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Services of the San Francisco Public Utilities Commission

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DATE: August 15, 2022

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

FROM: Dennis J. Herrera, General Manager DJH

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

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

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San Francisco
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QUARTERLY REPORT

Water Enterprise Capital Improvement Program

Q4 FY 2021 | 2022

April 2022 — June 2022

Published: August 15, 2022

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EXECUTIVE SUMMARY

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

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

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

Program Current Status:

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

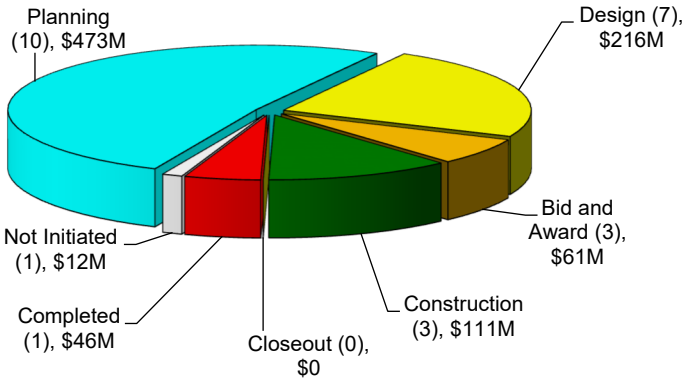

Figure A Total Current Approved Budget for Regional Projects Active in Each Phase

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

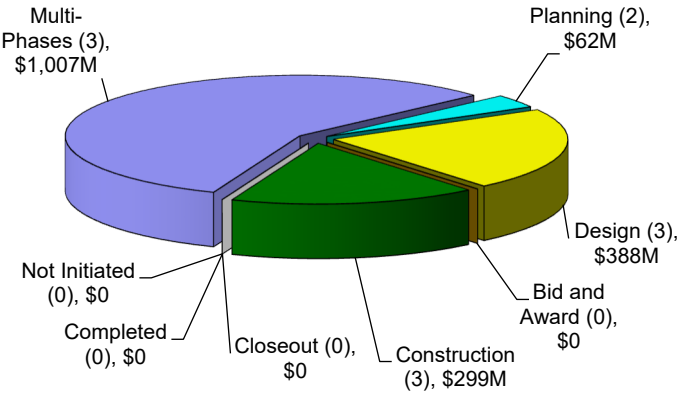

Figure B Total Current Approved Budget for Local Projects Active in Each Phase

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

Table A. Program Cost Summary

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

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

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

Table B. Current Approved vs. Current Forecast Schedule Dates

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

Program Key Updates:

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

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

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

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

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

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

Quarterly Report

Water Enterprise Capital Improvement Program

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I. Regional Capital Improvement Program

1. CAPITAL IMPROVEMENT PROGRAM DESCRIPTION

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

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

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

Biannual updates to the Regional Water CIP also account for post-Water System Improvement Program (post-WSIP) conditions, including deferred projects not in WSIP and new projects needed to continue meeting level of service goals and to maintain facilities in a state of good repair.

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

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

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

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

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

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

2. CAPITAL IMPROVEMENT PROGRAM STATUS

This Quarterly Report presents the progress made on Regional Water projects between April 1, 2022 and June 30, 2022. This document serves as the fourth (4th) Quarterly Report in Fiscal Year 2021-2022 (FY22) published for the Water Enterprise Capital Improvement Program.

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

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

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

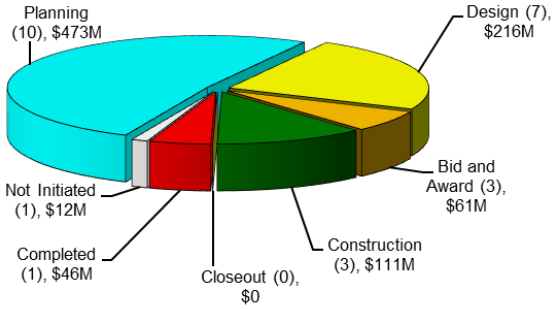


Figure 2.1 Total Current Approved Budget for Regional Projects Active in Each Phase

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

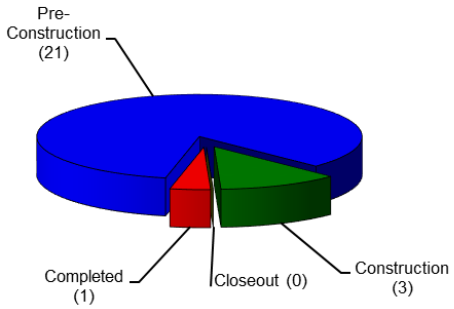


Figure 2.2 Number of Regional Projects in Pre-construction, Construction, and Post-construction

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

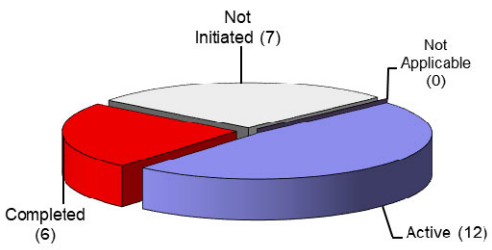


Figure 2.3 Regional Program Environmental Review

3. CAPITAL IMPROVEMENT PROGRAM COST SUMMARY

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

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

Note that during Q2/FY21-22 the project teams were requested to forecast any major changes in budget, scope and schedule that should be included as a proposed change in the FY23-32 10-Year CIP budget proposal. Thus, the forecasts that were included in the Q2/FY21-22 report are the same as the proposed changes to project budgets and schedules that were included in the 10-Year CIP budget proposal that was presented to, and approved by, the Commission on February 8, 2022. These forecasted changes from Q2/FY21-22 will become the approved budgets and schedules after full approval, anticipated to occur in Q1/FY22-23. For this Q4/FY21-22 report, any additional variances that exceed the proposed budgets and schedules approved for FY22/23 are also reported.

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

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

Table 3 Program Cost Summary

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

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

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

4. CAPITAL IMPROVEMENT PROGRAM SCHEDULE SUMMARY

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

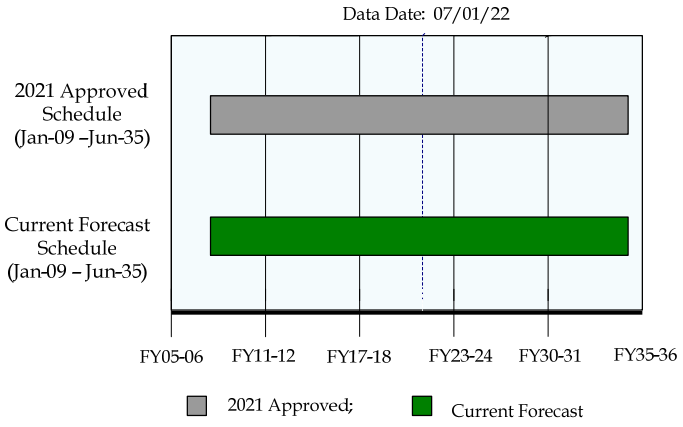


Figure 4. Regional Program Schedule Summary

Table 4. 2021 Approved vs. Current Forecast Schedule Dates

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

5. BUDGET AND SCHEDULE TREND SUMMARY

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

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

- The SVWTP Ozone completed 35% Design.

Table 5. Budget and Schedule Trend Summary

All Costs are shown in million.

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

Footnotes:

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

All Costs are shown in million.

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

Footnotes:

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

All Costs are shown in million.

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

Footnotes:

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

All Costs are shown in million.

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

Footnotes:

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

6. PROJECT PERFORMANCE SUMMARY*

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

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

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

**** Phase Status Legend**

PL Planning DS Design

BA Bid & Award CN Construction MP Multiple-Phase

Footnotes:

(+) CIP Approved Budget and Project Completion Date: The budget and schedule approved as part of 10-year CIP for FY21-30.

(++) Current Approved Budget and Schedule: The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.

(+++) Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.

I. Regional WECIP Quarterly Report — Q4-FY2021-2022 (04/01/22 - 06/30/22)

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

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

**** Phase Status Legend**

PL Planning DS Design

BA Bid & Award CN Construction MP Multiple-Phase

Footnotes:

(+) CIP Approved Budget and Project Completion Date: The budget and schedule approved as part of 10-year CIP for FY21-30.

(++) Current Approved Budget and Schedule: The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.

(+++) Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.

I. Regional WECIP Quarterly Report — Q4-FY2021-2022 (04/01/22 - 06/30/22)

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

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

∗∗ Phase Status Legend

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

Footnotes:

(+) CIP Approved Budget and Project Completion Date: The budget and schedule approved as part of 10-year CIP for FY21-30.

(++) Current Approved Budget and Schedule: The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.

(+++) Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.

7. PROJECT STATUS REPORT

10033123 - SVWTP Ozone (CUW27202)

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

Program: Water Treatment	**Project Status:** Design	**Environmental Status:** Active (CatEx)

Project Cost:

Approved	$165.13 M
Forecast	$192.82 M
Actual	$7.18 M

Project Schedule:

Approved	Jun-17	Jun-27
Forecast	Jun-17	Jun-28

Project Percent Complete: 4.7%

Approved; Actual Cost; Forecast

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

Progress and Status:

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

Issues and Challenges:

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

Rendering of Ozone Facility

10015064 - SVWTP Phase 3 and 4

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

Program: Water Treatment	**Project Status:** Planning	**Environmental Status:** Not Initiated (CatEx)

Project Cost:

Approved	$70.13 M
Forecast	$60.03 M
Actual	$8.11 M

Project Schedule:

Approved	Mar-14	Jun-26
Forecast	Mar-14	May-27

Project Percent Complete: 12.2%

Approved; Actual Cost; Forecast

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

Progress and Status:

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

Inspection of Sedimentation Basin 1

Issues and Challenges:

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

10037628 - SVWTP Polymer Feed Facility

Project Description: At the Sunol Valley Water Treatment Plant (SVWTP), the new flocculation/sedimentation basin built in 2013 as well as the other 4 existing basins that are each rated at a capacity of 40 million gallons per day (mgd) were not able to achieve their capacity under all operating and water quality scenarios. A basin optimization plan was prepared to address the performance; it recommended adding a flocculant aid polymer system. The project will build a polymer feed facility that will serve all five sedimentation basins to optimize plant water production. Planning and some design were performed under the Water System Improvement Program (WSIP); this project will finish design and construct the improvements.

