San Francisco
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DATE: March 14, 2024

TO: Commissioner Tim Paulson, President
Commissioner Anthony Rivera, Vice President
Commissioner Newsha K. Ajami
Commissioner Sophie Maxwell
Commissioner Kate H. Stacy

FROM: Dennis J. Herrera, General Manager DJH

RE: Wastewater Enterprise Capital Improvement Programs
2nd Quarter/ Fiscal Year 2023-2024

Enclosed please find the Wastewater Enterprise Capital Improvement Programs (CIP) Quarterly Report for the 2nd Quarter of Fiscal Year (FY) 2023-2024. The primary intent of this report is to provide the Commission, stakeholders, and the public with a status summary of the Program for the period of October 1, 2023 to December 31, 2023.

Attachment

London N. Breed
Mayor

Tim Paulson
President

Anthony Rivera
Vice President

Newsha K. Ajami
Commissioner

Sophie Maxwell
Commissioner

Kate H. Stacy
Commissioner

Dennis J. Herrera
General Manager

OUR MISSION: To provide our customers with high-quality, efficient and reliable water, power and sewer services in a manner that values environmental and community interests and sustains the resources entrusted to our care.

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

QUARTERLY REPORT

Wastewater Enterprise Programs

October 2023 – December 2023

Published: March 14, 2024

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EXECUTIVE SUMMARY

This Quarterly Report provides a summary update on Wastewater Capital Programs, including (1) the Sewer System Improvement Program (SSIP), comprised of SSIP Phase 1 and Other SSIP, (2) the Wastewater Enterprise (WWE) Facilities and Infrastructure Program, and (3) the WWE Renewal and Replacement Program. This Report provides a status summary of the WWE Capital Programs for the period of October 1, 2023 to December 31, 2023 to the Commission, the programs' stakeholders and the public.

For this Quarterly Report, the projects' schedule and cost forecasts were updated to match the proposed schedules and costs included in FY25-FY34 10-year Capital Improvement Plan that was presented to and approved by the San Francisco Public Utilities Commission on February 13, 2024. Changes to the approved program and project scopes, schedules, and budgets that were proposed as part of this FY25-FY34 10-year CIP will become effective at the start of FY25, on July 1, 2024.

Program Current Status:

During this quarter, steady progress continues with the Wastewater Capital Programs. For this reporting period, the overall SSIP is 49.7% complete with no changes to the number of projects, and SSIP Phase 1 and Other SSIP at 66.1% and 8.1% complete, respectively.

For this reporting period, the SSIP Phase 1 remains at seventy (70) projects in various phases as follows: one (1) project in multi-phase, six (6) projects in planning or design, nine (9) projects in construction, eight (8) projects in closeout, and forty-six (46) projects completed. See Figure A below.

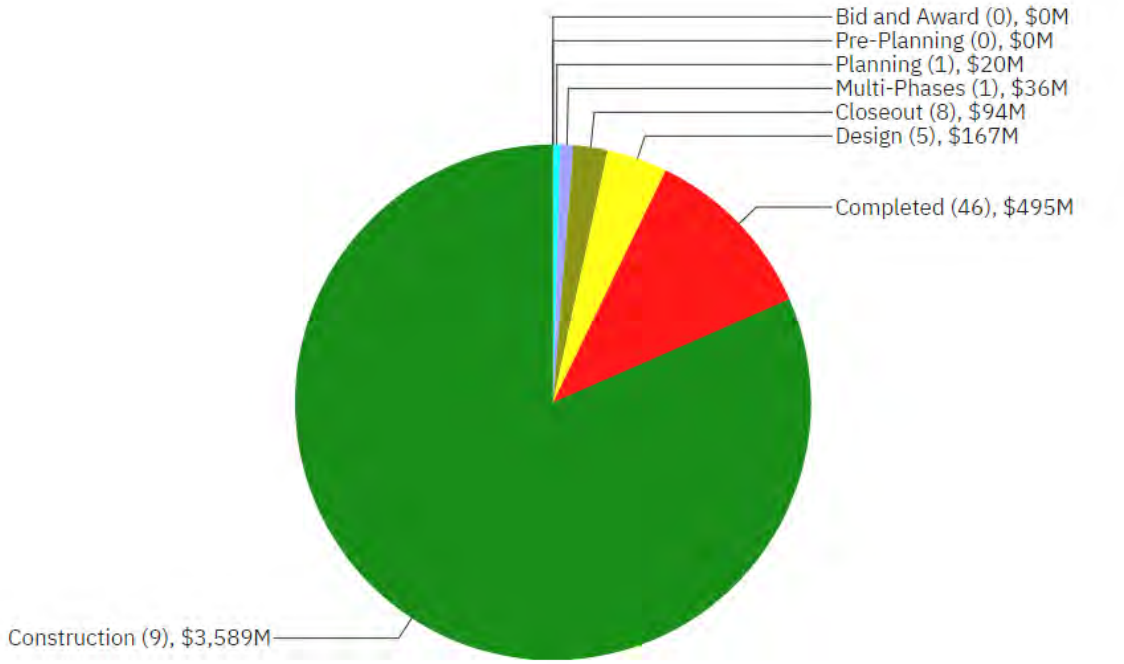

Figure A: SSIP Phase 1 Projects by Phase and Approved Budget

For this reporting period, the Other SSIP remains at forty-three (43) projects in various phases as follows: ten (10) projects in pre-planning, twenty-five (25) projects in planning or design, three (3) projects in construction, four (4) projects in multi-phase, and one (1) project in closeout. See Figure B below.

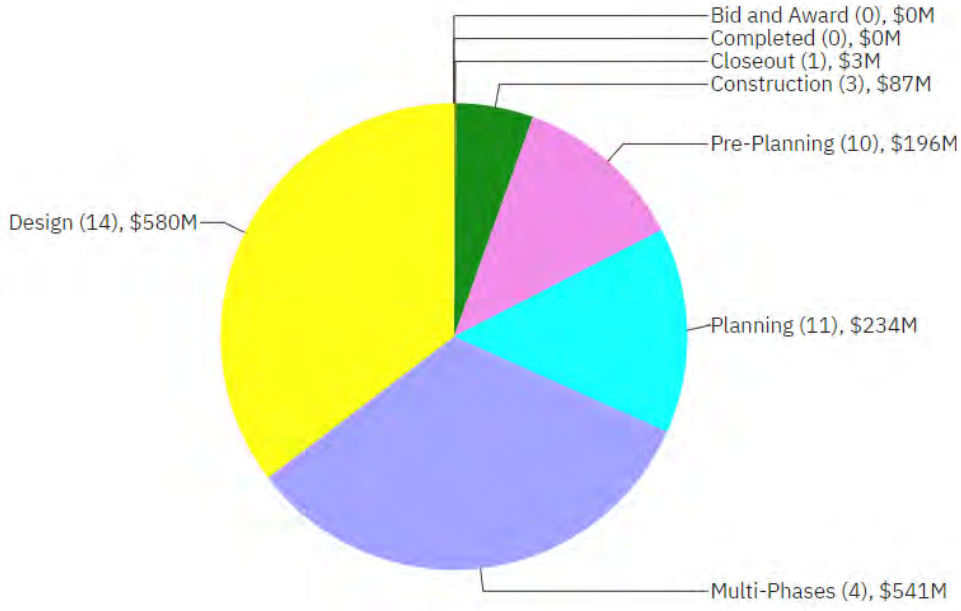

Figure B: Other SSIP Projects by Phase and Approved Budgets

For this reporting period, the WWE Facilities and Infrastructure Program (F&I) remains at seven (7) projects in various phases as follows: one (1) project in pre-planning, three (3) projects in planning or design, two (2) projects in construction, and one (1) project in closeout. See Figure C below.

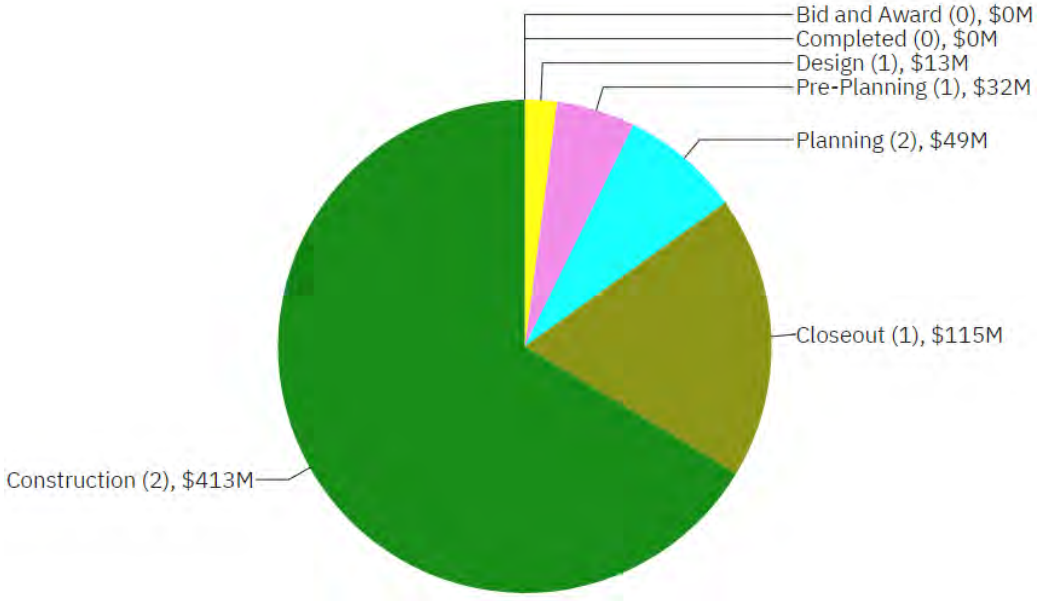

Figure C: Facilities and Infrastructure Projects by Phase and Approved Budgets

The following Tables provide a summary of the cost and schedule status for the SSIP Phase 1, Other SSIP, and Facilities and Infrastructure (F&I) Program.

Table B: Program Level Cost Summary

Programs	Expenditures To Date ($ Million) (A)	Current Approved Budget ($ Million) (B)	Forecast Costs this Quarter ($ Million) (C)	Cost Variance ($ Million) (D = B - C)	Variance Over Reporting Period* ($ Million) (E)
SSIP Phase 1	$2,822.6	$4,401.1	$4,704.1	($303.0)	($303.0)
Other SSIP	$96.2	$1,786.5	$2,031.3	($244.8)	($244.8)
F&I	$189.3	$630.5	$632.0	($1.5)	($1.5)
Programs Total	**$3,108.1**	**$6,818.1**	**$7,367.4**	**($549.3)**	**($549.3)**

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

Table C: Program Level Schedule Summary

Programs	2016 Approved Project Start	Current Approved Project Start	Actual Start	2016 Approved Completion	Current Approved Completion	Current Forecast Completion	Schedule Variance (Months)
SSIP Phase 1	07/01/11	07/01/11	07/01/11 A*	10/30/26	04/02/36	06/30/34	21.1
Other SSIP	N/A	03/03/18	03/03/18 A*	N/A	06/30/37	06/30/37	-
F&I	01/01/11	01/01/11	01/01/11 A*	12/29/23	01/23/32	04/02/40	(98.4)
Overall Programs	**01/01/11**	**01/01/11**	**01/01/11 A***	**10/30/26**	**06/30/37**	**04/02/40**	(33.1)

** "A" represents the actual date.*
N/A = not applicable since these projects were not part of the 2016 Approved Baseline.

Program Key Updates:

Key updates for the Sewer System Improvement Program include:

1. **SEP Biosolids Digester Facilities** – During this quarter, all major bid packages have been received, which is reflected in the project forecasting an overall budget increase of $300M and no change to the project schedule. The increases are due to higher-than-expected bids that reflect the reduced competition during bidding and ongoing supply chain challenges. In addition, procurement of a design-builder (using a Public-Private-Partnership delivery approach) for the Biogas Utilization work was issued. The overall project completion is at 50.4% compared to 49.5% last quarter.
2. **SEP New Headworks (Grit) Replacement** – This project is forecasting a budget increase of $28M and a schedule delay of 16-months, due to unforeseen site conditions encountered during

construction, shutdown constraints from the unprecedented wet weather in 2022-23, and impacts due to delays in obtaining electricity for the project. The project team continues coordination with Power Enterprises' electrical upgrade projects (SFPUC Contracts WW-662R/ DB-130) to obtain temporary and permanent power for this project. The overall project completion is at 81.5%, compared to 80.3% last quarter.

3. **SEP Facility-wide Distributed Control System (DCS) Upgrade** – The project is forecasting a budget increase of $10M with no change to the project schedule. The increase reflects the latest cost estimate from the Progressive Design Builder for work at Oceanside Water Pollution Treatment Plant, unforeseen condition that led to additional work, and additional coordination efforts with the SEP BioSolids Digester Facilities project. The overall project completion is at 53.5%, compared to 53.3% last quarter.
4. **Westside Pump Station Reliability Improvements** – This project is forecasting a budget increase of $4M and a schedule delay of 18-months due to delays in obtaining PG&E electric service and associated project modifications. The overall project completion is at 88.9%, compared to 85.5% last quarter.
5. **OSP Condition Improvement Projects – Part 2** – Achieved Final Completion for Contract G during this quarter. The overall project completion is at 18.1%, compared to 13.7% last quarter.
6. **North Shore Pump Station Wet Weather Improvements** – This project is forecasting a cost savings of over $3.5M and a schedule delay of 6 months. The increase in duration is needed to complete startup and testing of dry weather pumps and other construction activities, and the forecast cost savings reflect actual costs based on current construction progress. The overall project completion is at 80.2%, compared to 79.1% last quarter.
7. **Large Diameter Sewer Projects and Channel FM Intertie** – This project has no budget nor schedule variance this quarter. This project includes ten subprojects, which are at the following phases: five in construction, three in design, one in closeout, and one completed. During this quarter, project teams began preparation of construction bid packages for two projects, East SOMA, and Hayes Valley Sewer Improvements. Subproject I received an environmental approval during this quarter. The overall project completion is at 42.2%, compared to 37.3% last quarter.
8. **Geary BRT Sewer Improvements Phase 2** - the Environmental was approved during this quarter. The overall project completion is at 79.1%, compared to 78.2% last quarter.
9. **Seacliff No. 2 PS & FM Upgrade** - the Environmental was approved during this quarter. The overall project completion is at 14.5%, compared to 12.8% last quarter.
10. **CSD Structure Rehab & Upgrades - Part 1** – This project has no budget nor schedule variance this quarter. The project team completed the 95% Design for rehabilitation of three combined sewer discharges (CSDs), Laguna Street, Howard Street, and Mission Bay CSDs. The overall project completion is at 3.8%, compared to 3.5% last quarter.
11. **Operational Decision System Phase 2** – Achieved Final Completion during this quarter. The overall project completion is at 93.4%, compared to 60.1% last quarter.
12. **Lower Alemany Area Stormwater Improvements** – This project has no budget nor schedule variance this quarter, and the project team is proceeding towards 95% design. The overall project completion is at 9.4%, compared to 9.2% last quarter.
13. **Folsom Area Stormwater Improvement** – This project is implemented through four construction contracts, WW-719A, WW-719B, WW-719C, and WW-719D. For contract WW-

719A, Initial Upstream Pipe, construction is progressing. For contract WW-719B, Alameda Tunnel Construction Contract, the project team is working towards 95% design. For contract WW-719C, Harrison and Treat Sewer Box, the project team completed the 65% design. For contract WW-719D, Large Upstream Pipe, the project team is proceeding towards 65% design. Based on the latest engineer's estimates for contracts WW-719B and WW-719C, and the associated unforeseen technical challenges, the project is forecasting a budget increase of $110M and a schedule delay of 8-months. The overall project completion is at 59.7%, compared to 56.9% last quarter.

For the WWE Facilities and Infrastructure Program, there are five (5) on-going projects, with two (2) projects in construction, one (1) project in design, and two (2) projects in planning. Key updates for this program include:

1. **New Treasure Island Wastewater Treatment Plant Project** – This project has no budget nor schedule variance this quarter. The 95% design package was issued, and the Art Commission approved civic design review phase II. For construction, the design-build contractor continues civil work related to the influent pumping structure, biological nutrient removal facility, and the Headworks facility. Under-slab electrical and plumbing work was also initiated related to the membrane bioreactor/ultraviolet disinfection system. The overall project completion is at 14.6%, compared to 10.2% last quarter.
2. **Ocean Beach Climate Change Adaptation Project** – This project is forecasting a budget increase of $19M and a schedule delay of 18-months due to ongoing interdepartmental issues, complicated project approval processes, and significant delays to the design associated with a lack of agreement with the San Francisco Zoo. This project is being executed through five subprojects: (A) Army Corps of Engineers sand placement, which is complete; (B) Short-Term Improvements which is ongoing; and Long-Term Improvements, which includes (C) Intersection Reconfiguration, (D) Seawall and Coastal Access Amenities, and (E) Vegetation Planting. During this quarter, the CEQA Environmental Impact Report was finalized, legislation to close a portion of the Great Highway was introduced to the Board of Supervisors, and work continues on the Coastal Development Permit. The overall project completion is at 17.6%, compared to 17.3% last quarter.
3. **Southeast Bay Outfall Islais Creek Crossing Replacement** – This project has no budget variance and is forecasting a schedule delay of 12-months due to the time needed for procurement of a specialty consultant that has diving capability to perform the condition assessment work. The overall project completion is at 91.3%, compared to 90.0% last quarter.
4. I**nterim Sidestream Nutrient Removal** – This project is forecasting a budget increase of $3M to reflect the latest estimate provided by the design team during the progress of work, with no change to the schedule. The project team is proceeding on the preparation of the Conceptual Engineering Reports (CER). The overall project completion is at 0.6%, compared to 0.2% last quarter.

In addition, the following are key updates on the R&R program:

1. **Collection Systems, R&R Program** – For the small diameter sewer projects, approximately two-miles of sewer main replacement work has been awarded in this fiscal year.
2. **Treatment, R&R Program** – Fifteen equipment purchases, totaling over $2.3M, were completed.

A number of project schedules and budgets that comprise a large program are expected to deviate from baseline projections in association with a variety of factors. This is typical of large capital programs. All of the adjustments cited above have been evaluated and approved through the SFPUC's capital program change management process.

Quarterly Report

Wastewater Enterprise Programs

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I. Sewer System Improvement Program

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1. PROGRAM DESCRIPTION

The responsibilities of the San Francisco Public Utilities Commission (SFPUC)'s Wastewater Enterprise (WWE) are to manage, operate, and maintain San Francisco's wastewater collection and treatment system. San Francisco's sewer system collects, conveys, and treats both dry and wet weather (urban stormwater) flows.

The Sewer System Improvement Program (SSIP) is a wastewater capital improvement program which includes multiple projects to improve the existing system. The SSIP is the culmination of wastewater system planning efforts, public meetings, and SFPUC Commission workshops, to develop proposed improvements to address the following challenges:

1. Aging infrastructure and the poor condition of existing facilities.
2. Seismic deficiencies and lack of structural integrity.
3. Limited operating flexibility and lack of redundancy.
4. Compliance with operational permits at all times.
5. Managing stormwater in San Francisco's eight urban watersheds.
6. Optimizing system performance and efficiency.
7. Protecting public health, the environment, and conservation goals to safeguard our natural and human environments, and
8. Compliance with the Commission's Environmental Justice and Community Benefits Policy.

The purpose of the SSIP is to upgrade the existing wastewater system to meet the challenges of today and the future. The implementation of the SSIP projects were originally phased over twenty (20) years to maintain ratepayer affordability and minimize impacts to our communities throughout the City.

In February 2011, the SFPUC Commission directed staff to proceed with the procurement of a program management consultant to assist City staff with the implementation of the SSIP. The AECOM-Parsons Joint Venture was selected, and the Program Management Consultant (PMC) team began work on September 6, 2011. The first major task for the PMC was to develop a recommended Program, collectively known as Program Validation. This effort was completed by the PMC and City staff recommending the scope, schedule, and budget of the SSIP treatment and collection system projects, as well as revisions to the SSIP Goals and Levels of Service (LOS). On August 28, 2012, after a series of three public SSIP workshops, the SFPUC Commission officially endorsed the proposed projects in the $6.933 billion 20-year SSIP and the associated Goals and Level of Service and authorized staff to proceed with planning and development of projects within Phase 1 of the SSIP, representing $2.7 billion.

Subsequently, in October 2015, the PMC was assigned to refine the program scope, budget, and schedule based on newly available information, various constraints, and challenges. The effort included project re-prioritization, scope refinement, budget re-alignment, and schedule re-alignment. The refinement was completed in January 2016 and presented to the SFPUC Commission on March 22, 2016. The refined program scope and budget for $6.976 billion, along with the Goals and LOS for all three phases of the SSIP, was endorsed by the Commission along with the baseline for scope, schedule, and budget for Phase 1 projects totaling $2.910 billion. The revised program is referred to as the "2016 SSIP Baseline".

The 2016 Endorsed Goals include:

- Provide a compliant, reliable, resilient, and flexible system that can respond to catastrophic events;
- Integrate green and grey infrastructure to manage stormwater and minimize flooding;
- Provide benefits to impacted communities;
- Modify the system to adapt to climate change;

- Achieve economic and environmental sustainability; and
- Maintain ratepayer affordability.

Wastewater System Overview:

The San Francisco wastewater collection and treatment system has been developed over the past two centuries. San Francisco's sewer system dates back to the 1800's when the first sewers were constructed which, at the time, discharged directly into the San Francisco Bay and the Pacific Ocean. Since then, WWE's Collection System is now a network of sewers, tunnels and large structures (called transport/storage structures) that collect, store, and provide primary-level treatment for both sanitary flows and stormwater runoff (or combined sewage), before conveying the combined sewage flows to the wastewater treatment facilities. The City's major treatment facilities were constructed over several years with previously completed capital improvement programs. The treatment facilities that continues to be in operations today were originally built as follows: North Point Facility, 1951; Southeast Plant, 1952; and Oceanside Plant, 1993. The Southeast Plant was enlarged and upgraded to secondary treatment in 1982, and again expanded to treat the current peak wet-weather flows in 1996.

Whenever possible, this wastewater system is designed to reduce operation and maintenance costs by taking advantage of the City's natural topography and maximize the benefits of gravity flow for the collection, transport, treatment, and discharge of wastewater and stormwater. Ninety-two percent of San Francisco is served by this combined sewer system that consists of approximately 24,800 manholes, 25,000 catch basins, 27 pump stations, and 1,000 miles of sewers ranging from 8-inch diameter pipes to 10-foot diameter tunnels to transport/storage structures, which are underground concrete structures up to 45 feet deep by 25 feet wide.

Flows are conveyed from the collection system through the transport/storage boxes, to two centralized all-weather treatment plants, located in the southeast and southwest sections of the City respectively, the Southeast Water Pollution Control Plant (SEP) and the Oceanside Water Pollution Control Plant (OSP). During wet weather, additional flows are conveyed to our wet-weather facility, located in the northeast section of the City, the North Point Wet-Weather Facility (NPF). During each dry weather day, more than 80 million gallons of wastewater is collected and transported to one of three treatment plants (Southeast, Oceanside, and North Point), where harmful pollutants like human waste, oil and other pesticides are removed before reaching the San Francisco Bay and Pacific Ocean. When it rains, our wastewater system collects and can treat up to 575 million gallons a day. On an annual basis, the system treats approximately 40 billion gallons of combined sewage.

Program Evolution:

Due to the size of the SSIP, a phased approach was initially developed to simplify the implementation of projects. This was done to manage rate impacts, consider construction sequencing impacts and maintain existing operations and permit compliance. Each of the projects in the SSIP contributes to the wastewater system by meeting the Commission-endorsed Goals and LOS. The Program was originally baselined via the 2016 SSIP Baseline, which was endorsed by the SFPUC Commission to be implemented in three overlapping phases, Phase 1, 2 and 3. Subsequently, the SSIP Phase 1 Baseline Budget and Schedule were revised in 2018 and approved by the San Francisco Public Utilities Commission on April 24, 2018. Phase 1 projects focused on ensuring regulatory compliance, enhancing process reliability and redundancy, improving plant odor control, and replacing the antiquated biosolids and headworks facilities with state-of-the-art technology. As such, Phase 1 primarily focused on treatment plant improvements.

Since the Commission approval of the 2018 SSIP Baseline, considerable thought was put into how the program has evolved since its inception in 2010, and how it should move forward. A capital program spanning several decades, like the SSIP, must continually adapt to ever-evolving priorities and

changing market conditions to be sustainable. In previous SSIP baseline efforts, long-term forecasting was used to plan the three overlapping phases of investments to deliver the program while achieving financial affordability goals. However, lessons learned have taught us that the confidence and accuracy of these forecasts diminish over a long duration. Thus, on February 8, 2022, the Commission approved the 2022 SSIP Baseline, where a selection of high priority projects identified initially in Phases 2 and 3 were initiated. The SFPUC is transitioning away from the original intent of three SSIP phases to implementing capital improvement projects as part of a rolling Ten-Year Capital Plan. New projects will be initiated based on priority and timeline through the SFPUC's biennial budget process.

SSIP Revised Baseline:
As reflected in Table 1.1, the SSIP Phase 1 Baseline Budget and Schedule were revised in 2018, 2020, 2022, and 2023, and these revisions were approved by the San Francisco Public Utilities Commission (the Commission) on April 24, 2018, December 2020, February 2022, and February 2023 respectively. The 2023 Approved Budget for SSIP Phase 1 is $4,401.1 million, which is about $1.6 million lower than the 2022 Baseline Budget. The 2023 Approved Program Completion is April 2036, which is about 45 months later than the 2022 Baseline Program Completion.

As described in the Program Evolution above, other SSIP projects beyond Phase 1 (Other SSIP Projects) were initiated based on the rolling Ten-Year Capital Plan efforts. Table 1.2 reflects the Other SSIP Projects that were originally described in the 2018 Baseline approved by the Commission on December 11, 2018, before these Projects were approved for revision by the Commission in December 2020, February 2022, and February 2023. The 2023 Approved Budget for Other SSIP Projects is $1,786.5 million, which is about $215.6 million higher than the 2022 Baseline Budget. The 2023 Approved Projects' Completion is June 2037, which is about 48 months later than the 2022 Baseline Projects Completion. This Quarterly report also includes schedule and budget forecasts of the FY25-FY34 10-year Capital Improvement Plan that was presented to and approved by the San Francisco Public Utilities Commission on February 13, 2024. Changes to the approved program and project scopes, schedules, and budgets that were proposed as part of this FY25-FY34 10-year CIP will become effective at the start of FY25, on July 1, 2024.

Refer to Appendix 1 for scope description of all projects in SSIP Phase 1 Program and Other SSIP Projects.

Table 1.1 SSIP Phase I Program Revisions

Program Revision	Commission Approval	Budget ($Million)	Schedule*
2016 (Baseline)	March 22, 2016	$2,910.4	10/30/26
2018 (Revised)	April 24, 2018	$2,978.7	05/01/25
2020 (Revised)	December 22, 2020	$3,655.3	08/31/27
2022 (Revised)	February 8, 2022	$4,402.7	06/30/32
2023 (Latest Approved)	February 14, 2023	$4,401.1	04/02/36

* Final Program Completion Date

Table 1.2 Other SSIP Projects

Program Revision	Commission Approval	Budget ($Million)	Schedule*
2018 (Baseline)	December 11, 2018	$430.5	06/30/28
2020 (Revised)	December 22, 2020	$1,197.3	12/26/29
2022 (Revised)	February 8, 2022	$1,570.9	06/30/33
2023 (Latest Approved)	February 14, 2023	$1,786.5	06/30/37

* Final Program Completion Date

2. PROGRAM STATUS

Figure 2.1 depicts the total Current Approved Budget for the SSIP Phase 1 projects in each phase of the program as of December 31, 2023. The number of projects in each phase is shown in parentheses.

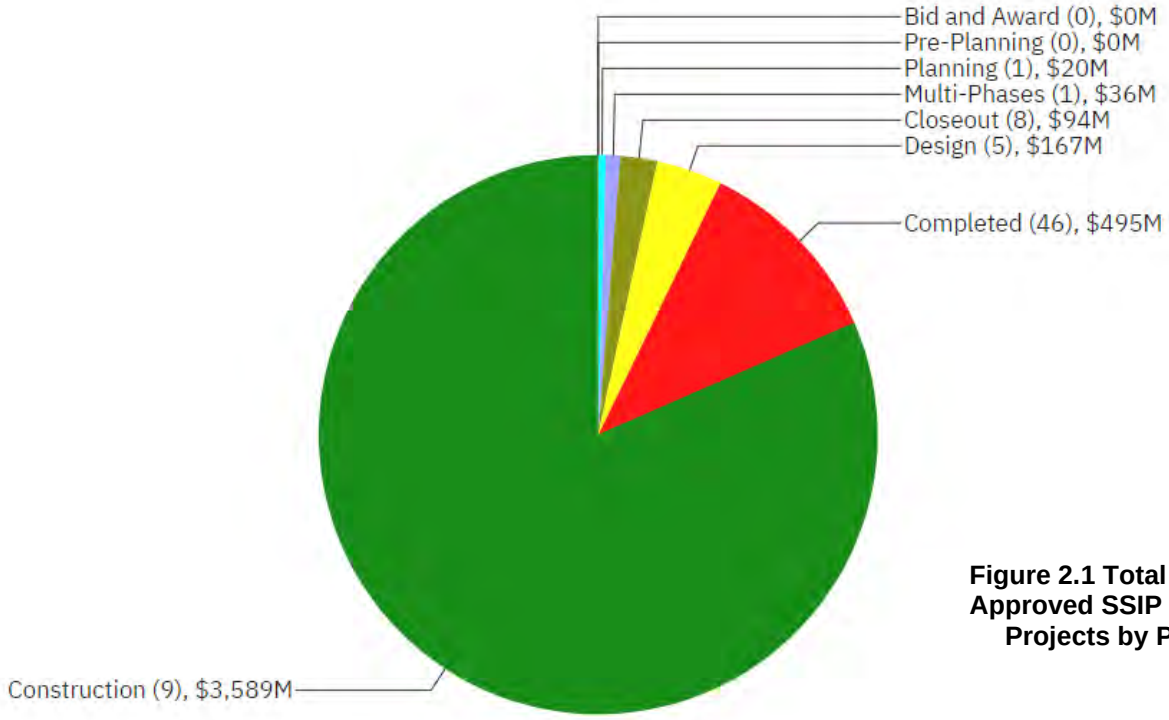

Figure 2.1 Total Current Approved SSIP Phase 1 Projects by Phase

Figure 2.2 depicts the number of SSIP Phase 1 projects in the following stages of the program as of December 31, 2023: Pre-construction, Construction, Multi-phase, and Post-construction (Completed or Closeout).

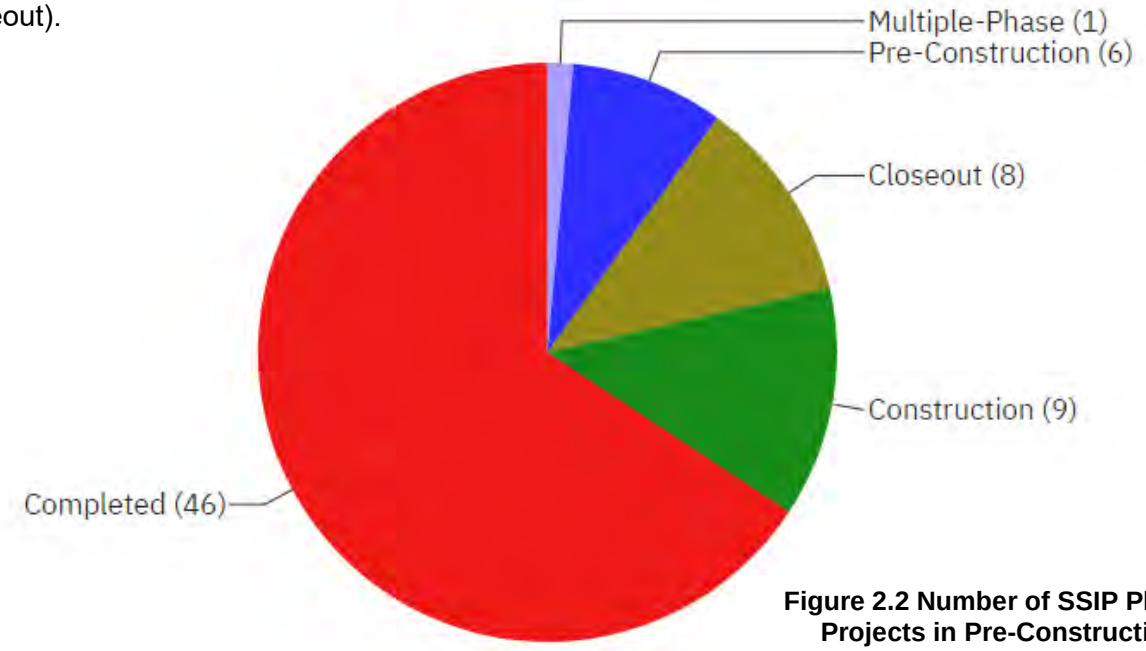

Figure 2.2 Number of SSIP Phase 1 Projects in Pre-Construction, Construction, and Post-Construction

Figure 2.3 depicts the environmental review and permitting status of the SSIP Phase 1 projects as of December 31, 2023.

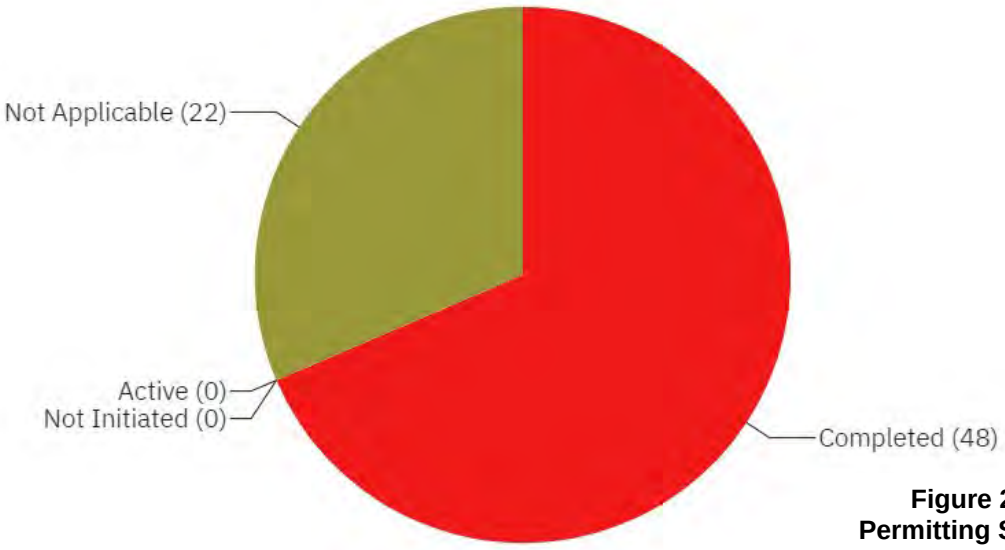

Figure 2.3 Environmental and Permitting Status of the SSIP Phase 1 Projects

Figure 2.4 depicts the total Current Approved Budget for the Other SSIP projects remaining in each phase of the program as of December 31, 2023. The number of projects currently active in each phase is shown in parentheses.

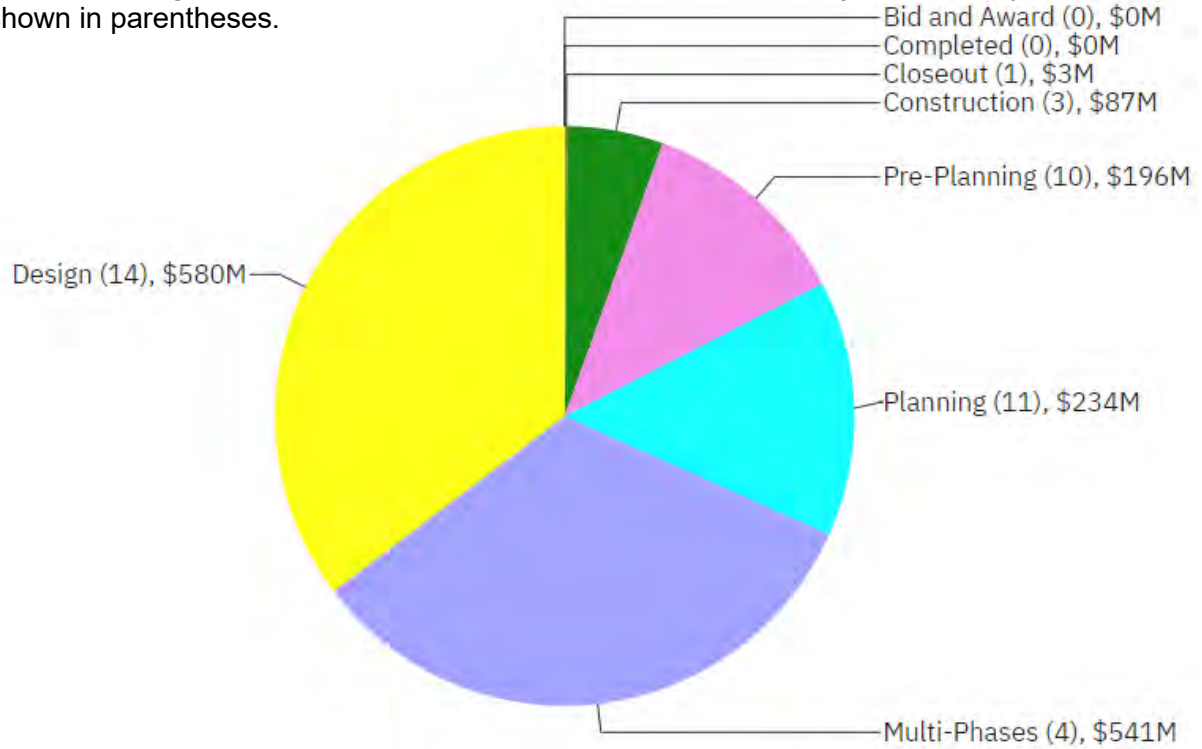

Figure 2.4 Total Current Approved Other SSIP Projects by Phase

Figure 2.5 depicts the number of Other SSIP projects in the following stages of the program as of December 31, 2023: Pre-construction, Construction, and Post-construction (Closeout or Completed).

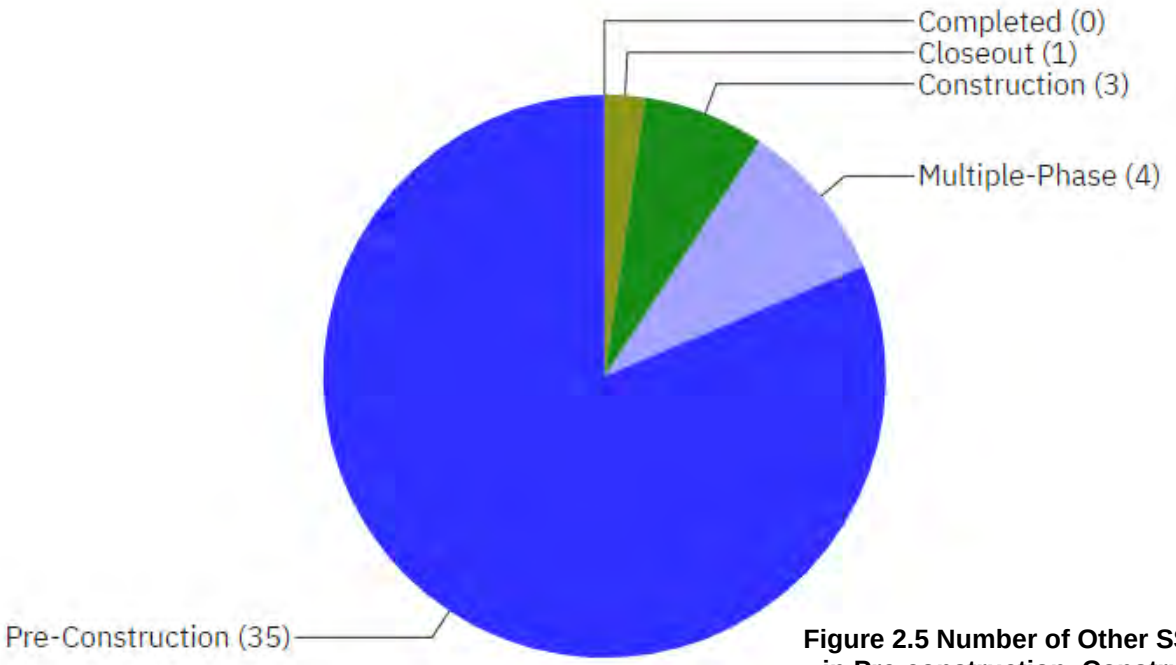

Figure 2.5 Number of Other SSIP Projects in Pre-construction, Construction, and Post-construction

Figure 2.6 depicts the environmental review and permitting status of the Other SSIP projects as of December 31, 2023.

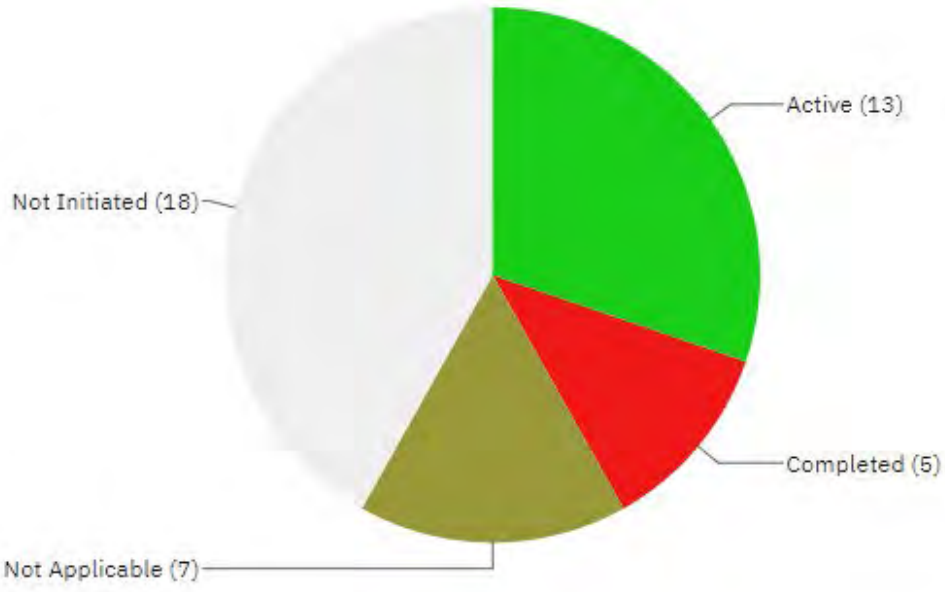

Figure 2.6 Environmental and Permitting Status of the Other SSIP Projects

KEY ACCOMPLISHMENTS

Programmatic

For this reporting period, the overall SSIP is 49.7% complete with no changes to the number of projects, and SSIP Phase 1 and Other SSIP at 66.1% and 8.1% complete, respectively.

In the News

News coverage in October and November on system upgrades on the west side and the Ocean Beach Climate Change Adaptation Project.

Highlights of Conducted Outreach

Monthly District 10 Sewer email newsletter to approximately 2,200 recipients providing project and agency updates and resources

October – Presented to Geary Blvd Citizens Advisory Committee (with SFMTA for the Geary Phase 2 Upgrades)

October – Held tour of the Southeast Treatment Plant construction for the CalEPA Secretary, SFPUC Commissioners Ajami and Stacy, and members of the San Francisco Civil Grand Jury

October—Distributed Bi-Annual Southeast Treatment Plant Construction Newsletters via mail

November—Announced the installation of the new Headworks Facility Project temporary art mural on Evans Avenue by Afatasi the Artist

November – Shared Seacliff Pump Stations No. 1 and No. 2 project updates, in partnership with the National Park Service China Beach project outreach

December – Held tour of the Oceanside Treatment Plant with members of the San Francisco Civil Grand Jury

3. PROGRAM COST SUMMARY

Table 3 provides an overall program-level cost summary of Sewer System Improvement (SSIP) projects grouped by Facilities. It shows the Expenditures to Date, Current Approved Budget, Q2/FY23-24 Forecast Costs, Cost Variance between the Current Approved and Forecast Cost, and Variance Over Reporting Period. The Current Approved Budget is $6,187.6 million and the Current Forecast Cost is $547.8 million over budget. This is mainly due to the Treatment Facilities and Flood Resilience Projects having a forecast more than the approved budget.

Table 3. Program-Level Cost Summary of SSIP

Subprograms	Expenditure To Date ($ Million) (A)	Current Approved Budget ($ Million) (B)	Current Forecast Cost ($ Million) (C)	Cost Variance ($ Million) (D = B - C)	Variance Over Reporting Period* ($ Million) (E)
Treatment Facilities	**$2,221.5**	**$4,258.6**	**$4,726.2**	**($467.6)**	**($467.6)**
Biosolids Digester Facilities Project	**$1,190.3**	**$2,372.6**	**$2,672.6**	**($300.0)**	**($300.0)**
SSIP Phase 1	$1,190.3	$2,372.6	$2,672.6	($300.0)	($300.0)
New Headworks (Grit) Replacement	**$579.9**	**$689.0**	**$716.7**	**($27.7)**	**($27.7)**
SSIP Phase 1	$579.9	$689.0	$716.7	($27.7)	($27.7)
Southeast Plant (SEP) Improvements	**$267.1**	**$594.4**	**$693.1**	**($98.7)**	**($98.7)**
SSIP Phase 1	$257.6	$327.4	$335.7	($8.3)	($8.3)
Other SSIP	$9.6	$267.0	$357.4	($90.3)	($90.3)
Oceanside Plant (OSP) Improvements	**$127.1**	**$438.3**	**$468.5**	**($30.2)**	**($30.2)**
SSIP Phase 1	$115.6	$166.0	$177.0	($11.0)	($11.0)
Other SSIP	$11.5	$272.4	$291.5	($19.2)	($19.2)
North Point Facility (NPF) Improvements	**$57.2**	**$164.3**	**$175.3**	**($11.0)**	**($11.0)**
SSIP Phase 1	$54.8	$73.2	$69.5	$3.7	$3.7
Other SSIP	$2.4	$91.1	$105.9	($14.8)	($14.8)
Collection System	**$291.1**	**$603.5**	**$574.6**	**$29.0**	**$29.0**
Interceptors / Tunnels and Odor Control	**$75.9**	**$195.4**	**$174.3**	**$21.1**	**$21.1**
SSIP Phase 1	$33.6	$59.6	$35.7	$23.8	$23.8
Other SSIP	$42.3	$135.8	$138.5	($2.7)	($2.7)
Interdepartmental Projects	**$67.3**	**$95.0**	**$82.2**	**$12.8**	**$12.8**
SSIP Phase 1	$67.3	$95.0	$82.2	$12.8	$12.8

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

Table 3. Program-Level Cost Summary of SSIP (continued)

Subprograms	Expenditure To Date ($ Million) (A)	Current Approved Budget ($ Million) (B)	Current Forecast Cost ($ Million) (C)	Cost Variance ($ Million) (D = B - C)	Variance Over Reporting Period* ($ Million) (E)
Pump Stations and Forcemain Improvements	**$88.3**	**$196.4**	**$197.1**	**($0.7)**	**($0.7)**
SSIP Phase 1	$81.0	$81.9	$81.8	$0.1	$0.1
Other SSIP	$7.3	$114.5	$115.3	($0.8)	($0.8)
Combined Sewer Discharge (CSD) and Transport/Storage Structures	**$22.9**	**$80.1**	**$84.3**	**($4.2)**	**($4.2)**
SSIP Phase 1	$19.8	$20.3	$20.0	$0.3	$0.3
Other SSIP	$3.1	$59.8	$64.3	($4.5)	($4.5)
Central Bayside System Improvement (CBSIP)	**$36.7**	**$36.7**	**$36.7**	**$0.0**	**$0.0**
SSIP Phase 1	$36.7	$36.7	$36.7	$0.0	$0.0
Stormwater Management	**$110.9**	**$244.0**	**$243.1**	**$0.9**	**$0.9**
Early Implementation Projects	**$46.7**	**$69.5**	**$71.0**	**($1.5)**	**($1.5)**
SSIP Phase 1	$46.7	$69.5	$71.0	($1.5)	($1.5)
Watershed Stormwater Management	**$40.0**	**$124.1**	**$120.3**	**$3.7**	**$3.7**
SSIP Phase 1	$33.5	$53.1	$49.4	$3.7	$3.7
Other SSIP	$6.6	$71.0	$71.0	$0.0	$0.0
Advanced Rainfall and Operation Decision System	**$6.7**	**$9.2**	**$7.3**	**$1.9**	**$1.9**
SSIP Phase 1	$6.7	$9.2	$7.3	$1.9	$1.9
Urban Watershed Assessment	**$17.4**	**$17.4**	**$17.4**	**$0.0**	**$0.0**
SSIP Phase 1	$17.4	$17.4	$17.4	$0.0	$0.0
Watershed Stormwater Management and Customer Service Billing System	**$0.0**	**$23.9**	**$27.2**	**($3.3)**	**($3.3)**
Other SSIP	$0.0	$23.9	$27.2	($3.3)	($3.3)
Flood Resilience Projects	**$45.2**	**$656.4**	**$766.0**	**($109.6)**	**($109.6)**
Flood Resilience Projects	**$45.2**	**$656.4**	**$766.0**	**($109.6)**	**($109.6)**
SSIP Phase 1	$32.0	$50.2	$50.6	($0.4)	($0.4)
Other SSIP	$13.3	$606.2	$715.4	($109.2)	($109.2)
Land Reuse	**$85.6**	**$85.1**	**$85.6**	**($0.5)**	**$0.0**
Land Reuse	**$85.6**	**$85.1**	**$85.6**	**($0.5)**	**$0.0**
SSIP Phase 1	$85.6	$85.1	$85.6	($0.5)	$0.0
Program Management	**$164.4**	**$340.0**	**$340.0**	**$0.0**	**($0.5)**
Phase 1 Program Management	**$164.4**	**$340.0**	**$340.0**	**$0.0**	**($0.5)**
SSIP Phase 1	$164.3	$195.0	$195.0	$0.0	($0.5)
Other SSIP	$0.1	$145.0	$145.0	$0.0	$0.0

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

Subprograms	Expenditure To Date ($ Million) (A)	Current Approved Budget ($ Million) (B)	Current Forecast Cost ($ Million) (C)	Cost Variance ($ Million) (D = B - C)	Variance Over Reporting Period* ($ Million) (E)
Overall Program Total	**$2,918.8**	**$6,187.6**	**$6,735.4**	**($547.8)**	**($547.8)**
SSIP Phase 1 Subtotal	$2,822.6	$4,401.1	$4,704.1	($303.0)	($303.0)
Other SSIP Subtotal	$96.2	$1,786.5	$2,031.3	($244.8)	($244.8)

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

4. PROGRAM SCHEDULE SUMMARY

Figure 4 depicts the Current Approved Schedule completion date and the Current Forecast Schedule completion date for the SSIP.

