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

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DATE: March 20, 2023

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

FROM: Dennis J. Herrera, General Manager DJH

RE: Wastewater Enterprise Capital Improvement Program
2nd Quarter/ Fiscal Year 2022-2023

Enclosed please find the Wastewater Enterprise Capital Improvement Program (CIP) Quarterly Report for the 2nd Quarter (Q) of Fiscal Year (FY) 2022-2023. The primary intent of the report is to provide the Commission, stakeholders, and the public with a status summary of the Program based on data for the period of October 1, 2022 to December 31, 2022.

Attachment

London N. Breed
Mayor

Newsha K. Ajami
President

Sophie Maxwell
Vice President

Tim Paulson
Commissioner

Anthony Rivera
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 2022 – December 2022

Published: March 20, 2023

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EXECUTIVE SUMMARY

This quarterly report provides a summary update on Sewer System Improvement Program (SSIP) Phase 1, Other SSIP Projects, and Facilities and Infrastructure Projects. The primary intent of the report is to provide the Commission, stakeholders, and the public, with a status summary of the Wastewater Enterprise Capital Projects, based on the data for the period of October 1, 2022 to December 31, 2022.

This quarterly report also includes schedule and cost forecasting of the FY24-FY33 10-year Capital Improvement Plan that was presented to and approved by the San Francisco Public Utilities Commission on February 14, 2023. Changes to the approved program and project scopes, schedules, and budgets that were proposed as part of this FY24-FY33 10-year CIP will become effective at the start of FY24, on July 1, 2023.

Program Current Status:

Overall, steady progress continues on this CIP. The SSIP Phase 1 is 52.6% complete, Other SSIP is 4% complete, and Overall SSIP is 40% complete as of December 2022. As of the end of the reporting period, the SSIP Phase 1 includes 70 projects in various phases as follows: seven (7) projects in planning or design, eleven (11) projects in construction, thirteen (13) projects in closeout, and thirty-nine (39) projects completed. See Figure A below.

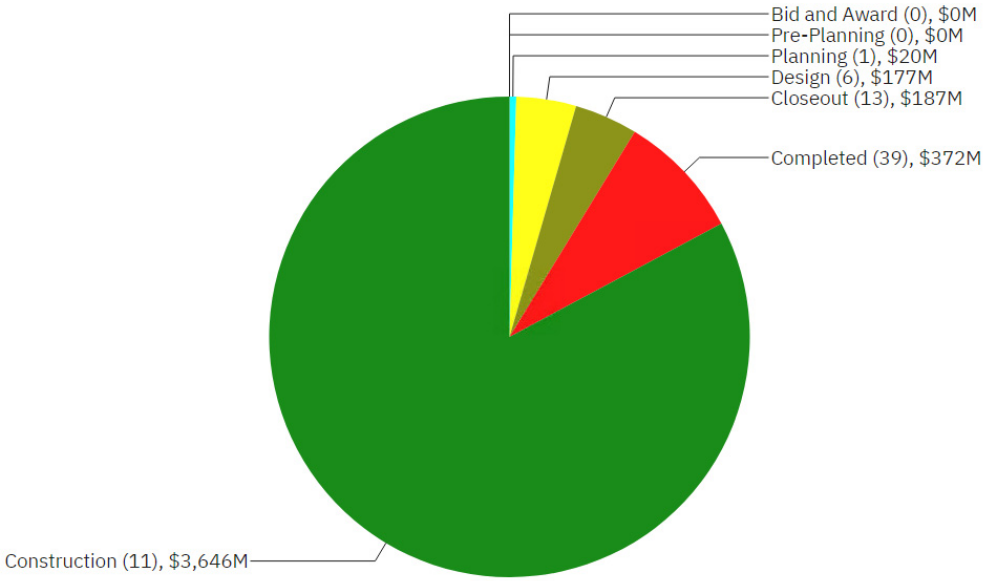

Figure A Total Current Approved Budget for SSIP Phase 1 Projects Active in Each Phase

As of the end of the reporting period, the Other SSIP includes forty-three (43) projects in various phases as follows: fourteen (14) projects in pre-planning, two (2) in bid-and-award, twenty-five (25) projects in planning or design, and two (2) projects in construction. See Figure B below.

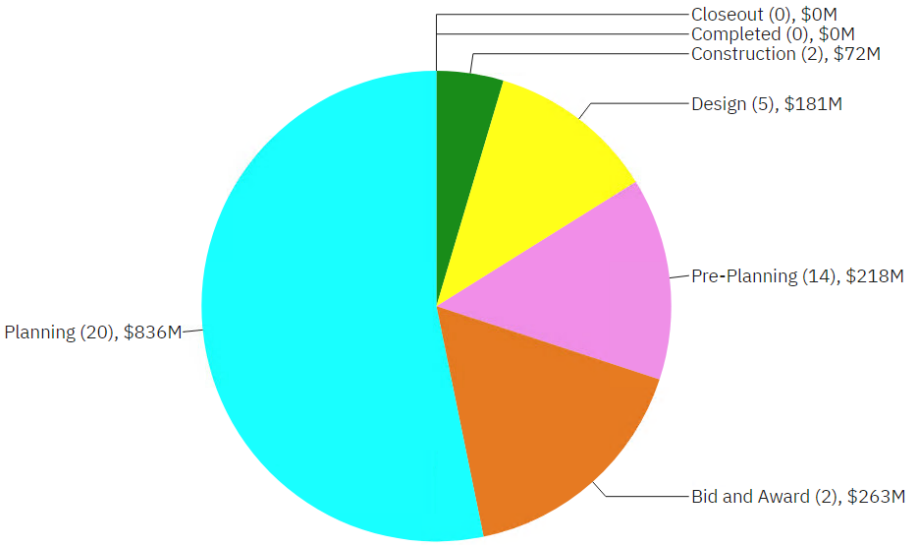

Figure B Total Current Approved Budget for Other SSIP Projects Active in Each Phase

As of the end of the reporting period, the Facilities and Infrastructure program includes 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.

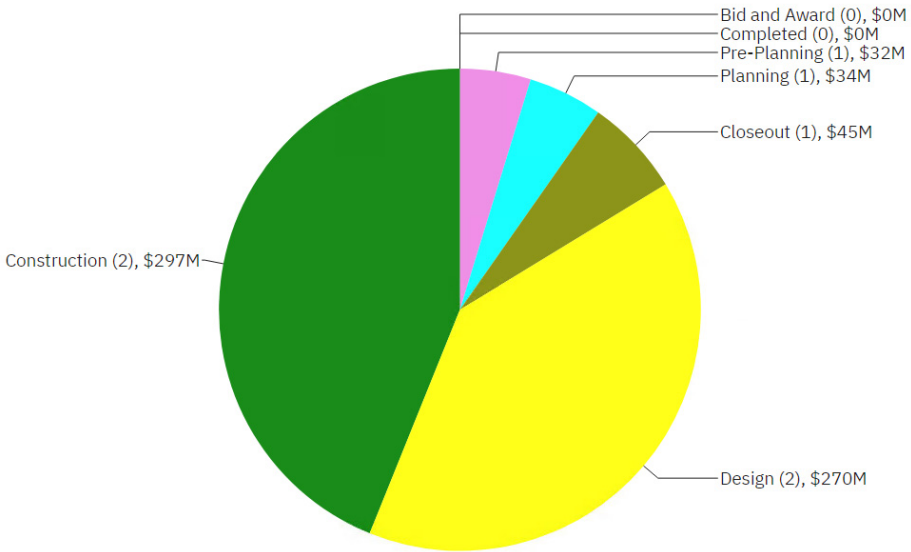

Figure C Total Current Approved Budget for Facilities and Infrastructure Projects Active in Each Phase

The following Tables provide a summary of the cost and schedule status for the Wastewater Enterprise CIP.

