


**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)

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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

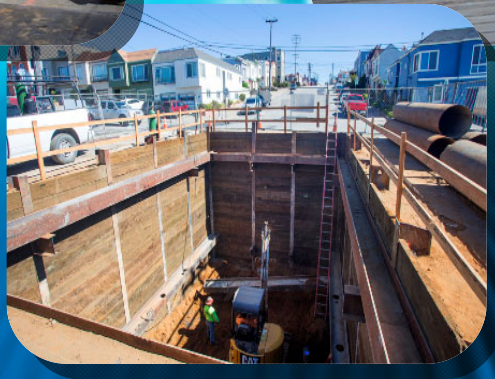
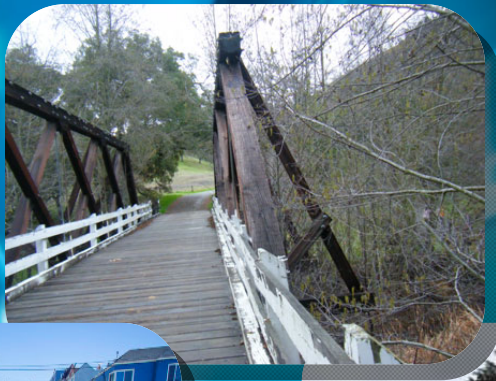
**Tim Paulson**  
Commissioner

**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.

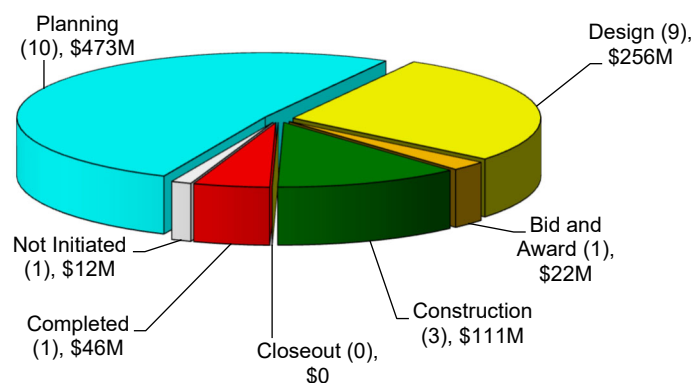


Figure A Total Current Approved Budget for Regional Projects Active in Each Phase

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.

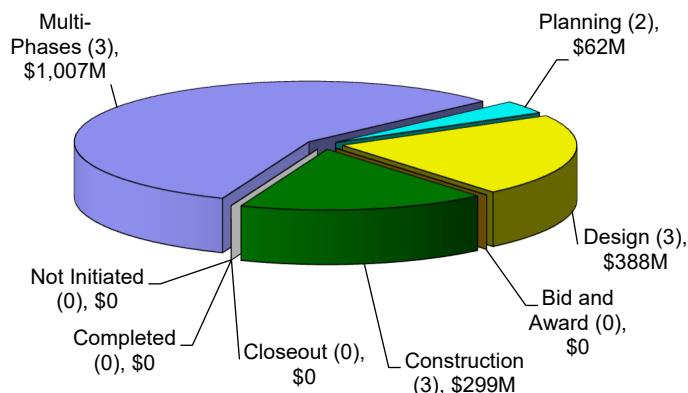


Figure B Total Current Approved Budget for Local Projects Active in Each Phase

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)	-
<b>Programs Total</b>	<b>\$946.13</b>	<b>\$2,674.16</b>	<b>\$3,301.67</b>	<b>(\$627.52)</b>	<b>-</b>

\* 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)
<b>Overall Water Enterprise CIP</b>	<b>03/03/03</b>	<b>03/03/03✓</b>	<b>06/29/35</b>	<b>06/29/35</b>	<b>-</b>

**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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# **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.

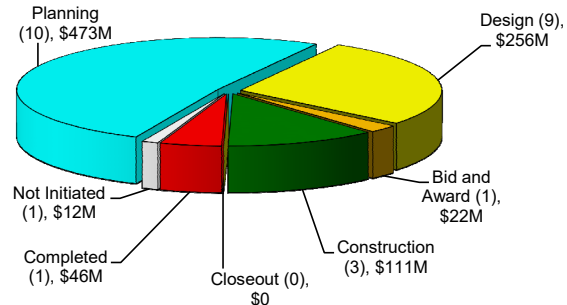


Figure 2.1 Total Current Approved Budget for Regional Projects Active in Each Phase

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

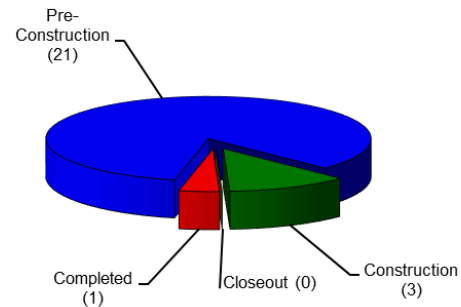


Figure 2.2 Number of Regional Projects in Pre-construction, Construction, and Post-construction