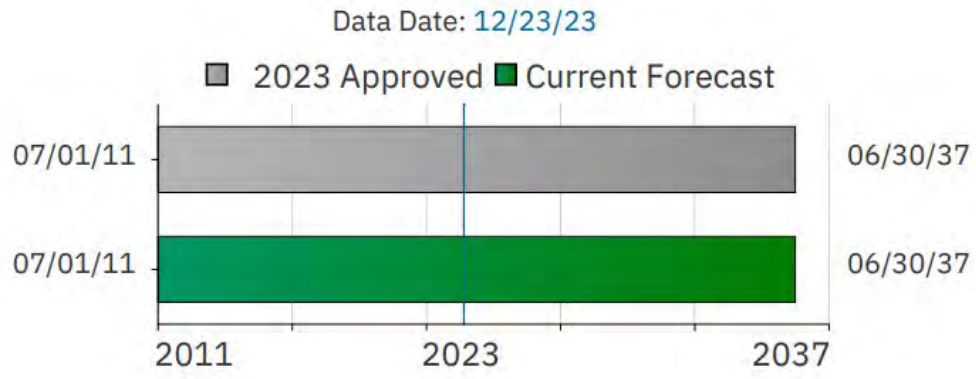

Figure 4 SSIP Schedule Summary

The latest approved program schedules for the SSIP Phase 1 and Other SSIP are based on the 2023 revision approved by the Commission on February 14, 2023. Table 4 depicts the current approved schedules and this quarter's forecast completion schedules for SSIP Phase 1 and Other SSIP Projects. SSIP Phase 1 is currently 21.1 months early.

Table 4. Current Approved vs. Current Forecast Schedule Dates

SUBPROGRAM	Current Approved Project Start	Actual Start	Current Approved Completion	Current Forecast Completion	Schedule Variance (Months)
SSIP Phase 1	07/01/11	07/01/11 A*	04/02/36	06/30/34	21.1
Other SSIP	03/03/18	03/03/18 A*	06/30/37	06/30/37	-
Overall SSIP	**07/01/11**	**07/01/11 A***	**06/30/37**	**06/30/37**	**-**

** "A" represents the actual date*

5. BUDGET AND SCHEDULE TREND SUMMARY

This Table 5 contains all approved SSIP projects that are active and in any of the planning, design, bid and award, or construction phases of the project. The table excludes all Program Management projects, as well as any projects that are either Not-Initiated, On-Hold, in Closeout or Completed.

During this Quarter (Q2 FY23-24), the following major milestones were achieved:

1. Project initiation for Floodwater Management Grant Assistance Program (Grant)
2. Conceptual engineering report for Solids Thickening (OSP 011) Process Upgrade (OSP – 2)
3. Conceptual engineering report for Admin Bldg (OSP 930) Health & Safety Improvements (OSP-7)
4. Conceptual engineering report for Admin Bldg (NPF 930) Evaluation & Interim H&S Improvements (NPF - 2)
5. 35% Design complete for SEP 550 Booster PS Condition Inspection & Interim

6. 95% Design complete for Primary Treatment (SEP 040/041) H&S Improvements
7. 95% Design complete for Large Diameter Sewer Projects and Channel FM Intertie – Hayes Valley
8. 95% Design complete for Seacliff No. 2 PS & FM Upgrade
9. 95% Design complete for Geary Underpass PS Safe Access Enhancements
10. 95% Design complete for Buchanan Street Mall
11. Construction Final Completion for Operational Decision System Phase 2
12. Construction Final Completion for OSP Condition Improvement Projects – Part 2
13. Environmental Approval for Seacliff No. 2 PS & FM Upgrade
14. Environmental Approval for Geary BRT Sewer Improvement Phase 2 PreCon
15. Environmental Approval for Large Diameter Sewer Projects and Channel FM Intertie (Hayes Valley)

Table 5. Budget and Schedule Trend Summary

All Costs are shown in million.

Project Name	Previous Program Group Title	Most Recent CIP		Project Initiation		CER		35% Design		95% Design		Awarded Construction[1]		Current Status	
		Approved Budget	Approved Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion
		a	b	c	d	e	f	g	h	i	j	k	l	m	n
Rolling WWE Capital Projects															
Treatment Facilities															
Biosolids Digester Facilities Project															
10015796 SEP Biosolids Digester Facilities Project (BDFP)[2]	SSIP Phase 1	FY24-33		12/31/14		01/29/16		11/30/16		12/06/18 (Scope I) & 01/14/19 (Scope II)		08/26/19 (Scope I) & 07/01/20 (Scope II)		Q2 - FY23-24	
Scope I - EOP 1A, 1C, 1B, 2B Scope II - Remainder of SOW		$2,372.6	05/11/29	$1,750.0	08/31/23	$1,276.4	05/01/25	$1,276.4	05/01/25	$1,315.3	05/01/26	$1,680.7	07/06/28	$2,672.6	05/11/29
New Headworks (Grit) Replacement															
10015807 SEP New Headworks (Grit) Replacement [2]	SSIP Phase 1	FY24-33		03/01/13		01/29/16		06/23/16 (Scope I), 10/17/16 (Scope II) & 06/23/16 (Scope III)		05/23/17 (Scope I), 09/26/17 (Scope II) & 05/31/18 (Scope III)		11/15/17 (Scope I), 12/17/18 (Scope II) & 07/22/19 (Scope III)		Q2 - FY23-24	
Scope I - Site Preparation Scope II - Bruce Flynn Pump Station Scope III - New Headworks		$689.0	05/29/26	$183.0	03/31/20	$359.0	12/29/23	$359.0	12/29/23	$718.0	09/30/24	$718.8	09/30/24	$716.7	08/31/27
Southeast Plant (SEP) Improvements															
10015809 SEP Facility-wide Distributed Control System Upgrade[3]	SSIP Phase 1	FY24-33		02/13/14		02/02/15		Ongoing		TBD		12/13/16[4]		Q2 - FY23-24	
		$63.0	12/30/27	$63.0	02/26/21	$63.0	08/31/23	$63.0	08/31/27	N/A	N/A	$63.0	08/31/23	$73.0	12/30/27
10002284 SEP Power Feed and Primary Switchgear Upgrades	SSIP Phase 1	FY24-33		06/23/14		04/15/16		07/29/16		10/31/17		09/08/20		Q2 - FY23-24	
		$95.9	05/30/25	$69.8	07/31/20	$69.8	07/31/20	$69.8	11/19/20	$84.3	06/30/22	$95.9	06/18/24	$95.9	03/31/26
10037353 SEP 550 Booster PS Condition Inspection & Interim	Other SSIP	FY24-33		01/12/21		06/30/23		12/29/23		12/31/24		08/29/24		Q2 - FY23-24	
		$20.3	01/21/28	$9.9	06/30/26	$20.3	01/21/28	$31.3	06/30/28	TBD	TBD	TBD	TBD	$31.3	06/30/28
10038373 SEP, Booster PS, & BFS Security Enhancements	Other SSIP	FY24-33		01/18/22		12/29/23		11/04/24		02/10/25		08/29/24		Q2 - FY23-24	
		$35.8	12/10/27	$35.8	12/10/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$35.8	03/01/28
10037330 Primary Treatment (SEP 040/041) H&S Improvements	Other SSIP	FY24-33		01/04/21		04/15/22		08/31/22		12/29/23		06/11/24		Q2 - FY23-24	
		$25.2	12/07/26	$27.4	09/30/26	$27.4	09/30/26	$27.4	09/30/26	$29.6	03/31/28	TBD	TBD	$29.6	03/31/28
10039310 Secondary Clarifiers (SEP 230) Rehabilitation	Other SSIP	FY24-33		10/03/22		02/29/24		TBD		TBD		TBD		Q2 - FY23-24	
		$52.0	06/26/28	$52.0	06/26/28	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$52.0	11/30/29
10039505 New Trades & Maintenance Buildings	Other SSIP	FY24-33		11/01/22		N/A		TBD		TBD		03/29/24[5]		Q2 - FY23-24	
		$87.2	06/25/27	$68.2	09/30/26	N/A	N/A	TBD	TBD	TBD	TBD	TBD	TBD	$171.9	08/31/28
10039811 SEP Condition Improvement Projects - Part 1	Other SSIP	FY24-33		11/01/22		02/29/24		06/28/24		12/20/24		07/22/25		Q2 - FY23-24	
		$3.8	08/29/25	$22.5	08/15/28	TBD	TBD	TBD	TBD	TBD	TBD	NA	NA	$16.0	10/29/27

Footnotes:

1. This represents forecast project cost and project completion date at the time of award of construction contract, award of CM/GC scope, award of DB scope.
2. The project delivery method for this project is Construction Manager/General Contractor (CM/GC).
3. The project delivery method for this project is Progressive Design-Build (DB).
4. This represents the award of the overall progressive design build contract DB-126 which includes Preconstruction & Construction phases. The project initiation forecast cost was based on funding availability.
5. This represents forecasted project cost and project completion date at the time of award of CM/GC contract during Pre-Construction

Table 5. Budget and Schedule Trend Summary (continued)

All Costs are shown in million.

Project Name	Previous Program Group Title	Most Recent CIP		Project Initiation		CER		35% Design		95% Design		Awarded Construction[1]		Current Status	
		Approved Budget	Approved Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion
		a	b	c	d	e	f	g	h	i	j	k	l	m	n
10037331 Maintenance Building (SEP 940) Interim Improvement	Other SSIP	FY24-33		01/12/21		03/24/23		09/21/23		06/27/24		03/11/25		Q2 - FY23-24	
		$40.7	01/09/29	$21.6	07/02/26	$40.7	01/09/29	$40.7	01/09/29	TBD	TBD	TBD	TBD	$20.9	02/04/28
Oceanside Plant (OSP) Improvements															
10029736 Westside Pump Station Reliability Improvements (OP02)	SSIP Phase 1	FY24-33		06/13/13		02/04/16		08/02/16		08/18/17		02/09/21		Q2 - FY23-24	
		$89.3	12/31/24	$68.3	09/02/21	$70.5	12/02/21	$70.5	12/02/21	$70.5	12/02/21	$87.8	12/31/24	$93.3	06/30/26
10029737 OSP Digester Gas Utilization Upgrade (OP03)	SSIP Phase 1	FY24-33		10/01/13		11/20/14		02/04/16		02/01/17		08/28/18		Q2 - FY23-24	
		$62.6	03/29/24	$48.2	06/15/20	$48.2	06/15/20	$39.7	06/15/20	$39.7	06/15/20	$45.9	07/29/21	$69.6	06/02/25
10037733 Solids Thickening (OSP 011) Process Upgrade (OSP - 2)	Other SSIP	FY24-33		01/25/22		10/25/23		02/06/24		08/06/24		06/13/25		Q2 - FY23-24	
		$20.2	09/03/26	$20.2	03/26/27	$20.2	3/10/2028	TBD	TBD	TBD	TBD	TBD	TBD	$20.2	03/10/28
10037734 OSP Plant-wide Ventilation (HVAC) Upgrades (OSP - 3)	Other SSIP	FY24-33		01/26/22		01/26/24		05/17/24		01/31/25		09/17/25		Q2 - FY23-24	
		$7.4	09/03/26	$7.4	03/29/27	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$22.6	07/16/27
10036398 OSP Condition Improvement Projects - Part 2 (OSP - 4)	Other SSIP	FY24-33		03/03/18		(A) 03/20/24 (B) 03/04/24 (C) 03/04/24 (D) 01/03/25 (E) N/A (F) N/A (G) N/A		(A) 04/24/24 (B) 05/15/24 (C) 06/14/24 (D) 05/16/25 (E) N/A (F) N/A (G) N/A		(A) 10/25/24 (B) 02/28/25 (C) 03/31/25 (D) 02/06/26 (E) N/A (F) N/A (G) N/A		(A) 04/16/25 (B) 12/17/25 (C) 01/15/26 (D) 11/18/26 (E) 02/08/22 (F) 09/13/22 (G) N/A		Q2 - FY23-24	
(A) WW-746 OSP 620 Digestion H&S, Mech Improvements (B) OSP 011 Polymer & Ferric Chloride Replacement (C) OSP 042 Primary Clarifiers Structural and Mechanical (D) OSP 200 Aeration Tanks Structural and Mechanical (E) W-648 OSP Building 042 Primary Clarifier Improvements (F) WW-669 OSP Building 011 Grit Classifier & Preliminary Influent Slide Gate System Improvement (G) JOC 53R-15 OSP UPS Assembly Replacements		$105.1	08/08/29	$105.1	07/06/29	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$105.1	06/28/30
10037735 Admin Bldg (OSP 930) Health & Safety Improvements (OSP - 7)	Other SSIP	FY24-33		02/01/22		10/31/23		03/04/24		09/03/24		04/16/25		Q2 - FY23-24	
		$5.7	01/21/27	$5.7	10/01/26	$9.6	07/08/27	TBD	TBD	TBD	TBD	TBD	TBD	$9.6	07/08/27
10037777 OSP & WSPS Security Enhancements	Other SSIP	FY23-32		08/02/21		02/29/24		02/21/25		10/20/25		08/27/24		Q2 - FY23-24	
		$13.8	11/19/27	$7.2	06/30/25	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$13.8	03/01/28
10039193 Gaseous Oxygen System (OSP 011) Upgrades (OSP - 11)	Other SSIP	FY24-33		01/03/23		04/29/24		10/28/24		10/27/25		09/15/26		Q2 - FY23-24	
		$22.4	05/08/29	$22.3	05/08/29	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$22.4	05/08/29
North Point Facility (NPF) Improvements															
10026822 North Shore Pump Station Wet Weather Improvements	SSIP Phase 1	FY24-33		08/15/13		05/29/15		06/30/17		12/07/18		01/26/21		Q2 - FY23-24	
		$55.0	12/27/24	$8.8	09/29/25	$66.6	12/31/19	$61.4	12/31/20	$55.0	01/27/22	$55.0	12/29/23	$51.3	06/30/25
10037325 Admin Bldg (NPF 930) Evaluation & Interim H&S Improvements (NPF - 2)	Other SSIP	FY24-33		03/01/22		12/29/23		05/23/24		03/21/25		11/06/25		Q2 - FY23-24	
		$7.9	08/27/27	$7.9	02/03/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$22.7	09/29/28
10037904 NPF & NSS Security Enhancements	Other SSIP	FY24-33		01/18/22		02/29/24		09/05/24		05/05/25		08/29/24		Q2 - FY23-24	
		$17.8	01/12/28	$17.8	12/10/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$17.8	03/01/28
10039251 Sedimentation (NPF 040/041) Tanks Condition Improvements	Other SSIP	FY24-33		11/14/22		12/31/24		06/25/25		06/25/26		05/03/27		Q2 - FY23-24	
		$54.2	07/17/31	$54.2	07/17/31	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$54.2	08/30/30
10038353 NPF DCS Upgrades (Construction)	Other SSIP	FY24-33		11/01/21		N/A		N/A		N/A		N/A		Q2 - FY23-24	
		$11.0	12/30/27	$11.0	09/02/27	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$11.0	12/30/27

Footnotes:

1. This represents forecast project cost and project completion date at the time of award of construction contract, award of CM/GC scope, award of DB scope.

Table 5. Budget and Schedule Trend Summary (continued)

All Costs are shown in million.

Project Name	Previous Program Group Title	Most Recent CIP		Project Initiation		CER		35% Design		95% Design		Awarded Construction[1]		Current Status	
		Approved Budget	Approved Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion
		a	b	c	d	e	f	g	h	i	j	k	l	m	n
Collection System															
Interceptors/Tunnels and Odor Control															
10034718 Large Diameter Sewer Projects and Channel FM Intertie[3]	Other SSIP	FY24-33		08/01/19		(A) 03/22/21 (B) N/A (C) 10/30/20 (D) 09/30/20 (E) 04/30/21 (F) 06/30/21 (G) N/A (H) 01/31/22 (I) 09/16/22 (J) 12/15/22		(A) 09/10/21 (B) 01/24/20 (C) 06/01/21 (D) 02/17/21 (E) 10/04/21 (F) 12/01/21 (G) N/A (H) 09/09/22 (I) 03/24/23 (J) 03/15/23		(A) 04/19/22 (B) 09/30/20 (C) 02/24/22 (D) 02/25/22 (E) 02/14/22 (F) 07/07/22 (G) N/A (H) 04/28/23 (I) 11/30/23 (J) 02/14/24		(A) 12/13/22 (B) 05/11/21 (C) 12/13/22 (D) N/A (E) 08/23/22 (F) 05/09/23 (G) N/A (H) 04/23/24 (I) 06/27/24 (J) 09/24/24		Q2 - FY23-24	
(A) Channel FM Intertie (B) New Montgomery, Mission, Jessie, & Minna Streets (C) Panhandle & Inner Sunset (D) Tenderloin & Nob Hill (E) Chinatown & North Beach (F) Castro (G) South Van Ness Ave (H) East SOMA (I) Hayes Valley (J) West SOMA		$114.6	12/07/26	$47.0	12/07/26	$114.6	12/07/26	$114.6	12/07/26	TBD	TBD	TBD	TBD	$114.6	12/07/26
10002652 Kansas and Marin Streets Sewer Improvements[2]	SSIP Phase 1	FY24-33		06/10/13		09/14/18 - DBB TBD - DB		06/30/21 - DBB 6/27/24		08/25/24		05/25/25		Q2 - FY23-24	
		$30.0	04/02/36	12.5[3]	03/30/16	$12.5	02/15/18	TBD	TBD	TBD	TBD	TBD	TBD	$6.7	10/16/26
Interdepartmental Projects															
10033106 Geary BRT Sewer Improvements Phase 2 PreCon	SSIP Phase 1	FY24-33		03/15/18		N/A		06/16/22		10/10/23		N/A		Q2 - FY23-24	
		$2.3	09/29/23	$2.0	03/30/20	N/A	N/A	$2.0	06/30/23	$2.3	4/8/2024	N/A	N/A	$2.3	04/08/24
10002664 Van Ness BRT Sewer Improvements	SSIP Phase 1	FY24-33		10/01/13		05/20/14		N/A		05/01/15		08/15/16		Q2 - FY23-24	
		$25.0	06/30/23	$12.3	01/16/18	$14.0	03/30/17	N/A	N/A	$14.0	04/19/17	$15.0	06/04/20	$25.0	12/31/24
10002776 Taraval Sewer Improvements	SSIP Phase 1	FY24-33		03/14/16		02/03/17		05/01/17		10/31/17		03/05/19 - Segment A 10/05/21 - Segment B		Q2 - FY23-24	
		$34.5	07/31/25	$20.4	10/19/20	$20.4	10/19/20	N/A	10/19/20	$20.4	10/19/20	$34.5	07/31/25	$34.5	07/31/25

Footnotes:

1. This represents forecast project cost and project completion date at the time of award of construction contract, award of CM/GC scope, award of DB scope.
2. The project delivery method for this project is Design-Build (DB).
3. The Project Initiation Forecast Cost was based on funding availability.

Table 5. Budget and Schedule Trend Summary (continued)

All Costs are shown in million.

Project Name	Previous Program Group Title	Most Recent CIP		Project Initiation		CER		35% Design		95% Design		Awarded Construction[1]		Current Status	
		Approved Budget	Approved Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion
		a	b	c	d	e	f	g	h	i	j	k	l	m	n
Pump Stations and Force Main Improvements															
10037251 Seacliff No. 1 PS & FM Upgrade	Other SSIP	FY24-33		12/07/20		01/31/23		02/14/23		08/04/23		06/11/24		Q2 - FY23-24	
		$16.2	03/31/27	$13.1	12/26/29	$16.2	03/31/27	$16.2	03/31/27	$16.2	03/31/27	TBD	TBD	$16.2	03/31/27
10037246 Seacliff No. 2 PS & FM Upgrade	Other SSIP	FY24-33		12/14/20		09/30/22		01/17/23		10/20/23		09/10/24		Q2 - FY23-24	
		$20.8	04/03/28	$16.8	12/21/29	$19.3	01/31/28	$20.8	04/03/28	$22.1	4/3/2028	TBD	TBD	$22.1	04/03/28
10037303 Sunnydale PS Safety Improvements	Other SSIP	FY24-33		12/14/20		09/26/22		02/13/23		01/10/24		08/15/24		Q2 - FY23-24	
		$15.5	12/31/26	$5.0	05/29/26	$15.5	05/29/26	$15.5	12/31/26	TBD	TBD	TBD	TBD	$16.7	05/23/28
10038469 Pump Station Security Upgrades (Cesar Chavez, GFS, CHS, MMS)	Other SSIP	FY24-33		06/01/22		05/11/23		09/24/24		04/03/25		11/25/25		Q2 - FY23-24	
		$9.1	06/30/27	$9.1	05/03/27	$9.1	06/30/27	TBD	TBD	TBD	TBD	TBD	TBD	$8.0	09/13/27
10038446 Geary Underpass PS Safe Access Enhancements	Other SSIP	FY24-33		01/10/22		07/21/22		12/29/22		12/22/23		N/A		Q2 - FY23-24	
		$1.9	05/29/26	$1.9	05/29/26	$1.9	05/29/26	$1.9	05/29/26	$1.3	05/29/26	TBD	TBD	$1.3	05/29/26
CSDs and Transport/Storage Structures															
10037245 Brannan St CSD Discharge & Baffle Rehabilitation	Other SSIP	FY24-33		12/07/20		05/30/23		09/15/23		09/12/24		05/02/25		Q2 - FY23-24	
		$7.9	10/30/26	$6.9	08/18/25	$7.9	10/30/26	$7.9	10/30/26	TBD	TBD	TBD	TBD	$11.9	04/28/28
10038468 System-wide Monitoring Equipment Assessment	Other SSIP	FY24-33		01/18/22		08/30/24		12/06/24		06/13/25		05/04/26		Q2 - FY23-24	
		$9.3	03/31/27	$9.3	02/01/27	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$11.2	03/17/28
10038547 CSD Structure Rehab & Upgrades - P1 (A) Laguna & Howard Streets CSDs (B) Mission Bay CSD (combined with A) (C) Mariposa, Evans & Lake Merced	Other SSIP	FY24-33		01/03/22		(A/B) 11/09/22; 01/31/23 (C) 06/28/24		(A/B) 04/10/23 (C) 09/30/24		(A/B) 01/09/24 (C) 04/02/25		(A/B) 08/13/24 (C) 12/23/25		Q2 - FY23-24	
		$39.7	01/31/29	$39.7	01/31/29	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$39.7	01/31/29

Footnotes:

1. This represents forecast project cost and project completion date at the time of award of construction contract, award of CM/GC scope, award of DB scope.

Table 5. Budget and Schedule Trend Summary (continued)

All Costs are shown in million.

Project Name	Previous Program Group Title	Most Recent CIP		Project Initiation		CER		35% Design		95% Design		Awarded Construction[1]		Current Status	
		Approved Budget	Approved Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion
		a	b	c	d	e	f	g	h	i	j	k	l	m	n
Early Implementation Projects															
10026810 Yosemite Green Infrastructure	SSIP Phase 1	FY24-33		12/03/12		01/11/21		N/A		04/01/24		10/15/24		Q2 - FY23-24	
		$25.6	11/08/28	$13.5	08/30/19	$17.1	06/30/26	N/A	N/A	TBD	TBD	TBD	TBD	$27.5	11/08/28
Watershed Stormwater Management															
10026816 Wawona Area Stormwater Improvement Project	SSIP Phase 1	FY24-33		07/01/16		09/15/17		09/30/19		04/20/20		07/23/21		Q2 - FY23-24	
		$34.1	12/02/24	$22.7	04/07/20	$22.7	04/07/20	$39.0	12/30/22	$44.5	01/16/24	$38.9	07/08/24	$28.3	12/02/24
10029726 Watershed Stormwater Management (Planning Only)	SSIP Phase 1	FY24-33		07/11/16		N/A		N/A		N/A		N/A		Q2 - FY23-24	
		$19.0	06/30/32	$9.0	07/12/19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$21.0	06/30/34
10039608 Buchanan Street Mall	SSIP Phase 1	FY24-33		10/03/22		10/03/22		11/03/22		10/30/23		10/30/24		Q2 - FY23-24	
		$9.6	12/28/26	$9.3	12/28/26	$9.3	12/28/26	$9.3	12/28/26	$9.6	12/28/26	TBD	TBD	$9.6	12/31/26
10034553 Green Infrastructure Grant Program (GIGP)	Other SSIP	FY24-33		07/01/18		N/A		N/A		N/A		(1) 06/11/19; (2) 10/09/19; (3) 01/28/20; (4) 05/12/20; (5) 04/28/20; (6) 01/13/20; (7) 10/22/20; (8) 10/22/20; (9) 11/10/20; (10) 03/31/22; (11) 03/31/22; (12) 06/01/23.		Q2 - FY23-24	
		$61.3	06/30/33	$25.0	06/30/28	N/A	N/A	N/A	N/A	N/A	N/A	$61.3	06/30/29	$61.3	06/30/33
Advanced Rainfall and Operation Decision System															
10029730 Operational Decision System Phase 2	SSIP Phase 1	FY24-33		02/01/17		N/A		N/A		N/A		02/22/18		Q2 - FY23-24	
		$6.7	09/30/25	$7.8	06/26/20	N/A	N/A	N/A	N/A	N/A	N/A	$8.7	06/26/20	$4.8	06/28/24
Flood Resilience Projects															
10039682 Flood Resiliency Planning	Other SSIP	FY24-33		10/03/22		N/A		N/A		N/A		N/A		Q2 - FY23-24	
		$9.6	03/31/27	$9.6	06/30/26	TBD	TBD	N/A	N/A	N/A	N/A	N/A	N/A	$9.6	06/29/29
10040621 Floodwater Management Grant Assistance Program (Grant)	Other SSIP	FY24-33		10/16/23		N/A		N/A		N/A		TBDs		Q2 - FY23-24	
		$15.0	03/31/33	$15.0	03/31/33	TBD	TBD	N/A	N/A	N/A	N/A	N/A	N/A	$15.0	12/27/34
10034360 Lower Alemany Area Stormwater Improvement Project	Other SSIP	FY24-33		01/02/19		02/10/23		05/02/23		TBD		12/10/24		Q2 - FY23-24	
		$299.6	11/01/28	$286.5	03/13/28	$299.6	11/1/2028	$299.6	11/1/2028	TBD	TBD	TBD	TBD	$299.6	11/01/28
10026818 Folsom Area Stormwater Improvement Project	SSIP Phase 1	FY24-33		07/01/16		03/16/18		(A) 03/31/20 (B) 03/31/20 (C) 11/24/21 (D) N/A		(A) 09/06/22 (B) 05/06/24 (C) 04/30/24 (D) 05/01/24		N/A		Q2 - FY23-24	
Initial Upstream WW-719A (A) Tunnel WW-719B (B) Box Sewer WW-719C (C) Large Pipe WW-719D (D)		$38.4	12/27/23	$36.3	11/01/19	$38.4	06/01/20	$38.4	12/27/23	$38.4	06/03/24	N/A	N/A	$38.4	12/31/24
10038471 Folsom Area Stormwater Imp. Project Phase 2	Other SSIP	FY24-33		10/17/22		N/A		N/A		N/A		(A) 08/04/23 (B) 05/20/25 (C) 02/10/25 (D) 02/11/25		Q2 - FY23-24	
Initial Upstream WW-719A (A) Tunnel WW-719B (B) Box Sewer WW-719C (C) Large Pipe WW-719D (D)		$282.0	06/30/27	$282.0	06/30/27	N/A	N/A	N/A	N/A	N/A	N/A	$362.7	12/31/26	$391.2	02/16/29

Footnotes:

1. This represents forecast project cost and project completion date at the time of award of construction contract, award of CM/GC scope, award of DB scope.

6. PROJECT PERFORMANCE SUMMARY*

All costs are shown in $1,000s

Project Name	Previous Program Group Title	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 Completion Date (h) (+)	Approved Completion Date (i) (++)	Forecast Completion Date (j)	Schedule Variance (Days) (k=i-j) (+++)
Treatment Facilities												
Biosolids Digester Facilities Project												
10015796 SEP Biosolids Digester Facilities Project	SSIP Phase 1	CN	$2,372,615	$2,372,615	$2,672,616	$1,190,302	($300,001)	(13%)	05/11/29	05/11/29	05/11/29	0
New Headworks (Grit) Replacement												
10015807 SEP New Headworks (Grit) Replacement	SSIP Phase 1	CN	$688,979	$688,979	$716,679	$579,860	($27,701)	(4%)	05/29/26	05/29/26	08/31/27	(459)
Southeast Plant (SEP) Improvements												
10015809 SEP Facility-wide Distributed Control System Upgrade	SSIP Phase 1	DS	$62,988	$62,988	$73,004	$24,865	($10,016)	(16%)	12/30/27	12/30/27	12/30/27	0
10002284 SEP Power Feed and Primary Switchgear Upgrades	SSIP Phase 1	CN	$95,875	$95,875	$95,875	$66,488	$0	0%	05/30/25	05/30/25	03/31/26	(305)
10037353 SEP 550 Booster PS Condition Inspection & Interim	Other SSIP	DS	$20,298	$20,298	$31,259	$989	($10,960)	(54%)	01/21/28	01/21/28	06/30/28	(161)
10038373 SEP Booster PS & BFS Security Enhancements	Other SSIP	PL	$35,759	$35,759	$35,759	$925	$0	0%	12/10/27	12/10/27	03/01/28	(82)
10037330 Primary Treatment (SEP 040/041) H&S Improvements	Other SSIP	DS	$25,228	$25,228	$29,602	$2,917	($4,374)	(17%)	12/07/26	12/07/26	03/31/28	(480)
10037331 Maintenance Building (SEP 940) Interim Improvement	Other SSIP	DS	$40,652	$40,652	$20,897	$1,209	$19,755	49%	01/09/29	01/09/29	02/04/28	340
10039505 New Trades & Maintenance Buildings	Other SSIP	DS	$87,154	$87,154	$171,879	$2,342	($84,726)	(97%)	06/25/27	06/25/27	08/31/28	(433)
10039310 Secondary Clarifiers (SEP230) Rehabilitation	Other SSIP	PL	$51,952	$51,952	$51,952	$847	$0	0%	06/26/28	06/26/28	11/30/29	(522)
10039811 SEP Condition Improvement Projects - Part 1	Other SSIP	PL	$3,762	$3,762	$16,009	$328	($12,248)	(326%)	08/29/25	08/29/25	10/29/27	(791)
Oceanside Plant (OSP) Improvements												

* 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 FY24-33.

(++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY24-33, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.

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

Project Name	Previous Program Group Title	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 Completion Date (h) (+)	Approved Completion Date (i) (++)	Forecast Completion Date (j)	Schedule Variance (Days) (k=i-j) (+++)
10029736 Westside Pump Station Reliability Improvements	SSIP Phase 1	CN	$89,300	$89,300	$93,300	$52,030	($4,000)	(4%)	12/31/24	12/31/24	06/30/26	(546)
10029737 OSP Digester Gas Utilization Upgrade	SSIP Phase 1	CN	$62,577	$62,577	$69,577	$49,498	($7,000)	(11%)	03/29/24	03/29/24	06/02/25	(430)
10037733 Solids Thickening (OSP 011) Process Upgrade	Other SSIP	DS	$20,222	$20,222	$20,222	$466	$0	0%	09/03/26	09/03/26	03/10/28	(554)
10037734 OSP Plant-wide Ventilation (HVAC) Upgrades	Other SSIP	PL	$7,354	$7,354	$22,577	$306	($15,224)	(207%)	09/03/26	09/03/26	07/16/27	(316)
10036398 OSP Condition Improvement Projects - Part 2	Other SSIP	MP	$105,100	$105,100	$105,100	$9,742	$0	0%	08/08/29	08/08/29	06/28/30	(324)
10037735 Admin Bldg (OSP 930) Health & Safety Improvements	Other SSIP	DS	$5,709	$5,709	$9,650	$372	($3,941)	(69%)	01/21/27	01/21/27	07/08/27	(168)
10037777 OSP & WSPS Security Enhancements	Other SSIP	PL	$13,776	$13,776	$13,776	$524	$0	0%	11/19/27	11/19/27	03/01/28	(103)
10039193 Gaseous Oxygen System (OSP 011) Upgrades	Other SSIP	PL	$22,351	$22,351	$22,351	$42	$0	0%	05/08/29	05/08/29	05/08/29	0
North Point Facility (NPF) Improvements												
10026822 North Shore Pump Station Wet Weather Improvements	SSIP Phase 1	CN	$55,033	$55,033	$51,296	$36,581	$3,737	7%	12/27/24	12/27/24	06/30/25	(185)
10037325 Admin Bldg (NPF 930) Evaluation & Interim H&S Improvements	Other SSIP	PL	$7,934	$7,934	$22,691	$786	($14,757)	(186%)	08/27/27	08/27/27	09/29/28	(399)
10037904 NPF & NSS Security Enhancements	Other SSIP	PL	$17,849	$17,849	$17,849	$537	$0	0%	01/12/28	01/12/28	03/01/28	(49)
10038353 NPF DCS Upgrades (Construction)	Other SSIP	CN	$11,073	$11,073	$11,073	$889	$0	0%	12/30/27	12/30/27	12/30/27	0
10039251 Sedimentation (NPF 040/041) Tanks Condition Improvements	Other SSIP	PL	$54,249	$54,249	$54,249	$236	$0	0%	07/17/31	07/17/31	08/30/30	321
Collection System												

* 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 FY24-33.

(++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY24-33, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.

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

Project Name	Previous Program Group Title	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 Completion Date (h) (+)	Approved Completion Date (i) (++)	Forecast Completion Date (j)	Schedule Variance (Days) (k=i-j) (+++)
Interceptors / Tunnels and Odor Control												
10034718 Large Diameter Sewer Projects and Channel FM Intertie	Other SSIP	MP	$114,592	$114,592	$114,592	$42,315	$0	0%	12/07/26	12/07/26	12/07/26	0
10002652 Kansas and Marin Streets Sewer Improvements	SSIP Phase 1	DS	$30,000	$30,000	$6,700	$4,617	$23,300	78%	04/02/36	04/02/36	10/16/26	3,456
Interdepartmental Projects												
10033106 Geary BRT Sewer Improvements Phase 2 PreCon	SSIP Phase 1	DS	$2,346	$2,346	$2,346	$1,842	$0	0%	09/29/23	09/29/23	04/08/24	(192)
10002664 Van Ness BRT Sewer Improvements	SSIP Phase 1	CN	$25,000	$25,000	$25,000	$21,048	$0	0%	06/30/23	06/30/23	12/31/24	(550)
10002776 Taraval Sewer Improvements	SSIP Phase 1	MP	$34,500	$34,500	$34,500	$24,406	$0	0%	07/31/25	07/31/25	07/31/25	0
Pump Stations and Forcemain Improvements												
10037251 Seacliff No. 1 PS & FM Upgrade	Other SSIP	DS	$16,180	$16,180	$16,180	$2,241	$0	0%	03/31/27	03/31/27	03/31/27	0
10037246 Seacliff No. 2 PS & FM Upgrade	Other SSIP	DS	$20,804	$20,804	$22,136	$2,972	($1,332)	(6%)	04/03/28	04/03/28	04/03/28	0
10037303 Sunnydale PS Safety Improvements	Other SSIP	DS	$15,546	$15,546	$16,666	$1,648	($1,120)	(7%)	12/31/26	12/31/26	05/23/28	(509)
10038469 Pump Station Security Upgrades (Cesar Chavez, GFS,CHS, MMS)	Other SSIP	DS	$9,105	$9,105	$7,985	$249	$1,120	12%	06/30/27	06/30/27	09/13/27	(75)
10038446 Geary Underpass PS Safe Access Enhancements	Other SSIP	DS	$1,854	$1,854	$1,280	$187	$574	31%	05/29/26	05/29/26	05/29/26	0
Combined Sewer Discharge (CSD) and Transport/Storage Structures												
10037245 Brannan St CSD Discharge & Baffle Rehabilitation	Other SSIP	DS	$7,949	$7,949	$11,944	$575	($3,995)	(50%)	10/30/26	10/30/26	04/28/28	(546)
10038468 System-wide Monitoring Equipment Assessment	Other SSIP	PL	$9,289	$9,289	$11,185	$313	($1,896)	(20%)	03/31/27	03/31/27	03/17/28	(352)

* 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 FY24-33.

(++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY24-33, plus any additional budget and schedule changes approved by the Commission as part of construction contract award.

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

Project Name	Previous Program Group Title	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 Completion Date (h) (+)	Approved Completion Date (i) (++)	Forecast Completion Date (j)	Schedule Variance (Days) (k=i-j) (+++)
10038547 CSD Structure Rehab & Upgrades - Part 1	Other SSIP	MP	$39,653	$39,653	$39,653	$1,077	$0	0%	01/31/29	01/31/29	01/31/29	0
Stormwater Management												
Early Implementation Projects												
10026810 Yosemite Green Infrastructure	SSIP Phase 1	DS	$25,588	$25,588	$27,539	$5,491	($1,950)	(8%)	11/08/28	11/08/28	11/08/28	0
Watershed Stormwater Management												
10026816 Wawona Area Stormwater Improvement Project	SSIP Phase 1	CN	$34,112	$34,112	$28,382	$26,272	$5,729	17%	12/02/24	12/02/24	12/02/24	0
10029726 Watershed Stormwater Management (Planning Only)	SSIP Phase 1	PL	$19,000	$19,000	$21,000	$7,198	($2,000)	(11%)	06/30/32	06/30/32	06/30/34	(730)
10034553 Green Infrastructure Grant Program (GIGP)	Other SSIP	CN	$61,318	$61,318	$61,318	$5,852	$0	0%	06/30/33	06/30/33	06/30/33	0
10039608 Buchanan Street Mall	Other SSIP	DS	$9,632	$9,632	$9,632	$717	$0	0%	12/28/26	12/28/26	12/28/26	0
Advanced Rainfall and Operation Decision System												
10029730 Operational Decision System Phase 2	SSIP Phase 1	CN	$6,721	$6,721	$4,833	$4,263	$1,887	28%	09/30/25	09/30/25	06/28/24	459
Flood Resilience Projects												
Flood Resilience Projects												
10034360 Lower Alemany Area Stormwater Improvement Project	Other SSIP	DS	$299,555	$299,555	$299,555	$10,827	$0	0%	11/01/28	11/01/28	11/01/28	0
10026818 Folsom Area Stormwater Improvement Project	SSIP Phase 1	DS	$38,411	$38,411	$38,411	$20,454	$0	0%	12/27/23	12/27/23	12/31/24	(370)
10038471 Folsom Area Stormwater Imp. Project Phase 2	Other SSIP	MP	$282,014	$282,014	$391,226	$1,850	($109,212)	(39%)	06/30/27	06/30/27	02/16/29	(597)
10039682 Flood Resiliency Planning	Other SSIP	PL	$9,600	$9,600	$9,600	$576	$0	0%	03/31/27	03/31/27	06/29/29	(821)

* 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 FY24-33.

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Project Name	Previous Program Group Title	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 Completion Date (h) (+)	Approved Completion Date (i) (++)	Forecast Completion Date (j)	Schedule Variance (Days) (k=i-j) (+++)
10040621 Floodwater Management Grant Assistance Program (Grant)	Other SSIP	CN	$15,000	$15,000	$15,000	$19	$0	0%	03/31/33	03/31/33	12/27/34	(636)

* 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 FY24-33.

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(+++) 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

10015796 - SEP Biosolids Digester Facilities Project

Project Description: Planning, engineering, and construction of the new solids processing facilities will include solids pretreatment; the thermal hydrolysis process (THP); anaerobic digestion; biosolids dewatering; biosolids product storage and loadout; biogas utilization; odor control; automated control systems; chemical facilities, and associated appurtenances and piping. The proposed site for the BDFP facilities is adjacent to the existing SEP at 1800 Jerrold Avenue (former Central Shops) and 1801 Jerrold Avenue (former Asphalt Plant), and on portions of the existing SEP property. Construction staging areas for the BDFP include 1150 Phelps Street (SFPUC's former Greenhouses), 50 Quint Street and may be extended to Pier 94/96 SF Port properties at a later date. The construction will be completed through a Construction Manager/General Contractor delivery approach under two distinct scopes. Scope I focus on the demolition and utility relocation of existing infrastructure at the project sites. Scope II addresses the construction of the new biosolids facilities (the remainder of the work).

Program: Biosolids Digester Facilities Project	**Project Status:** Construction	**Environmental Status:** Completed (EIR)

Project Cost:

Approved	$ 2372.62 M
Forecast	$ 2672.62 M
Actual	$ 1190.30 M

Project Schedule:

Approved 07/01/11	05/11/29
Forecast 07/01/11	05/11/29

Project Percent Complete: 50.4%

Key Milestones		Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	A	10/12/18 A	N/A	08/26/19 A	06/25/21 A
	B	10/12/18 A	N/A	07/01/20 A	07/11/28

Progress and Status:

The project delivery method for this project is Construction Manager/General Contractor (CM/GC). WW-647R CM/GC Construction contract consists of: (A) Scope I, and (B) Scope II. Scope I (Demolition and Utility Relocation) – Complete. Scope II (New Biosolids Facilities - Remainder of the construction work) – Construction of the five (5) digester tanks continues. Water leakage testing is proceeding in two of the five digesters. Mechanical, electrical and plumbing installations have been initiated in the digester basement, solids pretreatment building, and supporting facilities and pipe galleries. Foundation work and underground utilities for biosolids dewatering building are near complete and concrete slabs are being placed. To date, all of the construction of the major biosolids facilities have been bid out and awarded. In addition to Scope I and Scope II, a separate Biogas Utilization Project is underway to ensure beneficial use of the biogas generated from the new digesters. The Biogas Utilization Project under the DB-134 contract, will convert the biogas into renewable natural gas for pipeline injection under a Public-Private Partnership (P3) delivery approach. The Biogas Project may include, but is not limited to, financing, designing, constructing, permitting, operating, and maintaining the biogas facilities, and/or sales and marketing of the produced fuel and renewable fuel credits. A Request for Qualifications (RFQ) for DB-134 was issued in April 2023. The highest qualified proposers from the RFQ advanced to the proposal phase. A final Request for Proposals (RFP) was issued in October 2023. Proposals from the qualified P3 firms are anticipated in March 2024.

Digesters Under Construction

Issues and Challenges:

There is a budget variance of $300M. The increase in construction cost is due to market conditions, such as reduced competition during bidding and on-going supply chain challenges, encountered during the recent bid procurement of the work packages, which resulted in higher than expected costs.

10015807 - SEP New Headworks (Grit) Replacement

Project Description: The new 250 MGD headworks consists of major components / facilities as follows: New Influent Junction Structure and Influent Monitoring; New Primary Influent Distribution Structure; New Bar Screens, Washer-Compacters and Screenings Handling Facility; New Grit Basins, Grit Washers and Grit Handling Facility; A new Odor Control Facility, consisting of a two-stage system with bioscrubbers followed by carbon adsorption; Two new primary substation; Electrical, Instrumentation and Control Rooms/Building; Demolition of both existing Headworks Facilities (SEP-011 and SEP-012); Rehabilitation of the existing Southeast Lift Station; Upgrades to the Bruce Flynn Pump Station.

Program: New Headworks (Grit) Replacement	**Project Status:** Construction	**Environmental Status:** Completed (MND)

Project Cost:

Approved	$ 688.98 M
Forecast	$ 716.68 M
Actual	$ 579.86 M

Project Schedule:

Approved 03/01/13	05/29/26
Forecast 03/01/13	08/31/27

Project Percent Complete: 81.5%

Key Milestones		Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	A	05/31/17 A	N/A	11/15/17 A	05/01/20 A
	B	05/31/17 A	N/A	12/17/18 A	11/14/20 A
	C	05/31/17 A	N/A	07/22/19 A	05/30/25
	D	05/31/17 A	01/02/26	06/04/26	02/26/27

Progress and Status:
The project delivery method for this project is Construction Manager/General Contractor (CM/GC). (A, B, C) WW-628 CM/GC Construction which consist of: (A) Scope I; (B) Scope II.A; and (C) Scope III (D) Demolition Contract – not yet awarded. Scope I (Site Preparation) and Scope II.A (BFS Improvements) – Complete. Scope III (Main Headworks) – Contractor continued work at the influent junction area, fine screen/grit influent splitter, grit tank/grit handling, primary influent distribution, influent pump station, and odor control areas. Contractor completed installation of overhead conduits and emergency lighting fixtures in the electrical room. Contractor began the installation of the overhead crane in the screenings washing room, as well as installation of roofing and insulation. Initiated distributed control system (DCS) cabinets installation in the DCS/security room. For the grit pump room, the contractor began hydrotesting the grit pump discharge piping. For the site wall, the contractor began installation of the metal art wall. The project team continues coordination with Power Enterprises' electrical upgrade projects (SFPUC Contracts WW-662R/ DB-130) to obtain the temporary and permanent power needed for this project.

Art Wall Installation

Issues and Challenges:
Unforeseen conditions associated with existing influent channel structural strengthening requiring additional budget and time. Unprecedented wet weather in 2022-23 and shutdown constraints resulting in additional time required for large force main cutovers. Supply chain issues with odor control systems and major electrical and process equipment, as well as impacts related to the SFPUC and PG&E power feeds, have also contributed to the increase to the project budget and schedule.

10015809 - SEP Facility-wide Distributed Control System Upgrade

Project Description: This project addresses the upgrade/replacement of the existing Wastewater Enterprise (WWE) distributed control system (DCS). The project scope includes planning, design/programming, manufacturing, installation, testing, and commissioning of a new DCS at Southeast Water Pollution Control Plant (SEP). The scope also includes DCS planning & design for Oceanside Water Pollution Control Plant (OSP), Northpoint Wet Weather Treatment Facility (NPF), and all the various pump station facilities within San Francisco.