Table A – Wastewater Enterprise CIP Cost Summary

Programs	Expenditures To Date ($ Million) (A)	Current Approved Budget ($ Million) (B)	Q2/FY22-23 Forecast Costs ($ Million) (C)	Cost Variance ($ Million) (D = B - C)	Variance Over Reporting Period* ($ Million) (E)
SSIP Phase 1	$2,200.0	$4,402.7	$4,409.6	($6.9)	($12.6)
Other SSIP	$39.0	$1,570.9	$1,613.1	($42.2)	($42.2)
F&I	$193.9	$677.8	$648.6	$29.2	$26.2
Programs Total	**$2,432.9**	**$6,651.3**	**$6,671.2**	**($19.9)**	**($28.5)**

* A negative number reflects cost increases since last quarter, and a positive number reflects cost reduction since last quarter.

Table B - Current Approved vs. Current Forecast Schedule Dates

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	06/30/32	06/30/32	-
Other SSIP	-	03/03/18	03/03/18 A	-	06/30/33	06/30/33	-
F&I	01/01/11	01/01/11	01/01/11 A	12/29/23	01/29/32	01/29/32	-
Overall Programs	**01/01/11**	**01/01/11**	**01/01/11 A**	**10/30/26**	**06/30/33**	**06/30/33**	-

* "A" represents the actual date.

Program Key Updates:

Key updates for the Sewer System Improvement Program include:

- **SEP Biosolids Digester Facilities Project** - Construction of the five (5) digester vessels are on-going. Construction crews are nearly complete with the erection of the digesters skirt walls and are proceeding with the formwork for the hoppers for each digester tank. Construction on the adjacent solids pretreatment building is also continuing with the installation of membrane waterproofing and reinforcing steel for the below ground pipe encasement. Bid procurement for remaining construction is ongoing. To date, construction bid and award of most of the major biosolids facilities has been completed, including the digesters, solids pretreatment facility and the chemical feed and No. 2 water facilities.

- **SEP New Headworks (Grit) Replacement Project** – During the current quarter, the Contractor continued civil/structural work at the influent junction area, fine screen/grit influent splitter, grit tank/grit handling, primary influent distribution areas, and odor control areas. Contractor successfully completed plant shutdown work to tie-in the new 48" and 84" steel pipes to the influent junction area structure. A workshop on Influent pumping control strategy coordination was held in October 2022. The project team continued coordination with Power Enterprise/electrical upgrade projects (WW-662R/DB-130) for the Headworks temporary and permanent power cutovers from PG&E to SFPUC power.

- **SEP Facility-wide Distributed Control System Upgrade** - Southeast Plant (SEP) DCS server room hardware and other DCS-related equipment were delivered to the DB-126 Contractor's San Francisco facility. The project team is now in the planning process to start SEP DCS server room hardware and software operational readiness tests (ORTs) in the upcoming quarter prior to delivery and installation at the final location. The team is also working on the design of the new SEP DCS network, the DCS design associated to various SEP process facilities, and DCS design at Channel Pump Station (CHS). Coordination with the Headworks, Biosolids, and other SSIP project teams at SEP are ongoing.

- **SEP Seismic Reliability and Condition Assessment Improvements** - Project team is completing the contract punch list items and closeout documentation.

- **North Shore Pump Station Wet Weather Improvements Project** - Contractor completed dry weather/wet weather crossover work including relocation of seal water pumps, install of new 48" piping, and installation of dowels for new thrust blocks. Contractor continued installation, commissioning, and start-up of the Uninterruptable Power Supply (UPS) system at building SEP 930 basement.

- **Yosemite Green Infrastructure Project** – The project team validated the project design criteria developed by the prior design consultant in preparation for submittal of the design criteria report. The project team submitted an encroachment permit to SFRPD to perform geotechnical borings.

- **Watershed Stormwater Management Project (Planning Only)** - During the current quarter, the project team continued work on technical support for Flood Resilience Programmatic Strategies, green infrastructure projects and programs, and billing system upgrades.

- **Folsom Area Stormwater Improvement Project** - The City team prepared the 95% design for the Alameda Street Wet Weather Tunnel, started the 35% design for the Division Sewer Box, and began the Soil Structure Interaction (SSI) modeling for the Caltrans Pile Modification (all three are a part of Contract WW-719B). Also, the team is close to completing the 65% design for the Harrison and Treat Street Sewer Box (Contract WW-719C). In addition, the project team finalized the initial property appraisals for three sub-surface easements necessary for the tunnel alignment. The Folsom project requires extensive staging on private property and permanent improvements through private property in order to be implemented.

For the WWE Facilities and Infrastructure Program, there are five (5) on-going projects where two (2) projects are in construction, two (2) projects in design, and one (1) project in planning.

- **New Treasure Island Wastewater Treatment Plant Project** - The project team completed negotiations with the sole responsive bidder, and on December 13, 2022, the SFPUC Commission awarded the fixed-price design-build contract to PCL Construction, Inc. Project team continues to work with the contractor and our contracts group to complete insurance/bonding documentation required to formalize the agreement. NTP is anticipated in January 2023. Project team continues to coordinate with City Attorney, SFPUC Real Estate Services regarding Final property transfer from TIDA to SFPUC.

- **Ocean Beach Climate Change Adaptation Project** - For Long Term Improvements, negotiations on funding continues at a very slow rate and continues to impact overall project progress. 95% design has been delayed until funding is resolved; Response to Comments on the Draft Environmental Impact Report and Coastal Development Permit are in development.

- **Southeast Community Center @ 1550 Evans Project** - Substantial completion was issued on October 1 and the Grand Opening and ribbon cutting event was held on October 22. Final completion is projected for March 31, 2023.

For the WWE Renewal and Replacement (R&R) Program, there are twenty-nine (29) Collection System projects and eight (8) Treatment Facilities projects in construction.

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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 the SFPUC's wastewater capital improvement program which includes multiple projects to improve the existing system. The SSIP is the culmination of several years 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 so it can meet the challenges of today and the future. The implementation of the SSIP projects and their associated expenditures will be phased over twenty (20) years in an effort 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 also 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 work on refining program scope, budget and schedule based on newly available information and 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 endorsed Goals are stated below:

- 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. The City's major treatment facilities were constructed over several years as part of major capital improvement programs. The existing treatment facilities were 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 peak wet-weather flows in 1996.

The Collection System is a network of sewers that collect and transport both sanitary flows and stormwater runoff. The system is designed to take advantage of the City's natural topography wherever possible to 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 a combined sanitary and stormwater system that consists of 24,800 manholes, 25,000 catch basins, 27 pump stations, and approximately 1,000 miles of sewers ranging from 8-inch diameter pipes to large transport structures measuring 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). The collection system storage capacity is over 200 million gallons, comprised of predominantly grey infrastructure at this time. Existing collection system components include:

- Large Sewers(sewer greater than 36-inch in diameter or equivalent size), Tunnels and Odor Control;
- Pump Stations and Force Mains;
- Transport/Storage Boxes; and,
- Combined Sewer Discharge (CSD) Structures.

The broad components of the wastewater treatment plant facilities include:

- Liquid treatment processes;
- Solids treatment processes; and,
- Deepwater outfalls, located in the San Francisco Bay and Pacific Ocean.

Operating a combined system, WWE treats both sanitary sewage and urban stormwater – commonly referred to as wastewater. The maximum daily treatment capacity of the existing system is 575 million gallons. On an annual basis the system treats approximately 40 billion gallons.

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 meeting the Commission-endorsed goals and levels of service. 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 focused on treatment plant improvements.

Since Commission approval of the 2018 SSIP Baseline, considerable thought was put into how the program has evolved since 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 distinct SSIP phases and instead 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, and 2022, and these revisions were approved by the San Francisco Public Utilities Commission on April 24, 2018, December 2020, and February 2022, respectively. The 2022 Approved Budget for SSIP Phase 1 is $4,402.7 million, which is about $747.4 million higher than the 2020 Baseline Budget. The 2022 Approved Program Completion is June 2032, which is about 58 months later than the 2020 Baseline Program Completion.