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

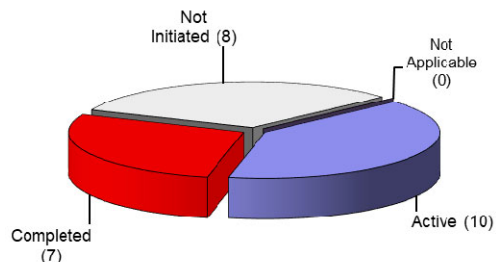


Figure 2.3 Regional Program Environmental Review

### 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)
<b>Regional Water Program</b>	<b>\$184.23</b>	<b>\$918.79</b>	<b>\$1,030.28</b>	<b>(\$111.49)</b>	-
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	<b>\$761.90</b>	<b>\$1,755.36</b>	<b>\$2,271.39</b>	<b>(\$516.03)</b>	-
<b>PROGRAM TOTAL</b>	<b>\$946.13</b>	<b>\$2,674.16</b>	<b>\$3,301.67</b>	<b>(\$627.52)</b>	-

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

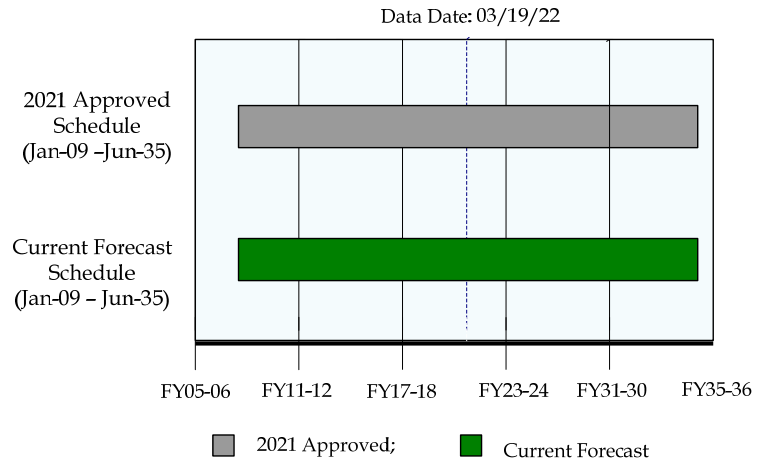


## I. Regional WECIP Quarterly Report

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)
<b>Overall Water Enterprise CIP</b>	<b>03/03/03</b>	<b>03/03/03✓</b>	<b>06/29/35</b>	<b>06/29/35</b>	<b>-</b>

### 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 <sup>1</sup>		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
<b>WECIP - Regional</b>														
<b>Water Treatment</b>														
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 <sup>2</sup>		06/30/19 <sup>2</sup>		08/17/20 <sup>2</sup>		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
<b>Water Transmission</b>														
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 <sup>1</sup>		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 <sup>2</sup>		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 <sup>2</sup>		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 <sup>2</sup>		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 <sup>3</sup>		01/28/22 <sup>4</sup>		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
<b>Water Supply &amp; Storage</b>														
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 <sup>1</sup>		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 <sup>3</sup>		09/29/23 <sup>3</sup>		09/30/24 <sup>3</sup>		05/26/26 <sup>3</sup>		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
<b>Watershed &amp; Lands Management</b>														
10015110 EBRPD Water System	FY21-30		06/02/14		01/31/19		08/09/19 <sup>2</sup>		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 <sup>2</sup>		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
<b>Buildings and Grounds</b>														
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 <sup>1</sup>		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) (+++)
<b>Water Treatment</b>											
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)
<b>Water Transmission</b>											
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) (+++)
<b>Water Transmission</b>											
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)
<b>Water Supply &amp; Storage</b>											
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	-
<b>Watershed &amp; Lands Management</b>											
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) (+++)
<b>Watershed &amp; Lands Management</b>											
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	-
<b>Buildings and Grounds</b>											
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.

<b>** Phase Status Legend</b>			
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.

<b>Program:</b> Water Treatment		<b>Project Status:</b> Design		<b>Environmental Status:</b> Active (CatEx)	
<b>Project Cost:</b>			<b>Project Schedule:</b>		
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%		
					
<b>Key Milestones:</b>	<b>Environmental Approval</b>	<b>Bid Advertisement</b>	<b>Construction NTP</b>	<b>Construction Final Completion</b>	
<b>Current Forecast</b>	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.

<b>Program:</b> Water Treatment	<b>Project Status:</b> Planning	<b>Environmental Status:</b> Not Initiated (CatEx)
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<b>Project Cost:</b>		<b>Project Schedule:</b>	
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
<b>Current Forecast</b>	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.

<b>Program:</b> Water Treatment	<b>Project Status:</b> Design	<b>Environmental Status:</b> Active (CatEx)
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<b>Project Cost:</b>		<b>Project Schedule:</b>	
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%	
█ Approved; █ Actual Cost; █ Forecast			

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.