Program: Southeast Plant (SEP) Improvements	**Project Status:** Design	**Environmental Status:** Not Applicable

Project Cost:

Approved	$ 62.99 M
Forecast	$ 73.00 M
Actual	$ 24.87 M

Project Schedule:

Approved 02/13/14	12/30/27
Forecast 02/13/14	12/30/27

Project Percent Complete: 53.5%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	N/A	N/A	12/31/18 A	06/30/27

Progress and Status:
Coordination with the BDFP project team and the various instrumentation / process vendors continued during this reporting quarter. Field test and commissioning of the DCS in the new SEP Headworks facility is also ongoing. DCS field verification activities prior to start of DCS design at Oceanside Water Pollution Treatment Facility (OSP) were initiated. ** Note in regard to the above table: Environmental Management Group (EMG) has determined upgrades to the DCS Controls involves primarily computer hardware and software which do not fall within the definition of a “project” under CEQA because there would be no physical change in the environment. The project delivery method for this project is Progressive Design-Build with pre-design/design components. Construction Notice to Proceed (NTP) represents start of fabrication/manufacturing.

Issues and Challenges:
The project level budget change is due to: (1) The Progressive Design Builder’s proposed estimate to provide DCS design services at Oceanside Water Pollution Treatment Plant, Westside Pump Station, and other ancillary pump stations. (2) The discovery of WWE’s process control network during the Design Builder’s field verification effort. This process control network will need to be replaced. (3) And finally, the additional effort to coordinate and design the DCS alongside SSIP’s Biosolids Digester project. As per the team’s experience coordinating with other ongoing SSIP capital projects and each project’s various instrumentation / process vendors, the team is estimating that the level of effort to coordinate with the BDFP project team will quadruple given the complexity of the Biosolid project’s scope of work.

Headworks DCS Software Operational Readiness Tests

10002284 - SEP Power Feed and Primary Switchgear Upgrades

Project Description: The objective of the project is to increase reliability, redundancy and capacity of the electrical system at Southeast Plant (SEP) to meet Sewer System Improvement Program (SSIP) level-of-service (LOS) goals by upgrading the existing power feed by PG&E and obtaining a new feed by Power Enterprise. The project will construct an elevated building to house the new Primary Power Switch Station and substructures to provide adequate power for the existing electrical loads and new SSIP facilities, upgrade/replace aging existing substations, install power monitoring and protection system for additional reliability and efficiency, as well as provide redundant services to the nearby pump stations.

Program: Southeast Plant (SEP) Improvements	**Project Status:** Construction	**Environmental Status:** Completed (Cat Ex)

Project Cost:

Approved	$ 95.88 M
Forecast	$ 95.88 M
Actual	$ 66.49 M

Project Schedule:

Approved 06/23/14	05/30/25
Forecast 06/23/14	03/31/26

Project Percent Complete: 65.1%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	02/22/18 A	02/20/20 A	10/05/20 A	08/21/24

Progress and Status:

Patch panels cassettes were installed/tested to accommodate Headworks project fiber optics requirements. Substations 9 and 10 were delivered to the warehouse for storage after its factory acceptance test. The contractor continued the installation of substation 2A and substation 11 components at SEP 892, as well as installation of various electrical, I&C and structural systems at Bruce Flynn Pump Station. Due to unavailability of SFPUC power, the substation cut-over work was still postponed. The project team continued to coordinate with Bay Corridor and Transmission Distribution (BCTD) project for re-energization of SFPUC power circuit feeding SEP 032.

Issues and Challenges:

The project schedule needs to be extended by ten months to accommodate for potential risk of delays of SFPUC power delivery/energization of circuit feeding SEP, process cutover work and installation of PG&E power service lateral to SEP.

Relay Testing of Primary Switchgear

10037353 - SEP 550 Booster PS Condition Inspection & Interim

Project Description: This project includes condition assessment of the influent channel and wet wells (confined space entry), as well as a budget allowance to perform concrete rehab on two wet wells and minor repairs to the influent channel. A firmer estimate to complete the repairs will depend on the results of the inspection. To inspect the influent channel, work must occur during dry weather and the plant must either be shut down or treated effluent diverted to Quint Street Outfall (QSO). Shutdowns may last up to 8 hours, and coordination/approval is needed with the Regional Water Quality Board to allow diversion through QSO. Mechanical equipment rehab is also included as part of the interim improvements. These include replacing (2) sump pumps (SE550SP1 and SE550SP2), water heater (SE550H, air relief valve, booster pumps, and all Variable Frequency Drives (VFD) (4).

Program: Southeast Plant (SEP) Improvements	**Project Status:** Design	**Environmental Status:** Active (Cat Ex)

Project Cost:

Approved	$ 20.30 M
Forecast	$ 31.26 M
Actual	$ 0.99 M

Project Schedule:

Approved 01/12/21	01/21/28
Forecast 01/12/21	06/30/28

Project Percent Complete: 4.7%

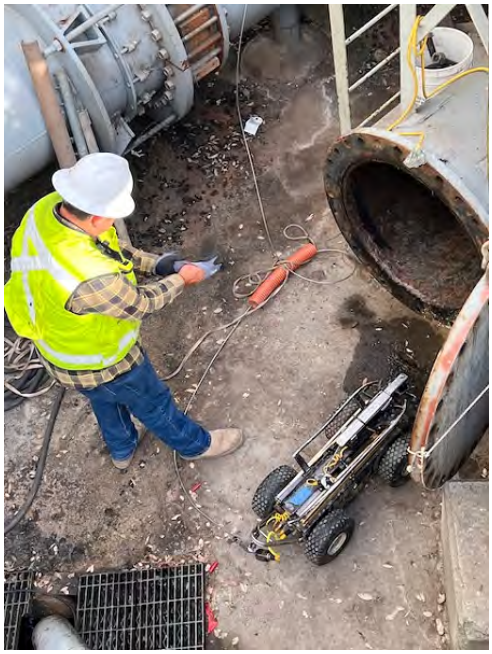
Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	03/31/25	05/01/25	12/01/25	12/31/27

Progress and Status:

In this reporting period, the project team issued the draft design criteria and 35% design package for review. The stakeholder presentation and final package is anticipated to be complete in the next reporting period. Project team completed the permit analysis checklist for early design and coordination with the Environmental Management Group for CEQA clearance is ongoing. Design phase risk register development was also initiated.

Issues and Challenges:

The increase to the project budget reflects the latest conceptual engineering report (10% design) cost estimate for the project scope of work. The increase to the construction costs is primarily related to scope refinement, market conditions and escalation factors. The increase to the project schedule is related to an extended design phase to properly sequence the construction activities due to wet weather constraints and to accommodate an actively used Booster Pump Station. Furthermore, the bid and award phase is extended from 6 to 8 months.



Interior CCTV camera inspection of the discharge manifold

10038373 - SEP Booster PS & BFS Security Enhancements

Project Description: The project involves, upgrading card readers and door contacts at all perimeter doors and ensuring proper operation; Replacing and furnishing gates and gate operators including structural support, electrical power and controls; Adding protective cages around outdoor chemical and electrical equipment, including an allowance for replacing/repairing the existing perimeter fence and fence support as needed; Furnishing, installing, and configuring servers for video recording, management and analytics; Configuring security fiber optic connectivity and adding video camera units and local recording; Pruning the landscaping, adding new security signage, and upgrading to dusk- activated LED lighting; Establishing a visitor management system and installing turnstile; Monitoring improvements (e.g. developing mobile tablet security video monitoring capability, establishing a security monitoring center, a tablet-based security incident response reporting template and setting up an automatic video archiving process across all Wastewater Enterprise sites); Providing interior intrusion detection of critical assets; Adding interior presence sensing connected to an intrusion detection panel and alarming to security; Upgrading UPS backup power to serve security components; Adding new security signage with "No Trespassing", applicable penal code and emergency contact information; and, adding a main distribution frame (MDF) to BFS SEP Fire Alarm, PA system, business network and radio communications.

Program: Southeast Plant (SEP) Improvements	**Project Status:** Planning	**Environmental Status:** Active (Cat Ex)

Project Cost:

Approved	$ 35.76 M
Forecast	$ 35.76 M
Actual	$ 0.92 M

Project Schedule:

Approved 01/18/22	12/10/27
Forecast 01/18/22	03/01/28

Project Percent Complete: 6.1%

Key Milestones		Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	A	08/30/24	05/30/24	12/02/24	08/31/27
	B	08/30/24	05/30/24	01/22/25	07/10/27

Progress and Status:

This project includes multiple components: (A) Security Enhancements, and (B) Fiber Optic, Phone, and Paging System. Project Security Enhancements include improvements at the Southeast Water Pollution Control Plant (SEP), Islais Creek Booster Station (SEP 550) & Bruce Flynn Pump Station (BFS). During this reporting period, the project team prepared technical memoranda and Final Alternatives Analysis Report - Conceptual Engineering Reports (AAR-CERs) to issue for approval. The project team continues to coordinate with WWE, SFPUC Information Technology Services (ITS), SFPUC Security, and other stakeholders regarding security enhancements, as well as configuration of security fiber optic connectivity and servers needed for video recording, management, and analytics.

Existing Cameras on a Building at SEP

Issues and Challenges:

The increase in overall project duration is primarily due to lack of resource availability during the project's planning phase. The project team continues to monitor potential schedule delays due to resource availability and associated impacts to the planning and design phases' delivery milestones. An alternative delivery process is also currently being considered and incorporated into the forecasted schedule.

10037330 - Primary Treatment (SEP 040/041) H&S Improvements

Project Description: Improvements to the existing ventilation system is proposed. In addition, repair of concrete cracks/deficiencies and rebar exposure will be provided, as well as, replacement of two (2) deteriorating dilution fans, interior/exterior lighting upgrades, replacement of selective guardrails, consolidation of electrical motor control center equipment, installation of induction mixers, miscellaneous piping relocation, and removal of abandoned assets. Furthermore, additional instrumentation and control scope of work is proposed to facilitate remote control of the facility.

Program: Southeast Plant (SEP) Improvements	**Project Status:** Design	**Environmental Status:** Completed (Cat Ex)

Project Cost:

Approved	$ 25.23 M
Forecast	$ 29.60 M
Actual	$ 2.92 M

Project Schedule:

Approved 01/04/21	12/07/26
Forecast 01/04/21	03/31/28

Project Percent Complete: 11.9%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	07/12/23 A	03/01/24	08/31/24	09/30/26

Progress and Status:

During this reporting period, the project team issued the final 95% design package and began development of 100% design. Coordination with Contract Administration Bureau (CAB) and contracts standards manager as it relates to bidding documents. Contract advertisement is anticipated in the next reporting period. Project team continues to coordinate with stakeholders regarding construability reviews and staging area constraints.

Issues and Challenges:

Due to planned Biosolids Digester Facilities Project work in SEP 042 (Dry Weather Primary Sedimentation Tanks) in the dry weather seasons of 2024 and 2025, SEP 040/041 (Wet Weather Primary Sedimentation Tanks) must be operational during the dry weather period. The motor control center and switchboard scope of work under this project requires a prolonged shutdown of SEP 040/041. The increase to the project budget is needed to account for temporary utilities to maintain operation of SEP 040/041 during construction, and as well as associated increase to project delivery costs. The increase to the project schedule reflects additional construction duration contingency in the event an additional dry weather period is needed to facilitate construction.

Existing SEP-041 Wet-Weather Primary Sedimentation Building.

10037331 - Maintenance Building (SEP 940) Interim Improvement

Project Description: Building 940 is a critical interim project for the Southeast Plant. This is an interim project while the long-term vision and improvements under the SEP Campus Plan is being developed. The following improvements form the basis of this project, space will be modified to include interim Electrical and Instrumentation and Controls (I&C) shop areas; HVAC Improvements including evaluation (and installation as-needed) of wet grinder filtration system, condensing unit, and welding exhaust system); and, H&S Improvements (emergency lights, signs, trip hazards, safe roof access).

Program: Southeast Plant (SEP) Improvements	**Project Status:** Design	**Environmental Status:** Active (Cat Ex)

Project Cost:

Approved	$ 40.65 M
Forecast	$ 20.90 M
Actual	$ 1.21 M

Project Schedule:

Approved 01/12/21	01/09/29
Forecast 01/12/21	02/04/28

Project Percent Complete: 8.3%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	09/30/24	11/01/24	06/02/25	08/03/27

Progress and Status:

During this reporting period, the project team issued the draft 65% design package. The project team held a review workshop with all stakeholders and are reviewing all comments. The final 65% design package is anticipated to be complete in the next reporting period. The project team continues coordination with WWE regarding accommodations for displaced staff during construction. Coordination with the Environmental Management Group for CEQA clearance is ongoing.

Issues and Challenges:

Upon completion of the seismic study evaluation, it was determined that a seismic retrofit of the entire building was not needed. The decrease in project budget reflects the conceptual engineering report (10% design) cost estimate for the identified scope of work. The decrease in the project budget reflects a shortened design phase and anticipated construction duration.

Interior of Bldg. SEP 940

10039505 - New Trades & Maintenance Buildings

Project Description: The project involves the following components, Interim Facilities:Removal of SEP 850 requires relocation of the building occupants and its facilities to interim space. Interim office space and shower facilities are required to support the larger work of developing the Campus. This will include further evaluation on the reuse of 1800 Oakdale and replacement of trailers at SEP. Funding includes site preparation and installation of temporary structures. Demolition of SEP 850: Site clearance includes demolition of SEP 850 and trailers at SEP 850. Demolish of SEP 850 includes boiler that serves SEP 930, requiring installation of local hot water solution for SEP 930. New Trades and Mechanical Maintenance Buildings (SEP 603 and 914): The project will replace SEP 850 and the adjacent parking lot at Jerrold and Phelps, an area just under one acre, with two new buildings, SEP 603 and SEP 914. Building SEP 603 is a single story, 9,800 square foot, Mechanical Maintenance building for crews 402, 402, and 404 shops. Building SEP 914 is a two-story, 28,250 square foot building, consisting of shops for Painters, Carpenters and Plumber on the ground floor and shower and locker facilities on the second floor.

Program: Southeast Plant (SEP) Improvements	**Project Status:** Design	**Environmental Status:** Active (EIR)

Project Cost:

Approved	$ 87.15 M
Forecast	$ 171.88 M
Actual	$ 2.34 M

Project Schedule:

Approved 11/01/22	06/25/27
Forecast 11/01/22	08/31/28

Project Percent Complete: 3.7%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	02/28/25	N/A	05/12/25	02/29/28

Progress and Status:

The project issued a Construction Manager/General Contractor (CM/GC) Request for Proposals in August and received four proposals in October. The proposals were evaluated and scored by a panel. Award of the contract will be scheduled to go to the Commission early 2024.

Issues and Challenges:

Variances in the budget and schedule are due to changes to the scope and escalation costs.

Updated Rendering

10039310 - Secondary Clarifiers (SEP230) Rehabilitation

Project Description: The components of the project at SEP 230 for the remaining eight clarifiers include performing inspections of confined spaces considering operational constraints; Rehabilitating concrete, repairing and coating, including patching and coating for basin areas exposed to wet weather conditions; Replacing collector mechanisms, sludge collectors, and drives; Inspecting mixed liquor dewatering gates and replacing as needed; Evaluating mixed liquor system (including assessment of the ventilation; the mixed liquor channels are covered but do not have ventilation which may be causing concrete corrosion issues); Replacing area lighting with watertight fixtures (LED lighting has corroded); Coordinating with plant-wide door contract on updates associated with SEP 230; Increasing pedestrian safety adjoining vehicular access areas (includes repaving, regrading, and striping).

Program: Southeast Plant (SEP) Improvements	**Project Status:** Planning	**Environmental Status:** Not Initiated (TBD)

Project Cost:

Approved	$ 51.95 M
Forecast	$ 51.95 M
Actual	$ 0.85 M

Project Schedule:

Approved 10/03/22	06/26/28
Forecast 10/03/22	11/30/29

Project Percent Complete: 2.9%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	09/30/24	03/25/25	09/01/25	05/31/29

Progress and Status:

During the reporting period, the project team issued the Draft Alternatives Analysis Report-Conceptual Engineering Report (AAR-CER) and conducted the client workshop in October 2023. The project team continues to coordinate with stakeholders, such as WWE, on the secondary clarifiers' performance and rehabilitation needs.

Issues and Challenges:

The project's extended schedule accounts primarily for construction phasing which extends the construction duration. The project team continues to monitor potential schedule delays and explore alternative project delivery methods.

One of the Secondary Clarifiers To be Replaced Under This Project

10039811 - SEP Condition Improvement Projects - Part 1

Project Description: Project involves relocation of Sodium Bisulfite Tanks (SEP 515) to the vicinity of the effluent disinfection location (SEP 521/522). Scope of work consists of: geotechnical/structural analysis to support the new bisulfite tanks and other ancillary systems. Electrical, controls and mechanical piping for the new bisulfite chemical injection system is also included in the scope of work. Project funding covers only planning and design phases.

Program: Southeast Plant (SEP) Improvements	**Project Status:** Planning	**Environmental Status:** Not Initiated

Project Cost:

Approved	$ 3.76 M
Forecast	$ 16.01 M
Actual	$ 0.33 M

Project Schedule:

Approved 01/17/23	08/29/25
Forecast 04/03/23	10/29/27

Project Percent Complete: 3.0%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	05/02/24	03/03/25	11/03/25	04/30/27

Progress and Status:
Surveying and potholing activities were completed in November 2023. Project team completed the draft combined Needs Assessment/Alternatives Analysis/Conceptual Engineering Report, and held a presentation for stakeholders. Project team is in the process of gathering and addressing review comments from all the stakeholders. The final report is anticipated in the next reporting period.

Issues and Challenges:
The increase to budget and schedule reflects the inclusion of construction, bid & award, and closeout phases to the project. Furthermore, there was a delay in starting this project due to lack of resources, and more time was needed for design phase.

Existing Sodium Bisulfite Tanks

10029736 - Westside Pump Station Reliability Improvements

Project Description: The project consists of screenings improvements including, replacement of existing bar screens, and addition of screening washing and compaction systems. The project also includes replacement of existing wet-weather pumps to provide pump redundancy. The construction would take place within the existing structure and includes four new submersible pumps and 200 linear feet (LF) of discharge force main. Other improvements under this project include increasing the power feeder capacity at WSS to account for additional wet weather pumping capacity and provide a reliable redundant power source from PG&E, and replacement of the existing odor control units at the WSS with dilution ventilation fans and ducting.

Program: Oceanside Plant (OSP) Improvements	**Project Status:** Construction	**Environmental Status:** Completed (Cat Ex)

Project Cost:

Approved	$ 89.30 M
Forecast	$ 93.30 M
Actual	$ 52.03 M

Project Schedule:

Approved 06/13/13	12/31/24
Forecast 06/13/13	06/30/26

Project Percent Complete: 88.9%

Key Milestones		Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	A	06/13/13 A	05/06/14 A	10/15/14 A	03/27/17 A
	B	04/20/17 A	09/08/20 A	04/19/21 A	12/15/25

Progress and Status:
Project includes multiple construction contracts: (A) WW-572R Westside Pump Station Discharge Pipe Manifold Upgrade contract closeout has been completed. Environmental approval for this contract was achieved in Project CWWRNRTF47 as presented in the table above. (B) WW-645R Westside Pump Station Reliability Improvements contract construction phase activities continue. During this reporting period, the Contractor furnished and installed new underground power service conduits and vault infrastructure. At the new electrical building, the Contractor furnished and installed the ventilation system ductwork, and performed exterior concrete finish work. The SFPUC continues to closely track PG&E power service application review progress and continues to evaluate mitigations to potential construction progress delays associated with PG&E power service.

Issues and Challenges:
The project is forecasting an increase in overall budget to allow for future pending modifications due to unforeseen site civil, structural, instrumentation & control, and electrical modifications, PG&E electric service and associated project costs.

Westside PS new power service precast vault installation in November 2023.

10029737 - OSP Digester Gas Utilization Upgrade

Project Description: In this project, the gas storage vessel and digester gas conditioning equipment will be replaced. The existing cogeneration Internal-Combustion units (IC engines) and controls will also be replaced. Other improvements include providing an ancillary exhaust gas conditioning and heat exchanger systems to comply with regulatory air board requirements. Improved reliability and redundancy of hot water and electrical energy production systems, as well as, ventilation upgrades will maximize process efficiency within the energy recovery building. The electrical gear at Sub-Station No. 5 will be replaced to provide parallel electrical gear and power system reliability.

Program: Oceanside Plant (OSP) Improvements	Project Status: Construction	Environmental Status: Completed (Cat Ex)

Project Cost:

Approved	$ 62.58 M
Forecast	$ 69.58 M
Actual	$ 49.50 M

Project Schedule:

Approved 10/01/13	03/29/24
Forecast 10/01/13	06/02/25

Project Percent Complete: 82.3%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/14/17 A	04/25/18 A	11/26/18 A	12/31/24

Progress and Status:

WW-639 Oceanside Water Pollution Control Plant Digester Gas Utilization Upgrade contract construction phase activities continue. During this reporting period, at Building 800 the Contractor continues mechanical and electrical rough-in of major equipment items, cogeneration engines, heat exchangers and loop pumps, electrical substation No. 5 transformer, and motor control centers. At building 821, the Contractor installed the 500 kW generator exhaust system, 15 kW exhaust system, ventilation ductwork and equipment. To meet requirements of PG&E Interconnection Agreement, PG&E has required the project install a PMH-3 switch assembly. The procurement of the PMH-3 switch assembly will result in construction schedule delay. The SFPUC continues to coordinate closely with PG&E and the Contractor on project compliance items and associated project schedule impacts.

Issues and Challenges:

The project is forecasting an increase in overall budget to allow for future pending modifications due to structural, mechanical, ventilation, instrumentation & control, and electrical modifications, PG&E electric interconnection equipment and associated project costs.

Building 821 500 kW generator exhaust system installation in December 2023.

10037733 - Solids Thickening (OSP 011) Process Upgrade

Project Description: Depending on the status of the R&R project (CWWRNRTFA8) to replace the GBT with RDT, an alternatives evaluation should be performed to confirm the selected thickening technology. As a basis, this project assumes replacement of the two remaining GBTs and installation of two new RDTs that can thicken a combination of primary sludge, waste activated sludge, and secondary scum. The scope of the project also includes the replacement of corroded pipe, room fixtures, demolition of the existing units and ventilation improvements, such as: Demolishing the two existing GBTs; Installing two new RDTs and associated controls; Replacing the three existing washwater booster pumps, piping, and appurtenances; Installing hot water lines, redundant primary scum skimmer, ventilation system, two fixed hydrogen sulfide sensors in the Gravity Belt Thickener Room, new ultrasonic pulsar level sensor in the TPAS tank and improving the mixing system in the tank; Redesign the drains on existing and new drum screens; Replace the three thickened sludge pumps, corroded pipes, window frames, doors, floor gates, and tiles; Upgrade electrical components and DCS control of the new system; Address residual thickening area odor issues that were not addressed by the OSP Ventilation (HVAC) Upgrades Project.

Program: Oceanside Plant (OSP) Improvements	**Project Status:** Design	**Environmental Status:** Not Initiated (TBD)

Project Cost:

Approved	$ 20.22 M
Forecast	$ 20.22 M
Actual	$ 0.47 M

Project Schedule:

Approved 07/06/21	09/03/26
Forecast 01/25/22	03/10/28

Project Percent Complete: 3.6%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	12/31/24	02/04/25	08/29/25	07/01/27

Progress and Status:

During this reporting period, the CER was issued and the project team completed design phase kick-off in October 2023, and continuing to assemble design phase deliverables.

Issues and Challenges:

The project has been delayed due to lack of available resources. At the end of 2023, SFPW has staffed the project and is preparing design phase deliverables.

Proposed new Rotary Drum Thickener (RDT) and associated flocculation tank assembly

10037734 - OSP Plant-wide Ventilation (HVAC) Upgrades

Project Description: A wide range of HVAC-related improvements were identified as part of the OSP Condition Assessment Repairs Project. It was determined that a plant-wide air handling performance evaluation be conducted to determine if the ventilation systems are meeting requirements and to better identify needed HVAC improvements. OSP 011: Replace inadequate duct supports in OSP 011 hallway areas; Duct supports within exhaust fan room at OS70EF1-1 thru -3 and OS70EF1-5 and -6 needs to be refastened/replaced; Coordination of HVAC evaluation, design and construction under the OSP Solids Thickening Process Upgrades project. OSP 530: Assess ventilation issues if keeping the temporary chemical station from the Recycle Water Project. OSP 620: Replace all HVAC equipment. Based on results of the plant-wide air handling performance evaluation, make provisions for increasing air ventilation rates in order to declassify area from Class 1 Division 1 to Class 1 Division 2; Replace Fiberglass Reinforced Plastic (FRP) ducts in digester basement serving fans 70EF19-1, 2. Replace HVAC equipment at OSP 042, OSP 230, and OSP 930.

Program: Oceanside Plant (OSP) Improvements	**Project Status:** Planning	**Environmental Status:** Not Initiated (TBD)

Project Cost:

Approved	$ 7.35 M
Forecast	$ 22.58 M
Actual	$ 0.31 M

Project Schedule:

Approved 07/06/21	09/03/26
Forecast 01/26/22	07/16/27

Project Percent Complete: 3.9%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	04/30/25	06/04/25	01/05/26	01/15/27

Progress and Status:

During this reporting period, the project team continues to finalize planning phase project deliverables and prepare a design phase kick-off targeted in January 2024.

Issues and Challenges:

The project is forecasting an overall budget increase based on updated cost estimate presented in the Conceptual Engineering Report. The project has been delayed due to lack of available resources at the end of 2023, SFPW has staffed the project and targeting to kick-off design phase deliverables in January 2024.

Existing Exhaust Fan Assembly Identified for Replacement at Building 011 Exhaust Fan Room.

10036398 - OSP Condition Improvement Projects - Part 2

Project Description: The OSP Condition Assessment Repairs project will include major improvements to the plant, aimed to address the reliability of existing assets that have deteriorated over the years. This project includes planning, design and environmental review of improvements to address the age, deterioration and reliability of existing assets at OSP that are not specifically included in the other SSIP projects. This project includes rehabilitation of building structures, rehabilitation or replacement of mechanical and electrical equipment, and seismic retrofit of process tanks and buildings. Improvements focus on maintaining operational reliability and extending the service life of buildings that are required to remain in operation for 30 years or more.

Program: Oceanside Plant (OSP) Improvements	**Project Status:** Multi-Phases	**Environmental Status:** Active (Various)

Project Cost:

Project Schedule:

Project Percent Complete: 18.1%

Key Milestones		Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	A	07/03/24	01/02/25	07/23/25	07/22/27
	B	03/31/26	09/02/25	04/09/26	04/10/28
	C	04/15/25	09/29/25	05/06/26	05/05/28
	D	03/06/26	08/05/26	01/04/27	12/27/29
	E	10/19/20 A	09/22/21 A	05/16/22 A	08/12/24
	F	03/03/18 A	06/22/22 A	12/19/22 A	09/03/25
	G	12/14/21 A	N/A	05/12/22 A	10/31/23 A

Progress and Status:

The project includes multiple construction contracts: (A) OSP 620 Digestion H&S, Mech Improvements, OSP 800 Mech Improvements: During the reporting period, the project team advanced the detail design of these project elements. (B) OSP 011 Polymer & Ferric Chloride Replacement: Sub scope not initiated. (C) OSP 042 Primary Clarifiers Structural and Mechanical Improvements: Sub scope not initiated. (D) OSP 200 Aeration Tanks Structural and Mechanical Improvements: Sub scope not initiated. (E) WW-648 OSP Building 042 Primary Clarifier Improvements: Construction activities continue, the Contractor continues to install W3 water lines, spray nozzles, mechanical and electrical equipment rough-ins in Clarifier Tanks No. 4 and No. 5. (F) WW-669 OSP Building 011 Grit Classifier & Preliminary Influent Slide Gate System Improvements: The Contractor installation of the new slide gates and butterfly valves is on-going. (G) JOC 53R3-15 OSP UPS Assembly Replacements: Installation of the four (4) Uninterruptable Power Supply systems has been completed. Contractor is working on submitting final construction documents.

Project (E) WW-648 OSP Building 042 Primary Clarifier Improvements, Tank No. 5 helical scum skimmer installation in December 2023.

Issues and Challenges:

The project is forecasting schedule delay due to lack of available staff resources.

10037735 - Admin Bldg (OSP 930) Health & Safety Improvements

Project Description: This project involves an evaluation of NPF 930 to provide safe working conditions for employees. The interim rehabilitation components will be identified during the planning, but as a basis, the following items are assumed: Interim structural repairs; Replacing roll-up doors, UPS for the emergency lighting system, and elevator; Rehabilitate HVAC system; Electrical improvements on Southside buildings; Assess and replace crane, if needed; Evaluate area and use of dewatering sump pumps; Replace pumps, piping, valves, and EI&C; Inspect and replace guardrails/handrails; Install fire sprinklers, alarms, and exit lighting; Replace and install new lighting.

Program: Oceanside Plant (OSP) Improvements	**Project Status:** Design	**Environmental Status:** Not Initiated (TBD)

Project Cost:

Approved	$ 5.71 M
Forecast	$ 9.65 M
Actual	$ 0.37 M

Project Schedule:

Approved 02/01/22	01/21/27
Forecast 02/01/22	07/08/27

Project Percent Complete: 6.3%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	11/27/24	01/02/25	08/01/25	01/07/27

Progress and Status:

During this reporting period, the CER was issued, and the project team completed design phase kick-off in November 2023.

Issues and Challenges:

The project is forecasting an increase in overall budget for project scoped elements within Building 930, as detailed in the Conceptual Engineering Report. The project is forecasting schedule delay due to lack of available staff resources.

Existing Laboratory Fume-Hood Assembly Identified for Replacement at Building 930 Laboratory.

10037777 - OSP & WSPS Security Enhancements

Project Description: The project involves upgrading card readers and door contacts at all perimeter doors and ensuring proper operation; Replacing and furnishing gate and gate operator including structural support, electrical power, and controls; Adding protective cages around outdoor chemical and electrical equipment, including an allowance for replacing/repairing the existing perimeter fence and fence support as needed; Furnishing, installing and configuring servers for video recording, management, and analytics; Configuring security fiber optic connectivity and adding video camera units and local recording; Establishing prune landscaping, adding new security signage, and upgrading lighting to dusk-activated LED lighting; Adding interior presence sensing connected to an intrusion detection panel and alarming security.

Program: Oceanside Plant (OSP) Improvements	**Project Status:** Planning	**Environmental Status:** Active (Cat Ex)

Project Cost:

Approved	$ 13.78 M
Forecast	$ 13.78 M
Actual	$ 0.52 M

Project Schedule:

Approved 08/02/21	11/19/27
Forecast 08/02/21	03/01/28

Project Percent Complete: 6.5%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	08/30/24	05/30/24	12/02/24	08/31/27

Progress and Status:

During this reporting period, the Final Needs Assessment Report (NAR) was approved. The project team issued the Draft Alternatives Analysis Report-Conceptual Engineering Report (AAR-CER) and conducted the client workshop in November 2023. The project team continues to coordinate with WWE, SFPUC Information Technology Services (ITS), SFPUC Security, and other stakeholders regarding security enhancements, as well as configuration of servers needed for video recording, management, and analytics.

Issues and Challenges:

The increase in overall project duration is primarily due to lack of resource availability during the project's planning phase. The project team continues to monitor potential schedule delays due to resource availability and associated impacts to the planning and design phases' delivery milestones. An alternative delivery process is also currently being considered and incorporated into the forecasted schedule.

Existing East Vehicle Entrance at Oceanside Water Pollution Control Plant

10039193 - Gaseous Oxygen System (OSP 011) Upgrades

Project Description: The appropriate technology and alternative would be explored in the project's planning phase, but as a basis for this project, replacement of the PSA units with vacuum pressure swing adsorption (VPSA) units is assumed. PSA reduces the desorption pressure compared to VPSA, which allows for a higher percentage of available oxygen to be recovered and less air to be processed. This project includes the replacement/upgrade of the existing gaseous oxygen (GOX) system at OSP as detailed below: 1. Demolish/remove the three (3) existing 10 ton per day PSAs 2. Install two (2) new 10 ton per day VPSAs 3. Replace the GOX line connecting the VPSAs to the OSP 200 Aeration Basins,

Program: Oceanside Plant (OSP) Improvements	**Project Status:** Planning	**Environmental Status:** Not Initiated (TBD)

Project Cost:

Approved	$ 22.35 M
Forecast	$ 22.35 M
Actual	$ 0.04 M

Project Schedule:

Approved 01/03/23	05/08/29
Forecast 01/03/23	05/08/29

Project Percent Complete: 0.5%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/30/25	06/03/26	01/04/27	12/01/28

Progress and Status:

During this reporting period, the project team performed a preliminary as-found condition field investigation and related planning phase activities. The project team is targeting the Needs Assessment Report kick-off in January 2024.

Issues and Challenges:

None at this time.

As-found Condition of Existing Pressure Swing Absorption (PSA) Oxygen Generation Process Equipment

10026822 - North Shore Pump Station Wet Weather Improvements

Project Description: The purpose-of this project is to provide redundant effluent pumping capacity at North Shore Pump Station (NSS) during wet weather. This project will replace existing four (4) dry weather pumps with larger capacity units so that 3 of the 4 pumps are capable of pumping 75 MGD during wet weather. The project also includes upgrades to the motor control centers (MCCs) and distributed control system (DCS). The implementation of this project will ensure reliable and efficient operation in keeping with the LOS and maintain regulatory compliance.

Program: North Point Facility (NPF) Improvements	**Project Status:** Construction	**Environmental Status:** Completed (Cat Ex)

Project Cost:

Approved	$ 55.03 M
Forecast	$ 51.30 M
Actual	$ 36.58 M

Project Schedule:

Approved 08/15/13	12/27/24
Forecast 08/15/13	06/30/25

Project Percent Complete: 80.2%

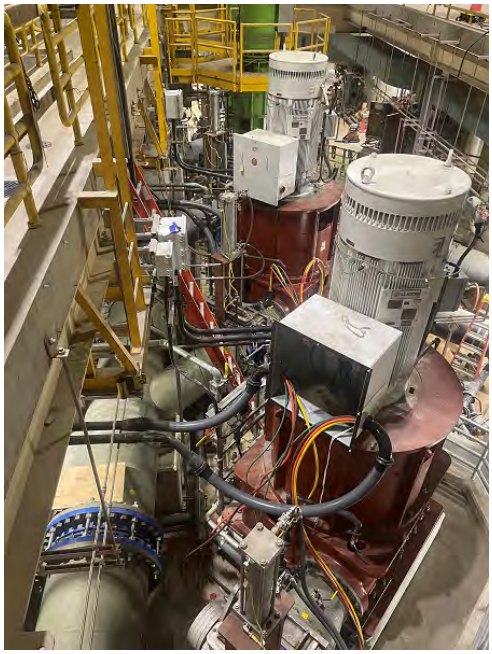
Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	10/13/17 A	10/08/20 A	04/19/21 A	12/31/24

Progress and Status:

During this reporting period, the contractor continued electrical cutovers to new motor control centers. Steel beams installation and field welding was performed in the elevator shaft. Test reports were submitted and are under review for startup/testing of the dewatering pumps. Operations staff participated in a training session on the newly installed chemical system. The contractor also performed distributed control system communication testing related to the variable frequency drives.

Issues and Challenges:

The increase to the project schedule is related to additional time needed to complete cutovers and startup testing of dry weather pumps. Furthermore, additional time is required to coordinate between the system integrator and the distributed control systems provider. The decrease in the project budget is related to anticipated project savings.



Ongoing installation of Dry Weather Pumps Nos. 1 & 2

10037325 - Admin Bldg (NPF 930) Evaluation & Interim H&S Improvements

Project Description: This project involves an evaluation of NPF 930 to provide safe working conditions for employees. The interim rehabilitation components will be identified during the planning, but as a basis, the following items are assumed: Interim structural repairs; Replacing roll-up doors, UPS for the emergency lighting system, and elevator; Rehabilitate HVAC system; Electrical improvements on Southside buildings; Assess and replace crane, if needed; Evaluate area and use of dewatering sump pumps; Replace pumps, piping, valves, and EI&C; Inspect and replace guardrails/handrails; Install fire sprinklers, alarms, and exit lighting; Replace and install new lighting.

Program: North Point Facility (NPF) Improvements	**Project Status:** Planning	**Environmental Status:** Not Initiated (TBD)

Project Cost:

Approved	$ 7.93 M
Forecast	$ 22.69 M
Actual	$ 0.79 M

Project Schedule:

Approved 01/03/22	08/27/27
Forecast 03/01/22	09/29/28

Project Percent Complete: 4.9%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/30/25	07/30/25	03/02/26	03/28/28

Progress and Status:

In this reporting quarter, the project team reviewed and addressed all stakeholder comments and issued the final combined Alternatives Analysis/Conceptual Engineering Report. Coordination with the Environmental Management Group as it relates to CEQA clearance is ongoing. The project team held a meeting with SFFD to discuss fire road and exit gate requirements. Also, the project team initiated coordination with NPF security project team regarding card readers and camera locations.

Issues and Challenges:

The increase to the project budget reflects the latest conceptual engineering report (10% design) cost estimate for the project scope of work. The increase to the construction cost is primarily related to scope refinement, market conditions and escalation factors. Furthermore, additional design services are needed to facilitate the utility connections and SFFD compliance related to the modular trailers. The increase to the project schedule is related to an extended design phase, as well as extended construction duration due to anticipated long lead items such as modular trailer units and select electrical equipment.

WWE Staff and Design Team Surveying Existing Obsolete Electrical Equipment at NPF 930 Administration Building

10037904 - NPF & NSS Security Enhancements

Project Description: The components of the project include upgrading continental card reader access control; Replacing and furnishing gate and gate operator including structural support, electrical power, and controls; Adding protective cages around outdoor equipment, and repairing/replacing perimeter fence; Furnishing, installing, and configuring servers; Configuring security fiber optic connectivity and adding video camera units; Adding signage, lighting, and pruning landscaping; Provide interior presence sensing connected to intrusion detection panel.

Program: North Point Facility (NPF) Improvements	**Project Status:** Planning	**Environmental Status:** Active (Cat Ex)

Project Cost:

Approved	$ 17.85 M
Forecast	$ 17.85 M
Actual	$ 0.54 M

Project Schedule:

Approved 01/18/22	01/12/28
Forecast 01/18/22	03/01/28

Project Percent Complete: 5.5%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	07/30/24	05/30/24	12/02/24	08/31/27

Progress and Status:
During this reporting period, the Final Needs Assessment Report (NAR) has been approved. The project team prepared the Final Alternatives Analysis Report - Conceptual Engineering Report (AAR-CER) to issue for approval. The project team continues to coordinate with WWE, SFPUC Information Technology Services (ITS), SFPUC Security, and other stakeholders regarding security enhancements, as well as configuration of servers needed for video recording, management, and analytics.

Issues and Challenges:
The increase in overall project duration is primarily due to lack of resource availability during the project's planning phase. The project team continues to monitor potential schedule delays due to resource availability and associated impacts to the planning and design phases' delivery milestones. An alternative delivery process is also currently being considered and incorporated into the forecasted schedule.

Temporary Chain Link Fence at North Point Facility

10038353 - NPF DCS Upgrades (Construction)

Project Description: This project will replace the aging control system infrastructure at the Northpoint Wet Weather Treatment Facility (NPF) and Northshore Pump Station (NSS), as the existing distributed control system (DCS) equipment are obsolete. The needed upgrades include replacement of all existing DCS hardware and software as specified by the Facility-Wide DCS Upgrades progressive design-build contract, replacement of aging control panels, annunciator panels, disconnect switches, bare grounding wiring and control devices. The design of the new DCS in the Northpoint facilities is scoped to be performed under SSIP project “10015809 – SEP Facility-Wide Distributed Control System (DCS) Upgrade” while the “Construction” portion of the work is scoped under this project. DCS construction consists of coordination with other ongoing projects on-site, manufacturing DCS hardware and software, delivery and installation on site, field testing, commissioning, and initiation of the support and upgrade period.

Program: North Point Facility (NPF) Improvements	**Project Status:** Construction	**Environmental Status:** Not Applicable

Project Cost:

Approved	$ 11.07 M
Forecast	$ 11.07 M
Actual	$ 0.89 M

Project Schedule:

Approved 11/01/21	12/30/27
Forecast 11/01/21	12/30/27

Project Percent Complete: 8.8%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	N/A	N/A	11/01/21 A	06/30/27

Progress and Status:

Coordination between the DB-126 and the WW-685R project teams continued during this reporting quarter. On-site field testing and commissioning under the WW-685R contract is ongoing as well. **Note in regard to the above table: Environmental Management Group (EMG) has determined upgrades to the DCS Controls involves primarily computer hardware and software which do not fall within the definition of a "project" under CEQA because there would be no physical change in the environment. The project delivery method for this project is Progressive Design-Build with pre-design/design components. Construction Notice-To-Proceed represents start of fabrication/manufacturing.

Issues and Challenges:

None at this time.

DCS Server Cabinets Delivered at Northshore Pump Station

10039251 - Sedimentation (NPF 040/041) Tanks Condition Improvements

Project Description: The project will perform condition improvements and upgrades to the sedimentation tanks, which includes the following: NPF 040 & NPF 041 Sedimentation Buildings No. 1 & 2: concrete structural rehabilitation; Replace doors in poor condition; Evaluate HVAC, ventilation and install a new heating system for locker rooms; Replace hot water system; Building structural repairs; Address NFPA 820 area classification issues; Rehabilitate locker rooms; Repair/replace deteriorated piping, and other corroded metallic components; Upgrade stairs and hand/guardrails; Provide no-flow cutoff for sludge pumps; Replace building sump pumps and air compressors in NPF 041; Upgrade NPF 041 server room; Remove abandoned-in-place equipment. NPF 043 Grease & Scum Removal Building Improvements: concrete structural rehabilitation; Building structural repairs; Replace roll-up doors. NPF 060 Sludge Control Building (including NPF 061, NPF 062, NPF 063, NPF 064) Improvements: concrete structural rehabilitation; Building structural repairs; HVAC/ventilation upgrade; Replace doors, a dewatering pump, sump pumps, elevator, and MCC; Remove abandoned-in-place equipment; Modernize control room and "lab" room.

Program: North Point Facility (NPF) Improvements	**Project Status:** Planning	**Environmental Status:** Not Initiated (TBD)

Project Cost:

Approved	$ 54.25 M
Forecast	$ 54.25 M
Actual	$ 0.24 M

Project Schedule:

Approved 11/14/22	07/17/31
Forecast 11/14/22	08/30/30

Project Percent Complete: 3.7%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	12/31/26	02/02/27	09/01/27	03/01/30

Progress and Status:

During this reporting period, the project team issued the Final Needs Assessment Report. The project team coordinated with WWE to install additional gas monitors around NPF 040/041 and is reviewing the data. The project team also held a coordination meeting with the NPF Distributed Control System(DCS) project team regarding the planned conversion to the new DCS.

Issues and Challenges:

The decrease in the project schedule reflects a shorter anticipated construction duration.

NPF 041 Main Sedimentation Tank Area

10034718 - Large Diameter Sewer Projects and Channel FM Intertie

Project Description: The purpose is to rehabilitate and/or replace large-diameter sewers based on previously completed condition assessment efforts. This project will rehabilitate or replace approximately 35,000-feet of large-diameter sewers that are over 100 years old. This project will also construct a bypass, or the Channel Force Main Tee, that will connect the existing Channel Force Main to a nearby sewer transport/storage structure; when complete, the Channel Force Main Tee would allow approximately one-third of the existing Channel Force Main to be taken out of service for rehabilitation or repair during the dry-weather seasons.

Program: Interceptors / Tunnels and Odor Control	**Project Status:** Multi-Phases	**Environmental Status:** Active (Various)

Project Cost:

Approved	$ 114.59 M
Forecast	$ 114.59 M
Actual	$ 42.31 M

Project Schedule:

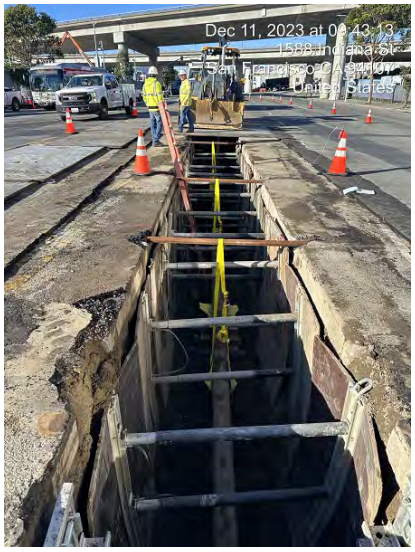
Approved 08/01/19	12/07/26
Forecast 08/01/19	12/07/26

Project Percent Complete: 42.2%

Key Milestones		Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	A	05/09/22 A	06/28/22 A	06/26/23 A	06/08/26
	B	08/06/20 A	01/19/21 A	08/30/21 A	03/23/23 A
	C	08/11/21 A	09/23/22 A	03/13/23 A	08/08/24
	D	03/23/21 A	06/17/22 A	N/A	N/A
	E	03/08/22 A	06/17/22 A	12/05/22 A	01/29/24
	F	06/29/22 A	01/31/23 A	08/28/23 A	10/25/24
	G	06/22/21 A	N/A	03/14/22 A	08/09/24
	H	02/01/23 A	01/03/24	09/03/24	11/04/25
	I	12/05/23 A	03/25/24	N/A	N/A
	J	02/29/24	06/05/24	N/A	N/A

Progress and Status:

For a complete list of contracts and subprojects, see Project Descriptions in the Appendices. Subproject (A): Construction work is ongoing. Subproject (B): Construction (CN) work has been completed and Substantial and Final Completions have been established. Subproject (C): Construction work is on hold. Subproject (D): Completed as the remaining scope of work was added to Subprojects B & E for contracting convenience. Subproject (E): Final Completion is anticipated by next quarter. Subproject (F): Construction work is ongoing. Subproject (G): CN work continued this quarter. SF Public Works is the contracting authority. Subproject (H): Bid package is being finalized with advertisement anticipated in next quarter. Subproject (I): Project team continues with the preparation of the bid package. CN phase will be funded through the Collection Systems R&R Program. Subproject (J): 95% design continues to be delayed due to traffic specifications requirements. CN phase will be funded through the Collection Systems R&R Program.



Contract A: Utilities Investigations and Relocation at Intersection of Cesar Chavez and Illinois Street

Issues and Challenges:

None at this time.

10002652 - Kansas and Marin Streets Sewer Improvements

Project Description: The purpose of the Kansas and Marin Streets Sewer Improvements Project is to increase the wet weather flow conveyance for a minor drainage basin within the Islais Creek Watershed Basin to meet the Level of Service (LOS) storm. The project consists of a 900 linear foot, 8' inside diameter tunnel connecting two existing sewer boxes through the Public Works Corporation Yard at Cesar Chavez Avenue. The project also includes relocation assistance associated with temporary displacements of existing lease-holders who occupy SFPUC's property above the C-Box Transport Storage Structure (Lot 031), as this space will be needed for construction staging. Two new reinforced concrete junction structures will also be constructed to connect with the existing sewers, along with surface restoration work associated with construction and installation of the above assets.

Program: Interceptors / Tunnels and Odor Control	**Project Status:** Design	**Environmental Status:** Completed (Cat Ex)

Project Cost:

Approved	$ 30.00 M
Forecast	$ 6.70 M
Actual	$ 4.62 M

Project Schedule:

Approved 06/10/13	04/02/36
Forecast 06/10/13	10/16/26

Project Percent Complete: 16.9%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	07/23/19 A	N/A	TBD	TBD

Progress and Status:

During this quarter, the project team continued revising a new Alternatives Analysis Report (AAR) for the project, accounting for a reduced scope, schedule and budget.

Issues and Challenges:

The project scope, schedule, and budget have been reduced to accommodate a different approach to the project objectives.