Refer to Appendix 1 for scope description of all projects in Phase 1.

Table 1.1 SSIP Phase I Program Revision

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 (Latest Approved)	February 8, 2022	$4,402.7	06/30/32

* 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 (Latest Approved)	February 8, 2022	$1,570.9	06/30/33

* Final Program Completion Date

2. PROGRAM STATUS

Figure 2.1 shows the total Current Approved Budget for the SSIP Phase 1 projects remaining in each phase of the program as of December 31, 2022. The number of projects currently active in each phase is shown in parentheses.

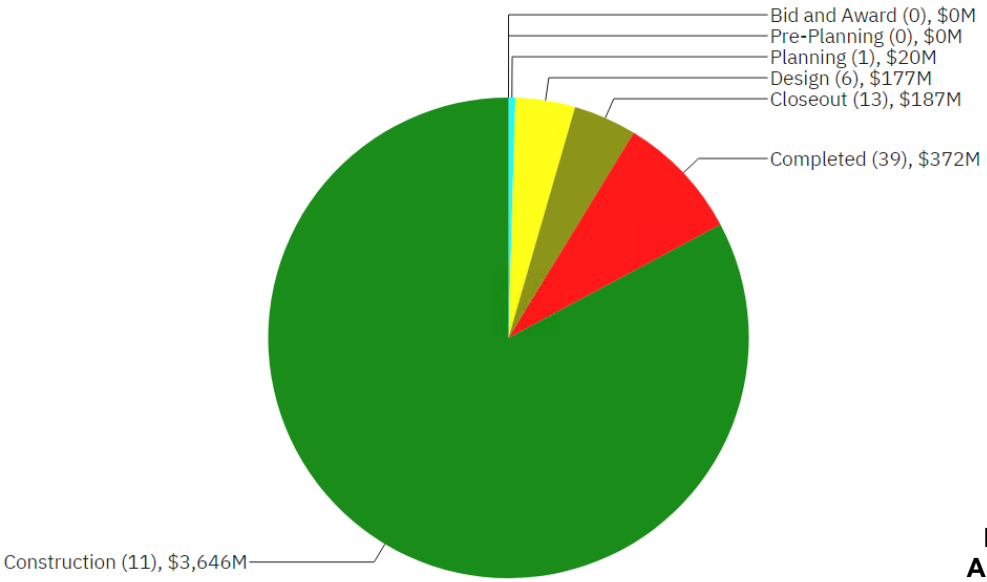

Figure 2.1 Total Current Approved Budget for SSIP Phase 1 Projects Active in Each Phase

Figure 2.2 shows the number of SSIP Phase 1 projects in the following stages of the program as of December 31, 2022: Pre-construction, Construction, and Post-construction.

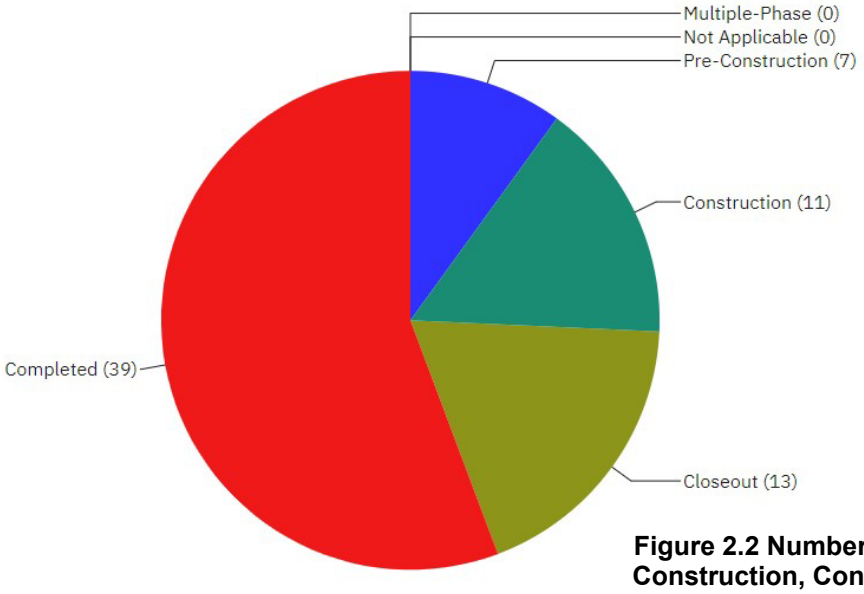

Figure 2.2 Number of SSIP Phase 1 Projects in Pre-Construction, Construction, and Post-Construction

Figure 2.3 summarizes the environmental review and permitting status of the SSIP Phase 1 projects as of December 31, 2022.

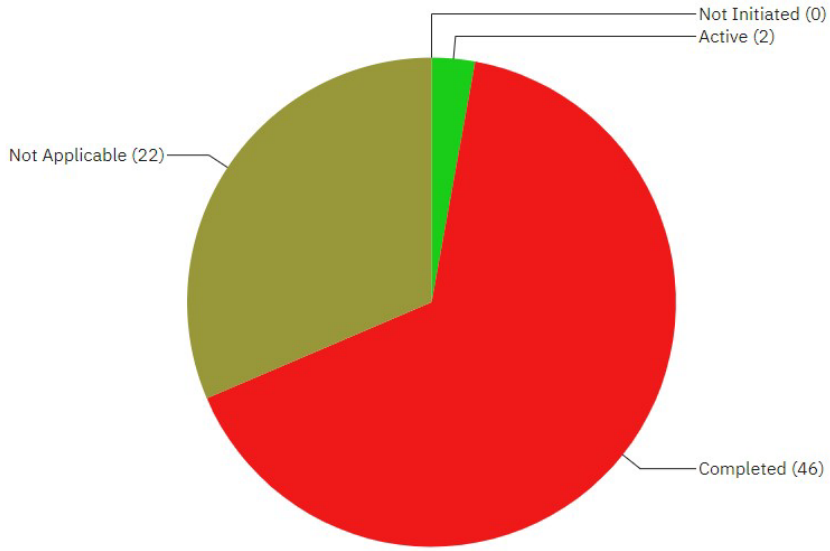

Figure 2.3 Program Environmental and Permitting Status of the SSIP Phase 1 Projects

Figure 2.4 shows the total Current Approved Budget for the Other SSIP projects remaining in each phase of the program as of December 31, 2022. The number of projects currently active in each phase is shown in parentheses.

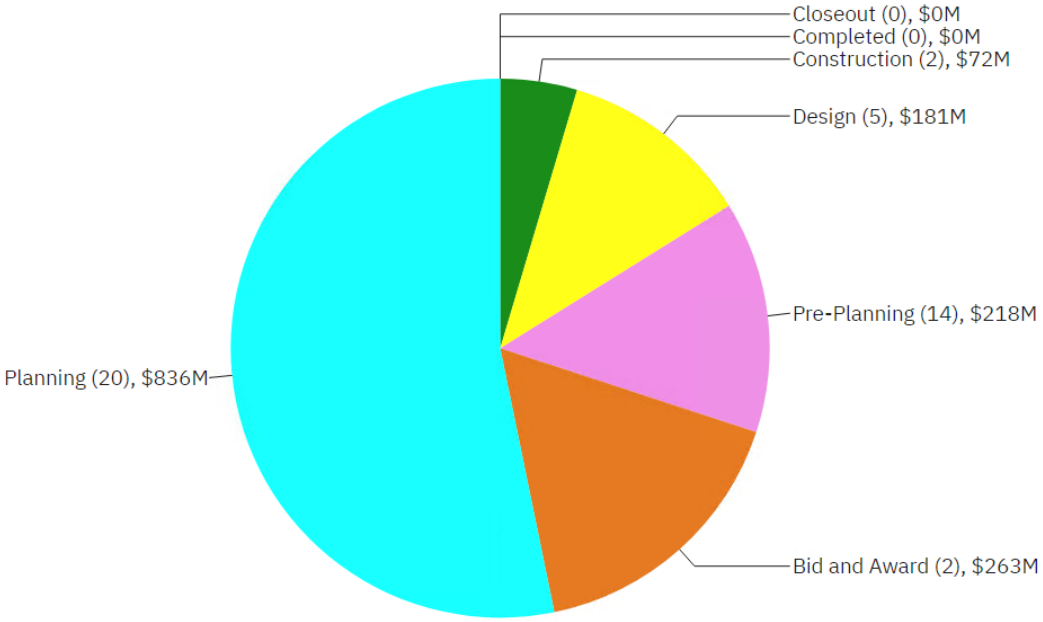

Figure 2.4 Total Current Approved Budget for Other SSIP Projects Active in Each Phase

Figure 2.5 shows the number of Other SSIP projects in the following stages of the program as of December 31, 2022: Pre-construction, Construction, and Post-construction.

