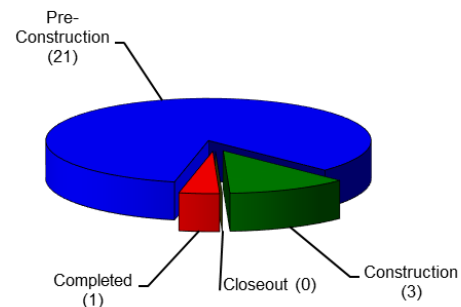


Figure 2.2 Number of Regional Projects in Pre-construction, Construction, and Post-construction

Figure 2.3 summarizes the environmental review status of the 25 Regional projects as of March 31, 2022.

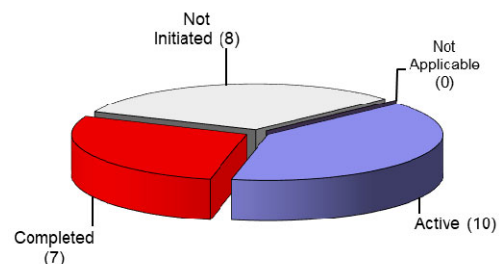


Figure 2.3 Regional Program Environmental Review

3. CAPITAL IMPROVEMENT PROGRAM COST SUMMARY

Table 3 provides an overall program-level cost summary of the Regional Water Program. It shows by categories of projects the Expenditures to Date, Current Approved Budgets, Q3/FY21-22 Forecasted Costs, Cost Variance between the Current Approved Budgets and Forecasted Costs, and Variance Over Reporting Period (difference between cost forecasts reported in Q2/FY21-22 and Q3/FY21-22).

The total Current Approved Budget (including Regional and Local Programs) and Current Forecasted Cost at completion are \$2,674.2 million, and \$3,301.7 million, respectively. The Current Approved Budget and Forecasted Cost at completion for only the Regional Water Program (including construction contingency) are \$918.8 million and \$1,030.3 million, respectively.

Note that during Q2/FY21-22 the project teams were requested to forecast any major changes in budget, scope and schedule that should be included as a proposed change in the FY23-32 10-Year CIP budget proposal. Thus, the forecasts that were included in the Q2 report are the same as the proposed changes to project budgets and schedules that were included in the 10-Year CIP budget proposal that was presented to the Commission for approval on February 8, 2022.

These forecasted changes from Q2 will become the approved budgets and schedules after full approval of the SFPUC's budgets, starting in Q1/FY22-23. For Q3 and Q4, any additional variances that exceed the proposed budgets and schedules for FY22/23 will also be reported.

There were no new cost variances for Regional projects during Q3. The overall Regional Water Program negative Cost Variance of \$111.5M in Table 3 is the same as in Q2 and can be attributed to the following projects; reasons for the project variances are reported in Section 7:

- 10015081 CSPL2 Reaches 2 and 3 Rehabilitation forecasted cost increased by \$32.8M.
- 10033123 SVWTP Ozone forecasted cost increased by \$27.7M.
- 10015071 Corrosion Control forecasted cost increased by \$11.6M.
- 10037628 SVWTP Polymer Feed Facility forecasted cost increased by \$11.5M.
- 10034578 CSPL2 Reach 5 Lining Replacement forecasted cost increased by \$10.7M.
- 10034526 Millbrae Warehouse Settlement & Admin. Bldg. HVAC forecasted cost increased by \$10.6M.
- 10015064 SVWTP Phase 3 and 4 forecasted cost decreased by \$10.1M.

Table 3 Program Cost Summary

Programs	Expenditures To Date (\$ Million) (A)	Current Approved Budget (\$ Million) (B)	Q3/FY21-22 Forecasted Costs (\$ Million) (C)	Cost Variance (\$ Million) (D = B - C)	Variance Over Reporting Period* (\$ Million) (E)
Regional Water Program	\$184.23	\$918.79	\$1,030.28	(\$111.49)	-
Water Treatment	\$14.68	\$295.80	\$324.90	(\$29.10)	-
Water Transmission	\$54.39	\$217.01	\$274.42	(\$57.42)	-
Water Supply & Storage	\$5.57	\$81.86	\$81.86	-	-
Watershed & Lands Management	\$9.30	\$43.45	\$53.34	(\$9.89)	-
Buildings and Grounds	\$100.30	\$280.67	\$295.75	(\$15.08)	-
Local Water Program	\$761.90	\$1,755.36	\$2,271.39	(\$516.03)	-
PROGRAM TOTAL	\$946.13	\$2,674.16	\$3,301.67	(\$627.52)	-

* Negative number is reflecting cost increases since last quarter, and positive number is reflecting cost reduction since last quarter.

I. Regional WECIP Quarterly Report

Please refer to the section of II.3 of this report for more details about the reported cost variance for the Local Water Program

4. CAPITAL IMPROVEMENT PROGRAM SCHEDULE SUMMARY

Figure 4 compares the 2021 Approved Schedule and the Current Forecast Schedule for the Regional Water CIP. As shown in Table 4, the 2021 Approved and Forecasted Schedule completion for the overall Water Enterprise CIP (including Regional and Local Programs) are each in June 2035. The 2021 Approved and Forecasted Schedule completion for the Regional Water CIP alone are also each in June 2035.

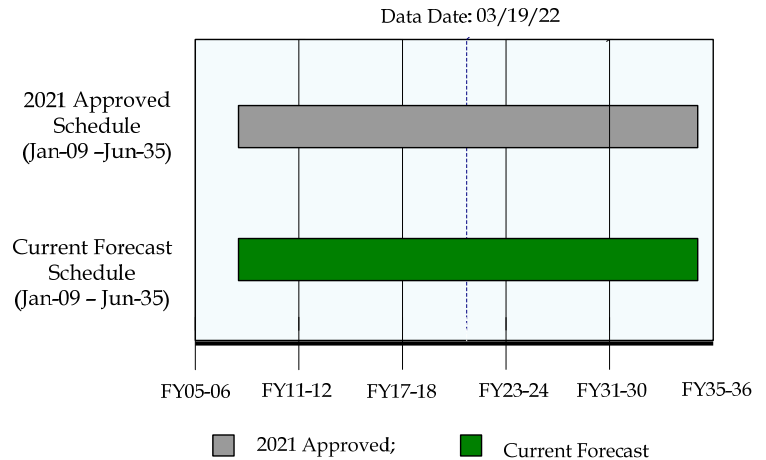


Figure 4. Regional Program Schedule Summary

Table 4. 2021 Approved vs. Current Forecast Schedule Dates

Program	2021 Approved Project Start	Actual Start	2021 Approved Completion	Current Forecast Completion	Schedule Variance (Months)
Regional Program	01/01/09	01/01/09✓	06/29/35	06/29/35	-
Local Program	03/03/03	03/03/03✓	12/29/28	06/30/32	42.0 (Late)
Overall Water Enterprise CIP	03/03/03	03/03/03✓	06/29/35	06/29/35	-

5. BUDGET AND SCHEDULE TREND SUMMARY

Starting with the Q1 FY21-22 Quarterly Report, a revised report format includes a new Table 5, titled Budget and Schedule Trend Summary. This Table 5 contains all approved Regional Water projects that are active and in any of the planning, design, bid and award, or construction phases of the project. The table excludes any projects that are either Not-Initiated, On-Hold, in Closeout, or Completed. During the reporting period, the following Regional projects achieved major project milestones:

- The SVWTP Ozone completed the Conceptual Engineering Report (CER) and the Planning Phase.
- The HTWTP Improvements Capital completed 95% design.
- The Sneath Lane Gate/North San Andreas completed the CER and the Planning Phase.
- SA-1 Service Road/Ingoing Road completed the CER and the Planning Phase.

Table 5. Budget and Schedule Trend Summary

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
WECIP - Regional														
Water Treatment														
10033123 SVWTP Ozone	FY21-30		06/27/17		01/18/22		05/10/22		01/06/23		12/15/23		Q3-FY21-22	
	\$165.1	06/30/27	\$115	09/09/24	\$192.8	06/30/28	TBD	TBD	TBD	TBD	TBD	TBD	\$192.8	06/30/28
10015064 SVWTP Phase 3 and 4	FY21-30		03/03/14		07/29/22		11/02/22		04/13/23		07/25/23		Q3-FY21-22	
	\$70.1	06/30/26	\$7.1	10/01/18	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$60.1	05/17/27
10037628 SVWTP Polymer Feed Facility	FY21-30		07/16/16 ²		06/30/19 ²		08/17/20 ²		12/06/22		05/09/23		Q3-FY21-22	
	\$7.5	09/27/24	N/A	N/A	N/A	N/A	N/A	N/A	TBD	TBD	TBD	TBD	\$19.1	08/01/25
10037349 HTWTP Improvements Capital	FY21-30		11/02/20		06/29/21		10/22/21		01/14/22		11/22/22		Q3-FY21-22	
	\$14.4	06/28/24	\$14.4	06/28/24	\$14.4	06/28/24	\$14.4	06/28/24	\$14.4	06/28/24	TBD	TBD	\$14.4	06/28/24
10037350 Regional Groundwater Treatment Improvement	FY21-30		08/13/20		08/13/24		10/30/25		11/23/26		06/29/27		Q3-FY21-22	
	\$38.6	12/27/29	\$38.6	12/27/29	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$38.6	2/26/30
Water Transmission														
10034578 CSPL2 Reach 5 Lining Replacement	FY21-30		02/25/19		08/31/22		12/05/22		06/28/23		01/09/24		Q3-FY21-22	
	\$13	11/30/22	\$12.8	11/30/22	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$23.7	04/07/26

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. For SVWTP Polymer Feed, project initiation, CER, and 35% Design were completed under WSIP - Closeout - Sunol Valley. Future milestones for this project are to be completed under WECIP.

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
10035029 As-Needed Pipeline Repairs	FY21-30		10/22/16		06/30/21		03/28/23 ²		10/31/23		03/12/24		Q3-FY21-22	
	\$6.8	08/25/28	\$6.8	08/25/28	\$6.8	08/25/28	TBD	TBD	TBD	TBD	TBD	TBD	\$7.7	08/25/28
10036839 BDPL4 PCCP Repair	FY21-30		05/01/20		06/10/22		08/18/22 ²		01/31/23		12/12/23		Q3-FY21-22	
	\$54.7	11/22/23	\$54.7	11/22/23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$54.7	5/28/25
10036840 BDPL 1-4 Lining Repair	FY21-30		09/12/16		06/30/21		02/21/23 ²		09/25/23		03/12/23		Q3-FY21-22	
	\$9.3	8/25/28	\$9.3	8/25/28	\$9.3	08/25/28	TBD	TBD	TBD	TBD	TBD	TBD	\$10.8	08/25/28
10015071 Corrosion Control <i>Phase I</i> <i>Phase II</i> <i>Phase III</i>	FY21-30		01/01/10		07/01/12 (Phase I) 12/29/17 (Phase II) 07/31/23 (Phase III)		12/31/13 (Phase I) 12/31/18 (Phase II) 08/30/24 (Phase III)		07/30/15 (Phase I) 11/30/21 (Phase II) 08/30/24 (Phase III)		12/30/18 (Phase I) 12/13/22 (Phase II) 08/01/25 (Phase III)		Q3-FY21-22	
	\$24.9	12/29/34	\$24.9	12/29/34	\$24.9	12/29/34	\$24.9	12/29/34	\$36.5	1/31/28	\$24.9	12/29/34	\$36.5	01/31/28
10015076 San Antonio Pump Station MCC Upgrades	FY21-30		05/12/16		NA ³		01/28/22 ⁴		04/29/22		03/28/23		Q3-FY21-22	
	\$12.5	03/19/25	\$7.2	01/27/23	NA	NA	\$12.5	03/19/25	TBD	TBD	TBD	TBD	\$12.5	03/19/25
10015081 CSPL2 Reaches 2 and 3 Rehabilitation	FY21-30		09/12/16		06/30/22		11/18/22		11/07/23		05/28/24		Q3-FY21-22	
	\$50.0	10/10/23	\$55.9	10/10/23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$82.8	02/18/27
Water Supply & Storage														
10036998 Turner Dam and Reservoir Improvements	FY21-30		10/01/20		06/30/27		06/29/28		12/31/30		10/21/31		Q3-FY21-22	
	\$7.5	06/29/35	\$7.5	06/29/35	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$7.5	06/29/35

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. This represents a project milestone of 50% Design.
3. For San Antonio Pump Station MCC, CER was not needed.
4. For San Antonio Pump Station MCC 35% Design was replaced with 65%

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
10015091 Pilarcitos Dam Improvements	FY21-30		04/07/14		06/30/23		02/08/24		02/07/25		11/12/25		Q3-FY21-22	
	\$30.1	06/29/29	\$25.7	09/05/25	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$30.1	06/29/29
10015092 San Andreas Dam Facility Improvements	FY21-30		12/11/13 ³		09/29/23 ³		09/30/24 ³		05/26/26 ³		05/4/27 (Scope I) 04/10/29 (Scope II)		Q3-FY21-22	
	\$32.2	12/30/33	\$26.8	04/20/27	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$32.2	12/30/33
Watershed & Lands Management														
10015110 EBRPD Water System	FY21-30		06/02/14		01/31/19		08/09/19 ²		12/02/19		05/10/21		Q3-FY21-22	
	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22	\$5.6	10/31/22
10015108 Sneath Lane Gate/North San Andreas	FY21-30		02/01/21		03/24/22		10/16/24		05/09/25		10/28/25		Q3-FY21-22	
	\$6.7	01/27/28	\$6.7	01/27/28	\$6.7	08/02/27	TBD	TBD	TBD	TBD	TBD	TBD	\$6.7	08/02/27
10015113 Southern Skyline Blvd Ridge Trail Extension	FY21-30		10/31/12		03/09/15		9/10/15 ²		01/05/18		11/08/22		Q3-FY21-22	
	\$21.8	09/11/23	\$18.7	02/25/19	\$18.7	02/25/19	\$18.7	02/25/19	\$19.3	07/22/21	TBD	TBD	\$25.3	02/02/24
10030771 SA-1 Service Road/Ingoing Road	FY21-30		06/30/16		01/06/22		10/31/22		10/30/23		04/09/24		Q3-FY21-22	
	\$9.6	12/31/26	\$9.6	12/31/26	\$15.8	12/31/26	TBD	TBD	TBD	TBD	TBD	TBD	\$15.8	12/31/26
Buildings and Grounds														
10033555 Rollins Road Building Renovations	FY21-30		03/01/18		05/31/19		11/16/20		01/28/21		04/01/21		Q3-FY21-22	
	\$5.2	06/30/22	\$17.9	01/31/22	\$17.9	01/31/22	\$5.2	06/30/22	\$5.2	06/30/22	\$5.2	06/30/22	\$5.2	06/30/22

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. This represents a project milestone of 50% Design.
3. For San Andreas Dam Facility Improvements, all milestones except Awarded Construction represent the same date for both scopes.

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
10034526 Millbrae Warehouse Settlement & Admin. Bldg. HVAC	FY21-30		1/3/17		12/29/17 (Scope I) 01/2/18 (Scope II)		12/29/18(Scope I) 08/12/22 (Scope II)		08/03/20(Scope I) 03/29/23 (Scope II)		03/09/21 (Scope I) 08/8/23(Scope II)		Q3-FY21-22	
Scope I Scope II	\$5.5	11/30/23	\$5.5	11/30/23	\$5.5	11/30/23	\$5.5	11/30/23	\$5.5	11/30/23	\$5.5	11/30/23	\$16.1	09/30/24
10015124 Sunol Long Term Improvements	FY21-30		01/01/09		04/27/12		05/28/13 (Scope I) 08/07/14 (Scope II)		03/30/15 (Scope I) 10/02/15 (Scope II)		11/08/16 (Scope I) 12/10/19 (Scope II)		Q3-FY21-22	
Scope I Scope II	\$91.7	09/01/21	\$91.7	09/01/21	\$91.7	09/01/21	\$91.7	09/01/21	\$91.7	09/01/21	\$91.7	09/01/21	\$104.9	08/14/23
10015128 Millbrae Yard Laboratory and Shop Improvements	FY21-30		11/02/15		10/03/22		04/17/23		07/19/24		02/11/25		Q3-FY21-22	
	\$169.6	03/31/28	\$24.5	05/03/23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$169.6	03/30/29

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).

6. PROJECT PERFORMANCE SUMMARY*

All costs are shown in \$1,000s as of 03/19/22

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Water Treatment											
10033123 - SVWTP Ozone (CUW27202)	DS	\$ 165,130	\$ 165,130	\$ 192,816	\$ 5,832	(\$27,686)	-17%	06/30/27	06/30/27	06/30/28	(366)
10015064 - SVWTP Phase 3 and 4	PL	\$ 70,132	\$ 70,132	\$ 60,035	\$ 7,892	\$ 10,097	14%	06/30/26	06/30/26	05/17/27	(321)
10037628 - SVWTP Polymer Feed Facility	DS	\$ 7,537	\$ 7,537	\$ 19,046	\$ 187	(\$11,509)	-153%	09/27/24	09/27/24	08/01/25	(308)
10037349 - HTWTP Improvements Capital	DS	\$ 14,404	\$ 14,404	\$ 14,404	\$ 444	-	0%	06/28/24	06/28/24	06/28/24	-
10037350 - Regional Groundwater Treatment Improvement	PL	\$ 38,600	\$ 38,600	\$ 38,600	\$ 321	-	0%	12/27/29	12/27/29	02/26/30	(61)
Water Transmission											
10034578 - CSPL2 Reach 5 Lining Replacement	PL	\$ 13,031	\$ 13,031	\$ 23,697	\$ 857	(\$10,666)	-82%	09/19/25	09/19/25	04/07/26	(200)
10035029 - As-Needed Pipeline Repairs	DS	\$ 6,795	\$ 6,795	\$ 7,724	\$ 279	(\$929)	-14%	08/25/28	08/25/28	08/25/28	-
10036839 - BDPL4 PCCP Repair	PL	\$ 54,750	\$ 54,750	\$ 54,750	\$ 306	-	0%	11/22/23	11/22/23	05/28/25	(553)
10036840 - BDPL 1-4 Lining Repair	DS	\$ 9,350	\$ 9,350	\$ 10,764	\$ 204	(\$1,414)	-15%	08/25/28	08/25/28	08/25/28	-

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

**** Phase Status Legend**

PL	Planning	DS	Design
BA	Bid & Award	CN	Construction
MP	Multiple-Phase		

Footnotes:

- (+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
- (+++) **Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.**

I. Regional WECIP Quarterly Report

Q3-FY2021-2022 (01/01/22 - 03/31/22)

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Water Transmission											
10015071 - Corrosion Control	DS	\$ 24,900	\$ 24,900	\$ 36,536	\$ 7,788	(\$11,636)	-47%	12/29/34	12/29/34	01/31/28	2,524
10015076 - San Antonio Pump Station MCC Upgrades	DS	\$ 12,500	\$ 12,500	\$ 12,500	\$ 1,012	-	0%	03/19/25	03/19/25	03/19/25	-
10015081 - CSPL2 Reaches 2 and 3 Rehabilitation	PL	\$ 50,041	\$ 50,041	\$ 82,813	\$ 1,907	(\$32,772)	-65%	06/12/26	06/12/26	02/18/27	(251)
Water Supply & Storage											
10036998 - Turner Dam and Reservoir Improvements	PL	\$ 7,500	\$ 7,500	\$ 7,500	\$ 500	-	0%	06/29/35	06/29/35	06/29/35	-
10015091 - Pilarcitos Dam Improvements	PL	\$ 30,087	\$ 30,087	\$ 30,087	\$ 3,610	-	0%	06/29/29	06/29/29	06/29/29	-
10015092 - San Andreas Dam Facility Improvements	PL	\$ 32,195	\$ 32,195	\$ 32,195	\$ 1,464	-	0%	12/30/33	12/30/33	12/30/33	-
Watershed & Lands Management											
10015110 - EBRPD WATER SYSTEM	CN	\$ 5,376	\$ 5,376	\$ 5,553	\$ 2,954	(\$177)	-3%	10/31/22	10/31/22	10/31/22	-
10015108 - Sneath Lane Gate/North San Andreas	PL	\$ 6,698	\$ 6,698	\$ 6,698	\$ 273	-	0%	01/27/28	01/27/28	08/02/27	178

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

**** Phase Status Legend**

PL Planning	DS Design
BA Bid & Award	CN Construction MP Multiple-Phase

Footnotes:

- (+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
- (+++) **Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.**

I. Regional WECIP Quarterly Report

Q3-FY2021-2022 (01/01/22 - 03/31/22)

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Watershed & Lands Management											
10015113 - Southern Skyline Blvd Ridge Trail Extension	BA	\$ 21,805	\$ 21,805	\$ 25,274	\$ 5,422	(\$3,469)	-16%	09/11/23	09/11/23	03/01/25	(537)
10030771 - SA-1 Service Road/Ingoing Road	DS	\$ 9,568	\$ 9,568	\$ 15,817	\$ 647	(\$6,249)	-65%	12/31/26	12/31/26	12/31/26	-
Buildings and Grounds											
10033555 - Rollins Road Building Renovations (CUW27703)	CN	\$ 5,192	\$ 5,192	\$ 5,192	\$ 3,167	-	0%	06/30/22	06/30/22	06/30/22	-
10034526 - Millbrae Warehouse Settlement & Admin. Bldg. HVAC	DS	\$ 5,500	\$ 5,500	\$ 16,080	\$ 1,907	(\$10,580)	-192%	11/30/23	11/30/23	09/30/24	(305)
10015124 - Sunol Long Term Improvements	CN	\$ 100,414	\$ 100,414	\$ 104,914	\$ 92,119	(\$4,500)	-4%	09/13/22	09/13/22	08/14/23	(335)
10015128 - Millbrae Yard Laboratory and Shop Improvements	PL	\$ 169,563	\$ 169,563	\$ 169,563	\$ 3,109	-	0%	03/31/28	03/31/28	03/30/29	(364)

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

**** Phase Status Legend**

PL Planning	DS Design
BA Bid & Award	CN Construction
MP Multiple-Phase	

Footnotes:







- (+)** CIP Approved Budget and Project Completion Date: The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++)** Current Approved Budget and Schedule: The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
- (+++)** Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.

I. Regional WECIP Quarterly Report

7. PROJECT STATUS REPORT

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: Design		Environmental Status: Active (CatEx)	
Project Cost:			Project Schedule:		
Approved		\$165.13 M	Approved Jun-17		Jun-27
Forecast		\$192.82 M	Forecast Jun-17		Jun-28
Actual		\$5.83 M	Project Percent Complete: 3.3%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	06/29/23	08/09/23	01/02/24	07/01/27	

Progress and Status:

During this reporting period, the Final Conceptual Engineering Report (CER) was presented and approved by the Technical Steering Committee and the Round 3 Treatability Testing Final Technical Memorandum was completed. The 35% design work and environmental work on the CEQA determination was initiated. A Memorandum of Understanding was issued to Public Works - Bureau of Architecture for architectural design services. The Bureau of Architecture started work on the 35% design.

Issues and Challenges:

The variance in the forecast budget, same as reported in the second quarter (Q2) of FY21/22, is due to refinements to the design including bypassing and relocating existing raw water pipelines; additional components for the ozone application; expansion of the contactor basin configuration; and increases in estimated costs for materials, contingencies, and escalation. Several scope items were identified, analyzed, and rejected for purposes of cost savings, including overflow chemical tanks and space for a future generator in the ozone building. The Team will continue to look for cost saving opportunities during the design. The current variance in the forecast schedule, same as reported in Q2, is to allow an additional 6 months for the relocation and bypassing of existing raw water pipelines and an additional 6 months for start-up, testing, training, project turnover,









Rendering of Ozone Facility

and closeout.

10015064 - 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 (CatEx)
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Project Cost:		Project Schedule:	
Approved	 \$70.13 M	Approved Mar-14	 Jun-26
Forecast	 \$60.03 M	Forecast Mar-14	 May-27
Actual	 \$7.89 M	Project Percent Complete: 11.6%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	04/03/23	(A) 06/08/23 (B) 10/10/24	(A) 11/14/23 (B) 03/21/25	11/14/24 08/04/25

Progress and Status:

During the reporting period, the 25 identified scope items were reprioritized and regrouped to include 9 items that will be the scope for the Short Term Improvement project in the next 10-Year CIP, and the remaining 16 items will be the scope for the Long Term Improvement project in the next 10-Year CIP. The workplan for the planning phase of the Short Term Improvements scope is being updated. Support for the 16 items under the Long Term Improvements will be included in a new Request for Proposal for engineering planning and design services.