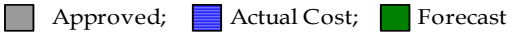


*Mobile Pilot Plant*

**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.

<b>Program:</b> Water Treatment	<b>Project Status:</b> Design	<b>Environmental Status:</b> Completed (CatEx)
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<b>Project Cost:</b>		<b>Project Schedule:</b>	
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).

<b>Program:</b> Water Treatment	<b>Project Status:</b> Planning	<b>Environmental Status:</b> Not Initiated (CatEx)
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<b>Project Cost:</b>	<b>Project Schedule:</b>
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:






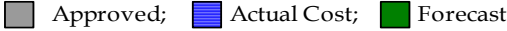
The variance in the forecast schedule, same as reported in Q2, is due to the additional unanticipated time required to procure a consultant to provide services for planning, design, construction, and closeout.



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.

<b>Program:</b> Water Transmission	<b>Project Status:</b> Planning	<b>Environmental Status:</b> Active (CatEx)
<b>Project Cost:</b> Approved  \$13.03 M Forecast  \$23.70 M Actual  \$0.86 M		<b>Project Schedule:</b> Approved Feb-19  Sep-25 Forecast Feb-19  Apr-26 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.

<b>Program:</b> Water Transmission		<b>Project Status:</b> Design		<b>Environmental Status:</b> Active (CatEx)	
<b>Project Cost:</b>			<b>Project Schedule:</b>		
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%		
					
<b>Key Milestones:</b>	<b>Environmental Approval</b>	<b>Bid Advertisement</b>	<b>Construction NTP</b>	<b>Construction Final Completion</b>	
<b>Current Forecast</b>	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.

<b>Program:</b> Water Transmission	<b>Project Status:</b> Planning	<b>Environmental Status:</b> Active (CatEx)
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<b>Project Cost:</b>		<b>Project Schedule:</b>	
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.

<b>Program:</b> Water Transmission		<b>Project Status:</b> Design		<b>Environmental Status:</b> Active (CatEx)	
<b>Project Cost:</b>			<b>Project Schedule:</b>		
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%		
					
<b>Key Milestones:</b>	<b>Environmental Approval</b>	<b>Bid Advertisement</b>	<b>Construction NTP</b>	<b>Construction Final Completion</b>	
<b>Current Forecast</b>	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.

<b>Program:</b> <a href="#">Water Transmission</a>	<b>Project Status:</b> <a href="#">Design</a>	<b>Environmental Status:</b> <a href="#">Active (CatEx)</a>
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<b>Project Cost:</b>		<b>Project Schedule:</b>	
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: <a href="#">46.1%</a>	
			

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.

<b>Program:</b> <a href="#">Water Transmission</a>		<b>Project Status:</b> <a href="#">Design</a>		<b>Environmental Status:</b> <a href="#">Active (CatEx)</a>	
<b>Project Cost:</b>			<b>Project Schedule:</b>		
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: <a href="#">13.4%</a>		
					
<b>Key Milestones:</b>	<b>Environmental Approval</b>	<b>Bid Advertisement</b>	<b>Construction NTP</b>	<b>Construction Final Completion</b>	
<b>Current Forecast</b>	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.

<b>Program:</b> Water Transmission	<b>Project Status:</b> Planning	<b>Environmental Status:</b> Not Initiated (MND)
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<b>Project Cost:</b>		<b>Project Schedule:</b>	
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.






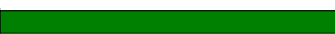


*Pipeline excavated for corrosion investigation*

## 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.

<b>Program:</b> <a href="#">Water Supply &amp; Storage</a>	<b>Project Status:</b> <a href="#">Planning</a>	<b>Environmental Status:</b> <a href="#">Not Initiated (EIR)</a>
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<b>Project Cost:</b>		<b>Project Schedule:</b>	
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: <a href="#">4.0%</a>	
			

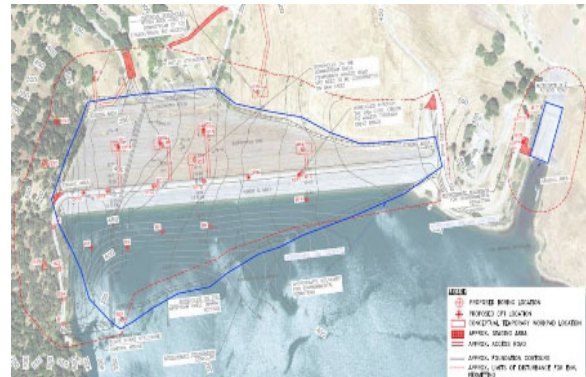
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
<b>Current Forecast</b>	06/30/31	07/01/31	01/02/32	12/29/34

#### 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.

<b>Program:</b> Water Supply & Storage	<b>Project Status:</b> Planning	<b>Environmental Status:</b> Not Initiated (MND)
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<b>Project Cost:</b>	<b>Project Schedule:</b>
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..