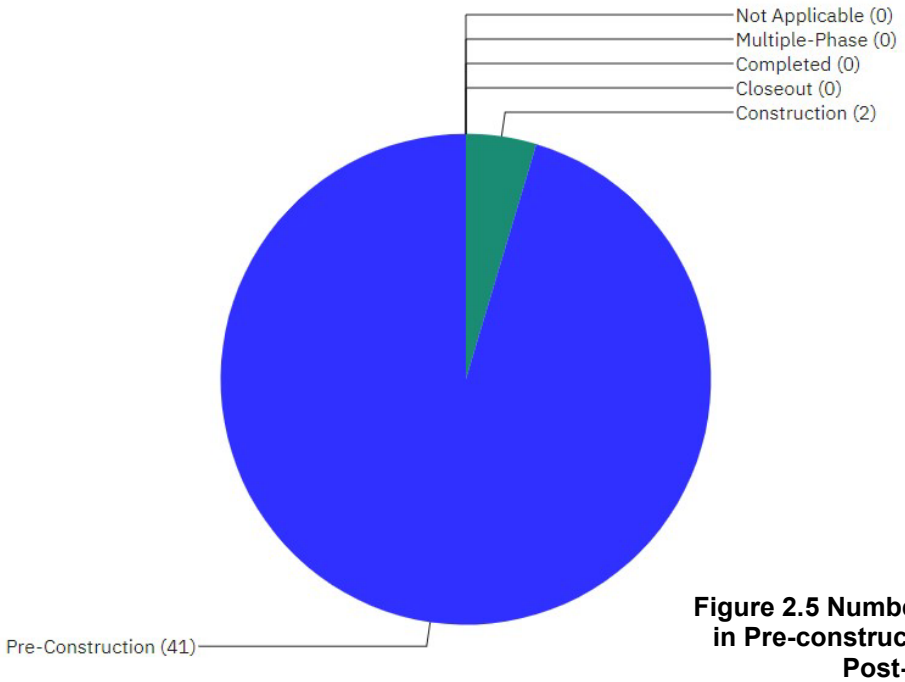

Figure 2.5 Number of Other SSIP Projects in Pre-construction, Construction, and Post-construction

Figure 2.6 summarizes the environmental review and permitting status of the Other SSIP projects as of December 31, 2022.

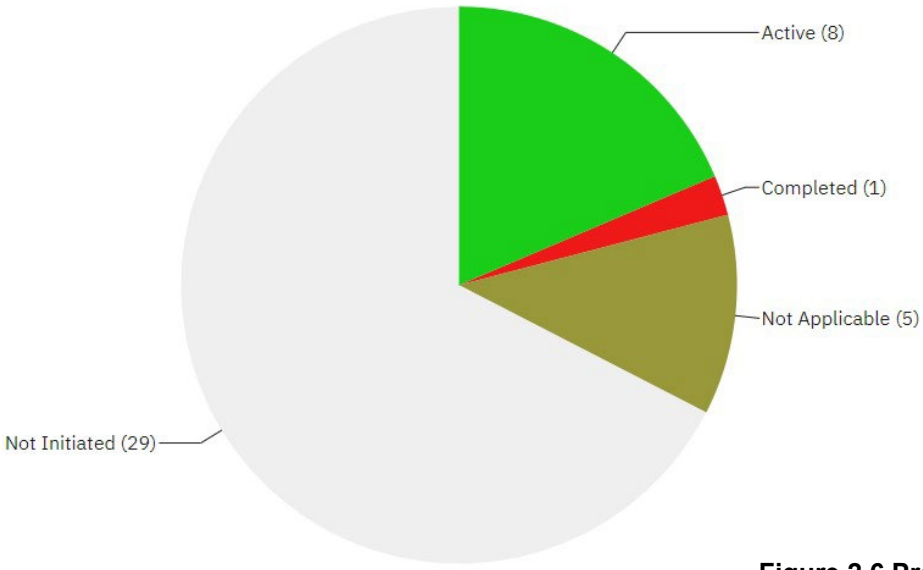

Figure 2.6 Program Environmental and Permitting Status of the Other SSIP Projects

KEY ACCOMPLISHMENTS

Programmatic

- Promoted and supported the celebration and grand opening of the new Southeast Community Center in October
- Conducted Supervisor Mar tour of Oceanside Treatment Plant and Recycled Water Facility
- Continued construction on the southeast area major projects which include Biosolids Digester Facility Project (BDFP) and Headworks Facility Project
- Held Southeast Treatment Plant Construction tours for members of the Revenue Bond Oversight Committee, Southeast Community Facility Commission and San Francisco Port Southern Advisory Committee
- Won Silver Award in San Francisco's 5th Annual Collaborative Partnering Awards 2022 for the Mission Brick Sewer Rehabilitation Project and Force Main Rehabilitation at Embarcadero and Jackson Improvements Project

In the News

Two media mentions, including story on upgrades underway at Southeast Treatment Plant and story on green infrastructure upgrades underway for the Upper Yosemite Creek Daylighting Project.

October – Press release announcing the completion of several seismic projects to ensure our sewer system is better prepared for the next big earthquake

November – Press release announcing the selection of Cambi Thermal Hydrolysis Technology for New Biosolids Digester Facilities at Southeast Treatment Plant

December – Press release announcing the unveiling of the new temporary mural by local Artist and Illustrator Nancy Cato on the Headworks Facility Project construction fence in Bayview-Hunters Point

Highlights of Conducted Outreach

Monthly Citywide Sewer and District 10 focused email newsletters to 4,700+ recipients providing Project Updates and Community Resources

October – Held Southeast Treatment Plant Construction Tour for members of the Revenue Bond Oversight Committee, Southeast Community Facility Commission and San Francisco Port Southern Advisory Committee

October – Conducted outreach and shared progress on Southeast Construction at the Children's Book Project and Southeast Community Center grand opening celebration in Bayview-Hunters Point

October-December – Posted notifications on Nextdoor regarding 24-hour concrete pours at the Southeast Treatment Plant

October – Noticing for start of construction on Large Diameter Sewer Upgrades

November – Article highlighting new Headworks Facility Project Construction Manager Jim Wang, technology, and odor control

December – Provided Southeast SSIP Construction Projects Quarterly Report to the SF Port Southern Advisory Committee

December – Announcement of and held celebration for the completion of the Mariposa Pump Station Improvement Project

December – Social media video highlighting the unveiling of the new temporary mural by local Artist and Illustrator Nancy Cato in Bayview-Hunters Point

December – Participated in joint event with SF Port on Waterfront Resilience Project

Upcoming Outreach Events

January -- Notifications to neighbors on Nextdoor regarding 24-hour concrete pours at the Southeast Treatment Plant