10033106 - Geary BRT Sewer Improvements Phase 2 PreCon

Project Description: Phase 2 of SFMTA's Geary Bus Rapid Transit (BRT) Project includes the addition of center-running BRT lanes on Geary Boulevard between Palm Avenue and 27th Avenue, followed by dedicated BRT lanes along each sides of the street between 27th and 34th Avenue. The center-running BRT lanes on Geary Boulevard would be located directly above the existing sewer lines and severely impact SFPUC's ability to perform future maintenance, repair and/or replacement. The purpose of the Phase 2 sewer work is to coordinate with Geary BRT Project to relocate (or replace as needed) main sewers outside of the transit lanes, platforms and bulbouts. SFPUC had determined sewer conditions along this segment (Stanyan Street to 34th Avenue) and approximately 2.2 miles of aging sewers have been identified as possibly needing replacement. Any sewer work required, whether it is sewer relocation, sewer rehabilitation or sewer replacement, will be undertaken as part of SFMTA's project. Only initial costs for planning and design has been allocated for this project within the SSIP Phase 1 Re-Baselined Program budget.

Program: Interdepartmental Projects	**Project Status:** Design	**Environmental Status:** Completed (Cat Ex)

Project Cost:

Approved	$ 2.35 M
Forecast	$ 2.35 M
Actual	$ 1.84 M

Project Schedule:

Approved 03/15/18	09/29/23
Forecast 03/15/18	04/08/24

Project Percent Complete: 79.1%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	11/08/23 A	N/A	N/A	N/A

Progress and Status:

During this quarter, the project team nearly completed the 100% design. The project team also began preparing the bid documents, started door-to-door outreach work with the neighborhood stakeholders, and finalized the construction cost estimate and schedule. Only the initial planning and design are included in this project within SSIP Phase 1. The Bid and award, construction and closeout phases are included in a separate and approved project in the Other SSIP.

Issues and Challenges:

The project schedule forecast has been delayed further to provide additional time needed to address complexity in the design completion, including a previously unforeseen conflict with a PG&E facility.

A Portion of Geary Boulevard Between 19th and 20th Avenue Which Is a Critical Part of the Project Corridor

10002664 - Van Ness BRT Sewer Improvements

Project Description: The Van Ness Bus Rapid Transit (BRT) Project is led by SFMTA in conjunction with the Van Ness BRT Sewer Improvements Project, which is part of the SFPUC's SSIP Phase 1 Program. SFPUC will replace and relocate existing sewer utilities within Van Ness Avenue, between Lombard Street and Mission Street, from the center of the street to outside of the BRT right-of-way. This will allow for future sewer service maintenance and repair/replacement without impacting SFMTA's BRT operations. The scope of the project includes constructing approximately 20,000 linear feet (LF) of 12-inch to 54-inch diameter Vitrified Clay Pipe (VCP), Reinforced Concrete Pipe (RCP) or High Density Polyethylene) HDPE (in steel casing) sewer mains and associated manholes, catch basins and culverts; and retrofitting and connecting existing sewer laterals and catch basins to the aforementioned new sewer mains. Closed-circuit television (CCTV) technology will be used to inspect the newly constructed sewer mains, sewer laterals and culverts. Abandoned sewers (approximately 1,800 LF) will be plugged-and-filled. Sewer construction was completed in early 2021.

Program: Interdepartmental Projects	**Project Status:** Construction	**Environmental Status:** Completed (EIR)

Project Cost:

Approved	$ 25.00 M
Forecast	$ 25.00 M
Actual	$ 21.05 M

Project Schedule:

Approved 10/01/13	06/30/23
Forecast 10/01/13	12/31/24

Project Percent Complete: 98.4%

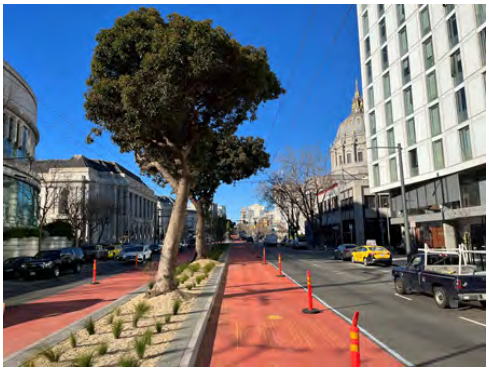
Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	N/A	N/A	01/16/18 A	06/28/24

Progress and Status:

The Construction Manager/General Contractor (CM/GC) contract was awarded by SFMTA and Notice to Proceed (NTP) was given to the contractor, Walsh Construction on January 16, 2018 for the sewer work. Substantial Completion for the sewer work was issued by SFMTA on January 15, 2021. As reported last quarter, SFMTA has yet to issue Final Completion. Claim negotiations related to schedule and differing site conditions between SFMTA and the Prime contractor has been completed resulting in a settlement. However, claim negotiations with subcontractors are still outstanding.

Issues and Challenges:

The project has been extended to December 2024, due to the delay in SFMTA issuing Final Completion and outstanding claim negotiations between SFMTA, SFPUC and subcontractors.



Sewer Completion along Van Ness Avenue

10002776 - Taraval Sewer Improvements

Project Description: SFMTA has proposed a pedestrian safety and transit improvements project along Muni's "L Taraval" route. The project includes construction/extension of boarding islands, addition of dedicated transit-only lanes, and replacement of aging tracks, overhead wires, and trolley poles. The Taraval Sewer Improvements Project will relocate existing sewer facilities from the center of the street to outside of the tracks to allow for ease of maintenance and repair/replacement without impacting future SFMTA's Muni operations. The scope of the sewer work includes replacing approximately 19,000 LF of 12-inch to 36-inch diameter ISP, Vitrified Clay Pipe (VCP), Reinforced Concrete Pipe (RCP), or concrete sewers along Taraval Street between 15th Avenue and 46th Avenue, and Ulloa Street between Forest Side Avenue and 15th Avenue for a twin sewer system. Most of the sewers to be replaced are close to 100 years old. Project is split into two construction contracts. Segment A is from Zoo to Sunset Blvd. and construction has been completed in 2021. Segment B is from Sunset Blvd. to West Portal and construction contract was initiated in December 2021.

Program: Interdepartmental Projects	**Project Status:** Multi-Phases	**Environmental Status:** Completed (Cat Ex)

Project Cost:

Approved	$ 34.50 M
Forecast	$ 34.50 M
Actual	$ 24.41 M

Project Schedule:

Approved 03/14/16	07/31/25
Forecast 03/14/16	07/31/25

Project Percent Complete: 75.3%

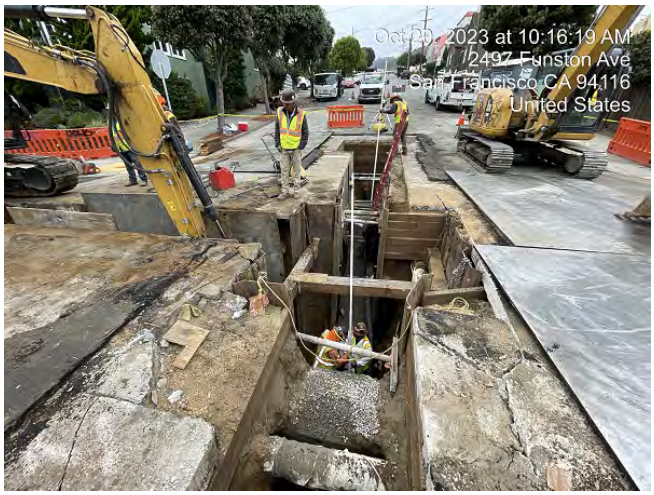
Key Milestones		Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	A	04/17/17 A	10/02/18 A	07/01/19 A	07/02/21 A
	B	04/17/17 A	01/21/21 A	12/01/21 A	08/16/24
	C	N/A	N/A	10/19/20 A	08/09/24

Progress and Status:

SFMTA is the project lead and contracting authority. This project includes the following contracts: (A) Segment A SF Zoo to Sunset Blvd/SFMTA Contract No 1306; (B) Segment B Sunset Blvd to West Portal/SFMTA Contract No 1308; and (C) 19th Ave Sewer Cost Share (Ulloa) PW 26523. Contract A: Project closeout continues. Contract B: Sewer work for main line was completed in December 2023. The remaining work includes culvert installation and is anticipated in the upcoming quarters. Contract C: Substantial Completion for the entire contract was obtained on December 15, 2023 and Public Works has delayed final completions for the entire contract as work is still on-going.

Issues and Challenges:

None at this time.



Segment B: Excavation and Grading for MH 19A Base Concrete Pour

10037251 - Seacliff No. 1 PS & FM Upgrade

Project Description: Due to its age, condition, and opportunity for water quality benefits through upsizing the station's capacity, it is recommended that Seacliff No.1 Pump Station and force main be replaced. This would include: replacement of pump station; replacement of 8-inch force main (930 LF); installation of flow monitoring devices for post-storm evaluation; installation of floatable controls at the overflow structure to CSD 005; connection from new pump station to CSD 005; consider installing a redundant pump for 'n+1' redundancy during wet weather and consider provisions for wet well isolation for maintenance and inspection, if feasible; decommissioning existing pump station. As the current site is partially on Federal/GGNRA property, locating a suitable site requires additional coordination with the Real Estate Division.

Program: Pump Stations and Forcemain Improvements	**Project Status:** Design	**Environmental Status:** Completed (Cat Ex)

Project Cost:

Approved	$ 16.18 M
Forecast	$ 16.18 M
Actual	$ 2.24 M

Project Schedule:

Approved 12/07/20	03/31/27
Forecast 12/07/20	03/31/27

Project Percent Complete: 14.3%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/13/23 A	02/29/24	10/28/24	05/01/26

Progress and Status:

The project team is finalizing the bid package and contract advertisement is anticipated in the upcoming quarter.

Issues and Challenges:

None at this time.

Seacliff Pump Station No.1

10037246 - Seacliff No. 2 PS & FM Upgrade

Project Description: The project will rehabilitate Seacliff No. 2 Pump Station (S2S) and Force Main and improve its operational performance and reduce CSD activations. The scope of work for S2S includes replacement or rehabilitation of: electrical equipment, power service, generator system, level monitoring system, process equipment, buildings, wet wells, and surrounding site. The existing force main which conveys flows from S2S to Richmond Transport Tunnel will also be upgraded.

Program: Pump Stations and Forcemain Improvements	**Project Status:** Design	**Environmental Status:** Completed (Cat Ex)

Project Cost:

Approved	$ 20.80 M
Forecast	$ 22.14 M
Actual	$ 2.97 M

Project Schedule:

Approved 12/14/20	04/03/28
Forecast 12/14/20	04/03/28

Project Percent Complete: 14.5%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	11/29/23 A	05/24/24	12/02/24	01/04/27

Progress and Status:

During this quarter, the design team prepared the 95% design deliverable and has begun preparing the bid package and the 100% design deliverable. Field sample analysis was performed to inform the structural scope of work.

Issues and Challenges:

The project budget has increased due to refinements of the electrical and mechanical scopes of work. Schedule has also been updated due to slight extensions of the design phase; however, the overall project completion is unchanged.

Potholing Investigation for Force Main

10037303 - Sunnydale PS Safety Improvements

Project Description: This project's scope aims to address the following health, safety, and security issues at Sunnydale PS -Address safety risks from groundwater intrusion, including repairing structural deficiencies, including cracks and leaks; Upgrade and repair corroded equipment and appurtenances inside manifold room (including piping, PRVs, lighting, instruments, equipment); Address water leakage in manifold room and Motor Control Center (MCC); Address water intrusion from conduits package connected to PG &E transformer; Repair leaking door; Perform electrical repairs; Replace corroded HVAC equipment damaged by water intrusion. Address Security Concerns, including installing new security signage and upgrading lighting to dusk-activated LED lighting; Upgrade card readers and door contacts at all perimeter doors; Add interior presence sensing, connected to an intrusion detection panel and alarming to security; Furnish, install and configure video recording servers, management server and analytic servers including uninterruptable power supplies (UPS); Install video camera units and local recording.

Program: Pump Stations and Forcemain Improvements	**Project Status:** Design	**Environmental Status:** Active (Cat Ex)

Project Cost:

Approved	$ 15.55 M
Forecast	$ 16.67 M
Actual	$ 1.65 M

Project Schedule:

Approved 12/14/20	12/31/26
Forecast 12/14/20	05/23/28

Project Percent Complete: 13.3%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	03/27/24	04/18/24	11/25/24	11/24/27

Progress and Status:

Project team has completed the draft 95% Design.

Issues and Challenges:

The increase to the project budget and overall project duration is due to the additional owner requested scope.

HVAC Ducting Corrosion due to Water Intrusion

10038469 - Pump Station Security Upgrades (Cesar Chavez, GFS,CHS, MMS)

Project Description: This project involves security upgrades at four pump stations: Cesar Chavez Pump Station (CCS), Griffith Street Pump Station (GFS), Channel Pump Station (CHS), Merlin Morris Pump Station (MMS). Each site will have its own specific upgrades which may include upgrading card readers and door contacts, replacing/repairing existing perimeter fence and fence support, upgrading lighting, adding security signage.

Program: Pump Stations and Forcemain Improvements	**Project Status:** Design	**Environmental Status:** Active (Cat Ex)

Project Cost:

Approved	$ 9.10 M
Forecast	$ 7.98 M
Actual	$ 0.25 M

Project Schedule:

Approved 06/01/22	06/30/27
Forecast 06/01/22	09/13/27

Project Percent Complete: 4.3%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/02/25	07/02/25	02/04/26	02/26/27

Progress and Status:

Project has been placed on hold due to resource constraints and will be re-initiated in mid-2024 after resources has been identified.

Issues and Challenges:

An overall project schedule delay is forecasted due to the hold. The project budget is also forecasting a decrease after completion of the Conceptual Engineering Report.

Cesar Chavez Pump Station

10038446 - Geary Underpass PS Safe Access Enhancements

Project Description: This project's purpose is to improve access in and around the Geary Underpass Pump Station, in accordance with the Health, Safety, and Security LOS goal. This includes and assumes the following scopes of work: improve lighting and accessibility for routine maintenance, such as removing and replacing existing pumps; add and/or modify handrail and ladders, and upgrade the guardrail at the well opening.

Program: Pump Stations and Forcemain Improvements	Project Status: Design	Environmental Status: Not Applicable

Project Cost:

Approved	$ 1.85 M
Forecast	$ 1.28 M
Actual	$ 0.19 M

Project Schedule:

Approved 01/10/22	05/29/26
Forecast 01/10/22	05/29/26

Project Percent Complete: 16.1%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	N/A	N/A	08/08/24	07/09/25

Progress and Status:

During this quarter, the project team completed the 95% design and is progressing towards 100% design. This project will proceed under the contracting method of Job Order Contract (JOC).

Issues and Challenges:

The overall project schedule did not change; but budget decreased. The project is utilizing job order contracting delivery method which reduces overall soft cost and the construction cost, is further refined to reflect design scope.

Water Connection Field Testing

10037245 - Brannan St CSD Discharge & Baffle Rehabilitation

Project Description: The Brannan St Combined Sewer Discharge ("Brannan CSD") is located at Brannan St and The Embarcadero. Brannan CSD was originally constructed in 1912. The outfall structure consolidates flows from the Brannan St and Beale St sewers and interfaces with the Channel Transport/Storage (T/S) Box. The following issues need to be addressed to meet Operational Reliability LOS goals (State of Good Repair): 1. Butterfly Valve: Unlike most outfalls, the Brannan CSD does not have an overflow weir. A rectangular butterfly valve with a hydraulic actuator controls combined sewer overflows. The Brannan CSD is not currently functioning since butterfly valve no longer functions and is stuck in the closed position. 2. Flap Gate: The outfall has a flap gate along the sea wall that is intended to prevent seawater and sea life from entering the discharge tunnel during high tide. The gate no longer functions, and replacement is needed with a new valve or similar device to restrain seawater and sea life from entering the sewer. 3. Baffle: Brannan CSD does not currently have a baffle for floatables control. The baffle needs to be restored. 4. Concrete Repair: Concrete degradation and spalling, exposed rebar and biological growth need to be addressed. 5. Health, Safety: The access ladder into the outfall is missing the bottom rungs and needs to be restored or completely be removed.

Program: Combined Sewer Discharge (CSD) and Transport/Storage Structures	Project Status: Design	Environmental Status: Active (Cat Ex)

Project Cost:

Approved	$ 7.95 M
Forecast	$ 11.94 M
Actual	$ 0.58 M

Project Schedule:

Approved 12/07/20	10/30/26
Forecast 12/07/20	04/28/28

Project Percent Complete: 7.6%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	12/06/24	01/09/25	08/11/25	10/30/26

Progress and Status:

Work on Sansome St. CSD study has started and will continue in the upcoming quarter. 65% design will resume after the completion of Sansome St. CSD study.

Issues and Challenges:

The increases in project budget and schedule are due to increased engineer's estimate and engineering/construction management workplans and additional scope for Sansome St. CSD valve repair. As a result, the interim milestones have also been pushed out.

Brannan CSD Existing Damaged Butterfly Discharge Valve

10038468 - System-wide Monitoring Equipment Assessment

Project Description: The project involves a system-wide assessment of all of WWE's collection system monitoring equipment for dry and wet-weather operations, reporting and other related functions. The project scope will perform a desktop-based gap analysis to document existing monitoring equipment location, condition, and reliability and compare findings against WWE's long-term vision. The assessment will provide recommendations for replacement, relocation or consolidation of sensors, calibration needs, technology upgrades related to power and communications, new installations, additional access, and other recommendations. The assessment will also include a long-term maintenance plan for all sensors. As an allowance and a starting point, the project cost assumes replacement and conversion to wireless communication for existing sensors at to-be-determined collection system locations. An additional allowance is also included for reliability improvements at other collection system locations based on the assessment results.

Program: Combined Sewer Discharge (CSD) and Transport/Storage Structures	**Project Status:** Planning	**Environmental Status:** Not Initiated (TBD)

Project Cost:

Approved	$ 9.29 M
Forecast	$ 11.19 M
Actual	$ 0.31 M

Project Schedule:

Approved 01/18/22	03/31/27
Forecast 01/18/22	03/17/28

Project Percent Complete: 3.4%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	04/01/25	09/29/25	06/25/26	09/17/27

Progress and Status:

Field work activities continued during this reporting period and will be ongoing for the remainder of FY23-24. The project team started data gathering and interviews with various WWE stakeholder groups as part of this project's planning phase. The project team continued drafting the Needs Assessment Report (NAR).

Issues and Challenges:

The initial project's pre-planning scope only included a short list of 22 collections system monitoring devices located at what were considered priority locations back in 2019-2020. Now that the project has been initiated and is currently in the Planning phase, as per WWE's existing device inventory, the more accurate count of devices requiring assessment is approximately 150-200. There was also a program-wide directive to extend the Bid and Award phase for all projects in preconstruction from the previous six to eight months which also contributed to the project level changes.

Existing Field Instrumentation Equipment Installed In a Sewer Manhole

10038547 - CSD Structure Rehab & Upgrades - Part 1

Project Description: This project encompasses improvements at CSD structures in response to structural deterioration. Detailed condition inspection and/or assessment would reveal the actual improvements required. In general, the scope of this project is structural rehabilitation of the following CSD Structures: CSD 001 Lake Merced; CSD 011 Laguna; CSD 018 Howard; CSD 022 Third Street; CSD 023 Fourth Street North; CSD 027 Sixth Steet South; CSD 028 Fourth Street South; CSD 029 Mariposa and CSD 037 Evans.

Program: Combined Sewer Discharge (CSD) and Transport/Storage Structures	**Project Status:** Multi-Phases	**Environmental Status:** Active (Cat Ex)

Project Cost:

Approved	$ 39.65 M
Forecast	$ 39.65 M
Actual	$ 1.08 M

Project Schedule:

Approved 01/03/22	01/31/29
Forecast 01/03/22	01/31/29

Project Percent Complete: 3.8%

Key Milestones		Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	A	02/29/24	04/01/24	10/15/24	12/31/26
	B	02/29/24	04/01/24	10/15/24	12/31/26
	C	04/04/25	07/31/25	02/27/26	10/14/27

Progress and Status:

This project includes the following Combined Sewer Discharge (CSD) contracts: (A) Laguna & Howard Streets CSDs; (B) Mission Bay CSD; and (C) Mariposa, Evans and Lake Merced. The team decided to combine Contracts A and B for efficiency in design, bid/award and construction as the scope of work for both contracts are very similar. The project team has completed the 95% design for the combined Contracts A and B in this quarter. For Contract C, the project team continues with the preparation of the Conceptual Engineering Report (CER) and anticipates issuing a draft in the next quarter.

Issues and Challenges:

The Final Completion milestone for Contract A/B is extended to capture two dry seasons for the construction duration with no impact to the overall project completion.

Damaged Rip-Rap Under and Around Laguna CSD

10026810 - Yosemite Green Infrastructure

Project Description: The upper reach of the Yosemite Creek Daylighting project would daylight the creek along a portion of the historic creek path, from Yosemite Marsh in McLaren Park to Woolsey and Hamilton Streets. This project diverts flows from the sewer using swales, vegetated channels, rain gardens, piped sections and a constructed wetland/detention basin/bio-swale system. This project is also referred to as the "Upper Yosemite Creek Daylighting".

Program: Early Implementation Projects	**Project Status:** Design	**Environmental Status:** Completed (Cat Ex)

Project Cost:

Approved	$ 25.59 M
Forecast	$ 27.54 M
Actual	$ 5.49 M

Project Schedule:

Approved 12/03/12	11/08/28
Forecast 12/03/12	11/08/28

Project Percent Complete: 27.6%

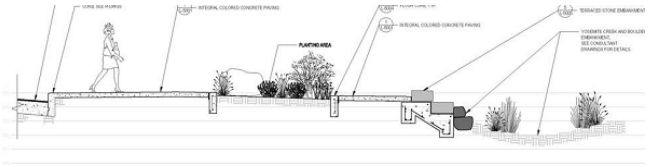
Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	08/15/17 A	07/25/24	02/18/25	02/17/27

Progress and Status:

This quarter, the project team worked on the 95% design package. There was ongoing coordination of irrigation, electrical and planting design with the San Francisco Recreation and Park Department.

Issues and Challenges:

The forecast budget increased due to cost escalation. The schedule variance results from slower than forecast progress on the 95% design milestone. The variance has no impact on the project finish date.



Sectional View at Yosemite Station

10026816 - Wawona Area Stormwater Improvement Project

Project Description: The neighborhood surrounding the intersection of 15th Avenue and Wawona Street is topographically lower in elevation compared to its adjacent neighborhoods, and has been subjected to flooding during large storms. When the capacity of the sewers are exceeded during large storms, significant volumes of overland flow upstream of the intersection cannot enter the catch basins and sewer system, causing flooding and property damage. The purpose of this project is to divert part of the flow at the intersection of Wawona and Vicente into a new auxiliary sewer on Vicente, extended to from Wawona to 34th Ave. The flow then would enter the existing system where there is capacity for additional flow.

Program: Watershed Stormwater Management	**Project Status:** Construction	**Environmental Status:** Completed (Cat Ex)

Project Cost:

Approved	$ 34.11 M
Forecast	$ 28.38 M
Actual	$ 26.27 M

Project Schedule:

Approved 07/01/16	12/02/24
Forecast 07/01/16	12/02/24

Project Percent Complete: 80.0%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/01/20 A	10/30/20 A	07/26/21 A	04/19/24

Progress and Status:

The contractor completed the remainder of the paving and all physical work in the field. The project substantial completion is anticipated in the upcoming quarter.

Issues and Challenges:

The budget is reduced to reflect the current projection of remaining work.

Contractor is completing the permanent paving on Vicente Street

10029726 - Watershed Stormwater Management (Planning Only)

*__Project Description:__ This project continues to support the SFPUC's goal of managing stormwater using green infrastructure. It develops tools and mechanisms to scale up the implementation of green infrastructure citywide. The scope includes capital planning tasks that will evaluate, refine and validate schedule, scope and budget of upcoming capital projects and partnership opportunities via stakeholder engagement, evaluations and performance/cost calculations. The project also includes watershed planning activities such as any required program development for upcoming agency priorities, engagement with large landowners across San Francisco, and development of and recommendations for scaling up green infrastructure, including evaluation of innovative funding and financing mechanisms.

**Project Description is different than the September Report because it was updated to match last year's approved CIP.*

Program: Watershed Stormwater Management	**Project Status:** Planning	**Environmental Status:** Not Applicable

Project Cost:

Approved	$ 19.00 M
Forecast	$ 21.00 M
Actual	$ 7.20 M

Project Schedule:

Approved 07/11/16	06/30/32
Forecast 07/11/16	06/30/34

Project Percent Complete: 39.5%

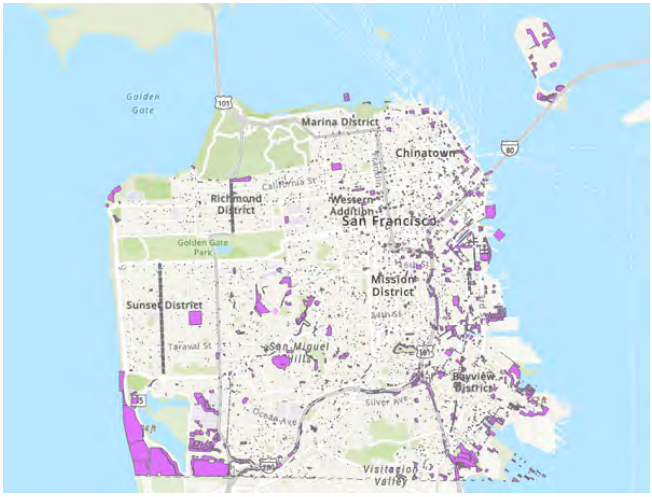
Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	N/A	N/A	N/A	N/A

Progress and Status:

The team continued to refine three GI project opportunity locations with partners from MTA and City Planning. Work on capturing unmetered parcels for the financial billing system upgrade continued.

Issues and Challenges:

The budget and schedule variance are due to adding 2 additional years of the planning services provided under this project to ensure this project runs concurrently with the Citywide Green Infrastructure Project.



Map of the City's Unmetered Parcels Currently Under Evaluation.

10034553 - Green Infrastructure Grant Program (GIGP)

*__Project Description:__ The Green Infrastructure (GI) Grant Program funds green infrastructure projects on public and private properties throughout San Francisco. By providing grants to owners of large, impervious parcels the SFPUC will encourage further green infrastructure projects that manage stormwater and improve the City's collection system performance during wet weather. The grants will cover costs of design and construction of approved stormwater management features, such as rain gardens, permeable pavement, cisterns, and vegetated roofs. Grantees will be eligible to receive $930,000 per acre of impervious surface managed, up to $2 million per project.

**Project Description is different than the September Report because it was updated to match last year's approved CIP.*

Program: Watershed Stormwater Management	**Project Status:** Construction	**Environmental Status:** Not Applicable

Project Cost:

Approved	$ 61.32 M
Forecast	$ 61.32 M
Actual	$ 5.85 M

Project Schedule:

Approved 07/01/18	06/30/33
Forecast 07/01/18	06/30/33

Project Percent Complete: 10.7%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	N/A	N/A	N/A	N/A

Progress and Status:

SFPUC closed the Fall 2023 application cycle and received 3 applications (Mariners Village, Cornerstone Academy Cambridge, and Cornerstone Academy Silver), totaling just over $4.4M in requested funding. During the reporting period, three projects (Crocker Amazon Park, St. Anne of the Sunset, and St. Emydius) continued construction and seven projects (Project Artaud, Buena Vista Horace Mann K-8, Everett Middle School, Church of the Visitacion, St. Thomas More School, St. Monica, and St. Thomas the Apostle) continued design and community engagement.

Issues and Challenges:

None at this time.

Construction of New Rain Garden at Crocker Amazon Parking Lot Entrance.

10039608 - Buchanan Street Mall

Project Description: The Buchanan Street Mall Neighborhood GI Project is located in the Western Addition Neighborhood and includes two major components: The Buchanan Street Mall Core Project - these components are centered on the Buchanan Street Mall, led mainly by RPD. This core project manages runoff from the mall and some adjacent streets that flow to the mall; The Neighborhood Projects – additional neighborhood-scale components that include adjacent streets and parcels, led by SFPUC. In addition to the stormwater performance metrics, the project produces additional benefits: Manage up to 7 acres of DMA; Integrate multipurpose GI in the Buchanan Street Mall; Maximize stormwater performance through management of adjacent parcels and street runoff; Explore a new design approach for street GI that combines impervious removal and bioretention; Deliver neighborhood-scale placemaking co-benefits in one of San Francisco's identified disadvantaged communities. In FY 21/22, the project scope expanded to include the rehabilitation of brick sewers within the mall.

Program: Watershed Stormwater Management	**Project Status:** Design	**Environmental Status:** Completed (Cat Ex)

Project Cost:

Approved	$ 9.63 M
Forecast	$ 9.63 M
Actual	$ 0.72 M

Project Schedule:

Approved 10/03/22	12/28/26
Forecast 10/03/22	12/28/26

Project Percent Complete: 6.2%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	01/17/23 A	05/01/24	07/31/24	06/30/26

Progress and Status:

This quarter, the project design team submitted the 95% design documents. Next quarter, the project team will complete the bid documents and the project will be advertised for bid by the San Francisco Department of Public Works.

Issues and Challenges:

None at this time.

Proposed conditions at Buchanan Street Mall

10029730 - Operational Decision System Phase 2

Project Description: This project would integrate available data in the collection system (levels, flows, pump status, etc.) with rainfall prediction data from National Oceanic and Atmospheric Administration (NOAA). The real-time data will be coupled with Wastewater Enterprise's (WWE) collection system hydraulic model to forecast the likely impact of approaching storms and generate specific operational recommendations for managing flows. Phase 2 builds upon Phase 1 (CWWSIPFCRP02) for a citywide installation.

Program: Advanced Rainfall and Operation Decision System	**Project Status:** Construction	**Environmental Status:** Not Applicable

Project Cost:

Approved	$ 6.72 M
Forecast	$ 4.83 M
Actual	$ 4.26 M

Project Schedule:

Approved 02/01/17	09/30/25
Forecast 02/01/17	06/28/24

Project Percent Complete: 93.4%

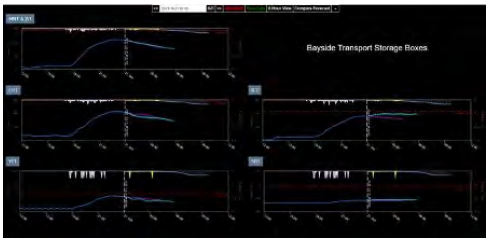
Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	N/A	12/18/17 A	02/28/18 A	12/29/23 A

Progress and Status:

Decommissioning discussions with SFPUC ITS and the Operational Decision System (ODS) vendor were initiated during this reporting quarter. Project financial closeout was also initiated.

Issues and Challenges:

This project's deliverable, the Operational Decision System (ODS), is considered no longer viable due to WWE's organizational and procedural changes.



One of the Operational Decision System screens

10034360 - Lower Alemany Area Stormwater Improvement Project

Project Description: This project will include planning, design, and construction of a new auxiliary sewer conveyance system in the Lower Alemany area that manages the stormwater and minimizes flooding in the Level of Service storms. The project includes constructing a 10-foot diameter underground pipe, from Stoneybrook Avenue to Industrial Street, via Alemany Boulevard, Gaven Street, and Boutwell Street to convey stromwater away from the Lower Alemany area.

Program: Flood Resilience Projects	**Project Status:** Design	**Environmental Status:** Active (Cat Ex)

Project Cost:

Approved	$ 299.56 M
Forecast	$ 299.56 M
Actual	$ 10.83 M

Project Schedule:

Approved 01/02/19	11/01/28
Forecast 01/02/19	11/01/28

Project Percent Complete: 9.4%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	01/09/24	07/11/24	03/10/25	05/10/28

Progress and Status:

Project team has presented 65% design documents to Caltrans for their reviews. Project team continued coordinating with MTA/MUNI on traffic constraints and with Planning Department on environmental studies. 95% design submittal is anticipated in the upcoming quarter.

Issues and Challenges:

None at this time.

Flooding at the I-280/Hwy 101 Interchange at Lower Alemany Area, During the Rainfall of January 2023

10026818 - Folsom Area Stormwater Improvement Project

Project Description: The Folsom Area Stormwater Improvement Project (FASIP) will provide stormwater conveyance improvements to the neighborhood surrounding 17th and Folsom Street. The project is being developed based on the alternative chosen in the NAR/AAR report and further defined in the CER. Major components of the project consist of a tunnel to convey stormwater flows from the neighborhood surrounding 17th and Folsom to the Channel Consolidated Transport/Storage Box, and upsizing of existing combined sewer pipes and structures upstream of the tunnel. Phase I covers through design. Construction will be covered by Folsom Area Stormwater Improvement Project Phase 2.

Program: Flood Resilience Projects	**Project Status:** Design	**Environmental Status:** Completed (Cat Ex)

Project Cost:

Approved	$ 38.41 M
Forecast	$ 38.41 M
Actual	$ 20.45 M

Project Schedule:

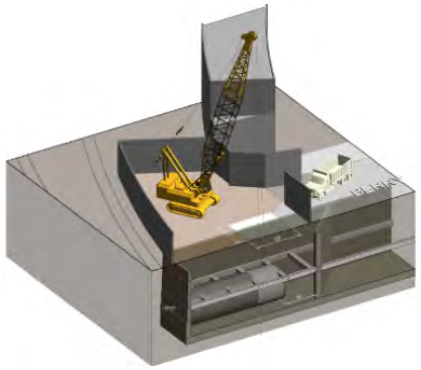
Approved 07/01/16	12/27/23
Forecast 07/01/16	12/31/24

Project Percent Complete: 59.7%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	04/11/23 A	N/A	N/A	N/A

Progress and Status:

The project is being implemented through (4) contracts: WW-719A Initial Upstream Pipe: The design of this contract was completed on 11/17/22. WW-719B Alameda Tunnel Construction Contract: During this quarter the project team worked on the 95% Design for Division Sewer Box package and worked on the Draft Strategy Report to Caltrans for the launch shaft. WW-719C Harrison and Treat Sewer Box: During this quarter, the project team completed the 65% design for this contract and completed review of the design package. The project team also nearly completed an alternative foundation study for this contract. WW-719D Large Upstream Pipe: During this quarter, the project team nearly completed the 65% design for this contract. The Folsom project requires extensive staging on private property and permanent improvements through private property in order to be implemented.



The proposed Tunnel Boring Machine (TBM) retrieval shaft at Berry Street

Issues and Challenges:

The design duration has been extended due to unforeseen technical challenges with both the WW-719C and WW-719B contracts. The complexity of the WW-719C design has increased during the course of design development and Caltrans augmented the technical requirements of the WW-719B contract within their right-of-way. Both of these factors led to additional design work, which is extending the duration of the design phase and overall project.

10038471 - Folsom Area Stormwater Imp. Project Phase 2

Project Description: The Folsom Area Stormwater Improvement Project (FASIP) will provide stormwater conveyance improvements to the neighborhood surrounding 17th and Folsom Street. The project is being developed based on the alternative chosen in the NAR/AAR report and further refined in the CER and during the initial design process. Major components of the project consist of a tunnel to convey stormwater flows from the neighborhood surrounding 17th and Folsom to the Channel Consolidated Transport/Storage Box, and upsizing of existing combined sewer pipes and boxes upstream of the new tunnel. This is Phase 2 of the project, Phase 1 (DB14) covers through the Design Phase, which is anticipated to be complete in December of 2023. This Phase 2 of the overall project covers Bid and Award through the Construction.

Program: Flood Resilience Projects	**Project Status:** Multi-Phases	**Environmental Status:** Not Applicable

Project Cost:

Approved	$ 282.01 M
Forecast	$ 391.23 M
Actual	$ 1.85 M

Project Schedule:

Approved 10/17/22	06/30/27
Forecast 10/17/22	02/16/29

Project Percent Complete: 1.4%

Key Milestones		Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	A	N/A	11/17/22 A	08/07/23 A	06/27/24
	B	N/A	07/31/24	05/20/25	01/24/28
	C	N/A	06/12/24	02/10/25	09/01/28
	D	N/A	07/04/24	02/11/25	08/17/26

Progress and Status:

During this quarter the project team started work in the field on Contract WW-719A and completed the majority of work at the first two sites of the contract.

Issues and Challenges:

The projected construction duration for Contract WW-719C is longer than expected due to the complexity of the excavation within a busy corridor. In addition, the design duration has been extended due to unforeseen technical challenges with both the WW-719C and WW-719B contracts. The engineer's estimate for the WW-719B came back higher than the previous estimate due to design development and a better understanding of the difficulty in excavating the roadway and the sequence of work required to construct the sewer box.

Installation of new combined sewer pipe on Erie Street as part of the WW-719A contract

10039682 - Flood Resiliency Planning

Project Description: This project includes funds for pre-planning the development of identified and potential new flood resilience programmatic strategies, including Flood Resilience Programmatic Strategies – technical work to support programmatic flood resilience strategies. This work includes mapping and modeling. Floodwater Grant Program Update Development – technical support to inform program structure updates, development of materials, and other program development efforts needed to support the increased allocation for the Floodwater Grant Program (full program to be funded in FR02). Flood Resilience Planning Studies and Implementation Support - If the Upper Islais Creek Watershed Plan (UICWP) alternative plan for the Lower Alemany area is approved, this work will support the ongoing implementation of the plan over the next 2 years. This will also cover additional requests for flood resilience studies or coordination efforts with City or other agencies.

Program: Flood Resilience Projects	**Project Status:** Planning	**Environmental Status:** Not Applicable

Project Cost:

Approved	$ 9.60 M
Forecast	$ 9.60 M
Actual	$ 0.58 M

Project Schedule:

Approved 10/03/22	03/31/27
Forecast 10/03/22	06/29/29

Project Percent Complete: 6.5%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	N/A	N/A	N/A	N/A

Progress and Status:

The project team continued work on the Waterfront Resilience Program this quarter by providing PUC input on varying approaches to reduce flood risks from sea level rise. The Port, the City of San Francisco's lead agency for the Waterfront Resilience Program, will issue a Tentatively Selected Plan to the US Army Corp of Engineers next quarter.

Issues and Challenges:

The project schedule is extended because the PUC's flood resilience planning work is anticipated to continue beyond fiscal year 26/27.

View of One Waterfront Adaptation Strategy Under Consideration.

10040621 - Floodwater Management Grant Assistance Program (Grant)

Project Description: In 2013 the SFPUC established the Floodwater Management Grant Assistance Program (Grant Program), providing San Francisco property owners with grants for the cost of some floodproofing measures to improve flood resilience for San Francisco businesses and residents. The SFPUC has expanded the types of projects eligible for grant funding, cost-sharing, and total grant amount. While the existing Grant Program has made multiple improvements to expand project types, increase funding caps, reduce financial burden, and improve the reimbursement structure, the SFPUC will further enhance and expand the program. The primary goal of the Grant Program is to encourage the implementation of site-specific floodproofing measures by providing grants to property owners to implement projects and improve their flood resilience in heavy rains. It is one of the various flood resilience programmatic strategies that the SFPUC has developed and continues to implement.

Program: Flood Resilience Projects	**Project Status:** Construction	**Environmental Status:** Not Applicable

Project Cost:

Approved	$ 15.00 M
Forecast	$ 15.00 M
Actual	$ 0.02 M

Project Schedule:

Approved 10/03/22	03/31/33
Forecast 10/16/23	12/27/34

Project Percent Complete: 0.0%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	N/A	N/A	N/A	N/A

Progress and Status:

The Floodwater Grant Program continues to provide resources for flood proofing measures to homes that have experienced flooding from the public right of way or combined sewer system. In this quarter, 8 interest forms were received, 3 site visits conducted, and 1 grant project reached completion and was paid out.

Issues and Challenges:

The project schedule has been extended to meet the requirement of the Cleanup and Abatement Order.

Completed Installation of a French Drain and Sump Pump

8. On-Going Construction*

Construction Contract	Schedule			Budget		Variance (Approved - Forecast)		Percent Complete
	NTP Date	Approved Construction Final Completion**	Current Forecast Construction Final Completion	Approved Contract Cost	Current Forecast Cost**	Schedule (Cal Days)	Cost	
Biosolids Digester Facilities Project								
10015796 - SEP Biosolids Digester Facilities Project - (WW-647R/Scope II - Remainder of Scope II (Issued POs for 53 Packages))	07/01/20	08/31/26	07/11/28	$1,029,544,655	$1,031,787,175	(680)	($2,242,520)	58.6%
New Headworks (Grit) Replacement								
10015807 - SEP New Headworks (Grit) Replacement - (WW-628/Scope III - New Headworks (issued POs for 66 Packages))	07/22/19	02/29/24	05/30/25	$377,147,406	$379,798,151	(456)	($2,650,745)	81.1%
Southeast Plant (SEP) Improvements								
10002284 - SEP Power Feed and Primary Switchgear Upgrades - (WW-662R)	10/05/20	08/21/24	08/21/24	$32,771,902	$33,401,009	0	($629,107)	65.9%
Oceanside Plant (OSP) Improvements								
10029736 - Westside Pump Station Reliability Improvements - (WW-645R)	04/19/21	02/02/24	12/15/25	$48,999,080	$48,999,080	(682)	$0	86.2%
10029737 - Oceanside Water Pollution Control Plant Digester Gas Utilization Upgrades - (WW-639)	11/26/18	03/17/22	12/31/24	$42,028,701	$42,028,701	(1,020)	$0	70.0%

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

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

*** Contracts performed under SFMTA/SFPW.

Construction Contract	Schedule			Budget		Variance (Approved - Forecast)		Percent Complete
	NTP Date	Approved Construction Final Completion**	Current Forecast Construction Final Completion	Approved Contract Cost	Current Forecast Cost**	Schedule (Cal Days)	Cost	
10036398 - OSP Condition Improvement Projects - Part 2 - (Contract E, WW-648)	05/16/22	08/12/24	08/12/24	$6,490,014	$6,490,014	0	$0	54.0%
10036398 - OSP Condition Improvement Projects - Part 2 - (Contract F, WW-669)	12/19/22	09/03/25	09/03/25	$9,160,000	$9,160,000	0	$0	10.6%
North Point Facility (NPF) Improvements								
10026822 - North Shore Pump Station Wet Weather Improvements - (WW-685R)	04/19/21	12/31/24	12/31/24	$25,721,139	$25,721,139	0	$0	72.2%
Interceptors / Tunnels and Odor Control								
10034718 - Large Diameter Sewer Projects and Channel FM Intertie - (Contract A, WW-723R)	06/26/23	06/08/26	06/08/26	$15,796,272	$15,796,272	0	$0	12.0%
10034718 - Large Diameter Sewer Projects and Channel FM Intertie - (Contract C, WW-724)	03/13/23	08/08/24	08/08/24	$9,937,355	$9,937,355	0	$0	49.0%
10034718 - Large Diameter Sewer Projects and Channel FM Intertie - (Contract E, WW-731)	12/05/22	01/29/24	01/29/24	$11,195,193	$11,195,193	0	$0	84.0%
10034718 - Large Diameter Sewer Projects and Channel FM Intertie - (Contract F, WW-736)	08/28/23	10/25/24	10/25/24	$7,272,320	$7,272,320	0	$0	12.0%
10034718 - Large Diameter Sewer Projects and Channel FM Intertie - (Contract G, SFPW 1243I)	03/14/22	08/09/24	08/09/24	$2,129,950	$2,129,950	0	$0	51.0%
Combined Sewer Discharge (CSD) and Transport/Storage Structures								

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

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

*** Contracts performed under SFMTA/SFPW.

Construction Contract	Schedule			Budget		Variance (Approved - Forecast)		Percent Complete
	NTP Date	Approved Construction Final Completion**	Current Forecast Construction Final Completion	Approved Contract Cost	Current Forecast Cost**	Schedule (Cal Days)	Cost	
10037244 - Baker St CSD Baffle Impr & Backflow Valve Repair - (WW-737)	04/10/23	12/05/23	12/05/23	$566,000	$566,000	0	$0	78.4%
Interdepartmental Projects								
10002664 - Van Ness BRT Sewer Improvements - (No. 1289) ***	01/16/18	12/30/22	06/28/24	$17,649,795	$17,649,795	(546)	$0	99.7%
10002776 - Taraval Sewer Improvements - (Contract B, SFMTA 1308R) ***	12/01/21	08/16/24	08/16/24	$17,000,000	$17,000,000	0	$0	74.0%
Watershed Stormwater Management								
10026816 - Wawona Area Stormwater Improvement Project - (WW-711)	07/26/21	03/12/24	04/19/24	$20,165,316	$20,165,316	(38)	$0	91.2%
Advanced Rainfall and Operation Decision System								
10029730 - Operational Decision System Phase 2 - (OM525-101)	02/28/18	06/30/25	12/29/23	$2,261,937	$2,261,937	549	$0	100.0%
Flood Resilience Projects								
10038471 - Folsom Area Stormwater Improvements - SOMA and Mission Districts Sewer Replacement (WWE-719A)	08/07/23	10/04/24	06/27/24	$8,274,245	$8,274,245	99	$0	22.1%

	Approved	Current	Variance	
	Contract Cost	Forecast Cost	Cost	Percent
Program Total for On-Going Construction	**$1,684,111,279**	**$1,689,633,651**	**($5,522,372)**	**(0.3%)**

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

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

*** Contracts performed under SFMTA/SFPW.

9. PROJECTS IN CLOSEOUT

Project Title	Current Approved Construction Phase Completion	Actual Construction Phase Completion	Current Approved Construction Phase Budget	Construction Phase Expenditures To Date
Sewer System Improvement Program Phase 1				
10002303 - Beach and Sansome Street CSD Rehabilitation	06/30/22	06/30/22	$3,880,127	$3,880,127
10002344 - CSD Backflow Prevention and Monitoring	04/12/22	04/12/22	$4,637,300	$4,637,300
10002378 - 5th, North 6th and Division Street CSD Rehabilitation	01/23/21	01/23/21	$3,621,092	$3,621,092
10002419 - Force Main Rehab at Embarcadero and Jackson Streets	04/22/22	04/22/22	$8,083,556	$7,991,983
10002667 - Better Market Street Sewer Improvements	09/29/28	12/15/23	$18,837,466	$439,466
10002670 - Geary BRT Sewer Improvements Phase 1	06/30/22	06/30/22	$7,953,026	$7,798,461
10002687 - Mission Bay Loop Sewer Improvements	12/01/20	12/01/20	$261,347	$261,347
10026828 - Mariposa Dry-Weather Pump Station & Force Main Improvements	06/30/23	05/12/23	$20,001,123	$19,642,363
10037244 - Baker St CSD Baffle Improvements & Backflow Valve Repair	04/09/24	12/05/23	$755,600	$504,704
TOTAL			**$68,030,637**	**$48,776,843**