<b>Program:</b> Water Supply & Storage		<b>Project Status:</b> Planning		<b>Environmental Status:</b> Not Initiated (Various)	
<b>Project Cost:</b>			<b>Project Schedule:</b>		
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%		
<b>Key Milestones:</b>	<b>Environmental** Approval</b>	<b>Bid Advertisement</b>	<b>Construction NTP</b>	<b>Construction Final Completion</b>	
<b>Current Forecast</b>	(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	

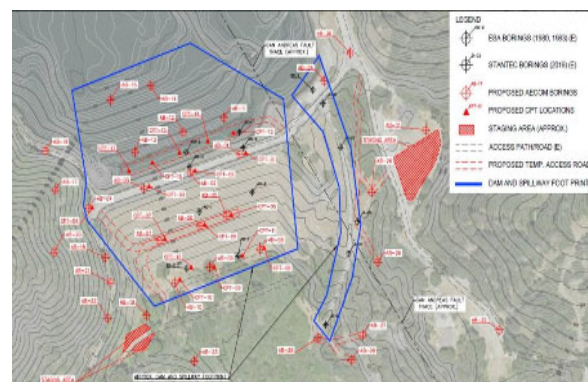
\*\* (A) CatEx; (B) MND

#### 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.

<b>Program:</b> Watershed & Lands Management	<b>Project Status:</b> Construction	<b>Environmental Status:</b> Completed
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<b>Project Cost:</b>		<b>Project Schedule:</b>	
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%	

 Approved;  Actual Cost;  Forecast

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.

<b>Program:</b> Watershed & Lands Management	<b>Project Status:</b> Planning	<b>Environmental Status:</b> Not Initiated (CatEx)
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<b>Project Cost:</b>		<b>Project Schedule:</b>	
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.

<b>Program:</b> Watershed & Lands Management	<b>Project Status:</b> Bid and Award	<b>Environmental Status:</b> Active (EIR)		
<b>Project Cost:</b>		<b>Project Schedule:</b>		
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%		
				
<b>Key Milestones:</b>	<b>Environmental Approval</b>	<b>Bid Advertisement</b>	<b>Construction NTP</b>	<b>Construction Final Completion</b>
<b>Current Forecast</b>	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*

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







**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

## 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.

<b>Program:</b> Watershed & Lands Management		<b>Project Status:</b> Design		<b>Environmental Status:</b> Active (MND)	
<b>Project Cost:</b>			<b>Project Schedule:</b>		
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%		
					
<b>Key Milestones:</b>	<b>Environmental Approval</b>	<b>Bid Advertisement</b>	<b>Construction NTP</b>	<b>Construction Final Completion</b>	
<b>Current Forecast</b>	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.

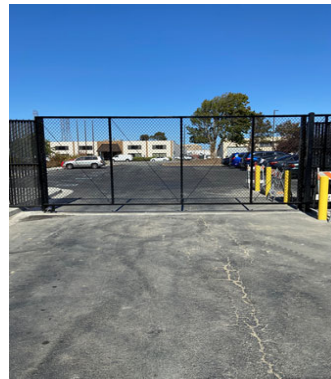
<b>Program:</b> Buildings and Grounds	<b>Project Status:</b> Construction	<b>Environmental Status:</b> Completed (CatEx)		
<b>Project Cost:</b>		<b>Project Schedule:</b>		
Approved	 \$5.19 M	Approved Mar-18		Jun-22
Forecast	 \$5.19 M	Forecast Mar-18		Jun-22
Actual	 \$3.17 M	Project Percent Complete: 61.9%		
				
<b>Key Milestones:</b>	<b>Environmental Approval</b>	<b>Bid Advertisement</b>	<b>Construction NTP</b>	<b>Construction Final Completion</b>
<b>Current Forecast</b>	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.

<b>Program:</b> Buildings and Grounds	<b>Project Status:</b> Design	<b>Environmental Status:</b> Completed (MND)		
<b>Project Cost:</b>		<b>Project Schedule:</b>		
Approved 	\$5.50 M	Approved Jan-17 	Nov-23	
Forecast 	\$16.08 M	Forecast Jan-17 	Sep-24	
Actual 	\$1.91 M	Project Percent Complete: 32.2%		
				
<b>Key Milestones:</b>	<b>Environmental** Approval</b>	<b>Bid+ Advertisement</b>	<b>Construction+ NTP</b>	<b>Construction+ Final Completion</b>
<b>Current Forecast</b>	(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.

<b>Program:</b> Buildings and Grounds	<b>Project Status:</b> Construction	<b>Environmental Status:</b> Completed (MND)
<b>Project Cost:</b>		<b>Project Schedule:</b>
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.