Inspection of Sedimentation Basin 1







Issues and Challenges:

The variance in the cost and schedule forecasts, same as reported in Q2, are due to the project being re-sequenced and rescoped into two separate projects: SVWTP Short Term Improvements and SVWTP Long Term Improvements; these projects will be reported separately beginning in Q1 of FY22/23. The cost forecast of \$60M is for the SVWTP Short Term Improvement project proposed budget, and the remaining budget of \$10M is the proposed budget for the SVWTP Long Term Improvements project. The variance in schedule forecast is due to multiple construction projects that will increase the project duration.

I. Regional WECIP Quarterly Report

10037628 - SVWTP Polymer Feed Facility

Project Description: 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. Planning and some design were performed under the Water System Improvement Program (WSIP); this project will finish design and construct the improvements.

Program: Water Treatment		Project Status: Design		Environmental Status: Active (CatEx)	
Project Cost:			Project Schedule:		
Approved		\$7.54 M	Approved Mar-21		Sep-24
Forecast		\$19.05 M	Forecast Jul-21		Aug-25
Actual		\$0.19 M	Project Percent Complete: 0.3%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	04/01/22	01/30/23	07/27/23	07/31/25	

Progress and Status:

A draft cost evaluation technical memorandum on the 65% design was prepared, and it identified three options for the facility, with associated costs for each option. The Team is working to produce a presentation of the findings and will present these findings to the Technical Steering Committee during the next reporting period.

Issues and Challenges:

The variance in the forecast budget, same as reported in Q2, is due to design development that resulted in higher costs for building systems, foundation and structural steel systems, polymer feed system and components; missed items in the previous engineer's estimates; and increases in contingencies and escalation costs. The variance in the forecast schedule, same as reported in Q2, is to allow 6 months for the redesign to incorporate a selected value engineering option, and an additional 5 months for startup, testing, training, facility turnover, and closeout.






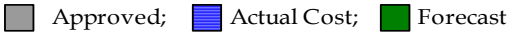


Mobile Pilot Plant

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: Design	Environmental Status: Completed (CatEx)
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Project Cost:		Project Schedule:	
Approved  \$14.40 M		Approved Nov-20  Jun-24	
Forecast  \$14.40 M		Forecast Nov-20  Jun-24	
Actual  \$0.44 M		Project Percent Complete: 18.7%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	10/29/21✓	04/14/22	12/30/22	12/30/23

Progress and Status:

The 95% design and the 100% design for replacement of the plastic underdrains of Filters 1 through 6 with stainless steel underdrains were both completed this quarter. The bid package is being prepared, and the contract is anticipated to be ready for advertisement early next quarter. The project is ahead of schedule.

Issues and Challenges:

None at this time.








Example of air distribution piping inside a filter gullet to be used at HTWTP

I. Regional WECIP Quarterly Report

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 (CatEx)
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Project Cost:	Project Schedule:
Approved  \$38.60 M	Approved Aug-20  Dec-29
Forecast  \$38.60 M	Forecast Aug-20  Feb-30
Actual  \$0.32 M	Project Percent Complete: 0.5%

 Approved;  Actual Cost;  Forecast

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	01/20/27	04/07/27	08/30/27	08/29/29

Progress and Status:

The Regional Groundwater Treatment Evaluation report, including an overview of options for centralized treatment facilities for the regional groundwater wells, was finalized this quarter. Preparation of a Request for Proposals to procure a professional services contract for assistance with the planning, design, engineering services during construction, and closeout of the project is continuing.

Issues and Challenges:






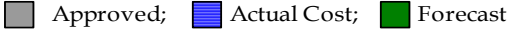
The variance in the forecast schedule, same as reported in Q2, is due to the additional unanticipated time required to procure a consultant to provide services for planning, design, construction, and closeout.



Regional Groundwater Wells

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 (CatEx)
Project Cost:		Project Schedule:
Approved 	\$13.03 M	Approved Feb-19  Sep-25
Forecast 	\$23.70 M	Forecast Feb-19  Apr-26
Actual 	\$0.86 M	Project Percent Complete: 6.1%
		

Key Milestones:	Environmental** Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	See Note	10/20/23	03/04/24	09/30/25

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

Progress and Status:

The new pipeline consultant received authorization to begin preparing the Conceptual Engineering Report (CER) during this quarter. Planning for surveying and geotechnical studies began.

Issues and Challenges:

The variance in the budget, same as reported in Q2, is due to the addition of scope during the alternatives analysis, including the improvement of an additional 34 appurtenances, removal of the coal tar lining to the highest level of cleanliness, and the potential repair of sections of 3 parallel pipelines (San Andreas Pipeline No. 2, San Andreas Pipeline No. 3 and the Sunset Supply Pipeline) near the Baden Pump Station due to possible corrosion. The variance in the schedule, same as reported in Q2, is due to additional unanticipated time required to procure a consultant to assist with the planning phase and future design phase.









Lining Disbondment and Scaling

I. Regional WECIP Quarterly Report

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.

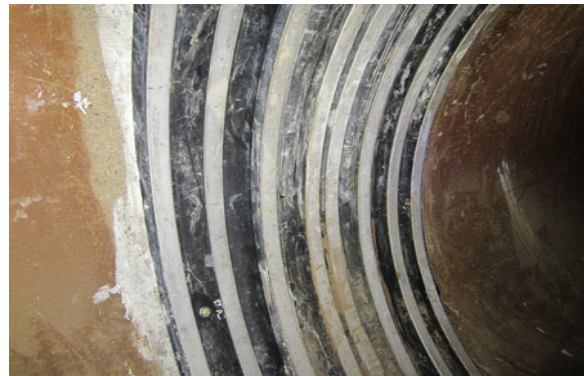
Program: Water Transmission		Project Status: Design		Environmental Status: Active (CatEx)	
Project Cost:			Project Schedule:		
Approved		\$6.80 M	Approved Oct-16		Aug-28
Forecast		\$7.72 M	Forecast Oct-16		Aug-28
Actual		\$0.28 M	Project Percent Complete: 8.1%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	03/24/23	12/18/23	05/21/24	02/21/28	

Progress and Status:

Evaluation of alternative safe pipeline entry measures was completed during the quarter. The installation of extra valves was determined to be the preferred alternative.

Issues and Challenges:

The variance between the approved and forecast cost, same as reported in Q2, is due to the additional cost to accommodate safe pipeline entry requirements. Since installation of extra valves was selected as the preferred safe pipeline entry measure, additional cost increase per length of pipe is anticipated when fully assessed.








Typical pipeline repairs with WEKO seals

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 (CatEx)
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Project Cost:		Project Schedule:	
Approved	 \$54.75 M	Approved May-20	 Nov-23
Forecast	 \$54.75 M	Forecast May-20	 May-25
Actual	\$0.31 M	Project Percent Complete: 0.6%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/30/23	07/25/23	12/22/23	11/27/24

Progress and Status:

The new pipeline consultant received authorization to prepare a Needs Assessment Report and has begun review of background documents.

Issues and Challenges:

The variance in schedule, same as reported in Q2, is due to the ongoing discovery of new leaks in the pipeline and the potential need to repair different or additional segments of pipeline. With the discovery of new leaks, various immediate and short-term solutions, as well as long-term solutions, are being considered and will be further evaluated in the Needs Assessment that is currently being prepared.









Void beneath pipeline discovered during leak investigation

I. Regional WECIP Quarterly Report

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: Water Transmission		Project Status: Design		Environmental Status: Active (CatEx)	
Project Cost:			Project Schedule:		
Approved		\$9.35 M	Approved Sep-16		Aug-28
Forecast		\$10.76 M	Forecast Sep-16		Aug-28
Actual		\$0.20 M	Project Percent Complete: 3.5%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	08/19/22	12/14/23	05/16/24	01/04/28	

Progress and Status:

Design of the lining repairs is continuing. Evaluation of safe pipeline entry measures was completed, and the installation of extra valves was determined to be the preferred method to provide worker safety when performing maintenance within the pipes.

Issues and Challenges:

The variance between the approved and forecast cost, same as reported in Q2, is due to modifications to design since project inception. Since installation of extra valves was selected as the preferred safe pipeline entry measure, additional cost increase per length of pipe is anticipated when fully assessed.









Typical butterfly valve to be installed for pipeline safe entry

10015071 - 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: Active (CatEx)
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Project Cost:		Project Schedule:	
Approved 	\$24.90 M	Approved Jan-16 	Dec-34
Forecast 	\$36.54 M	Forecast Jan-16 	Jan-28
Actual 	\$7.79 M	Project Percent Complete: 46.1%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	01/31/22✓	07/11/22	01/05/23	01/06/25

Progress and Status:

The project team continues development of the 100% design and contract advertisement documents. The Phase 3 project is being accelerated in order to complete cathodic protection installations at an earlier date and eliminate additional escalation costs.

Issues and Challenges:

The variance in the forecast cost and schedule, same as reported in Q2, are due primarily to PG&E’s late decision to require step-down facilities at all new power connections.









Deep Anode Installation – Corrosion Phase 1

I. Regional WECIP Quarterly Report

10015076 - 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: Active (CatEx)	
Project Cost:			Project Schedule:		
Approved		\$12.50 M	Approved May-16		Mar-25
Forecast		\$12.50 M	Forecast May-16		Mar-25
Actual		\$1.01 M	Project Percent Complete: 13.4%		
					
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 SAPS building foundation was seismically upgraded in 2009, but recent code changes require the building to be reassessed under current code. Based on the updated code, and on new seismic parameters received from the Geotechnical consultant during the quarter, the preliminary structural analysis has determined that the foundation will require use of micropiles for the two walls adjacent to the room being seismically upgraded. The design team is looking at cost-effective options to implement the foundation changes in the project, including fewer micropiles, combined micropile caps, and locating the micropiles on the exterior of the building as much as feasible. Although the structural design has increased the project's scope, it is expected that the project team can still meet the current schedule. The cost impact for the foundation design will be evaluated upon completion of the 95% design.



San Antonio Pump Station building looking southeast






Issues and Challenges:

None at this time.

10015081 - 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  \$82.81 M	Forecast Sep-16  Feb-27
Actual  \$1.91 M	Project Percent Complete: 2.4%

 Approved;  Actual Cost;  Forecast

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	12/21/23	03/14/24	08/21/24	08/21/26

Progress and Status:

San Francisco Public Works is nearing completion of surveying and geotechnical field investigation work; the results will be included in the draft Conceptual Engineering Report (CER).

Issues and Challenges:

The variance from the approved budget, same as reported in Q2, is due to estimating the construction cost based on unit costs from recently bid and similar complexity pipeline projects that were bid during recent market conditions. This has resulted in a significantly higher forecasted cost than previously estimated. The variance in the schedule, same as reported in Q2, is due to the lengthy amount of time required to procure a consultant to assist with the planning phase and future design phase.






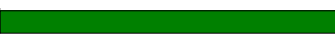


Pipeline excavated for corrosion investigation

I. Regional WECIP Quarterly Report

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.

Program: <i>Water Supply & Storage</i>	Project Status: <i>Planning</i>	Environmental Status: <i>Not Initiated (EIR)</i>
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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	 \$0.50 M	Project Percent Complete: <i>4.0%</i>	
			

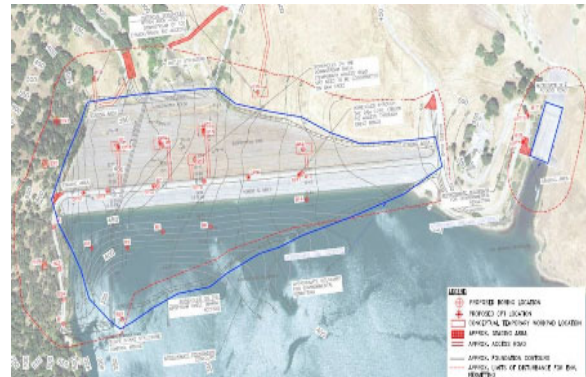
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/30/31	07/01/31	01/02/32	12/29/34

Progress and Status:

Division of Safety of Dams (DSOD) provided comments on the geotechnical investigation workplan during the quarter. The permit for geotechnical investigation work will be issued next quarter, in early April, allowing the work to start as planned. CEQA documents and all the environmental permits were received for the project.

Issues and Challenges:

None at this time.








Turner Dam Geotechnical Exploration Plan

10015091 - 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 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 Pilarcitos Dam and Reservoir facilities, including the dam and forebay outlet structure, spillway, outlet tunnel, and outlet pipeline, and will perform necessary upgrades identified during the Planning Phase.

Program: Water Supply & Storage	Project Status: Planning	Environmental Status: Not Initiated (MND)
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Project Cost:	Project Schedule:
Approved  \$30.09 M	Approved Apr-14  Jun-29
Forecast  \$30.09 M	Forecast Apr-14  Jun-29
Actual  \$3.61 M	Project Percent Complete: 19.9%

 Approved;  Actual Cost;  Forecast

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:

The project team started analyzing the nine alternatives identified during the Condition and Needs Assessment phase. These alternatives will be further screened and reduced to four to six alternatives for more detailed evaluation during the Alternative Analysis phase.

Issues and Challenges:

Based on the latest assessment on the schedule, the planning phase may need to be extended to accommodate the additional time spent on the geotechnical investigation and additional studies performed for the condition and needs assessments. The overall project schedule and budget will be reforecast once the scope is defined at the end of the Alternative Analysis phase.



Spillway cleaning and mapping for condition assessment

I. Regional WECIP Quarterly Report

10015092 - 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, including the dam, spillway, emergency outlet, and ancillary facilities, and perform necessary upgrades identified during the Planning Phase..

Program: Water Supply & Storage		Project Status: Planning		Environmental Status: Not Initiated (Various)	
Project Cost:			Project Schedule:		
Approved		\$32.20 M	Approved Dec-13		Dec-33
Forecast		\$32.20 M	Forecast Dec-13		Dec-33
Actual		\$1.46 M	Project Percent Complete: 6.5%		
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	

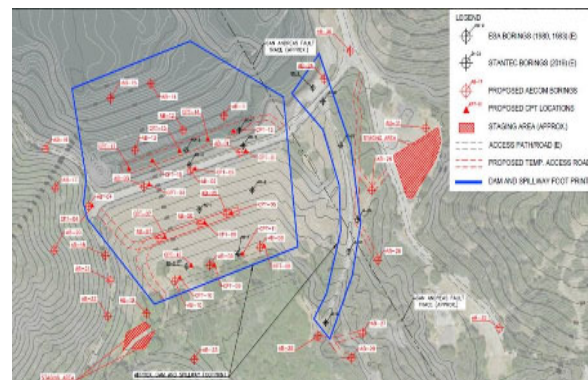
** (A) CatEx; (B) MND

Progress and Status:

The project team started analyzing the nine alternatives identified during the Condition and Needs Assessment phase. While these alternatives are being analyzed, additional geotechnical investigation will be started next quarter to provide information needed to complete the Alternative Analysis Report. During this quarter, Division of Safety of Dams (DSOD) provided comments on the geotechnical investigation workplan. The permit for the geotechnical investigation work is anticipated to be issued next quarter, in early April, which will allow the field work to start as planned. CEQA documents and environmental permits for geotechnical investigations were all obtained during the quarter, except for the permit from California Department of Fish and Wildlife (CDFW) anticipated by mid-April.

Issues and Challenges:

The approved schedule assumed the construction work for the spillway and emergency drawdown outlet structures would be completed two years before the dam embankment. Based on the preliminary needs assessment and condition assessment findings, it is now recommended that the alternatives analysis also include analysis for combining the construction of these three major components under a single construction contract, which will impact the project









San Andreas Geotechnical Exploration Plan

overall schedule. Since the project is still in early planning phase, the overall project schedule and budget will be reforecast once the scope of work is defined at the end of the Alternative Analysis phase.

10015110 - 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. The project purpose is to provide a reliable water supply for potable use at the EBRPD facilities within 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	 \$5.55 M	Forecast Jun-14	 Oct-22
Actual	 \$2.95 M	Project Percent Complete: 55.6%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	11/05/20✓	10/09/20✓	05/10/21✓	07/08/22

Progress and Status:

During this reporting period, the Bay Area Air Quality Management District (BAAQMD) approved the Asbestos Dust Mitigation Plan (ADMP). The contractor was subsequently authorized to begin groundbreaking construction work. The Construction Final Completion date was updated to July 8, 2022 based on the delay in construction start. The contractor anticipates being able to complete construction by this final completion date. Construction work is ongoing in both the High Valley and Park Headquarters areas.



Sunol Regional Wilderness Park High Valley Area

Issues and Challenges:







The forecasted budget exceeds the approved, same as reported in Q2, due to the need for Naturally Occurring Asbestos (NOA) monitoring required by the ADMP. The forecasted schedule does not exceed the approved completion date at this time; however, the project will be reviewed for schedule impacts due to the additional time taken by the Contractor to obtain ADMP approval.

I. Regional WECIP Quarterly Report

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: Watershed & Lands Management	Project Status: Planning	Environmental Status: Not Initiated (CatEx)
--	---------------------------------	--

Project Cost:		Project Schedule:	
Approved	 \$6.70 M	Approved Feb-21	 Jan-28
Forecast	 \$6.70 M	Forecast Feb-21	 Aug-27
Actual	 \$0.27 M	Project Percent Complete: 12.3%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	01/17/25	07/01/25	01/02/26	02/01/27

Progress and Status:

During this reporting period, the Technical Steering Committee approved the Conceptual Engineering Report.

Issues and Challenges:







The most recent engineer's estimate for construction exceeds the approved construction budget. Value engineering options will be identified in the design phase. Since the project is in early planning phase, no changes to the schedule forecast are reported at this time.



Sneath Lane Gate Trailhead - View Looking South

10015113 - 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: Bid and Award	Environmental Status: Active (EIR)
Project Cost:		Project Schedule:
Approved  \$21.81 M	Approved Oct-12  Sep-23	
Forecast  \$25.27 M	Forecast Oct-12  Mar-25	
Actual  \$5.42 M	Project Percent Complete: 28.4%	
		

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	05/11/21✓	09/01/22	03/01/23	09/01/24

Progress and Status:

During this reporting period, the project team developed responses to the US Fish and Wildlife Services’ questions and researched real estate issues related to the right of way (ROW). The project team prepared some of the required documents for the Federal grant. The Federal grant administered through CalTrans has also triggered the need to comply with National Environmental Protection Act permitting requirements, including additional compliance with Americans with Disabilities Act requirements and reviews by federal agencies including the US Fish and Wildlife Services. This has triggered additional evaluations, consultations, and further delays in advertising the contract.



View of southern trail alignment

Issues and Challenges:

The variance in schedule has been extended by an additional 13 months this quarter due to unanticipated additional requirements to receive the \$1M Federal Highway Administration grant. Prior to advertisement, requirements for compliance with the National Environmental Policy Act (NEPA) include consultation with the State Historic Preservation Officer and the United States Fish and Wildlife Service. The PUC standard specifications are being re-written to conform to federal law, including provisions related






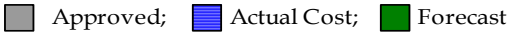
to Disadvantaged Business Enterprise participation goals, Davis Bacon Act, and project labor participation.

I. Regional WECIP Quarterly Report

10030771 - 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: Design	Environmental Status: Active (MND)
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Project Cost:		Project Schedule:	
Approved 	\$9.57 M	Approved Jun-16 	Dec-26
Forecast 	\$15.82 M	Forecast Jun-16 	Dec-26
Actual 	\$0.65 M	Project Percent Complete: 4.8%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/15/23	01/24/24	06/26/24	06/24/26

Progress and Status:

The Technical Steering Committee approved the project to move to design phase during the quarter, on January 6, 2022. The project team held a kick-off meeting with the design team. The environmental compliance work was started; the existing Watershed Environmental Impact Report is planned to be modified to include this project.

Issues and Challenges:







The variance between budget and forecast cost, same as reported in Q2, is due to increased scope recommended for slope stabilization, reservoir drawdown requirements for construction, and scope refinement. The project team will consider value engineering and alternatives for roadway realignment south of San Andreas Road to reduce project costs.



Project Map – SA-1 Service Road/Ingoing Road

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, in order to relocate personnel at 1657 Rollins Road to Millbrae Yard campus following the completion of the Millbrae Yard Lab & Shops Project, and decrease this project’s scope to minor necessary tenant improvements. 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 to accommodate the Rollins Road building staff.

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	 \$3.17 M	Project Percent Complete: 61.9%		
				
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	10/30/20✓	N/A	12/08/20✓	06/30/22

Progress and Status:

During this reporting period, the access control security system was commissioned and accepted. Nine of the security cameras were installed, and the security software was configured.

Issues and Challenges:

The forecasted construction completion date, same as reported in Q2, exceeds the approved completion date because supply chain issues have delayed the delivery of the security cameras for more than 6 months. Delivery of the remaining two security cameras is now anticipated in April 2022. Installation of the remaining cameras and commissioning of the security system software is delayed until these final two security cameras are delivered.











View of new entry gate at southern entrance

I. Regional WECIP Quarterly Report

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: Completed (MND)
Project Cost: Approved  \$5.50 M Forecast  \$16.08 M Actual  \$1.91 M		Project Schedule: Approved Jan-17  Nov-23 Forecast Jan-17  Sep-24 Project Percent Complete: 32.2%
 Approved;  Actual Cost;  Forecast		

Key Milestones:	Environmental** Approval	Bid+ Advertisement	Construction+ NTP	Construction+ Final Completion
Current Forecast	(A) 08/31/20✓ (B) 01/12/22✓	(A) 09/01/20✓ (B) 05/22/23	(A) 06/16/21✓ (B) 11/01/23	11/24/21✓ 09/27/24

+ 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:

The sub-project Millbrae Warehouse Loading Dock Repair is now in closeout phase; and Commission acceptance of the work and approval of final payment to the contractor will be sought next quarter. Construction was completed under budget and in advance of schedule. Final modification reduced the contract amount by \$75,000 due to unused allowances. The second sub-project, Millbrae HVAC Upgrades, re-started design phase after approval from the San Francisco Arts Commission this quarter. Due to increased project cost, the project team looked into value engineering by hiring an HVAC expert to perform testing of the existing conduit system. The recommended intermediate fix for the HVAC system would allow 10-15 years of air efficiency in the building. Use of this intermediate fix may result in cost savings. The project team will evaluate the proposal in the next quarter.



Existing Millbrae Administration Building







laboratory analyses. The design changes and additional construction scope for this relocation have significantly increased the cost forecast. The design team is investigating options to reduce costs. Additional time is forecasted to be needed due to the redesign of the HVAC system, Arts Commission review of the outdoor structure, changes to the environmental permit, and negotiations with SFPW for design services.

Issues and Challenges:

The variances in the forecast cost and schedule from the approved baseline, same as reported in Q2, are due to the need to relocate the HVAC system outdoors due to building seismic and structural load requirements, and also increased ventilation requirements for some

10015124 - 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  \$104.91 M	Forecast Jan-09  Aug-23	
Actual  \$92.12 M	Project Percent Complete: 90.8%	
		

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✓ 08/14/22

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

Progress and Status:

Sunol Yard (Contract A): The project closeout dossier is being finalized.

Watershed Center (Contract B): Construction work on the building interior continued, including electrical work, pond filter system, HVAC, aquarium systems, fish quarantine room, floor polishing, wood slat ceilings and doors. Construction work on the exterior continued, including granite-crete pathways, planting, bluestone boulders, outdoor lighting, eagle sculpture and fencing. Work on the windows, irrigation system, temple forecourt, photovoltaic panels, access stairs, and ramps to the picnic area were completed. Several windows will need to be replaced due to damage, sizing issue, and defects. The exhibit submittals work and meetings are on-going.

Issues and Challenges:

The forecasted schedule, same as reported in Q2, exceeds the approved completion date due to procurement delays for bluestone pavers, boulders, and stencil materials as well as bird-proof glass. The design and installation of the interior exhibits is also delayed due to extended time to redesign, fabricate,









Exhibition Hall – Topping Slab Preparation

and install the exhibits and to complete the exhibit hardware and programming work. An additional 6 months has been added to the closeout phase to allow for training, start-up and maintenance planning with operations and Natural Resources and Lands Management staff. The forecasted cost, same as reported in Q2, exceeds the approved budget due to the addition of scope requested for overflow parking space, backup power system, picnic area restoration, purchase of composting toilets, and exhibit revisions.

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10015128 - 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. 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-29
Actual	 \$3.11 M	Project Percent Complete: 1.5%		
				
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	07/27/23	N/A	04/15/25	03/31/28

Progress and Status:

Development of an overall site plan that includes access and circulation of equipment, employees, fleet vehicles, delivery vehicles, and pick-up vehicles continued. Several consultants have been added during the quarter to work on the conceptual laboratory design; campus utility planning; and identification of the mechanical, electrical, and plumbing system needs for the laboratory and the south shop. Consultants have also started development of the design elements to obtain Leadership in Energy and Environmental Design (LEED) certification. No parking garage is included in the design; instead the existing parking spaces in the current tenant area will be reserved to meet the future parking needs of the employees in the Millbrae Yard campus.