Program: Water Treatment	**Project Status:** Design	**Environmental Status:** Active (CatEx)

Project Cost:		**Project Schedule:**	
Approved	$7.54 M	Approved Mar-21	Sep-24
Forecast	$19.05 M	Forecast Jul-21	Aug-25
Actual	$0.29 M	Project Percent Complete: 0.4%	

Approved; Actual Cost; Forecast

Key Milestones:	**Environmental Approval**	**Bid Advertisement**	**Construction NTP**	**Construction Final Completion**
Current Forecast	07/01/22	01/30/23	07/27/23	07/24/25

Progress and Status:

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

Mobile Pilot Plant

Issues and Challenges:

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

10037349 - HTWTP Improvements Capital

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

Program: Water Treatment	**Project Status:** Bid and Award	**Environmental Status:** Completed (CatEx)

Project Cost:

Approved	$14.40 M
Forecast	$14.40 M
Actual	$0.51 M

Project Schedule:

Approved	Nov-20	Jun-24
Forecast	Nov-20	Jun-24

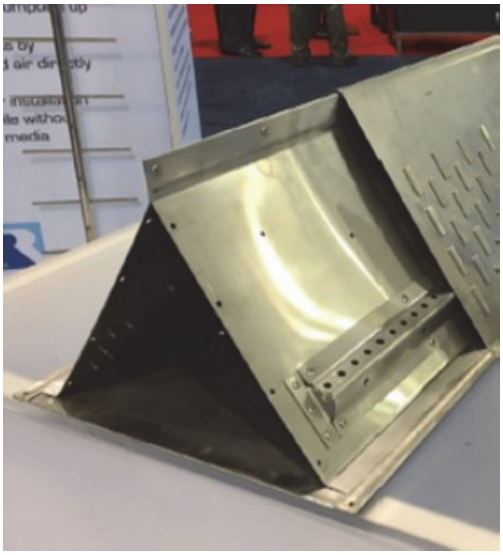
Project Percent Complete: 19.0%

Approved; Actual Cost; Forecast

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

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

Issues and Challenges:
None at this time.



Stainless Steel Underdrain

10037350 - Regional Groundwater Treatment Improvement

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

Program: Water Treatment	**Project Status:** Planning	**Environmental Status:** Not Initiated (CatEx)

Project Cost:

Approved	$38.60 M
Forecast	$38.60 M
Actual	$0.89 M

Project Schedule:

Approved	Aug-20	Dec-29
Forecast	Aug-20	Feb-30

Project Percent Complete: 1.2%

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

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

Well Station Building

10034578 - CSPL2 Reach 5 Lining Replacement

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

Program: Water Transmission	**Project Status:** Planning	**Environmental Status:** Active (CatEx)

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

Approved; Actual Cost; Forecast

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

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

Progress and Status:

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

Issues and Challenges:

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

Typical Appurtenance to be Upgraded

10035029 - As-Needed Pipeline Repairs

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

Program: Water Transmission	**Project Status:** Design	**Environmental Status:** Active (CatEx)

Project Cost:		**Project Schedule:**	
Approved	$6.80 M	Approved Oct-16	Aug-28
Forecast	$7.72 M	Forecast Oct-16	Aug-28
Actual	$0.31 M	Project Percent Complete: 8.2%	

Approved; Actual Cost; Forecast

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/26/23	12/18/23	05/21/24	02/21/28

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

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

Typical Valve Requiring Installation of Additional Valve for Safe Entry

10036839 - BDPL4 PCCP Repair

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

Program: Water Transmission	**Project Status:** Planning	**Environmental Status:** Active (CatEx)

Project Cost:

Approved	$54.75 M
Forecast	$54.75 M
Actual	$0.41 M

Project Schedule:

Approved	May-20	Nov-23
Forecast	May-20	May-25

Project Percent Complete: 0.8%

Approved; Actual Cost; Forecast

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

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

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

Leak at PCCP to Steel Transition

10036840 - BDPL 1-4 Lining Repair

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

Program: Water Transmission	**Project Status:** Design	**Environmental Status:** Active (CatEx)

Project Cost:

Approved	$9.35 M
Forecast	$10.76 M
Actual	$0.23 M

Approved; Actual Cost; Forecast

Project Schedule:

Approved	Sep-16	Aug-28
Forecast	Sep-16	Aug-28

Project Percent Complete: 3.7%

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	10/21/22	12/14/23	05/16/24	01/04/28

Progress and Status:

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

Issues and Challenges:

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

Valve Lot Where New Valve Will be Added for Safe Entry

10015071 - Corrosion Control

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

Program: Water Transmission	**Project Status:** Bid and Award	**Environmental Status:** Active (CatEx)

Project Cost:

Approved	$24.90 M
Forecast	$36.54 M
Actual	$7.96 M

Approved; Actual Cost; Forecast

Project Schedule:

Approved	Jan-16	Dec-34
Forecast	Jan-16	Jan-28

Project Percent Complete: 46.3%

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	01/31/22✓	05/27/22✓	01/05/23	01/06/25

Progress and Status:
The project is currently in Bid & Award Phase. Actual advertisement date for construction was during the quarter, on May 27, 2022, and bid opening date is scheduled for next quarter, August 8, 2022. Construction NTP forecast is March 2023.

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

Deep Anode Installation – Corrosion Phase 1

10015076 - San Antonio Pump Station MCC Upgrades

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

Program: Water Transmission	**Project Status:** Design	**Environmental Status:** Active (CatEx)

Project Cost:

Approved	$12.50 M
Forecast	$12.50 M
Actual	$1.18 M

Project Schedule:

Approved	May-16	Mar-25
Forecast	May-16	Mar-25

Project Percent Complete: 14.9%

Approved; Actual Cost; Forecast

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	10/31/22	12/07/22	06/05/23	10/09/24

Progress and Status:
During this reporting period, the design team coordinated with Operations on construction sequencing requirements and progressed on the 95% design. The 95% design is anticipated to be completed in the next quarter. Utility locating work, to further develop the design for the micropiles adjacent and outside of the building, was completed during this quarter. The Design Criteria Report is being updated to include recently identified generator and lighting requirements.

Issues and Challenges:
None at this time.

San Antonio Pump Station building looking southeast

10015081 - CSPL2 Reaches 2 and 3 Rehabilitation

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

Program: Water Transmission	**Project Status:** Planning	**Environmental Status:** Not Initiated (MND)

Project Cost:

Approved	$50.04 M
Forecast	$82.81 M
Actual	$2.04 M

Project Schedule:

Approved	Sep-16	Jun-26
Forecast	Sep-16	Feb-27

Project Percent Complete: 2.6%

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 (SFPW) completed surveying and geotechnical investigation field work during the quarter, and the SFPUC is using the data provided to create base maps that will be included in the Conceptual Engineering Report (CER).

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

CSPL2 Gully Crossing

10036998 - Turner Dam and Reservoir Improvements

Project Description: Turner Dam is a 195-foot-high earth embankment dam that was completed in 1965 and impounds San Antonio Reservoir in the East Bay. The dam is regulated by the California Division of Safety of Dams (DSOD). This project is to investigate the seismic stability and hydraulic performance of the Turner Dam and San Antonio Reservoir facilities and to perform necessary upgrades identified during the Planning Phase.

Program: Water Supply & Storage	**Project Status:** Planning	**Environmental Status:** Not Initiated (EIR)

Project Cost:

Approved	$7.50 M
Forecast	$7.50 M
Actual	$0.68 M

Approved; Actual Cost; Forecast

Project Schedule:

Approved	Oct-20	Jun-35
Forecast	Oct-20	Jun-35

Project Percent Complete: 6.3%

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

Progress and Status:
Geotechnical investigation started this quarter, and the team completed 18 land borings and 9 cone penetration tests, performed both on the downstream face and on the crest of the dam. Remaining geotechnical investigation work at additional locations will be undertaken in the next two quarters.

Issues and Challenges:
None at this time.

Crews performing geotechnical drilling work on dam crest during DSOD site visit

10015091 - Pilarcitos Dam Improvements

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

Program: Water Supply & Storage	**Project Status:** Planning	**Environmental Status:** Not Initiated (MND)

Project Cost:

Approved	$30.09 M
Forecast	$30.09 M
Actual	$3.69 M

Project Schedule:

Approved	Apr-14	Jun-29
Forecast	Apr-14	Jun-29

Project Percent Complete: 20.1%

Approved; Actual Cost; Forecast

Key Milestones:	**Environmental Approval**	**Bid Advertisement**	**Construction NTP**	**Construction Final Completion**
Current Forecast	06/30/25	07/09/25	01/02/26	12/31/28

Progress and Status:

The project team continued to analyze the nine alternatives previously identified during the condition and needs assessment phase. A preliminary list of four to six pre-screened alternatives will be proposed and reviewed with stakeholders in the next quarter.

Issues and Challenges:

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

Spillway cleaning and mapping for condition assessment

10015092 - San Andreas Dam Facility Improvements

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

Program: Water Supply & Storage	**Project Status:** Planning	**Environmental Status:** Not Initiated (Various)

Project Cost:

Approved	$32.20 M
Forecast	$32.20 M
Actual	$1.61 M

Project Schedule:

Approved	Dec-13	Dec-33
Forecast	Dec-13	Dec-33

Project Percent Complete: 6.6%

Approved; Actual Cost; Forecast

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

"** (A) Spillway CatEx; (B) Embankment MND

Progress and Status:

The project team started analyzing the nine alternatives identified during the Condition and Needs Assessment phase during the quarter. Geotechnical investigation also started this quarter. The team completed 13 land borings on the upstream face of the dam and 14 cone penetration tests on both the upstream face and the downstream face of the dam. Remaining geotechnical investigation work at additional locations will be undertaken in the next two quarters.

Crews performing geotechnical drilling work on dam embankment

Issues and Challenges:

The approved schedule assumed the construction work for the spillway and emergency drawdown outlet structures would be completed two years before the dam embankment. Based on the preliminary needs assessment and condition assessment findings, it is now recommended that the alternatives analysis also include analysis for combining the construction of these three major components under a single construction contract. This combined construction contract alternative would impact the project overall schedule. As the project is still in early planning phase, the overall project schedule and budget will be reforecast once the scope of work is defined at the end of the Alternative Analysis phase.

10015110 - EBRPD WATER SYSTEM

Project Description: As a mitigation for the Calaveras Dam Replacement Project, the SFPUC agreed to construct new potable water distribution facilities for the Sunol Regional Wilderness Park (SRP), managed by the East Bay Regional Park District (EBRPD). The EBRPD owns and maintains a water system located at SRP Headquarters which previously supplied potable water to four park facilities, as well as drinking water fountains and picnic areas interspersed throughout the park. Currently, the water system serves non-potable water for use by EBRPD employees only. The project purpose is to provide a reliable water supply for potable use at the EBRPD facilities within the SRP.

Program: Watershed & Lands Management	**Project Status:** Construction	**Environmental Status:** Completed

Project Cost:

Approved	$5.38 M
Forecast	$5.55 M
Actual	$4.25 M

Approved; Actual Cost; Forecast

Project Schedule:

Approved	Jun-14	Oct-22
Forecast	Jun-14	Oct-22

Project Percent Complete: 79.0%

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	11/05/20✓	10/09/20✓	05/10/21✓	08/16/22

Progress and Status:

During this reporting period, construction is on-going and is nearing completion. The Construction Final Completion date was updated to August 16, 2022 based on the delay in construction start and delays in startup and testing. The contractor anticipates being able to complete construction by this final completion date. Meanwhile, an MOU is being drafted in coordination with the City Attorney to memorialize the turnover of the East Bay Regional Park District water system to the East Bay Regional Park District.