10. COMPLETED PROJECTS

Project Title	2016 Baseline Project Completion	2023 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2016 Baseline Project Budget	2023 Approved Project Budget	Current Approved Project Budget	Project Expenditures To Date
Early Implementation Projects								
10015558/10026813 - Islais Creek Green Infrastructure	10/30/26	04/24/18	04/24/18	04/24/18	$4,929,908	$5,648,416	$5,493,379	$3,834,370
10031477 - Cesar Chavez Green Infrastructure	06/28/13	06/28/13	06/28/13	06/28/13	$1,374,143	$1,395,847	$1,395,847	$1,395,847
10026805 - Sunset Green Infrastructure		10/31/22	10/31/22	10/31/22	$10,745,679	$8,738,193	$8,458,091	$8,273,863
10026806 - North Shore Green Infrastructure	03/31/20	12/31/18	12/31/18	12/31/18	$2,493,272	$1,721,677	$1,721,677	$1,721,677
10026807 - Lake Merced Green Infrastructure	07/31/20	04/24/18	04/24/18	04/24/18	$7,316,074	$6,287,009	$6,286,478	$6,286,478
10026808 - Sunnydale Green Infrastructure	11/30/20	09/30/19	09/30/19	09/30/19	$4,950,001	$5,129,283	$5,079,286	$5,079,286
10026809 - Richmond Green Infrastructure		09/30/22	09/30/22	10/28/22	$10,118,934	$12,713,052	$12,713,052	$12,456,663
10026812 - Channel Green Infrastructure	09/17/20	08/31/18	08/31/18	08/31/18	$4,569,648	$2,263,671	$2,263,671	$2,170,254
Southeast Plant (SEP) Improvements								
10026824 - SEP Oxygen Generation Plant	06/10/16	06/10/16	06/10/16	06/10/16	$11,781,151	$11,135,740	$11,135,740	$11,135,740
10015808 - SEP Existing Digester Roof Repairs	07/29/16	03/03/16	03/03/16	03/03/16	$16,625,297	$15,438,647	$15,438,647	$15,438,647
10026825 - SEP Primary and Secondary Clarifier Upgrades	08/31/18	01/21/19	01/21/19	01/21/19	$36,016,280	$32,583,576	$32,583,576	$32,583,576
10002192 - SEP 521/522 and Disinfection Upgrades	01/18/19	06/30/21	06/30/21	06/30/21	$41,613,516	$45,016,932	$44,978,369	$44,978,369
10015810 - SEP Seismic Reliability and Condition Assessment Improvements		09/09/22	09/09/22	03/31/23	$53,152,197	$35,838,381	$34,205,381	$33,570,838
10026826 - SEP Existing Digester Gas Handling Improvements	03/05/19	02/28/20	02/28/20	02/28/20	$22,143,317	$15,878,502	$15,878,502	$15,878,502
10015811 - SEP Oxygen Generation Plant 01	12/31/18	11/21/19	11/21/19	11/21/19	$9,030,106	$8,697,217	$8,697,217	$8,697,217
10015553 - Biofuel Alternative Energy	03/31/16	03/31/16	03/31/16	03/31/16	$1,855,143	$1,857,887	$1,857,887	$1,857,887
Oceanside Plant (OSP) Improvements								
10029739 - OSP Condition Assessment Repairs	06/28/21	01/29/21	01/29/21	01/29/21	$15,843,037	$11,630,774	$11,630,774	$11,630,774
10029740 - OSP Odor Control Optimization	04/15/22	02/05/20	02/05/20	02/05/20	$5,129,029	$1,207,197	$1,207,197	$1,207,197
North Point Facility (NPF) Improvements								
10026821 - Northpoint Outfall Refurbishment	08/27/18	10/31/18	10/31/18	10/31/18	$17,775,621	$18,183,639	$18,183,639	$18,183,639
Central Bayside System Improvement (CBSIP)								
10002102 - Central Bayside System Improvement Project (CBSIP)		06/30/23	06/30/23	06/30/23	$64,000,000	$36,700,000	$36,700,000	$36,700,000
Interceptors / Tunnels and Odor Control								
10033745 - Mission Street, 16th to Cesar Chavez Streets, Brick Sewer Rehabilitation		11/30/22	11/30/22	11/30/22		$8,000,000	$7,567,585	$7,567,585
10002554 - Richmond Transport Modeling	06/30/14	06/30/14	06/30/14	06/30/14	$86,883	$86,883	$86,883	$86,883
10002641 - Collection System Condition Assessment	04/09/20	03/31/21	03/31/21	03/31/21	$10,912,000	$4,909,939	$4,909,939	$4,909,939

Project Title	2016 Baseline Project Completion	2023 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2016 Baseline Project Budget	2023 Approved Project Budget	Current Approved Project Budget	Project Expenditures To Date
10002689 - Drumm and Jackson Streets Sewer System Improvement	12/14/18	12/31/20	12/31/20	12/31/20	$11,126,000	$6,470,881	$6,470,881	$6,470,881
10002760 - Cargo Way Sewer Box Odor Reduction		06/30/23	06/30/23	06/30/23	$6,442,000	$8,636,675	$8,530,655	$8,498,820
10002767 - Rutland Sewer Improvements	04/26/18	09/21/18	09/21/18	09/21/18	$1,500,000	$1,465,319	$1,465,324	$1,465,324
Interdepartmental Projects								
10002672 - Central Subway Sewer Improvements	02/28/17	06/28/19	06/28/19	06/28/19	$3,956,000	$3,108,430	$3,108,430	$3,108,430
10002695 - Masonic Avenue Sewer Improvements	05/07/18	06/28/19	06/28/19	06/28/19	$3,921,000	$2,995,772	$2,995,772	$2,995,772
Pump Stations and Forcemain Improvements								
10002138 - North Shore to Channel F M Drainage Improvement	06/06/17	06/06/17	06/06/17	06/06/17	$29,800,000	$17,300,000	$17,300,000	$17,300,000
10002417 - Hudson Ave Pump Station and Outfall Improvements	02/28/18	10/31/17	10/31/17	10/31/17	$594,000	$281,639	$281,639	$281,639
10026829 - Cesar Chavez Pump Station	05/26/16	05/26/16	05/26/16	05/26/16	$185,000	$178,360	$178,360	$178,360
10002465 - Marin Street Sewer Replacement	08/03/18	01/23/20	01/23/20	01/23/20	$3,926,000	$5,968,190	$5,968,190	$5,968,190
10002485 - Griffith Pump Station Improvements		12/30/22	12/30/22	12/30/22	$7,029,000	$15,200,000	$15,139,976	$15,139,976
Combined Sewer Discharge (CSD) and Transport/Storage Structures								
10002299 - Richmond Transport/Storage Tunnel Rehabilitation	05/13/19	12/31/20	12/31/20	12/31/20	$4,873,000	$589,972	$589,972	$589,972
Urban Watershed Assessment								
10015816 - Urban Watershed Assessment and Planning Initiation	06/28/13	06/28/13	06/28/13	06/28/13	$3,102,671	$3,102,671	$3,102,671	$3,102,671
10015817 - Urban Watershed Assessment and Planning	04/04/17	06/30/17	06/30/17	06/30/17	$14,260,844	$14,260,841	$14,260,841	$14,260,841
Advanced Rainfall and Operation Decision System								
10029728 - Advanced Rainfall Prediction - Part 1	06/29/18	06/29/18	06/29/18	06/29/18	$3,254,000	$1,491,236	$1,491,236	$1,488,628
10029729 - Operational Decision System Phase 1	09/30/16	09/30/16	09/30/16	09/30/16	$1,000,921	$944,709	$944,709	$944,709
Flood Resilience Projects								
10026811 - 17th and Folsom Wet Weather Storage	03/31/16	05/06/16	05/06/16	05/06/16	$1,012,352	$898,623	$898,623	$898,623
10026814 - Flood Resilience Analysis (Planning Phase Only)	05/31/17	02/28/17	02/28/17	02/28/17	$2,505,999	$2,176,246	$2,176,246	$2,176,246
10026815 - Flood Resilience - Early Projects (Planning Phase Only)	12/30/16	12/30/16	12/30/16	12/30/16	$5,708,749	$4,037,057	$4,037,057	$4,037,057
10026817 - Cayuga Ave Stormwater Detention Project	01/07/20	03/29/19	03/29/19	03/29/19	$8,253,000	$453,576	$453,569	$453,569
10026819 - 17th and Folsom Permanent Barriers	04/02/18	03/29/19	03/29/19	03/29/19	$2,656,000	$175,540	$175,540	$175,540
10026820 - Hydraulic and Drainage Sewer Improvements		12/30/21	12/30/21	06/30/23		$4,077,483	$4,427,530	$3,777,483
Land Reuse								
10029733 - Land Reuse of 1800 Jerrold Avenue	02/01/19	12/31/19	12/31/19	12/31/19	$90,000,000	$84,354,151	$84,805,355	$84,805,355
10029734 - Land Reuse of 1801 Jerrold Avenue	12/04/17	12/24/21	12/24/21	12/24/21	$8,244,010	$767,372	$812,753	$812,753

Project Title	2016 Baseline Project Completion	2023 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2016 Baseline Project Budget	2023 Approved Project Budget	Current Approved Project Budget	Project Expenditures To Date
Phase 1 Program Management								
10015803 - SSIP Program Management		12/01/15	12/01/15	12/01/15		$5,413,000	$5,413,000	$5,193,906
TOTAL					**$565,811,782**	**$475,410,205**	**$473,501,146**	**$469,769,977**

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II. Facilities and Infrastructure Program

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1. PROGRAM DESCRIPTION

The Wastewater Facilities and Infrastructure Program will encompass those capital improvements that fall outside of the Sewer System Improvement and Renewal and Replacement Programs. These capital projects are intended to provide necessary upgrades to aging facilities to maintain their intended functions.

The Wastewater Facilities and Infrastructure Program will address the following challenges:

- Uphold the SFPUC Wastewater Enterprise Levels of Service (LOS);
- Protect the structural integrity of critical City infrastructure;
- Streamline core operational functions and processes;
- Employ energy efficiency components, stormwater management enhancements, seismic upgrades, spatial improvements, safety and security improvements, and other essential improvements to modernize existing facilities to current standards;
- Provide benefits to surrounding communities.

2. PROGRAM STATUS

This Quarterly Report presents the progress made on the Facilities and Infrastructure program between October 1, 2023 and December 31, 2023. The approved budget and schedule were developed by the project teams using the latest available information and was approved by Wastewater Enterprise Management.

Figure 2.1 depicts the total Current Approved Budget for the Facilities and Infrastructure program projects remaining in each phase of the program as of December 31, 2023. The number of projects currently active in each phase is shown in parentheses.

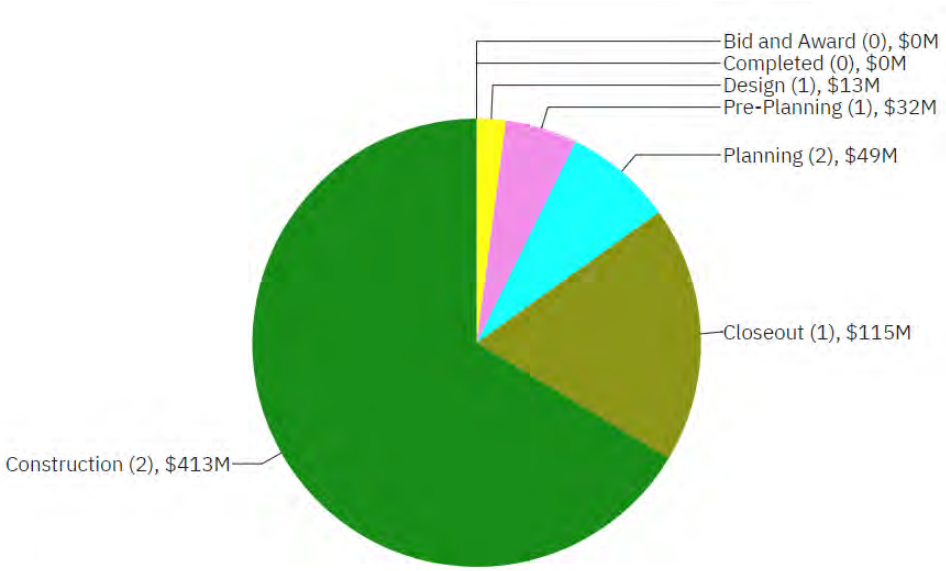


Figure 2.1 Total Current Approved Budget for Facilities and Infrastructure Program Projects Active in Each Phase

Figure 2.2 depicts the number of Facilities and Infrastructure Program projects in the following stages of the program as of December 31, 2023: Pre-construction, Construction, and Post-construction.

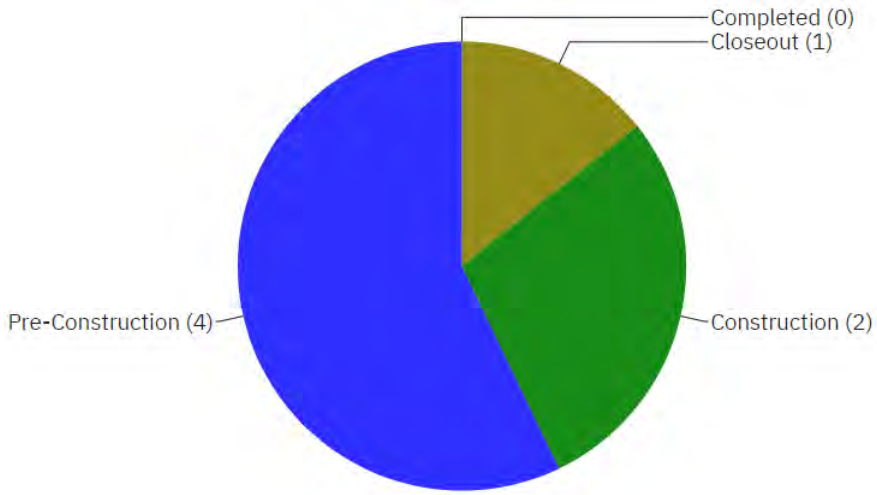


Figure 2.2 Number of Facilities and Infrastructure Program Projects in Pre-Construction, Construction, and Post-Construction

Figure 2.3 depicts the environmental review and permitting status of the Facilities and Infrastructure Program projects as of December 31, 2023.

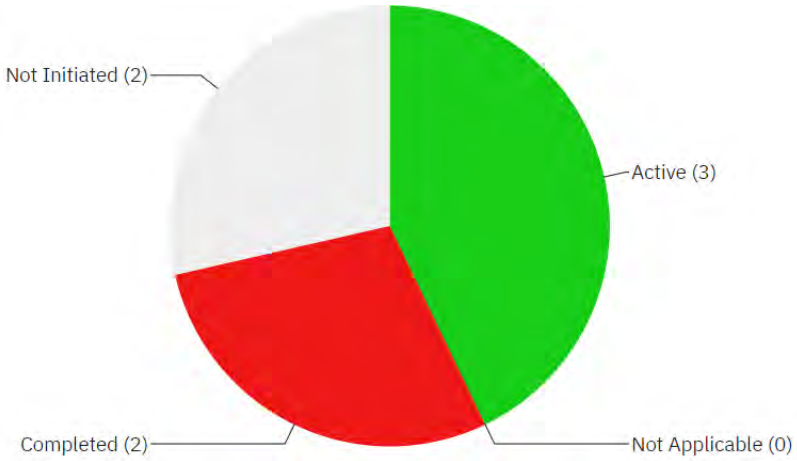


Figure 2.3 Program Environmental and Permitting Status of the Facilities and Infrastructure Program Projects

3. PROGRAM COST SUMMARY

Table 3 provides an overall program-level cost summary of the Facilities and Infrastructure Program. It shows the Expenditures to Date, Current Approved Budget, Q2/FY23-24 Forecast Costs, Cost Variance between the Current Approved and Forecast Cost, and Variance Over Reporting Period. The Current Approved Budget and the Current Forecast Cost (based on the proposed project list) at completion is $630.5M and $632.0M, respectively.

The difference in the Current Approved Budget and the Current Forecast Cost Q2/FY23-24 is $1.5M. This difference is attributed to the following factors:

- 10040511 Interim Sidestream Nutrient Removal forecast cost increased by $3.0M.
- 10033820 Southeast Outfall Condition Assessment Rehabilitation forecast cost decreased by $24.6M.
- 10015554 Ocean Beach Climate Change Adaptation Project Plant forecast cost increased by $18.8M.
- Southwest Ocean Outfall (SWOO) forecast cost increased by $4.3M.

Table 3. Program Level Cost Summary

Program	Expenditure To Date ($ Million) (A)	Current Approved Budget ($ Million) (B)	Current Forecast Cost ($ Million) (C)	Cost Variance ($ Million) (D = B - C)	Variance Over Reporting Period* ($ Million) (E)
Facilities and Infrastructure Program	$189.3	$630.5	$632.0	($1.5)	($1.5)

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

4. PROGRAM SCHEDULE SUMMARY

Figure 4 and Table 4 compare the Current Approved Schedule completion date and the Current Forecast Schedule completion date for the Facilities and Infrastructure Program. The Program schedule is under development, the overall time frame is 20-30 years.

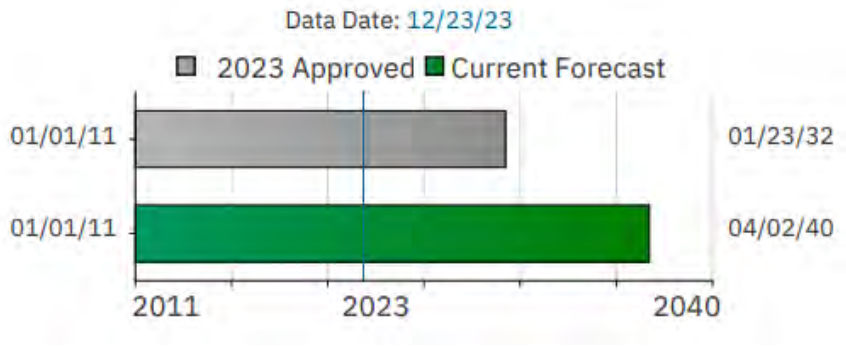


Figure 4. Program Schedule Summary

Table 4. Current Approved vs. Current Forecasted Schedule Dates

SUBPROGRAM	Current Approved Project Start	Actual Start	Current Approved Completion	Current Forecast Completion	Schedule Variance (Months)
Facilities and Infrastructure Program	01/01/11	01/01/11	01/23/32	04/02/40	98.4

5. BUDGET AND SCHEDULE TREND SUMMARY

Table 5 contains all approved Facilities and Infrastructure projects that are active and in any of the planning, design, bid and award, or construction phases of the project. The table excludes all Program Management accounts, as well as any projects that are either Not-Initiated, On-Hold, in Closeout or Completed.

During this Quarter (Q2 FY23-24), the following major milestone was achieved, for the following F&I projects:

1. 10015546 – New Treasure Wastewater Plant – Design Build Construction portion – (DB-132) issued the 95% design package and the Art Commission approved civic design review phase II.

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	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion	Forecast Cost	Forecast Completion
	a	b	c	d	e	f	g	h	i	j	k	l	m	n
WWE - Facilities and Infrastructure (F&I)														
10033820 Southeast Outfall Condition Assessment & Rehabilitation	FY24-33		07/01/19		02/15/24		08/30/24		06/27/25		01/22/26		Q2 - FY23-24	
	$33.8	09/30/30	$33.8	01/31/28	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$9.2	03/31/27
10015546 New Treasure Island Wastewater Treatment Plant	FY24-33		06/18/18		04/02/19		05/22/23		09/29/23[2]		10/24/22[3]		Q2 - FY23-24	
	$222.2	08/26/26	$67.4	11/01/22	$67.4	01/29/24	$222.2	8/26/2026	N/A	N/A	$222.2	08/26/26	$222.2	08/26/26
10015554 Ocean Beach Climate Change Adaptation Project	FY24-33		07/23/12		(A) N/A (B) N/A (C) 09/30/19		(A) N/A (B) N/A (C) 09/30/20		(A) N/A (B) N/A (C) 05/31/23 (D) 05/31/23 (E) 05/31/23		(A) N/A (B) 06/30/22 (C) 03/05/25 (D) 08/01/25 (E) 08/18/27		Q2 - FY23-24	
(A) ACOE Beach Nourishment (B) Ocean Beach Short-Term Improvements (C) Ocean Beach Long-Term Improvements - (D) Ocean Beach Long-Term Improvements - Seawall (E) Ocean Beach Long-Term Improvements - Planting	$190.8	01/23/32	$126.7	01/30/26	$169.9	07/01/27	$169.9	07/01/27	$183.4	04/19/32	TBD	TBD	$209.6	07/20/33
10015557 Southeast Bay Outfall Islais Creek Crossing Replacement	FY24-33		09/26/16		N/A		N/A		N/A		N/A		Q2 - FY23-24	
	$13.0	07/03/24	$15.0	02/07/22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$13.0	06/30/25
10040511 Interim Sidestream Nutrient Removal	FY24-33		09/01/23		02/29/24		TBD		TBD		TBD		Q2 - FY23-24	
	$15.0	06/30/26	$15.0	06/30/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$18.0	06/30/26

Footnotes:

1. This represents Forecast project cost and project completion date at the time of award of construction contract, award of CM/GC scope, award of DB scope.
2. The project delivery method for this project is Design-Build (DB). Design milestones are from Design Build contractor's current schedule forecast.
3. This represents the award of the overall design-build contract DB-132 which includes Preconstruction & Construction phases / The project Initiation Forecast Cost was based on funding availability.

6. PROJECT PERFORMANCE SUMMARY*

All costs are shown in $1,000s

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 Completion Date (h) (+)	Approved Completion Date (i) (++)	Forecast Completion Date (j)	Schedule Variance (Days) (k=i-j) (+++)
Facilities and Infrastructure Program											
Facilities and Infrastructure Program											
10033820 Southeast Outfall Condition Assessment Rehabilitation	PL	$33,775	$33,775	$9,192	$1,912	$24,583	73%	09/30/30	09/30/30	03/31/27	1,279
10015546 New Treasure Island Wastewater Treatment Plant	CN	$222,170	$222,170	$222,170	$34,878	$0	0%	08/26/26	08/26/26	08/26/26	0
10015554 Ocean Beach Climate Change Adaptation Project	CN	$190,833	$190,833	$209,589	$27,753	($18,756)	(10%)	01/23/32	01/23/32	07/20/33	(544)
10015557 Southeast Bay Outfall Islais Creek Crossing Replacement	DS	$13,000	$13,000	$13,000	$10,713	$0	0%	07/03/24	07/03/24	06/30/25	(362)
10040511 Interim Sidestream Nutrient Removal	PL	$15,000	$15,000	$18,000	$286	($3,000)	(20%)	06/30/26	06/30/26	06/30/26	0

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

**** Phase Status Legend**

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

Footnotes:

(+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY24-33.

(++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY24-33, 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

10033820 - Southeast Outfall Condition Assessment Rehabilitation

Project Description: The Southeast Outfall (SEO) discharges effluent from the Southeast Plant (SEP) into the San Francisco Bay about 650 feet offshore, east of Pier 80. The goal of the project is to determine the pipeline condition of the onshore force main and offshore outfall components of the SEO system. The project will thoroughly and completely evaluate the condition and remaining life expectancy of the SEO system and implement the rehabilitation solutions to extend the useful life.

Program: Facilities and Infrastructure Program	**Project Status:** Planning	**Environmental Status:** Not Initiated (TBD)

Project Cost:

Approved	$ 33.78 M
Forecast	$ 9.19 M
Actual	$ 1.91 M

Project Schedule:

Approved 07/01/19	09/30/30
Forecast 07/01/19	03/31/27

Project Percent Complete: 7.1%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	TBD	07/31/25	04/01/26	09/30/26

Progress and Status:

A preferred alternative to slipline approximately 35-LF of pipe near Manhole 6 was determined during the Alternative Analysis Report (AAR) evaluation process. However, during Capital Improvement Planning, budget for the project was reduced, and the project team was asked to look at WEKO- SEAL for the internal pipe joint repair instead. WEKO-SEAL repair was one of the alternatives analyzed during the evaluation process. It was screened out because it does not meet the project's LOS of 15 years' service life. Based on previous repairs, WEKO-SEAL would last approximately 3 years. A letter will be prepared and submitted to WWE for their consideration of using WEKO-SEAL for repairing the leak.

Issues and Challenges:

During the Planning phase, a preferred alternative for rehabilitation was identified resulting in reduction of project schedule and budget.

Southeast Outfall Segments

10015546 - New Treasure Island Wastewater Treatment Plant

Project Description: The objective of the project is to build a new wastewater treatment plant that will provide reliable service for the Treasure Island residents and meet the recycled water demands of the future redevelopment on the island. The existing facility was built by the United States Navy over 50 years ago and is past its useful life and no longer reliable. The existing facility is also not capable of providing recycled water and meeting the needs of the residents on the redeveloped island.

Program: Facilities and Infrastructure Program	**Project Status:** Construction	**Environmental Status:** Completed (EIR)

Project Cost:

Approved	$ 222.17 M
Forecast	$ 222.17 M
Actual	$ 34.88 M

Project Schedule:

Approved 01/01/11	08/26/26
Forecast 01/01/11	08/26/26

Project Percent Complete: 14.6%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	04/18/19 A	12/27/21 A	08/21/23 A	02/27/26

Progress and Status:

The project delivery method for this project is Design-Build (DB). For design, the design-build contractor issued the 95% design package and the Art Commission approved civic design review phase II. Coordination with the SFPUC Power Enterprise is on-going regarding permanent power. The project team is also coordinating with the Treasure Island Development Authority (TIDA) regarding key infrastructure items. For construction, the design-build contractor continues civil work related to the influent pumping structure, biological nutrient removal facility, and the Headworks facility. Under-slab electrical and plumbing work was also initiated for the membrane bioreactor/ultraviolet disinfection system.

Issues and Challenges:

None at this time.

Biological Nutrient Removal (BNR) Facility Wall Placement

10015554 - Ocean Beach Climate Change Adaptation Project

Project Description: The Project was initially envisioned through the 2012 Ocean Beach Master Plan. The Ocean Beach Master Plan lays out a comprehensive vision for addressing a wide range of complex challenges along Ocean Beach, including past emergency declarations by the City to protect both SFPUC and non-SFPUC assets, and presents a series of recommendations for a more resilient and sustainable future. The project, which is being led by the SFPUC, will facilitate the removal of the stabilization measures and development of a comprehensive shoreline management and infrastructure protection plan in partnership with relevant stakeholders and regulatory agencies to provide a long-term solution to climate induced erosion issues along Ocean Beach.

Program: Facilities and Infrastructure Program	**Project Status:** Construction	**Environmental Status:** Active (Various)

Project Cost:

Approved	$ 190.83 M
Forecast	$ 209.59 M
Actual	$ 27.75 M

Project Schedule:

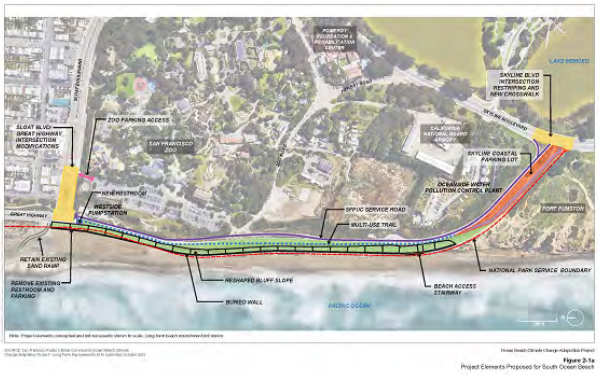
Approved 07/23/12	01/23/32
Forecast 07/23/12	07/20/33

Project Percent Complete: 17.6%

Key Milestones		Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	A	09/10/14 A	N/A	06/02/21 A	09/30/21 A
	B	02/09/21 A	09/14/15 A	01/07/16 A	04/02/25
	C	07/31/24	11/01/24	04/02/25	05/05/26
	D	07/31/24	05/01/25	11/04/25	10/03/29
	E	07/31/24	05/03/27	11/02/27	01/20/33

Progress and Status:

A) Army Corps of Engineers (ACOE): Construction completed 2021-2022. Closeout activities are being finalized as a refund of $1,080,500 was received in November 2023 from the ACOE. B) Short Term Improvements: The short-term improvements projects represent multi-year, as-needed protection of the bluff that overlays the Lake Merced Tunnel. Annual monitoring was finalized; no sand backpassing is required. However, monitoring continues through the season. Sandbags are stored at the SF Zoo and can be deployed if necessary, under contract WW-714. Preceding contracts WW-663 (2018-2021) & WW-607 (2016-2019) covering this work have been closed. C/D/E) Long Term Improvements: Negotiations on funding with SF Rec and Park has resulted in a Final Terms Agreement which will need to be further refined in a MOU. The team is currently working on 100% design. The project is anticipated to be executed in three separated contracts (C) Intersection, (D) Seawall, and (E) Planting. The CEQA Environmental Impact Report became final in October 2023; legislation to close the portion of the Great Highway between Sloat and Skyline Boulevards was introduced to the Board of Supervisors; work continues on obtaining the Coastal Development Permit.



Proposed Project Components

Issues and Challenges:

The budget and schedule variance are due to on-going interdepartmental issues, complicated project approval processes, and significant delays to design associated with a lack of agreement with the San Francisco Zoo.

10015557 - Southeast Bay Outfall Islais Creek Crossing Replacement

Project Description: The Project Scope includes only condition assessment to document deficiencies for the portion of the Southeast Outfall ("SEO") that crosses Islais Creek immediately parallel to, and west of, the Third Street Bridge in San Francisco, CA. Treated effluent from the SEP flows by gravity to the Booster Pump Station (BPS) and then pumped to the San Francisco Bay ("the Bay") via the SEO. The existing SEO Islais Creek crossing is comprised of two ductile iron pipes 36-inch and 42-inch constructed in 1967 and have reached useful life. One of the two crossings was replaced on an emergency basis with HDPE pipe with ballast sitting on the bed of creek in 2020. It is anticipated to utilize R&R funds to extend life of two existing crossing by addressing the potential deficiencies found during the inspections/condition assessment.

Program: Facilities and Infrastructure Program	**Project Status:** Design	**Environmental Status:** (Not Applicable)

Project Cost:

Approved	$ 13.00 M
Forecast	$ 13.00 M
Actual	$ 10.71 M

Project Schedule:

Approved 09/26/16	07/03/24
Forecast 09/26/16	06/30/25

Project Percent Complete: 91.3%

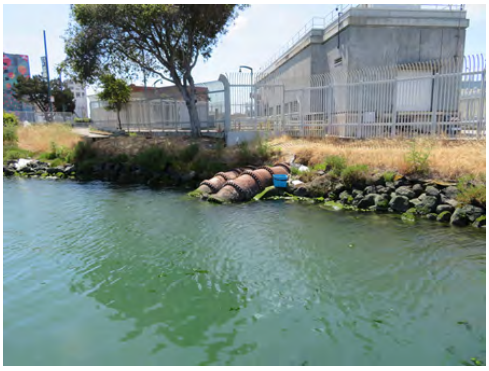
Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	N/A	N/A	N/A	N/A

Progress and Status:

Inspection plan for the 42" ductile iron pipe at Islais Creek crossing has been finalized and the inspection is anticipated to occur in April 2024. Inspection plan for the 48" HDPE emergency bypass at Islais Creek crossing was approved. The bathymetric and lidar surveys were completed and the project team is developing the inspection report.

Issues and Challenges:

The increase to the project schedule is needed to accommodate additional time for procurement of consultant services that has diving capabilities. In addition, the condition assessment plan approval has a regulatory interface with San Francisco Bay Conservation and Development Commission (BCDC). BCDC approval and coordination regarding the inspection plans may require additional time. Furthermore, a shutdown of the SEP is required to facilitate inspections and shutdowns are dependent on process performance constraints.



Current Pipeline Crossing at Islais Creek

10040511 - Interim Sidestream Nutrient Removal

Project Description: The SEP Interim Sidestream Nutrient Removal Project addresses the planning, design, and construction of a new pipeline, treatment facility and supporting infrastructure and utilities, to reliably reduce the nitrogen levels in the waste stream from the biosolids dewatering process at the Southeast Wastewater Treatment Plant (SEP). The Project intends to convert and repurpose the abandoned Dissolved Air Flotation (DAF) tanks at SEP, located south of Jerrold Avenue.

Program: Facilities and Infrastructure Program	**Project Status:** Planning	**Environmental Status:** Active (TBD)

Project Cost:

Approved	$ 15.00 M
Forecast	$ 18.00 M
Actual	$ 0.29 M

Project Schedule:

Approved 09/01/23	06/30/26
Forecast 09/01/23	06/30/26

Project Percent Complete: 0.6%

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

Progress and Status:

The Conceptual Engineering Report (CER) for the SEP Interim Sidestream Nutrient Removal Project is currently underway. A draft and final CER will be completed in the next quarter. Environmental review is currently underway. Project delivery options that can meet the aggressive project schedule are also being identified and evaluated.

Issues and Challenges:

The project budget was increased by $3M based on recent clarification of the scope of work and the future waste streams once the new Southeast Plant biosolids facilities are in operation.

Southeast Plant- Abandoned DAF Units

8. On-Going Construction*

Construction Contract	Schedule			Budget		Variance (Approved - Forecast)		Percent Complete
	NTP Date	Approved Construction Final Completion**	Current Forecast Construction Final Completion	Approved Contract Cost	Current Forecast Cost**	Schedule (Cal Days)	Cost	
Facilities and Infrastructure Program								
10015554 - Ocean Beach Climate Change Adaptation Project - (Contract B, WW-714)	04/04/22	04/02/25	04/02/25	$3,134,000	$3,134,000	0	$0	10.0%
10015546 - New Treasure Island Wastewater Treatment Plant - Design Build Construction portion - (DB-132)	08/21/23	02/27/26	02/27/26	$151,515,204	$151,515,204	0	$0	8.0%

	Approved Contract Cost	Current Forecast Cost	Variance	
			Cost	Percent
Program Total for On-Going Construction	**$154,649,204**	**$154,649,204**	**$0**	**0%**

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

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

*** Contracts performed under SFMTA/SFPW.

9. PROJECTS IN CLOSEOUT

Project Title	Current Approved Construction Phase Completion	Actual Construction Phase Completion	Current Approved Construction Phase Budget	Construction Phase Expenditures To Date
Facilities and Infrastructure Program				
10015556 - Southeast Community Center at 1550 Evans	12/29/23	12/29/17	$85,148,362	$85,133,168
TOTAL			**$85,148,362**	**$85,133,168**

10. COMPLETED PROJECTS

No projects are currently completed.

III. Renewal and Replacement Program

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1. PROGRAM DESCRIPTION

The Wastewater Enterprise (WWE) Renewal and Replacement Program (R&R) is an on-going annual program that seeks to address deficiencies in two wastewater infrastructure categories: R&R Collection System and R&R Treatment Facilities. The goal of the R&R Program is to meet the endorsed levels of service goals, regulatory permit compliance, system reliability and functionality, and sustainable operations of the City's sewer system. The R&R Program also complies with the State requirement that a provision be made for the periodic repair and replacement of sewer system facilities.

In general, the R&R Program's projects and priorities are led by WWE. The R&R Collection System projects are prioritized based on WWE's asset management approach, which factors in the physical condition of the sewer, age, location, risk, public safety, San Francisco Public Work's street paving schedule, and various other factors.

The R&R Treatment Facilities projects are prioritized based upon regulatory compliance, condition assessments, Operation staff recommendations, and Level of Service goals. These projects seek to extend the useful life of wastewater collection systems and treatment facility assets throughout San Francisco by helping to maintain their collection, conveyance, storage and treatment capacities and performance.

More importantly, this Program provides ongoing support and asset improvements to augment the ongoing operation & maintenance work performed by WWE staffs on the wastewater systems, and helps maintain compliance with various regulatory bodies, including the Regional Water Quality Control Board (RWQCB) for the National Pollutant Discharge Elimination System (NPDES) permits and Bay Area Air Quality Management District (BAAQMD) requirements.

2. PROGRAM STATUS

This Quarterly Report presents the progress made on the Renewal and Replacement Program (R&R) projects between October 1, 2023 and December 31, 2023.

The approved project budget and schedule were developed and approved by the appropriate Wastewater Enterprise Manager on December 31, 2023. This is based on the project team's best assessment of the projects at this time. However, it should be noted that the project team is currently focused on validating these estimates.

Figures 2.1, 2.2, and 2.3 depict the total number of active projects remaining in each phase of the R&R Collection systems and R&R Treatment Facilities programs as of December 31, 2023.

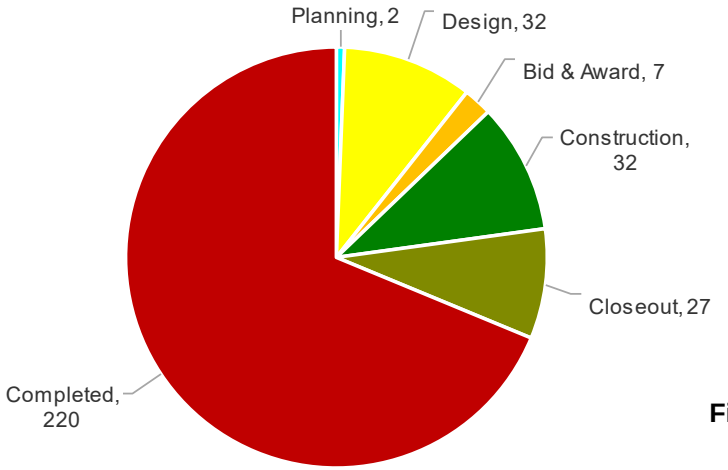


Figure 2.1 R&R Collection Systems – Small Diameter Projects by Phase

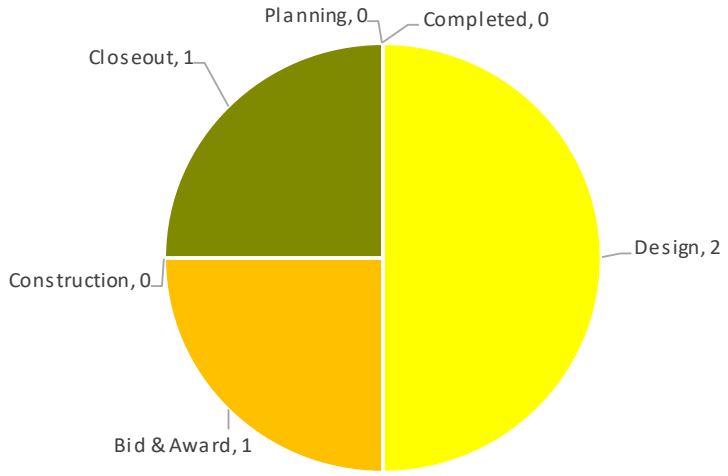


Figure 2.2 R&R Collection Systems – Large Diameter Projects by Phase

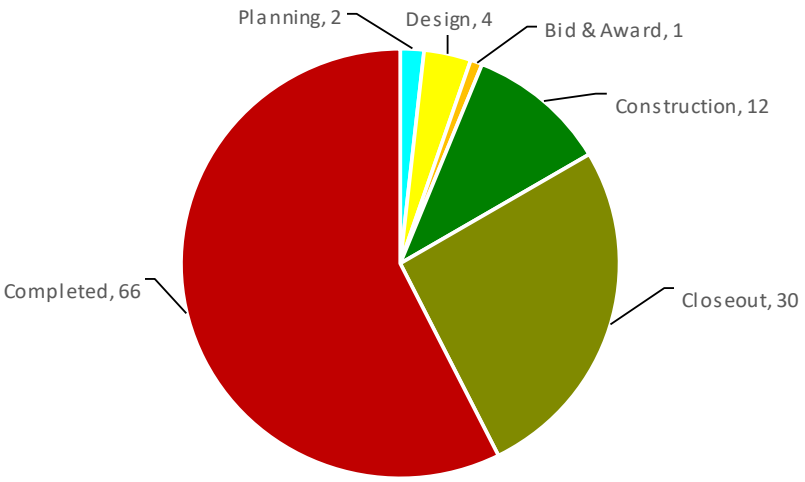
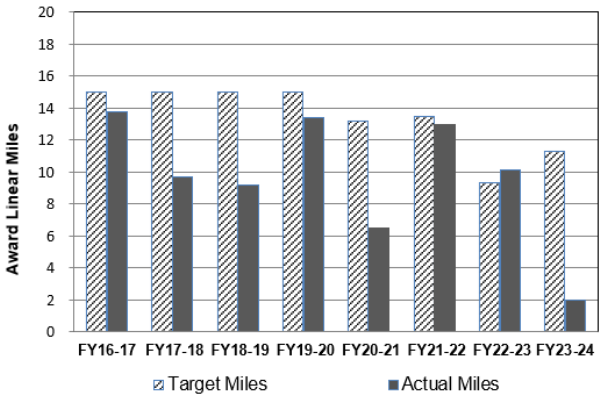


Figure 2.3 R&R Treatment Facilities Projects by Phase by Phase

The Wastewater R&R Collection System Sewer Replacement Program has an annual budget of $48.1 million in FY24 to award a target of 11.3 miles of sewer replacement work in San Francisco.

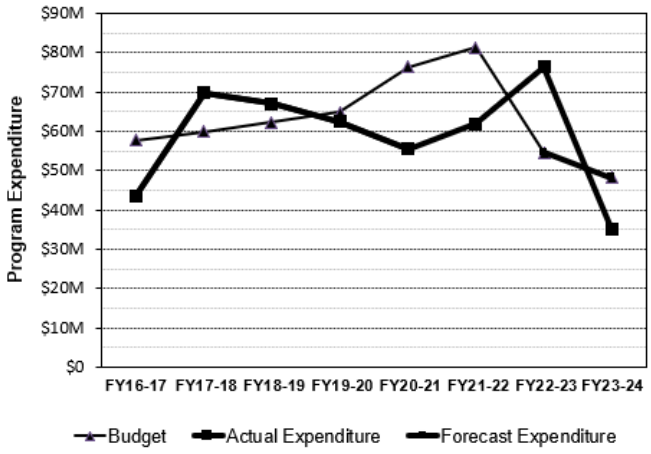
Figure 2.4 depicts the target and actual award miles of sewer improvement projects that have been awarded to date and are forecasted to be awarded. The Wastewater R&R Collection System Small Diameter Sewer Replacement Program has awarded approximately 2.0 miles of sewer replacement work in FY24.



	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	FY21-22	FY22-23	FY23-24
Target Miles	15.0	15.0	15.0	15.0	13.2	13.5	9.3	11.3
Actual Miles	13.8	9.7	9.2	13.4	6.5	13.0	10.1	2.0
Forecast Miles								11.3

Figure 2.4 Wastewater R&R Collection System – Small Diameter Sewer Improvements - Award Linear Miles by Fiscal Year

Figure 2.5 shows the annual total program expenditure by fiscal year for the R&R Collection System Small Diameter Sewer Replacement program.



	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	FY21-22	FY22-23	FY23-24
Budget	$57.6M	$59.9M	$62.3M	$64.8M	$76.3M	$81.2M	$54.5M	$48.1M
Actual Expenditure	$43.4M	$69.7M	$67.0M	$62.4M	$55.5M	$61.9M	$76.3M	$35.2M
Forecast Expenditure								$48.1M

Figure 2.5 Wastewater R&R Collection System – Small Diameter Sewer Improvements - Program Expenditure by Fiscal Year

3. PROGRAM COST SUMMARY

Table 3 provides an overall program-level cost summary of the R&R Program. It shows the Expenditures to Date; Current Approved Budget and Current Forecasted Cost; and the Cost Variance between the Approved Budget and Forecasted Cost.

The total Approved Budget and the Current Forecasted Cost at completion for the R&R Program are the same at $1,286.9 million.

Table 3. Program Cost Summary

Subprograms	Expenditures to Date ($ Million) (A)	Current Approved Budget ($ Million) (B)	Current Forecasted Cost ($ Million) (C)	Cost Variance ($ Million) (D = B - C)
R&R Collection Systems – Small Diameter	$824.92	$1,036.30	$1,036.30	-
R&R Collection Systems – Large Diameter	$2.44	$29.02	$29.02	-
R&R Treatment Facilities	$156.78	$221.55	$221.55	-
Program Total	**$984.13**	**$1,286.88**	**$1,286.88**	**-**

4. PROGRAM SCHEDULE SUMMARY

Figure 4 and Table 4 depict the Current Approved and Current Forecasted Schedules for the R&R program. The Approved Schedule and Forecast completion for the overall R&R program is March 2025.

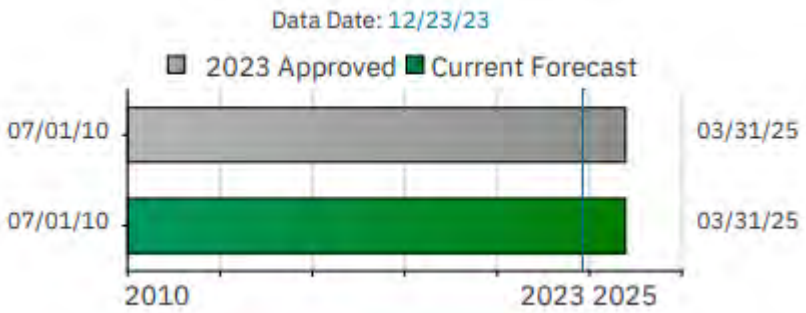


Figure 4. Program Schedule Summary

Table 4 Current Approved vs. Current Forecasted Schedule Dates

Sub-Program	Current Approved Project Start	Actual Start	Current Approved Completion	Current Forecasted Completion	Schedule Variance (Months)
R&R Collection Systems – Small Diameter	07/01/10	07/01/10 A*	03/31/25	03/31/25	-
R&R Collection Systems – Large Diameter	07/01/22	07/01/22 A*	03/31/25	03/31/25	-
R&R Treatment Facilities	07/01/10	07/01/10 A*	02/14/25	02/14/25	-
Overall Program	**07/01/10**	**07/01/10 A***	**03/31/25**	**03/31/25**	**-**

** "A" represents the actual date.*

5. PROJECT PERFORMANCE SUMMARY*

All costs are shown in $1,000s

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 Completion Date (h) (+)	Approved Completion Date (i) (++)	Forecast Completion Date (j)	Schedule Variance (Days) (k=i-j) (+++)
Collection Systems											
Renewal & Replacement Program											
15722 R&R Collection Systems - Small Diameter	MP	$1,036,304	$1,036,304	$1,036,304	$824,920	$0	0%	03/31/25	03/31/25	03/31/25	0
R&R Collection Systems - Large Diameter	MP	$29,020	$29,020	$29,020	$2,435	$0	0%	03/31/25	03/31/25	03/31/25	0
Treatment Facilities											
Renewal & Replacement Program											
15724 R&R Treatment Facilities	MP	$221,553	$221,553	$221,553	$156,778	$0	0%	02/14/25	02/14/25	02/14/25	0

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

**** Phase Status Legend**

PL Planning DS Design

BA Bid & Award CN Construction MP Multiple-Phase

Footnotes:

(+) **CIP Approved Budget and Project Completion Date:** The budget and schedule approved as part of 10-year CIP for FY24-33.

(++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY24-33, 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.

6. PROJECT STATUS REPORT

15722 - R&R Collection Systems - Small Diameter

Project Description: The purpose of the Wastewater Enterprise (WWE) Renewal and Replacement Program (R&R) Collection System Small Diameter Sewer project is to maintain the existing functionality of the sewage collection system and address planned and emergency projects for repair and replacement of structurally inadequate sewers. This project consists of the following sub-projects: small diameter (less than and equal to 36-inch) sewer improvements, small diameter (less than and equal to 36-inch) sewer condition assessment, spot sewer replacement. By utilizing an asset management approach, which factors in: physical condition, age, location, risk, public safety, paving schedule and other factors, aging and failed portions of the collection system are identified and replaced.

Program: Renewal & Replacement Program	**Project Status:** Multi-Phases	**Environmental Status:** Completed

Project Cost:

Approved	$ 1036.30 M
Forecast	$ 1036.30 M
Actual	$ 824.92 M

Project Schedule:

Approved 07/01/10	03/31/25
Forecast 07/01/10	03/31/25

Project Percent Complete: 80.0%

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

Progress and Status:
See Section 7 for the active construction contracts information. ++On-Going Construction Projects identified in Section 7. were all covered under exemption determinations. The summary below shows the total number of R&R Collection Systems-Small Diameter projects in each phase of the program as of December 31, 2023. The three-hundred twenty (320) WWE Collection Systems-Small Diameter projects are distributed as follows:

Planning: 2

Design: 32

Bid & Award: 7

Construction: 32

Closeout: 27

Completed: 220

During this Quarter, 1 new project was initiated, 2 projects were advertised, 3 projects were awarded/awaiting NTP, 3 projects received NTP, 5 projects completed construction and 1 project closed out.

Issues and Challenges:
None at this time.

Open trench excavation and replacement of 12-inch main sewer on Page Street, San Francisco

R&R Collection Systems - Large Diameter

Project Description: The purpose of the Wastewater Enterprise (WWE) Renewal and Replacement Program (R&R) Collection System Large Diameter Sewer project is to maintain the existing functionality of the sewage collection system and address planned and emergency projects for repair and replacement of structurally inadequate sewers. This project consists of the following sub-projects: large diameter (greater than 36-inch) sewer cleaning and condition assessment, and large diameter (greater than 36-inch) sewer improvements. By utilizing an asset management approach, which factors in: physical condition, age, location, risk, public safety, paving schedule and other factors, aging and failed portions of the collection system are identified and replaced.

Program: Renewal & Replacement Program	**Project Status:** Multi-Phases	**Environmental Status:** Completed

Project Cost:

Project Schedule:

Project Percent Complete: 8.3%

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

Progress and Status:
See Section 7 for the active construction contracts information. ++On-Going Construction Projects identified in Section 7. were all covered under exemption determinations. The summary below shows the total number of R&R Collection Systems-Large Diameter projects in each phase of the program as of December 31, 2023. The WWE Collection Systems-Large Diameter projects are distributed as follows:

Planning: 0

Design: 2

Bid & Award: 1

Construction: 0

Closeout: 1

Completed: 0

During this Quarter, 2 projects are in design, 1 project was advertised, and 1 project is in closed out.

Issues and Challenges:
None at this time.