Existing Administration Building

and closeout activities for this complex building project.

Issues and Challenges:

The variance in schedule, same as reported in Q2, is due to Public Works Bureau of Construction Management's proposed extension of the construction duration from 30 months to 36 months to be better aligned with construction schedules on recent building projects. Also, increase of the closeout phase duration from 6 months to 12 months is forecasted due to the likelihood of longer time needed to complete start-up

8. 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								
10015110 - WD-2865 PUC Sunol Rgnl WP WTR Sys	05/10/21	05/28/22	07/08/22	\$ 2,634,808	\$ 2,634,808	(41)	-	60.0%
Buildings and Grounds								
10015124 - WD-2794B Sunol Long Term Improvements - Watershed Center	03/09/20	03/16/22	08/14/22	\$ 31,172,727	\$ 31,942,983	(151)	(\$770,256)	79.0%

Program Total for On-Going Construction	Approved Contract Cost		Current Forecasted Cost		Variance	
					Cost	Percent
		\$ 33,807,535	\$ 34,577,791	(\$770,256)	(2.3%)	

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.

9. PROJECTS IN CLOSEOUT

There are no active projects currently in closeout phase.

10. COMPLETED PROJECTS

Project Title	Approved Project Completion	Actual Project Completion	Approved Project Budget	Project Expenditures To Date
Water Transmission				
10015080 - San Andreas Pipeline No. 2 Replacement	12/08/21	12/08/21	\$ 45,642,000	\$ 42,035,344
TOTAL			\$ 45,642,000	\$ 42,035,344

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II. Local Capital Improvement Program

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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 and 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 every two years (with minor modifications in the off years) 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 January 1, 2022 and March 31, 2022. This document serves as the third (3rd) Quarterly Report in Fiscal Year 2021-2022 (FY22) 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.

Going forward, changes to the approved baseline program, including any changes to continuing projects' scopes, schedules, and budgets, will be proposed as part of the bi-annually updated 10- year CIP to be approved by the SFPUC Commission. The proposed revisions to the program will become the new baseline for new and continuing projects' scopes, schedules, and budgets in the beginning of the new fiscal year following SFPUC Commission approval.

Figure 2.1 shows the total Current Approved Budget for the Local projects in each phase of the program as of March 31, 2022. The number of projects currently active in each phase is shown in parentheses.

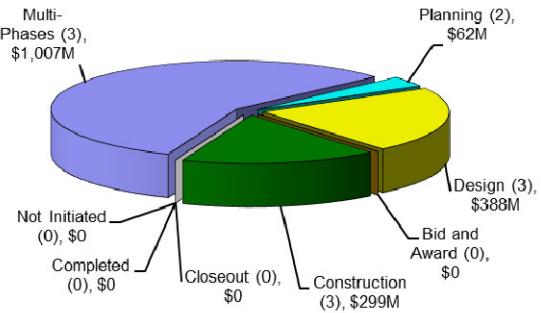


Figure 2.1 Total Current Approved Budget for Local Projects Active in Each Phase

Figure 2.2 shows the number of Local projects in the following phases as of March 31, 2022: Pre-construction, Construction, and Post-construction.

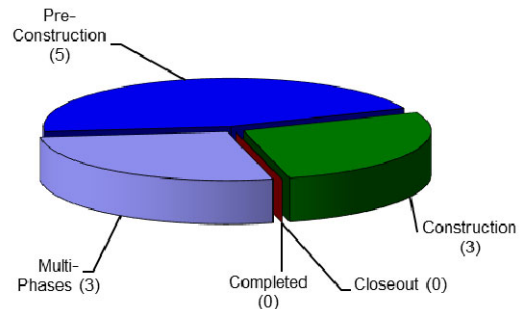


Figure 2.2 Number of Local Projects in Pre-construction, Construction, and Post-construction

Figure 2.3 summarizes the environmental review status of the Local projects as of March 31, 2022.

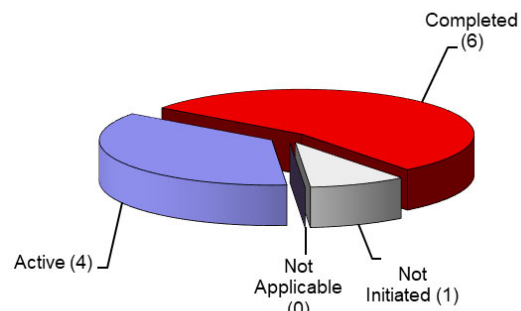
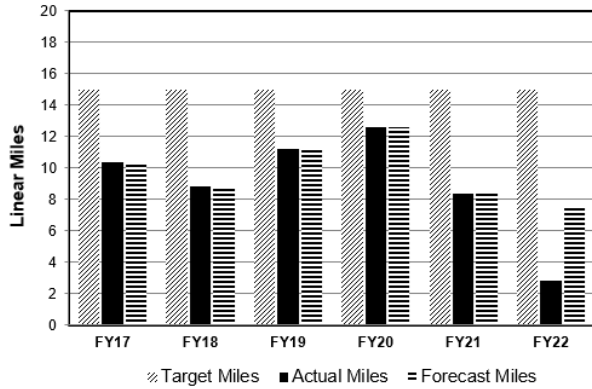


Figure 2.3 Local Program Environmental Status

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 FY17. At the end of FY22, 7.5 miles of pipe are forecasted to be replaced.

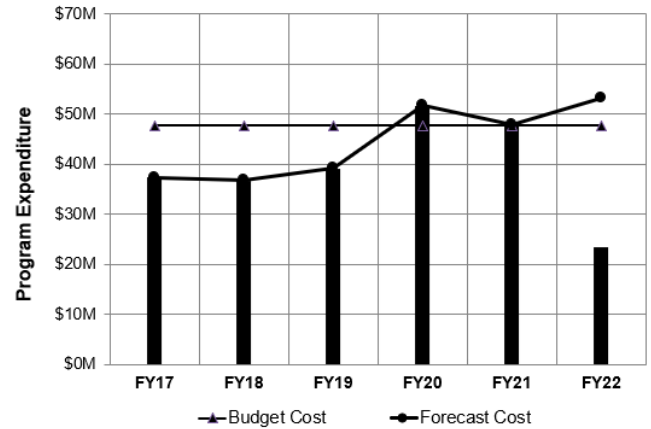


	FY17	FY18	FY19	FY20	FY21	FY22
Target Miles	15.0	15.0	15.0	15.0	15.0	15.0
Actual Miles	10.4	8.8	11.2	12.6	8.4	2.8
Forecast Miles						7.5

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

Water main replacement projects with construction underway in the 3rd quarter of FY22 included the City streets of Pierce Street, Castro Street, 17th Street, Baker Street, 19th Avenue, Casitas Avenue, Vicente Street, College Hill Reservoir pipelines, Prospect Avenue, and L-Taraval Segment B (Taraval Street). Water main replacement projects which achieved substantial completion during the 3rd quarter of FY21-22 included the contract for Casitas Avenue. The Diamond Street Project received preconstruction notice to proceed during the 3rd quarter and is anticipated to start construction during the 4th quarter following Contractor procurement of pipeline materials.

Figure 2.5 above shows the annual total program expenditure by fiscal year for the pipeline replacement program. Program



	FY17	FY18	FY19	FY20	FY21	FY22
Budget	\$47.7M	\$47.7M	\$47.7M	\$47.7M	\$47.7M	\$47.7M
Actual Expenditure	\$37.3M	\$36.8M	\$39.2M	\$51.7M	\$47.8M	\$23.4M
Forecast Expenditure						\$53.1M

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

expenditures are forecast to be higher than the budgeted annual amount of \$47.7M over the next three years to account for the delayed start of several large streetscape improvement projects mentioned above. The budgeted cost per mile has been updated for FY22 from \$3.18 million per mile to \$5.4 million per mile for replacement of water distribution mains. The updated cost per mile for streetscape, transit, or ERDIP type projects is approximately \$8 million per mile. The updated cost per mile for water main replacement projects is 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

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protection requirements and restricted work hours.

- Changes in SFPW's requirements for pavement restoration, code-compliant curb ramps, and permitting in the City continue to increase the cost of pipe replacement projects over earlier estimates.

3. CAPITAL IMPROVEMENT PROGRAM COST SUMMARY

Table 3 provides an overall program-level cost summary by categories of projects for the Water Enterprise CIP Local Program. It shows the Expenditures to Date, Current Approved Budgets, Q3/FY21-22 Forecasted Costs, Cost Variance between the Current Approved Budgets and Forecasted Costs, and Variance Over Reporting Period (difference between cost forecasts reported in Q2/FY21-22 and Q3/FY21-22).

Note that during Q2/FY21-22 the project teams were requested to forecast any major changes in budget, scope and schedule that should be included as a proposed change in the FY23-32 10- Year CIP budget proposal. Thus, the

forecasts that were included in the Q2 report are the same as the proposed changes to project budgets and schedules that were included in the 10-Year CIP budget proposal that was presented to the Commission for approval on February 8, 2022. These forecasted changes from Q2 will become the approved budgets and schedules after full approval of the SFPUC's budgets starting in Q1/FY22-23. For this Q3/FY21-22 report and for the Q4/FY21-22 report, any additional variances that exceed the proposed budgets and schedules approved for FY22/23 will also be reported.

There were no new cost variances for Local projects during Q3. The total Current Approved Budget (including Regional and Local Programs) and Current Forecasted Cost at completion are \$2,674.2 million and \$3,301.7 million, respectively, same as reported last quarter. The Current Approved Budget and Forecasted Cost at completion for only the Local Water Program (including construction contingency) are \$1,755.4 million and \$2,271.4 million, respectively.

Table 3. Program Cost Summary

Programs	Expenditures To Date (\$ Million) (A)	Current Approved Budget (\$ Million) (B)	Q3/FY21-22 Forecasted Costs (\$ Million) (C)	Cost Variance (\$ Million) (D = B - C)	Variance Over Reporting Period* (\$ Million) (E)
Local Program	\$761.90	\$1,755.36	\$2,271.39	(\$516.03)	-
Local Water Conveyance/ Distribution System	\$420.28	\$810.58	\$1,273.20	(\$462.62)	-
Local Water Supply	\$255.58	\$312.54	\$322.54	(\$10.00)	-
Local Tanks/Reservoir Improvements	\$1.56	\$19.28	\$19.28	-	-
Pump Stations	\$0.45	\$6.53	\$6.53	-	-
Buildings and Grounds	\$4.14	\$350.19	\$393.60	(\$43.41)	-
Emergency Firefighting Water System	\$79.89	\$256.25	\$256.25	-	-
Regional Program	\$184.23	\$918.79	\$1,030.28	(\$111.49)	-
PROGRAM TOTAL	\$946.13	\$2,674.16	\$3,301.67	(\$627.52)	-

* Negative number reflects cost increases since last quarter, and positive number reflects cost reduction since last quarter.

The overall Local Water Program negative Cost Variance of \$516.0M in Table 3, same as reported in the last quarter, can be attributed to the following projects; reasons for the project variances are reported in Section 7:

- 19063 Local Water Conveyance/Distribution System forecasted cost increased by \$461.0M.
- 10037249 New CDD Headquarters forecasted cost increased by \$43.4M.
- 10015239 Lake Merced Water Level Restoration forecasted cost increased by \$10.0M.

- 10033818 Town of Sunol Pipeline forecasted cost increased by \$1.7M.

Please refer to the section of I.3 of this report for more details about the reported cost variance for the Regional Water Program.

4. CAPITAL IMPROVEMENT PROGRAM SCHEDULE SUMMARY

Figure 4 compares the 2021 Approved Schedule and the Current Forecast Schedule for the Local Water CIP. As shown in Table 4, the 2021 Approved and Forecasted Schedule completion for the overall Water Enterprise CIP (including Regional and Local Programs) are each in June 2035. The 2021 Approved and Forecasted Schedule completion for the Local CIP are in December 2028 and June 2032, respectively.

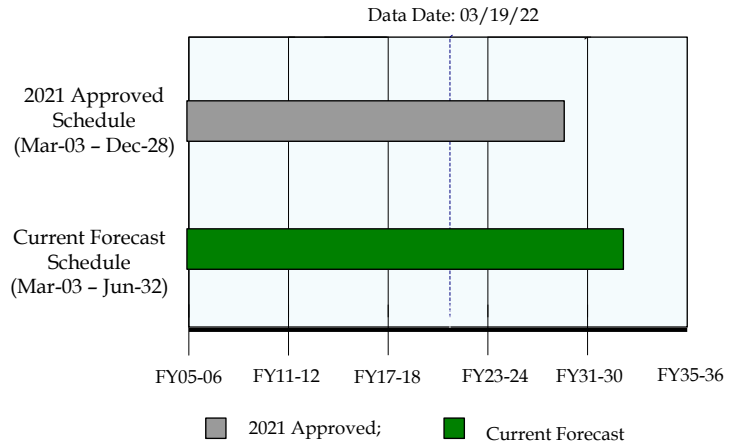


Figure 4. Local Program Schedule Summary

Table 4 2021 Approved vs. Current Forecast Schedule Dates

Sub-Program	2021 Approved Project Start	Actual Start	2021 Approved Completion	Current Forecast Completion	Schedule Variance (Months)
Local Program	03/03/03	03/03/03✓	12/29/28	06/30/32	42.0 (Late)
Regional Program	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. BUDGET AND SCHEDULE TREND SUMMARY

Starting with the Q1 FY21-22 Quarterly Report, a revised report format includes a new Table 5, titled Budget and Schedule Trend Summary. This Table 5 contains all approved Local Water projects that are active and in any of the planning, design, bid and award, or construction phases of the project. The table excludes any projects that are either Not-Initiated, On-Hold, in Closeout, or Completed.

During this quarter (Q3 FY21-22), the following major milestones were achieved, and the project cost and schedule forecasts were accordingly updated based on the updated milestone cost estimates for the following Local Water project:

- None this quarter.

Table 5. Budget and Schedule Trend Summary

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
WECIP - Local														
Local Water Conveyance/Distribution System														
10033816 Potable Emergency Firefighting Water System ²	FY21-30		8/12/19		N/A		N/A		N/A		N/A		Q3-FY21-22	
	\$55.0	06/30/28	\$44.8	06/30/28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$55.0	06/30/28
10033818 Town of Sunol Pipeline	FY21-30		06/17/19		11/01/21		06/17/22 ³		03/21/23		12/04/23		Q3-FY21-22	
	\$5.0	04/03/23	\$5.0	04/03/23	\$5.0	04/03/23	TBD	TBD	TBD	TBD	TBD	TBD	\$6.7	04/04/25
19063 Local Water Conveyance / Distribution System ⁴	FY21-30		N/A		Various		Various		Various		Various		Q3-FY21-22	
	\$750.6	06/30/28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,211.5	06/30/32
Local Water Supply														
10015239 Lake Merced Water Level Restoration	FY21-30		06/16/03		04/30/10		08/31/22		10/13/22		04/11/23		Q3-FY21-22	
	\$32.7	01/31/19	\$32.7	01/31/19	\$32.7	01/31/19	TBD	TBD	TBD	TBD	TBD	TBD	\$42.7	03/03/27
10015240 San Francisco Groundwater Supply	FY21-30		06/16/03		12/08/06		10/19/10		03/11/16		08/22/17		Q3-FY21-22	
	\$66.5	06/30/22	\$39.8	02/27/14	\$49.8	09/08/14	\$49.8	09/08/14	\$66.5	06/25/18	\$66.5	06/25/18	\$66.5	06/30/23
10015242 San Francisco Westside Recycled Water	FY21-30		03/03/03		05/15/09		12/08/14		06/29/16		10/17/17		Q3-FY21-22	
	\$213.3	01/12/23	\$201.3	04/18/08	\$149.6	09/25/13	\$186.2	12/18/19	\$186.2	12/18/19	\$186.2	12/18/19	\$213.3	04/06/23

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. Potable Emergency Firefighting Water System: This project will fund construction phase of PEFWS pipelines in the next several years.
3. Town of Sunol first Design milestone is 65%.
4. Local Water Conveyance/Distribution System: This is a Renew and Replacement Program where the corresponding CIP budget and forecast completion date are updated every 2 years during the CIP budget update cycle.

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
Local Tank/Reservoir Improvements														
10015223 College Hill Reservoir Outlet ²	FY21-30		01/24/13		10/14/16		12/15/16		02/15/19		06/08/21		Q3-FY21-22	
	\$19.3	01/29/24	\$16.3	09/28/21	\$16.3	09/28/21	\$16.3	09/28/21	\$16.3	09/28/21	\$19.3	01/29/24	\$19.3	04/24/24
Pump Stations														
10015231 Harding Park PS	FY21-30		07/06/21		09/26/22		03/31/23		11/30/23		07/01/24		Q3-FY21-22	
	\$6.5	04/03/26	\$6.5	04/03/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$6.5	04/03/26
Buildings and Grounds														
10037249 New CDD Headquarters	FY21-30		02/01/20		08/31/21		12/30/21		12/29/23		05/24/22		Q3-FY21-22	
	\$350.2	06/28/28	\$350.2	06/28/28	\$393.6	06/28/28	TBD	TBD	TBD	TBD	TBD	TBD	\$393.6	06/28/28
Emergency Firefighting Water System														
EFWSPL EFWS Pipelines ³	FY21-30		04/01/11		Various		Various		Various		Various		Q3-FY21-22	
	\$205.3	12/29/28	\$31.6	09/29/17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$205.3	12/29/28
EFWSPPS EFWS Pump Stations ⁴	FY21-30		04/01/11		Various		Various		Various		Various		Q3-FY21-22	
	\$45.2	12/29/28	\$17.5	09/26/16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$45.2	12/29/28

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. College Hill Reservoir Outlet: Planning through 65% Design was achieved under a different program in Local Water Conveyance/Distribution System.
3. EFWS Pipelines: EFWS Pipelines include multiple projects.
4. EFWS Pump Stations: EFWS Pump Stations include multiple projects.

6. PROJECT PERFORMANCE SUMMARY*

All costs are shown in \$1,000s as of 03/19/22

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Local Water Conveyance/Distribution System											
10033816 - Potable Emergency Firefighting Water System	PL	\$ 55,000	\$ 55,000	\$ 55,000	\$ 822	-	0%	06/30/28	06/30/28	06/30/28	-
10033818 - Town of Sunol Pipeline	DS	\$ 5,000	\$ 5,000	\$ 6,663	\$ 2,397	(\$1,663)	-33%	04/03/23	04/03/23	04/04/25	(732)
19063 - Local Water Conveyance/Distribution System	MP	\$ 750,581	\$ 750,581	\$ 1,211,536	\$ 417,059	(\$460,955)	-61%	06/30/28	06/30/28	06/30/32	(1,461)
Local Water Supply											
10015239 - Lake Merced Water Level Restoration	DS	\$ 32,668	\$ 32,668	\$ 42,668	\$ 4,696	(\$10,000)	-31%	01/30/26	01/30/26	03/03/27	(397)
10015240 - San Francisco Groundwater Supply	CN	\$ 66,552	\$ 66,552	\$ 66,552	\$ 63,607	-	0%	06/30/22	06/30/22	06/30/23	(365)
10015242 - San Francisco Westside Recycled Water	CN	\$ 213,316	\$ 213,316	\$ 213,316	\$ 187,278	-	0%	01/12/23	01/12/23	04/06/23	(84)

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

**** Phase Status Legend**

PL	Planning	DS	Design
BA	Bid & Award	CN	Construction
MP	Multiple-Phase		

Footnotes:

- (+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
- (+++) **Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.**

II. Local WECIP Quarterly Report

Q3-FY2021-2022 (01/01/22 - 03/31/22)

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Local Tanks/Reservoir Improvements											
10015223 - College Hill Reservoir Outlet	CN	\$ 19,283	\$ 19,283	\$ 19,283	\$ 1,556	-	0%	01/29/24	01/29/24	04/24/24	(86)
Pump Stations											
10015231 - Harding Park PS	PL	\$ 6,527	\$ 6,527	\$ 6,527	\$ 452	-	0%	04/03/26	04/03/26	04/03/26	-
Buildings and Grounds											
10037249 - New CDD Headquarters	DS	\$ 350,192	\$ 350,192	\$ 393,601	\$ 4,138	(\$43,409)	-12%	06/28/28	06/28/28	06/28/28	-
Emergency Firefighting Water System											
EFWS PL - EFWS Pipelines	MP	\$ 205,263	\$ 205,263	\$ 205,263	\$ 34,640	-	0%	12/29/28	12/29/28	12/29/28	-
EFWS PS - EFWS Pump Stations	MP	\$ 45,245	\$ 45,245	\$ 45,245	\$ 39,699	-	0%	12/29/28	12/29/28	12/29/28	-

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

** Phase Status Legend

PL Planning DS Design
BA Bid & Award CN Construction MP Multiple-Phase







Footnotes:

- (+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
- (+++) **Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.**

7. PROJECT STATUS REPORT

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	 \$0.82 M	Project Percent Complete: 0.8%		
				
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	08/12/19✓	N/A	TBD	12/31/25

Progress and Status:

Under this Emergency Firefighting Water System (EFWS) pipelines project during this quarter, the configuration, routes, and construction sequencing for the multiple potable EFWS pipeline contracts were analyzed. The funding for this project will fund construction of potable EFWS pipelines in the next several years.

Issues and Challenges:

None at this time.






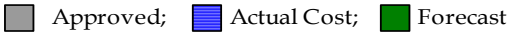


Earthquake Resistant Ductile Iron Pipe with flexible joints (demonstrated) used for this project

II. Local WECIP Quarterly Report

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)	
Project Cost:			Project Schedule:		
Approved		\$5.00 M	Approved Jun-19		Apr-23
Forecast		\$6.66 M	Forecast Jun-19		Apr-25
Actual		\$2.40 M	Project Percent Complete: 44.2%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	02/01/23	07/12/23	01/13/24	10/09/24	

Progress and Status:

During this reporting period the project team continued development of the design criteria and 65% design. The environmental team, meanwhile, presented the project to the permitting agencies. The permitting agencies requested that the existing pipeline be removed from the creek, due to it impeding flow within the creek. The agencies are requiring removal of the pipeline from bank to bank of the creek, which could increase cost because of additional excavation needed. This request will be further evaluated upon completion of the 65% design. The environmental team continues preparation of the CEQA Addendum. The Highway 680 Crossing construction is on-going and anticipated to be completed next quarter.









Exposed Town of Sunol Pipeline crossing Arroyo de la Laguna Creek

Issues and Challenges:

The currently reported variance to the forecast schedule and cost is due, as reported in Q2, to the change in construction method from tunneling to open cut trench. This change in scope triggers the need to update the CEQA documents, environmental permits, and real estate negotiations. This change is anticipated to delay the project by two years and to add soft costs and escalation costs for construction.

19063 - 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		1,211.54 M	Forecast Jul-10		Jun-32
Actual		\$417.06 M	Project Percent Complete: 43.7%		
					
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, is 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. The forecast mileage for FY22 is 7.5 miles. The budgeted cost per mile has been updated for FY22 from \$3.18 million per mile to \$5.4 million per mile for replacement of distribution water mains. The updated cost per mile for streetscape, transit, or seismic reliability projects is approximately \$8 million per mile. The increased cost per mile is attributed to changes in SFPW’s pavement restoration, code-compliant curb ramps, and permitting requirements in the City; increased material and labor

costs; support costs when working under SFMTA’s overhead catenary system; and increased complexity in working in crowded utility corridors. Projects under construction during Q3 FY22 include Pierce Street, Castro Street, 17th Street, Baker Street, 19th Avenue, Casitas Avenue, Vicente Street, College Hill Reservoir pipelines, Prospect Avenue, and L-Taraval Segment B. The Diamond Street Project which includes 9,100 feet of 8-inch diameter, 3,000 feet of 12-inch diameter, and 1,600 feet of 16-inch diameter ductile iron water distribution mains received pre-construction notice to proceed during this quarter to allow the contractor to procure pipeline materials, and is anticipated to start construction next quarter.






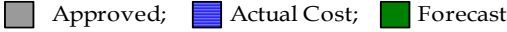
Issues and Challenges:

SFPUC’s Capital Improvement Plan has been updated with an overall main replacement budget increase from \$750M to \$1.2B. The forecasted cost increase of \$450M is attributed to the schedule extension along with the increased cost per mile for main replacement.

II. Local WECIP Quarterly Report

10015239 - 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 	\$42.67 M	Forecast Jun-03  Mar-27
Actual 	\$4.70 M	Project Percent Complete: 16.5%
		

Key Milestones:	Environmental** Approval	Bid+ Advertisement	Construction+ NTP	Construction+ Final Completion
Current Forecast	(A) 07/31/18✓ (B) 11/10/16✓ (C) 05/25/23	11/18/22 N/A 07/24/23	06/19/23 06/13/17✓ 02/07/25	08/24/26 07/07/17✓ 09/03/25

+ 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): SFPUC and Daly City are coordinating with the Regional Water Quality Control Board (RWQCB) for project discharge permitting. Daly City, through the SFPUC, is negotiating with SFPW for a major encroachment permit for construction of the diversion structure for the approved flows to Lake Merced. This structure would be constructed under John Muir Drive within the City's right of way. Daly City is additionally working on obtaining required permits from the California Coastal Commission. The Daly City Team has prepared an updated Lake Management Plan, which is currently in review by SFPUC.