Installation of hypochlorite system at High Valley tanks

Issues and Challenges:

The forecasted budget exceeds the approved, same as reported since Q2, due to the need for Naturally Occurring Asbestos (NOA) monitoring required by the Asbestos Dust Mitigation Plan (ADMP). The forecasted schedule exceeds the approved, due to the additional time needed to produce an ADMP plan as well as longer than anticipated startup and testing.

10015108 - Sneath Lane Gate/North San Andreas

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

Program: Watershed & Lands Management	**Project Status:** Planning	**Environmental Status:** Active (CatEx)

Project Cost:		**Project Schedule:**	
Approved	$6.70 M	Approved Feb-21	Jan-28
Forecast	$6.70 M	Forecast Feb-21	Aug-27
Actual	$0.29 M	Project Percent Complete: 14.0%	

Approved; Actual Cost; Forecast

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

Progress and Status:
During this reporting period, notice to proceed (NTP) was issued for the environmental phase task order, and California Environmental Quality Act (CEQA) work commenced.

Issues and Challenges:
The most recent engineer's estimate for construction exceeds the approved construction budget. Value engineering options will be identified in the design phase.

Sneath Lane Gate Trailhead - View Looking South

10015113 - Southern Skyline Blvd Ridge Trail Extension

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

Program: Watershed & Lands Management	**Project Status:** Bid and Award	**Environmental Status:** Active (EIR)

Project Cost:

Approved		$21.81 M
Forecast		$25.27 M
Actual		$5.55 M

Approved; Actual Cost; Forecast

Project Schedule:

Approved	Oct-12	Sep-23
Forecast	Oct-12	Mar-25

Project Percent Complete: 31.0%

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

Progress and Status:

During this reporting period, the project team received preliminary approval for the project plans from the City's designated Americans with Disabilities Act (ADA) Coordinator. The project team continued to develop responses to the US Fish and Wildlife Services' questions. Application for a Federal grant administered through CalTrans triggered the need to comply with National Environmental Protection Act (NEPA) permitting requirements, including additional compliance with Americans with Disabilities Act requirements, and also triggered review of the project by federal agencies, including the US Fish and Wildlife Services. This in turn has required additional evaluations and consultations and has caused further delays in advertising the contract. As part of NEPA compliance, Caltrans forwarded required documentation for the project's NEPA compliance (NEPA Section 106) to the State Historic Preservation Office.

View of southern trail alignment

with the State Historic Preservation Officer and the United States Fish and Wildlife Service. The PUC standard specifications are being re-written to conform to federal law, including provisions related to Disadvantaged Business Enterprise participation goals, Davis Bacon Act, and project labor participation.

Issues and Challenges:

The variance in schedule was extended by an additional 13 months last quarter due to unanticipated additional requirements for the $1M Federal Highway Administration grant. Prior to advertisement, requirements for compliance with the National Environmental Policy Act (NEPA) include consultation

10030771 - SA-1 Service Road/Ingoing Road

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

Program: Watershed & Lands Management	**Project Status:** Design	**Environmental Status:** Active (MND)

Project Cost:

Approved	$9.57 M
Forecast	$15.82 M
Actual	$0.69 M

Approved; Actual Cost; Forecast

Project Schedule:

Approved	Jun-16	Dec-26
Forecast	Jun-16	Dec-26

Project Percent Complete: 6.0%

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

Progress and Status:

The project team further developed the 35% design during the quarter. Consultant engineering support services for overall geotechnical design and structural design of debris boom system were also put into place during the quarter. The SFPUC Bureau of Environmental Management (BEM) confirmed that environmental clearance may be obtained within 18 months.

Issues and Challenges:

The design phase was shortened from 24 months to 18 months to accommodate the expiration date of design consultant resources. Overall project schedule will be adjusted when the environmental permit has been obtained. Engineer's estimate will be updated at 35%, 65%, and 95% design milestones.

Project Map – SA-1 Service Road/Ingoing Road

10033555 - Rollins Road Building Renovations (CUW27703)

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

Program: Buildings and Grounds	**Project Status:** Construction	**Environmental Status:** Completed (CatEx)

Project Cost:

Approved	$5.19 M
Forecast	$5.19 M
Actual	$3.21 M

Approved; Actual Cost; Forecast

Project Schedule:

Approved	Mar-18	Jun-22
Forecast	Mar-18	Oct-22

Project Percent Complete: 61.9%

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	10/30/20✓	N/A	12/08/20✓	10/30/22

Progress and Status:
During this reporting period, security cameras were installed, substantial completionwas achieved and the punch list was issued.

Issues and Challenges:
The forecasted construction completion date exceeds the approved completion date by four months because supply chain issues delayed the delivery of the security cameras for more than 6 months. The final two security cameras were installed during the quarter, in May 2022. Punch list work is forecast to be complete by October 2022.

View of new entry gate at southern entrance

10034526 - Millbrae Warehouse Settlement & Admin. Bldg. HVAC

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

Program: Buildings and Grounds	**Project Status:** Design	**Environmental Status:** Completed (MND)

Project Cost:

Approved	$5.50 M
Forecast	$16.08 M
Actual	$2.09 M

Approved; Actual Cost; Forecast

Project Schedule:

Approved	Jan-17	Nov-23
Forecast	Jan-17	Sep-24

Project Percent Complete: 35.2%

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

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

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

Progress and Status:

For the sub-project Millbrae Warehouse Loading Dock Repair, the Commission accepted the work and approved final payment to the contractor during the quarter on April 12. Turnover to the San Francisco Public Utilities Commission's (SFPUC) Water Supply and Treatment Division on June 10 included final as-builts, warranties, maintenance documents, and closeout package. This will be the last report for this subproject. For the sub-project Millbrae HVAC Upgrades, a contractor had conducted an inspection of the existing HVAC system last quarter, on March 17, and determined that an upgrade to the existing HVAC system inside the building can sufficiently provide the necessary improvements to address the outdated nonoperational pneumatic controls, increased heat generating lab equipment, and the inadequate heating and ventilation that affect the working conditions inside the building. This HVAC upgrade inside the building will provide about 15 to 20 years of use. All work that was to have been performed outside the building has been eliminated from the scope, and the proposed upgrades to existing HVAC inside the building are the current limited scope of the HVAC Upgrades sub-project.

Existing Millbrae Administration Building

Issues and Challenges:

The variances in the forecast cost and schedule from the approved baseline, same as reported since Q2, have not yet been adjusted to reflect the new, limited scope of the second sub-project; new forecasted cost and schedule will be reported next quarter.

10015124 - Sunol Long Term Improvements

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

Program: Buildings and Grounds	**Project Status:** Construction	**Environmental Status:** Completed (MND)

Project Cost:

Approved	$100.41 M
Forecast	$104.91 M
Actual	$96.27 M

Project Schedule:

Approved Jan-09	Sep-22
Forecast Jan-09	Aug-23

Project Percent Complete: 94.9%

Approved; Actual Cost; Forecast

Key Milestones:	Environmental Approval	Bid+ Advertisement	Construction+ NTP	Construction+ Final Completion
Current Forecast	12/02/15✓	(A) 03/01/16✓ (B) 08/30/19✓	(A) 01/17/17✓ (B) 03/09/20✓	09/15/20✓ 10/31/22

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

Progress and Status:

Sunol Yard (Contract A): The project close-out dossier was finalized during the quarter.

Watershed Center (Contract B): Construction work on the building interior continued, including electrical work, communication systems, pond filter system, HVAC, aquarium systems, windows, kitchen and restroom finishes, security, exhibits, interior glass doors and LEED certification documentation. Construction work on the exterior continued, including planting, bluestone boulders and pavers, pathways, pond and stream. Work on the windows, floor polishing, newt tile installation, and exterior doors was all completed during the quarter.

Entrance to the Watershed Center

Issues and Challenges:

The forecasted schedule, same as reported since Q2, exceeds the approved completion date due to procurement delays for bluestone pavers, boulders, and stencil materials as well as bird-proof glass. The design and installation of the interior exhibits is also delayed due to extended time to redesign, fabricate, and install the exhibits and to complete the exhibit hardware and programming work. An additional 6 months has been added to the closeout phase to allow for training, start-up and maintenance planning with operations and Natural Resources and Lands Management staff. The forecasted cost, same as reported since Q2, exceeds the approved budget due to the addition of scope requested for overflow parking space, backup power system, picnic area restoration, purchase of compositing toilets, and exhibit revisions.

10015128 - Millbrae Yard Laboratory and Shop Improvements

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

Program: Buildings and Grounds	**Project Status:** Planning	**Environmental Status:** Active (MND)

Project Cost:

Approved		$169.56 M
Forecast		$169.56 M
Actual		$3.99 M

Project Schedule:

Approved	Nov-15	Mar-28
Forecast	Nov-15	Mar-29

Project Percent Complete: 2.4%

Approved; Actual Cost; Forecast

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	07/27/23	N/A	04/15/25	03/31/28

Progress and Status:

Conceptual design was issued during the quarter, on May 24, for internal team review. Request for Proposal (RFP) Agreement No. PUC.PRO.0221 – to provide engineering services for the project - was advertised during the quarter on June 29. Laboratory and space planning; geotechnical investigation; utilities survey; grading, landscaping and site layout planning; traffic and parking circulation planning; building exterior design concept; frontage design along El Camino Real; and stormwater and best practice management planning continued to progress.

Existing Administration Building

Issues and Challenges:

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

Since the project is still in the planning phase, the overall project schedule and budget will be re-forecasted once the scope of work is refined due to scope development, increase in escalation, and increased duration forecast for several phases at the end of the conceptual design phase.

8. On-Going Construction*

Construction Contract	Schedule			Budget		Variance (Approved - Forecast)		Actual % Complete
	NTP Date	Approved Construction Final Completion	Current Forecasted Construction Final Completion**	Approved Contract Cost	Current Forecasted Cost**	Schedule (Cal. Days)	Cost	
Watershed & Lands Management								
10015110 - WD-2865 PUC Sunol Rgnl WP WTR Sys	05/10/21	05/28/22	08/16/22	$ 2,634,808	$ 2,634,808	(80)	-	90.0%
Buildings and Grounds								
10015124 - WD-2794B Sunol Long Term Improvements - Watershed Center	03/09/20	03/16/22	10/31/22	$ 30,937,270	$ 32,093,096	(229)	($1,155,826)	93.0%

Program Total for On-Going Construction	Approved Contract Cost	Current Forecasted Cost	Variance	
			Cost	Percent
	$ 33,572,078	**$ 34,727,904**	**($1,155,826)**	**(3.4%)**

Note: * This table reflects Active Construction Contracts with an original contract amount greater than $1M.
** The Forecasted Cost includes all approved, pending, and potential change orders; and Final Completion includes all approved, pending, and potential change orders, and trends.

9. PROJECTS IN CLOSEOUT

There are no active projects currently in closeout phase.