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/FY22-23 Forecast Costs, Cost Variance between the Current Approved and Forecast Cost, and Variance Over Reporting Period. The Current Approved Budget for SSIP is $5,973.5 million and the Current Forecast Cost is $49.1 million over budget. This is mainly due to the New Headworks (Grit) Replacement, Southeast Plant (SEP) Improvements, 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	**$1,619.5**	**$4,256.9**	**$4,290.6**	**($33.8)**	**($33.7)**
Biosolids Digester Facilities Project	**$803.2**	**$2,372.6**	**$2,372.6**	**$0.0**	**$0.0**
SSIP Phase 1	$803.2	$2,372.6	$2,372.6	$0.0	$0.0
New Headworks (Grit) Replacement	**$436.7**	**$679.0**	**$689.0**	**($10.0)**	**($10.0)**
SSIP Phase 1	$436.7	$679.0	$689.0	($10.0)	($10.0)
Southeast Plant (SEP) Improvements	**$239.3**	**$609.6**	**$626.4**	**($16.8)**	**($16.8)**
SSIP Phase 1	$236.1	$335.7	$335.7	($0.0)	$0.0
Other SSIP	$3.2	$273.9	$290.7	($16.8)	($16.8)
Oceanside Plant (OSP) Improvements	**$94.2**	**$431.3**	**$438.3**	**($7.0)**	**($7.0)**
SSIP Phase 1	$91.1	$159.0	$166.0	($7.0)	($7.0)
Other SSIP	$3.1	$272.4	$272.4	$0.0	$0.0
North Point Facility (NPF) Improvements	**$46.1**	**$164.3**	**$164.3**	**$0.0**	**$0.0**
SSIP Phase 1	$45.2	$73.2	$73.2	$0.0	$0.0
Other SSIP	$0.9	$91.1	$91.1	$0.0	$0.0
Collection System	**$250.1**	**$555.2**	**$552.5**	**$2.7**	**$1.4**
Interceptors / Tunnels and Odor Control	**$51.8**	**$196.4**	**$195.4**	**$1.0**	**$1.0**
SSIP Phase 1	$33.3	$60.6	$59.6	$1.0	$0.9
Other SSIP	$18.5	$135.8	$135.8	$0.0	$0.0
Interdepartmental Projects	**$58.3**	**$94.8**	**$95.0**	**($0.2)**	**($0.4)**
SSIP Phase 1	$58.3	$94.8	$95.0	($0.2)	($0.4)
Pump Stations and Forcemain Improvements	**$83.5**	**$142.5**	**$145.4**	**($2.8)**	**($2.9)**
SSIP Phase 1	$80.3	$82.0	$81.9	$0.2	$0.2
Other SSIP	$3.2	$60.5	$63.5	($3.0)	($3.0)

Combined Sewer Discharge (CSD) and Transport/Storage Structures	**$19.9**	**$82.9**	**$80.1**	**$2.9**	**$3.0**
SSIP Phase 1	$18.8	$23.2	$20.3	$2.9	$3.0
Other SSIP	$1.1	$59.8	$59.8	$0.0	$0.1
Central Bayside System Improvement (CBSIP)	**$36.6**	**$38.5**	**$36.7**	**$1.8**	**$0.7**
SSIP Phase 1	$36.6	$38.5	$36.7	$1.8	$0.7
Stormwater Management	**$100.9**	**$242.5**	**$243.4**	**($0.8)**	**($0.3)**
Early Implementation Projects	**$44.0**	**$65.2**	**$70.0**	**($4.8)**	**($4.8)**
SSIP Phase 1	$44.0	$65.2	$70.0	($4.8)	($4.8)
Watershed Stormwater Management	**$33.1**	**$128.0**	**$124.1**	**$4.0**	**$4.5**
SSIP Phase 1	$29.6	$57.9	$53.1	$4.8	$4.8
Other SSIP	$3.5	$70.1	$71.0	($0.8)	($0.3)
Advanced Rainfall and Operation Decision System	**$6.4**	**$9.2**	**$9.2**	**$0.0**	**$0.0**
SSIP Phase 1	$6.4	$9.2	$9.2	$0.0	$0.0
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**	**$22.7**	**$22.7**	**$0.0**	**$0.0**
Other SSIP	$0.0	$22.7	$22.7	$0.0	$0.0
Flood Resilience Projects	**$31.2**	**$633.9**	**$656.0**	**($22.1)**	**($22.1)**
Flood Resilience Projects	**$31.2**	**$633.9**	**$656.0**	**($22.1)**	**($22.1)**
SSIP Phase 1	$25.7	$49.9	$49.9	$0.0	$0.0
Other SSIP	$5.5	$584.1	$606.2	($22.1)	($22.1)
Land Reuse	**$85.1**	**$89.5**	**$85.1**	**$4.3**	**$0.0**
Land Reuse	**$85.1**	**$89.5**	**$85.1**	**$4.3**	**$0.0**
SSIP Phase 1	$85.1	$89.5	$85.1	$4.3	$0.0
Program Management	**$152.3**	**$195.0**	**$195.0**	**$0.0**	**$0.0**
Phase 1 Program Management	**$152.3**	**$195.0**	**$195.0**	**$0.0**	**$0.0**
SSIP Phase 1	$152.3	$195.0	$195.0	$0.0	$0.0
Overall Program Total	**$2,239.1**	**$5,973.5**	**$6,022.7**	**($49.1)**	**($54.8)**
SSIP Phase 1 Subtotal	$2,200.0	$4,402.6	$4,409.6	($6.9)	($12.6)
Other SSIP Subtotal	$39.0	$1,570.9	$1,613.1	($42.2)	($42.2)

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

4. PROGRAM SCHEDULE SUMMARY

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

Overall completion schedule for the revised SSIP Phase 1 and Other SSIP were approved by the SFPUC Commission in February 2022. As shown in Table 4, the approved schedule completion for the overall SSIP Phase 1 and Other SSIP are in June 2032 and June 2033, respectively. The current projects forecasted completion of the SSIP Phase 1 and Other SSIP are in April 2036 and June 2033, respectively.

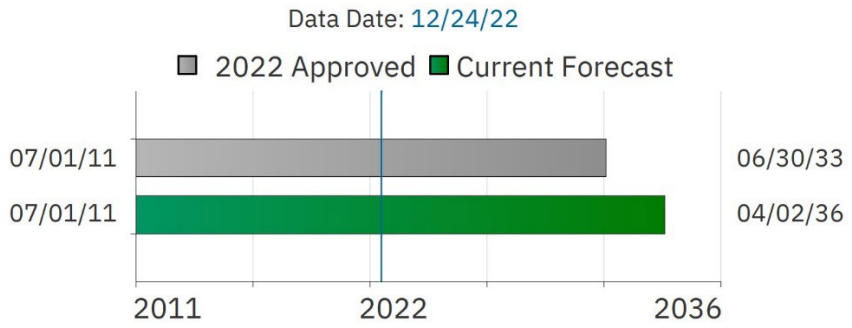

Figure 4 SSIP Schedule Summary

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	06/30/32	04/02/36	45.1 (Late)
Other SSIP	03/03/18	03/03/18 A	06/30/33	06/30/33	-
Overall SSIP	**07/01/11**	**07/01/11 A**	**06/30/33**	**04/02/36**	**33.1 (Late)**

* "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 FY22-23), the following major milestone were achieved, and the project cost and schedule forecasts were updated based on the updated milestone cost estimates accordingly for the following SSIP projects:

1. Large Diameter Sewer Projects and Channel FM Intertie Subproject A & C awarded construction contract.
2. Completed Conceptual Engineering Report (CER): CSD Structure Rehab & Upgrades – P1 Subproject A; and Large Diameter Sewer Projects and Channel FM Intertie Subproject J