**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.

<b>Program:</b> Buildings and Grounds		<b>Project Status:</b> Planning		<b>Environmental Status:</b> Active (MND)	
<b>Project Cost:</b>			<b>Project Schedule:</b>		
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%		
<b>Key Milestones:</b>	<b>Environmental Approval</b>	<b>Bid Advertisement</b>	<b>Construction NTP</b>	<b>Construction Final Completion</b>	
<b>Current Forecast</b>	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	
<b>Watershed &amp; Lands Management</b>								
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%
<b>Buildings and Grounds</b>								
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		Current		Variance	
	Contract	Cost	Forecasted	Cost	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**

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

## 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.

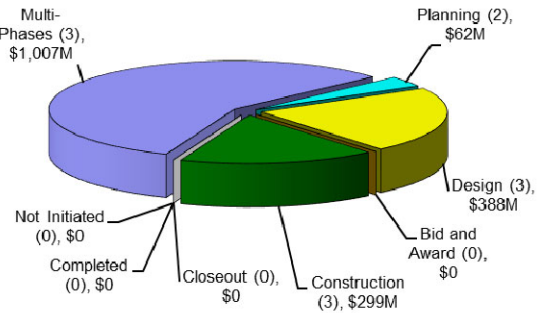
### 2. CAPITAL IMPROVEMENT PROGRAM STATUS

This Quarterly Report presents the progress made on Local Water projects between 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.

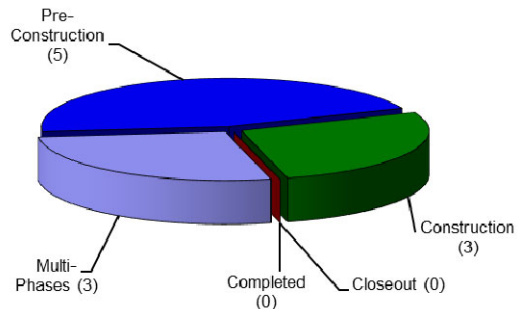
Going forward, changes to the approved baseline program, including any changes to continuing projects' scopes, schedules, and budgets, will be proposed as part of the bi-annually updated 10- year CIP to be approved by the SFPUC Commission. The proposed revisions to the program will become the new baseline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



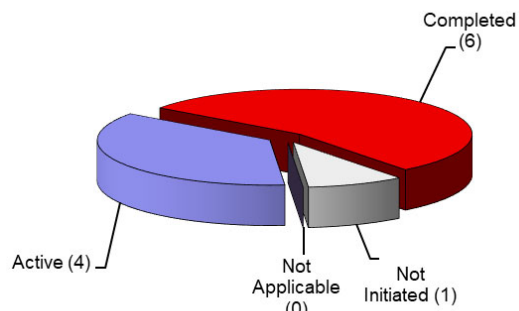
**Figure 2.1 Total Current Approved Budget for Local Projects Active in Each Phase**

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



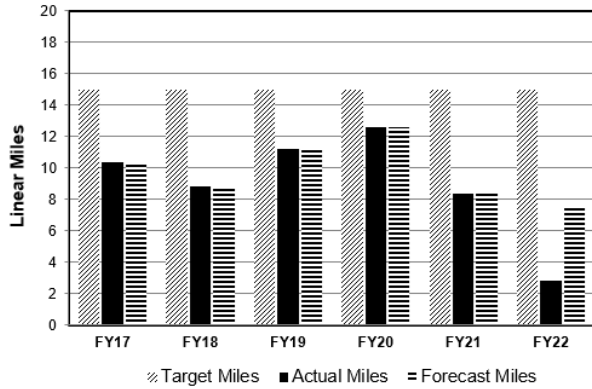
**Figure 2.2 Number of Local Projects in Pre-construction, Construction, and Post-construction**

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.

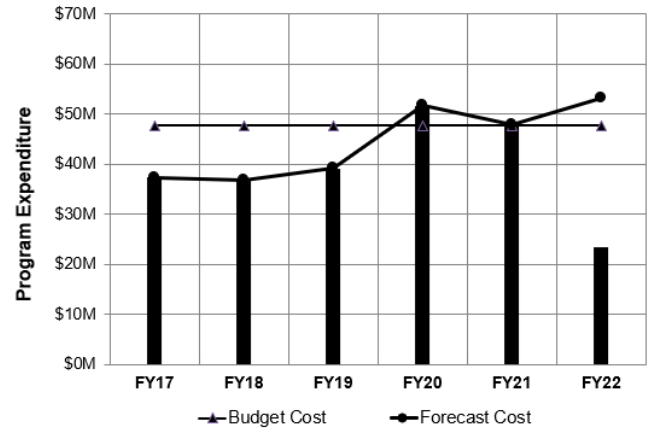


	FY17	FY18	FY19	FY20	FY21	FY22
Target Miles	15.0	15.0	15.0	15.0	15.0	15.0
Actual Miles	10.4	8.8	11.2	12.6	8.4	2.8
Forecast Miles						7.5

**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

## II. Local WECIP Quarterly Report

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)
<b>Local Program</b>	<b>\$761.90</b>	<b>\$1,755.36</b>	<b>\$2,271.39</b>	<b>(\$516.03)</b>	<b>-</b>
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	-	-
<b>Regional Program</b>	<b>\$184.23</b>	<b>\$918.79</b>	<b>\$1,030.28</b>	<b>(\$111.49)</b>	<b>-</b>
<b>PROGRAM TOTAL</b>	<b>\$946.13</b>	<b>\$2,674.16</b>	<b>\$3,301.67</b>	<b>(\$627.52)</b>	<b>-</b>

\* 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.