10. COMPLETED PROJECTS

Project Title	Approved Project Completion	Actual Project Completion	Approved Project Budget	Project Expenditures To Date
Water Transmission				
10015080 - San Andreas Pipeline No. 2 Replacement	12/08/21	12/08/21	$ 45,642,000	$ 42,069,946
TOTAL			$ 45,642,000	$ 42,069,946

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II. Local Capital Improvement Program

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1. CAPITAL IMPROVEMENT PROGRAM DESCRIPTION

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

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

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

The Local Water System Capital Improvement Program (Local Water CIP) is a 10-year proposed appropriations plan of scheduled projects to physically improve the system assets and maintain level of service goals. This Local Water CIP is updated every two years (with minor modifications in the off years) and integrated with the SFPUC's 10-year Financial Plan and rate-setting.

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

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

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

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

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

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

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

2. CAPITAL IMPROVEMENT PROGRAM STATUS

This Quarterly Report presents the progress made on Local Water projects between April 1, 2022 and June 30, 2022. This document serves as the fourth (4th) Quarterly Report in Fiscal Year 2021-2022 (FY22) published for the Water Enterprise Capital Improvement Program.

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

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

Figure 2.1 shows the total Current Approved Budget for the Local projects in each phase of the program as of June 30, 2022. The number of projects currently active in each phase is shown in parentheses.

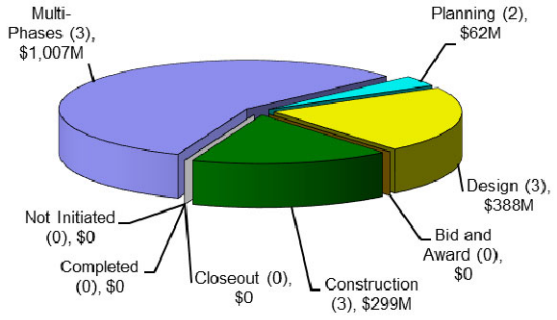


Figure 2.1 Total Current Approved Budget for Local Projects Active in Each Phase

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

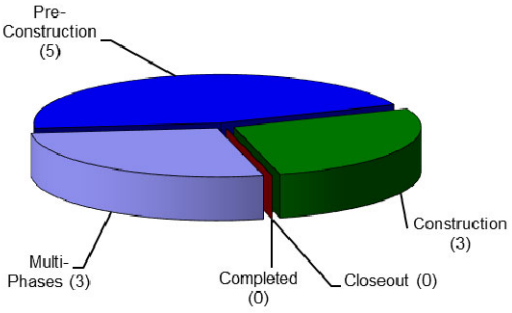


Figure 2.2 Number of Local Projects in Pre-construction, Construction, and Post-construction

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

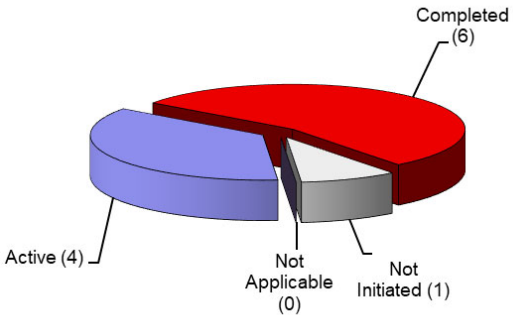
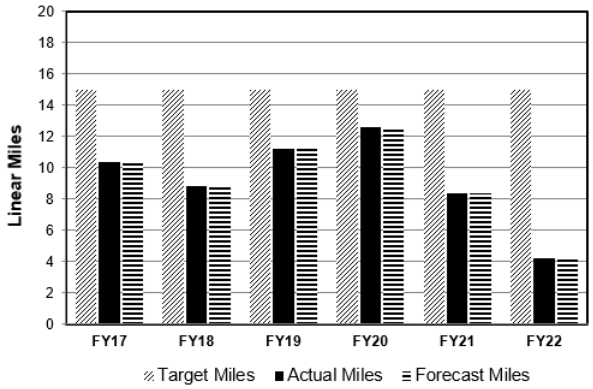


Figure 2.3 Local Program Environmental Status

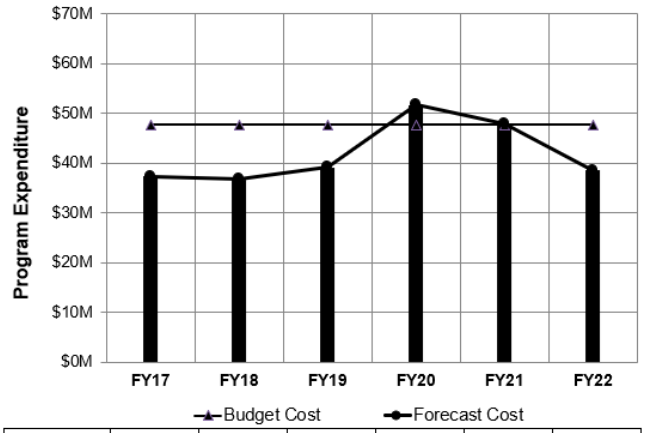
The Local Water Conveyance/Distribution System Program has an annual goal to replace or improve a target of 15 miles of water mains in San Francisco. Figure 2.4 shows the planned and actual miles of pipeline projects that have reached substantial completion since FY17. At the end of FY22, 4.2 miles of pipe were replaced; this was significantly less than forecasted since $10M of the project's budget was re-directed to fund emergency improvements at Stern Grove in San Francisco due to an unanticipated valve failure and subsequent flooding of the Grove during 2021.



	FY17	FY18	FY19	FY20	FY21	FY22
Target Miles	15.0	15.0	15.0	15.0	15.0	15.0
Actual Miles	10.4	8.8	11.2	12.6	8.4	4.2
Forecast Miles						4.2

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

Water main replacement projects with construction underway in the 4th quarter of FY22 included the City streets of Castro Street, 17th Street, Baker Street, 19th Avenue, Vicente Street, Prospect Avenue, and L-Taraval Segment B. Water main replacement projects which received substantial completion during the 4th quarter of FY22 included Baker and Castro streets. Projects anticipated to start in the 1st quarter of FY23 include Diamond Street.



	FY17	FY18	FY19	FY20	FY21	FY22
Budget	$47.7M	$47.7M	$47.7M	$47.7M	$47.7M	$47.7M
Actual Expenditure	$37.3M	$36.8M	$39.2M	$51.7M	$47.8M	38.5M*
Forecast Expenditure						$38.5M

**FY22 total expenditures were $38.5M with $9M related to Stern Grove Emergency Restoration Project and $29.5M from main replacement projects.*

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

Figure 2.5 shows the annual total program expenditure by fiscal year for the pipeline replacement program. FY21 had a reduced budget of $18M which resulted in a reduction in advertisement of new construction projects and a decrease in new construction projects underway in FY22. It typically takes 12 to 15 months from construction contract advertisement to placement of new pipelines in services for beneficial use. FY22 had a increased budget of $53.1M with approximately $10M of FY22 budget redirected to fund the Stern Grove Emergency Restoration Contract issued under Board of Supervisor Resolution 170-22 and resolution file number 220245. In FY22, total expenditures were lower than previous fiscal years due to the reduction in contract advertisements from FY21 as noted above and the redirection of funds to the work related to the Stern Grove Emergency Restoration Contract. The budgeted cost per mile has been updated for FY22 from $3.18 million per mile to $5.4 million per mile for replacement of water distribution mains. The updated cost per mile for streetscape, transit, or ERDIP type projects is approximately $8 million per mile. The updated

cost per mile for water main replacement projects is due to the following factors:

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

3. CAPITAL IMPROVEMENT PROGRAM COST SUMMARY

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

Note that during Q2/FY21-22 the project teams were requested to forecast any major changes in budget, scope and schedule that should be included as a proposed change in the FY23-32 10- Year CIP budget proposal. Thus, the forecasts that were included in the Q2/FY21-22 report are the same as the proposed changes to project budgets and schedules that were included in the 10-Year CIP budget proposal that was presented to, and approved by, the Commission on February 8, 2022. These forecasted changes from Q2/FY21-22 will become the approved budgets and schedules after full approval, anticipated to occur in Q1/FY22-23. For this Q4/FY21-22 report, any additional variances that exceed the proposed budgets and schedules approved for FY22/23 are also reported.

There were no new cost variances for Local projects since Q2. The total Current Approved Budget (including Regional and Local Programs) and Current Forecasted Cost at completion are $2,674.2 million and $3,301.7 million, respectively, same as reported since Q2FY22. The Current Approved Budget and Forecasted Cost at completion for only the Local Water Program (including construction contingency) are $1,755.4 million and $2,271.4 million, respectively.

The overall Local Water Program negative Cost Variance of $516.0M in Table 3, same as reported since Q2, can be attributed to the following projects; reasons for the project variances are reported in Section 7:

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

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

Table 3. Program Cost Summary

Programs	Expenditures To Date ($ Million) (A)	Current Approved Budget ($ Million) (B)	Q4/FY21-22 Forecasted Costs ($ Million) (C)	Cost Variance ($ Million) (D = B - C)	Variance Over Reporting Period* ($ Million) (E)
Local Program	**$792.67**	**$1,755.36**	**$2,271.39**	**($516.03)**	**-**
Local Water Conveyance/ Distribution System	$435.84	$810.58	$1,273.20	($462.62)	-
Local Water Supply	$256.60	$312.54	$322.54	($10.00)	-
Local Tanks/Reservoir Improvements	$5.04	$19.28	$19.28	-	-
Pump Stations	$0.47	$6.53	$6.53	-	-
Buildings and Grounds	$4.38	$350.19	$393.60	($43.41)	-
Emergency Firefighting Water System	$90.33	$256.25	$256.25	-	-
Regional Program	**$194.52**	**$918.79**	**$1,030.28**	**($111.49)**	**-**
PROGRAM TOTAL	**$987.18**	**$2,674.16**	**$3,301.67**	**($627.52)**	**-**

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

4. CAPITAL IMPROVEMENT PROGRAM SCHEDULE SUMMARY

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

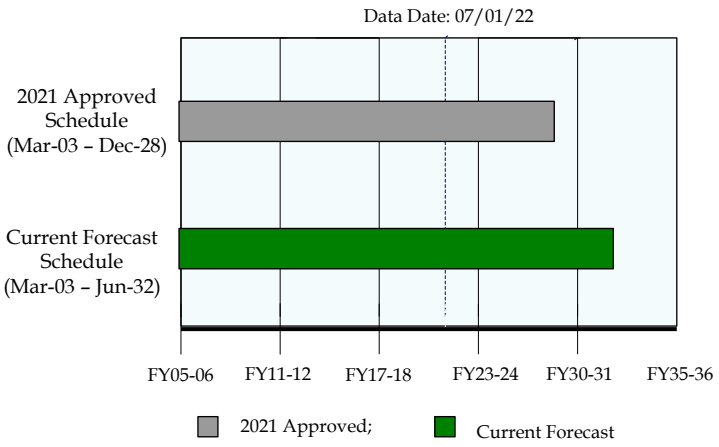


Figure 4. Local Program Schedule Summary

Table 4 2021 Approved vs. Current Forecast Schedule Dates

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

5. BUDGET AND SCHEDULE TREND SUMMARY

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

During this quarter (Q4/FY21-22), the following major milestones were achieved, and the project cost and schedule forecasts were accordingly updated based on the updated milestone cost estimates for the following Local Water project:

- New CDD Headquarters Construction Management/General Contractor (CM/GC) contract was awarded.