15724 - R&R Treatment Facilities

Project Description: The purpose of the Wastewater Enterprise (WWE) Renewal and Replacement (R&R) Treatment Program is to extend the useful life of the WWE treatment facility assets. The R&R Treatment Facilities projects are prioritized based upon regulatory compliance, condition assessments, Operation staff recommendations and Level Of Service goals.

Program: Renewal & Replacement Program	**Project Status:** Multi-Phases	**Environmental Status:** Active

Project Cost:

Approved	$ 221.55 M
Forecast	$ 221.55 M
Actual	$ 156.78 M

Project Schedule:

Approved 07/01/10	02/14/25
Forecast 07/01/10	02/14/25

Project Percent Complete: 83.0%

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

Progress and Status:
See Section 7 for the active construction contracts information. ++ Projects will be reviewed for CEQA compliance as they proceed. The summary below shows the total number of the remaining 115 projects in each phase of the program as of December 31, 2023.

Planning: 2

Design: 4

Bid/Award: 1

Construction: 12

Closeout: 30

Completed: 66

Equipment Purchase FY24 to Date: Fifteen (15) equipment purchases completed totaling $2,288,207.85

Issues and Challenges:
None at this time.

7. On-Going Construction*

Construction Contract	Schedule			Budget		Variance (Approved - Forecast)		Percent Complete
	NTP Date	Approved Construction Final Completion**	Current Forecast Construction Final Completion	Approved Contract Cost	Current Forecast Cost**	Schedule (Cal Days)	Cost	
Collections Systems								
10034367 - 45th Ave, 46th Ave, 47th Ave, Vicente St, Wawona St, and Sloat Blvd Sewer Repl (WW-684)	02/27/23	03/07/24	03/07/24	$7,342,612	$7,342,612	0	$0	80.0%
10034813 - As-Needed Main Sewer Replacement No. 8 (WW-697)	11/30/20	01/03/25	01/03/25	$7,373,000	$7,373,000	0	$0	91.6%
10035307 - Various Locations Sewer Replacement No. 9 - (WW-704)	04/18/22	03/17/24	03/17/24	$3,637,362	$3,637,362	0	$0	88.0%
10035308 - Various Locations Sewer Replacement No. 10 (WW-705)	01/09/23	12/24/23	02/29/24	$4,739,540	$4,739,540	(67)	$0	83.7%
10035398 - Various Locations Sewer Replacement No. 12 - (WW-708)	04/18/22	10/14/23	01/31/24	$3,802,637	$3,802,637	(109)	$0	97.4%
10035615 - 10035615-Various Locations Sewer Replacement No. 13 (WW-709R)	02/21/23	05/25/24	05/25/24	$9,497,156	$9,497,156	0	$0	66.5%
10038766 - As-Needed Sewer Inspection (FY23) (WW-733)	04/10/23	10/30/24	10/30/24	$1,698,300	$1,698,300	0	$0	45.3%
10038815 - 10038815-Various Locations Main Sewer Inspection No. 1 (WW-735)	08/07/23	05/02/24	05/02/24	$1,998,888	$1,998,888	0	$0	51.5%
10037105 - 10037105-As-Needed Spot Sewer Replacement No. 44 (WW-716)	08/14/23	08/29/24	08/29/24	$9,796,468	$9,796,468	0	$0	34.6%
Treatment Facilities								
10015731 - Southeast Water Pollution Control Plant HVAC and Mechanical Upgrades - (WW-543)	12/07/22	08/22/25	08/22/25	$12,947,014	$12,947,014	0	$0	11.0%

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

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

*** Contracts performed under SFMTA/SFPW.

	Approved Contract Cost	Current Forecast Cost	Variance	
			Cost	Percent
Program Total for On-Going Construction	**$62,832,977**	**$62,832,977**	**$0**	**0%**

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

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

*** Contracts performed under SFMTA/SFPW.

8. PROGRAMS IN CLOSEOUT

No program is currently under closeout.

9. COMPLETED PROGRAMS

No program is currently completed.

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APPENDICES

A. PROJECT DESCRIPTIONS

B. APPROVED PROJECT-LEVEL SCHEDULE

C. LIST OF ACRONYMS

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APPENDIX A. PROJECT DESCRIPTION

SSIP

Sewer System Improvement Program Phase 1

10002102 Central Bayside System Improvement Project (CBSIP)

The Central Bayside System Improvements Project (CBSIP) will provide collection system enhancement to the Channel & Islais Creek urban watersheds, including needed redundancy for the existing 66-inch Channel Force Main, infrastructure improvements to sewers/pump stations, and stormwater management through elements of both green and grey infrastructure. Major components of the project consist of a tunnel to transport, via gravity, dry and wet-weather flows from the Channel and North Shore watersheds to the Southeast Water Pollution Control Plant (SEP), a large all-weather pump station to lift the flows into the SEP, improvements to Channel Pump Station, and green/gray infrastructure improvements within the watersheds.

10002138 North Shore to Channel F M Drainage Improvement

North Shore Force Main (NSFM) provides critical conveyance of combined sewage and stormwater flows and before this project, the force main did not have any redundancy. Approximately 2,750 LF of the 8,000 LF of this force main were located in The Embarcadero Roadway and either constructed of steel pipe or ductile iron pipe (both are susceptible to corrosion). After emergency repairs in 2008, a project was initiated under the Wastewater Capital Improvement Program to construct a redundant force main (North Shore to Channel Force Main [NSCFM]), so the 2,750 LF of the existing NSFM may be taken out of service for a complete repairs.

10002192 SEP 521/522 and Disinfection Upgrades

This project includes upgrades to the Post-Chlorination Building as well as construction of a new building to house electrical and hydraulic controls, and replacement of valves and actuators in the Chlorine ContactChannel and stop logs at the Effluent Control Structure. The new building for electrical and hydraulic controls will be constructed to meet the Sewer System Improvement Program (SSIP) seismic reliability goals. In addition, this project will upgrade and relocate the non-potable (W3) pump system by replacing four existing W3 pumps and motors with six new higher flow capacity pumps.

10002220 SEP Primary Sludge Handling Improvements

The project’s scope of work includes a new building to house primary sludge screens, grit removal equipment, grit washing and clarification equipment, and ancillary equipment including pumps; a new Gravity Belt Thickener (GBT), rehabilitation of the existing two GBT units; and replacement of existing odor control equipment and upgrades to existing exhaust fans. However, after design was completed, it was determined that this project is less critical than other long-term treatment improvements. Therefore, this project will complete the closeout of design and rehabilitation of critical components is to be deferred to the WWE R&R program for consideration.

10002284 SEP Power Feed and Primary Switchgear Upgrades

The objective of the project is to increase reliability, redundancy and capacity of the electrical system at Southeast Plant (SEP) to meet Sewer System Improvement Program (SSIP) level-of-service (LOS) goals by upgrading the existing power feed by PG&E and obtaining a new feed by Power Enterprise. The project will construct an elevated building to house the new Primary Power Switch Station and substructures to provide adequate power for the existing electrical loads and new SSIP facilities, upgrade/replace aging existing substations, install power monitoring and protection system for additional reliability and efficiency,

as well as provide redundant services to the nearby pump stations.

10002299 Richmond Transport/Storage Tunnel Rehabilitation

Under the Richmond Transport Modeling Project, recommendations for handling the reported issues within this system were developed. The purpose of this project is to execute the recommendations of the Modeling Project. The scope of this project includes the evaluation of rehabilitation methods for the Richmond/Transport Storage Tunnel to confirm the previous findings and recommendations included in the physical modeling performed by PMC and presented in October 2013 to resolve historical surge issues identified. The model identified the causes of geysering through vent holes and dislodged manhole covers in various areas, and included modification recommendations including odor solutions that will be verified during the Planning Phase of this project.

10002300 Baker/Laguna/Pierce CSD & Outfall

Project has been deferred to Phase 2.

10002303 Beach and Sansome Street CSD Rehabilitation

A program-wide assessment was performed of the combined sewer discharge (CSD) structures through the Collections System Reliability (CSR) programmatic effort. Inspections and analysis provided specific information about lack of or deficient baffles to control floatables per the National Pollutant Discharge Elimination System (NPDES) permit. Scope of work for these CSDs are based on historical performance and Waste Water Enterprise (WWE) Operations video inspection records and include several items at both Beach Street and Sansome Street CSDs. Under this project, cleaning and specific condition assessment of the CSDs will be completed in order to further scope rehabilitation at the Beach Street CSD. Inspection of baffles and weirs will be performed, and necessary repairs or replacements will be made accordingly. Corroded metal ceiling will also be repaired. Similar improvements will be carried out for the Sansome Street CSD. Concrete cracks and spalling, exposed rebar, and I-beam will be repaired along with replacement of butterfly valve seals.

10002344 CSD Backflow Prevention and Monitoring

Collection system assets that contribute to saltwater intrusion fall into two categories: conveyance and CSD structures. A component of this project involves developing and implementing a CSD and conveyance monitoring plan to gather data on the salinity in the whole collection network to be able to locate potential infiltration sources in the collection system and then verify performance once improvements (implemented through SFPUC's R&R Program) have been completed. The scope also includes planning, design and installation backflow preventers at selected CSD outfalls. Backflow preventers will be installed in a phased and monitored approach, with the following priority CSD outfalls considered based on locations with the potential for highest inflow in the system for the same tide: 17 Jackson Street, 10 Pierce Street, 29 Mariposa Street, 13 Beach Street, 15 Sansome Street, 24 Fifth Street, 25 Sixth Street, 26 Division Street, 18 Howard Street, 31A Islais Creek North, 32 Marin Street, 33 Selby Street, and 41 Yosemite. The project scope will be fluid and subject to change based on monitoring results.

10002378 5th, North 6th and Division Street CSD Rehabilitation

A program-wide assessment was performed of the CSD structures through the Collections System Reliability (CSR) programmatic effort. Based on video inspections by WWE Operations personnel, three CSD structures, CSD 24, 25, and 26 (5th, North 6th, and Division Street) were identified as priority structures due to their age (built in 1947, 1934, and 1963, respectively), the importance of the CSD structure based on amount of discharge and sensitivity of the receiving water body, structural conditions, compliance with permit requirements, and other operational deficiencies. These CSDs were combined into

one project due to proximity and hydraulic interconnectedness. Hydraulic modeling of the three CSDs will be performed as their functions are related. Scope of work for these CSDs are based on historical performance and WWE Operations video inspection records and include cleaning and specific condition assessment of the asset, including preliminary seismic evaluation, provide necessary ventilation and repair necessary concrete crack, spalling and exposed rebar. Additionally, the project will also aim to provide safe access, replace the flap gate at 5th St. CSD and North 6th St. CSD, refurbish flap gate at Division CSD, and repair the baffle at Division CSD.

10002417 Hudson Ave Pump Station and Outfall Improvements

This project involves working with other City departments as necessary to request two affected property owners to install sewer laterals from their properties to the sewer main on Innes Avenue. The project also involves working with other City departments to determine the feasibility and possibility of implementing a loan program or other financial assistance to the property owners for their construction of the lateral connection to the sewer main. After the affected properties have sewer lateral connections to the sewer main in place on Innes Avenue, the Hudson Avenue Pump Station and the 1-block of 8-inch easement sewer will be deactivated by plugging and capping the pipe with light weight concrete. Coordination with SFPW will be required on sidewalk encroachment issues related to one of the affected properties. External outreach will also be needed to implement the solution, in coordination with SFPUC Communications. The project assumes that the property owners will hire and pay for their own contractor to install necessary pumps or laterals to make a connection to the sewer on Innes Avenue.

10002419 Force Main Rehab at Embarcadero and Jackson Streets

The purpose of this project is to rehabilitate or replace the portion of the existing North Shore Force Main (NSFM) that is most susceptible to failure. At the completion of this project, the entire portion of the NSFM located outside the Jackson Street Transport/Storage Box (JST) will have complete redundancy. NSFM provides critical conveyance of the combined sewage and stormwater flows from the northeastern quadrant of San Francisco to the Southeast Treatment Plant. Before 2015, this force main did not have any redundancy and can only be taken out of service for no more than 22-hours in order to meet the National Pollutant Discharge Elimination System (NPDES) permit requirements. In 2014, approximately 2,500-feet of the NSFM was rehabilitated, but approximately 240- feet could not be rehabilitated due to limited shutdown time. By 2016, a redundant force main was installed (the North Shore to Channel Force Main), and the combined sewage flows are now diverted to the NSCFM, allowing this project to proceed. This project consists of rehabilitating the remaining 240-feet of NSFM, which is most susceptible to failure, by installing a 28-inch outside diameter HDPE pipe into the existing 36-inch diameter steel force main. In addition, the project will include construction of a new valve-vault and associated mechanical and electrical equipment, refurbishment of mechanical and electrical equipment inside an existing valve vault, and installation of a new electrical pedestal and control units aboveground. Together, these mechanical and electrical equipment will allow Waste Water Enterprise Operations operational redundancy to either to direct combined sewage flows to the NSFM or to the NSCFM. A Memorandum of Understanding (MOU) and a Permit to Enter are established with SF Port and its tenant for the temporary staging area needed for the construction contract and an existing MOU is already in place for the permanent facilities that will be installed. California Environmental Quality Act (CEQA) approval (MND) has been approved by City Planning. Extensive public outreach to the community will also be conducted, including stakeholders along SF Port's waterfront area.

10002465 Marin Street Sewer Replacement

Project completed and fully funded, no additional funding is being requested in FY22-23. The project will upsize the 24-inch diameter sewer (located between the intersection of 3rd Street and Marin Street and

the Marin Street Outfall Structure) and associated sewers to handle the additional dry-weather flows projected from the tributary area. The wet-weather conveyance associated with this sewer system would also be evaluated but any identified scope for addressing wet-weather conveyance issues is not included in this project. Hydraulic studies of the watershed area will be performed to determine the hydraulic adequacy of the pipelines in the area based on expected flows from approved developments, as well as to confirm the necessary pipe size. The existing 24-inch diameter sewer in the vicinity of Marin Street, between Indiana Street and Marin Street CSD (located under southbound Highway 280) will also be upsized. The existing 24-inch diameter sewer on Marin Street, between 3rd street and Indiana Streets, will be replaced with a larger diameter sewer.

10002485 Griffith Pump Station Improvements

The aging mechanical and electrical systems at Griffith Pump Station is refurbished and its expected service life is extended. The facility is modernized, which would reduce energy use and future maintenance requirements. The scope of the project includes replacing the dry weather pumps and rebuilding the wet weather pump, installing new sump pumps to maintain the existing capacity of 11.5 MGD and 120 MGD, new bar screens, two new bridge cranes in the manifold room and main pump area, and a new tamper-proof roof access ladder. The bar rack room crane is replaced with a new monorail system. Structural modifications was performed in support of mechanical systems installations. The project involved construction of two canopy systems to protect outdoor equipment, including chemical tanks, metering pumps, ultraviolet light, and associated deteriorating elements.

10002554 Richmond Transport Modeling

Historically, geysering and blown manholes have been observed in the Richmond Transport/Storage Tunnel and upstream sewer system during large storms. Various hydraulic models were performed using InfoWorks and some physical improvements to the system have been made over the last 15 years. The hydraulic modeling performed could not account for air pockets or potential bores in the system; therefore, WWE and DPW/Hydraulics agreed that consultant support was needed to provide numeric modeling that can stimulate the known situation and provide recommendations for capital improvements to address the system issues. This project included the review of two separate models: the InfoWorks Integrated Catchment Model of the San Francisco collection system, and a Transient Analysis Program model of the Richmond Transport/Storage Tunnel and associated sewers and amenities. Recommendations for improving the system and addressing the identified issues were developed in a technical memorandum. Since the completion of the TM, a new project was initiated to evaluate and determine which recommendations from the TM would be implemented through construction.

10002641 Collection System Condition Assessment

There are over 80-miles of major sewers that have been in service for over 100-years. Using Collection System Asset Management Program (CSAMP) data, major sewers were prioritized by expanding the existing consequence of failure scores. Using this method, approximately 13-miles of the 80-miles major sewers that were considered to be the most critical with an average age of 127-years. The project completed the condition assessment of approximately 10-miles of these critical large-diameter sewers. The project included condition assessment of large-diameter sewers at various locations throughout San Francisco and fulfill the Needs Assessment effort in the Planning Phase. Upon completion of the condition assessment, the means and methods of rehabilitation or replacement will be used to initiate sewer improvement projects in SSIP Sewer Improvement Projects.

10002652 Kansas and Marin Streets Sewer Improvements

The purpose of the Kansas and Marin Streets Sewer Improvements Project is to increase the wet weather

flow conveyance for a minor drainage basin within the Islais Creek Watershed Basin to meet the Level of Service (LOS) storm. The project consists of a 900 linear foot, 8' inside diameter tunnel connecting two existing sewer boxes through the Public Works Corporation Yard at Cesar Chavez Avenue. The project also includes relocation assistance associated with temporary displacements of existing lease-holders who occupy SFPUC's property above the C-Box Transport Storage Structure (Lot 031), as this space will be needed for construction staging. Two new reinforced concrete junction structures will also be constructed to connect with the existing sewers, along with surface restoration work associated with construction and installation of the above assets.

10002664 Van Ness BRT Sewer Improvements

The Van Ness Bus Rapid Transit (BRT) Project is led by SFMTA in conjunction with the Van Ness BRT Sewer Improvements Project, which is part of the SFPUC's SSIP Phase 1 Program. SFPUC will replace and relocate existing sewer utilities within Van Ness Avenue, between Lombard Street and Mission Street, from the center of the street to outside of the BRT right-of-way. This will allow for future sewer service maintenance and repair/replacement without impacting SFMTA's BRT operations. The scope of the project includes constructing approximately 20,000 linear feet (LF) of 12-inch to 54-inch diameter Vitrified Clay Pipe (VCP), Reinforced Concrete Pipe (RCP) or High Density Polyethylene) HDPE (in steel casing) sewer mains and associated manholes, catch basins and culverts; and retrofitting and connecting existing sewer laterals and catch basins to the aforementioned new sewer mains. Closed-circuit television (CCTV) technology will be used to inspect the newly constructed sewer mains, sewer laterals and culverts. Abandoned sewers (approximately 1,800 LF) will be plugged-and-filled. Sewer construction was completed in early 2021.

10002667 Better Market Street Sewer Improvements

San Francisco Public Works Department's vision for a Better Market Street (BMS) is a comprehensive program to reconstruct the City's premier boulevard and the region's most important transit corridor from Octavia Boulevard to The Embarcadero. The program is a series of interdependent projects (BMS Core Capacity Improvements, BMS Streetscape Enhancements, and BMS State of Good Repair) that will advance several key City policies: Transit First, Complete Streets, the SF Pedestrian Strategy/Walk First and the SF Bicycle Plan. The BMS State of Good Repair Project (a.k.a. BMS Sewer Improvements) will be completed under SSIP to replace aging sewer infrastructure beneath Market Street, especially the brick sewers that are over 100 years old. The requesting funding is for project cost of the Phase 1A contract from 5th Street to 8th Street, and for design budget of the entire corridor. SFPW/SFMTA had decided to proceed on the first contract without any SFPUC scope. SFPUC's utility scope will be deferred until the 2nd contract.

10002670 Geary BRT Sewer Improvements Phase 1

SFMTA's Geary BRT Project will improve the 38-Geary bus services, accessibilities, and pedestrian safety. The project includes collaboration from SFPUC, SFPW, and San Francisco County Transportation Authority (SFCTA). Phase 1 of the SFMTA Geary BRT Project is comprised mostly of transit and pedestrian bulbs. The addition of concrete and/or curb alignment change may trigger the needs to relocate existing catch basins, side sewers vents, and manholes. SFPW and SFPUC have determined the condition of water and sewer utilities along the Geary Corridor. Approximately 2.5 miles of aging sewers (6-inch to 18-inch diameter circular sewers and 3-foot by 5-foot egg-shaped brick sewers) along the Geary corridor and nearby cross streets will be rehabilitated or replaced. The purpose of the Geary Blvd Sewer and Water Improvements Project is to coordinate with the Geary BRT Project in relocating/replacing main sewers and water mains outside of the transit lanes along the Geary Corridor from Van Ness Avenue to Stanyan Street.

10002672 Central Subway Sewer Improvements

This project is related to the SFMTA Central Subway Phase 2 of the Third Street Long Range Transportation Plan Project that will extend rail service from Fourth and King Streets to a northern terminal at Stockton and Jackson Streets. The purpose of this project is to include sewer improvements to avoid conflicts with the proposed light rail scope and to minimize future repair and replacement impacts. The sewer improvement project includes reconstructing existing 78-inch sewer (Fourth Street between Brannan Street and King Street), and relocating/ replacing existing 30-inch force main (Fourth Street between Bryant Street and King Street) and 48-inch gravity sewer (Fourth Street between Bryant Street and Brannan Street).

10002687 Mission Bay Loop Sewer Improvements

SFMTA's Mission Bay Loop Project will install light rail track on Illinois Street between 18th and 19th Streets. The improvements will support the future operations of the Third Street Light Rail in anticipation of the activation of the new Central Subway segment. The existing gravity sewers and force mains on Illinois Street will need to be relocated and/or replaced to avoid future conflicts with light rail operations. The sewer work has been completed and turned over to WWE operations, and SFMTA's contract has issued substantial completion to its contractor.

10002689 Drumm and Jackson Streets Sewer System Improvement

Under this project, 800 linear-feet of the Drumm Street Box Sewer (between Commercial and Jackson Streets) and 200 linear-feet of the Jackson Street Box Sewer (between Drumm Street and the Embarcadero) were rehabilitated. Increasing the reliability of these major assets help meet the NPDES permit requirement to maximize use of the collection system for storage and to maximize flows to the wastewater treatment plant. Associated work for rehabilitation included performing necessary cleaning for trenchless rehabilitation, bypassing sewer flow by damming and piping through the existing box sewer and performing surface restoration. Coordination with WWE were conducted to ensure worker safety and preventing wet-weather impacts. CEQA approval and public outreach for the project were completed. The project included planning, environmental approval, design, and construction phases.

10002695 Masonic Avenue Sewer Improvements

SFPW's Masonic Avenue Complete Streets Project will take place on Masonic Avenue between Geary Boulevard and Fell Street. The project includes sidewalk and streetscape improvements; median and bicycle lane additions on Masonic Avenue; construction of a small park on the southwest corner of Geary Boulevard and Masonic Avenue; and incorporation of public art elements along this corridor. In conjunction with the aforementioned SFPW Masonic Avenue Complete Streets Project, the Masonic Avenue Sewer Replacement Project includes rehabilitating/ realigning existing sewers as well as constructing new sewer mains, manholes, side sewers and catch basins. The sewer scope includes approximately 4,700 linear feet of sewers ranging from 12-inch to 24-inch in diameter.

10002760 Cargo Way Sewer Box Odor Reduction

This project will construct a new force main (flush line) that conveys secondary effluent from the existing Booster Pump Station to the existing 7-foot diameter sewer located on Cargo Way, near Mendell Street. The new force main will introduce approximately 1.5 million-gallon-per day (MGD) of flow back into the sewer system to minimize solids from settling to the bottom of the sewer; thereby, reducing odors from forming and escaping from the sewers into the atmosphere. In addition, mechanical, electrical, and instrumental controls will be installed inside the Booster Pump Station that would allow operation staff to turn on and off (or throttle) flows into this flushline.

10002767 Rutland Sewer Improvements

Project Completed. Under this project, the hydraulic capacity of the sewers in the project area will be increased to meet the SSIP Level of Service storm. The project will consist of multiple improvements along Rutland Street (from Visitacion Avenue to Sunnydale Avenue) including replacing the existing sewer with a larger reinforced concrete pipe, constructing a wet weather diversion structure, and conveying water passing over a weir inside this underground structure during a large storm event through new piping and discharging into a deep wet weather tunnel (Sunnydale Sewer Tunnel). To minimize construction impacts to the community, this sewer work will be constructed with the Visitacion Valley Green Nodes Project.

10002776 Taraval Sewer Improvements

SFMTA has proposed a pedestrian safety and transit improvements project along Muni's "L Taraval" route. The project includes construction/extension of boarding islands, addition of dedicated transit-only lanes, and replacement of aging tracks, overhead wires, and trolley poles. The Taraval Sewer Improvements Project will relocate existing sewer facilities from the center of the street to outside of the tracks to allow for ease of maintenance and repair/replacement without impacting future SFMTA's Muni operations. The scope of the sewer work includes replacing approximately 19,000 LF of 12-inch to 36-inch diameter ISP, Vitrified Clay Pipe (VCP), Reinforced Concrete Pipe (RCP), or concrete sewers along Taraval Street between 15th Avenue and 46th Avenue, and Ulloa Street between Forest Side Avenue and 15th Avenue for a twin sewer system. Most of the sewers to be replaced are close to 100 years old. Project is split into two construction contracts. Segment A is from Zoo to Sunset Blvd. and construction has been completed in 2021. Segment B is from Sunset Blvd. to West Portal and construction contract was initiated in December 2021.

10015553 Biofuel Alternative Energy

A recent trend in the wastewater industry involves the addition of fats, oil, and grease (FOG) or other high-strength waste (HSW) directly into digesters to increase digester gas production and maximize the amount of renewable energy production from cogeneration. Due to the existing capacity constraints and condition of the biosolids facilities at the SEP, the addition of large quantities of FOG or other HSW is not currently feasible. While inedible kitchen grease (IKG) is currently accepted at the SEP Yellow Grease Facility, only the marginal grease is directly injected to the digesters, which consists of residual solids and moisture that is removed from the raw IKG and represents less than one percent of the daily volatile suspended solids loading to the digesters. Therefore, while not an option for the existing biosolids facilities, FOG and HSW addition could be a component of the new biosolids digesters project. The Biofuel Alternative Energy Project aims to determine if it is feasible and cost-effective for the SFPUC to generate bioenergy (e.g. biofuel or cogenerated power) as a byproduct of processing the FOG and/or food waste collected throughout the City. This project was originally initiated in 2011 before SSIP Phase 1 validation efforts began in 2012, but has been placed on hold until considered necessary.

10015796 SEP Biosolids Digester Facilities Project

Planning, engineering, and construction of the new solids processing facilities will include solids pretreatment; the thermal hydrolysis process (THP); anaerobic digestion; biosolids dewatering; biosolids product storage and loadout; biogas utilization; odor control; automated control systems; chemical facilities, and associated appurtenances and piping. Key BDFP facilities and processes consist of: Primary sludge (PS) and waste sludge (WAS) pumping to the solids treatment processes, which includes improvement to the existing WAS pumping facilities. A consolidated Solids Pretreatment building that incorporates the following processes/equipment: o WAS thickening using gravity belt thickeners (GBTs) (3 units). o Blending of thickened activated sludge (TAS) and PS to produce combined primary and active sludge (CPAS). o Screening of CPAS using inline strainpress-type screens (5 units). o Pre-THP Cake Storage (3 hoppers). o Pre-THP dewatering of screened CPAS using centrifuges (5 units). Thermal

hydrolysis of dewatered, screened CPAS using Cambi THP process (3 THP units) and cooling of the thermally hydrolyzed sludge (THS). Mesophilic anaerobic digestion and digested sludge (DS) storage using digesters (5 silo-shaped digesters). A Biosolids Dewatering building that will include the following processes/equipment: o Dewatering of digested biosolids using belt filter presses (BFPs) (4 units), o Storage (4 silos) and load-out of dewatered biosolids product using screw conveyors, and truck hauling. · Beneficial use of the biogas produced during the digestion process. Biomethane Pipeline Injection is being considered as an alternative biogas end use. The biogas will be treated to natural gas quality, injected into an existing PG&E gas line, and then sold as a renewable natural gas or vehicle fuel in a potential Public-Private Partnership (P3) contract. This alternate biogas end use would provide the SFPUC its highest value and reduce local air emissions in the SEP neighborhood due to the elimination of electricity-producing combustion engines. Odor control facilities consisting of biofilters, carbon units and ammonia scrubbers Process systems to support the BDFP facilities including No. 2 water (W2 – chlorinated and filtered plant secondary effluent) system upgrade, plant air, polymer systems, and cooling water system. Ancillary facilities will also include a ferric chloride facility for struvite control, as well as pumped plant recycle (PPR) pumping to convey the liquids return streams from thickening, pre-THP dewatering, and biosolids dewatering. The proposed site for the BDFP facilities is adjacent to the existing SEP at 1800 Jerrold Avenue (former Central Shops) and 1801 Jerrold Avenue (former Asphalt Plant), and on portions of the existing SEP property. Possible construction staging areas for the BDFP include 1150 Phelps Street (SFPUC's former Greenhouses), 50 Quint Street and/or Pier 94/96 SF Port properties. The construction will be completed through a Construction Manager/General Contractor delivery approach under two distinct scopes. Scope I focus on the demolition and utility relocation of existing infrastructure at the project sites. Scope II addresses the construction of the new biosolids facilities (the remainder of the work).

10015803 SSIP Program Management

This project includes the following components necessary for successful implementation of the Sewer System Improvement Program (SSIP) Program Management: condition assessment (facility inspections), technical support and evaluations, water quality studies, progression of project definition and prioritization, public outreach and education, analysis of the impacts of climate change, development of green infrastructure standards and training programs, Triple Bottom Line evaluations, site logistics coordination, sustainability evaluation, and general program management tasks (program controls, change control, constructability, QA/QC, risk management, document management and evaluation study of alternate delivery systems). This project includes support by an integrated team comprised of SFPUC staff and the Program Management Consultants (PMC) under a professional services contract.

10015807 SEP New Headworks (Grit) Replacement

The new 250 MGD headworks consists of major components / facilities as follows: New Influent Junction Structure and Influent Monitoring: o Construction of a new Influent Junction Structure that will include a temporary overflow weir for excess wet weather flow. o Construction of a temporary connection between the Influent Junction Structure and Influent Control Structure. o Construction of a new connection from Influent Junction Structure to the new bypass, o Demolition of the existing Influent Control Structure. o Installation of a new influent monitoring and sampling system including: influent flowmeters, pH and conductivity insertion probes, automatic samplers, and manual sample ports. A new Primary Influent Distribution Structure: o Construction of a new bypass around the wet weather Headworks facility from the Influent Control Structure to the primary influent conduits that lead to the wet weather primary sedimentation basins (SEP 040/041). Upgrades to the Bruce Flynn Pump Station: o Modifications to sewer connections and mechanical/electrical modifications. o Addition of new bar screens and upgrades to the electrical system. o Upon completion of these modifications, demolish the Southeast Lift Station (SELS). A

new Bar Screens, Washer-Compacters and Screenings Handling Facility consisting of four multi-rake bar fine screens (three duty plus one standby), four screenings washer compactors, two shuttle hoppers, and a grit influent splitter structure. A new Grit Basins, Grit Washers and Grit Handling Facility using either the HeadCell (modular multi-tray grit tanks) or Pista360 (grit vortex) technology. This includes 12 HeadCell grit tanks with 24 grit pumps or six Pista360 tanks with 18 grit pumps. Both technologies involve 6 grit washers and two grit storage hoppers. A new Odor Control Facility, consisting of a two-stage system with bioscrubbers followed by carbon adsorption. New 50 mgd influent pump station, including influent piping and effluent force main, electrical building and odor control. Two new primary substations, each with a 15-kV vacuum circuit breaker, substation type, liquid-filled transformer, and a low-voltage power circuit breaker on the secondary side of the transformer. Electrical, Instrumentation and Control Rooms/Building. Demolition of both existing Headworks Facilities (SEP-011 and SEP-012).

10015808 SEP Existing Digester Roof Repairs

As part of the SSIP, a new biosolids handling facility will be built to replace the existing system. However, the existing digesters and associated facilities must continue to handle all biosolids generated by primary and secondary treatment operations at SEP until all planning, design, construction, and commissioning activities for new facilities are completed. Under this project, work will be completed to maintain existing digestion facilities in operation with sufficient capacity and reliability to produce Class B biosolids until new facilities are available for service. The project consists of repairs to the existing floating roof and associated appurtenances (Digester 8), and replacement of the existing floating roofs and associated appurtenances (Digesters 4, 6, 7 and Cake Bins 3 & 4). This project is currently at the closeout stage.

10015809 SEP Facility-wide Distributed Control System Upgrade

This project addresses distributed control system (DCS) upgrades within the Southeast Pollution Control Plant (SEP), Oceanside Pollution Control Plant (OSP), North Point Wet Weather Facility (NPF), Channel Pump Station (CHS), Westside Pump Station (WSS), and Bruce Flynn Pump Station (BFS). In order to ensure system-wide consistency, this project's scope of work also includes DCS planning & design for OSP, NPF, and WSS facilities. Hardware and software upgrades integration of field instrumentation, control devices, communications hardware, processing hardware, interface hardware, and associated software packages into a unified system are required to provide real-time, system-wide monitoring and control. Coordination of monitoring parameters in various systems will also be required to maintain compatibility and consistency of the input data used for process control.

10015810 SEP Seismic Reliability and Condition Assessment Improvements

As part of the condition assessment effort, numerous seismic, conditional and operational issues associated with the existing facilities will require remedial attention before other program projects are completed. This project represents immediate improvements to the existing facilities at South East Plant (SEP) identified as part of the condition assessment effort that are not specifically included as part of another near-term Sewer System Improvement Program (SSIP) Phase 1 project. This project includes items for rehabilitation such as concrete spalling repair and seismic retrofit of priority process buildings. Seismic retrofit and structural repairs to the Sedimentation Building and channel structures (SEP 530 Contact Channel, SEP 540 Effluent Control Structure, 6' reinforced concrete pipe from SEP 540 to Booster Pump Station, Conduits C/D/E, SEP 525 Box Channel, and 9' reinforced concrete pipe to Junction Structure #5) will be completed.

10015811 SEP Oxygen Generation Plant 01

The existing liquid oxygen (LOX) facility at Southeast Plant (SEP) does not meet current safety codes and is in need of replacement. The LOX system is a mandatory redundant system to the on-site oxygen

generation to ensure full compliance with the NPDES permit. This project includes the demolition of the LOX facility (three horizontal LOX storage tanks, four vaporization systems, and ancillary equipment); demolition of SEP 270 Oxygen Generation Building; installation of structural piles; construction of concrete slabs and utility trench; and installation of a new packaged LOX system consisting of four vertical LOX storage tanks, vaporizers and an unloading station.

10015816 Urban Watershed Assessment and Planning Initiation

Many of the SSIP's proposed projects are focused on improvements to surface drainage and collection system management in San Francisco. The SSIP Urban Watershed Assessment Task will evaluate and recommend alternatives that balance the use of grey (for example, pipelines) versus green infrastructure (for example, low impact design) for improvements to watershed surface drainage and collection system management. The SSIP will utilize an integrated watershed management approach to investigate the health of the City's watershed and identify potential opportunities for stormwater capture, conveyance, detention and possible reuse to address issues of flooding as wells as combined sewage conveyance and storage. Project implementation will require the hydrologic and hydraulic analysis of each of the eight drainage basins and will include: identification of various solutions to each basin's unique set of flooding challenges; evaluation of the social, economic and environmental values of alternatives that meet the level of service with a triple bottom line tool and the optimization and prioritization of projects for each basin. The work will address life cycle costs and detailed operation and maintenance requirements.

10015817 Urban Watershed Assessment and Planning

The UWA is the comprehensive watershed-based planning process developed to diagnose challenges and design solutions for the surface drainage and collection/conveyance portion of the City's sewer system. The UWA emphasizes holistic urban watershed-scale planning and the development of multiple-function solutions to sewer system challenges. These solutions are evaluated using a comprehensive Triple Bottom Line (TBL) tool that employs societal and environmental benefits and costs with the goal of delivering more holistic investment decisions. Project implementation will require the hydrologic and hydraulic analysis of each of the eight drainage basins and will include identification of various solutions to each basin's unique set of flooding and other challenges; evaluation of the social, economic and environmental values of alternatives using the TBL tool; optimization and prioritization of projects for each basin; and life cycle costs with detailed operation and maintenance requirements.

10015818 Fulton St Sewer

Many of the SSIP's proposed projects are focused on improvements to surface drainage and collection system management in San Francisco. The SSIP Urban Watershed Assessment Task will evaluate and recommend alternatives that balance the use of grey (pipelines) versus green infrastructure (low impact design) for solutions to watershed surface drainage and collection system management improvements. The SSIP will utilize an integrated watershed management approach to investigate the health of the City's watershed and identify potential opportunities for stormwater capture, conveyance, detention and possible reuse to address issues of flooding as wells as combined sewage conveyance and storage. Project implementation will require the hydrologic and hydraulic analysis of each of the eight drainage basins and will include: identification of various solutions to each basin's unique set of flooding challenges; evaluation of the social, economic and environmental values of alternatives that meet the level of service with a triple bottom line tool and the optimization and prioritization of projects for each basin. The work will address life cycle costs and detailed maintenance requirements.

10015819 Lake Merced Drainage

Many of the SSIP's proposed projects are focused on improvements to surface drainage and collection

system management in San Francisco. The SSIP Urban Watershed Assessment Task will evaluate and recommend alternatives that balance the use of grey (pipelines) versus green infrastructure (low impact design) for solutions to watershed surface drainage and collection system management improvements. The SSIP will utilize an integrated watershed management approach to investigate the health of the City's watershed and identify potential opportunities for stormwater capture, conveyance, detention and possible reuse to address issues of flooding as wells as combined sewage conveyance and storage. Project implementation will require the hydrologic and hydraulic analysis of each of the eight drainage basins and will include: identification of various solutions to each basin's unique set of flooding challenges; evaluation of the social, economic and environmental values of alternatives that meet the level of service with a triple bottom line tool and the optimization and prioritization of projects for each basin. The work will address life cycle costs and detailed maintenance requirements.

10015820 Major Trunk Sewers

Many of the SSIP's proposed projects are focused on improvements to surface drainage and collection system management in San Francisco. The SSIP Urban Watershed Assessment Task will evaluate and recommend alternatives that balance the use of grey (pipelines) versus green infrastructure (low impact design) for solutions to watershed surface drainage and collection system management improvements. The SSIP will utilize an integrated watershed management approach to investigate the health of the City's watershed and identify potential opportunities for stormwater capture, conveyance, detention and possible reuse to address issues of flooding as wells as combined sewage conveyance and storage. Project implementation will require the hydrologic and hydraulic analysis of each of the eight drainage basins and will include: identification of various solutions to each basin's unique set of flooding challenges; evaluation of the social, economic and environmental values of alternatives that meet the level of service with a triple bottom line tool and the optimization and prioritization of projects for each basin. The work will address life cycle costs and detailed maintenance requirements.

10026805 Sunset Green Infrastructure

The Sunset Boulevard Greenway project will construct a series of tiered bioretention rain gardens in the western stretch of landscaped parcels along 10 to 16 blocks stretching from Golden Gate Park to Lake Merced. The rain gardens will manage stormwater runoff on the west side of Sunset Boulevard from the street, paths, and a portion of the landscaped parcel area. The project will also incorporate a "Learning Lab" to supplement elementary school curriculum. This project is also referred to as "Sunset Boulevard Greenway."

10026806 North Shore Green Infrastructure

This project will route stormwater to flow-through bioretention planters with surfaces set lower than the surrounding grade. During large storm events, ponded water at the surface of the planters will reach a maximum depth of 6 inches before it crests an overflow weir, either to a lower planter tier or to a concrete valley gutter running the length of the alley. To protect the adjacent building foundations, an impermeable waterproof liner will be placed along the bottom and sides of the planters. New street surfacing and furnishings provide improved community space for local residents and visitors. This project is also referred to as "Chinatown Green Alley".

10026807 Lake Merced Green Infrastructure

The project starts at the Ashton Avenue intersection and extends along eight blocks to the Lee Avenue intersection. Corner bulb-outs containing bioretention planters will be installed on the downstream end of six of the blocks. On the remaining two blocks, roadside bioretention planters adjacent to the curb will manage stormwater in lieu of corner bulb-out planters, which are infeasible due to driveway conflicts. The

bioretention planters are sized to manage stormwater runoff from the sidewalk and use the minimal area needed in order to minimize the associated parking loss from the new bulb-outs. Permeable pavement installed within the existing parking lanes on both sides of Holloway Avenue will manage runoff from the roadway. This project is also referred to as the "Holloway Green Street".

10026808 Sunnydale Green Infrastructure

This project includes two green nodes in Sunnydale watershed; a mini plaza on Sunnydale Ave. and a rain garden at the eastern end of McLaren Park. These green nodes are being designed to maximize the removal of street stormwater runoff from the combined sewer system. At the Sunnydale Avenue Mini-Plaza, bulb-outs containing bioretention planters will be installed to remove stormwater while also providing traffic calming and pedestrian safety. At the Leland Avenue Rain Garden, terraced bioretention facility will be created to capture, store, and infiltrate runoff from the impervious roadway and an adjacent vegetated sloped area. Approximately one block of local sewer work on Rutland Street will be included into the construction contract to minimize construction impact; however, the project cost of that sewer improvement is accounted for separately. This project is also referred to as the "Visitacion Valley Green Nodes".

10026809 Richmond Green Infrastructure

Specific work that will be completed at El Camino Del Mar includes providing new pedestrian crosswalks, terraced rain gardens, subsurface infiltration galleries, soil stabilization techniques in selected locations, sewer main upsizing between Lands End Trailhead and manhole east of 32nd Avenue, and upgrading existing crosswalks to comply with the Americans with Disabilities Act. Specific work that will be completed at Beach Terrace includes permeable pavement, rain garden bulb outs at the eastern & western ends of the permeable pavement, a flow-through rain garden, traditional (infiltrative) rain garden bulb-outs, improved catch basins, and a traditional rain garden. This project is also referred to as the "Baker Beach Green Street".

10026810 Yosemite Green Infrastructure

The upper reach of the Yosemite Creek Daylighting project would daylight the creek along a portion of the historic creek path, from Yosemite Marsh in McLaren Park to Woolsey and Hamilton Streets. This project diverts flows from the sewer using swales, vegetated channels, rain gardens, piped sections and a constructed wetland/detention basin/bio-swale system. This project is also referred to as the "Upper Yosemite Creek Daylighting".

10026811 17th and Folsom Wet Weather Storage

The neighborhood surrounding 17th Street, 18th Street and Folsom Street has been experiencing over a foot of water on the streets, sidewalks and into their houses during rain events, resulting in property damages to the residents. The 17th and Folsom Wet Weather Storage project was originally intended to provide interim flood mitigation to the neighborhood while SSIP is working on identifying long-term solutions through capital improvement projects. The proposed interim flood mitigation alternatives consisted of a storage basin, pump station, and collection facilities to be built underneath the proposed future 17th & Folsom Park. However, the project was cancelled and defunded except for residual funds for ongoing response activities as directed by management, including certain outreach activities related to flooding.

10026812 Channel Green Infrastructure

The Wiggle neighborhood is a collection point for stormwater flow, both from surface runoff and from the collection system. It is also the focus of a project by the SFMTA to repair roadways and aid the flow of

motor vehicles, bicycles, and pedestrians. Many of these traffic calming features provide opportunities for the inclusion of green infrastructure. The purpose of the Wiggle Neighborhood Green Corridor project is to implement low impact stormwater management along the Wiggle bike route between Oak and Baker Streets, along Scott and Page Streets, ending at Waller and Steiner Streets. The project is designed to manage runoff from 4 acres, removing 1.1 million gallons of stormwater in a typical year. Key features of this project will include installation of bulb-outs on selected street corners, bioretention planters, and permeable pavement.

10026813 Islais Creek Green Infrastructure (SPLIT)

No information available.

10026814 Flood Resilience Analysis (Planning Phase Only)

The Flood Resilience Analysis Project will focus on developing a framework for identifying multiple storm scenarios; quantifying risks and cost implications associated with mitigating flooding across the aforementioned storm scenarios; and defining the extent and scope of the City's responsibility, based on consequences of extreme storms. To minimize flood risks citywide and meet SFPUC objectives, this project will also develop programs and policies beyond what the collection system can manage, and make recommendations on prioritization of structural, non-structural, and operational measures.

10026815 Flood Resilience - Early Projects (Planning Phase Only)

The City of San Francisco has experienced multiple significant storms in the last decade, which have led to flooding in various parts of the City. While Flood Resilience Analysis is being conducted by SFPUC, early infrastructure projects are being planned at three critical areas (Cayuga, Wawona, and Folsom neighborhoods) subjected to high flood risk. This project focuses on planning and developing stormwater detention and conveyance concepts specific to each of the aforementioned critical neighborhoods.

10026816 Wawona Area Stormwater Improvement Project

The neighborhood surrounding the intersection of 15th Avenue and Wawona Street is topographically lower in elevation compared to its adjacent neighborhoods, and has been subjected to flooding during large storms. When the capacity of the sewers are exceeded during large storms, significant volumes of overland flow upstream of the intersection cannot enter the catch basins and sewer system, causing flooding and property damage. The purpose of this project is to divert part of the flow at the intersection of Wawona and Vicente into a new auxiliary sewer on Vicente, extended to from Wawona to 34th Ave. The flow then would enter the existing system where there is capacity for additional flow.

10026817 Cayuga Ave Stormwater Detention Project

The neighborhood surrounding the northeastern end of Cayuga Avenue has been susceptible to recurring flooding associated with moderate to heavy storms. Due to its low land topography, the area can experience up to a few feet of water on the streets and sidewalks during rain events. This project will improve the stormwater detention by re-grading the I-280 embankment at the foot of Cayuga to create a low lying detention field. This project will provide surface detention of flows during flooding and includes an overflow relief connection into the College Hill Tunnel as well and a retaining wall to support the roadway.

10026818 Folsom Area Stormwater Improvement Project

The Folsom Area Stormwater Improvement Project (FASIP) will provide stormwater conveyance improvements to the neighborhood surrounding 17th and Folsom Street. The project is being developed based on the alternative chosen in the NAR/AAR report and further defined in the CER. Major components

of the project consist of a tunnel to convey stormwater flows from the neighborhood surrounding 17th and Folsom to the Channel Consolidated Transport/Storage Box, and upsizing of existing combined sewer pipes and structures upstream of the tunnel. Phase I covers through design. Construction will be covered by Folsom Area Stormwater Improvement Project Phase 2.

10026819 17th and Folsom Permanent Barriers

SFPUC has purchased off-the-shelf plastic temporary flood barriers for 2015 and 2016 wet seasons. At locations where temporary plastic flood barriers were installed and proven effective in mitigating floods, SFPUC plans to install more durable custom aluminum or steel barriers before a permanent solution (Folsom Area Stormwater Improvement Project) can be implemented. The aluminum or steel barriers would be installed during wet seasons and removed during dry seasons. The sidewalk would be graded and outfitted with recessed and covered receptacles for mounting flood barrier poles. Interlocking aluminum logs would be installed between the poles. The flood barrier system would be custom built based on site-specific pole intervals, barrier height, and other characteristics.

10026820 Hydraulic and Drainage Sewer Improvements

This project includes awarding "As-Needed Construction Contracts" to implement small and non- specialty sewer improvement projects at critical flood prone neighborhoods. Examples of non- specialty, small infrastructure construction include improvement of drainage features, upsizing/expansion of sewer pipes, and surface grading modifications. Three preliminary projects (areas) were identified: Joost/Foerster Sewer Expansion, Urbano/Victoria Drainage Project, and Wawona Interim Drainage Project. Additional projects will be added as the needs arise.

10026821 Northpoint Outfall Refurbishment

Rehabilitation of the outfall system includes removal of sediment/debris inside subterranean reinforced concrete sewers and repair of concrete spalls, cracks and damaged linings with epoxy. Rust formations will also be removed, followed by re-lining of existing cast-iron pipes (CIPs) with epoxy lining that provides the protection against the extreme corrosive marine environment and strength to withstand operating and hydrodynamic loads. In addition, sediments deposited inside and around the diffuser pipes will be removed and disposed of, along with associated steel supporting brackets. The project will also include installation of a new cathodic protection system for the Outfall System CIPs, ductile iron pipes (DIPs), and Outfall support structures under Piers 33 and 35; repair of damaged coating of Outfall pipes and supports; and installation of air vents and air relief valves on the outfall to release entrapped air.