Lake Merced Recycled Water Diversion (Contract C): SFPUC is continuing preliminary design and water quality evaluation of the proposal to divert recycled water from the new Westside Recycled Water Plant into Lake Merced to manage lake levels. SFPUC completed a Draft Preliminary Connections Alternatives Evaluation to further study project feasibility.

Issues and Challenges:

Daly City has provided an updated project schedule which currently shows a delay of 1 year, with Bid and Award delayed to October 2022. This delay is primarily due to the impact of COVID-19, as well as challenges with acquiring project funding during this period. Following discussions between SFPUC and Daly City regarding project benefits, SFPUC agreed last quarter to provide an additional contribution of \$10 Million to construction costs, resulting in the \$10 Million cost variance forecast in the project.

10015240 - 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-23	
Actual  \$63.61 M	Project Percent Complete: 96.4%	
		

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✓ 06/30/22

+ 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 2 (Contract C), during the quarter the contractor continued to finalize punch list items (subject to Operation’s verifications); continued to review closeout documents; continued to process remaining change orders, including deductive bid items, extended warranties, and miscellaneous change order work; and continued to prepare as-built drawings and operational and maintenance manuals.

Issues and Challenges:

Phase 2 project final completion has been delayed due to additional time needed to complete punch list items and compile closeout documents. An additional 18-month construction duration may be needed to allow time to complete the work.









North Lake Well Station

II. Local WECIP Quarterly Report

10015242 - 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		Apr-23
Actual		\$187.28 M	Project Percent Complete: 85.0%		
					
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✓	12/02/22 12/03/22 08/19/18✓ 07/23/22	

+ 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): Miscellaneous electrical and mechanical work continued in Buildings 580 and 581. Limited start-up activities continued this quarter, including training on the new equipment by the manufacturers for SFPUC Wastewater Enterprise Operations staff. More extensive start-up tests requiring water flow were delayed due to routine Oceanside maintenance activities that impacted new recycled water equipment. An updated overall start-up sequence was submitted by the Contractor. Work continued on the development of the Operations Manual and Standard Operating Procedures (SOPs) for the new treatment facility; the first set of SOPs were submitted to SFPUC WWE Operations for review. Distribution Pump Station and Reservoir (Contract B): Electrical and mechanical/HVAC work inside the new pump station continued. Site grading was conducted in preparation for paving. A preliminary start-up testing plan was submitted to the SFPUC and is being reviewed. Project staff drafted a proposed change order for interim power supply to the facility to

address lack of permanent PG&E power service. Pipeline (Contract C) is complete. Irrigation System Retrofit (Contract D): The installation of purple quick connect couplers and valve tags continued. Multiple gate valves were installed, and various minor plumbing modifications were completed. The cross-connection control testing of Golden Gate Park continued. Notice of Intent for coverage under the Recycled Water General Order to the San Francisco Bay Regional Water Quality Control Board was submitted.







Issues and Challenges:

For Contract B, Distribution Pump Station and Reservoir, SFPUC Management remained in discussions with PG&E to resolve the issue that arose last quarter when PG&E notified it would not honor the project's secondary power service agreement. For Contract D, Irrigation System Retrofit, a tree hearing has been conducted for tree removal, but the approval has not been finalized. The impacts from these issues will be further evaluated and reported on when more information is available.

10015223 - 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: Construction	Environmental Status: Completed (CatEx)
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Project Cost:	Project Schedule:
Approved  \$19.28 M	Approved Jan-13  Jan-24
Forecast  \$19.28 M	Forecast Jan-13  Apr-24
Actual  \$1.56 M	Project Percent Complete: 18.9%
	

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	11/20/19✓	02/24/21✓	09/27/21✓	10/21/23

Progress and Status:

The contractor has mobilized to the site, and construction activities are underway. SFPUC City Distribution Division Operations staff have completed reservoir draining and shutdown activities and are working with the contractor to install pipeline appurtenances to control water leakage during pipeline improvements within and adjacent to the reservoir. Major construction activities are anticipated to start next quarter.

Issues and Challenges:

Additional work necessary to control water entering back into the reservoir has impacted the start of in reservoir water work. The contractor is currently evaluating potential project delays along with mitigation measures which will be better known during the next quarter.






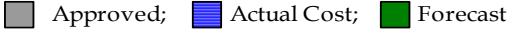


Aerial View of College Hill Reservoir

II. Local WECIP Quarterly Report

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		\$0.45 M	Project Percent Complete: 7.3%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	TBD	02/02/24	10/04/24	10/03/25	

Progress and Status:

The San Francisco Public Works design team reviewed background documents, conducted a facility inspection, and discussed major issues with CDD electricians. Due to a change in project staffing, the completion of the draft Alternatives Analysis has been delayed until next quarter.

Issues and Challenges:

None at this time.

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: Design		Environmental Status: Active	
Project Cost:			Project Schedule:		
Approved		\$350.19 M	Approved Feb-20		Jun-28
Forecast		\$393.60 M	Forecast Feb-20		Jun-28
Actual		\$4.14 M	Project Percent Complete: 1.6%		
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	06/30/23	06/18/21✓	10/01/23	12/31/27	

Progress and Status:

The design contract was awarded by the Commission during the quarter, on February 22, and is scheduled to go to the Board of Supervisors for approval next quarter, in May. Design development will proceed following Board of Supervisors approval. The deadline for submittal of proposals for the CM/GC contract was extended to March 23, and three proposals were received.

Issues and Challenges:

The project is incurring significant delays in securing design and CM/GC contracts. Impacts to the schedule will be assessed after contracts are issued and opportunities to make up time are evaluated. Due to the rising cost of escalation, as noted last quarter, the project cost is forecasted to increase by \$43.4M. There were no new variances in the quarter.



Aerial Rendering of Campus

II. Local WECIP Quarterly Report

EFWS PL - EFWS Pipelines

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

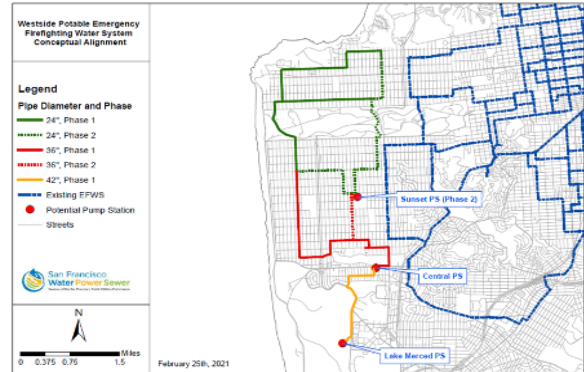
Program: Emergency Firefighting Water System		Project Status: Multiple Phases		Environmental Status: Completed (Various)	
Project Cost:			Project Schedule:		
Approved		\$205.26 M	Approved Apr-11		Dec-28
Forecast		\$205.26 M	Forecast Apr-11		Dec-28
Actual		\$34.64 M	Project Percent Complete: 27.9%		
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	Various	Various	Various	Various	

Progress and Status:

- 19th Avenue Pipeline:
Construction completion expected December 2023.
- Clarendon Supply:
Construction completion expected September 2022.
- Emergency Firefighting Water System 2050 Planning Study:
Study was completed December 2021.
- Fireboat Manifolds:
Conceptual Engineering Review (CER) completion expected August 2022.
- Potable Emergency Firefighting Water System Pipeline: Construction completion expected July 2027.
- Terry Francois Blvd (TFB) Mission South Pipeline: Construction completion expected May 2022.
- Vicente Potable EFWS Pipeline:
Construction completion expected July 2024.

Issues and Challenges:

None at this time.









Westside Potable EFWS Conceptual Alignment

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 (Various)
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Project Cost:		Project Schedule:	
Approved	 \$45.25 M	Approved Apr-11	 Dec-28
Forecast	 \$45.25 M	Forecast Apr-11	 Dec-28
Actual	 \$39.70 M	Project Percent Complete: 95.3%	
			

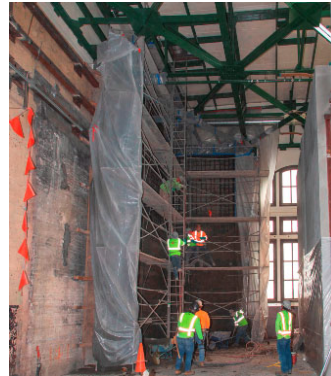
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	Various	Various	Various	Various

Progress and Status:

- Pump Station #2:
Construction completion expected December 2022.
- PEFWS PS - Lake Merced:
Planning completion expected December 2022. The Conceptual Engineering Report (CER) for Lake Merced Pump Station will be a part of the Pipeline CER. The draft CER is anticipated in May 2022, and the final CER is anticipated in August 2022.

Issues and Challenges:

None at this time.



Roof installation of Pump Station No. 2

8. 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								
19063 - WD-2811 17TH STREET/CLAYTON/ORD	05/26/20	07/09/22	06/28/22	\$ 6,663,324	\$ 7,037,359	11	(\$374,035)	60.6%
19063 - WD-2842 CASITAS AVE FROM LANSDALE TO YERBA BUENA	02/08/21	04/19/22	04/29/22	\$ 3,921,463	\$ 4,064,269	(10)	(\$142,806)	66.3%
19063 - WD-2717 COLLEGE HILL/PROSPECT/SANTA MARIA	09/27/21	10/21/23	10/21/23	\$ 12,180,497	\$ 12,180,497	-	-	0.0%
19063 - WD-2616 BAKER STREET /SUTTER STREET	10/19/20	03/27/22	07/05/22	\$ 3,758,930	\$ 4,083,028	(100)	(\$324,098)	68.4%
19063 - WD-2739 CASTRO STREET 19TH/26TH STREET	08/17/20	08/16/22	08/16/22	\$ 10,915,782	\$ 11,768,587	-	(\$852,805)	115.1%
19063 - WD-2775 19TH AVE/VICENTE/LINCOLN	10/19/20	01/09/23	01/09/23	\$ 6,693,385	\$ 6,702,260	-	(\$8,875)	27.5%
19063 - WD-2806 VICENTE 19TH TO 25TH AVE	07/26/21	04/07/24	02/11/24	\$ 6,267,815	\$ 6,267,815	56	-	2.2%

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. 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 Supply								
10015240 - WD-2809 SF Groundwater Supply Phase 2	08/07/17	08/26/19	06/30/22	\$ 10,732,565	\$ 10,780,143	(1,039)	(\$47,578)	98.0%
10015242 - WD-2852R Westside Recycled Irrigation Retrofits and Improvements	01/25/21	07/29/22	03/07/23	\$ 2,517,779	\$ 2,517,779	(221)	-	73.8%
10015242 - WD-2776 Westside Recycled Water Treatment Facility	10/16/17	07/29/22	03/27/23	\$ 94,637,405	\$ 94,637,405	(241)	-	90.0%
Emergency Firefighting Water System								
- WD-2861 Clarendon Supply	02/01/21	07/29/22	07/29/22	\$ 2,706,081	\$ 2,706,081	-	-	60.4%
10029709 - WD-2687R Pump Station # 2	12/12/17	12/30/22	12/30/22	\$ 20,623,887	\$ 20,623,887	-	-	94.8%

Program Total for On-Going Construction	Approved Contract Cost		Current Forecasted Cost		Variance	
					Cost	Percent
		\$ 181,618,912	\$ 183,369,110	(\$1,750,197)	(1.0%)	

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.

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9. PROJECTS IN CLOSEOUT

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				
10029709- Pump Station #2	05/05/21	05/05/21	\$ 7,494,981	\$ 7,011,548
TOTAL			\$ 7,494,981	\$ 7,011,548

10. COMPLETED PROJECTS

Project Title	Approved Project Completion	Actual Project Completion	Approved Project Budget	Project Expenditures To Date
Emergency Firefighting Water System				
EFWS PL - EFWS Pipelines				
10035860 - Fillmore Haight	06/30/21	06/30/21	\$ 501,460	\$ 79,909
10029719 - Gate Valve Motors - Pipeline	03/31/21	09/30/21	\$ 637,491	\$ 570,011
10029724 - Clarendon Supply (ESER 2010 Partial Funding)	03/31/21	12/30/21	\$ 947,653	\$ 947,653
EFWS PS - EFWS Pump Stations				
10029710 - Pump Station #1	03/31/21	12/30/21	\$ 15,529,505	\$ 15,127,735
TOTAL			\$ 17,616,109	\$ 16,725,308

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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.

10015064 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.

10037628 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.

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).

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.

10015071 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. .

10015076 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.

10015080 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.

10015081 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.

10015091 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.

10015092 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.

10015113 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.

10030771 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.

10015124 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 on 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.

10015128 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.

19063 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

10015239 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.

10015240 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.

10015242 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

10015223 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

10015231 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

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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 Approved Project-Level Schedules

Regional Programs

Project Name	Start	Finish	FY2022				FY2023				FY2024				FY2025				FY2026				FY2027				FY2028				FY2029				FY2030			
			FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4
Water Regional Improvement Projects																																						
Water Treatment																																						
10015064 SVWTP Phases 3 and 4	03-Mar-14	30-Jun-26																																				
10033123 SVWTP Ozone (CUW27202)	27-Jun-17	30-Jun-27																																				
10037349 HTWTP Improvements Capital	02-Nov-20	28-Jun-24																																				
10037350 Regional Groundwater Treatment Improvements	13-Aug-20	27-Dec-29																																				
10037628 SVWTP Polymer Feed Facility	08-Mar-21	27-Sep-24																																				
Water Transmission																																						
10015071 Corrosion Control	01-Jan-16	29-Dec-34																																				
10015076 San Antonio Pump Station MCC Upgrades	12-May-16	19-Mar-25																																				
10015080 San Andreas Pipeline No. 2 Replacement	01-Mar-16	08-Dec-21																																				
10015081 CSPL2 Reaches 2 and 3 Rehabilitation	22-Oct-16	12-Jun-26																																				
10034578 CSPL2 Reach 5 Lining Replacement	25-Feb-19	19-Sep-25																																				
10035029 As-Needed Pipeline Repair	01-Jul-20	25-Aug-28																																				
10036839 Pre-Stressed Concrete Cylinder Pipe (PCCP) Repair	01-May-20	22-Nov-23																																				
10036840 BDPL 1-4 Lining Repair	12-Sep-16	25-Aug-28																																				
Water Supply & Storage																																						
10015091 Pilarcitos Dam Improvements	07-Apr-14	29-Jun-29																																				
10015092 San Andreas Dam Facility Improvements	11-Dec-13	30-Dec-33																																				
10015232 Merced Manor Reservoir Facilities Repairs	04-Jan-22	30-Jun-31																																				
10036998 Turner Dam and Reservoir Improvements	01-Oct-20	29-Jun-35																																				
Watershed and Lands Management																																						
10015108 Sneath Lane Gate/North San Andreas	01-Feb-21	27-Jan-28																																				
10015110 EBRPD Water System	02-Jun-14	31-Oct-22																																				
10015113 Southern Skyline Blvd Ridge Trail Extension	31-Oct-12	11-Sep-23																																				
10030771 San Andreas Service Road Upgrades	30-Jun-16	31-Dec-26																																				
Buildings and Grounds																																						
10014124 Sunol Long Term Improvements	01-Jan-09	13-Sep-22																																				
10015128 Millbrae Yard Laboratory and Shop Improvements	02-Nov-15	31-Mar-28																																				
10033555 Rollins Road Building Renovations (CUW27703)	01-Mar-18	30-Jun-22																																				
10034526 Millbrae Warehouse Settlement & Admin. Bldg. HVAC	03-Jan-17	30-Nov-23																																				



Appendix B. Water Enterprise Approved 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	30-Dec-28																																	
Local Water Conveyance / Distribution System	01-Jul-10	30-Jun-28																																	
10033816 Potable Emergency Firefighting Water System	12-Aug-19	30-Jun-28	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
10033818 Town of Sunol Pipeline	17-Jun-19	03-Apr-23	[Gantt bar showing phases: Planning, Design, Bid & Award, Construction, Closeout]																																
19063 Local Water Conveyance/Distribution System	01-Jul-10	30-Jun-28	[Gantt bar showing phases: Construction, Closeout]																																
Local Water Supply	03-Mar-03	30-Jan-26																																	
10015239 Lake Merced Water Level Restoration	16-Jun-03	30-Jan-26	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
10015240 San Francisco Groundwater Supply	16-Jun-03	30-Jun-22	[Gantt bar showing phases: Construction, Closeout]																																
10015242 San Francisco Westside Recycled Water	03-Mar-03	12-Jan-23	[Gantt bar showing phases: Construction, Closeout]																																
Local Tanks/Reservoir Improvements	24-Jan-13	29-Jan-24																																	
10015223 College Hill Reservoir Outlet	24-Jan-13	29-Jan-24	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
Pump Stations	06-Jul-21	03-Apr-26																																	
10015231 Harding Park PS	06-Jul-21	03-Apr-26	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
Buildings and Grounds	01-Feb-20	28-Jun-28																																	
10037249 New CDD Headquarters	01-Feb-20	28-Jun-28	[Gantt bar showing phases: Design, Bid & Award, Construction, Closeout]																																
Emergency Firefighting Water System (EFWS)	01-Apr-11	30-Dec-28																																	
10015480 2014 AUXILIARY WATER SUPPLY SYSTEM*	06-Nov-14	30-Dec-22	[Gantt bar showing phases: Construction, Closeout]																																
10015482 AUXILIARY WATER SUPPLY SYSTEM*	01-Apr-11	30-Jun-22	[Gantt bar showing phases: Construction, Closeout]																																
EFWSPS EFWS Pump Stations	01-Apr-11	30-Dec-28	[Gantt bar showing phases: Construction, Closeout]																																
EFWSPL EFWS Pipelines	01-Apr-11	29-Dec-28	[Gantt bar showing phases: 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	I&C	Instrumentation and Controls
ADEIR	Administrative Draft of the Environmental Impact Report	ITS	Information Technology Services
AWMP	Automated Water Meter Program	IOC	Job Order Contract
AWSS	Auxiliary Water Supply System	LEED	Leadership in Energy and Environmental Design
BARR	Bay Area Regional Reliability	MCC	Motor Control Centers
BDPL	Bay Division Pipeline	MCP	Main Control Panel
BDPL 1 - 4	Bay Division Pipeline Numbers 1 - 4	MG	Million Gallons
BRT	Bus Rapid Transit	MGD	Million Gallons per Day
C&M	Construction and Maintenance	MIB	2-Methylisoborneol
CalTrans	California Department of Transportation	MND	Mitigated Negative Declaration
CATEX	Categorical Exemption	MOU	Memorandum of Understanding
CDD	City Distribution Division	MW	Megawatt
CEQA	California Environmental Quality Act	NEPA	National Environmental Policy Act
CER	Conceptual Engineering Report	NLWS	North Lake Well Station
CIP	Capital Improvement Program	NRD	Natural Resources Division
CM	Construction Management	NTP	Notice to Proceed
CM/GC	Construction Manager/General Contractor	O&M	Operation and Maintenance
CMB	Construction Management Bureau	PAC	Powdered Activated Carbon
COVID-19	Coronavirus Disease of 2019	PAH	Polycyclic Aromatic Hydrocarbons
CSPL	Crystal Springs Pipeline	PEFWS	Potable Emergency Firefighting Water System
CSPL2	Crystal Springs Pipeline Number 2	PMF	Probable Maximum Flood
DCU	Data Collection Unit	PREP	Potable Reuse Exploratory Plan
DDW	Department of Drinking Water (State of California)	PRGC	Pacific Rod and Gun Club
DFI	Dam Facility Improvements	PS	Pump Station
DIP	Ductile Iron Pipe	PUC	Public Utilities Commission
DSOD	Division of Safety of Dams (State of California)	RF	Radio Frequency
EBRPD	East Bay Regional Park District	RFP	Request for Proposal
EFWS	Emergency Firefighting Water System	RFQ	Request for Qualifications
EIR	Environmental Impact Report	ROW	Right-of-Way
EIS	Environmental Impact Statement	RWQCB	Regional Water Quality Control Board
EMB	Engineering Management Bureau	RWS	Regional Water System
ESER	Earthquake Safety and Emergency Response	SAD	San Andreas Dam
FCC	Federal Communications Commission	SAPL1	San Antonio Pipeline Number 1
FY	Fiscal Year	SAPL2	San Antonio Pipeline Number 2
GGNRA	Golden Gate National Recreation Area	SAPS	San Antonio Pump Station
GGP	Golden Gate Park	SCADA	Supervisory Control and Data Acquisition
GPR	Ground Penetrating Radar	SF	San Francisco
HTWTP	Harry Tracy Water Treatment Plant	SFPUC	San Francisco Public Utilities Commission
HVAC	Heating, Ventilation, and Air Conditioning	SFPW	San Francisco Public Works (formerly SFDPW)
		SOP	Standard Operating Procedure
		STATEX	Statutory Exemption

Appendices

SVWTP	Sunol Valley Water Treatment Plant
SWWS	South Windmill Well Station
T&O	Taste and Odor
TBD	To be determined
TCE	Temporary Construction Easement
TFB	Terry Francois Boulevard
TSC	Technical Steering Committee
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

DATE: August 15, 2022

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

FROM: Dennis J. Herrera, General Manager 

RE: Water Enterprise Capital Improvement Program
Quarterly Report (4th Quarter / FY 2021-2022)

Enclosed please find the Water Enterprise Capital Improvement Program (WECIP) Quarterly Report for the 4th Quarter (Q4) of Fiscal Year (FY) 2021-2022. The primary intent of the report is to provide the Commission, stakeholders, and the public with a status summary of the Water Enterprise Capital Improvement Program based on data for the period of April 1, 2022 to June 30, 2022. This quarterly report provides a summary update on both Regional and Local Water Enterprise CIP projects.

London N. Breed
Mayor

Anson Moran
President

Newsha Ajami
Vice President

Sophie Maxwell
Commissioner

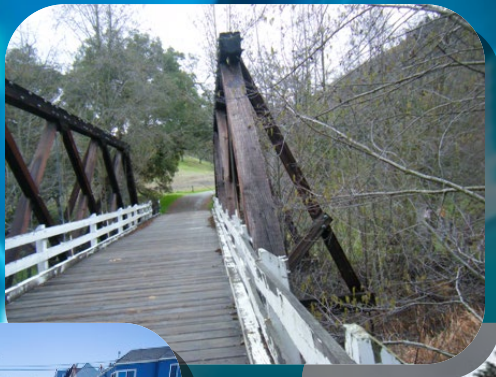
Tim Paulson
Commissioner

Dennis J. Herrera
General Manager

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



QUARTERLY REPORT

Water Enterprise Capital Improvement Program
Q4 FY 2021 | 2022
April 2022 — June 2022

Published: August 15, 2022

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EXECUTIVE SUMMARY

This quarterly report provides a summary update on both Regional and Local Water Enterprise CIP projects. The primary intent of the report is to provide the Commission, stakeholders, and the public with a status summary of the Water Enterprise Capital Improvement Program based on data for the period of April 1, 2022 to June 30, 2022.

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 by Resolution No. 21-0055.

This quarterly report also includes schedule and cost forecasting of the FY23-FY32 10-year Capital Improvement Plan that was presented to and approved by the San Francisco Public Utilities Commission on February 8, 2022. Changes to the approved baseline program and project scopes, schedules, and budgets that were proposed as part of this FY23-32 10-year CIP will become the new baseline for project scopes, schedules, and budgets at the start of FY23, on July 1, 2022. Going forward, changes to the approved baseline will continue to be proposed as part of the 10-year CIP that is updated every two years and approved by the SFPUC Commission. The proposed revisions to the program will become the new baseline for project scopes, schedules, and budgets in the beginning of the new fiscal year following SFPUC Commission approval.

Program Current Status:

Overall steady progress continued on the ongoing Water Enterprise CIP projects. As of the end of the reporting period, the Regional Water Enterprise CIP includes 25 projects in various phases as follows: one (1) project not initiated, twenty (20) projects in planning, design or bid and award, three (3) projects in construction, and one (1) project completed.