Table 5. Budget and Schedule Trend Summary

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction[1]		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
WECIP - Local														
Local Water Conveyance/Distribution System														
10033816 Potable Emergency Firefighting Water System[2]	FY21-30		8/12/19		N/A		N/A		N/A		N/A		Q4-FY21-22	
	$55.0	06/30/28	$44.8	06/30/28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$55.0	06/30/28
10033818 Town of Sunol Pipeline	FY21-30		06/17/19		11/01/21		09/16/22[3]		04/03/23		12/04/23		Q4-FY21-22	
	$5.0	04/03/23	$5.0	04/03/23	$5.0	04/03/23	TBD	TBD	TBD	TBD	TBD	TBD	$6.7	04/04/25
19063 Local Water Conveyance / Distribution System[4]	FY21-30		N/A		Various		Various		Various		Various		Q4-FY21-22	
	$750.6	06/30/28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$1,211.5	06/30/32
Local Water Supply														
10015239 Lake Merced Water Level Restoration	FY21-30		06/16/03		04/30/10		08/31/22		10/13/22		04/11/23		Q4-FY21-22	
	$32.7	01/31/19	$32.7	01/31/19	$32.7	01/31/19	TBD	TBD	TBD	TBD	TBD	TBD	$42.7	03/03/27
10015240 San Francisco Groundwater Supply	FY21-30		06/16/03		12/08/06		10/19/10		03/11/16		08/22/17		Q4-FY21-22	
	$66.5	06/30/22	$39.8	02/27/14	$49.8	09/08/14	$49.8	09/08/14	$66.5	06/25/18	$66.5	06/25/18	$66.5	06/30/23
10015242 San Francisco Westside Recycled Water	FY21-30		03/03/03		05/15/09		12/08/14		06/29/16		10/17/17		Q4-FY21-22	
	$213.3	01/12/23	$201.3	04/18/08	$149.6	09/25/13	$186.2	12/18/19	$186.2	12/18/19	$186.2	12/18/19	$213.3	04/06/23

Footnotes:

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

All Costs are shown in million.

Project Name	Most Recent CIP Approved Budget		Project Initiation		CER		35% Design		95% Design		Awarded Construction[1]		Current Status	
	Approved Budget	Approved Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion	Forecasted Cost	Forecasted Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
Local Tank/Reservoir Improvements														
10015223 College Hill Reservoir Outlet[2]	FY21-30		01/24/13		10/14/16		12/15/16		02/15/19		06/08/21		Q4-FY21-22	
	$19.3	01/29/24	$16.3	09/28/21	$16.3	09/28/21	$16.3	09/28/21	$16.3	09/28/21	$19.3	01/29/24	$19.3	04/24/24
Pump Stations														
10015231 Harding Park PS	FY21-30		07/06/21		09/26/22		03/31/23		11/30/23		07/01/24		Q4-FY21-22	
	$6.5	04/03/26	$6.5	04/03/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$6.5	04/03/26
Buildings and Grounds														
10037249 New CDD Headquarters	FY21-30		02/01/20		08/31/21		12/30/21		12/29/23		06/28/22		Q4-FY21-22	
	$350.2	06/28/28	$350.2	06/28/28	$393.6	06/28/28	$393.6	06/28/28	TBD	TBD	$393.6	06/28/28	$393.6	06/28/28
Emergency Firefighting Water System														
EFWSPL EFWS Pipelines[3]	FY21-30		04/01/11		Various		Various		Various		Various		Q4-FY21-22	
	$205.3	12/29/28	$31.6	09/29/17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$205.3	12/29/28
EFWSPPS EFWS Pump Stations[4]	FY21-30		04/01/11		Various		Various		Various		Various		Q4-FY21-22	
	$45.2	12/29/28	$17.5	09/26/16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$45.2	12/29/28

Footnotes:

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

6. PROJECT PERFORMANCE SUMMARY*

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

Project Name	Active Phase (a) (**)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Local Water Conveyance/Distribution System											
10033816 - Potable Emergency Firefighting Water System	PL	$55,000	$ 55,000	$ 55,000	$ 806	-	0%	06/30/28	06/30/28	06/30/28	-
10033818 - Town of Sunol Pipeline	DS	$5,000	$ 5,000	$ 6,663	$ 2,567	($1,663)	-33%	04/03/23	04/03/23	04/04/25	(732)
19063 - Local Water Conveyance/Distribution System	MP	$750,581	$ 750,581	$ 1,211,536	$ 432,468	($460,955)	-61%	06/30/28	06/30/28	06/30/32	(1,461)
Local Water Supply											
10015239 - Lake Merced Water Level Restoration	DS	$32,668	$ 32,668	$ 42,668	$ 4,730	($10,000)	-31%	01/30/26	01/30/26	03/03/27	(397)
10015240 - San Francisco Groundwater Supply	CN	$66,552	$ 66,552	$ 66,552	$ 63,681	-	0%	06/30/22	06/30/22	06/30/23	(365)
10015242 - San Francisco Westside Recycled Water	CN	$213,316	$ 213,316	$ 213,316	$ 188,194	-	0%	01/12/23	01/12/23	04/06/23	(84)

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

**** Phase Status Legend**

PL Planning DS Design

BA Bid & Award CN Construction MP Multiple-Phase

Footnotes:

(+) CIP Approved Budget and Project Completion Date: The budget and schedule approved as part of 10-year CIP for FY21-30.

(++) Current Approved Budget and Schedule: The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.

(+++) Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.

II. Local WECIP Quarterly Report — Q4-FY2021-2022 (04/01/22 - 06/30/22)

Project Name	Active Phase (a) (∗∗)	CIP Approved Budget (b) (+)	Current Approved Budget (c) (++)	Current Forecast Cost (d)	Expenditures To Date (e)	Cost Variance (f= c - d) (+++)	% Cost Changes (g = f/c) (+++)	CIP Project Completion Date (h) (+)	Current Approved Completion (i) (++)	Current Forecast Completion (j)	Schedule Variance (Days) (k = i - j) (+++)
Local Tanks/Reservoir Improvements											
10015223 - College Hill Reservoir Outlet	CN	$19,283	$ 19,283	$ 19,283	$ 5,037	-	0%	01/29/24	01/29/24	04/24/24	(86)
Pump Stations											
10015231 - Harding Park PS	PL	$6,527	$ 6,527	$ 6,527	$ 472	-	0%	04/03/26	04/03/26	04/03/26	-
Buildings and Grounds											
10037249 - New CDD Headquarters	DS	$350,192	$ 350,192	$ 393,601	$ 4,381	($43,409)	-12%	06/28/28	06/28/28	06/28/28	-
Emergency Firefighting Water System											
EFWS PL - EFWS Pipelines	MP	$205,513	$ 205,263	$ 205,263	$ 44,806	-	0%	12/29/28	12/29/28	02/09/29	(42)
EFWS PS - EFWS Pump Stations	MP	$45,245	$ 45,245	$ 45,245	$ 47,542	-	0%	12/29/28	12/29/28	12/29/28	-

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

∗∗ Phase Status Legend

PL Planning DS Design

BA Bid & Award CN Construction MP Multiple-Phase

Footnotes:

(+) CIP Approved Budget and Project Completion Date: The budget and schedule approved as part of 10-year CIP for FY21-30.

(++) Current Approved Budget and Schedule: The budget and schedule approved as part of 10-year CIP for FY21-30, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.

(+++) Negative number reflects cost overrun (or schedule delay) and positive number reflects cost underrun (or ahead of schedule). Projects with a forecasted cost overrun greater than 10%, or forecasted delay of greater than 6 months or 10%, will be highlighted in grey.

7. PROJECT STATUS REPORT

10033816 - Potable Emergency Firefighting Water System

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

Program: Local Water Conveyance/Distribution System	**Project Status:** Planning	**Environmental Status:** Completed (CatEx)

Project Cost:		**Project Schedule:**		
Approved	$55.00 M	Approved	Aug-19	Jun-28
Forecast	$55.00 M	Forecast	Aug-19	Jun-28
Actual	$0.81 M	Project Percent Complete: 0.8%		

Approved; Actual Cost; Forecast

Key Milestones:	**Environmental Approval**	**Bid Advertisement**	**Construction NTP**	**Construction Final Completion**
Current Forecast	08/12/19✓	N/A	TBD	04/15/26

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

Issues and Challenges:
None at this time.

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

10033818 - Town of Sunol Pipeline

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

Program: Local Water Conveyance/Distribution System	**Project Status:** Design	**Environmental Status:** Active (MND)

Project Cost:

Approved	$5.00 M
Forecast	$6.66 M
Actual	$2.57 M

Project Schedule:

Approved	Jun-19	Apr-23
Forecast	Jun-19	Apr-25

Project Percent Complete: 45.7%

Approved; Actual Cost; Forecast

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	02/01/23	07/12/23	01/13/24	10/09/24

Progress and Status:

During this reporting period the project team continued development of the design criteria and 65% design. The environmental team continues preparation of the CEQA Addendum. The Highway 680 Crossing construction is complete for this season, and the final tie-in work is anticipated to be completed in early 2023.

Issues and Challenges:

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

Installation of 12" Town of Sunol Raw Water Pipeline North of Hwy 680

19063 - Local Water Conveyance/Distribution System

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

Program: Local Water Conveyance/Distribution System	**Project Status:** Multiple Phases	**Environmental Status:** Active (Various)

Project Cost:

Approved	$750.58 M
Forecast	1,211.54 M
Actual	$432.47 M

Approved; Actual Cost; Forecast

Project Schedule:

Approved	Jul-10	Jun-28
Forecast	Jul-10	Jun-32

Project Percent Complete: 45.0%

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

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

Progress and Status:

The forecast mileage for the main replacement program in FY22 was 7.5 miles, but only 4.2 miles was installed and placed in service as a result of a reduced program budget in FY21 of $18M. The reduced program budget resulted in a reduction in advertisement of new construction projects and a decrease in new construction projects underway in FY22. It typically takes 12 to 15 months from construction contract advertisement to placement of new pipelines in service for beneficial use. FY22 had an increased budget of $53.1M, but approximately $10M of FY22 budget was redirected to the Stern Grove Emergency Restoration Contract issued under Board of Supervisor Resolution 170-22 and resolution file number 220245. In FY22, total expenditures were lower than previous fiscal years due to the reduction in contract advertisements from FY21 as noted above together with the use of funds for work related to the Stern Grove Emergency Restoration Contract. Projects under construction during Q4 FY22 include Castro Street, 17th Street, Baker Street, 19th Avenue, Vicente Street, Prospect Avenue, and L-Taraval Segment B. Projects in which all water work was completed during Q4 FY22 includes Baker Street and Castro Street. Construction Notice to Proceed for the Diamond Street Project will be issued during the first month of Q1FY23.