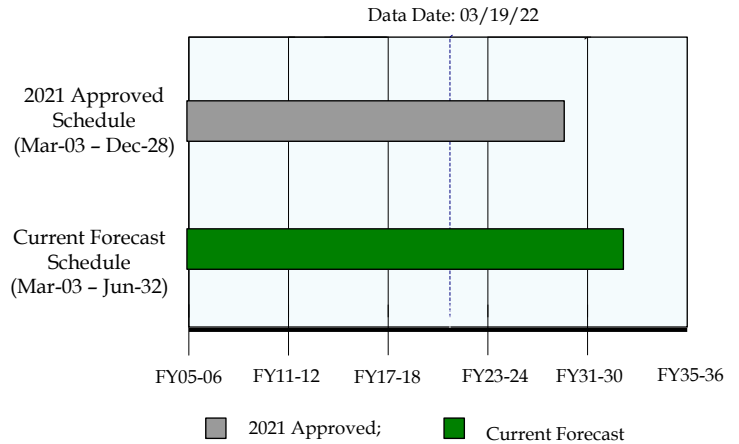


Figure 4. Local Program Schedule Summary

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	-
<b>Overall Water Enterprise CIP</b>	<b>03/03/03</b>	<b>03/03/03✓</b>	<b>06/29/35</b>	<b>06/29/35</b>	<b>-</b>

**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 <sup>1</sup>		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
<b>WECIP - Local</b>														
<b>Local Water Conveyance/Distribution System</b>														
10033816 Potable Emergency Firefighting Water System <sup>2</sup>	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 <sup>3</sup>		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 <sup>4</sup>	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
<b>Local Water Supply</b>														
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 <sup>1</sup>		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
<b>Local Tank/Reservoir Improvements</b>														
10015223 College Hill Reservoir Outlet <sup>2</sup>	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
<b>Pump Stations</b>														
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
<b>Buildings and Grounds</b>														
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
<b>Emergency Firefighting Water System</b>														
EFWSPL EFWS Pipelines <sup>3</sup>	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 <sup>4</sup>	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) (+++)
<b>Local Water Conveyance/Distribution System</b>											
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)
<b>Local Water Supply</b>											
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) (+++)
<b>Local Tanks/Reservoir Improvements</b>											
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)
<b>Pump Stations</b>											
10015231 - Harding Park PS	PL	\$ 6,527	\$ 6,527	\$ 6,527	\$ 452	-	0%	04/03/26	04/03/26	04/03/26	-
<b>Buildings and Grounds</b>											
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	-
<b>Emergency Firefighting Water System</b>											
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.

<b>Program:</b> Local Water Conveyance/Distribution System	<b>Project Status:</b> Planning	<b>Environmental Status:</b> Completed (CatEx)
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<b>Project Cost:</b>	<b>Project Schedule:</b>
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.






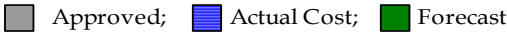


*Earthquake Resistant Ductile Iron Pipe with flexible joints (demonstrated) used for this project*

## 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.

<b>Program:</b> Local Water Conveyance/Distribution System		<b>Project Status:</b> Design		<b>Environmental Status:</b> Active (MND)	
<b>Project Cost:</b>			<b>Project Schedule:</b>		
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%		
					
<b>Key Milestones:</b>	<b>Environmental Approval</b>	<b>Bid Advertisement</b>	<b>Construction NTP</b>	<b>Construction Final Completion</b>	
<b>Current Forecast</b>	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.

<b>Program:</b> Local Water Conveyance/Distribution System		<b>Project Status:</b> Multiple Phases		<b>Environmental Status:</b> Active (Various)	
<b>Project Cost:</b>			<b>Project Schedule:</b>		
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%		
					
<b>Key Milestones:</b>	<b>Environmental Approval</b>	<b>Bid+ Advertisement</b>	<b>Construction+ NTP</b>	<b>Construction+ Final Completion</b>	
<b>Current Forecast</b>	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:**






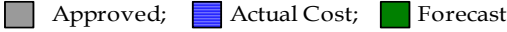
SFPUC’s Capital Improvement Plan has been updated with an overall main replacement budget increase from \$750M to \$1.2B. The forecasted cost increase of \$450M is attributed to the schedule extension along with the increased cost per mile for main replacement.



## 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.

<b>Program:</b> Local Water Supply	<b>Project Status:</b> Design	<b>Environmental Status:</b> Active (Various)
<b>Project Cost:</b>		<b>Project Schedule:</b>
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
<b>Current Forecast</b>	(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.

<b>Program:</b> Local Water Supply	<b>Project Status:</b> Construction	<b>Environmental Status:</b> Completed (EIR)
<b>Project Cost:</b>		<b>Project Schedule:</b>
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
<b>Current Forecast</b>	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.