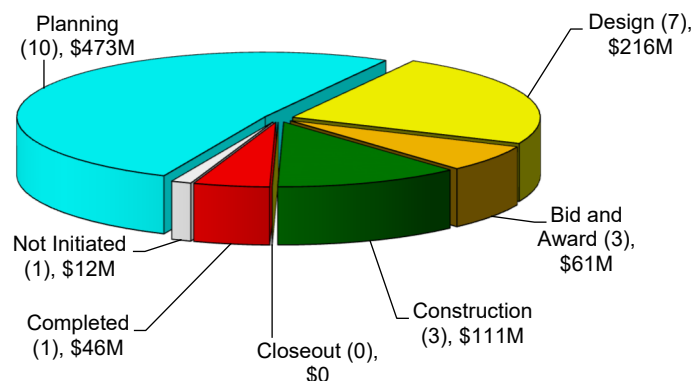


Figure A Total Current Approved Budget for Regional Projects Active in Each Phase

As of the end of the reporting period, the Local Water Enterprise CIP includes 11 projects in various phases as follows: three (3) projects in multiple phases, five (5) projects in planning or design, and three (3) projects in construction.

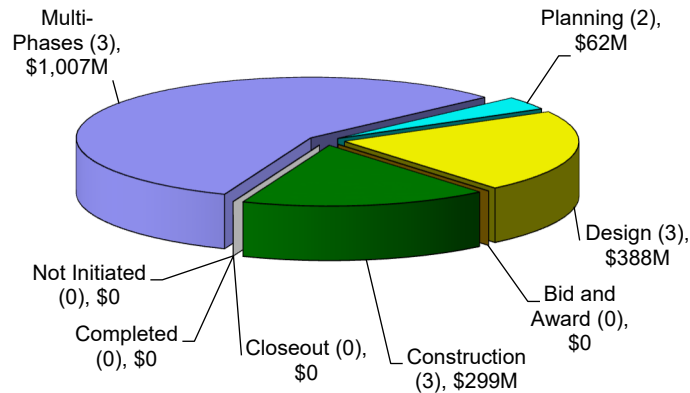


Figure B Total Current Approved Budget for Local Projects Active in Each Phase

The following Tables provide a high-level summary of the cost and schedule status for the Regional and Local programs. There were no new cost variances for any of the projects in the Regional and Local programs during the quarter.

Table A. Program Cost Summary

Programs	Expenditures To Date (\$ Million) (A)	Current Approved Budget (\$ Million) (B)	Q4/FY21-22 Forecasted Costs (\$ Million) (C)	Cost Variance (\$ Million) (D = B - C)	Variance Over Reporting Period* (\$ Million) (E)
Regional Program	\$194.52	\$918.79	\$1,030.28	(\$111.49)	-
Local Program	\$792.67	\$1,755.36	\$2,271.39	(\$516.03)	-
Programs Total	\$987.18	\$2,674.16	\$3,301.67	(\$627.52)	-

* Negative number reflects cost increases since last quarter, and positive number reflects cost reduction since last quarter.

One project in the Regional program, and no projects in the Local program, had schedule variances during the quarter. The change in variance during the quarter did not impact the forecasted programs' completion dates.

Table B. Current Approved vs. Current Forecast Schedule Dates

Programs	Current Approved Project Start	Actual Start	Current Approved Completion	Current Forecast Completion	Schedule Variance (Months)
Regional Program	01/01/09	01/01/09✓	06/29/35	06/29/35	-
Local Program	03/03/03	03/03/03✓	12/29/28	06/30/32	42.0 (Late)
Overall Water Enterprise CIP	03/03/03	03/03/03✓	06/29/35	06/29/35	-

Program Key Updates:

The key updates for the Regional Water Enterprise Capital Improvement Program include:

- COVID-19-related issues continued to cause minor impacts to projects in planning, design, and construction during the quarter due to labor shortages and procurement delays.
- For the Sunol Valley Water Treatment Plant (SVWTP) Ozone project, during this reporting period, the 35% design was completed, and the 65% design started. A value engineering review was performed on the 35% design, and the draft findings of this review were presented to the stakeholders. A value engineering report on the findings is being prepared. A 35% cost estimate review was performed.
- For San Andreas-1 Service Road/Ingoing Road project, the planning phase has been completed, and the 35% design is underway.
- For the Crystal Springs Pipeline No. 2 (CSPL2) Reach 5 Lining Replacement, surveying field work to create base maps for the project's Conceptual Engineering Report (CER) began this quarter. Geotechnical field work that will be summarized in the CER was planned and is waiting for CEQA clearance in order to begin. Drafting of the CER is in progress.
- For the Crystal Springs Pipeline No. 2 (CSPL2) Reaches 2 and 3 Rehabilitation, geotechnical field investigation, survey work, and the Conceptual Engineering Report (CER) were completed this quarter.
- Preparation of a Request for Proposals to procure a consultant to assist with the planning, design, and engineering services during construction and closeout of the Regional Groundwater Treatment project continued during the quarter.
- For the Alameda Creek Watershed Center (Contract B of the Sunol Long Term Improvements project), work on the building interior continued, including electrical work, communication systems, pond filter system, HVAC, aquarium systems, windows, kitchen and restroom finishes, security, exhibits, interior glass doors and LEED certification. Construction work on the exterior continued, including planting, bluestone boulders and pavers, pathways, and work on the pond and stream. Work on the windows, floor polishing, new tile installation, and exterior doors were completed.

The key updates for the Local Water Enterprise Capital Improvement Program include:

- For the Local Water Conveyance/Distribution System, the actual mileage for replacement or improvement in FY22 is 4.2 miles, a decrease from the forecasted mileage due to several project delays. Projects under construction during Q4 FY22 include Pierce Street, Castro Street, 17th Street, Baker Street, 19th Avenue, Vicente Street, College Hill Reservoir pipelines, Prospect Avenue, and L-Taraval Segment B. Projects that completed all water work during Q4 include Baker Street and Castro Street.
- For College Hill Reservoir Outlet, the contractor, with assistance from SFPUC City Distribution Division Operations, has completed all reservoir shutdown operations including installation of pipelines and equipment to control water leakage and remove sludge/debris within the reservoir. The contractor has completed installation of 24-inch diameter reservoir inlet

earthquake resistant ductile iron pipe (ERDIP) that will connect the reservoir to the future valve control vault. The jacking pit was excavated for constructing the reservoir outlet 36-inch diameter steel pipe; and electrical conduit was installed on Elise Street for future PG&E service to the reservoir. In addition, the contractor investigated the reservoir roof wood joist and beam substructure for potential replacement at the same time as planned roof replacement.

- For the New City Distribution Division Headquarters project, The CM/GC contract was awarded by the Commission during the quarter subject to Board of Supervisor's exemption of the contract from the behested payments prohibition under Board of Supervisors Ordinance No. 232-21 to be sought in the next quarter.
- The San Francisco Westside Recycled Water project made substantial progress on its three construction contracts:
 - At the treatment facility (Contract A), miscellaneous mechanical, electrical and architectural finish work continued in Buildings 580 and 581. Functional testing of equipment continued, with most of the major process equipment having been tested by the end of the quarter. Installation of the membrane filtration modules began. Civil yardwork continued with placement of curbs, gutters, and sidewalks and installation of trench covers. Work continued also on the development of the Operations Manual and Standard Operating Procedures (SOPs) for the new treatment facility; the second and third sets of SOPs were submitted to SFPUC WVE Operations for review.
 - Distribution Pump Station and Reservoir (Contract B): Electrical and mechanical/HVAC work inside the new pump station has been mostly completed. The yard area has been paved.
 - Irrigation System Retrofit (Contract D): Punchlist walkthrough of the retrofit work began. Work at the Elk Glen Pump Station was completed. The cross-connection control testing of Golden Gate Park continued. The San Francisco Bay Regional Water Quality Control Board returned comments on the Notice of Intent (NOI) document submitted by the SFPUC for coverage under the Recycled Water General Order. SFPUC met with RWQCB staff to discuss the comments and obtain additional clarifications for resubmittal of a revised NOI.

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 and 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 every two years (with minor modifications in the off years) and integrated with the SFPUC's Financial Plan and rate-setting.

Biannual 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 to maintain facilities in 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, 2022 and June 30, 2022. This document serves as the fourth (4th) Quarterly Report in Fiscal Year 2021-2022 (FY22) 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.

Going forward, changes to the approved baseline program, including any changes to continuing projects' scopes, schedules, and budgets, will be proposed as part of the bi-annually updated 10- year CIP to be approved by the SFPUC Commission. The proposed revisions to the program will become the new baseline for new and continuing projects' scopes, schedules, and budgets in the beginning of the new fiscal year following SFPUC Commission approval.

Figure 2.1 shows the total Current Approved Budget for the 25 Regional projects in each phase as of June 30, 2022. The number of

projects currently active in each phase is shown in parentheses.

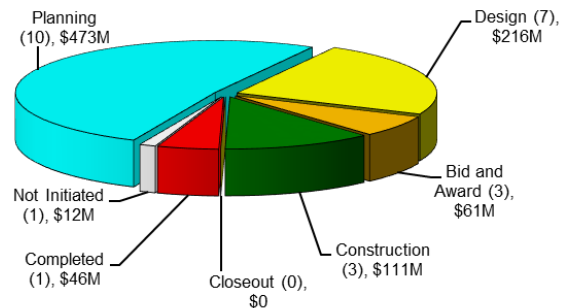


Figure 2.1 Total Current Approved Budget for Regional Projects Active in Each Phase

Figure 2.2 shows the number of Regional projects in the following stages as of June 30, 2022: Pre-construction, Construction, and Post-construction.

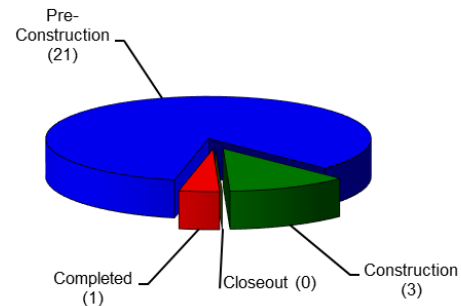


Figure 2.2 Number of Regional Projects in Pre-construction, Construction, and Post-construction

Figure 2.3 summarizes the environmental review status of the 25 Regional projects as of June 30, 2022.

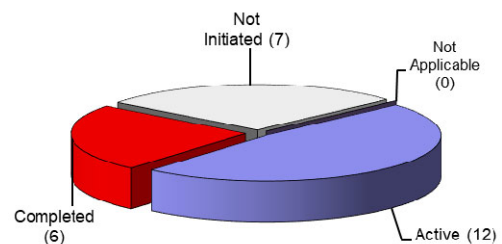


Figure 2.3 Regional Program Environmental Review

3. CAPITAL IMPROVEMENT PROGRAM COST SUMMARY

Table 3 provides an overall program-level cost summary of the Regional Water Program. It shows by categories of projects the Expenditures to Date, Current Approved Budgets, Q4/FY21-22 Forecasted Costs, Cost Variance between the Current Approved Budgets and Forecasted Costs, and Variance Over Reporting Period (difference between cost forecasts reported in Q3/FY21-22 and Q4/FY21-22).

The total Current Approved Budget (including Regional and Local Programs) and Current Forecasted Cost at completion are \$2,674.2 million, and \$3,301.7 million, respectively. The Current Approved Budget and Forecasted Cost at completion for only the Regional Water Program (including construction contingency) are \$918.8 million and \$1,030.3 million, respectively.

Note that during Q2/FY21-22 the project teams were requested to forecast any major changes in budget, scope and schedule that should be included as a proposed change in the FY23-32 10-Year CIP budget proposal. Thus, the forecasts that were included in the Q2/FY21-22 report are the same as the proposed changes to project budgets and schedules that were included in the 10-Year CIP budget proposal that was presented to, and approved by, the Commission on February 8, 2022. These forecasted changes from

Q2/FY21-22 will become the approved budgets and schedules after full approval, anticipated to occur in Q1/FY22-23. For this Q4/FY21-22 report, any additional variances that exceed the proposed budgets and schedules approved for FY22/23 are also reported.

There were no new cost variances for Regional projects during Q4. The overall Regional Water Program negative Cost Variance of \$111.5M in Table 3 is the same as in Q2 and can be attributed to the following projects; reasons for the project variances are reported in Section 7:

- 10015081 CSPL2 Reaches 2 and 3 Rehabilitation forecasted cost increased by \$32.8M.
- 10033123 SVWTP Ozone forecasted cost increased by \$27.7M.
- 10015071 Corrosion Control forecasted cost increased by \$11.6M.
- 10037628 SVWTP Polymer Feed Facility forecasted cost increased by \$11.5M.
- 10034578 CSPL2 Reach 5 Lining Replacement forecasted cost increased by \$10.7M.
- 10034526 Millbrae Warehouse Settlement & Admin. Bldg. HVAC forecasted cost increased by \$10.6M.
- 10015064 SVWTP Phase 3 and 4 forecasted cost decreased by \$10.1M.

Table 3 Program Cost Summary

Programs	Expenditures To Date (\$ Million) (A)	Current Approved Budget (\$ Million) (B)	Q4/FY21-22 Forecasted Costs (\$ Million) (C)	Cost Variance (\$ Million) (D = B - C)	Variance Over Reporting Period* (\$ Million) (E)
Regional Water Program	\$194.52	\$918.79	\$1,030.28	(\$111.49)	-
Water Treatment	\$16.99	\$295.80	\$324.90	(\$29.10)	-
Water Transmission	\$55.21	\$217.01	\$274.42	(\$57.42)	-
Water Supply & Storage	\$5.98	\$81.86	\$81.86	-	-
Watershed & Lands Management	\$10.78	\$43.45	\$53.34	(\$9.89)	-
Buildings and Grounds	\$105.56	\$280.67	\$295.75	(\$15.08)	-
Local Water Program	\$792.67	\$1,755.36	\$2,271.39	(\$516.03)	-
PROGRAM TOTAL	\$987.18	\$2,674.16	\$3,301.67	(\$627.52)	-

* Negative number is reflecting cost increases since last quarter, and positive number is reflecting cost reduction since last quarter.

I. Regional WECIP Quarterly Report

Please refer to Section II.3 of this report for more details about the reported cost variance for the Local Water Program

4. CAPITAL IMPROVEMENT PROGRAM SCHEDULE SUMMARY

Figure 4 compares the 2021 Approved Schedule and the Current Forecast Schedule for the Regional Water CIP. As shown in Table 4, the 2021 Approved and Forecasted Schedule completion for the overall Water Enterprise CIP (including Regional and Local Programs) are each in June 2035. The 2021 Approved and Forecasted Schedule completion for the Regional Water CIP alone are also each in June 2035.

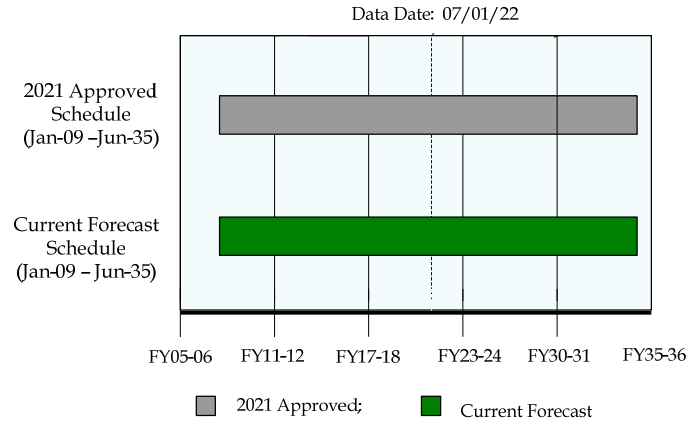


Figure 4. Regional Program Schedule Summary

Table 4. 2021 Approved vs. Current Forecast Schedule Dates

Program	2021 Approved Project Start	Actual Start	2021 Approved Completion	Current Forecast Completion	Schedule Variance (Months)
Regional Program	01/01/09	01/01/09✓	06/29/35	06/29/35	-
Local Program	03/03/03	03/03/03✓	12/29/28	06/30/32	42.0 (Late)
Overall Water Enterprise CIP	03/03/03	03/03/03✓	06/29/35	06/29/35	-

5. BUDGET AND SCHEDULE TREND SUMMARY

Starting with the Q1 FY21-22 Quarterly Report, a revised report format includes a new Table 5, titled Budget and Schedule Trend Summary. This Table 5 contains all approved Regional Water projects that are active and in any of the planning, design, bid and award, or construction phases of the project. The table

excludes any projects that are either Not-Initiated, On-Hold, in Closeout, or Completed. During the reporting period, the following Regional project achieved major project milestones:

- The SVWTP Ozone completed 35% Design.

Table 5. Budget and Schedule Trend Summary

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
WECIP - Regional														
Water Treatment														
10033123 SVWTP Ozone	FY21-30		06/27/17		01/18/22		05/10/22		01/06/23		12/15/23		Q4-FY21-22	
	\$165.1	06/30/27	\$115	09/09/24	\$192.8	06/30/28	\$192.8	06/30/28	TBD	TBD	TBD	TBD	\$192.8	06/30/28
10015064 SVWTP Phase 3 and 4	FY21-30		03/03/14		07/29/22		11/02/22		04/13/23		07/25/23		Q4-FY21-22	
	\$70.1	06/30/26	\$7.1	10/01/18	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$60.1	05/17/27
10037628 SVWTP Polymer Feed Facility	FY21-30		07/16/16 ²		06/30/19 ²		08/17/20 ²		12/06/22		05/09/23		Q4-FY21-22	
	\$7.5	09/27/24	N/A	N/A	N/A	N/A	N/A	N/A	TBD	TBD	TBD	TBD	\$19.1	08/01/25
10037349 HTWTP Improvements Capital	FY21-30		11/02/20		06/29/21		10/22/21		01/14/22		11/22/22		Q4-FY21-22	
	\$14.4	06/28/24	\$14.4	06/28/24	\$14.4	06/28/24	\$14.4	06/28/24	\$14.4	06/28/24	TBD	TBD	\$14.4	06/28/24
10037350 Regional Groundwater Treatment Improvement	FY21-30		08/13/20		08/13/24		10/30/25		11/23/26		06/29/27		Q4-FY21-22	
	\$38.6	12/27/29	\$38.6	12/27/29	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$38.6	2/26/30
Water Transmission														
10034578 CSPL2 Reach 5 Lining Replacement	FY21-30		02/25/19		10/24/22		01/27/23		06/28/23		01/09/24		Q4-FY21-22	
	\$13	11/30/22	\$12.8	11/30/22	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$23.7	04/07/26

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. For SVWTP Polymer Feed, project initiation, CER, and 35% Design were completed under WSIP - Closeout - Sunol Valley. Future milestones for this project are to be completed under WECIP.

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
10035029 As-Needed Pipeline Repairs	FY21-30		10/22/16		06/30/21		03/28/23 ²		10/31/23		03/12/24		Q4-FY21-22	
	\$6.8	08/25/28	\$6.8	08/25/28	\$6.8	08/25/28	TBD	TBD	TBD	TBD	TBD	TBD	\$7.7	08/25/28
10036839 BDPL4 PCCP Repair	FY21-30		05/01/20		10/17/22		12/15/22 ²		03/31/23		12/12/23		Q4-FY21-22	
	\$54.7	11/22/23	\$54.7	11/22/23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$54.7	5/28/25
10036840 BDPL 1-4 Lining Repair	FY21-30		09/12/16		06/30/21		02/21/23 ²		09/25/23		03/12/23		Q4-FY21-22	
	\$9.3	8/25/28	\$9.3	8/25/28	\$9.3	08/25/28	TBD	TBD	TBD	TBD	TBD	TBD	\$10.8	08/25/28
10015071 Corrosion Control	FY21-30		01/01/10		07/01/12 (Phase I) 12/29/17 (Phase II) 07/31/23 (Phase III)		12/31/13 (Phase I) 12/31/18 (Phase II) 08/30/24 (Phase III)		07/30/15 (Phase I) 11/30/21 (Phase II) 08/30/24 (Phase III)		12/30/18 (Phase I) 12/13/22 (Phase II) 08/01/25 (Phase III)		Q4-FY21-22	
	Phase I													
	Phase II	\$24.9	12/29/34	\$24.9	12/29/34	\$24.9	12/29/34	\$24.9	12/29/34	\$36.5	1/31/28	\$24.9	12/29/34	\$36.5
10015076 San Antonio Pump Station MCC Upgrades	FY21-30		05/12/16		NA ³		01/28/22 ⁴		08/09/22		03/28/23		Q4-FY21-22	
	\$12.5	03/19/25	\$7.2	01/27/23	NA	NA	\$12.5	03/19/25	TBD	TBD	TBD	TBD	\$12.5	03/19/25
10015081 CSPL2 Reaches 2 and 3 Rehabilitation	FY21-30		09/12/16		12/30/22		04/07/23		11/17/23		05/28/24		Q4-FY21-22	
	\$50.0	10/10/23	\$55.9	10/10/23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$82.8	02/18/27
Water Supply & Storage														
10036998 Turner Dam and Reservoir Improvements	FY21-30		10/01/20		06/30/27		06/29/28		12/31/30		10/21/31		Q4-FY21-22	
	\$7.5	06/29/35	\$7.5	06/29/35	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$7.5	06/29/35

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. This represents a project milestone of 50% Design.
3. For San Antonio Pump Station MCC, CER was not needed.
4. For San Antonio Pump Station MCC 35% Design was replaced with 65%

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
10015091 Pilarcitos Dam Improvements	FY21-30		04/07/14		06/30/23		02/08/24		02/07/25		11/12/25		Q4-FY21-22	
	\$30.1	06/29/29	\$25.7	09/05/25	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$30.1	06/29/29
10015092 San Andreas Dam Facility Improvements	FY21-30		12/11/13 ³		09/29/23 ³		09/30/24 ³		05/26/26 ³		05/4/27 (Scope I) 04/10/29 (Scope II)		Q4-FY21-22	
	Scope I Scope II	\$32.2	12/30/33	\$26.8	04/20/27	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$32.2	12/30/33
Watershed & Lands Management														
10015110 EBRPD Water System	FY21-30		06/02/14		01/31/19		08/09/19 ²		12/02/19		05/10/21		Q4-FY21-22	
	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22	\$5.4	10/31/22	\$5.6	10/31/22
10015108 Sneath Lane Gate/North San Andreas	FY21-30		02/01/21		03/24/22		10/16/24		05/09/25		10/28/25		Q4-FY21-22	
	\$6.7	01/27/28	\$6.7	01/27/28	\$6.7	08/02/27	TBD	TBD	TBD	TBD	TBD	TBD	\$6.7	08/02/27
10015113 Southern Skyline Blvd Ridge Trail Extension	FY21-30		10/31/12		03/09/15		9/10/15 ²		01/05/18		11/08/22		Q4-FY21-22	
	\$21.8	09/11/23	\$18.7	02/25/19	\$18.7	02/25/19	\$18.7	02/25/19	\$19.3	07/22/21	TBD	TBD	\$25.3	02/02/24
10030771 SA-1 Service Road/Ingoing Road	FY21-30		06/30/16		01/06/22		10/31/22		10/30/23		04/09/24		Q4-FY21-22	
	\$9.6	12/31/26	\$9.6	12/31/26	\$15.8	12/31/26	TBD	TBD	TBD	TBD	TBD	TBD	\$15.8	12/31/26
Buildings and Grounds														
10033555 Rollins Road Building Renovations	FY21-30		03/01/18		05/31/19		11/16/20		01/28/21		04/01/21		Q4-FY21-22	
	\$5.2	06/30/22	\$17.9	01/31/22	\$17.9	01/31/22	\$5.2	06/30/22	\$5.2	06/30/22	\$5.2	06/30/22	\$5.2	10/30/22

Footnotes:

1. This represents forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. This represents a project milestone of 50% Design.
3. For San Andreas Dam Facility Improvements, all milestones except Awarded Construction represent the same date for both scopes.

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
10034526 Millbrae Warehouse Settlement & Admin. Bldg. HVAC	FY21-30		1/3/17		12/29/17 (Scope I) 01/2/18 (Scope II)		12/29/18(Scope I) 08/12/22 (Scope II)		08/03/20(Scope I) 03/29/23 (Scope II)		03/09/21 (Scope I) 08/8/23(Scope II)		Q4-FY21-22	
Scope I	\$5.5	11/30/23	\$5.5	11/30/23	\$5.5	11/30/23	\$5.5	11/30/23	\$5.5	11/30/23	\$5.5	11/30/23	\$16.1	09/30/24
Scope II														
10015124 Sunol Long Term Improvements	FY21-30		01/01/09		04/27/12		05/28/13 (Scope I) 08/07/14 (Scope II)		03/30/15 (Scope I) 10/02/15 (Scope II)		11/08/16 (Scope I) 12/10/19 (Scope II)		Q4-FY21-22	
Scope I	\$91.7	09/01/21	\$91.7	09/01/21	\$91.7	09/01/21	\$91.7	09/01/21	\$91.7	09/01/21	\$91.7	09/01/21	\$104.9	08/14/23
Scope II														
10015128 Millbrae Yard Laboratory and Shop Improvements	FY21-30		11/02/15		10/03/22		04/17/23		07/19/24		02/11/25		Q4-FY21-22	
	\$169.6	03/31/28	\$24.5	05/03/23	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$169.6	03/30/29

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).