Issues and Challenges:

Same as reported since Q2, SFPUC's Capital Improvement Plan has been updated with an overall main replacement budget increase from $750M to $1.2B. The forecasted cost increase of $450M is attributed to the schedule extension along with the increased cost per mile for main replacement.

10015239 - Lake Merced Water Level Restoration

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

Program: Local Water Supply	**Project Status:** Design	**Environmental Status:** Active (Various)

Project Cost:

Approved		$32.67 M
Forecast		$42.67 M
Actual		$4.73 M

Project Schedule:

Approved	Jun-03	Jan-26
Forecast	Jun-03	Mar-27

Project Percent Complete: 16.6%

Approved; Actual Cost; Forecast

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

+ Project includes multiple construction contracts. (A) Vista Grande Drainage Basin Improvement managed by Daly City ; (B) Lake Merced Aeration Mixing System - Phase 1 JOC Contract; (C) Lake Merced Aeration Mixing System - Phase 3

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

Progress and Status:

Vista Grande Drainage Basin Improvement Project (Contract A): Daly City is currently working with California Department of Fish and Wildlife to finalize permit conditions. In addition, Daly City is working with staff at the California Coastal Commission to address their concerns over construction of the outflow structure at Fort Funston. Daly City, through the SFPUC, is negotiating with SF Public Works for a major encroachment permit for construction of the diversion structure for the approved flows to Lake Merced. This diversion structure would be constructed under John Muir Drive within the City's right of way. The Daly City staff working on this project have prepared an updated Lake Management Plan, which was reviewed by SFPUC and has been updated to address SFPUC comments.

Lake Merced Recycled Water Diversion (Contract C): SFPUC is continuing preliminary design and water quality evaluation of the proposal to divert recycled water from the new Westside Recycled Water Plant into Lake Merced to manage lake levels. SFPUC completed a Draft Evaluation to further study project feasibility and is currently working on the 35% design documents.

Issues and Challenges:

SFPUC is conducting additional review of potential utility conflicts following a determination that Daly City issued an alternative 100% Design package that was not shared with SFPUC. The updated design documents indicate a different pipeline alignment than had previously been advised, and this new proposed pipeline alignment is currently under review by the Engineering Management Bureau and Wastewater Engineering staff for any potential conflicts. Real Estate Services efforts to confirm the assessed values of parcels needed by Daly City is temporarily on hold and will be completed following completion of internal review of the new proposed pipeline alignment.

10015240 - San Francisco Groundwater Supply

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

Program: Local Water Supply	**Project Status:** Construction	**Environmental Status:** Completed (EIR)

Project Cost:

Approved		$66.55 M
Forecast		$66.55 M
Actual		$63.68 M

Project Schedule:

Approved	Jun-03	Jun-22
Forecast	Jun-03	Jun-23

Project Percent Complete: 96.6%

Approved; Actual Cost; Forecast

Key Milestones:	Environmental Approval	Bid+ Advertisement	Construction+ NTP	Construction+ Final Completion
Current Forecast	12/19/13✓	(A) 05/01/14✓ (B) 03/10/14✓ (C) 08/17/16✓	(A) 03/16/15✓ (B) 08/04/14✓ (C) 08/07/17✓	03/31/21✓ 12/21/15✓ 12/31/22

\+ Project includes multiple construction contracts.
(A) San Francisco Groundwater Supply Well Stations Phase 1; (B) San Francisco Groundwater Supply Pipeline Phase 1; (C) San Francisco Groundwater Supply Phase 2

Progress and Status:

For Phase 2 (Contract C), during the quarter, the contractor completed the punch list items, which are currently undergoing Operation's verifications. The team continued to review closeout documents and process remaining change orders, including deductive bid items and miscellaneous change order work. The contractor has submitted as-built drawings and operational and maintenance manuals, both currently pending City review. Warranties and spare parts have been completed and delivered to Operations.

North Lake Well Station

Issues and Challenges:

Phase 2 project final completion has been delayed due to additional time needed to complete punch list items and compile closeout documents.

10015242 - San Francisco Westside Recycled Water

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

Program: Local Water Supply	**Project Status:** Construction	**Environmental Status:** Completed (EIR)

Project Cost:

Approved	$213.32 M
Forecast	$213.32 M
Actual	$188.19 M

Project Schedule:

Approved	Mar-03	Jan-23
Forecast	Mar-03	Apr-23

Project Percent Complete: 88.2%

Key Milestones:	Environmental Approval	Bid+ Advertisement	Construction+ NTP	Construction+ Final Completion
Current Forecast	09/03/15✓	(A) 12/29/16✓ (B) 12/19/18✓ (C) 07/15/16✓ (D) 02/25/20✓	(A) 10/18/17✓ (B) 07/01/19✓ (C) 02/21/17✓ (D) 01/25/21✓	12/03/22 12/04/22 08/19/18✓ 11/30/22

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

Progress and Status:

Treatment Facility (Contract A): Miscellaneous mechanical, electrical and architectural finish work continued in Buildings 580 and 581. Functional testing of equipment continued during the quarter, with most of the major process equipment tested by the end of the quarter. Installation of the membrane filtration modules began. Civil yardwork continued with placement of curbs, gutters and sidewalks and installation of trench covers. Work also continued on the development of the Operations Manual and Standard Operating Procedures (SOPs) for the new treatment facility; the second and third sets of SOPs were submitted to SFPUC Wastewater Enterprise Operations for review. Distribution Pump Station and Reservoir (Contract B): Electrical and mechanical/HVAC work inside the new pump station has been mostly completed. The yard area has been paved. Pipeline (Contract C) is complete. Irrigation System Retrofit (Contract D): Punchlist walkthrough of the retrofit work began. Work at the Elk Glen Pump Station was completed. The cross-connection control testing of Golden Gate Park continued. The San Francisco Bay Regional Water Quality Control Board returned comments on the Notice of Intent (NOI) document submitted by the SFPUC for coverage under the Recycled Water General Order. SFPUC met with RWQCB staff to discuss the comments and obtain additional clarifications for resubmittal of a revised Notice Of Intent (NOI).

Issues and Challenges:

For Contract A, potential issues with the completion of the Process Control and Instrumentation System (PCIS) work have been identified. The SFPUC will be meeting with the contractor and the system integrator to assess current work status and proposed solutions. Delay in completion of the PCIS work will delay start-up testing and completion of the overall project. For Contract B, Distribution Pump Station and Reservoir, the project team will be moving forward with a new design for primary power service, due to PG&E's changed decision about the project's earlier agreement to connect using secondary power service. This will delay the full-scale operation of the new pump station and recycled water delivery to Lincoln Park Golf Course by several years. For Contract D, Irrigation System Retrofit, after an appeal on the first decision was submitted by members of the public, a second tree hearing was conducted for the proposed removal of a single tree on Clement Street. At the time of this report, a final decision regarding the tree had not been reached.

10015223 - College Hill Reservoir Outlet

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

Program: Local Tanks/Reservoir Improvements	**Project Status:** Construction	**Environmental Status:** Completed (CatEx)

Project Cost:

Approved	$19.28 M
Forecast	$19.28 M
Actual	$5.04 M

Approved; Actual Cost; Forecast

Project Schedule:

Approved	Jan-13	Jan-24
Forecast	Jan-13	Apr-24

Project Percent Complete: 26.2%

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

Progress and Status:

The contractor, with assistance from SFPUC City Distribution Division Operations, has completed all reservoir shutdown operations including installation of pipelines and equipment to control water leakage and removal of sludge/debris within the reservoir. The contractor has completed installation of 24-inch diameter reservoir inlet earthquake resistant ductile iron pipe (ERDIP) that will connect the reservoir to the future valve control vault. The jacking pit was excavated for constructing the reservoir outlet 36-inch diameter steel pipe, and electrical conduit was installed on Elise Street for future PG&E service to the reservoir. In addition, the contractor inspected the reservoir roof wood joist and beam substructure for potential replacement due to significantly advanced deterioration that had not been previously detected. Upcoming construction activities next quarter include completion of the reservoir outlet 36-inch diameter steel pipe and valve vault construction.

Installation of 24-inch diameter ERDIP reservoir inlet pipe.

Issues and Challenges:

The forecasted increase in schedule, due to a late start while the contractor evaluated leakage control, may be mitigated by the contractor; updated forecast will be reported next quarter.

10015231 - Harding Park PS

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

Program: Pump Stations	**Project Status:** Planning	**Environmental Status:** Not Initiated

Project Cost:

Approved		$6.53 M
Forecast		$6.53 M
Actual		$0.47 M

Project Schedule:

Approved Jul-21		Apr-26
Forecast May-21		Apr-26

Project Percent Complete: 7.4%

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

Progress and Status:
The PM and PE had a project scope and alternatives confirmation meeting with Operations in June. An additional field meeting is scheduled in July to discuss the proposed alternatives, including a new option of building expansion. Additional project resources may be needed to complete the Alternatives Analysis Report.

Issues and Challenges:
None at this time.

10037249 - New CDD Headquarters

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

Program: Buildings and Grounds	**Project Status:** Design	**Environmental Status:** Active

Project Cost:

Approved	$350.19 M
Forecast	$393.60 M
Actual	$4.38 M

Project Schedule:

Approved	Feb-20	Jun-28
Forecast	Feb-20	Jun-28

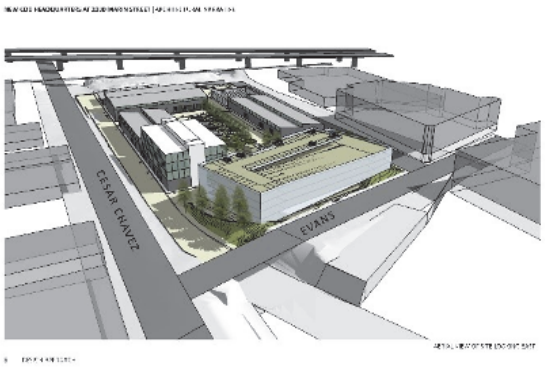
Project Percent Complete: 2.0%

Approved; Actual Cost; Forecast

Key Milestones:	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/30/23	06/18/21✓	10/01/23	12/31/27

Progress and Status:
The Construction Management/General Contractor (CM/GC) contract was awarded by the Commission during the quarter, on June 28. Design development will proceed upon execution of a contract for design.

Issues and Challenges:
The delays in hiring the Design consultant to start the design documents will result in delaying the Design phase; impacts to schedule will be reevaluated when the CM/GC contractor is on board. Due to the rising cost of escalation, as reported since Q2, the project cost is forecasted to increase by $43.4M. There were no new cost variances in the quarter.



Aerial Rendering of Campus

EFWS PL - EFWS Pipelines

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

Program: Emergency Firefighting Water System	**Project Status:** Multiple Phases	**Environmental Status:** Completed (Various)

Project Cost:

Approved		$205.26 M
Forecast		$205.26 M
Actual		$44.81 M

Approved; Actual Cost; Forecast

Project Schedule:

Approved	Apr-11	Dec-28
Forecast	Apr-11	Feb-29

Project Percent Complete: 28.1%

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

Progress and Status:

•19th Avenue Pipeline:
Construction completion expected December 2023.