10026822 North Shore Pump Station Wet Weather Improvements

North Point Facility, North Shore Pump Station and associated outfalls improvements include: North Shore Wet Weather Pump Station Improvement and Disinfection: Includes installation of pumps and pumping system to provide redundancy for the 150 MGD wet weather station, NPF Outfall System Rehabilitation: Includes rehabilitation and sediment removal of four outfalls and their structural support systems to address issues with the liner, inadequate air relief, and issues with manhole covers. NPF Clarifier Improvements: Includes refurbishment of the existing clarifiers or sedimentation basins, including seismic retrofit and rehabilitation of sedimentation basins, improvements to hydraulic gates and actuators, and improvements to the primary clarification process to allow more efficient operation. DCS/Telemetry System Upgrade: Includes upgrades to the communications, sensors, and control devices at NPF.

10026824 SEP Oxygen Generation Plant

As a result of the Clean Water Act of 1972, the secondary treatment process, which is achieved through the use of high purity oxygen (HPO), was implemented at Southeast Plant. During wet weather the regulatory

permit requires that the Southeast Plant treat up to 150 million gallons per day, to the secondary level. The two existing, 66 tons per day (TPD), cryogenic oxygen generation plants that were placed in operation in 1981 are becoming extremely difficult to maintain, and have failed two times in the past year. Replacing the antiquated oxygen plants with two technologically advanced 45 TPD oxygen generation plants, will allow WWE Operations to have optimum control on the utilization of oxygen (based on the influent variations), thus significantly reducing the energy consumption.

10026825 SEP Primary and Secondary Clarifier Upgrades

This project will upgrade the mechanical, structural and electrical components at the primary and secondary sedimentation tanks (clarifiers) at SEP to address operational reliability and compliance with regulatory requirements for liquid treatment. The major upgrades taking place at the primary sedimentation tanks include replacing key mechanical and electrical equipment and addressing structural repairs such as concrete repairs and coating seven tanks and influent channel. Covers for the primary sedimentation tanks and ventilation system will also be installed. Similarly, major upgrades for the secondary clarifiers include replacing key equipment and retrofitting existing secondary clarifiers (8 of 16 included in this project). Structural repairs will also be addressed including concrete crack repairs and coating.

10026826 SEP Existing Digester Gas Handling Improvements

The project consists of: • Process upgrades addressing deficiencies related to Digester Gas Compressors, Heat Exchangers and Controllers, Combined Primary Activated Sludge (CPAS) Tank, Boiler and Boiler Stacks, Waste Flare and Cogeneration Cooling Water System, and B100 Biofuel Tank (EPA permit compliance). • Building systems and odor control unit (OCU) upgrades such as replacing Roof Drains, OCUs and upgrading ventilation and OCUs, Roof Replacement and Air Compressor (BAAQMD Permit Application). • Electrical Upgrades related to External Lighting Upgrades and installing Fire Alarm Building 800 (safety). • Control Upgrades such as installing CO Gas Monitors and Replacing Digester Gas Flow Meters (safety). • 300 feet of waste gas piping and appurtenances.

10026828 Mariposa Dry-Weather Pump Station & Force Main Improvements

The project involves construction of new dry-weather pump station and force main to achieve the peak design flow of 5.0 million-gallon per day (MGD). The scope consists of demolishing the existing pump station building, underground structure, wet well, electrical system, and associated assets to make room for a new pump station. The existing dry-weather force main is being replaced with a larger diameter force main downstream of the new dry-weather pump station. A Memorandum of Understanding (MOU) was established with the Port of San Francisco (SF Port) since both the pump station and force main are located within SF Port's jurisdiction. Mariposa Dry-Weather Pump Station conveys dry-weather and wet-weather combined sewage flows from the Channel watershed to the existing Southeast Wastewater Treatment Plant. This station was originally completed in1954 with dry-weather pumping capacity of 1.2 million-gallon-per-day (MGD). Due to recent developments from the upstream area (Mission Bay, Dogpatch, Potrero Hill areas), the pump station needs to be upsized to convey 5.0 MGD of dry-weather sewage flows to prevent dry-weather sewage flows from discharging into the San Francisco Bay. Project has been fully funded and no additional funding is requested at this time.

10026829 Cesar Chavez Pump Station

Under this project, stormwater and groundwater that collects under the Cesar Chavez freeway underpass within a bounded area will be conveyed to SEP. As this is not an all-weather pump station, WWE determined that this project is a lower priority than other all-weather pump stations. The remaining needs of the project may be added to the WWE R&R program list for consideration. After the NAR and the Draft

AAR were completed, it was determined that this project is less critical than other dry-weather or all-weather pump station improvements. Therefore, this project will complete the Draft AAR and any remaining work is to be deferred to the WWE R&R program for consideration. This SSIP project will end at the Draft AAR phase.

10029726 Watershed Stormwater Management (Planning Only)

This project continues to support the SFPUC's goal of managing stormwater using green infrastructure. It develops tools and mechanisms to scale up the implementation of green infrastructure citywide. The planning scope includes capital project evaluation and partnership/watershed planning. 1. GI Capital Project & Partnership Project Evaluation: tasks will evaluate, refine and validate schedule, scope and budget of upcoming capital projects and partnership opportunities via stakeholder engagement, evaluations and performance/cost calculations. 2. Partnerships/Watershed Planning includes the following activities: • Green Infrastructure Program Development - Ongoing and future work related to the stormwater runoff charge and development of new programs and incentives as the SFPUC's green infrastructure portfolio grows. This work will pilot new approaches by establishing technical criteria, administrative needs, and funding levels to establish long term program budgets and frameworks. • Large Landowner Engagement - Outreach and engagement with large priority landowners on the various applicable PUC GI stormwater programs and policies; providing as needed technical support and evaluation of opportunities to promote partnership frameworks. • GI Scaling/Watershed Planning - Development of methods to scale up green infrastructure implementation. Responding to immediate regulatory requests and other agency priorities, evaluation of project and program opportunities at a watershed scale, and continuance of current GI scaling work such as evaluation of new legislative, contracting, and program delivery approaches. • Innovative Funding and Financing - Evaluation and research into new funding and financing mechanisms to support green infrastructure scaling and strategic partnerships.

10029728 Advanced Rainfall Prediction - Part 1

The purpose of this project was to provide rainfall forecast information to SFPUC WWE staff automatically in real-time. This project included planning, design, and environmental review for three new radar equipment stations to collect additional data that would feed into the rainfall prediction modeling for short-term and long-term precipitation forecasts. In September 2017, this project was cancelled and recommended to be placed on hold as the potential benefit of the project to Wastewater Operations did not merit the significant project costs.

10029729 Operational Decision System Phase 1

SFPUC desires a more consistent and transparent basis for making decisions that make best use of available data in an automated way. This project would integrate available data in the collection system (levels, flows, pump status, etc.) with rainfall prediction data (from National Oceanic and Atmospheric Administration, or in the future improved through the Advanced Rainfall Prediction project). The real-time data will be coupled with WWE’s collection system hydraulic model to project the likely impact of approaching storms and generate specific operational recommendations for managing flows.

10029730 Operational Decision System Phase 2

This project would integrate available data in the collection system (levels, flows, pump status, etc.) with rainfall prediction data from National Oceanic and Atmospheric Administration (NOAA). The real-time data will be coupled with Wastewater Enterprise's (WWE) collection system hydraulic model to forecast the likely impact of approaching storms and generate specific operational recommendations for managing flows. Phase 2 builds upon Phase 1 (CWWSIPFCRP02) for a citywide installation.

10029732 SSIP Program Management

This project includes the following components necessary for successful implementation of the Sewer System Improvement Program (SSIP) Program Management: condition assessment (facility inspections), technical support and evaluations, water quality studies, progression of project definition and prioritization, public outreach and education, analysis of the impacts of climate change, development of green infrastructure standards and training programs, Triple Bottom Line evaluations, site logistics coordination, sustainability evaluation, and general program management tasks (program controls, change control, constructability, QA/QC, risk management, document management and evaluation study of alternate delivery systems). This project includes support by an integrated team comprised of SFPUC staff and the Program Management Consultants (PMC) under a professional services contract.

10029733 Land Reuse of 1800 Jerrold Avenue

This project includes jurisdictional transfer of 1800 Jerrold Avenue property ("Central Shops") from the Office of Contract Administration (OCA) to SFPUC. This 6.04-acre site is located adjacent to the SEP at the northwest corner of Quint Street/Jerrold Avenue intersection, and is currently used by OCA as central shops for city vehicle maintenance and repair. A new location to move the existing Central Shops to was identified, and planning is underway to complete design and construction. Upon approval of the Jurisdictional Transfer, the relocation will involve the purchase of two properties, lease of a third property, and construction agreements to complete improvements. This requires extensive coordination and cooperation between multiple City departments. Subsequent to the relocation of the Central Shops by the OCA, the 1800 Jerrold Avenue property would be acquired by SFPUC. Upon completion of geotechnical and environmental hazardous materials investigation, a demolition and remediation plan will be developed. The site is currently being considered for construction of the new SEP biosolids facilities.

10029734 Land Reuse of 1801 Jerrold Avenue

Reuse of the site requires a negotiated transfer of the site and subsequent demolition of the abandoned asphalt plant facilities and site remediation. Following the completion of geotechnical and environmental hazardous materials investigations, a demolition and remediation plan will be developed. Demolition will include the removal of all of the structures currently occupying the space including the existing asphalt plant equipment, storage silos and outbuildings. The remediation plan will be dependent on findings from the site investigation. Presently, the relocation of SFPW's Street Repair from the Asphalt Plant site to a property adjacent to the SFPW Yard is pending the relocation of SFPUC Sewer Operations (Sewer Ops) from 160 Napoleon (on a portion of Lot 31). Planning is currently underway to relocate Sewer Ops to a new location at Griffith Yard, and then to move the Asphalt Plant occupants to 160 Napoleon.

10029735 OSP Fine Screen and Grit Removal Enhancements

The purpose of this project is to maximize solids/grit removal efficiencies at the plant headworks thereby reducing grit throughout the wastewater treatment facility processes; minimize potential grit impacts to biosolids processes and reduce O&M costs associated with grit wear on treatment process equipment. The project includes planning, design and environmental review of the following major components: controls improvements of the three existing ¼-inch fine screens; evaluation/upgrade of the three existing Pista-type grit removal units with higher efficiency new fine grit removal units such as the hydraulically-induced vortex-type (Headcell®) or other high-efficiency technologies that remove fine grit, and structural modifications to the influent channels/headworks structure to suite new grit removal units. The construction phase of this project is proposed in SSIP Phase 2. However, the SSIP re-prioritization in 2016 has resulted in the deferral of remaining efforts in planning, design and environmental review to Phase 2.

10029736 Westside Pump Station Reliability Improvements

The project consists of screening improvements including replacement of existing bar screens, and addition of screening washing and compaction systems. The project also includes replacing existing wet-weather pumps to provide pump redundancy. The construction would take place within the existing structure and includes four new submersible pumps and 200 linear feet (LF) of discharge force main. Other improvements include increasing the power feeder capacity at WSS to account for additional wet weather pumping capacity and provide a reliable redundant power source, and replacing existing odor control units at the WSS with dilution ventilation fans and ducting.

10029737 OSP Digester Gas Utilization Upgrade

In this project, the gas storage vessel and digester gas conditioning equipment will be replaced. The existing cogeneration Internal-Combustion units (IC engines) and controls will also be replaced. Other improvements include providing an ancillary exhaust gas conditioning and heat exchanger systems to comply with regulatory air board requirements. Improved reliability and redundancy of hot water and electrical energy production systems, as well as, ventilation upgrades will maximize process efficiency within the energy recovery building. The electrical gear at Sub-Station No. 5 will be replaced to provide parallel electrical gear and power system reliability.

10029738 Westside Pump Station Redundant Force Main Improvements

Flow from the Westside Pump Station (WSS) is transported through an existing force main with no reliable redundancy. The purpose of this project is to ensure operational flexibility and reliability of critical force main infrastructure functions. This is accomplished by providing a redundant force main pipeline and supporting valving sized to maximum treatment plant capacity. This project includes planning, design, environmental review and construction of a redundant new force main from the WSS to the OSP. Major components of this project include installation of 6,400 linear feet of new force main on Sloat Blvd and Highway 35, as well as street pavement demolition and restoration, traffic control, and relocation of impacted utilities. However during the planning phase of this project, it was determined that this project may be deferred with accepted risks to SSIP Phase 2.

10029739 OSP Condition Assessment Repairs

The OSP Condition Assessment Repairs project will include planning, design, and environmental review of major improvements to the plant including: rehabilitation of building structures, rehabilitation or replacement of mechanical and electrical equipment, and seismic retrofit of process tanks and buildings. Improvements focus on maintaining operational reliability and extending the service life of buildings that are required to remain in operation for 30 years or more. A preliminary evaluation identified improvements to be addressed in various phases of the project, including those at the following buildings: • 011 – Pretreatment/Solids • 042 – Primary Clarifiers • 200 – Aeration Basins • 230 – Secondary Clarifiers • 510 – Chemical Storage • 530 – Chlorine Contact Channels • 620 – Digester Operations • 630, 640, 650, 660 – Digesters 1, 2, 3 and 4 • 741 – Digester Gas Holder • 800 – Co-Generation • 821 – Gas Burner • 920 – Pipe Gallery • 930 – Administration and Laboratory • 961/962 – Parking and West Entrance Tunnel/East Entrance Tunnel

10029740 OSP Odor Control Optimization

This project includes planning, design, environmental review and construction/upgrades to inefficiencies identified in Building 042 (Primary Clarifiers). Currently, the air from the entire building is exchanged and scrubbed for odor. In order to significantly reduce the volume of air treated for odor, the primary clarifiers should be covered and only air from the primary clarifier basins scrubbed. The main components of this project included: • New covers for the five primary clarifiers (each cover would be approximately 190 feet long by 38 feet wide). • Duct work to connect the head space in each clarifier basin to the odor control

system. Current plans involve the completion of an odor control study as part of the Alternative Analysis Report (AAR) planning phase. Opportunities may exist for reducing energy consumption while maintaining effective performance and meeting offsite odor limits. These include optimizing system operation, consideration of different reduced backpressure media, implementation of new lower energy usage technologies, and ventilation strategies including reduced turnover, covers for reducing volume, and air transfer. Based on the results of the alternative analysis, the project will forego covering the primary clarifiers and implement other optimization measures in its place.

10033106 Geary BRT Sewer Improvements Phase 2 PreCon

Phase 2 of SFMTA's Geary Bus Rapid Transit (BRT) Project includes the addition of center-running BRT lanes on Geary Boulevard between Palm Avenue and 27th Avenue, followed by dedicated BRT lanes along each sides of the street between 27th and 34th Avenue. The center-running BRT lanes on Geary Boulevard would be located directly above the existing sewer lines and severely impact SFPUC's ability to perform future maintenance, repair and/or replacement. The purpose of the Phase 2 sewer work is to coordinate with Geary BRT Project to relocate (or replace as needed) main sewers outside of the transit lanes, platforms and bulbouts. SFPUC had determined sewer conditions along this segment (Stanyan Street to 34th Avenue) and approximately 2.2 miles of aging sewers have been identified as possibly needing replacement. Any sewer work required, whether it is sewer relocation, sewer rehabilitation or sewer replacement, will be undertaken as part of SFMTA's project. Only initial costs for planning and design has been allocated for this project within the SSIP Phase 1 Re-Baselined Program budget.

10033745 Mission Street, 16th to Cesar Chavez Streets, Brick Sewer Rehabilitation

Project Completed. The project purpose is to rehabilitate and/or replace large-diameter sewers after the scope of work is defined through the condition assessment efforts from the Collection System Condition Assessment Project (Project CWWSIPCSSR02). Based on the condition assessment efforts, approximately 1-mile of large diameter sewers over 100-years old and located on Mission Street, between 16th and Cesar Chavez Streets, were confirmed to be in need of rehabilitation. This project will include the design, environmental review, right-of-way, bid and award, construction, project management, and construction management support to complete the rehabilitation work. In addition, funding for the planning efforts for two additional projects was funded through this project. At the end of the planning effort, the two projects will be completed through a separate wastewater capital project, the Large Diameter Sewer Rehabilitation and Condition Assessment. When this project is completed, approximately 4,350 feet of large-diameter sewers would be rehabilitated, with an extended useful life of at least 50-years.

10034360 Lower Alemany Area Stormwater Improvement Project

This project will include planning, design, and construction of a new auxiliary sewer conveyance system in the Lower Alemany area that manages the stormwater and minimizes flooding in the Level of Service storms. The project includes constructing a 10-foot diameter underground pipe, from Stoneybrook Avenue to Industrial Street, via Alemany Boulevard, Gaven Street, and Boutwell Street to convey stromwater away from the Lower Alemany area.

10034553 Green Infrastructure Grant Program (GIGP)

The Green Infrastructure (GI) Grant Program funds green infrastructure projects on public and private properties throughout San Francisco. By providing grants to owners of large, impervious parcels the SFPUC will encourage further green infrastructure projects that manage stormwater and improve the City's collection system performance during wet weather. The grants will cover costs of design and construction of approved stormwater management features, such as rain gardens, permeable pavement, cisterns, and vegetated roofs. Grantees will be eligible to receive $930,000 per acre of impervious surface managed, up

to $2 million per project.

10034718 Large Diameter Sewer Projects and Channel FM Intertie

The project purpose is to rehabilitate and/or replace large-diameter sewers based on condition assessment efforts completed by staff. This project will fund approximately 35,000-feet of rehabilitation or replacements of large-diameter sewers that are over 100-years-old in various parts of San Francisco. In addition, a 66-inch diameter pressurized pipe (or the Channel Force Main) was identified to be in need of rehabilitation or replacement; however, since the force main is almost always in service to meet regulations, a major sewer bypass is needed in order to perform a thorough inspection. This project will construct a bypass, or the Channel Force Main Tee, that will connect the existing force main to a nearby sewer transport/storage structure. When complete, approximately one-third of the existing force main can be taken out of service for rehabilitation and/or repair during the dry-weather seasons. In addition, this bypass will provide long-term operational flexibility to Wastewater Enterprise since flows from the Channel Force Main can be diverted away from the headworks area of Southeast Treatment Plant during dry weather seasons. When complete, this project will fund multiple construction contracts to rehabilitate and/or repair approximately 35,000-feet of large-diameter sewers, and a bypass will be installed that would allow future condition assessment and/or rehabilitation of one-third of the Channel Force Main.

10036398 OSP Condition Improvement Projects - Part 2

The OSP Condition Assessment Repairs project will include major improvements to the plant, aimed to address the reliability of existing assets that have deteriorated over the years. This project includes planning, design and environmental review of improvements to address the age, deterioration and reliability of existing assets at OSP that are not specifically included in the other SSIP projects. This project includes rehabilitation of building structures, rehabilitation or replacement of mechanical and electrical equipment, and seismic retrofit of process tanks and buildings. Improvements focus on maintaining operational reliability and extending the service life of buildings that are required to remain in operation for 30 years or more.

10037244 Baker St CSD Baffle Improvements & Backflow Valve Repair

Baker CSD (CSD 009) is located at the northern end of Baker St, adjacent to the Little Marina Green Picnic Area. Baker CSD was originally constructed in 1971. During storm events when the treatment and storage (T/S) in the system is maximized, the structure allows combined sanitary sewer and stormwater runoff from the Marina T/S box to discharge to the Bay. The following issue needs to be addressed to meet Operational Reliability LOS goals (Performance Requirements): East Baffle Wall: Baker CSD was originally constructed in 1971 and has a weir elevation of -4.0 feet. The CSD has two weirs: the "east overflow weir" and the "west overflow weir". Each weir is approximately 39 feet in length. While the west overflow weir has a wooden baffle that is noted to be in good condition, recent inspections have noted that the baffle adjacent to the east overflow weir is missing. The following issues need to be addressed to meet Operational Reliability LOS goals (State of Good Repair): LCV Check Valves: In 2015, LCV Check Valves (flap gates) were installed on each (east and west) weir to prevent tidal backflow into the sewer system. There are six check valves on each weir (12 in total). Recent inspections have noted that the western array of check valves may leak during king tides due to the adhesive peeling away from the concrete. The adhesive on the eastern array of check valves is also showing signs of deterioration in a similar fashion. Structural Rehab: Annual CSD inspections have also revealed minor structural deficiencies at Baker CSD, such as deteriorated metal plumbing pipes (≤2 inch diameter) at one end of the discharge structure, minor missing aggregate, stains and patched circumferential cracks in the rectangular portion of the connecting sewer, and minor exposed aggregate in the former DAF chamber. The components of the project at Baker CSD involve the following: Install a baffle on the east overflow weir; Repair or replace western array of

valves to stop leaking; Repair eastern array of valves to prevent leaking; Repair or replace deteriorated metal plumbing pipes; Repair minor defects including missing aggregate and infiltration in connecting sewer.

10037245 Brannan St CSD Discharge & Baffle Rehabilitation

The Brannan St Combined Sewer Discharge ("Brannan CSD") is located at Brannan St and The Embarcadero. Brannan CSD was originally constructed in 1912. The outfall structure consolidates flows from the Brannan St and Beale St sewers and interfaces with the Channel Transport/Storage (T/S) Box. The following issues need to be addressed to meet Operational Reliability LOS goals (State of Good Repair): Butterfly Valve: Unlike most outfalls, the Brannan CSD does not have an overflow weir. A rectangular butterfly valve with a hydraulic actuator controls combined sewer overflows. The valve is controlled by level measurement from a stilling well located under the pier measuring tidal flows ("tide sensor") as well as a stilling well located within the T/S box ("sewer sensor"). The sensors are not currently in service. The 2019 inspections noted severe corroding on the stilling well of the sensors. The controls and power unit for the valve are located on the opposite sidewalk, Embarcadero South (west side of street), with the connecting utilities traversing under the MUNI light rail railway. The butterfly valve also prevents seawater and sea life from entering the sewer system. The butterfly valve is old, corroded, and past its useful life. The butterfly valve no longer functions and is stuck in the closed position. As a result, the Brannan CSD is not currently functioning. Flap Gate: The outfall has a flap gate along the sea wall that is intended to prevent seawater and sea life from entering the discharge tunnel during high tide. During the construction of the Embarcadero promenade, concrete was demolished and dropped on the existing gate. This damaged the frame and gate, preventing seating of the gate against the wall and damaging the flap. The gate no longer functions in restraining seawater and sea life from entering the sewer. Baffle: Brannan CSD does not currently have a baffle for floatables control. The 2019 AAR recommended installation of a baffle. Structural Rehab: Annual inspection of the outfall has revealed that the structure exhibits concrete degradation and spalling, exposed rebar and biological growth. The following issues need to be addressed to meet Health, Safety & Security LOS goals: The access ladder into the outfall is missing the bottom rungs.

10037246 Seacliff No. 2 PS & FM Upgrade

The project will rehabilitate Seacliff No. 2 Pump Station (S2S) and Force Main and improve its operational performance and reduce CSD activations. The scope of work for S2S includes replacement or rehabilitation of: electrical equipment, power service, generator system, level monitoring system, process equipment, buildings, wet wells, and surrounding site. The existing force main which conveys flows from S2S to Richmond Transport Tunnel will also be upgraded.

10037251 Seacliff No. 1 PS & FM Upgrade

Seacliff No.1 PS was constructed in 1929 and operates in dry and wet weather via two pumps. An 8-inch diameter force main (930 LF) connects the pump station to a sewer on El Camino Del Mar Drive that drains to the Richmond Transport Tunnel. Overflows from the sump drain to China Beach via CSD 005. Due to its age, condition, and opportunity for water quality benefits through upsizing the station's capacity, it is recommended that Seacliff No.1 Pump Station and force main be replaced. This would include: replacement of pump station; Replacement of 8-inch force main (930 LF); installation of flow monitoring devices for post-storm evaluation; installation of floatable controls at the overflow structure to CSD 005; connection from new pump station to CSD 005; consider installing a redundant pump for 'n+1' redundancy during wet weather and consider provisions for wet well isolation for maintenance and inspection, if feasible; decommissioning existing pump station. As the current site is partially on Federal/GGNRA property, locating a suitable site requires additional coordination with the Real Estate Division.

10037303 Sunnydale PS Safety Improvements

This project's scope aims to address the following health, safety, and security issues at Sunnydale PS - Address safety risks from groundwater intrusion, including repairing structural deficiencies, including cracks and leaks; Upgrade and repair corroded equipment and appurtenances inside manifold room (including piping, PRVs, lighting, instruments, equipment); Address water leakage in manifold room and Motor Control Center (MCC); Address water intrusion from conduits package connected to PG &E transformer; Repair leaking door; Perform electrical repairs; Replace corroded HVAC equipment damaged by water intrusion. Address Security Concerns, including installing new security signage and upgrading lighting to dusk-activated LED lighting; Upgrade card readers and door contacts at all perimeter doors; Add interior presence sensing, connected to an intrusion detection panel and alarming to security; Furnish, install and configure video recording servers, management server and analytic servers including uninterruptable power supplies (UPS); Install video camera units and local recording.

10037325 Admin Bldg (NPF 930) Evaluation & Interim H&S Improvements

This project involves an evaluation of NPF 930 to provide safe working conditions for employees. The interim rehabilitation components will be identified during the planning, but as a basis, the following items are assumed: Interim structural repairs; Replacing roll-up doors, UPS for the emergency lighting system, and elevator; Rehabilitate HVAC system; Electrical improvements on Southside buildings; Assess and replace crane, if needed; Evaluate area and use of dewatering sump pumps; Replace pumps, piping, valves, and EI&C; Inspect and replace guardrails/handrails; Install fire sprinklers, alarms, and exit lighting; Replace and install new lighting.

10037330 Primary Treatment (SEP 040/041) H&S Improvements

Improvements to the existing ventilation system is proposed. In addition, repair of concrete cracks/deficiencies and rebar exposure will be provided, as well as, replacement of two (2) deteriorating dilution fans, interior/exterior lighting upgrades, replacement of selective guardrails, consolidation of electrical motor control center equipment, installation of induction mixers, miscellaneous piping relocation, and removal of abandoned assets. Furthermore, additional instrumentation and control scope of work is proposed to facilitate remote control of the facility.

10037331 Maintenance Building (SEP 940) Interim Improvement

Building 940 is a critical interim project for South East Plant (SEP). This is an interim project while the long-term vision and improvements under the SEP Campus Plan is being developed. Currently these crews are shoehorned into facilities not designed for the maintenance of electronic equipment. A new robust shop area is essential to be able to maintain reliable treatment facilities. The new maintenance shops included under Biosolids Digester Facilities Project (BDFP) do not address these crews. The following improvements form the basis of this project: • Space will be modified to include interim Electrical and Instrumentation and Controls (I&C) shop areas. • HVAC Improvements including evaluation (and installation as-needed) of wet grinder filtration system, condensing unit, and welding exhaust system) • H&S Improvements (emergency lights, signs, trip hazards, safe roof access)

10037353 SEP 550 Booster PS Condition Inspection & Interim

This project includes condition assessment of the influent channel and wet wells (confined space entry), as well as a budget allowance to perform concrete rehab on two wet wells and minor repairs to the influent channel. A firmer estimate to complete the repairs will depend on the results of the inspection. To inspect the influent channel, work must occur during dry weather and the plant must either be shut down or treated effluent diverted to Quint Street Outfall (QSO). Shutdowns may last up to 8 hours, and coordination/approval is needed with the Regional Water Quality Board to allow diversion through QSO. Mechanical equipment rehab is also included as part of the interim improvements. These include replacing

(2) sump pumps (SE550SP1 and SE550SP2), water heater (SE550H, air relief valve, booster pumps, and all Variable Frequency Drives (VFD) (4).

10037733 Solids Thickening (OSP 011) Process Upgrade

Depending on the status of the R&R project (CWWRNRTFA8) to replace the GBT with RDT, an alternatives evaluation should be performed to confirm the selected thickening technology. As a basis, this project assumes replacement of the two remaining GBTs and installation of two new RDTs that can thicken a combination of primary sludge, waste activated sludge, and secondary scum. The scope of the project also includes the replacement of corroded pipe, room fixtures, demolition of the existing units and ventilation improvements, such as: Demolishing the two existing GBTs; Installing two new RDTs and associated controls; Replacing the three existing washwater booster pumps, piping, and appurtenances; Installing hot water lines, redundant primary scum skimmer, ventilation system, two fixed hydrogen sulfide sensors in the Gravity Belt Thickener Room, new ultrasonic pulsar level sensor in the TPAS tank and improving the mixing system in the tank; Redesign the drains on existing and new drum screens; Replace the three thickened sludge pumps, corroded pipes, window frames, doors, floor gates, and tiles; Upgrade electrical components and DCS control of the new system; Address residual thickening area odor issues that were not addressed by the OSP Ventilation (HVAC) Upgrades Project.

10037734 OSP Plant-wide Ventilation (HVAC) Upgrades

A wide range of HVAC-related improvements were identified as part of the OSP Condition Assessment Repairs Project. It was determined that a plant-wide air handling performance evaluation be conducted to determine if the ventilation systems are meeting requirements and to better identify needed HVAC improvements. OSP 011: Replace inadequate duct supports in OSP 011 hallway areas; Duct supports within exhaust fan room at OS70EF1-1 thru -3 and OS70EF1-5 and -6 needs to be refastened/replaced; Coordination of HVAC evaluation, design and construction under the OSP Solids Thickening Process Upgrades project. OSP 530: Assess ventilation issues if keeping the temporary chemical station from the Recycle Water Project. OSP 620: Replace all HVAC equipment. Based on results of the plant-wide air handling performance evaluation, make provisions for increasing air ventilation rates in order to declassify area from Class 1 Division 1 to Class 1 Division 2; Replace Fiberglass Reinforced Plastic (FRP) ducts in digester basement serving fans 70EF19-1, 2. Replace HVAC equipment at OSP 042, OSP 230, and OSP 930.

10037735 Admin Bldg (OSP 930) Health & Safety Improvements

This project involves an evaluation of NPF 930 to provide safe working conditions for employees. The interim rehabilitation components will be identified during the planning, but as a basis, the following items are assumed: Interim structural repairs; Replacing roll-up doors, UPS for the emergency lighting system, and elevator; Rehabilitate HVAC system; Electrical improvements on Southside buildings; Assess and replace crane, if needed; Evaluate area and use of dewatering sump pumps; Replace pumps, piping, valves, and EI&C; Inspect and replace guardrails/handrails; Install fire sprinklers, alarms, and exit lighting; Replace and install new lighting.

10037777 OSP & WSPS Security Enhancements

The project involves upgrading card readers and door contacts at all perimeter doors and ensuring proper operation; Replacing and furnishing gate and gate operator including structural support, electrical power, and controls; Adding protective cages around outdoor chemical and electrical equipment, including an allowance for replacing/repairing the existing perimeter fence and fence support as needed; Furnishing, installing and configuring servers for video recording, management, and analytics; Configuring security fiber optic connectivity and adding video camera units and local recording; Establishing prune landscaping,

adding new security signage, and upgrading lighting to dusk-activated LED lighting; Adding interior presence sensing connected to an intrusion detection panel and alarming security.

10037904 NPF & NSS Security Enhancements

The components of the project include upgrading continental card reader access control; Replacing and furnishing gate and gate operator including structural support, electrical power, and controls; Adding protective cages around outdoor equipment, and repairing/replacing perimeter fence; Furnishing, installing, and configuring servers; Configuring security fiber optic connectivity and adding video camera units; Adding signage, lighting, and pruning landscaping; Provide interior presence sensing connected to intrusion detection panel.

10038353 NPF DCS Upgrades (Construction)

For Environmental Approval, Environmental Management Group has determined upgrades to the DCS Controls involves primarily computer hardware and software which do not fall within the definition of a "project" under CEQA because there would be no physical change in the environment. For Bid Advertisement, the project delivery method for this project is Progressive Design-Build with pre-design/ design components. Construction NTP represents start of fabrication/manufacturing. Distributed control system (DCS) equipment and hardware for SSIP contract WW-685R has been delivered onsite at Northshore Pump Station (NSS). DB-126 DCS coordination with the WW-685R team at NSS is ongoing. Planning and preparations to conduct NSS DCS software operational readiness tests (ORT) with WWE in the upcoming quarter were performed.

10038373 SEP Booster PS & BFS Security Enhancements

The project involves, upgrading card readers and door contacts at all perimeter doors and ensuring proper operation; Replacing and furnishing gates and gate operators including structural support, electrical power and controls; Adding protective cages around outdoor chemical and electrical equipment, including an allowance for replacing/repairing the existing perimeter fence and fence support as needed; Furnishing, installing, and configuring servers for video recording, management and analytics; Configuring security fiber optic connectivity and adding video camera units and local recording; Pruning the landscaping, adding new security signage, and upgrading to dusk- activated LED lighting; Establishing a visitor management system and installing turnstile; Monitoring improvements (e.g. developing mobile tablet security video monitoring capability, establishing a security monitoring center, a tablet-based security incident response reporting template and setting up an automatic video archiving process across all Wastewater Enterprise sites); Providing interior intrusion detection of critical assets; Adding interior presence sensing connected to an intrusion detection panel and alarming to security; Upgrading UPS backup power to serve security components; Adding new security signage with "No Trespassing", applicable penal code and emergency contact information; and, adding a main distribution frame (MDF) to BFS SEP Fire Alarm, PA system, business network and radio communications.

10038446 Geary Underpass PS Safe Access Enhancements

This project's purpose is to improve access in and around the Geary Underpass Pump Station, in accordance with the Health, Safety, and Security LOS goal. This includes and assumes the following scopes of work: improve lighting and accessibility for routine maintenance, such as removing and replacing existing pumps; add and/or modify handrail and ladders, and upgrade the guardrail at the well opening.

10038468 System-wide Monitoring Equipment Assessment

The project involves a system-wide assessment of all of WWE's collection system monitoring equipment for dry and wet-weather operations, reporting and other related functions. The project scope will perform a

desktop-based gap analysis to document existing monitoring equipment location, condition, and reliability and compare findings against WWE's long-term vision. The assessment will provide recommendations for replacement, relocation or consolidation of sensors, calibration needs, technology upgrades related to power and communications, new installations, additional access, and other recommendations. The assessment will also include a long-term maintenance plan for all sensors. As an allowance and a starting point, the project cost assumes replacement and conversion to wireless communication for existing sensors at to-be-determined collection system locations. An additional allowance is also included for reliability improvements at other collection system locations based on the assessment results.

10038469 Pump Station Security Upgrades (Cesar Chavez, GFS,CHS, MMS)

A security evaluation was performed in 2017 to identify the security risks of various Wastewater Enterprise facilities and assets. The evaluation identified security improvements based on security vulnerability (factoring in location, signage, perimeter protection, lighting, surveillance, and access). Based on the evaluation, the following pump stations are included in this project: Cesar Chavez Pump Station, Griffith Pump Station, Channel Pump Station, and Merlin Morris Pump Station. A summary of the scope is below (details can be found in "SFPUC WWE Security Evaluation Matrix (September 2017)". 1. Cesar Chavez Pump Station: Upgrade card readers and door contacts; Add interior presence sensing; connected to an intrusion detection panel and alarm security; Replacing perimeter fence; Add protective cage around outdoor chemical/electrical equipment; Install video recording servers, management server, and analytic servers including UPS; Configure security fiber optic connectivity back to SEP; Upgrade lighting; Add new security signage. 2. Griffith Pump Station: Add bullet-resistant glass at perimeter windows; Upgrade card readers and door contact; Add interior presence sensing, connected to an intrusion detection panel and alarm security; Install two new gates, replace gate and gate operator at one location, including structural support and electrical power and controls; Replace perimeter fence; Add protective cage around outdoor chemical/electrical equipment; Install recording servers, management server, and analytic servers UPS; Upgrade lighting; Add new security signage; Add video camera units and local recording. 3. Channel Pump Station: Repair card reader operation at swing gate; Repair any door contacts requiring upgrades; Upgrade card readers Add interior presence sensing, connected to an intrusion detection panel and alarming to security; Replace gate and gate operator at one location including structural support and electrical power and controls; Replace perimeter fence; Install video recording servers, management server, and analytic servers including UPS; Install wireless mesh network; Configure security fiber optic connectivity back to SEP; Upgrade lighting; Add new security signage; Add video camera units and local recording. 4. Merlin Morris Pump Station: Add new security signage; Upgrade lighting; Convert roof and perimeter fencing to be non-porous to protect staff from freeway debris and safety and security risks posed by the public.

10038471 Folsom Area Stormwater Imp. Project Phase 2

The Folsom Area Stormwater Improvement Project (FASIP) will provide stormwater conveyance improvements to the neighborhood surrounding 17th and Folsom Street. The project is being developed based on the alternative chosen in the NAR/AAR report and further refined in the CER and during the initial design process. Major components of the project consist of a tunnel to convey stormwater flows from the neighborhood surrounding 17th and Folsom to the Channel Consolidated Transport/Storage Box, and upsizing of existing combined sewer pipes and boxes upstream of the new tunnel. This is Phase 2 of the project, Phase 1 covers through the Design Phase. This Phase 2 of the overall project covers Bid and Award through the Construction.

10038547 CSD Structure Rehab & Upgrades - Part 1

This project encompasses improvements at CSD structures in response to structural deterioration. Detailed condition inspection and/or assessment would reveal the actual improvements required. In

general, the scope of this project is structural rehabilitation of the following CSD Structures: CSD 001 Lake Merced; CSD 011 Laguna; CSD 018 Howard; CSD 022 Third Street; CSD 023 Fourth Street North; CSD 027 Sixth Steet South; CSD 028 Fourth Street South; CSD 029 Mariposa and CSD 037 Evans.

10039184 Westside FM Reliability Project - PLANNING

For the redundant force main, the proposed alignment from AAR is Alternative 1, which is approximately 2,765 total linear feet and requires a short overall pipeline length. This alignment mainly runs west from the connection point then south and parallel: either west of the existing force main within the paved outer northbound lane in the Great Highway or east of the existing force main within the east shoulder of the Great Highway, then turns east to connect to the headworks at OSP 011. This project will advance the existing AAR through CER, and in the process, also consider risk mitigation strategies with continuing operation of the existing Westside Force Main. Details of the CER will form the basis for Project OSP-1B: Westside Force Main Reliability Project – Design and Construction.

10039193 Gaseous Oxygen System (OSP 011) Upgrades

The appropriate technology and alternative would be explored in the project's planning phase, but as a basis for this project, replacement of the PSA units with vacuum pressure swing adsorption (VPSA) units is assumed. PSA reduces the desorption pressure compared to VPSA, which allows for a higher percentage of available oxygen to be recovered and less air to be processed. This project includes the replacement/upgrade of the existing gaseous oxygen (GOX) system at OSP as detailed below: 1. Demolish/remove the three (3) existing 10 ton per day PSAs 2. Install two (2) new 10 ton per day VPSAs 3. Replace the GOX line connecting the VPSAs to the OSP 200 Aeration Basins

10039251 Sedimentation (NPF 040/041) Tanks Condition Improvements

The project will perform condition improvements and upgrades to the sedimentation tanks, which includes the following: NPF 040 & NPF 041 Sedimentation Buildings No. 1 & 2: concrete structural rehabilitation; Replace doors in poor condition; Evaluate HVAC, ventilation and install a new heating system for locker rooms; Replace hot water system; Building structural repairs; Address NFPA 820 area classification issues; Rehabilitate locker rooms; Repair/replace deteriorated piping, and other corroded metallic components; Upgrade stairs and hand/guardrails; Provide no-flow cutoff for sludge pumps; Replace building sump pumps and air compressors in NPF 041; Upgrade NPF 041 server room; Remove abandoned-in-place equipment. NPF 043 Grease & Scum Removal Building Improvements: concrete structural rehabilitation; Building structural repairs; Replace roll-up doors. NPF 060 Sludge Control Building (including NPF 061, NPF 062, NPF 063, NPF 064) Improvements: concrete structural rehabilitation; Building structural repairs; HVAC/ventilation upgrade; Replace doors, a dewatering pump, sump pumps, elevator, and MCC; Remove abandoned-in-place equipment; Modernize control room and "lab" room.

10039310 Secondary Clarifiers (SEP230) Rehabilitation

The components of the project at SEP 230 for the remaining eight clarifiers include performing inspections of confined spaces considering operational constraints; Rehabilitating concrete, repairing and coating, including patching and coating for basin areas exposed to wet weather conditions; Replacing collector mechanisms, sludge collectors, and drives; Inspecting mixed liquor dewatering gates and replacing as needed; Evaluating mixed liquor system (including assessment of the ventilation; the mixed liquor channels are covered but do not have ventilation which may be causing concrete corrosion issues); Replacing area lighting with watertight fixtures (LED lighting has corroded); Coordinating with plant-wide door contract on updates associated with SEP 230; Increasing pedestrian safety adjoining vehicular access areas (includes repaving, regrading, and striping).

10039505 New Trades & Maintenance Buildings

The project involves the following components, Interim Facilities Removal of SEP 850 requires relocation of the building occupants and its facilities to interim space. Interim office space and shower facilities are required to support the larger work of developing the Campus. This will include further evaluation on the reuse of 1800 Oakdale and replacement of trailers at SEP. Funding includes site preparation and installation of temporary structures. Demolition of SEP 850: Site clearance includes demolition of SEP 850 and trailers at SEP 850. Demolish of SEP 850 includes boiler that serves SEP 930, requiring installation of local hot water solution for SEP 930. New Trades and Mechanical Maintenance Buildings (SEP 603 and 914): The project will replace SEP 850 and the adjacent parking lot at Jerrold and Phelps, an area just under one acre, with two new buildings, SEP 603 and SEP 914. Building SEP 603 is a single story, 9,800 square foot, Mechanical Maintenance building for crews 402, 402, and 404 shops. Building SEP 914 is a two-story, 28,250 square foot building, consisting of shops for Painters, Carpenters and Plumber on the ground floor and shower and locker facilities on the second floor.

10039608 Buchanan Street Mall

The Buchanan Street Mall Neighborhood GI Project is located in the Western Addition Neighborhood and includes two major components: The Buchanan Street Mall Core Project - these components are centered on the Buchanan Street Mall, led mainly by RPD. This core project manages runoff from the mall and some adjacent streets that flow to the mall; The Neighborhood Projects – additional neighborhood-scale components that include adjacent streets and parcels, led by SFPUC. In addition to the stormwater performance metrics, the project produces additional benefits: Manage up to 7 acres of DMA; Integrate multipurpose GI in the Buchanan Street Mall; Maximize stormwater performance through management of adjacent parcels and street runoff; Explore a new design approach for street GI that combines impervious removal and bioretention; Deliver neighborhood-scale placemaking co-benefits in one of San Francisco's identified disadvantaged communities. In FY 21/22, the project scope expanded to include the rehabilitation of brick sewers within the mall.

10039682 Flood Resiliency Planning

This project includes funds for pre-planning the development of identified and potential new flood resilience programmatic strategies, including Flood Resilience Programmatic Strategies – technical work to support programmatic flood resilience strategies. This work includes mapping and modeling. Floodwater Grant Program Update Development – technical support to inform program structure updates, development of materials, and other program development efforts needed to support the increased allocation for the Floodwater Grant Program (full program to be funded in FR02). Flood Resilience Planning Studies and Implementation Support - If the Upper Islais Creek Watershed Plan (UICWP) alternative plan for the Lower Alemany area is approved, this work will support the ongoing implementation of the plan over the next 2 years. This will also cover additional requests for flood resilience studies or coordination efforts with City or other agencies.

10039811 SEP Condition Improvement Projects - Part 1

Project involves relocation of Sodium Bisulfite Tanks (SEP 515) to the vicinity of the effluent disinfection location (SEP 521/522). Scope of work consists of: geotechnical/structural analysis to support the new bisulfite tanks and other ancillary systems. Electrical, controls and mechanical piping for the new bisulfite chemical injection system is also included in the scope of work. Project funding covers only planning and design phases.

10040591 SSIP Program Management - PM02

This project includes the following components necessary for successful implementation of the Sewer System Improvement Program (SSIP) Program Management: condition assessment (facility inspections),

technical support and evaluations, water quality studies, progression of project definition and prioritization, public outreach and education, analysis of the impacts of climate change, development of green infrastructure standards and training programs, Triple Bottom Line evaluations, site logistics coordination, sustainability evaluation and general program management tasks (program controls, change control, constructability, QA/QC, risk management, document management and evaluation study of alternate delivery systems).

10040621 Floodwater Management Grant Assistance Program (Grant)

In 2013 the SFPUC established the Floodwater Management Grant Assistance Program (Grant Program), providing San Francisco property owners with grants for the cost of some floodproofing measures to improve flood resilience for San Francisco businesses and residents. The SFPUC has expanded the types of projects eligible for grant funding, cost-sharing, and total grant amount. While the existing Grant Program has made multiple improvements to expand project types, increase funding caps, reduce financial burden, and improve the reimbursement structure, the SFPUC will further enhance and expand the program. The primary goal of the Grant Program is to encourage the implementation of site-specific floodproofing measures by providing grants to property owners to implement projects and improve their flood resilience in heavy rains. It is one of the various flood resilience programmatic strategies that the SFPUC has developed and continues to implement.

10041084 Geary BRT Sewer Improvements - Phase 2 (CON)

This project includes planning, design, and construction of the proposed sewer work in coordination with the Geary BRT Phase 2 project. The 38 Geary bus service delivery currently relies on a motorcoach with bus stations closer to the curbs. The proposed side-running dedicated lanes on Geary Blvd. may impact SFPUC's future replacement or repair of the existing sewers. The age, materials and past condition assessment of sewers were considered to determine the proposed sewer replacement scope. It is assumed that SFPUC would prefer replacing all aging brick sewers and other inadequate sewers that need repair or replacement. The preliminary project estimates are based on the assumption that 78% of the existing sewers need replacement, where 40% of the existing sewers are over 90 years old. Condition assessment will determine the replacement needs of the remaining 22% of the sewers, and cost will be adjusted accordingly. Sewer replacement work is recommended along Geary corridor and the cross streets intersecting Geary. Some of the sewers along the cross streets were replaced in or after 1997. About 11% of the sewers have been identified for replacement. The proposed replacement is assumed using an open trench construction technique using equivalent pipe sizes. A condition assessment is recommended for all sewers along the Geary corridor within the project limit for a trenchless rehabilitation assessment.

CWWLID01 Cesar Chavez Green Infrastructure

The purpose of this streetscape and sewer improvement project, which focused on the segment between Guerrero Street and Hampshire Street, was to improve the safety, aesthetics, and infrastructure and transit efficiency of the corridor. This project also turned Cesar Chavez into a sustainable “green street” by increasing the number of street trees, implementing Low Impact Development (LID) practices, and installing stormwater planters to add green landscaping pockets and provide for stormwater management. The project widened the existing median to allow for many more street trees and landscaping; provided left turn pockets for turning vehicles; widened the sidewalk at the corners; and upgraded the street lighting along the corridor to LED to provide brighter, whiter light and reduce energy consumption. Permeable paving and bioretention were also integrated into the street design. This strategy fuses infrastructure with urban design, allowing the streetscape to become part of the solution to drainage problems. This project has been completed.

CWWLID02 Islais Creek Green Infrastructure

This project will incorporate green stormwater management into an urban design to meet the neighborhood's needs and the stormwater performance goals for the Islais Creek watershed (i.e. manage the first 0.75 inch of rainfall for a 5-year, 3-hour storm event within the drainage management area). The project will also provide secondary benefits by creating new plazas that can serve as neighborhood gathering spaces, greening of the neighborhood by adding more vegetated areas within the right-of-way (ROW), and adding curb bulb-outs to enhance pedestrian and bicyclist safety. Additional work includes construction of bioretention and pervious concrete plazas, construction of permeable pavement parking strips, and developing parking spaces and traffic lane configurations based on recommendations from SFMTA & SF Planning.

GI-1 Balboa High School Regional Runoff Reduction Project

The regional stormwater project is centered around Balboa High School in the Balboa Park Neighborhood. In addition to the stormwater performance metrics, the considerations that led to this project being selected as the preferred regional Green Infrastructure (GI) site in Cayuga include: Ideal location relative to surrounding flood risks; Positive synergy with providing a solution to historical flooding in the basement of the high school; Quantity and location of impervious area relative to irrigated open space; Supports level-of-service (LOS) by providing benefits to a disadvantaged community; Synergy with Balboa Park Area Plan by the San Francisco Planning Department. This Project involves regional stormwater collection from San Miguel Child Development Center, Civic Center Secondary School, James Denman Middle School, as well as the Balboa High School campus itself.