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	FY23-32		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 - FY22-23	
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	$2,372.6	05/11/29
New Headworks (Grit) Replacement															
10015807 SEP New Headworks (Grit) Replacement [2]	SSIP Phase 1	FY23-32		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) & 07/23/19 (Scope III)		Q2 - FY22-23	
Scope I - Site Preparation Scope II - Bruce Flynn Pump Station Scope III - New Headworks		$679.0	09/30/24	$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	$689.0	05/29/26
Southeast Plant (SEP) Improvements															
10015809 SEP Facility-wide Distributed Control System Upgrade[3]	SSIP Phase 1	FY23-32		09/03/13		11/01/17		Ongoing		Not Started		12/13/16[4]		Q2 - FY22-23	
		$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	$63.0	12/30/27
10002284 SEP Power Feed and Primary Switchgear Upgrades	SSIP Phase 1	FY23-32		06/23/14		04/15/16		07/29/16		09/29/17		09/08/20		Q2 - FY22-23	
		$95.9	08/24/24	$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	05/30/25
10037353 SEP 550 Booster PS Condition Inspection & Interim	Other SSIP	FY23-32		01/12/21		05/31/23		10/13/23		07/26/24		07/30/25		Q2 - FY22-23	
		$20.3	02/24/27	$9.9	06/30/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$20.3	01/21/28
10038373 SEP, Booster PS, & BFS Security Enhancements	Other SSIP	FY23-32		01/18/22		03/31/23		06/16/23		10/27/23		11/06/24		Q2 - FY22-23	
		$35.8	12/10/26	$35.8	12/10/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$35.8	12/10/27
10037330 Primary Treatment (SEP 040/041) H&S Improvements	Other SSIP	FY23-32		01/04/21		04/15/22		08/31/22		09/01/23		02/20/24		Q2 - FY22-23	
		$27.4	09/30/26	$27.4	09/30/26	$27.4	09/30/26	$27.4	09/30/26	TBD	TBD	TBD	TBD	$25.2	12/07/26
10039310 Secondary Clarifiers (SEP 230) Rehabilitaion	Other SSIP	FY23-32		10/03/22		TBD		TBD		TBD		TBD		Q2 - FY22-23	
		$52.0	09/30/27	$52.0	06/26/28	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$52.0	06/26/28
10039505 New Trades & Maintenance Buildings	Other SSIP	FY23-32		11/01/22		TBD		TBD		TBD		10/27/23[5]		Q2 - FY22-23	
		$68.2	09/30/26	$68.2	09/30/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$87.2	6/25/27

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-Built (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

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	FY23-32		01/12/21		02/28/23		08/31/23		09/18/24		08/12/25		Q2 - FY22-23	
		$40.7	09/13/28	$40.6	07/02/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$40.7	01/09/29
Oceanside Plant (OSP) Improvements															
10029736 Westside Pump Station Reliability Improvements (OP02)	SSIP Phase 1	FY23-32		06/13/13		02/04/16		08/02/16		08/18/17		02/09/21		Q2 - FY22-23	
		$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	$89.3	12/31/24
10029737 OSP Digester Gas Utilization Upgrade (OP03)	SSIP Phase 1	FY23-32		10/01/13		11/20/14		02/04/16		02/01/17		08/28/18		Q2 - FY22-23	
		$55.6	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	$62.6	03/29/24
10037733 Solids Thickening (OSP 011) Process Upgrade (OSP - 2)	Other SSIP	FY23-32		01/25/22		04/28/23		10/02/23		05/31/24		04/01/25		Q2 - FY22-23	
		$20.2	01/12/28	$20.2	03/26/27	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$20.2	01/12/28
10037734 OSP Plant-wide Ventilation (HVAC) Upgrades (OSP - 3)	Other SSIP	FY23-32		01/26/22		02/14/23		05/30/23		01/16/24		07/05/24		Q2 - FY22-23	
		$7.4	05/04/27	$7.4	03/29/27	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$7.4	05/05/27
10036398 OSP Condition Improvement Projects - Part 2 (OSP - 4)	Other SSIP	FY23-32		03/03/18		(A) 03/14/23 (B) 04/03/23 (C) 04/03/23 (D) 01/03/25 (E) N/A (F) N/A (G) N/A		(A) 03/24/23 (B) 06/15/23 (C) 07/17/23 (D) 05/16/25 (E) N/A (F) N/A (G) N/A		(A) 11/27/23 (B) 03/29/24 (C) 04/29/24 (D) 02/06/26 (E) N/A (F) N/A (G) N/A		(A) 05/14/25 (B) 01/2026 (C) 02/17/26 (D) 11/18/26 (E) 02/08/22 (F) 09/13/22 (G) N/A		Q2 - FY22-23	
Contract(A) Contract (B) Contract (C) Contract (D) WW-648 (E) WW-669(F) JOC 53R-15(G)		$105.1	07/06/29	$105.1	07/06/29	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$105.1	07/06/29
10037735 Admin Bldg (OSP 930) Health & Safety Improvements (OSP - 7)	Other SSIP	FY23-32		02/01/22		03/13/23		06/09/23		01/05/24		07/23/24		Q2 - FY22-23	
		$5.7	10/01/26	$5.7	10/01/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$5.7	01/21/27
10037777 OSP & WSPS Security Enhancements	Other SSIP	FY23-32		08/02/21		11/14/23		05/03/24		01/06/25		01/23/26		Q2 - FY22-23	
		$13.8	$ 46,196.00	$7.2	06/30/25	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$13.8	11/19/27
North Point Facility (NPF) Improvements															
10026822 North Shore Pump Station Wet Weather Improvements	SSIP Phase 1	FY23-32		08/15/13		05/29/15		06/30/17		12/07/18		01/26/21		Q2 - FY22-23	
		$55.0	12/29/23	$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	$55.0	12/27/24
10037325 Admin Bldg (NPF 930) Evaluation & Interim H&S Improvements (NPF - 2)	Other SSIP	FY23-32		03/01/22		11/30/23		03/20/24		10/24/24		05/12/25		Q2 - FY22-23	
		$7.9	07/23/26	$7.9	02/03/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$7.9	08/31/27
10037904 NPF & NSS Security Enhancements	Other SSIP	FY23-32		01/18/22		03/31/23		07/31/23		01/03/24		11/06/24		Q2 - FY22-23	
		$17.8	12/10/26	$17.8	12/10/26	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$17.8	01/12/28
10039251 Sedimentation (NPF 040/041) Tanks Condition Improvements	Other SSIP	FY23-32		11/14/22		05/15/24		11/07/24		11/07/25		09/25/26		Q2 - FY22-23	
		$54.2	03/10/31	$54.2	07/17/31	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$54.2	07/17/31
10038353 NPF DCS Upgrades (Construction)	Other SSIP	FY23-32		11/01/21		N/A		N/A		N/A		N/A		Q2 - FY22-23	
		$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.

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	Other SSIP	FY23-32		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) 03/02/23 (I) 09/22/23 (J) 08/14/23		(A) 12/13/22 (B) 05/11/21 (C) 12/13/22 (D) N/A (E) 08/23/22 (F) 05/23/23 (G) N/A (H) 08/22/23 (I) 04/09/24 (J) 04/23/24		Q2 - FY22-23	
(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	TBD	TBD	TBD	TBD	TBD	TBD	$114.6	12/07/26
10002652 Kansas and Marin Streets Sewer Improvements [2]	SSIP Phase 1	FY23-32		06/10/13		09/14/18 - DBB TBD - DB		06/30/21 - DBB TBD - DB		TBD		TBD		Q2 - FY22-23	
		$30.0	08/30/24	$12.5	03/30/16	$12.5	02/15/18	TBD	TBD	TBD	TBD	TBD	TBD	$30.0	04/02/36
Interdepartmental Projects															
10033106 Geary BRT Sewer Improvements Phase 2	SSIP Phase 1	FY23-32		03/15/18		N/A		N/A		N/A		N/A		Q2 - FY22-23	
		$2.0	06/30/23	$2.0	03/30/20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$2.3	09/29/23
10002664 Van Ness BRT Sewer Improvements	SSIP Phase 1	FY23-32		10/01/13		05/20/14		N/A		05/01/15		08/15/16		Q2 - FY22-23	
		$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	06/30/23
10002667 Better Market Street Sewer Improvements - Phase 1	SSIP Phase 1	FY23-32		01/06/14		12/13/16		01/18/19 (Pilot Block)		01/10/20 (Pilot Block)		TBD - Contract 2		Q2 - FY22-23	
		$15.0	10/31/28	$0.5	01/04/19	$32.4	01/23/24	$9.8	03/31/22	$15.0	09/30/24	TBD	TBD	$15.0	10/31/28
10002776 Taraval Sewer Improvements	SSIP Phase 1	FY23-32		03/14/16		02/03/17		05/01/17		10/31/17		03/05/19 - Segment A 10/05/21 - Segment B		Q2 - FY22-23	
		$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 Progressive Design-Built (DB).
3. The project Initiation Forecast Cost was based on funding availability.