<b>Program:</b> Local Water Supply		<b>Project Status:</b> Construction		<b>Environmental Status:</b> Completed (EIR)	
<b>Project Cost:</b>			<b>Project Schedule:</b>		
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%		
					
<b>Key Milestones:</b>	<b>Environmental Approval</b>	<b>Bid+ Advertisement</b>	<b>Construction+ NTP</b>	<b>Construction+ Final Completion</b>	
<b>Current Forecast</b>	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.

<b>Program:</b> Local Tanks/Reservoir Improvements	<b>Project Status:</b> Construction	<b>Environmental Status:</b> Completed (CatEx)
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<b>Project Cost:</b>	<b>Project Schedule:</b>
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.






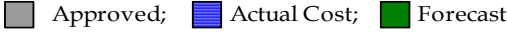


*Aerial View of College Hill Reservoir*

## 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.

<b>Program:</b> Pump Stations		<b>Project Status:</b> Planning		<b>Environmental Status:</b> Not Initiated	
<b>Project Cost:</b>			<b>Project Schedule:</b>		
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%		
					
<b>Key Milestones:</b>	<b>Environmental Approval</b>	<b>Bid Advertisement</b>	<b>Construction NTP</b>	<b>Construction Final Completion</b>	
<b>Current Forecast</b>	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.

<b>Program:</b> Buildings and Grounds		<b>Project Status:</b> Design		<b>Environmental Status:</b> Active	
<b>Project Cost:</b>			<b>Project Schedule:</b>		
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%		
<b>Key Milestones:</b>	<b>Environmental Approval</b>	<b>Bid Advertisement</b>	<b>Construction NTP</b>	<b>Construction Final Completion</b>	
<b>Current Forecast</b>	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

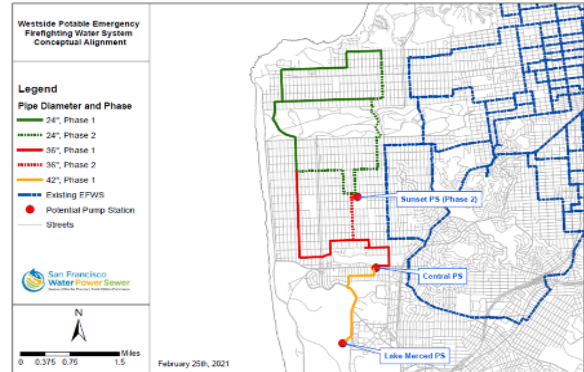
### EFWS PL - EFWS Pipelines

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

<b>Program:</b> Emergency Firefighting Water System		<b>Project Status:</b> Multiple Phases		<b>Environmental Status:</b> Completed (Various)	
<b>Project Cost:</b>			<b>Project Schedule:</b>		
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%		
<b>Key Milestones:</b>	<b>Environmental Approval</b>	<b>Bid Advertisement</b>	<b>Construction NTP</b>	<b>Construction Final Completion</b>	
<b>Current Forecast</b>	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.



*Westside Potable EFWS Conceptual Alignment*

#### 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.

<b>Program:</b> Emergency Firefighting Water System	<b>Project Status:</b> Multiple Phases	<b>Environmental Status:</b> Completed (Various)
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<b>Project Cost:</b>		<b>Project Schedule:</b>	
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%	
			

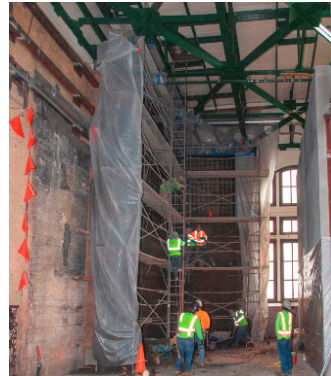
Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	Various	Various	Various	Various

**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	
<b>Local Water Conveyance/Distribution System</b>								
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	
<b>Local Water Supply</b>								
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%
<b>Emergency Firefighting Water System</b>								
- 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.

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
<b>Emergency Firefighting Water System</b>				
10029709- Pump Station #2	05/05/21	05/05/21	\$ 7,494,981	\$ 7,011,548
<b>TOTAL</b>			\$ 7,494,981	\$ 7,011,548

**10. COMPLETED PROJECTS**

Project Title	Approved Project Completion	Actual Project Completion	Approved Project Budget	Project Expenditures To Date
<b>Emergency Firefighting Water System</b>				
<b>EFWS PL - EFWS Pipelines</b>				
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
<b>EFWS PS - EFWS Pump Stations</b>				
10029710 - Pump Station #1	03/31/21	12/30/21	\$ 15,529,505	\$ 15,127,735
<b>TOTAL</b>			\$ 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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## APPENDIX C. LIST OF ACRONYMS