GI-3 Regional School/Park: Giannini Middle School

AP Giannini Middle School is located above the Westside Groundwater Basin and has well draining soils. The project site is 8 acres of mostly impervious roofs and pavement including over 2.5 acres of play yard. There is an opportunity to remove impervious paving to promote infiltration while greening the school yard. Green infrastructure BMPs such as permeable paving, bioretention planters, and infiltration trenches will be installed to reduce the volume and rate of water entering SFPUC's sewer system.

OSP-12A Grit Removal (OSP 011) Upgrades - PLANNING

This project is a continuation of the efforts previously completed through the OSP Fine Screen and Grit Removal Enhancements Project through CER and includes an analysis to confirm/validate the design alternative selected. This analysis should also consider any recent sedimentation assessment and cleaning program.

OSP-5 OSP Odor Control Upgrades

Specific work includes Primary Odor Control System Improvements: Covering influent and effluent channels in OSP 042. The primary clarifiers would remain open and uncovered; Refurbishment of the existing Odor Control Units (OCUs) serving OSP 042; Installation of heating coils to pre-heat the foul air extracted from below the covered channels, OSP 042 building space, and the aeration basin channels prior to treatment through the OCUs; Other miscellaneous improvements include new variable frequency drives (VFDs) at the supply fans, new odor control fans with VFDs, duct repairs at odor control fans, replacement of fan differential pressure switches and automated ventilation modulation. Secondary Odor Control System Improvements: Sealing the inlet weir channel openings and effluent channel openings with aluminum checker plate hatch covers. The secondary clarifiers would remain open and uncovered; The air from the channel head spaces would be extracted and treated by two existing OCUs. The room air will contain very low odor/moisture concentrations and be transferred to OSP 530 as makeup air and then exhausted outdoors without treatment. A heating coil will be installed to pre-heat the foul air prior to the OCUs; Other miscellaneous improvements include new VFDs at supply fans, a new odor control fan, new

space exhaust fans with VGDs, rebalancing existing odor control fans, blank-off plates at existing ductwork, replacement of motor control center (MCC) exhaust fan along with associated ductwork and disconnect switch, replacement of fan differential pressure switches and automated ventilation modulation. Replacement of High Head Loss Fittings: Replacement of two rectangular elbows in a Z-type configuration which supplies HVAC air to the second floor Gravity Belt Thickening Area in OSP 011 with two smooth radius elbows with a splitter vane.

OSP-6 OSP Communication & Safety Monitoring Upgrades

Fixed Gas Monitoring Systems: Fixed gas monitoring is to be added within the following OSP process areas. The systems should follow the standards and specifications included in Project WW-559R - SEP Fixed Gas Monitor Upgrades, and will include DCS connections, horns, beacon lights and other notifications. OSP 011: 1. Install two (2) fixed hydrogen sulfide sensors in the Influent Channel Room (OSP 011-107). 2. Install two (2) fixed ammonia sensors in the Screw Press Room (OSP 011-207). OSP 042: 1. Install four (4) fixed hydrogen sulfide monitors in the Primary Clarifier Building. OSP 230: 1. Install Two (2) fixed hydrogen sulfide sensors in the Secondary Clarifier Building. OSP 620: 1. Relocate fixed gas monitoring system notification locations which are currently considered to be located to close to potential gas sources. 2. Modernize Elevator OSP 930: 1. Modernize 930 Freight Elevator and upsize capacity from 6000-lbs to 8000-lbs Public Address System / Emergency Evacuation Notification System: 1. Replace the existing Public Address System at OSP which is old and in disrepair. 2. Replace the existing Emergency Evacuation Notification System at OSP which is old and in disrepair. 3. Install repeaters at Westside PS and replace existing repeaters (loss of communication outside of plant for radios). Fire Alarm System: 1. Replace the existing Fire Alarm System at OSP and WSS which are old and in disrepair. Improvements to the WSPS and OSP radio communication systems are planned to be completed in the R&R program and should be tracked accordingly.

OSP-8 OSP DCS Upgrade (Construction)

This project will replace the aging control system infrastructure at OSP and other satellite wastewater facilities like WSS as the existing DCS equipment are obsolete. The upgrades include converting all existing DCS, Wonderware HMI, and programmable logic controllers (PLCs) to Emerson-based systems as specified by the Facility-Wide DCS Control Upgrades Project, and upgrades to OSP's aging control panels, annunciator panels, sensors, disconnect switches, bare grounding wiring and control devices. The DCS supplier will provide design and installation services. In addition to the needed DCS upgrades to the specified Emerson-based systems, a wide range of DCS-related improvements were identified as part of the OSP Condition Assessment Repairs Project. These are listed below, but should be further evaluated during planning and design by the DCS Contractor. OSP 011 Building: Replace local control panels LP-02-2, LP-03-3, LP-12-1. Replace control panels CS-02/03-1, CS-47-1 and CS-47-3. Replace panel FP12-1. Refurbish CP-1, CP-9, CP-10, CP-12, CP-14, CP-15 and CP-19. Replace 25 standard disconnect switches in the Bar Screen Room. Replace 20 Class 1/Division 1 disconnect switches in the Bar Screen Room. OSP 042 Primary Clarifiers: Replace 21 disconnect switches and all bare copper grounding wire. OSP 200 Aeration Tanks: Replace/Refurbish control panels CP-2 and CP-3 with new annunciator panels and LED lights. Replace existing FP-10-1 next to CP-3. This aeration panel has a PLC and internal relay boards that are identical to the FP12-1. OSP 230 Secondary Clarifiers: Replace local control panel (CP-13) and refurbish the annunciator panel. OSP 620 Digestion Operations: Replace control panels CP-22, LP-47-20 and Day Tank Bubbler Panel for code compliance. Please note that these control panels may not require replacement if ventilation improvements are made which result in an electrical reclassification of the OSP 620 area. Recycled Water Facility: Interface with the PLC.

PS-17 CHFM Inspection and Rehabilitation - Southern Portion

According to the Operational Reliability LOS Goals, all major dry weather force mains (ADWF ≥ 1 mgd) should have the operational flexibility to perform maintenance, and that dry weather force mains conveying to treatment plants shall also have provisions to convey design flows following an unplanned outage. In addition, assets should be maintained in good working order. This project allows for the internal inspection of the CHFM south of the intertie structure to SEP, which is assumed to be performed by a multi-sensor remote operated vehicle (ROV). It is assumed that the ROV will contain video camera, sonar, and lidar data capture equipment. Once the condition of the facility is evaluated, the design and construction for the required level of rehabilitation will be performed. The assumed rehabilitation budget assumes cured-in-place lining (CIPL) for the entirety of the 2,600-foot length.

APPENDIX A. PROJECT DESCRIPTION

FI

Facilities and Infrastructure Program

10015546 New Treasure Island Wastewater Treatment Plant

The objective of the project is to build a new wastewater treatment plant that will provide reliable service for the Treasure Island residents and meet the recycled water demands of the future redevelopment on the island. The existing facility was built by the United States Navy over 50 years ago and is past its useful life and no longer reliable. The existing facility is also not capable of providing recycled water and meeting the needs of the residents on the redeveloped island.

10015554 Ocean Beach Climate Change Adaptation Project

Chronic erosion problems along Ocean Beach south of Sloat Boulevard have been threatening City and County of San Francisco (CCSF) assets since the late 1990's. The city, via Public Works, declared erosion emergencies 3 times in 15 years in order to place stabilization measures (i.e., large rock revetments and sand bags) on the beach. Those measures ultimately impeded safe public access and affected habitat. These actions precipitated intense political pressure, including litigation, on CCSF to remove the revetments and improve access to the beach. In addition, the Coastal Commission denied CCSF requested permits and required CCSF to develop a long-term management strategy. The project will develop a comprehensive shoreline management and protection plan against bluff erosion and climate change induced sea level rise consistent with the recommendations in the 2012 Ocean Beach Master Plan. The project is necessary to protect the integrity of wastewater assets built to protect public health and the environment, including the Lake Merced Tunnel, the Westside Pump Station and the Oceanside Treatment Plant. The project is one of the first CCSF Climate Change Adaptation projects which is being led by the SFPUC. The Lake Merced Transport Tunnel has a storage capacity of up to 10 million gallons for combined sewage and stormwater flows and is located closest to the section of Ocean Beach most severely impacted from, and most vulnerable to, continued bluff erosion. The tunnel could become structurally compromised if sudden bluff retreat is experienced during a design storm event, resulting in significant environmental and public health impacts. This project will facilitate the development of a comprehensive shoreline management and protection plan in partnership with relevant stakeholders and regulatory agencies to provide a long-term solution to the erosion issue along Ocean Beach, and to mitigate potential impacts to the Lake Merced Tunnel and other critical wastewater assets at this location.

10015556 Southeast Community Center at 1550 Evans

The Southeast Community Center project will serve to address the SFPUC's commitment to the mitigation measure for the expansion of the Southeast Plant (SEP) by constructing a new community center at 1550 Evans. The project will include a childcare center, café, multipurpose space for meetings, events, and workshops, and co-working office and classroom space for community-based organizations providing workforce development services. It will also include parking and over two acres of landscaped open space, with play areas, an amphitheater, picnic areas and gardens. The new center will provide a wide range of social services supporting workforce development and education for Southeast residents of all ages.

10015557 Southeast Bay Outfall Islais Creek Crossing Replacement

The Project Scope includes only condition assessment to document deficiencies for the portion of the Southeast Outfall (“SEO”) that crosses Islais Creek immediately parallel to, and west of, the Third Street Bridge in San Francisco, CA. Treated effluent from the SEP flows by gravity to the Booster Pump Station (BPS) and then pumped to the San Francisco Bay (“the Bay”) via the SEO. The existing SEO Islais Creek

crossing is comprised of two ductile iron pipes 36-inch and 42-inch constructed in 1967 and have reached useful life. One of the two crossings was replaced on an emergency basis with HDPE pipe with ballast sitting on the bed of creek in 2020. It is anticipated to utilize R&R funds to extend life of two existing crossing by addressing the potential deficiencies found during the inspections/condition assessment.

10033820 Southeast Outfall Condition Assessment Rehabilitation

The Southeast Outfall (SEO) discharges effluent from the Southeast Plant (SEP) into the San Francisco Bay about 650 feet offshore, east of Pier 80. The goal of the project is to determine the pipeline condition of the onshore force main and offshore outfall components of the SEO system. The project will thoroughly and completely evaluate the condition and remaining life expectancy of the SEO system and implement the rehabilitation solutions to extend the useful life.

10038793 WWE Customer Service System

This project will transform the Customer Service experience at the SFPUC. It will modernize our technology and enable us to optimize business processes to align with current and future Customer Service needs and bring increased operational effectiveness. The project has 3 main components - a) Migrating to a modern, flexible cloud-based contact center solution, b) Migrating from our legacy "My Account" platform to a new digital self-service and customer engagement platform, and c) Migrating from our on-premises legacy Customer Information System (CIS) CC&B (Oracle "Customer Care & Billing") to Oracle's replacement CIS solution - Oracle CCS ("Customer Cloud Service"). These are all significant changes across our Customer Service and IT infrastructure. The current systems are all between 8 and 20 years old. A lack of modern, flexible technology is making it impossible to improve Customer Service business process, and restricts how customers access their data. This project will increase customer satisfaction, reduce frustration and improve the experience of our staff. The call center telephony and supporting applications are around 20 years old. Not completing this project puts the PUC at risk as it will fall further behind in its technology and what customers expect from a modern utility. Customer's now demand modern access (txt, mobile, chat etc) to their billing and usage information, and this project will improve the customer experience, engagement and overall satisfaction. Not completing this work will increase customer frustrations, making it challenging to retain staff, and could impact our ability to collect revenue in a timely manner.

10040511 Interim Sidestream Nutrient Removal

The SEP Interim Sidestream Nutrient Removal Project addresses the planning, design, and construction of a new pipeline, treatment facility and supporting infrastructure and utilities, to reliably reduce the nitrogen levels in the waste stream from the biosolids dewatering process at the Southeast Wastewater Treatment Plant (SEP). The Project intends to convert and repurpose the abandoned Dissolved Air Flotation (DAF) tanks at SEP, located south of Jerrold Avenue.

SWOO Southwest Ocean Outfall (SWOO)

This project addresses Oceanside Plant's (OSP) effluent discharge through the 96-inch diameter Southwest Ocean Outfall (SWOO), which extends approximately 4.5 miles offshore from Ocean Beach. The SWOO was put into service in 1986 to accommodate effluent discharges from OSP and the Westside Pump Station (wet weather only). The SWOO was designed to accommodate discharge flows in excess of 400 MGD, but actual flows are far less, even during wet weather events. This project includes the condition assessment of the outfall, as well as an allowance to perform repairs. The condition assessment and repair work should consist of removing sediments from within the pipeline to allow access for a Remotely Operated Vehicle (ROV) internal inspection of the diffuser section to document the pipeline condition and sediment levels. Sediment samples from within the diffuser section of the pipe would also be collected and analyzed; External inspection of the diffuser section of the pipe, including the measurement of the velocity

and effluent flow rates at each open diffuser port and the recording of water depths at three elevations at each riser diffuser location; Based upon previous inspection information, new diffuser blanking plates and manhole covers should be installed where necessary to replace missing or corroded plates and covers.

APPENDIX A. PROJECT DESCRIPTION

RNR

Renewal & Replacement Program

15722 R&R Collection Systems - Small Diameter

The purpose of the Wastewater Enterprise (WWE) Renewal and Replacement Program (R&R) Collection System Small Diameter Sewer project is to maintain the existing functionality of the sewage collection system and address planned and emergency projects for repair and replacement of structurally inadequate sewers. This project consists of the following sub-projects: small diameter (less than and equal to 36-inch) sewer improvements, small diameter (less than and equal to 36-inch) sewer condition assessment, spot sewer replacement. By utilizing an asset management approach, which factors in: physical condition, age, location, risk, public safety, paving schedule and other factors, aging and failed portions of the collection system are identified and replaced.

CWWRNRCS-LD R&R Collection Systems - Large Diameter

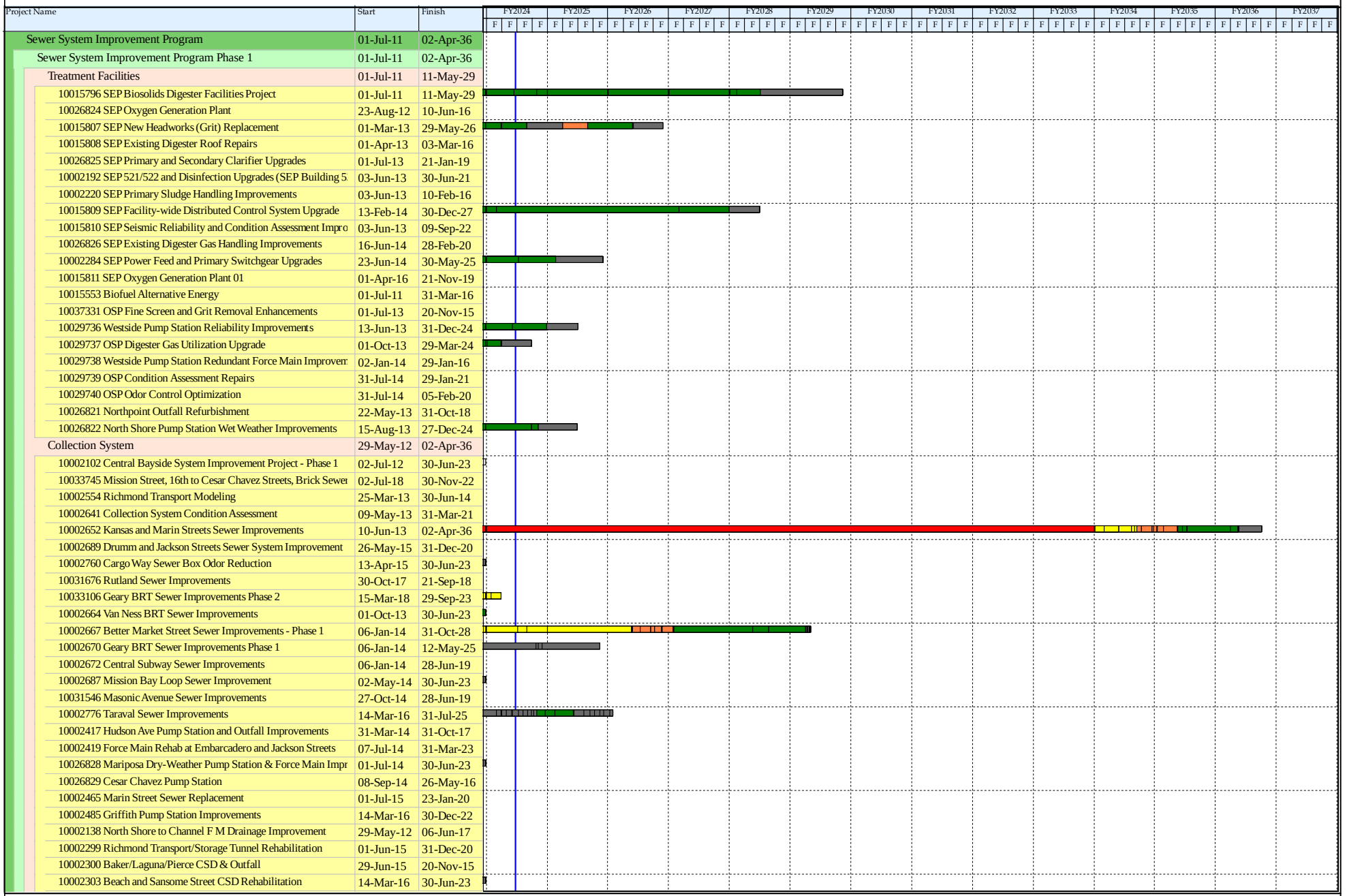
The purpose of the Wastewater Enterprise (WWE) Renewal and Replacement Program (R&R) Collection System Large Diameter Sewer project is to maintain the existing functionality of the sewage collection system and address planned and emergency projects for repair and replacement of structurally inadequate sewers. This project consists of the following sub-projects: large diameter (greater than 36-inch) sewer cleaning and condition assessment, and large diameter (greater than 36-inch) sewer improvements. By utilizing an asset management approach, which factors in: physical condition, age, location, risk, public safety, paving schedule and other factors, aging and failed portions of the collection system are identified and replaced.

15724 R&R Treatment Facilities

The purpose of the Wastewater Enterprise (WWE) Renewal and Replacement (R&R) Program Treatment Plant Improvement projects is to maintain the capacity and reliable performance of the wastewater treatment facilities owned/operated by the Wastewater Enterprise. This is a continuing annual program to extend the useful life of the WWE treatment assets. Treatment Facility Wastewater Enterprise Assets include: Transport Boxes, Discharge Structures, Pump Stations, Force Mains, Tunnels and Treatment Plants. The R&R Treatment Facilities projects are prioritized based upon regulatory compliance, condition assessments, Operation staff recommendations and Level Of Service goals. Planned WWE R&R Program Treatment Plant Improvement projects will address aging infrastructure at the wastewater enterprise treatment facility assets. Planned WWE R&R Program Treatment Plant Improvement projects are prioritized based on risk to permit compliance, safety and urgency. The current list of projects includes: WWE Treatment Facility Repairs: Richmond hypochlorite pipe repair; Southeast Community Facility Hot Water Pipe Repairs; Southeast Building Roof repairs; Oceanside Bar Screen Repairs; Southeast Plant Fixed Gas Monitor Upgrades; Sunnydale Pump Station Adjustable Frequency Drive Upgrades; WWE Recycled Water Station Upgrades; Oceanside Plant Air Compressor Replacements; Griffith Pump Station Adjustable Frequency Drive Upgrades; Southeast Plant Building 062 Motor Starter Upgrades; and Oceanside Dry Polymer System Upgrades. Project priorities are revisited on a monthly basis.

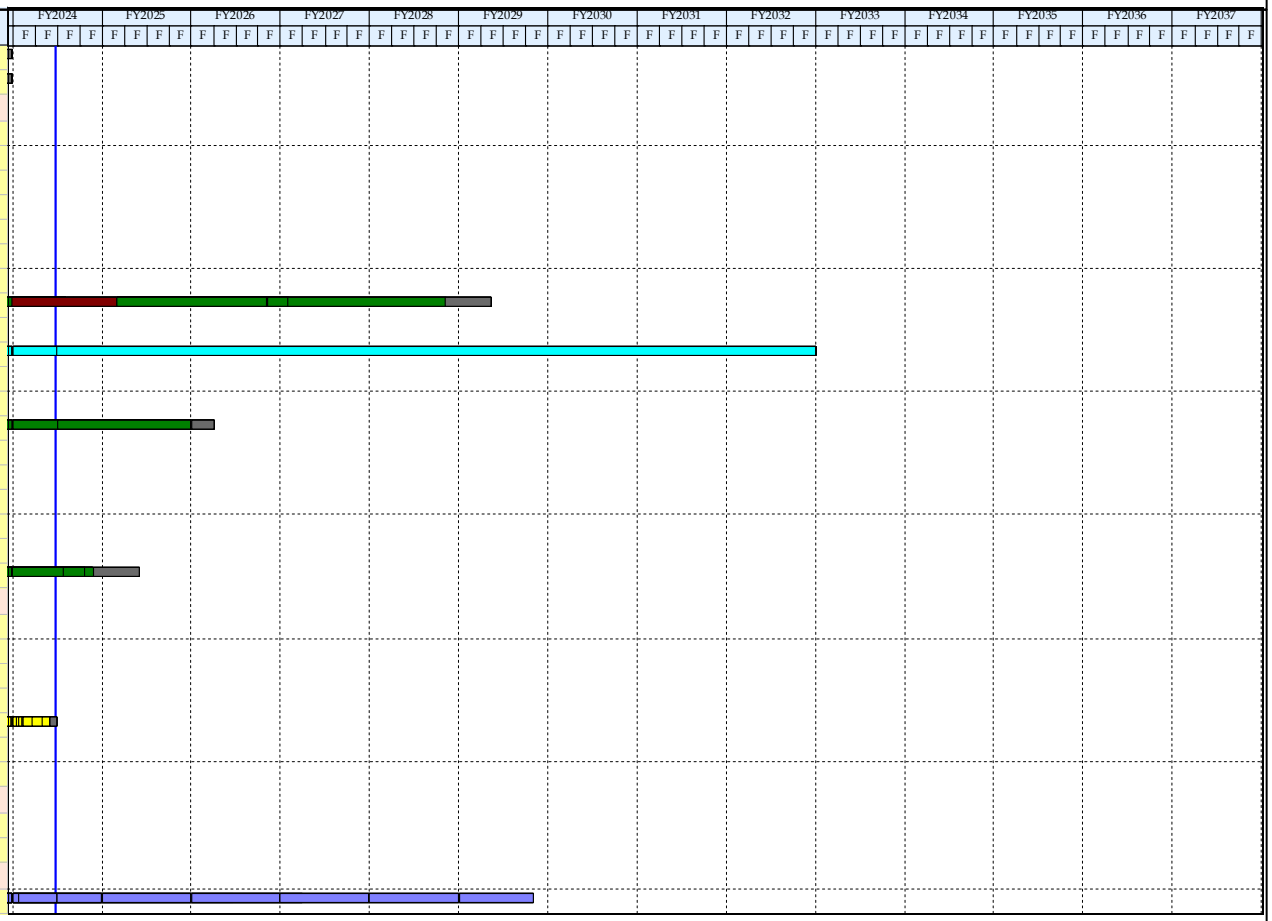
Appendix B.1 Sewer System Improvement Program (SSIP) Phase 1 - Approved Project-Level Schedules

Project Name	Start	Finish
Sewer System Improvement Program	01-Jul-11	02-Apr-36
Sewer System Improvement Program Phase 1	01-Jul-11	02-Apr-36
Treatment Facilities	01-Jul-11	11-May-29
10015796 SEP Biosolids Digester Facilities Project	01-Jul-11	11-May-29
10026824 SEP Oxygen Generation Plant	23-Aug-12	10-Jun-16
10015807 SEP New Headworks (Grit) Replacement	01-Mar-13	29-May-26
10015808 SEP Existing Digester Roof Repairs	01-Apr-13	03-Mar-16
10026825 SEP Primary and Secondary Clarifier Upgrades	01-Jul-13	21-Jan-19
10002192 SEP 521/522 and Disinfection Upgrades (SEP Building 5	03-Jun-13	30-Jun-21
10002220 SEP Primary Sludge Handling Improvements	03-Jun-13	10-Feb-16
10015809 SEP Facility-wide Distributed Control System Upgrade	13-Feb-14	30-Dec-27
10015810 SEP Seismic Reliability and Condition Assessment Impro	03-Jun-13	09-Sep-22
10026826 SEP Existing Digester Gas Handling Improvements	16-Jun-14	28-Feb-20
10002284 SEP Power Feed and Primary Switchgear Upgrades	23-Jun-14	30-May-25
10015811 SEP Oxygen Generation Plant 01	01-Apr-16	21-Nov-19
10015553 Biofuel Alternative Energy	01-Jul-11	31-Mar-16
10037331 OSP Fine Screen and Grit Removal Enhancements	01-Jul-13	20-Nov-15
10029736 Westside Pump Station Reliability Improvements	13-Jun-13	31-Dec-24
10029737 OSP Digester Gas Utilization Upgrade	01-Oct-13	29-Mar-24
10029738 Westside Pump Station Redundant Force Main Improvem	02-Jan-14	29-Jan-16
10029739 OSP Condition Assessment Repairs	31-Jul-14	29-Jan-21
10029740 OSP Odor Control Optimization	31-Jul-14	05-Feb-20
10026821 Northpoint Outfall Refurbishment	22-May-13	31-Oct-18
10026822 North Shore Pump Station Wet Weather Improvements	15-Aug-13	27-Dec-24
Collection System	29-May-12	02-Apr-36
10002102 Central Bayside System Improvement Project - Phase 1	02-Jul-12	30-Jun-23
10033745 Mission Street, 16th to Cesar Chavez Streets, Brick Sewer	02-Jul-18	30-Nov-22
10002554 Richmond Transport Modeling	25-Mar-13	30-Jun-14
10002641 Collection System Condition Assessment	09-May-13	31-Mar-21
10002652 Kansas and Marin Streets Sewer Improvements	10-Jun-13	02-Apr-36
10002689 Drumm and Jackson Streets Sewer System Improvement	26-May-15	31-Dec-20
10002760 Cargo Way Sewer Box Odor Reduction	13-Apr-15	30-Jun-23
10031676 Rutland Sewer Improvements	30-Oct-17	21-Sep-18
10033106 Geary BRT Sewer Improvements Phase 2	15-Mar-18	29-Sep-23
10002664 Van Ness BRT Sewer Improvements	01-Oct-13	30-Jun-23
10002667 Better Market Street Sewer Improvements - Phase 1	06-Jan-14	31-Oct-28
10002670 Geary BRT Sewer Improvements Phase 1	06-Jan-14	12-May-25
10002672 Central Subway Sewer Improvements	06-Jan-14	28-Jun-19
10002687 Mission Bay Loop Sewer Improvement	02-May-14	30-Jun-23
10031546 Masonic Avenue Sewer Improvements	27-Oct-14	28-Jun-19
10002776 Taraval Sewer Improvements	14-Mar-16	31-Jul-25
10002417 Hudson Ave Pump Station and Outfall Improvements	31-Mar-14	31-Oct-17
10002419 Force Main Rehab at Embarcadero and Jackson Streets	07-Jul-14	31-Mar-23
10026828 Mariposa Dry-Weather Pump Station & Force Main Impr	01-Jul-14	30-Jun-23
10026829 Cesar Chavez Pump Station	08-Sep-14	26-May-16
10002465 Marin Street Sewer Replacement	01-Jul-15	23-Jan-20
10002485 Griffith Pump Station Improvements	14-Mar-16	30-Dec-22
10002138 North Shore to Channel F M Drainage Improvement	29-May-12	06-Jun-17
10002299 Richmond Transport/Storage Tunnel Rehabilitation	01-Jun-15	31-Dec-20
10002300 Baker/Laguna/Pierce CSD & Outfall	29-Jun-15	20-Nov-15
10002303 Beach and Sansome Street CSD Rehabilitation	14-Mar-16	30-Jun-23



Appendix B.1 Sewer System Improvement Program (SSIP) Phase 1 - Approved Project-Level Schedules

Project Name	Start	Finish
10002344 CSD Backflow Prevention and Monitoring	25-Jul-16	30-Jun-23
10002378 5th, North 6th and Division Street CSD Rehabilitation	01-Jul-16	30-Jun-23
Stormwater Management	01-Jul-11	30-Jun-32
10031477 Cesar Chavez Green Infrastructure	01-Apr-13	28-Jun-13
10015558/10026813 Islais Creek Green Infrastructure	04-Sep-12	24-Apr-18
10026805 Sunset Green Infrastructure	03-Dec-12	31-Oct-22
10031465 North Shore Green Infrastructure	03-Dec-12	31-Dec-18
10026807 Lake Merced Green Infrastructure	03-Dec-12	24-Apr-18
10031676 Sunnydale Green Infrastructure	03-Dec-12	30-Sep-19
10026809 Richmond Green Infrastructure	03-Dec-12	30-Sep-22
10026810 Yosemite Green Infrastructure	03-Dec-12	08-Nov-28
10031473 Channel Green Infrastructure	21-Feb-14	31-Aug-18
10029726 Watershed Stormwater Management (Planning Only)	11-Jul-16	30-Jun-32
10029728 Advanced Rainfall Prediction - Part 1	01-Apr-13	29-Jun-18
10029729 Operational Decision System Phase 1	01-Aug-13	30-Sep-16
10029730 Operational Decision System Phase 2	01-Feb-17	30-Sep-25
10015816 Urban Watershed Assessment and Planning Initiation	01-Jul-11	28-Jun-13
10015817 Urban Watershed Assessment and Planning	07-Oct-11	30-Jun-17
10015818 Fulton St Sewer	01-Jul-11	31-Oct-12
10015819 Lake Merced Drainage	01-Jul-11	31-Oct-12
10015820 Major Trunk Sewers	01-Jul-11	31-Oct-12
10026816 Wawona Area Stormwater Improvement Project	01-Jul-16	02-Dec-24
Flood Resilience Projects	01-Apr-13	27-Dec-23
10026811 17th and Folsom Wet Weather Storage	01-Apr-13	06-May-16
10026814 Flood Resilience Analysis (Planning Phase Only)	30-Jun-15	28-Feb-17
10026815 Flood Resilience - Early Projects (Planning Phase Only)	26-Oct-15	30-Dec-16
10026817 Cayuga Ave Stormwater Detention Project	01-Jul-16	29-Mar-19
10026818 Folsom Area Stormwater Improvement Project	01-Jul-16	27-Dec-23
10026819 17th and Folsom Permanent Barriers	20-May-16	29-Mar-19
10026820 Hydraulic and Drainage Sewer Improvements	01-Jul-16	30-Dec-21
Land Reuse	17-Sep-13	24-Dec-21
10031815 Land Reuse of 1800 Jerrold Avenue	17-Sep-13	31-Dec-19
10029734 Land Reuse of 1801 Jerrold Avenue	30-Sep-13	24-Dec-21
Program Management	01-Sep-11	01-May-29
10015803/10029732 SSIP Progam Management	01-Sep-11	01-May-29



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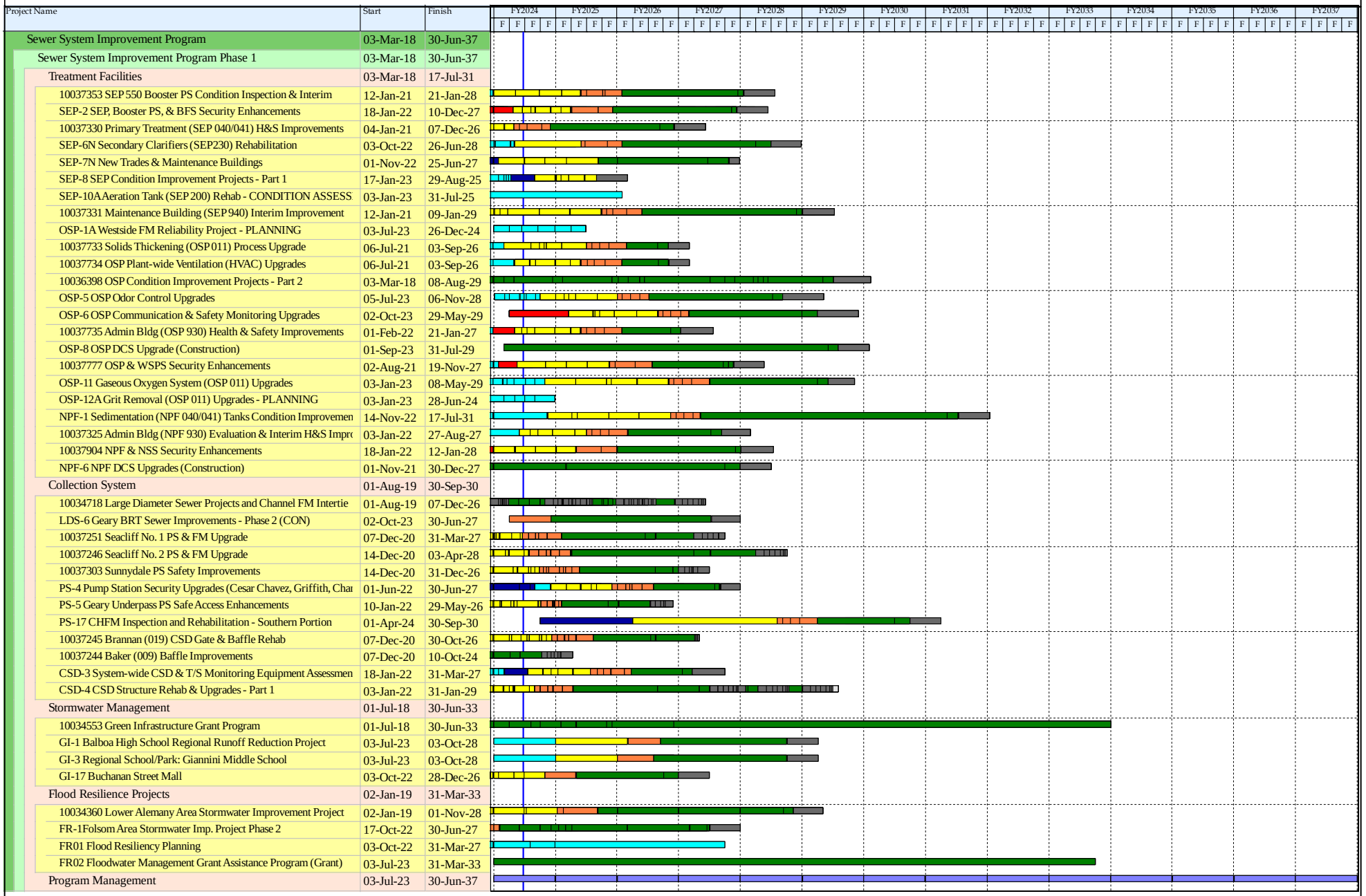
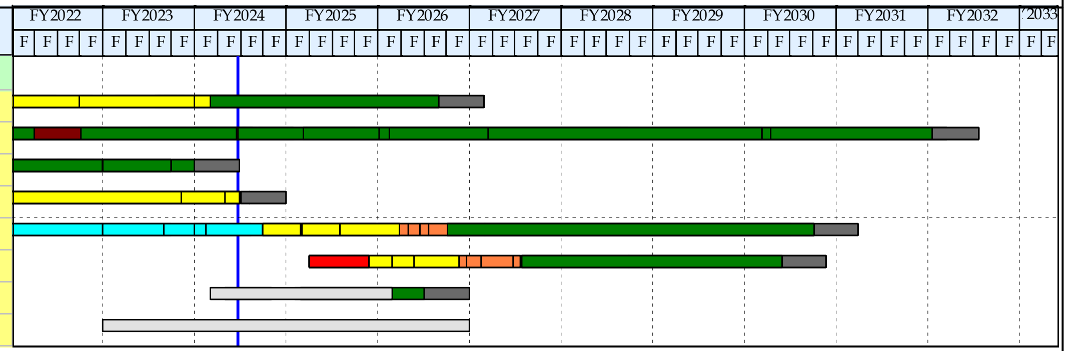
Appendix B.1 Sewer System Improvement Program (SSIP) Other SSIP - Approved Project-Level Schedules

Project Name	Start	Finish
Sewer System Improvement Program	03-Mar-18	30-Jun-37
Sewer System Improvement Program Phase 1	03-Mar-18	30-Jun-37
Treatment Facilities	03-Mar-18	17-Jul-31
10037353 SEP 550 Booster PS Condition Inspection & Interim	12-Jan-21	21-Jan-28
SEP-2 SEP, Booster PS, & BFS Security Enhancements	18-Jan-22	10-Dec-27
10037330 Primary Treatment (SEP 040/041) H&S Improvements	04-Jan-21	07-Dec-26
SEP-6N Secondary Clarifiers (SEP230) Rehabilitation	03-Oct-22	26-Jun-28
SEP-7N New Trades & Maintenance Buildings	01-Nov-22	25-Jun-27
SEP-8 SEP Condition Improvement Projects - Part 1	17-Jan-23	29-Aug-25
SEP-10A Aeration Tank (SEP 200) Rehab - CONDITION ASSESS	03-Jan-23	31-Jul-25
10037331 Maintenance Building (SEP 940) Interim Improvement	12-Jan-21	09-Jan-29
OSP-1A Westside FM Reliability Project - PLANNING	03-Jul-23	26-Dec-24
10037733 Solids Thickening (OSP 011) Process Upgrade	06-Jul-21	03-Sep-26
10037734 OSP Plant-wide Ventilation (HVAC) Upgrades	06-Jul-21	03-Sep-26
10036398 OSP Condition Improvement Projects - Part 2	03-Mar-18	08-Aug-29
OSP-5 OSP Odor Control Upgrades	05-Jul-23	06-Nov-28
OSP-6 OSP Communication & Safety Monitoring Upgrades	02-Oct-23	29-May-29
10037735 Admin Bldg (OSP 930) Health & Safety Improvements	01-Feb-22	21-Jan-27
OSP-8 OSP DCS Upgrade (Construction)	01-Sep-23	31-Jul-29
10037777 OSP & WSPS Security Enhancements	02-Aug-21	19-Nov-27
OSP-11 Gaseous Oxygen System (OSP 011) Upgrades	03-Jan-23	08-May-29
OSP-12A Grit Removal (OSP 011) Upgrades - PLANNING	03-Jan-23	28-Jun-24
NPF-1 Sedimentation (NPF 040/041) Tanks Condition Improvemen	14-Nov-22	17-Jul-31
10037325 Admin Bldg (NPF 930) Evaluation & Interim H&S Impr	03-Jan-22	27-Aug-27
10037904 NPF & NSS Security Enhancements	18-Jan-22	12-Jan-28
NPF-6 NPF DCS Upgrades (Construction)	01-Nov-21	30-Dec-27
Collection System	01-Aug-19	30-Sep-30
10034718 Large Diameter Sewer Projects and Channel FM Intertie	01-Aug-19	07-Dec-26
LDS-6 Geary BRT Sewer Improvements - Phase 2 (CON)	02-Oct-23	30-Jun-27
10037251 Seacliff No. 1 PS & FM Upgrade	07-Dec-20	31-Mar-27
10037246 Seacliff No. 2 PS & FM Upgrade	14-Dec-20	03-Apr-28
10037303 Sunnydale PS Safety Improvements	14-Dec-20	31-Dec-26
PS-4 Pump Station Security Upgrades (Cesar Chavez, Griffith, Chat	01-Jun-22	30-Jun-27
PS-5 Geary Underpass PS Safe Access Enhancements	10-Jan-22	29-May-26
PS-17 CHFM Inspection and Rehabilitation - Southern Portion	01-Apr-24	30-Sep-30
10037245 Brannan (019) CSD Gate & Baffle Rehab	07-Dec-20	30-Oct-26
10037244 Baker (009) Baffle Improvements	07-Dec-20	10-Oct-24
CSD-3 System-wide CSD & T/S Monitoring Equipment Assessmen	18-Jan-22	31-Mar-27
CSD-4 CSD Structure Rehab & Upgrades - Part 1	03-Jan-22	31-Jan-29
Stormwater Management	01-Jul-18	30-Jun-33
10034553 Green Infrastructure Grant Program	01-Jul-18	30-Jun-33
GI-1 Balboa High School Regional Runoff Reduction Project	03-Jul-23	03-Oct-28
GI-3 Regional School/Park: Giannini Middle School	03-Jul-23	03-Oct-28
GI-17 Buchanan Street Mall	03-Oct-22	28-Dec-26
Flood Resilience Projects	02-Jan-19	31-Mar-33
10034360 Lower Alemany Area Stormwater Improvement Project	02-Jan-19	01-Nov-28
FR-1Folsom Area Stormwater Imp. Project Phase 2	17-Oct-22	30-Jun-27
FR01 Flood Resiliency Planning	03-Oct-22	31-Mar-27
FR02 Floodwater Management Grant Assistance Program (Grant)	03-Jul-23	31-Mar-33
Program Management	03-Jul-23	30-Jun-37



Appendix B.3 WWE F&I Project Approved-Level Schedules

Project Name	Start	Finish
Wastewater Facilities and Infrastructure Programs	01-Jan-11	23-Jan-32
CWP11001 New Treasure Island Wastewater Treatment Plant	01-Jan-11	26-Aug-26
CWWFAC01 Ocean Beach Climate Change Adaptation Project	23-Jul-12	23-Jan-32
CWWFAC03 Southeast Community Center at 1550 Evans	26-Jul-12	29-Dec-23
CWWFAC04 Southeast Bay Outfall Islais Creek Crossing Replacement	26-Sep-16	03-Jul-24
10033820 Southeast Outfall Condition Assessment Rehabilitation	01-Jul-19	30-Sep-30
SWOO Southwest Ocean Outfall (SWOO)	01-Oct-24	23-May-30
10040511 Interim Sidestream Nutrient Removal	01-Sep-23	30-Jun-26
10038793 WWE Customer Service System	01-Jul-22	30-Jun-26



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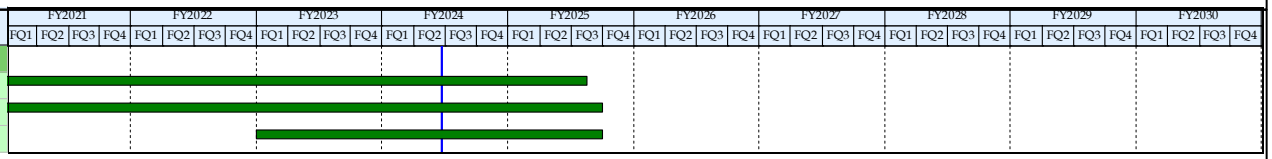
Appendix B.4 WWE R&R Approved Project-Level Approved Schedules

Project Name	Start	Finish
WWE Renewal & Replacement Program	01-Jul-10	31-Mar-25
R&R Treatment Facilities	01-Jul-10	14-Feb-25
R&R Collection Systems - Small Diameter	01-Jul-10	31-Mar-25
R&R Collection Systems - Large Diameter	01-Jul-22	31-Mar-25



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APPENDIX C. LIST OF ACRONYMS

AAR	Alternative Analysis Report
ACOE	Army Corps of Engineers (also shown as USACE)
BAAQMD	Bay Area Air Quality Management District
BCDC	Bay Conservation and Development Commission
BCTD	Bay Corridor and Transmission Distribution
BDFP	Biosolids Digester Facilities Project
BFS	Bruce Flynn Pump Station
BMS	Better Market Street
BPS	Booster Pump Station
BRT	Bus Rapid Transit
CAB	Contract Administration Bureau
Caltrans	California Department of Transportation
CATEX	Categorical Exemption
CBSIP	Central Bayside System Improvement Project
CC&B	Customer Care & Billing
CCS	Customer Cloud Service
CCSF	City and County of San Francisco
CCTV	Closed-Circuit Television
CEQA	California Environmental Quality Act
CER	Conceptual Engineering Report
CHS	Channel (Street) Pump Station
CIP	Capital Improvement Program; Cast-Iron Pipe
CIS	Customer Information System
CM/GC	Construction Manager/General Contractor
CPAS	Combined Primary Activated Sludge
CSAMP	Collection System Asset Management Program
CSD	Combined Sewer Discharge
CSR	Collections System Reliability
DAF	Dissolved Air Flotation
DB	Design-Build
DCS	Distributed Control System
DIP	Ductile Iron Pipe
EIR	Environmental Impact Report
EMG	Environmental Management Group
EOP	Early Out Package(s)
EPA	Environmental Protection Agency
EI&C	Electrical, Instrumentation, and Controls
F&I	Facilities and Infrastructure
FASIP	Folsom Area Stormwater Improvement Project
FM	Force Main
FOG	Fats, Oils, and Grease
FRP	Fiberglass Reinforced Plastic
FY	Fiscal Year
GBT	Gravity Belt Thickener
GFS	Griffith Street Pump Station
GGNRA	Golden Gate National Recreation Area
GI	Green Infrastructure
GIGP	Green Infrastructure Grant Program
GOX	Gaseous Oxygen
HDPE	High Density Polyethylene
HMI	Human Machine Interface
HPO	High Purity Oxygen
H&S	Healthy and Safety
HSW	High-Strength Waste
HVAC	Heating, Ventilation, and Air Conditioning

I&C	Instrumentation and Controls
IC	Internal Combustion
IKG	Inedible Kitchen Grease
ISP	Iron Stone Pipe
ITS	Information Technology Services
JOC	Job Order Contract
JST	Jackson Street Transport/Storage
LED	Light Emitting Diode
LF	Linear Feet
LID	Low Impact Development
LOS	Levels of Service
LOX	Liquid Oxygen
MDF	Main Distribution Frame
MCC	Motor Control Center
MGD	Million Gallons per Day
MMS	Merlin Morris Pump Station
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
MTA	Municipal Transportation Agency (also shown as SFMTA)
N/A	Not Applicable
NAR	Needs Assessment Report
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPF	Northpoint (Wet-Weather) Facility
NSCFM	North Shore to Channel Force Main
NSFM	North Shore Force Main
NSS	North Shore Pump Station (also shown as NSPS)
NTP	Notice to Proceed
O&M	Operations and Maintenance
OCA	Office of Contract Administration
OCU	Odor Control Unit
ODS	Operational Decision System
ORT	Operational Readiness Tests
OSP	Oceanside Water Pollution Control Plant
P3	Public-Private Partnership
PA	Public Address
PG&E	Pacific Gas & Electric
PLC	Programmable Logic Controller
PM	Program Management; Project Manager
PMC	Program Management Consultant
PPR	Pumped Plant Recycle
PreCon	Pre-Construction
PS	Pump Station; Primary Sludge
PSA	Pressure Swing Absorption
PUC	Public Utilities Commission
QSO	Quint Street Outfall
R&R	Renewal and Replacement (also shown as RnR)
RDT	Rotary Drum Thickener
RCP	Reinforced Concrete Pipe
RFP	Request for Proposal
RFQ	Request for Qualification
ROV	Remotely Operated Vehicle
ROW	Right of Way
RWQCB	Regional Water Quality Control Board
S2S	Seacliff No. 2 Pump Station
SELS	Southeast Lift Station
SEO	Southeast Outfall
SEP	Southeast Water Pollution Control Plant
SF	San Francisco
SFCTA	San Francisco County Transportation Authority

SFMTA	San Francisco Municipal Transportation Agency (also shown as MTA)
SFPUC	San Francisco Public Utilities Commission
SFPW	San Francisco Public Works (formerly SFDPW)
SFRPD	San Francisco Recreation & Parks Department (also shown as RPD)
SOMA	South of Market
SOW	Scope of Work
SSIP	Sewer System Improvement Program
SWOO	Southeast Ocean Outfall
T/S	Transport and Storage
TAS	Thickened Activated Sludge
TBD	To Be Determined
TBL	Triple Bottom Line
TIDA	Treasure Island Development Authority
THP	Thermal Hydrolysis Process
TM	Technical Memorandum
TPD	Tons Per Day
UICWP	Upper Islais Creek Watershed Plan
UPS	Uninterruptable Power Supply
UWA	Urban Watershed Assessment
VCP	Vitrified Clay Pipe
VFD	Variable Frequency Drives
VPSA	Vacuum Pressure Swing Adsorption
WAS	Waste Sludge
WSPS	West Side Pump Station (also shown as WSS)
WSS	Westside Pump Station (also shown as WSPS)
WWE	Wastewater Enterprise

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