6. PROJECT PERFORMANCE SUMMARY*

All costs are shown in \$1,000s as of 07/01/22

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Water Treatment											
10033123 - SVWTP Ozone (CUW27202)	DS	\$165,130	\$ 165,130	\$ 192,816	\$ 7,185	(\$27,686)	-17%	06/30/27	06/30/27	06/30/28	(366)
10015064 - SVWTP Phase 3 and 4	PL	\$70,132	\$ 70,132	\$ 60,035	\$ 8,109	\$ 10,097	14%	06/30/26	06/30/26	05/17/27	(321)
10037628 - SVWTP Polymer Feed Facility	DS	\$7,537	\$ 7,537	\$ 19,046	\$ 288	(\$11,509)	-153%	09/27/24	09/27/24	08/01/25	(308)
10037349 - HTWTP Improvements Capital	BA	\$14,404	\$ 14,404	\$ 14,404	\$ 511	-	0%	06/28/24	06/28/24	06/28/24	-
10037350 - Regional Groundwater Treatment Improvement	PL	\$38,600	\$ 38,600	\$ 38,600	\$ 893	-	0%	12/27/29	12/27/29	02/26/30	(61)
Water Transmission											
10034578 - CSPL2 Reach 5 Lining Replacement	PL	\$13,031	\$ 13,031	\$ 23,697	\$ 1,008	(\$10,666)	-82%	09/19/25	09/19/25	04/07/26	(200)
10035029 - As-Needed Pipeline Repairs	DS	\$6,795	\$ 6,795	\$ 7,724	\$ 307	(\$929)	-14%	08/25/28	08/25/28	08/25/28	-
10036839 - BDPL4 PCCP Repair	PL	\$54,750	\$ 54,750	\$ 54,750	\$ 413	-	0%	11/22/23	11/22/23	05/28/25	(553)
10036840 - BDPL 1-4 Lining Repair	DS	\$9,350	\$ 9,350	\$ 10,764	\$ 229	(\$1,414)	-15%	08/25/28	08/25/28	08/25/28	-

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

**** Phase Status Legend**

PL	Planning	DS	Design
BA	Bid & Award	CN	Construction
MP	Multiple-Phase		

Footnotes:

- (+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
- (+++) **Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.**

I. Regional WECIP Quarterly Report

Q4-FY2021-2022 (04/01/22 - 06/30/22)

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Water Transmission											
10015071 - Corrosion Control	BA	\$24,900	\$ 24,900	\$ 36,536	\$ 7,961	(\$11,636)	-47%	12/29/34	12/29/34	01/31/28	2,524
10015076 - San Antonio Pump Station MCC Upgrades	DS	\$12,500	\$ 12,500	\$ 12,500	\$ 1,183	-	0%	03/19/25	03/19/25	03/19/25	-
10015081 - CSPL2 Reaches 2 and 3 Rehabilitation	PL	\$50,041	\$ 50,041	\$ 82,813	\$ 2,038	(\$32,772)	-65%	06/12/26	06/12/26	02/18/27	(251)
Water Supply & Storage											
10036998 - Turner Dam and Reservoir Improvements	PL	\$7,500	\$ 7,500	\$ 7,500	\$ 682	-	0%	06/29/35	06/29/35	06/29/35	-
10015091 - Pilarcitos Dam Improvements	PL	\$30,087	\$ 30,087	\$ 30,087	\$ 3,689	-	0%	06/29/29	06/29/29	06/29/29	-
10015092 - San Andreas Dam Facility Improvements	PL	\$32,195	\$ 32,195	\$ 32,195	\$ 1,610	-	0%	12/30/33	12/30/33	12/30/33	-
Watershed & Lands Management											
10015110 - EBRPD WATER SYSTEM	CN	\$5,376	\$ 5,376	\$ 5,553	\$ 4,254	(\$177)	-3%	10/31/22	10/31/22	10/31/22	-
10015108 - Sneath Lane Gate/North San Andreas	PL	\$6,698	\$ 6,698	\$ 6,698	\$ 294	-	0%	01/27/28	01/27/28	08/02/27	178

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

**** Phase Status Legend**

PL	Planning	DS	Design
BA	Bid & Award	CN	Construction
MP	Multiple-Phase		

Footnotes:

- (+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
- (+++) **Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.**

I. Regional WECIP Quarterly Report

Q4-FY2021-2022 (04/01/22 - 06/30/22)

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Watershed & Lands Management											
10015113 - Southern Skyline Blvd Ridge Trail Extension	BA	\$21,805	\$ 21,805	\$ 25,274	\$ 5,545	(\$3,469)	-16%	09/11/23	09/11/23	03/01/25	(537)
10030771 - SA-1 Service Road/Ingoing Road	DS	\$9,568	\$ 9,568	\$ 15,817	\$ 690	(\$6,249)	-65%	12/31/26	12/31/26	12/31/26	-
Buildings and Grounds											
10033555 - Rollins Road Building Renovations (CUW27703)	CN	\$5,192	\$ 5,192	\$ 5,192	\$ 3,209	-	0%	06/30/22	06/30/22	10/30/22	(122)
10034526 - Millbrae Warehouse Settlement & Admin. Bldg. HVAC	DS	\$5,500	\$ 5,500	\$ 16,080	\$ 2,095	(\$10,580)	-192%	11/30/23	11/30/23	09/30/24	(305)
10015124 - Sunol Long Term Improvements	CN	\$100,414	\$ 100,414	\$ 104,914	\$ 96,268	(\$4,500)	-4%	09/13/22	09/13/22	08/14/23	(335)
10015128 - Millbrae Yard Laboratory and Shop Improvements	PL	\$169,563	\$ 169,563	\$ 169,563	\$ 3,987	-	0%	03/31/28	03/31/28	03/30/29	(364)

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

**** Phase Status Legend**

PL	Planning	DS	Design
BA	Bid & Award	CN	Construction
MP	Multiple-Phase		

Footnotes:

- (+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
- (+++) **Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.**

7. PROJECT STATUS REPORT

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: Design		Environmental Status: Active (CatEx)	
Project Cost:			Project Schedule:		
Approved		\$165.13 M	Approved Jun-17		Jun-27
Forecast		\$192.82 M	Forecast Jun-17		Jun-28
Actual		\$7.18 M	Project Percent Complete: 4.7%		

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	03/28/23	08/09/23	01/02/24	07/01/27

Progress and Status:

During this reporting period, the 35% design was completed, and the 65% design started. A value engineering review was performed on the 35% design, and the draft findings were presented to the stakeholders. A value engineering report on the findings is being prepared. A 35% cost estimate review was performed.

Issues and Challenges:

The variance in the forecast budget, same as reported since Q2 of FY21/22, is due to refinements to the design including bypassing and relocating existing raw water pipelines; additional components for the ozone application; expansion of the contactor basin configuration; and increases in estimated costs for materials, contingencies, and escalation. The team is evaluating the 35% cost estimate, value engineering findings and estimate review comments and will update the project budget forecast in the next reporting period. The current variance in the forecast schedule, same as reported since Q2, is to allow an additional 6 months for the relocation and bypassing of existing raw water pipelines and an additional 6 months for start-up, testing, training, project turnover, and closeout.









Rendering of Ozone Facility

10015064 - 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 (CatEx)
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Project Cost:		Project Schedule:	
Approved 	\$70.13 M	Approved Mar-14 	Jun-26
Forecast 	\$60.03 M	Forecast Mar-14 	May-27
Actual 	\$8.11 M	Project Percent Complete: 12.2%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	04/03/23	(A) 06/08/23 (B) 10/10/24	(A) 11/14/23 (B) 03/21/25	11/14/24 08/04/25

Progress and Status:

During the previous reporting period, the 25 identified scope items were re-sequenced to include 9 items for the Short Term Improvement project in the next 10-Year CIP and the remaining 16 items for the Long Term Improvement project in the next 10-Year CIP. The draft Conceptual Engineering Report (CER) for the Short Term Improvements scope was submitted for review this quarter. Review comments on the CER are being prepared. The Long Term Improvements project Request for Proposal work started during the quarter.



Inspection of Sedimentation Basin 1







Issues and Challenges:

The variance in the cost and schedule forecasts, same as reported since Q2, are due to the project being re-sequenced and rescoped into two separate projects: SVWTP Short Term Improvements and SVWTP Long Term Improvements; these projects will be reported separately beginning in Q1 of FY22/23. The cost forecast of \$60M is for the SVWTP Short Term Improvement project proposed budget; the remaining budget of \$10M is the proposed budget for the SVWTP Long Term Improvements project. The CER cost estimate is being evaluated and an updated forecast will be prepared next quarter. The variance in schedule forecast is due to delays in the planning phase and increase in construction duration, as previously reported. The schedule is being evaluated based on the re-sequenced scope and an updated forecast will be prepared next quarter.

I. Regional WECIP Quarterly Report

10037628 - SVWTP Polymer Feed Facility

Project Description: 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. Planning and some design were performed under the Water System Improvement Program (WSIP); this project will finish design and construct the improvements.

Program: Water Treatment		Project Status: Design		Environmental Status: Active (CatEx)	
Project Cost:			Project Schedule:		
Approved		\$7.54 M	Approved Mar-21		Sep-24
Forecast		\$19.05 M	Forecast Jul-21		Aug-25
Actual		\$0.29 M	Project Percent Complete: 0.4%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	07/01/22	01/30/23	07/27/23	07/24/25	

Progress and Status:

The final cost evaluation technical memorandum on the 65% design was completed. A presentation on the findings was held with the stakeholders and a preferred option was selected for implementation. The preferred option requires revision to the 35% design. Operations requested to perform full scale tests at the SVWTP to confirm the need for polymer systems in all 5 sedimentation basins. The team started coordination with Operations on the testing.

Issues and Challenges:

The variance in the forecast budget, same as reported since Q2, is due to design development that resulted in higher costs for building systems, foundation and structural steel systems, polymer feed system and components; missed items in the previous engineer's estimates; and increases in contingencies and escalation costs. The variance in the forecast schedule, same as reported since Q2, is to allow 6 months for the redesign to incorporate a selected value engineering option, and an additional 5 months for startup, testing, training, facility turnover, and closeout. The team is evaluating the impact to the schedule to perform more full-scale testing and will update the project budget and schedule forecast next quarter.









Mobile Pilot Plant

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: Bid and Award	Environmental Status: Completed (CatEx)
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Project Cost:		Project Schedule:	
Approved  \$14.40 M	Approved Nov-20  Jun-24	Forecast  \$14.40 M	Forecast Nov-20  Jun-24
Actual  \$0.51 M	Project Percent Complete: 19.0%		
			

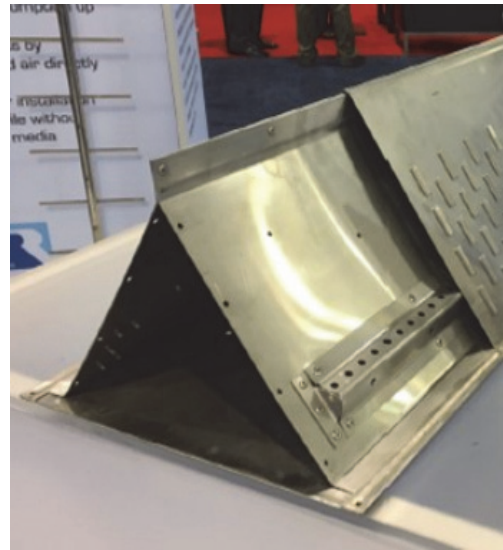
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	10/29/21✓	04/21/22✓	12/30/22	12/29/23

Progress and Status:

Contract WD-2887, Harry Tracy Water Treatment Plant - Filters No. 1 to 6 Underdrain Replacement, was advertised for bids during the quarter. The Engineer’s Estimate was between \$10.5M and \$11.5M. Four bids were received, which were between 5% and 19% below the Engineer’s Estimate range. The contract will be presented to the Commission for award to the responsible bidder with the lowest responsive bid early next quarter.

Issues and Challenges:

None at this time.









Stainless Steel Underdrain

I. Regional WECIP Quarterly Report

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 (CatEx)
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Project Cost:		Project Schedule:	
Approved	 \$38.60 M	Approved Aug-20	 Dec-29
Forecast	 \$38.60 M	Forecast Aug-20	 Feb-30
Actual	 \$0.89 M	Project Percent Complete: 1.2%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	01/20/27	04/07/27	08/30/27	08/29/29

Progress and Status:

Preparation of a Request for Proposals to procure a professional services contract for assistance with project planning, design, engineering services during construction, and closeout is continuing.

Issues and Challenges:







The variance in the forecast schedule, same as reported since Q2, is due to the additional unanticipated time required to procure a consultant to provide services for planning, design, construction, and closeout.



Well Station Building

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 (CatEx)
Project Cost:		Project Schedule:
Approved 	\$13.03 M	Approved Feb-19  Sep-25
Forecast 	\$23.70 M	Forecast Feb-19  Apr-26
Actual 	\$1.01 M	Project Percent Complete: 7.2%
		

Key Milestones:	Environmental** Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	See Note	10/20/23	03/04/24	09/30/25

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

Progress and Status:

Surveying field work to create base maps for the project’s Conceptual Engineering Report (CER) began this quarter. Geotechnical field work that will be summarized in the CER was planned and is waiting for CEQA clearance in order to begin. Drafting of the CER is in progress.

Issues and Challenges:

The variance in the budget, same as reported since Q2, is due to the addition of scope during the alternatives analysis, including the improvement of an additional 34 appurtenances, removal of the coal tar lining to the highest level of cleanliness, and the potential repair of sections of 3 parallel pipelines (San Andreas Pipeline No. 2, San Andreas Pipeline No. 3 and the Sunset Supply Pipeline) near the Baden Pump Station due to possible corrosion. The variance in the schedule, same as reported since Q2, is due to additional unanticipated time required to procure a consultant to assist with the planning phase and future design phase.









Typical Appurtenance to be Upgraded

I. Regional WECIP Quarterly Report

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: Design		Environmental Status: Active (CatEx)	
Project Cost:			Project Schedule:		
Approved		\$6.80 M	Approved Oct-16		Aug-28
Forecast		\$7.72 M	Forecast Oct-16		Aug-28
Actual		\$0.31 M	Project Percent Complete: 8.2%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	06/26/23	12/18/23	05/21/24	02/21/28	

Progress and Status:

This quarter, consultants were procured to support the planning phase, to incorporate the valves to be used for safe pipeline entry into the design, and to perform survey and geotechnical investigation work.

Issues and Challenges:

The variance between the approved and forecast cost, same as reported since Q2, is due to the additional cost to accommodate safe pipeline entry requirements. Since installation of extra valves was selected as the preferred safe pipeline entry measure, additional cost increase per length of pipe is anticipated when fully assessed.









Typical Valve Requiring Installation of Additional Valve for Safe Entry

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 (CatEx)
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Project Cost:		Project Schedule:	
Approved	 \$54.75 M	Approved May-20	 Nov-23
Forecast	 \$54.75 M	Forecast May-20	 May-25
Actual	 \$0.41 M	Project Percent Complete: 0.8%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/30/23	07/25/23	12/22/23	11/27/24

Progress and Status:

Consultant is continuing to prepare a Needs Assessment Report. In addition, interim repairs to high priority segments are being evaluated.

Issues and Challenges:

The variance in schedule, same as reported since Q2, is due to the ongoing discovery of new leaks in the pipeline and the potential need to repair different or additional segments of pipeline. With the discovery of new leaks, various immediate and short-term solutions, as well as long-term solutions, are being considered and will be further evaluated in the Needs Assessment that is currently being prepared.









Leak at PCCP to Steel Transition

I. Regional WECIP Quarterly Report

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: Water Transmission		Project Status: Design		Environmental Status: Active (CatEx)	
Project Cost:			Project Schedule:		
Approved		\$9.35 M	Approved Sep-16		Aug-28
Forecast		\$10.76 M	Forecast Sep-16		Aug-28
Actual		\$0.23 M	Project Percent Complete: 3.7%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	10/21/22	12/14/23	05/16/24	01/04/28	

Progress and Status:

This quarter, consultants were procured to support the planning phase, to incorporate the valves to be used for safe pipeline entry into the design, and to perform survey and geotechnical investigation work.

Issues and Challenges:

The variance between the approved and forecast cost, same as reported since Q2, is due to the additional cost to accommodate safe pipeline entry requirements. Since installation of extra valves was selected as the preferred safe pipeline entry measure, additional cost increase per length of pipe is anticipated when fully assessed.









Valve Lot Where New Valve Will be Added for Safe Entry

10015071 - 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: Bid and Award	Environmental Status: Active (CatEx)
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Project Cost:		Project Schedule:	
Approved 	\$24.90 M	Approved Jan-16 	Dec-34
Forecast 	\$36.54 M	Forecast Jan-16 	Jan-28
Actual 	\$7.96 M	Project Percent Complete: 46.3%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	01/31/22✓	05/27/22✓	01/05/23	01/06/25

Progress and Status:

The project is currently in Bid & Award Phase. Actual advertisement date for construction was during the quarter, on May 27, 2022, and bid opening date is scheduled for next quarter, August 8, 2022. Construction NTP forecast is March 2023.

Issues and Challenges:

The variance in the forecast cost and schedule, same as reported since Q2, are due primarily to PG&E’s late decision to require step-down facilities at all new power connections.









Deep Anode Installation – Corrosion Phase 1

I. Regional WECIP Quarterly Report

10015076 - 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: Active (CatEx)	
Project Cost:			Project Schedule:		
Approved		\$12.50 M	Approved May-16		Mar-25
Forecast		\$12.50 M	Forecast May-16		Mar-25
Actual		\$1.18 M	Project Percent Complete: 14.9%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	10/31/22	12/07/22	06/05/23	10/09/24	

Progress and Status:

During this reporting period, the design team coordinated with Operations on construction sequencing requirements and progressed on the 95% design. The 95% design is anticipated to be completed in the next quarter. Utility locating work, to further develop the design for the micropiles adjacent and outside of the building, was completed during this quarter. The Design Criteria Report is being updated to include recently identified generator and lighting requirements.

Issues and Challenges:

None at this time.









San Antonio Pump Station building looking southeast

10015081 - 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 	\$82.81 M	Forecast Sep-16 	Feb-27
Actual 	\$2.04 M	Project Percent Complete: 2.6%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	12/21/23	03/14/24	08/21/24	08/21/26

Progress and Status:

San Francisco Public Works (SFPW) completed surveying and geotechnical investigation field work during the quarter, and the SFPUC is using the data provided to create base maps that will be included in the Conceptual Engineering Report (CER).

Issues and Challenges:

The variance from the approved budget, same as reported in since Q2, is due to estimating the construction cost based on unit costs from recently bid and similar complexity pipeline projects that were bid during recent market conditions. This has resulted in a significantly higher forecasted cost than previously estimated. The variance in the schedule, same as reported since Q2, is due to the lengthy amount of time required to procure a consultant to assist with the planning phase and future design phase.











CSPL2 Gully Crossing

I. Regional WECIP Quarterly Report

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.

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	 \$0.68 M	Project Percent Complete: 6.3%	
 Approved;  Actual Cost;  Forecast			

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:

Geotechnical investigation started this quarter, and the team completed 18 land borings and 9 cone penetration tests, performed both on the downstream face and on the crest of the dam. Remaining geotechnical investigation work at additional locations will be undertaken in the next two quarters.

Issues and Challenges:

None at this time.








Crews performing geotechnical drilling work on dam crest during DSOD site visit

10015091 - 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 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 Pilarcitos Dam and Reservoir facilities, including the dam and forebay outlet structure, spillway, outlet tunnel, and outlet pipeline, and will perform necessary upgrades identified during the Planning Phase.

Program: Water Supply & Storage	Project Status: Planning	Environmental Status: Not Initiated (MND)
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Project Cost:	Project Schedule:
Approved  \$30.09 M	Approved Apr-14  Jun-29
Forecast  \$30.09 M	Forecast Apr-14  Jun-29
Actual  \$3.69 M	Project Percent Complete: 20.1%

 Approved;  Actual Cost;  Forecast

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:

The project team continued to analyze the nine alternatives previously identified during the condition and needs assessment phase. A preliminary list of four to six pre-screened alternatives will be proposed and reviewed with stakeholders in the next quarter.

Issues and Challenges:

Based on the assessment of the schedule already noted in the previous quarter, the planning phase may need to be extended to accommodate the additional time spent on the geotechnical investigation and additional studies performed for the condition and needs assessments. The overall project schedule and budget will be reforecast once the scope is defined at the end of the Alternative Analysis phase.









Spillway cleaning and mapping for condition assessment

I. Regional WECIP Quarterly Report

10015092 - 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, including the dam, spillway, emergency outlet, and ancillary facilities, and perform necessary upgrades identified during the Planning Phase..

Program: Water Supply & Storage		Project Status: Planning		Environmental Status: Not Initiated (Various)	
Project Cost:			Project Schedule:		
Approved		\$32.20 M	Approved Dec-13		Dec-33
Forecast		\$32.20 M	Forecast Dec-13		Dec-33
Actual		\$1.61 M	Project Percent Complete: 6.6%		
					
Key Milestones:	Environmental** Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	(A) 12/31/26 (B) 12/31/26	01/04/27 01/04/27	07/01/27 07/01/27	06/29/29 06/29/31	

*** (A) Spillway CatEx; (B) Embankment MND

Progress and Status:

The project team started analyzing the nine alternatives identified during the Condition and Needs Assessment phase during the quarter. Geotechnical investigation also started this quarter. The team completed 13 land borings on the upstream face of the dam and 14 cone penetration tests on both the upstream face and the downstream face of the dam. Remaining geotechnical investigation work at additional locations will be undertaken in the next two quarters.

Issues and Challenges:

The approved schedule assumed the construction work for the spillway and emergency drawdown outlet structures would be completed two years before the dam embankment. Based on the preliminary needs assessment and condition assessment findings, it is now recommended that the alternatives analysis also include analysis for combining the construction of these three major components under a single construction contract. This combined construction contract alternative would impact the project overall schedule. As the project is still in early planning phase, the overall project schedule and budget will be reforecast once the scope of work is defined at the end of the Alternative Analysis phase.









Crews performing geotechnical drilling work on dam embankment

10015110 - 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. The project purpose is to provide a reliable water supply for potable use at the EBRPD facilities within the SRP.

Program: Watershed & Lands Management	Project Status: Construction	Environmental Status: Completed
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Project Cost:		Project Schedule:	
Approved	 \$5.38 M	Approved Jun-14	 Oct-22
Forecast	 \$5.55 M	Forecast Jun-14	 Oct-22
Actual	 \$4.25 M	Project Percent Complete: 79.0%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	11/05/20✓	10/09/20✓	05/10/21✓	08/16/22

Progress and Status:

During this reporting period, construction is on-going and is nearing completion. The Construction Final Completion date was updated to August 16, 2022 based on the delay in construction start and delays in startup and testing. The contractor anticipates being able to complete construction by this final completion date. Meanwhile, an MOU is being drafted in coordination with the City Attorney to memorialize the turnover of the East Bay Regional Park District water system to the East Bay Regional Park District.

Issues and Challenges:

The forecasted budget exceeds the approved, same as reported since Q2, due to the need for Naturally Occurring Asbestos (NOA) monitoring required by the Asbestos Dust Mitigation Plan (ADMP). The forecasted schedule exceeds the approved, due to the additional time needed to produce an ADMP plan as well as longer than anticipated startup and testing.









Installation of hypochlorite system at High Valley tanks

I. Regional WECIP Quarterly Report

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: Watershed & Lands Management	Project Status: Planning	Environmental Status: Active (CatEx)
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Project Cost:		Project Schedule:	
Approved 	\$6.70 M	Approved Feb-21 	Jan-28
Forecast 	\$6.70 M	Forecast Feb-21 	Aug-27
Actual 	\$0.29 M	Project Percent Complete: 14.0%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	01/17/25	07/01/25	01/02/26	02/01/27

Progress and Status:

During this reporting period, notice to proceed (NTP) was issued for the environmental phase task order, and California Environmental Quality Act (CEQA) work commenced.

Issues and Challenges:







The most recent engineer's estimate for construction exceeds the approved construction budget. Value engineering options will be identified in the design phase.



Sneath Lane Gate Trailhead - View Looking South

10015113 - 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: Bid and Award	Environmental Status: Active (EIR)
Project Cost:		Project Schedule:
Approved  \$21.81 M	Approved Oct-12  Sep-23	
Forecast  \$25.27 M	Forecast Oct-12  Mar-25	
Actual  \$5.55 M	Project Percent Complete: 31.0%	
		

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	05/11/21✓	09/01/22	03/01/23	09/01/24

Progress and Status:

During this reporting period, the project team received preliminary approval for the project plans from the City’s designated Americans with Disabilities Act (ADA) Coordinator. The project team continued to develop responses to the US Fish and Wildlife Services’ questions. Application for a Federal grant administered through CalTrans triggered the need to comply with National Environmental Protection Act (NEPA) permitting requirements, including additional compliance with Americans with Disabilities Act requirements, and also triggered review of the project by federal agencies, including the US Fish and Wildlife Services. This in turn has required additional evaluations and consultations and has caused further delays in advertising the contract. As part of NEPA compliance, Caltrans forwarded required documentation for the project's NEPA compliance (NEPA Section 106) to the State Historic Preservation Office.