<b>AAR</b>	Alternative Analysis Report	<b>I&amp;C</b>	Instrumentation and Controls
<b>ADEIR</b>	Administrative Draft of the Environmental Impact Report	<b>ITS</b>	Information Technology Services
<b>AWMP</b>	Automated Water Meter Program	<b>IOC</b>	Job Order Contract
<b>AWSS</b>	Auxiliary Water Supply System	<b>LEED</b>	Leadership in Energy and Environmental Design
<b>BARR</b>	Bay Area Regional Reliability	<b>MCC</b>	Motor Control Centers
<b>BDPL</b>	Bay Division Pipeline	<b>MCP</b>	Main Control Panel
<b>BDPL 1 - 4</b>	Bay Division Pipeline Numbers 1 - 4	<b>MG</b>	Million Gallons
<b>BRT</b>	Bus Rapid Transit	<b>MGD</b>	Million Gallons per Day
<b>C&amp;M</b>	Construction and Maintenance	<b>MIB</b>	2-Methylisoborneol
<b>CalTrans</b>	California Department of Transportation	<b>MND</b>	Mitigated Negative Declaration
<b>CATEX</b>	Categorical Exemption	<b>MOU</b>	Memorandum of Understanding
<b>CDD</b>	City Distribution Division	<b>MW</b>	Megawatt
<b>CEQA</b>	California Environmental Quality Act	<b>NEPA</b>	National Environmental Policy Act
<b>CER</b>	Conceptual Engineering Report	<b>NLWS</b>	North Lake Well Station
<b>CIP</b>	Capital Improvement Program	<b>NRD</b>	Natural Resources Division
<b>CM</b>	Construction Management	<b>NTP</b>	Notice to Proceed
<b>CM/GC</b>	Construction Manager/General Contractor	<b>O&amp;M</b>	Operation and Maintenance
<b>CMB</b>	Construction Management Bureau	<b>PAC</b>	Powdered Activated Carbon
<b>COVID-19</b>	Coronavirus Disease of 2019	<b>PAH</b>	Polycyclic Aromatic Hydrocarbons
<b>CSPL</b>	Crystal Springs Pipeline	<b>PEFWS</b>	Potable Emergency Firefighting Water System
<b>CSPL2</b>	Crystal Springs Pipeline Number 2	<b>PMF</b>	Probable Maximum Flood
<b>DCU</b>	Data Collection Unit	<b>PREP</b>	Potable Reuse Exploratory Plan
<b>DDW</b>	Department of Drinking Water (State of California)	<b>PRGC</b>	Pacific Rod and Gun Club
<b>DFI</b>	Dam Facility Improvements	<b>PS</b>	Pump Station
<b>DIP</b>	Ductile Iron Pipe	<b>PUC</b>	Public Utilities Commission
<b>DSOD</b>	Division of Safety of Dams (State of California)	<b>RF</b>	Radio Frequency
<b>EBRPD</b>	East Bay Regional Park District	<b>RFP</b>	Request for Proposal
<b>EFWS</b>	Emergency Firefighting Water System	<b>RFQ</b>	Request for Qualifications
<b>EIR</b>	Environmental Impact Report	<b>ROW</b>	Right-of-Way
<b>EIS</b>	Environmental Impact Statement	<b>RWQCB</b>	Regional Water Quality Control Board
<b>EMB</b>	Engineering Management Bureau	<b>RWS</b>	Regional Water System
<b>ESER</b>	Earthquake Safety and Emergency Response	<b>SAD</b>	San Andreas Dam
<b>FCC</b>	Federal Communications Commission	<b>SAPL1</b>	San Antonio Pipeline Number 1
<b>FY</b>	Fiscal Year	<b>SAPL2</b>	San Antonio Pipeline Number 2
<b>GGNRA</b>	Golden Gate National Recreation Area	<b>SAPS</b>	San Antonio Pump Station
<b>GGP</b>	Golden Gate Park	<b>SCADA</b>	Supervisory Control and Data Acquisition
<b>GPR</b>	Ground Penetrating Radar	<b>SF</b>	San Francisco
<b>HTWTP</b>	Harry Tracy Water Treatment Plant	<b>SFPUC</b>	San Francisco Public Utilities Commission
<b>HVAC</b>	Heating, Ventilation, and Air Conditioning	<b>SFPW</b>	San Francisco Public Works (formerly SFDPW)
		<b>SOP</b>	Standard Operating Procedure
		<b>STATEX</b>	Statutory Exemption

## Appendices

<b>SVWTP</b>	Sunol Valley Water Treatment Plant
<b>SWWS</b>	South Windmill Well Station
<b>T&amp;O</b>	Taste and Odor
<b>TBD</b>	To be determined
<b>TCE</b>	Temporary Construction Easement
<b>TFB</b>	Terry Francois Boulevard
<b>TSC</b>	Technical Steering Committee
<b>UV</b>	Ultra Violet
<b>VNBRT</b>	Van Ness Bus Rapid Transit
<b>WE</b>	Water Enterprise
<b>WECIP</b>	Water Enterprise Capital Improvement Program
<b>WQD</b>	Water Quality Division
<b>WSIP</b>	Water System Improvement Program
<b>WSTD</b>	Water Supply and Treatment Division