•Clarendon Supply:
Construction completion expected September 2022; delayed due to tree hearing.

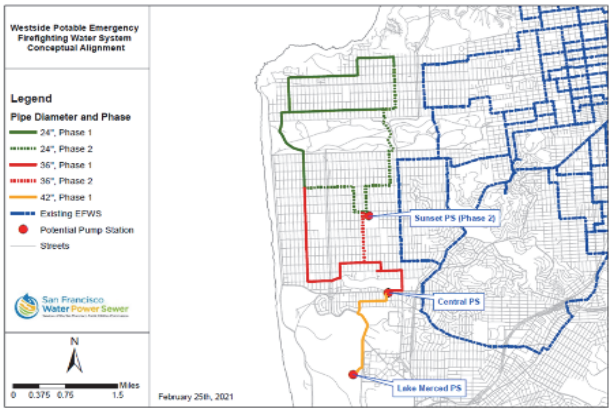
•Emergency Firefighting Water System 2050 Planning Study:
Study was completed December 2021.

•Fireboat Manifolds:
Continued planning and design during the quarter.

•Potable Emergency Firefighting Water System Pipeline:
Construction completion expected July 2027.

•Terry Francois Blvd (TFB) Mission South Pipeline:
Construction completed May 2022.

•Vicente Potable EFWS Pipeline: Construction completion expected July 2024.



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.

Program: Emergency Firefighting Water System	**Project Status:** Multiple Phases	**Environmental Status:** Completed (Various)

Project Cost:

Approved		$45.25 M
Forecast		$45.25 M
Actual		$39.88 M

Project Schedule:

Approved	Apr-11	Dec-28
Forecast	Apr-11	Dec-28

Project Percent Complete: 95.6%

Approved; Actual Cost; Forecast

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

Progress and Status:

•Pump Station #2:
Construction completion expected December 2022.

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

Issues and Challenges:

None at this time.

Roof installation of Pump Station No. 2

8. On-Going Construction*

Construction Contract	Schedule			Budget		Variance (Approved - Forecast)		Actual % Complete
	NTP Date	Approved Construction Final Completion	Current Forecasted Construction Final Completion**	Approved Contract Cost	Current Forecasted Cost**	Schedule (Cal. Days)	Cost	
Local Water Conveyance/Distribution System								
19063 - WD-2811 17TH STREET/CLAYTON/ORD	05/26/20	09/24/22	10/27/22	$ 6,701,609	$ 7,346,745	(33)	($645,136)	61.8%
19063 - WD-2718 PROSPECT/CORTLAND/FAIR AVE	01/03/22	11/23/23	04/02/24	$ 5,902,021	$ 6,539,459	(131)	($637,438)	8.9%
19063 - WD-2616 BAKER STREET /SUTTER STREET	10/19/20	03/27/22	08/27/22	$ 3,928,028	$ 4,007,028	(153)	($79,000)	75.7%
19063 - WD-2739 CASTRO STREET 19TH/26TH STREET	08/17/20	08/16/22	10/23/22	$ 10,915,782	$ 11,287,636	(68)	($371,854)	89.6%
19063 - WD-2859 L-TARAVAL SEGMENT B	12/02/21	09/17/24	09/17/24	$ 14,468,000	$ 14,468,000	-	-	4.3%
19063 - WD-2775 19TH AVE/VICENTE/LINCOLN	10/19/20	01/09/23	01/09/23	$ 6,725,506	$ 6,769,887	-	($44,381)	29.8%
19063 - WD-2806 VICENTE 19TH TO 25TH AVE	07/26/21	04/07/24	02/11/24	$ 6,267,815	$ 6,267,815	56	-	18.2%

Note: * This table reflects Active Construction Contracts with an original contract amount greater than $1M.
** The Forecasted Cost includes all approved, pending, and potential change orders; and Final Completion includes all approved, pending, and potential change orders, and trends.

8. On-Going Construction*

Construction Contract	Schedule			Budget		Variance (Approved - Forecast)		Actual % Complete
	NTP Date	Approved Construction Final Completion	Current Forecasted Construction Final Completion**	Approved Contract Cost	Current Forecasted Cost**	Schedule (Cal. Days)	Cost	
Local Water Supply								
10015240 - WD-2809 SF Groundwater Supply Phase 2	08/07/17	08/26/19	12/31/22	$ 10,732,565	$ 10,780,143	(1,223)	($47,578)	98.5%
10015242 - WD-2852R Westside Recycled Irrigation Retrofits and Improvements	01/25/21	07/29/22	11/30/22	$ 2,517,779	$ 2,517,779	(124)	-	74.0%
10015242 - WD-2776 Westside Recycled Water Treatment Facility	10/16/17	07/29/22	12/03/22	$ 94,637,405	$ 94,637,405	(127)	-	95.0%
10015242 - WD-2797 SFWRW Pump Station and Reservoir	03/08/21	06/30/22	12/04/22	$ 17,375,898	$ 17,496,520	(157)	($120,622)	91.0%
Local Tanks/Reservoir Improvements								
10015223 - WD-2717 COLLEGE HILL/PROSPECT/SANTA MARIA	09/27/21	10/21/23	10/21/23	$ 12,180,497	$ 12,180,497	-	-	20.7%
Emergency Firefighting Water System								
10029709/10030778 - WD-2687R Pump Station # 2	12/12/17	11/16/22	11/15/22	$ 20,972,298	$ 22,122,298	1	($1,150,000)	94.8%
10029724/10029695 - WD-2861 Clarendon Supply	02/01/21	07/29/22	07/29/22	$ 2,706,081	$ 2,706,081	-	-	60.4%

Program Total for On-Going Construction	Approved Contract Cost	Current Forecasted Cost	Variance	
			Cost	Percent
	$ 216,031,283	**$ 219,127,292**	**($3,096,009)**	**(1.4%)**

Note: * This table reflects Active Construction Contracts with an original contract amount greater than $1M.
** The Forecasted Cost includes all approved, pending, and potential change orders; and Final Completion includes all approved, pending, and potential change orders, and trends.

9. PROJECTS IN CLOSEOUT

There are no active projects currently in closeout phase

10. COMPLETED PROJECTS

Project Title	Approved Project Completion	Actual Project Completion	Approved Project Budget	Project Expenditures To Date
Emergency Firefighting Water System				
EFWS PL - EFWS Pipelines				
10035860 - Fillmore Haight	06/30/21	06/30/21	$ 501,460	$ 544,687
10029719 - Gate Valve Motors - Pipeline	03/31/21	09/30/21	$ 637,491	$ 675,503
10029724 - Clarendon Supply (ESER 2010 Partial Funding)	03/31/21	12/30/21	$ 947,653	$ 1,094,301
EFWS PS - EFWS Pump Stations				
10029710 - Pump Station #1	03/31/21	12/30/21	$ 15,529,505	$ 14,795,916
TOTAL			$ 17,616,109	$ 17,110,407

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APPENDICES

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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 ad stabilize lake levels.

10015240 San Francisco Groundwater Supply
This project consists of two phases, which combined will provide an annual average of 4 mgd of groundwater to San Francisco's municipal water supply, and improvements at the existing San Francisco Zoo Well No. 5. Phase 1 is divided in two separate contracts, which are Contracts A & B. Contract A work for building four new groundwater well stations in the western part of San Francisco is currently in the final construction phase. Contract B work for installing buried piping to connect three of these well stations to the Sunset Reservoir was completed and accepted on December 21, 2015. Groundwater from the fourth well station was piped to the nearby Lake Merced Pump Station, where it was distributed to both the Sunset Reservoir and Sutro Reservoir. Phase 2 has Contract C work for installing buried piping and converting two existing irrigation well facilities in Golden Gate Park to groundwater supply wells is currently in the final construction phase, and would be implemented after completion of the CUW30201, San Francisco Westside Recycled Water Project. Improvements at the existing San Francisco Zoo Well No. 5 were completed and accepted on February 15, 2007.

10015242 San Francisco Westside Recycled Water
This project consists of a new recycled water treatment facility located at the SFPUC's existing Oceanside Plant, along with the associated distribution system components, to produce and deliver an annual average of approximately 1.6 mgd of recycled water to Golden Gate Park, Lincoln Park, and the Presidio. The treatment process includes membrane filtration, reverse osmosis, and ultraviolet light disinfection. A new pump station and reservoir will be constructed in Golden Gate Park to deliver water to Lincoln Park and the Presidio. Approximately 8 miles of new recycled water pipeline connect the treatment facility to the new reservoir in Golden Gate Park and extends to the Lincoln Park and Presidio points of connection. The project also includes the retrofitting of the existing irrigation systems to bring them into compliance with Title 22 regulations. The treatment facility includes additional capacity to serve potential future customers, such as the SF Zoo.

Local Tanks/Reservoir Improvements

10015223 College Hill Reservoir Outlet
The College Hill Reservoir is located in San Francisco's Bernal Heights residential district and is a critical reservoir responsible for delivering water to the eastern and northern areas of San Francisco including General Hospital, Upper Market Street, Civic Center, and City Hall. The College Hill Reservoir, constructed in 1870 and San Francisco's oldest water reservoir, was seismically retrofitted in 2001. SFPUC is currently undertaking a phased program to improve the seismic reliability of the water distribution system from College Hill Reservoir to SF General Hospital to withstand a major seismic event. This project addresses essential seismic improvements within the reservoir including installation of a new control valve vault; replacement of reservoir inlet and outlet piping; reservoir roof replacement; miscellaneous piping, security, site

access, electrical, instrumentation, and water quality improvements; and replacement of the first section of transmission pipelines for the College Hill system up to Cortland Avenue.

Pump Stations

10015231 Harding Park PS
The Harding Park irrigation pump station and recycled water storage tank was commissioned in 2012. The pump station draws recycled water from an underground reservoir and delivers the pressurized water to the Tournament Players Club (TPC) Harding Park golf course. In the summer of 2016, the pump station was taken off-line because electrical terminations in the pump station control panel had corroded. This resulted in an arc flash event, which damaged the main switch, making the pump station inoperable. Temporary repairs have been made, allowing for the facility to resume operation. The primary objective of the Harding Park Pump Station Project is to implement a permanent solution to the electrical system deficiencies and improve pump station reliability.

Buildings and Grounds

10037249 New CDD Headquarters
The City Distribution Division (CDD) oversees the retail water distribution system within the City and County of San Francisco and is responsible for the physical infrastructure of San Francisco's potable, auxiliary water supply and ground water systems. CDD's responsibilities include 24/7 emergency response to water main breaks and two-alarm or larger fires in addition to day-to-day operations and maintenance of over 1,250 miles of water mains, 12 reservoirs, 9 pump stations, 7 hydro-pneumatic stations, 6 tanks, the water meter program serving over 176,000 customers, and maintain CDD's physical plant, equipment and fleet and over 1,100 acres of grounds through the City.
The buildings and facilities at the existing CDD campus are functionally obsolete, in disrepair and are not in compliance with current building codes, and do not meet standards for safety, accessibility and environmental requirements. The campus requires full replacement. New buildings will provide greater reliability, safety, security, and higher productivity.