View of southern trail alignment

with the State Historic Preservation Officer and the United States Fish and Wildlife Service. The PUC standard specifications are being re-written to conform to federal law, including provisions related to Disadvantaged Business Enterprise participation goals, Davis Bacon Act, and project labor participation.







Issues and Challenges:

The variance in schedule was extended by an additional 13 months last quarter due to unanticipated additional requirements for the \$1M Federal Highway Administration grant. Prior to advertisement, requirements for compliance with the National Environmental Policy Act (NEPA) include consultation

I. Regional WECIP Quarterly Report

10030771 - 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: Design		Environmental Status: Active (MND)	
Project Cost:			Project Schedule:		
Approved		\$9.57 M	Approved Jun-16		Dec-26
Forecast		\$15.82 M	Forecast Jun-16		Dec-26
Actual		\$0.69 M	Project Percent Complete: 6.0%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	06/15/23	01/24/24	06/26/24	06/24/26	

Progress and Status:

The project team further developed the 35% design during the quarter. Consultant engineering support services for overall geotechnical design and structural design of debris boom system were also put into place during the quarter. The SFPUC Bureau of Environmental Management (BEM) confirmed that environmental clearance may be obtained within 18 months.

Issues and Challenges:







The design phase was shortened from 24 months to 18 months to accommodate the expiration date of design consultant resources. Overall project schedule will be adjusted when the environmental permit has been obtained. Engineer's estimate will be updated at 35%, 65%, and 95% design milestones.



Project Map – SA-1 Service Road/Ingoing Road

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, in order to relocate personnel at 1657 Rollins Road to Millbrae Yard campus following the completion of the Millbrae Yard Lab & Shops Project, and decrease this project’s scope to minor necessary tenant improvements. 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 to accommodate the Rollins Road building staff.

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		Oct-22
Actual	 \$3.21 M	Project Percent Complete: 61.9%		
				
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	10/30/20✓	N/A	12/08/20✓	10/30/22

Progress and Status:

During this reporting period, security cameras were installed, substantial completion was achieved and the punch list was issued.

Issues and Challenges:

The forecasted construction completion date exceeds the approved completion date by four months because supply chain issues delayed the delivery of the security cameras for more than 6 months. The final two security cameras were installed during the quarter, in May 2022. Punch list work is forecast to be complete by October 2022.









View of new entry gate at southern entrance

I. Regional WECIP Quarterly Report

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: Completed (MND)		
Project Cost:		Project Schedule:		
Approved 	\$5.50 M	Approved Jan-17 	Nov-23	
Forecast 	\$16.08 M	Forecast Jan-17 	Sep-24	
Actual 	\$2.09 M	Project Percent Complete: 35.2%		
				
Key Milestones:	Environmental** Approval	Bid+ Advertisement	Construction+ NTP	Construction+ Final Completion
Current Forecast	(A) 08/31/20✓ (B) 01/12/22✓	(A) 09/01/20✓ (B) 05/22/23	(A) 06/16/21✓ (B) 11/01/23	11/24/21✓ 09/27/24

+ 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:

For the sub-project Millbrae Warehouse Loading Dock Repair, the Commission accepted the work and approved final payment to the contractor during the quarter on April 12. Turnover to the San Francisco Public Utilities Commission's (SFPUC) Water Supply and Treatment Division on June 10 included final as-builts, warranties, maintenance documents, and closeout package. This will be the last report for this subproject. For the sub-project Millbrae HVAC Upgrades, a contractor had conducted an inspection of the existing HVAC system last quarter, on March 17, and determined that an upgrade to the existing HVAC system inside the building can sufficiently provide the necessary improvements to address the outdated nonoperational pneumatic controls, increased heat generating lab equipment, and the inadequate heating and ventilation that affect the working conditions inside the building. This HVAC upgrade inside the building will provide about 15 to 20 years of use. All work that was to have been performed outside the building has been eliminated from the scope, and the proposed upgrades to existing HVAC inside the building are the current limited scope of the HVAC Upgrades sub-project.









Existing Millbrae Administration Building

Issues and Challenges:

The variances in the forecast cost and schedule from the approved baseline, same as reported since Q2, have not yet been adjusted to reflect the new, limited scope of the second sub-project; new forecasted cost and schedule will be reported next quarter.

10015124 - 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  \$104.91 M	Forecast Jan-09  Aug-23	
Actual  \$96.27 M	Project Percent Complete: 94.9%	
		

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✓ 10/31/22

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

Progress and Status:

Sunol Yard (Contract A): The project close-out dossier was finalized during the quarter.

Watershed Center (Contract B): Construction work on the building interior continued, including electrical work, communication systems, pond filter system, HVAC, aquarium systems, windows, kitchen and restroom finishes, security, exhibits, interior glass doors and LEED certification documentation. Construction work on the exterior continued, including planting, bluestone boulders and pavers, pathways, pond and stream. Work on the windows, floor polishing, new tile installation, and exterior doors was all completed during the quarter.



Entrance to the Watershed Center

Issues and Challenges:







The forecasted schedule, same as reported since Q2, exceeds the approved completion date due to procurement delays for bluestone pavers, boulders, and stencil materials as well as bird-proof glass. The design and installation of the interior exhibits is also delayed due to extended time to redesign, fabricate, and install the exhibits and to complete the exhibit hardware and programming work. An additional 6 months has been added to the closeout phase to allow for training, start-up and maintenance planning with

operations and Natural Resources and Lands Management staff. The forecasted cost, same as reported since Q2, exceeds the approved budget due to the addition of scope requested for overflow parking space, backup power system, picnic area restoration, purchase of compositing toilets, and exhibit revisions.

I. Regional WECIP Quarterly Report

10015128 - 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. 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-29
Actual	 \$3.99 M	Project Percent Complete: 2.4%		
				
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	07/27/23	N/A	04/15/25	03/31/28

Progress and Status:

Conceptual design was issued during the quarter, on May 24, for internal team review. Request for Proposal (RFP) Agreement No. PUC.PRO.0221 - to provide engineering services for the project - was advertised during the quarter on June 29. Laboratory and space planning; geotechnical investigation; utilities survey; grading, landscaping and site layout planning; traffic and parking circulation planning; building exterior design concept; frontage design along El Camino Real; and stormwater and best practice management planning continued to progress.



Existing Administration Building

Issues and Challenges:

The variance in schedule, same as reported since Q2, is due to Public Works Bureau of Construction Management's proposed extension of the construction duration from 30 months to 36 months to be better aligned with construction schedules on recent building projects. Also, increase of the closeout phase duration from 6 months to 12 months is forecasted due to the likelihood of longer time needed to complete start-up and closeout activities for this complex building project.

Since the project is still in the planning phase, the overall project schedule and budget will be re-forecasted once the scope of work is refined due to

scope development, increase in escalation, and increased duration forecast for several phases at the end of the conceptual design phase.

8. 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								
10015110 - WD-2865 PUC Sunol Rgnl WP WTR Sys	05/10/21	05/28/22	08/16/22	\$ 2,634,808	\$ 2,634,808	(80)	-	90.0%
Buildings and Grounds								
10015124 - WD-2794B Sunol Long Term Improvements - Watershed Center	03/09/20	03/16/22	10/31/22	\$ 30,937,270	\$ 32,093,096	(229)	(\$1,155,826)	93.0%

Program Total for On-Going Construction	Approved	Current	Variance	
	Contract Cost	Forecasted Cost	Cost	Percent
	\$ 33,572,078	\$ 34,727,904	(\$1,155,826)	(3.4%)

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.

9. PROJECTS IN CLOSEOUT

There are no active projects currently in closeout phase.

10. COMPLETED PROJECTS

Project Title	Approved Project Completion	Actual Project Completion	Approved Project Budget	Project Expenditures To Date
Water Transmission				
10015080 - San Andreas Pipeline No. 2 Replacement	12/08/21	12/08/21	\$ 45,642,000	\$ 42,069,946
TOTAL			\$ 45,642,000	\$ 42,069,946

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II. Local Capital Improvement Program

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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 and 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 every two years (with minor modifications in the off years) 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, 2022 and June 30, 2022. This document serves as the fourth (4th) Quarterly Report in Fiscal Year 2021-2022 (FY22) 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.

Going forward, changes to the approved baseline program, including any changes to continuing projects' scopes, schedules, and budgets, will be proposed as part of the bi-annually updated 10-year CIP to be approved by the SFPUC Commission. The proposed revisions to the program will become the new baseline for new and continuing projects' scopes, schedules, and budgets in the beginning of the new fiscal year following SFPUC Commission approval.

Figure 2.1 shows the total Current Approved Budget for the Local projects in each phase of the program as of June 30, 2022. The number of projects currently active in each phase is shown in parentheses.

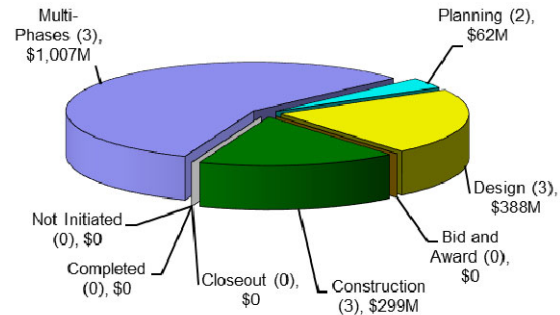


Figure 2.1 Total Current Approved Budget for Local Projects Active in Each Phase

Figure 2.2 shows the number of Local projects in the following phases as of June 30, 2022: Pre-construction, Construction, and Post-construction.

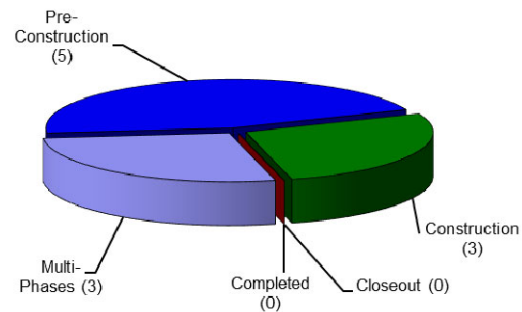


Figure 2.2 Number of Local Projects in Pre-construction, Construction, and Post-construction

Figure 2.3 summarizes the environmental review status of the Local projects as of June 30, 2022.

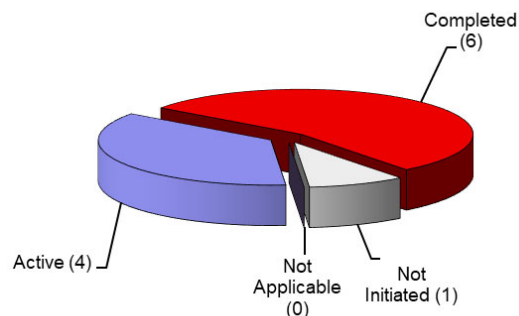
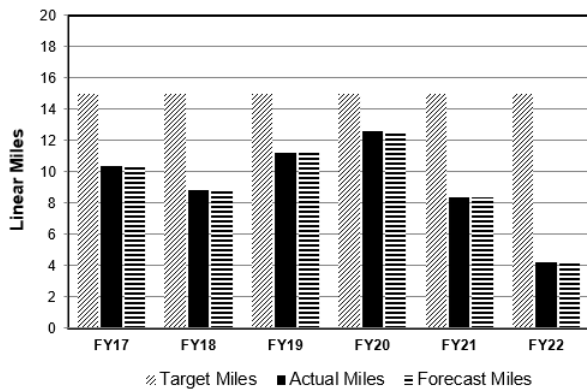


Figure 2.3 Local Program Environmental Status

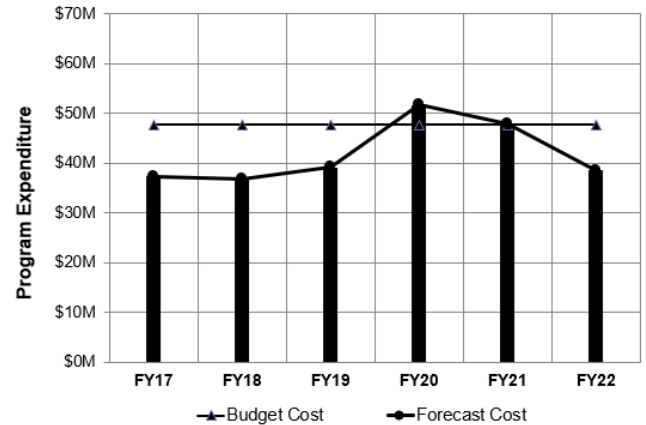
The Local Water Conveyance/Distribution System Program has an annual goal to replace or improve a target of 15 miles of water mains in San Francisco. Figure 2.4 shows the planned and actual miles of pipeline projects that have reached substantial completion since FY17. At the end of FY22, 4.2 miles of pipe were replaced; this was significantly less than forecasted since \$10M of the project’s budget was re-directed to fund emergency improvements at Stern Grove in San Francisco due to an unanticipated valve failure and subsequent flooding of the Grove during 2021.



	FY17	FY18	FY19	FY20	FY21	FY22
Target Miles	15.0	15.0	15.0	15.0	15.0	15.0
Actual Miles	10.4	8.8	11.2	12.6	8.4	4.2
Forecast Miles						4.2

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 FY22 included the City streets of Castro Street, 17th Street, Baker Street, 19th Avenue, Vicente Street, Prospect Avenue, and L-Taraval Segment B. Water main replacement projects which received substantial completion during the 4th quarter of FY22 included Baker and Castro streets. Projects anticipated to start in the 1st quarter of FY23 include Diamond Street.



	FY17	FY18	FY19	FY20	FY21	FY22
Budget	\$47.7M	\$47.7M	\$47.7M	\$47.7M	\$47.7M	\$47.7M
Actual Expenditure	\$37.3M	\$36.8M	\$39.2M	\$51.7M	\$47.8M	\$38.5M*
Forecast Expenditure						\$38.5M

*FY22 total expenditures were \$38.5M with \$9M related to Stern Grove Emergency Restoration Project and \$29.5M from main replacement projects.

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. FY21 had a reduced budget of \$18M which resulted in a reduction in advertisement of new construction projects and a decrease in new construction projects underway in FY22. It typically takes 12 to 15 months from construction contract advertisement to placement of new pipelines in services for beneficial use. FY22 had a increased budget of \$53.1M with approximately \$10M of FY22 budget redirected to fund the Stern Grove Emergency Restoration Contract issued under Board of Supervisor Resolution 170-22 and resolution file number 220245. In FY22, total expenditures were lower than previous fiscal years due to the reduction in contract advertisements from FY21 as noted above and the redirection of funds to the work related to the Stern Grove Emergency Restoration Contract. The budgeted cost per mile has been updated for FY22 from \$3.18 million per mile to \$5.4 million per mile for replacement of water distribution mains. The updated cost per mile for streetscape, transit, or ERDIP type projects is approximately \$8 million per mile. The updated

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cost per mile for water main replacement projects is 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 estimates.

3. CAPITAL IMPROVEMENT PROGRAM COST SUMMARY

Table 3 provides an overall program-level cost summary by categories of projects for the Water Enterprise CIP Local Program. It shows the Expenditures to Date, Current Approved Budgets, Q4/FY21-22 Forecasted Costs, Cost Variance between the Current Approved Budgets and Forecasted Costs, and Variance Over Reporting Period (difference between cost forecasts reported in Q3/FY21-22 and Q4/FY21-22).

Note that during Q2/FY21-22 the project teams were requested to forecast any major changes in budget, scope and schedule that should be included as a proposed change in the FY23-32 10- Year CIP budget proposal. Thus, the forecasts that were included in the Q2/FY21-22 report are the same as the proposed changes to project budgets and schedules that were

included in the 10-Year CIP budget proposal that was presented to, and approved by, the Commission on February 8, 2022. These forecasted changes from Q2/FY21-22 will become the approved budgets and schedules after full approval, anticipated to occur in Q1/FY22-23. For this Q4/FY21-22 report, any additional variances that exceed the proposed budgets and schedules approved for FY22/23 are also reported.

There were no new cost variances for Local projects since Q2. The total Current Approved Budget (including Regional and Local Programs) and Current Forecasted Cost at completion are \$2,674.2 million and \$3,301.7 million, respectively, same as reported since Q2FY22. The Current Approved Budget and Forecasted Cost at completion for only the Local Water Program (including construction contingency) are \$1,755.4 million and \$2,271.4 million, respectively.

The overall Local Water Program negative Cost Variance of \$516.0M in Table 3, same as reported since Q2, can be attributed to the following projects; reasons for the project variances are reported in Section 7:

- 19063 Local Water Conveyance/Distribution System forecasted cost increased by \$461.0M.
- 10037249 New CDD Headquarters forecasted cost increased by \$43.4M.
- 10015239 Lake Merced Water Level Restoration forecasted cost increased by \$10.0M.
- 10033818 Town of Sunol Pipeline forecasted cost increased by \$1.7M.

Please refer to Section I.3 of this report for more details about the reported cost variance for the Regional Water Program.

Table 3. Program Cost Summary

Programs	Expenditures To Date (\$ Million) (A)	Current Approved Budget (\$ Million) (B)	Q4/FY21-22 Forecasted Costs (\$ Million) (C)	Cost Variance (\$ Million) (D = B - C)	Variance Over Reporting Period* (\$ Million) (E)
Local Program	\$792.67	\$1,755.36	\$2,271.39	(\$516.03)	-
Local Water Conveyance/ Distribution System	\$435.84	\$810.58	\$1,273.20	(\$462.62)	-
Local Water Supply	\$256.60	\$312.54	\$322.54	(\$10.00)	-
Local Tanks/Reservoir Improvements	\$5.04	\$19.28	\$19.28	-	-
Pump Stations	\$0.47	\$6.53	\$6.53	-	-
Buildings and Grounds	\$4.38	\$350.19	\$393.60	(\$43.41)	-
Emergency Firefighting Water System	\$90.33	\$256.25	\$256.25	-	-
Regional Program	\$194.52	\$918.79	\$1,030.28	(\$111.49)	-
PROGRAM TOTAL	\$987.18	\$2,674.16	\$3,301.67	(\$627.52)	-

* Negative number reflects cost increases since last quarter, and positive number reflects cost reduction since last quarter.

4. CAPITAL IMPROVEMENT PROGRAM SCHEDULE SUMMARY

Figure 4 compares the 2021 Approved Schedule and the Current Forecast Schedule for the Local Water CIP. As shown in Table 4, the 2021 Approved and Forecasted Schedule completion for the overall Water Enterprise CIP (including Regional and Local Programs) are each in June 2035. The 2021 Approved and Forecasted Schedule completion for the Local CIP are in December 2028 and June 2032, respectively.

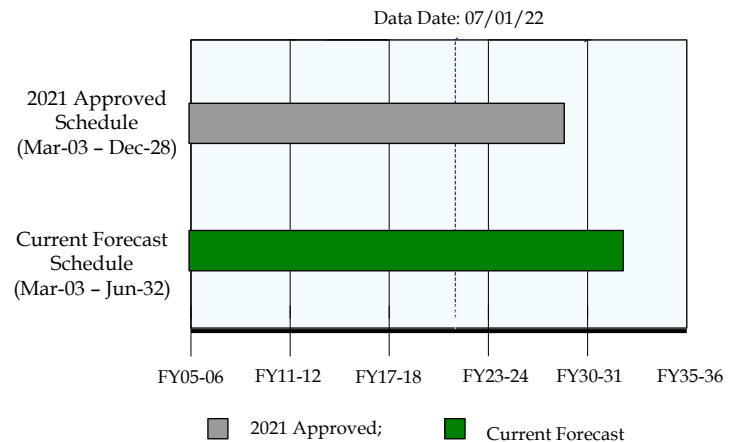


Figure 4. Local Program Schedule Summary

Table 4 2021 Approved vs. Current Forecast Schedule Dates

Sub-Program	2021 Approved Project Start	Actual Start	2021 Approved Completion	Current Forecast Completion	Schedule Variance (Months)
Local Program	03/03/03	03/03/03✓	12/29/28	06/30/32	42.0 (Late)
Regional Program	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. BUDGET AND SCHEDULE TREND SUMMARY

Starting with the Q1 FY21-22 Quarterly Report, a revised report format includes a new Table 5, titled Budget and Schedule Trend Summary. This Table 5 contains all approved Local Water projects that are active and in any of the planning, design, bid and award, or construction phases of the project. The table excludes any projects that are either Not-Initiated, On-Hold, in Closeout, or Completed.

During this quarter (Q4/FY21-22), the following major milestones were achieved, and the project cost and schedule forecasts were accordingly updated based on the updated milestone cost estimates for the following Local Water project:

- New CDD Headquarters Construction Management/General Contractor (CM/GC) contract was awarded.

Table 5. Budget and Schedule Trend Summary

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
WECIP - Local														
Local Water Conveyance/Distribution System														
10033816 Potable Emergency Firefighting Water System ²	FY21-30		8/12/19		N/A		N/A		N/A		N/A		Q4-FY21-22	
	\$55.0	06/30/28	\$44.8	06/30/28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$55.0	06/30/28
10033818 Town of Sunol Pipeline	FY21-30		06/17/19		11/01/21		09/16/22 ³		04/03/23		12/04/23		Q4-FY21-22	
	\$5.0	04/03/23	\$5.0	04/03/23	\$5.0	04/03/23	TBD	TBD	TBD	TBD	TBD	TBD	\$6.7	04/04/25
19063 Local Water Conveyance / Distribution System ⁴	FY21-30		N/A		Various		Various		Various		Various		Q4-FY21-22	
	\$750.6	06/30/28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,211.5	06/30/32
Local Water Supply														
10015239 Lake Merced Water Level Restoration	FY21-30		06/16/03		04/30/10		08/31/22		10/13/22		04/11/23		Q4-FY21-22	
	\$32.7	01/31/19	\$32.7	01/31/19	\$32.7	01/31/19	TBD	TBD	TBD	TBD	TBD	TBD	\$42.7	03/03/27
10015240 San Francisco Groundwater Supply	FY21-30		06/16/03		12/08/06		10/19/10		03/11/16		08/22/17		Q4-FY21-22	
	\$66.5	06/30/22	\$39.8	02/27/14	\$49.8	09/08/14	\$49.8	09/08/14	\$66.5	06/25/18	\$66.5	06/25/18	\$66.5	06/30/23
10015242 San Francisco Westside Recycled Water	FY21-30		03/03/03		05/15/09		12/08/14		06/29/16		10/17/17		Q4-FY21-22	
	\$213.3	01/12/23	\$201.3	04/18/08	\$149.6	09/25/13	\$186.2	12/18/19	\$186.2	12/18/19	\$186.2	12/18/19	\$213.3	04/06/23

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. Potable Emergency Firefighting Water System: This project will fund construction phase of PEFWS pipelines in the next several years.
3. Town of Sunol first Design milestone is 65%.
4. Local Water Conveyance/Distribution System: This is a Renew and Replacement Program where the corresponding CIP budget and forecast completion date are updated every 2 years during the CIP budget update cycle.

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction ¹		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
Local Tank/Reservoir Improvements														
10015223 College Hill Reservoir Outlet ²	FY21-30		01/24/13		10/14/16		12/15/16		02/15/19		06/08/21		Q4-FY21-22	
	\$19.3	01/29/24	\$16.3	09/28/21	\$16.3	09/28/21	\$16.3	09/28/21	\$16.3	09/28/21	\$19.3	01/29/24	\$19.3	04/24/24
Pump Stations														
10015231 Harding Park PS	FY21-30		07/06/21		09/26/22		03/31/23		11/30/23		07/01/24		Q4-FY21-22	
	\$6.5	04/03/26	\$6.5	04/03/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$6.5	04/03/26
Buildings and Grounds														
10037249 New CDD Headquarters	FY21-30		02/01/20		08/31/21		12/30/21		12/29/23		06/28/22		Q4-FY21-22	
	\$350.2	06/28/28	\$350.2	06/28/28	\$393.6	06/28/28	\$393.6	06/28/28	TBD	TBD	\$393.6	06/28/28	\$393.6	06/28/28
Emergency Firefighting Water System														
EFWSPL EFWS Pipelines ³	FY21-30		04/01/11		Various		Various		Various		Various		Q4-FY21-22	
	\$205.3	12/29/28	\$31.6	09/29/17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$205.3	12/29/28
EFWSPPS EFWS Pump Stations ⁴	FY21-30		04/01/11		Various		Various		Various		Various		Q4-FY21-22	
	\$45.2	12/29/28	\$17.5	09/26/16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$45.2	12/29/28

Footnotes:

1. This represents Forecasted project cost and project completion date at the time of award of construction contract (or award of CM/GC scope).
2. College Hill Reservoir Outlet: Planning through 65% Design was achieved under a different program in Local Water Conveyance/Distribution System.
3. EFWS Pipelines: EFWS Pipelines include multiple projects.
4. EFWS Pump Stations: EFWS Pump Stations include multiple projects.