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															
10026828 Mariposa Dry-Weather Pump Station & Force Main Improvements[2]	SSIP Phase 1	FY23-32		07/01/14		11/30/16		03/24/17		10/30/17		09/11/18		Q2 - FY22-23	
		$31.9	12/30/22	$0.3	12/31/14	$28.2	01/21/21	$28.2	01/21/21	$28.2	01/21/21	$31.9	06/21/21	$31.9	06/30/23
10037251 Seacliff No. 1 PS & FM Upgrade	Other SSIP	FY23-32		12/07/20		02/28/23		02/07/23		07/17/23		05/16/24		Q2 - FY22-23	
		$14.7	12/31/26	$13.1	12/26/29	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$16.2	03/31/27
10037246 Seacliff No. 2 PS & FM Upgrade	Other SSIP	FY23-32		12/14/20		09/30/22		01/24/23		09/22/23		07/23/24		Q2 - FY22-23	
		$19.3	01/31/28	$16.8	12/21/29	$19.3	01/31/28	TBD	TBD	TBD	TBD	TBD	TBD	$20.8	04/03/28
10037303 Sunnydale PS Safety Improvements	Other SSIP	FY23-32		12/14/20		09/26/22		01/23/23		07/11/23		03/18/24		Q2 - FY22-23	
		$15.5	05/29/26	$5.0	05/29/26	$15.5	05/29/26	TBD	TBD	TBD	TBD	TBD	TBD	$15.5	12/31/26
10038469 Pump Station Security Upgrades (Cesar Chavez, GFS, CHS, MMS)	Other SSIP	FY23-32		06/01/22		03/31/23		07/25/23		03/18/24		03/11/25		Q2 - FY22-23	
		$9.1	05/03/27	$9.1	05/03/27	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$9.1	06/30/27
10038446 Geary Underpass PS Safe Access Enhancements	Other SSIP	FY23-32		01/10/22		07/21/22		05/08/23		09/29/23		07/16/24		Q2 - FY22-23	
		$1.9	05/29/26	$1.9	05/29/26	$1.9	05/29/26	TBD	TBD	TBD	TBD	TBD	TBD	$1.9	05/29/26
CSDs and Transport/Storage Structures															
10037245 Brannan (019) CSD Discharge and Baffle Rehabilitation	Other SSIP	FY23-32		12/07/20		03/31/23		08/10/23		02/02/24		08/27/24		Q2 - FY22-23	
		$7.9	05/01/26	$6.9	08/18/25	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$7.9	10/30/26
10037244 Baker (009) Baffle Improvements and Repair of Backflow Valve	Other SSIP	FY23-32		12/07/20		01/21/22		04/22/22		07/29/22		02/28/23		Q2 - FY22-23	
		$2.9	08/30/24	$2.3	03/26/24	$2.9	08/30/24	$2.9	08/30/24	$2.9	08/30/24	TBD	TBD	$2.9	10/10/24
10038468 System-wide CSD & T/S Monitoring Equipment Assessment	Other SSIP	FY23-32		01/18/22		N/A		03/29/24		09/24/24		07/25/25		Q2 - FY22-23	
		$9.3	02/01/27	$9.3	02/01/27	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$9.3	03/31/27
10038547 CSD Structure Rehab & Upgrades - P1 (A) Laguna & Howard Streets CSDs (B) Mission Bay CSD (C) TBD #1 (D) N/A	Other SSIP	FY23-32		01/03/22		(A) 11/09/22 (B) 01/31/23 (C) 06/28/24 (D) N/A		(A) 02/27/23 (B) 05/02/23 (C) 09/30/24 (D) N/A		(A) 07/17/23 (B) 10/27/23 (C) 04/02/25 (D) N/A		(A) 01/23/24 (B) 07/09/24 (C) 12/24/25 (D) N/A		Q2 - FY22-23	
		$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.
2. The project delivery method for this project is Progressive Design-Built (DB).

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	FY23-32		12/03/12		01/11/21		07/28/23		10/31/23		8/28/2024		Q2 - FY22-23	
		$20.8	10/29/27	$13.5	08/30/19	$17.1	06/30/26	TBD	TBD	TBD	TBD	TBD	TBD	$25.6	11/08/28
Watershed Stormwater Management															
10026816 Wawona Area Stormwater Improvement Project	SSIP Phase 1	FY23-32		07/01/16		09/15/17		09/30/19		04/20/20		10/30/20		Q2 - FY22-23	
		$38.9	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	$34.1	12/02/24
10029726 Watershed Stormwater Management (Planning Only)	SSIP Phase 1	FY23-32		07/11/16		N/A		N/A		N/A		N/A		Q2 - FY22-23	
		$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	$19.0	06/30/32
10039608 Buchanan Street Mall	SSIP Phase 1	FY23-32		N/A		N/A		N/A		N/A		N/A		Q2 - FY22-23	
		$9.3	12/28/26	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$9.6	12/28/26
10034553 Green Infrastructure Grant Program (GIGP)	Other SSIP	FY23-32		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.		Q2 - FY22-23	
		$61.3	06/30/33	$25.0	06/30/28	N/A	N/A	N/A	N/A	N/A	N/A	S25.0	06/30/29	$61.3	06/30/33
Advanced Rainfall and Operation Decision System															
10029730 Operational Decision System Phase 2	SSIP Phase 1	FY23-32		06/01/15		N/A		N/A		N/A		02/22/18		Q2 - FY22-23	
		$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	$6.7	09/30/25
Flood Resilience Projects															
10034360 Lower Alemany Area Stormwater Improvement Project	Other SSIP	FY23-32		01/02/19		01/31/23		TBD		TBD		05/07/25		Q2 - FY22-23	
		$299.6	09/06/28	$286.5	03/13/28	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$299.6	11/01/28
10026818 Folsom Area Stormwater Improvement Project (A) Initial Upstream (B) Tunnel (C) Box Sewer (D) Large Pipe Upstream	SSIP Phase 1	FY23-32		07/01/16		03/16/18		(A) 03/31/20 (B) 03/31/20 (C) 11/24/22 (D) N/A		(A) 09/06/22 (B) 02/24/23 (C) 03/24/23 (D) 06/06/23		N/A		Q2 - FY22-23	
		$38.4	12/27/23	$36.3	11/01/19	$38.4	06/01/20	$38.4	12/27/23	TBD	TBD	N/A	N/A	$38.4	12/27/23
10038471 Folsom Area Stormwater Imp. Project Phase 2 (A) Initial Upstream WW-719A (B) Tunnel (C) Box Sewer (D) Large Pipe Upstream	Other SSIP	FY23-32		10/17/22		N/A		N/A		N/A		(A) 06/19/23 (B) 02/29/24 (C) 11/30/23 (D) 05/31/24		Q2 - FY22-23	
		$260.0	06/30/27	$282.0	06/30/27	N/A	N/A	N/A	N/A	N/A	N/A	TBD	TBD	$282.0	06/30/27

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.