Emergency Firefighting Water System

EFWS PL Emergency Firefighting Water System (EFWS) Pipelines
The Emergency Firefighting Water System (EFWS) includes several methods of delivering water to suppress fires during emergency situations. EFWS is vital for protecting against the loss of life, homes, and businesses from fire following an earthquake and non-earthquake multiple-alarm fires.
One EFWS component is a high-pressure fire-suppression water system, formerly known as Auxiliary Water Supply System (AWSS), which was originally built in the decade following the catastrophic 1906 San Francisco earthquake. It consists of a resilient 135-mile high-pressure pipeline network, a high elevation reservoir, two large capacity tanks, two high-pressure seawater pumping stations, and manifolds that allow fireboats to inject Bay water into the City's pipelines.
The Potable Emergency Firefighting Water System (PEFWS) will bring a seismically resilient high□pressure firefighting water system to the western neighborhoods of San Francisco, while also creating a seismically resilient pipeline that supplies drinking water to the west side during non□fire situations. The proposed overall project will install over 14 miles of seismically resilient pipelines in multiple phases as funding is provided. The system will be capable of providing water to the SFFD firefighters at the high pressure needed to combat large fires after a seismic event. The proposed pipelines will be fed by pump stations delivering 30,000 gallons per minute with services to the Richmond and Sunset Districts.
Fireboat manifolds allow fire boats to pump seawater from the bay into the EFWS. Existing fireboat manifolds at Fort Mason and Pier 33 ½ are located on piers of unknown condition and are likely susceptible to seismically induced failures. Rehabilitation of manifolds and connector pipelines is required at Fort Mason and Pier 33 ½ to provide adequate access for

firefighters.

EFWS PS Emergency Firefighting Water System (EFWS) Pump Stations

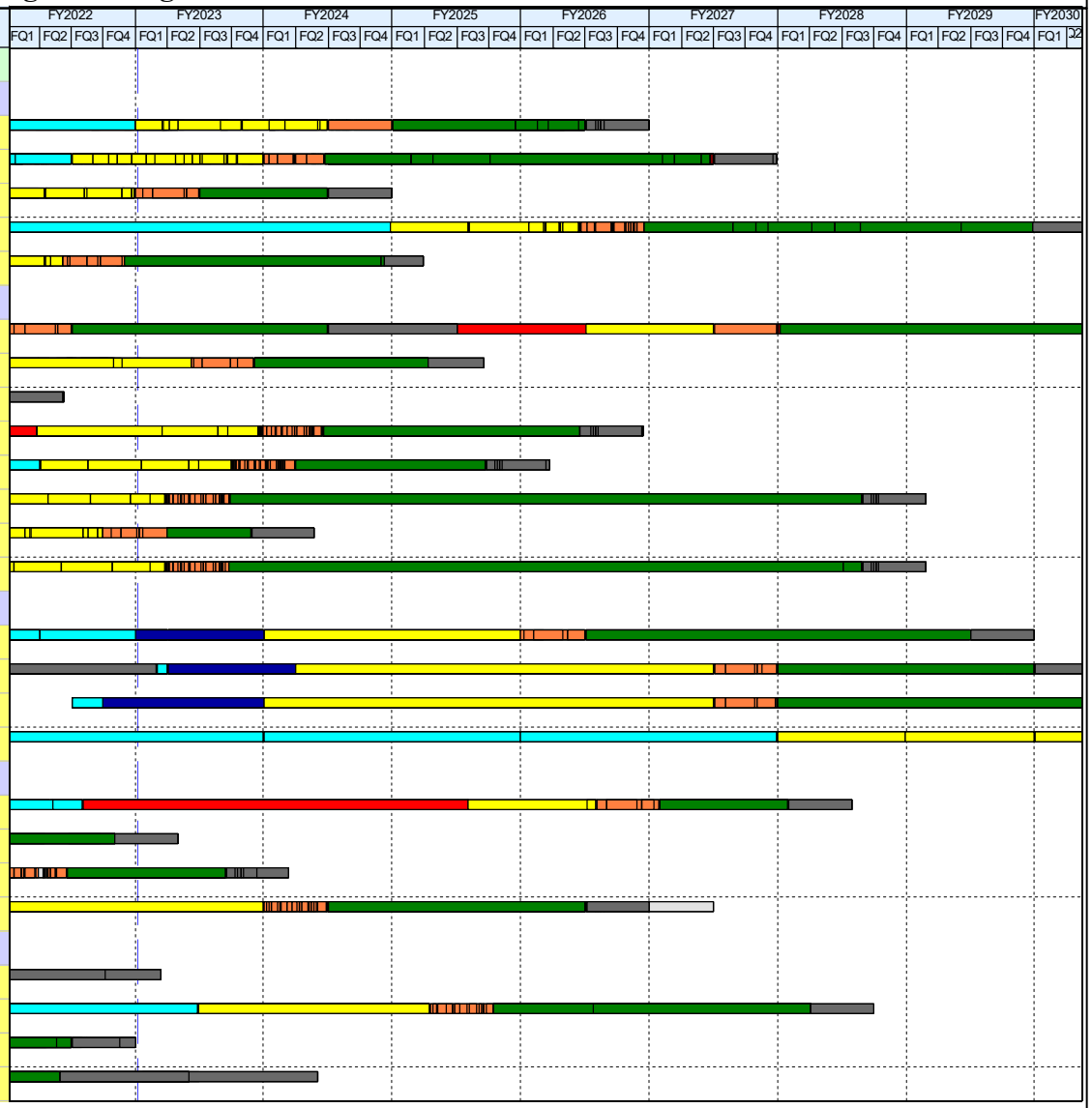
The Emergency Firefighting Water System (EFWS) includes several methods of delivering water to suppress fires during emergency situations. EFWS is vital for protecting against the loss of life, homes, and businesses from fire following an earthquake and non-earthquake multiple-alarm fires.

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 can supply drinking water to the west side during non□fire situations. The proposed overall project will install over 14 miles of seismically resilient pipelines in multiple phases as funding is provided. The system will be capable of providing water to the SFFD firefighters at the high pressure needed to combat large fires after a seismic event. The proposed pipelines will be fed by pump stations delivering 30,000 gallons per minute with services to the Richmond and Sunset Districts.

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

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



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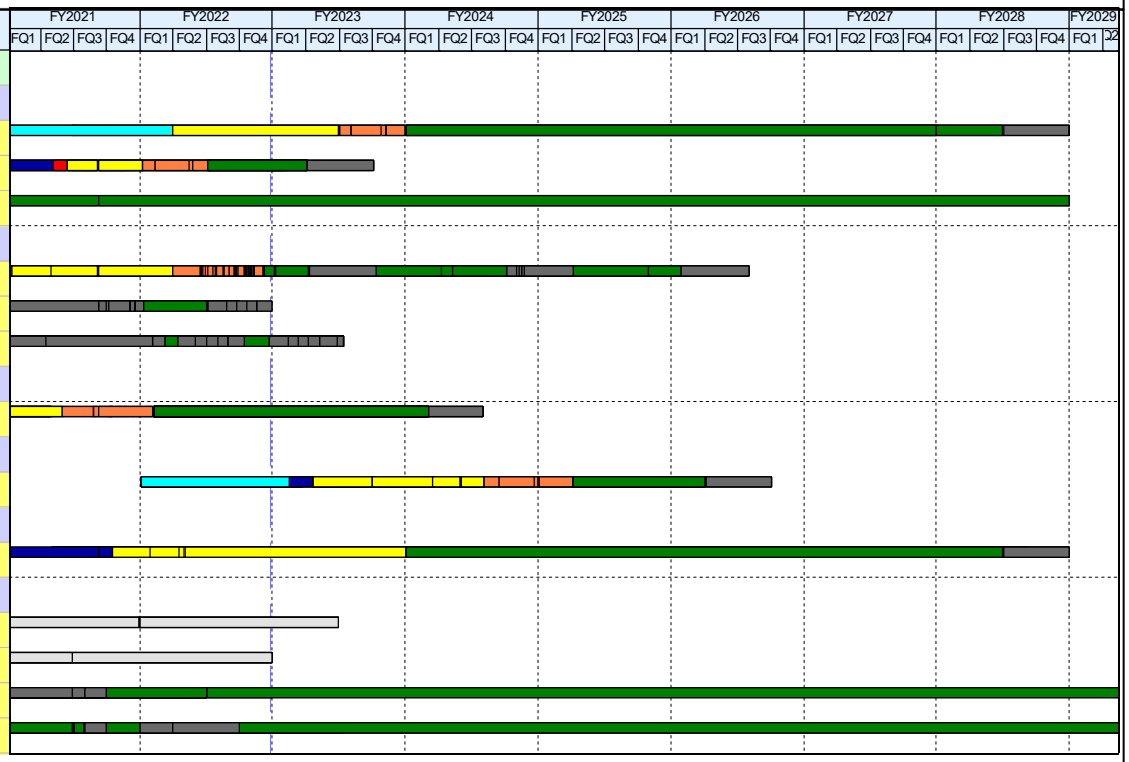
Appendix B. Water Enterprise Approved Project-Level Schedules
Local Programs

Project Name	Start	Finish
Water Local Improvement Projects	03-Mar-03	30-Dec-28
Local Water Conveyance / Distribution System	01-Jul-10	30-Jun-28
10033816 Potable Emergency Firefighting Water System	12-Aug-19	30-Jun-28
10033818 Town of Sunol Pipeline	17-Jun-19	03-Apr-23
19063 Local Water Conveyance/Distribution System	01-Jul-10	30-Jun-28
Local Water Supply	03-Mar-03	30-Jan-26
10015239 Lake Merced Water Level Restoration	16-Jun-03	30-Jan-26
10015240 San Francisco Groundwater Supply	16-Jun-03	30-Jun-22
10015242 San Francisco Westside Recycled Water	03-Mar-03	12-Jan-23
Local Tanks/Reservoir Improvements	24-Jan-13	29-Jan-24
10015223 College Hill Reservoir Outlet	24-Jan-13	29-Jan-24
Pump Stations	06-Jul-21	03-Apr-26
10015231 Harding Park PS	06-Jul-21	03-Apr-26
Buildings and Grounds	01-Feb-20	28-Jun-28
10037249 New CDD Headquarters	01-Feb-20	28-Jun-28
Emergency Firefighting Water System (EFWS)	01-Apr-11	30-Dec-28
10015480 2014 AUXILIARY WATER SUPPLY SYSTEM*	06-Nov-14	30-Dec-22
10015482 AUXILIARY WATER SUPPLY SYSTEM*	01-Apr-11	30-Jun-22
EFWSPS EFWS Pump Stations	01-Apr-11	30-Dec-28
EFWSPL EFWS Pipelines	01-Apr-11	29-Dec-28



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APPENDIX C. LIST OF ACRONYMS

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

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