6. PROJECT PERFORMANCE SUMMARY*

All costs are shown in \$1,000s as of 07/01/22

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Local Water Conveyance/Distribution System											
10033816 - Potable Emergency Firefighting Water System	PL	\$55,000	\$ 55,000	\$ 55,000	\$ 806	-	0%	06/30/28	06/30/28	06/30/28	-
10033818 - Town of Sunol Pipeline	DS	\$5,000	\$ 5,000	\$ 6,663	\$ 2,567	(\$1,663)	-33%	04/03/23	04/03/23	04/04/25	(732)
19063 - Local Water Conveyance/Distribution System	MP	\$750,581	\$ 750,581	\$ 1,211,536	\$ 432,468	(\$460,955)	-61%	06/30/28	06/30/28	06/30/32	(1,461)
Local Water Supply											
10015239 - Lake Merced Water Level Restoration	DS	\$32,668	\$ 32,668	\$ 42,668	\$ 4,730	(\$10,000)	-31%	01/30/26	01/30/26	03/03/27	(397)
10015240 - San Francisco Groundwater Supply	CN	\$66,552	\$ 66,552	\$ 66,552	\$ 63,681	-	0%	06/30/22	06/30/22	06/30/23	(365)
10015242 - San Francisco Westside Recycled Water	CN	\$213,316	\$ 213,316	\$ 213,316	\$ 188,194	-	0%	01/12/23	01/12/23	04/06/23	(84)

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

**** Phase Status Legend**

PL	Planning	DS	Design
BA	Bid & Award	CN	Construction
MP	Multiple-Phase		

Footnotes:

- (+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
- (+++) **Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.**

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Q4-FY2021-2022 (04/01/22 - 06/30/22)

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Local Tanks/Reservoir Improvements											
10015223 - College Hill Reservoir Outlet	CN	\$19,283	\$ 19,283	\$ 19,283	\$ 5,037	-	0%	01/29/24	01/29/24	04/24/24	(86)
Pump Stations											
10015231 - Harding Park PS	PL	\$6,527	\$ 6,527	\$ 6,527	\$ 472	-	0%	04/03/26	04/03/26	04/03/26	-
Buildings and Grounds											
10037249 - New CDD Headquarters	DS	\$350,192	\$ 350,192	\$ 393,601	\$ 4,381	(\$43,409)	-12%	06/28/28	06/28/28	06/28/28	-
Emergency Firefighting Water System											
EFWS PL - EFWS Pipelines	MP	\$205,513	\$ 205,263	\$ 205,263	\$ 44,806	-	0%	12/29/28	12/29/28	02/09/29	(42)
EFWS PS - EFWS Pump Stations	MP	\$45,245	\$ 45,245	\$ 45,245	\$ 47,542	-	0%	12/29/28	12/29/28	12/29/28	-

* Does not include projects in closeout, completed, not initiated, on hold, deleted projects, and projects combined with other projects.

** Phase Status Legend

PL	Planning	DS	Design
BA	Bid & Award	CN	Construction
MP	Multiple-Phase		







Footnotes:

- (+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY21-30.
- (++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.
- (+++) **Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.**

7. PROJECT STATUS REPORT

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	 \$0.81 M	Project Percent Complete: 0.8%		
				
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	08/12/19✓	N/A	TBD	04/15/26

Progress and Status:

Under this Emergency Firefighting Water System (EFWS) pipelines project during this quarter, the configuration, routes, and construction sequencing for the multiple potable EFWS pipeline contracts were analyzed. The funding for this project will fund construction of potable EFWS pipelines in the next several years.

Issues and Challenges:

None at this time.









Earthquake Resistant Ductile Iron Pipe with flexible joints (demonstrated) used for this project

II. Local WECIP Quarterly Report

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)	
Project Cost:			Project Schedule:		
Approved		\$5.00 M	Approved Jun-19		Apr-23
Forecast		\$6.66 M	Forecast Jun-19		Apr-25
Actual		\$2.57 M	Project Percent Complete: 45.7%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	02/01/23	07/12/23	01/13/24	10/09/24	

Progress and Status:

During this reporting period the project team continued development of the design criteria and 65% design. The environmental team continues preparation of the CEQA Addendum. The Highway 680 Crossing construction is complete for this season, and the final tie-in work is anticipated to be completed in early 2023.

Issues and Challenges:







The variance to the forecast schedule and cost is due, same as reported since Q2, to the change in construction method from tunneling to open cut trench. This change in scope triggers the need to update the CEQA documents, environmental permits, and real estate negotiations. This change is anticipated to delay the project by two years and to add soft costs and escalation costs for construction.



Installation of 12" Town of Sunol Raw Water Pipeline North of Hwy 680

19063 - 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		1,211.54 M	Forecast Jul-10		Jun-32
Actual		\$432.47 M	Project Percent Complete: 45.0%		
					
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:

The forecast mileage for the main replacement program in FY22 was 7.5 miles, but only 4.2 miles was installed and placed in service as a result of a reduced program budget in FY21 of \$18M. The reduced program budget resulted in a reduction in advertisement of new construction projects and a decrease in new construction projects underway in FY22. It typically takes 12 to 15 months from construction contract advertisement to placement of new pipelines in service for beneficial use. FY22 had an increased budget of \$53.1M, but approximately \$10M of FY22 budget was redirected to the Stern Grove Emergency Restoration Contract issued under Board of Supervisor Resolution 170-22 and resolution file number 220245. In FY22, total expenditures were lower than previous fiscal years due to the reduction in contract advertisements from FY21 as noted above together with the use of funds for work related to the Stern Grove Emergency Restoration Contract. Projects

under construction during Q4 FY22 include Castro Street, 17th Street, Baker Street, 19th Avenue, Vicente Street, Prospect Avenue, and L-Taraval Segment B. Projects in which all water work was completed during Q4 FY22 includes Baker Street and Castro Street. Construction Notice to Proceed for the Diamond Street Project will be issued during the first month of Q1FY23.







Issues and Challenges:

Same as reported since Q2, SFPUC’s Capital Improvement Plan has been updated with an overall main replacement budget increase from \$750M to \$1.2B. The forecasted cost increase of \$450M is attributed to the schedule extension along with the increased cost per mile for main replacement.

II. Local WECIP Quarterly Report

10015239 - 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		\$42.67 M	Forecast Jun-03		Mar-27
Actual		\$4.73 M	Project Percent Complete: 16.6%		
					
Key Milestones:	Environmental** Approval	Bid+ Advertisement	Construction+ NTP	Construction+ Final Completion	
Current Forecast	(A) 07/31/18✓ (B) 11/10/16✓ (C) 05/25/23	11/18/22 N/A 07/24/23	06/19/23 06/13/17✓ 02/07/25	08/24/26 07/07/17✓ 09/03/25	

+ 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 3

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

Progress and Status:

Vista Grande Drainage Basin Improvement Project (Contract A): Daly City is currently working with California Department of Fish and Wildlife to finalize permit conditions. In addition, Daly City is working with staff at the California Coastal Commission to address their concerns over construction of the outflow structure at Fort Funston. Daly City, through the SFPUC, is negotiating with SF Public Works for a major encroachment permit for construction of the diversion structure for the approved flows to Lake Merced. This diversion structure would be constructed under John Muir Drive within the City's right of way. The Daly City staff working on this project have prepared an updated Lake Management Plan, which was reviewed by SFPUC and has been updated to address SFPUC comments.

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







feasibility and is currently working on the 35% design documents.

Issues and Challenges:

SFPUC is conducting additional review of potential utility conflicts following a determination that Daly City issued an alternative 100% Design package that was not shared with SFPUC. The updated design documents indicate a different pipeline alignment than had previously been advised, and this new proposed pipeline alignment is currently under review by the Engineering Management Bureau and Wastewater Engineering staff for any potential conflicts. Real Estate Services efforts to confirm the assessed values of parcels needed by Daly City is temporarily on hold and will be completed following completion of internal review of the new proposed pipeline alignment.

10015240 - 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-23	
Actual  \$63.68 M	Project Percent Complete: 96.6%	
		

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✓ 12/31/22

+ 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 2 (Contract C), during the quarter, the contractor completed the punch list items, which are currently undergoing Operation’s verifications. The team continued to review closeout documents and process remaining change orders, including deductive bid items and miscellaneous change order work. The contractor has submitted as-built drawings and operational and maintenance manuals, both currently pending City review. Warranties and spare parts have been completed and delivered to Operations.



North Lake Well Station







Issues and Challenges:

Phase 2 project final completion has been delayed due to additional time needed to complete punch list items and compile closeout documents.

II. Local WECIP Quarterly Report

10015242 - 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		Apr-23
Actual		\$188.19 M	Project Percent Complete: 88.2%		
					
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✓	12/03/22 12/04/22 08/19/18✓ 11/30/22	

+ 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): Miscellaneous mechanical, electrical and architectural finish work continued in Buildings 580 and 581. Functional testing of equipment continued during the quarter, with most of the major process equipment tested by the end of the quarter. Installation of the membrane filtration modules began. Civil yardwork continued with placement of curbs, gutters and sidewalks and installation of trench covers. Work also continued on the development of the Operations Manual and Standard Operating Procedures (SOPs) for the new treatment facility; the second and third sets of SOPs were submitted to SFPUC Wastewater Enterprise Operations for review. Distribution Pump Station and Reservoir (Contract B): Electrical and mechanical/HVAC work inside the new pump station has been mostly completed. The yard area has been paved. Pipeline (Contract C) is complete. Irrigation System Retrofit (Contract D): Punchlist walkthrough of the retrofit work began. Work at the Elk Glen Pump Station was completed. The cross-connection control testing of Golden Gate Park continued. The San Francisco Bay Regional Water Quality Control Board returned comments on the Notice of Intent (NOI) document submitted by the SFPUC for coverage under

the Recycled Water General Order. SFPUC met with RWQCB staff to discuss the comments and obtain additional clarifications for resubmittal of a revised Notice Of Intent (NOI).







Issues and Challenges:

For Contract A, potential issues with the completion of the Process Control and Instrumentation System (PCIS) work have been identified. The SFPUC will be meeting with the contractor and the system integrator to assess current work status and proposed solutions. Delay in completion of the PCIS work will delay start-up testing and completion of the overall project. For Contract B, Distribution Pump Station and Reservoir, the project team will be moving forward with a new design for primary power service, due to PG&E's changed decision about the project's earlier agreement to connect using secondary power service. This will delay the full-scale operation of the new pump station and recycled water delivery to Lincoln Park Golf Course by several years. For Contract D, Irrigation System Retrofit, after an appeal on the first decision was submitted by members of the public, a second tree hearing was conducted for the proposed removal of a single tree on Clement Street. At the time of this report, a final decision regarding the tree had not been reached.

10015223 - 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: Construction	Environmental Status: Completed (CatEx)
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Project Cost:		Project Schedule:	
Approved	 \$19.28 M	Approved Jan-13	 Jan-24
Forecast	 \$19.28 M	Forecast Jan-13	 Apr-24
Actual	 \$5.04 M	Project Percent Complete: 26.2%	
			

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	11/20/19✓	02/24/21✓	09/27/21✓	10/21/23

Progress and Status:

The contractor, with assistance from SFPUC City Distribution Division Operations, has completed all reservoir shutdown operations including installation of pipelines and equipment to control water leakage and removal of sludge/debris within the reservoir. The contractor has completed installation of 24-inch diameter reservoir inlet earthquake resistant ductile iron pipe (ERDIP) that will connect the reservoir to the future valve control vault. The jacking pit was excavated for constructing the reservoir outlet 36-inch diameter steel pipe, and electrical conduit was installed on Elise Street for future PG&E service to the reservoir. In addition, the contractor inspected the reservoir roof wood joist and beam substructure for potential replacement due to significantly advanced deterioration that had not been previously detected. Upcoming construction activities next quarter include completion of the reservoir outlet 36-inch diameter steel pipe and valve vault construction.



Installation of 24-inch diameter ERDIP reservoir inlet pipe.







Issues and Challenges:

The forecasted increase in schedule, due to a late start while the contractor evaluated leakage control, may be mitigated by the contractor; updated forecast will be reported next quarter.

II. Local WECIP Quarterly Report

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		\$0.47 M	Project Percent Complete: 7.4%		
					
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	TBD	02/02/24	10/04/24	10/03/25	

Progress and Status:

The PM and PE had a project scope and alternatives confirmation meeting with Operations in June. An additional field meeting is scheduled in July to discuss the proposed alternatives, including a new option of building expansion. Additional project resources may be needed to complete the Alternatives Analysis Report.

Issues and Challenges:

None at this time.

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.

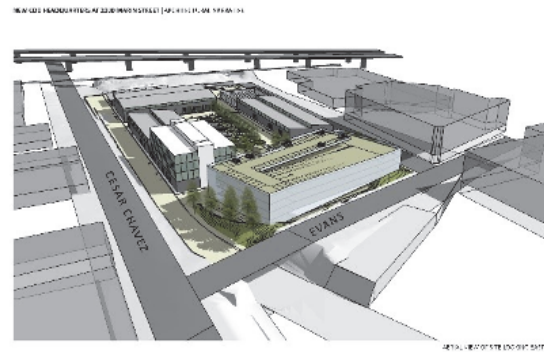
Program: Buildings and Grounds		Project Status: Design		Environmental Status: Active	
Project Cost:			Project Schedule:		
Approved		\$350.19 M	Approved Feb-20		Jun-28
Forecast		\$393.60 M	Forecast Feb-20		Jun-28
Actual		\$4.38 M	Project Percent Complete: 2.0%		
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion	
Current Forecast	06/30/23	06/18/21✓	10/01/23	12/31/27	

Progress and Status:

The Construction Management/General Contractor (CM/GC) contract was awarded by the Commission during the quarter, on June 28. Design development will proceed upon execution of a contract for design.

Issues and Challenges:

The delays in hiring the Design consultant to start the design documents will result in delaying the Design phase; impacts to schedule will be reevaluated when the CM/GC contractor is on board. Due to the rising cost of escalation, as reported since Q2, the project cost is forecasted to increase by \$43.4M. There were no new cost variances in the quarter.









Aerial Rendering of Campus

II. Local WECIP Quarterly Report

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 (Various)
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Project Cost:		Project Schedule:	
Approved	 \$205.26 M	Approved Apr-11	 Dec-28
Forecast	 \$205.26 M	Forecast Apr-11	 Feb-29
Actual	 \$44.81 M	Project Percent Complete: 28.1%	
			

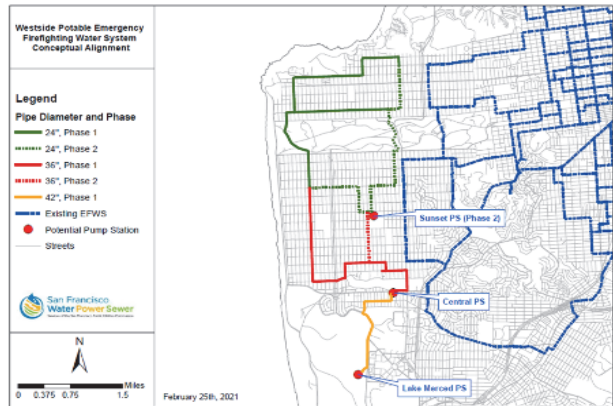
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	Various	Various	Various	Various

Progress and Status:

- 19th Avenue Pipeline: Construction completion expected December 2023.
- Clarendon Supply: Construction completion expected September 2022; delayed due to tree hearing.
- Emergency Firefighting Water System 2050 Planning Study: Study was completed December 2021.
- Fireboat Manifolds: Continued planning and design during the quarter.
- Potable Emergency Firefighting Water System Pipeline: Construction completion expected July 2027.
- Terry Francois Blvd (TFB) Mission South Pipeline: Construction completed May 2022.
- Vicente Potable EFWS Pipeline: Construction completion expected July 2024.

Issues and Challenges:

None at this time.






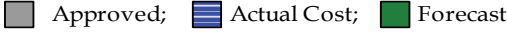


Westside Potable EFWS Conceptual Alignment

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 (Various)
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Project Cost:		Project Schedule:	
Approved	 \$45.25 M	Approved Apr-11	 Dec-28
Forecast	 \$45.25 M	Forecast Apr-11	 Dec-28
Actual	 \$39.88 M	Project Percent Complete: 95.6%	
			

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

Progress and Status:

- Pump Station #2:
Construction completion expected December 2022.
- PEFWS PS - Lake Merced:
Planning completion expected December 2022. The Conceptual Engineering Report (CER) for Lake Merced Pump Station will be a part of the Pipeline CER. The final CER is anticipated in August 2022.

Issues and Challenges:

None at this time.



Roof installation of Pump Station No. 2

8. 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								
19063 - WD-2811 17TH STREET/CLAYTON/ORD	05/26/20	09/24/22	10/27/22	\$ 6,701,609	\$ 7,346,745	(33)	(\$645,136)	61.8%
19063 - WD-2718 PROSPECT/CORTLAND/FAIR AVE	01/03/22	11/23/23	04/02/24	\$ 5,902,021	\$ 6,539,459	(131)	(\$637,438)	8.9%
19063 - WD-2616 BAKER STREET /SUTTER STREET	10/19/20	03/27/22	08/27/22	\$ 3,928,028	\$ 4,007,028	(153)	(\$79,000)	75.7%
19063 - WD-2739 CASTRO STREET 19TH/26TH STREET	08/17/20	08/16/22	10/23/22	\$ 10,915,782	\$ 11,287,636	(68)	(\$371,854)	89.6%
19063 - WD-2859 L-TARAVAL SEGMENT B	12/02/21	09/17/24	09/17/24	\$ 14,468,000	\$ 14,468,000	-	-	4.3%
19063 - WD-2775 19TH AVE/VICENTE/LINCOLN	10/19/20	01/09/23	01/09/23	\$ 6,725,506	\$ 6,769,887	-	(\$44,381)	29.8%
19063 - WD-2806 VICENTE 19TH TO 25TH AVE	07/26/21	04/07/24	02/11/24	\$ 6,267,815	\$ 6,267,815	56	-	18.2%

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. 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 Supply								
10015240 - WD-2809 SF Groundwater Supply Phase 2	08/07/17	08/26/19	12/31/22	\$ 10,732,565	\$ 10,780,143	(1,223)	(\$47,578)	98.5%
10015242 - WD-2852R Westside Recycled Irrigation Retrofits and Improvements	01/25/21	07/29/22	11/30/22	\$ 2,517,779	\$ 2,517,779	(124)	-	74.0%
10015242 - WD-2776 Westside Recycled Water Treatment Facility	10/16/17	07/29/22	12/03/22	\$ 94,637,405	\$ 94,637,405	(127)	-	95.0%
10015242 - WD-2797 SFWRW Pump Station and Reservoir	03/08/21	06/30/22	12/04/22	\$ 17,375,898	\$ 17,496,520	(157)	(\$120,622)	91.0%
Local Tanks/Reservoir Improvements								
10015223 - WD-2717 COLLEGE HILL/PROSPECT/SANTA MARIA	09/27/21	10/21/23	10/21/23	\$ 12,180,497	\$ 12,180,497	-	-	20.7%
Emergency Firefighting Water System								
10029709/10030778 - WD-2687R Pump Station # 2	12/12/17	11/16/22	11/15/22	\$ 20,972,298	\$ 22,122,298	1	(\$1,150,000)	94.8%
10029724/10029695 - WD-2861 Clarendon Supply	02/01/21	07/29/22	07/29/22	\$ 2,706,081	\$ 2,706,081	-	-	60.4%

Program Total for On-Going Construction	Approved Contract Cost	Current Forecasted Cost	Variance	
			Cost	Percent
	\$ 216,031,283	\$ 219,127,292	(\$3,096,009)	(1.4%)

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.

9. PROJECTS IN CLOSEOUT

There are no active projects currently in closeout phase

10. COMPLETED PROJECTS

Project Title	Approved Project Completion	Actual Project Completion	Approved Project Budget	Project Expenditures To Date
Emergency Firefighting Water System				
EFWS PL - EFWS Pipelines				
10035860 - Fillmore Haight	06/30/21	06/30/21	\$ 501,460	\$ 544,687
10029719 - Gate Valve Motors - Pipeline	03/31/21	09/30/21	\$ 637,491	\$ 675,503
10029724 - Clarendon Supply (ESER 2010 Partial Funding)	03/31/21	12/30/21	\$ 947,653	\$ 1,094,301
EFWS PS - EFWS Pump Stations				
10029710 - Pump Station #1	03/31/21	12/30/21	\$ 15,529,505	\$ 14,795,916
TOTAL			\$ 17,616,109	\$ 17,110,407

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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.

10015064 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.

10037628 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.

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).

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.

10015071 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. .

10015076 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.

10015080 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.

10015081 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.

10015091 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.

10015092 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.

10015113 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.

10030771 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.

10015124 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 on 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.

10015128 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.

19063 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

10015239 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.

10015240 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.

10015242 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

10015223 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

10015231 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

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APPENDIX C. LIST OF ACRONYMS

AAR	Alternative Analysis Report	I&C	Instrumentation and Controls
ADEIR	Administrative Draft of the Environmental Impact Report	ITS	Information Technology Services
AWMP	Automated Water Meter Program	IOC	Job Order Contract
AWSS	Auxiliary Water Supply System	LEED	Leadership in Energy and Environmental Design
BARR	Bay Area Regional Reliability	MCC	Motor Control Centers
BDPL	Bay Division Pipeline	MCP	Main Control Panel
BDPL 1 - 4	Bay Division Pipeline Numbers 1 - 4	MG	Million Gallons
BRT	Bus Rapid Transit	MGD	Million Gallons per Day
C&M	Construction and Maintenance	MIB	2-Methylisoborneol
CalTrans	California Department of Transportation	MND	Mitigated Negative Declaration
CATEX	Categorical Exemption	MOU	Memorandum of Understanding
CDD	City Distribution Division	MW	Megawatt
CEQA	California Environmental Quality Act	NEPA	National Environmental Policy Act
CER	Conceptual Engineering Report	NLWS	North Lake Well Station
CIP	Capital Improvement Program	NRD	Natural Resources Division
CM	Construction Management	NTP	Notice to Proceed
CM/GC	Construction Manager/General Contractor	O&M	Operation and Maintenance
CMB	Construction Management Bureau	PAC	Powdered Activated Carbon
COVID-19	Coronavirus Disease of 2019	PAH	Polycyclic Aromatic Hydrocarbons
CSPL	Crystal Springs Pipeline	PEFWS	Potable Emergency Firefighting Water System
CSPL2	Crystal Springs Pipeline Number 2	PMF	Probable Maximum Flood
DCU	Data Collection Unit	PREP	Potable Reuse Exploratory Plan
DDW	Department of Drinking Water (State of California)	PRGC	Pacific Rod and Gun Club
DFI	Dam Facility Improvements	PS	Pump Station
DIP	Ductile Iron Pipe	PUC	Public Utilities Commission
DSOD	Division of Safety of Dams (State of California)	RF	Radio Frequency
EBRPD	East Bay Regional Park District	RFP	Request for Proposal
EFWS	Emergency Firefighting Water System	RFQ	Request for Qualifications
EIR	Environmental Impact Report	ROW	Right-of-Way
EIS	Environmental Impact Statement	RWQCB	Regional Water Quality Control Board
EMB	Engineering Management Bureau	RWS	Regional Water System
ESER	Earthquake Safety and Emergency Response	SAD	San Andreas Dam
FCC	Federal Communications Commission	SAPL1	San Antonio Pipeline Number 1
FY	Fiscal Year	SAPL2	San Antonio Pipeline Number 2
GGNRA	Golden Gate National Recreation Area	SAPS	San Antonio Pump Station
GGP	Golden Gate Park	SCADA	Supervisory Control and Data Acquisition
GPR	Ground Penetrating Radar	SF	San Francisco
HTWTP	Harry Tracy Water Treatment Plant	SFPUC	San Francisco Public Utilities Commission
HVAC	Heating, Ventilation, and Air Conditioning	SFPW	San Francisco Public Works (formerly SFDPW)
		SOP	Standard Operating Procedure
		STATEX	Statutory Exemption

Appendices

SVWTP	Sunol Valley Water Treatment Plant
SWWS	South Windmill Well Station
T&O	Taste and Odor
TBD	To be determined
TCE	Temporary Construction Easement
TFB	Terry Francois Boulevard
TSC	Technical Steering Committee
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