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	$2,372,615	$803,234	$0	0%	05/11/29	05/11/29	05/11/29	0
New Headworks (Grit) Replacement												
10015807 SEP New Headworks (Grit) Replacement	SSIP Phase 1	CN	$679,025	$679,025	$688,979	$436,655	($9,954)	(1%)	09/30/24	09/30/24	05/29/26	(606)
Southeast Plant (SEP) Improvements												
10015809 SEP Facility-wide Distributed Control System Upgrade	SSIP Phase 1	DS	$62,988	$62,988	$62,988	$19,125	$0	0%	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	$51,022	$0	0%	08/21/24	08/21/24	05/30/25	(282)
10037353 SEP 550 Booster PS Condition Inspection & Interim	Other SSIP	PL	$20,298	$20,298	$20,298	$460	$0	0%	02/24/27	02/24/27	01/21/28	(331)
10038373 SEP, Booster PS, & BFS Security Enhancements	Other SSIP	PL	$35,759	$35,759	$35,759	$296	$0	0%	12/10/26	12/10/26	12/10/27	(365)
10037330 Primary Treatment (SEP 040/041) H&S Improvements	Other SSIP	DS	$27,382	$27,382	$25,228	$1,887	$2,155	8%	09/30/26	09/30/26	12/07/26	(68)
10037331 Maintenance Building (SEP 940) Interim Improvement	Other SSIP	PL	$40,652	$40,652	$40,652	$515	$0	0%	09/13/28	09/13/28	01/09/29	(118)
10039505 New Trades & Maintenance Buildings	Other SSIP	PL	$68,179	$68,179	$87,154	$0	($18,975)	(28%)	09/30/26	09/30/26	06/25/27	(268)
10039310 Secondary Clarifiers (SEP230) Rehabilitation	Other SSIP	PL	$51,952	$51,952	$51,952	$0	$0	0%	09/30/27	09/30/27	06/26/28	(270)
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 FY23-32.

(++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY23-32, 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	$89,300	$37,058	$0	0%	12/31/24	12/31/24	12/31/24	0
10029737 OSP Digester Gas Utilization Upgrade	SSIP Phase 1	CN	$55,577	$55,577	$62,577	$39,918	($7,000)	(13%)	09/14/22	09/14/22	03/29/24	(562)
10037733 Solids Thickening (OSP 011) Process Upgrade	Other SSIP	PL	$20,222	$20,222	$20,222	$306	$0	0%	09/03/26	09/03/26	01/12/28	(496)
10037734 OSP Plant-wide Ventilation (HVAC) Upgrades	Other SSIP	PL	$7,354	$7,354	$7,354	$100	$0	0%	09/03/26	09/03/26	05/05/27	(244)
10036398 OSP Condition Improvement Projects - Part 2	Other SSIP	PL	$105,100	$105,100	$105,100	$2,283	$0	0%	07/06/29	07/06/29	07/06/29	0
10037735 Admin Bldg (OSP 930) Health & Safety Improvements	Other SSIP	PL	$5,709	$5,709	$5,709	$268	$0	0%	10/01/26	10/01/26	01/21/27	(112)
10037777 OSP & WSPS Security Enhancements	Other SSIP	PL	$13,776	$13,776	$13,776	$158	$0	0%	06/23/26	06/23/26	11/19/27	(514)
North Point Facility (NPF) Improvements												
10026822 North Shore Pump Station Wet Weather Improvements	SSIP Phase 1	CN	$55,000	$55,000	$55,000	$26,985	$0	0%	12/29/23	12/29/23	12/27/24	(364)
10037325 Admin Bldg (NPF 930) Evaluation & Interim H&S Improvements	Other SSIP	PL	$7,934	$7,934	$7,934	$242	$0	0%	02/03/26	02/03/26	08/31/27	(574)
10037904 NPF & NSS Security Enhancements	Other SSIP	PL	$17,849	$17,849	$17,849	$133	$0	0%	12/10/26	12/10/26	01/12/28	(398)
10038353 NPF DCS Upgrades (Construction)	Other SSIP	CN	$11,073	$11,073	$11,073	$571	$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	$0	$0	0%	03/10/31	03/10/31	07/17/31	(129)
Collection System												
Interceptors / Tunnels and Odor Control												

* 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 FY23-32.

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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) (+++)
10034718 Large Diameter Sewer Projects and Channel FM Intertie	Other SSIP	DS	$114,592	$114,592	$114,592	$18,497	$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	$30,000	$4,356	$0	0%	08/30/24	08/30/24	04/02/36	(4,233)
Interdepartmental Projects												
10033106 Geary BRT Sewer Improvements Phase 2	SSIP Phase 1	DS	$2,000	$2,000	$2,346	$749	($346)	(17%)	06/30/23	06/30/23	09/29/23	(91)
10002664 Van Ness BRT Sewer Improvements	SSIP Phase 1	CN	$25,000	$25,000	$25,000	$20,932	$0	0%	06/30/23	06/30/23	06/30/23	0
10002667 Better Market Street Sewer Improvements - Phase 1	SSIP Phase 1	DS	$15,000	$15,000	$15,000	$2,110	$0	0%	10/31/28	10/31/28	10/31/28	0
10002776 Taraval Sewer Improvements	SSIP Phase 1	CN	$34,500	$34,500	$34,500	$16,746	$0	0%	07/31/25	07/31/25	07/31/25	0
Pump Stations and Forcemain Improvements												
10026828 Mariposa Dry-Weather Pump Station & Force Main Improvements	SSIP Phase 1	CN	$31,932	$31,932	$31,932	$30,736	$0	0%	12/30/22	12/30/22	06/30/23	(182)
10037251 Seacliff No. 1 PS & FM Upgrade	Other SSIP	DS	$14,682	$14,682	$16,180	$1,233	($1,498)	(10%)	12/31/26	12/31/26	03/31/27	(90)
10037246 Seacliff No. 2 PS & FM Upgrade	Other SSIP	PL	$19,315	$19,315	$20,804	$1,109	($1,489)	(8%)	01/31/28	01/31/28	04/03/28	(63)
10037303 Sunnydale PS Safety Improvements	Other SSIP	DS	$15,542	$15,542	$15,542	$720	$0	0%	05/29/26	05/29/26	12/31/26	(216)
10038469 Pump Station Security Upgrades (Cesar Chavez, GFS,CHS, MMS)	Other SSIP	PL	$9,105	$9,105	$9,105	$65	$0	0%	05/03/27	05/03/27	06/30/27	(58)
10038446 Geary Underpass PS Safe Access Enhancements	Other SSIP	PL	$1,854	$1,854	$1,854	$46	$0	0%	05/29/26	05/29/26	05/29/26	0
Combined Sewer Discharge (CSD) and Transport/Storage Structures												

* 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:

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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) (+++)
10037245 Brannan (019) CSD Discharge and Baffle Rehabilitation	Other SSIP	PL	$7,949	$7,949	$7,949	$282	$0	0%	05/01/26	05/01/26	10/30/26	(182)
10037244 Baker (009) Baffle Improvements and Repair of Backflow Valve	Other SSIP	BA	$2,861	$2,861	$2,861	$427	$0	0%	08/30/24	08/30/24	10/10/24	(41)
10038468 System-wide CSD & T/S Monitoring Equipment Assessment	Other SSIP	PL	$9,289	$9,289	$9,289	$63	$0	0%	02/01/27	02/01/27	03/31/27	(58)
10038547 CSD Structure Rehab & Upgrades - Part 1	Other SSIP	PL	$39,653	$39,653	$39,653	$334	$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	$20,793	$20,793	$25,588	$3,996	($4,795)	(23%)	10/29/27	10/29/27	11/08/28	(376)
Watershed Stormwater Management												
10026816 Wawona Area Stormwater Improvement Project	SSIP Phase 1	CN	$38,900	$38,900	$34,112	$22,498	$4,788	12%	12/02/24	12/02/24	12/02/24	0
10029726 Watershed Stormwater Management (Planning Only)	SSIP Phase 1	PL	$19,000	$19,000	$19,000	$7,098	$0	0%	06/30/32	06/30/32	06/30/32	0
10034553 Green Infrastructure Grant Program (GIGP)	Other SSIP	CN	$61,318	$61,318	$61,318	$3,536	$0	0%	06/30/33	06/30/33	06/30/33	0
10039608 Buchanan Street Mall	Other SSIP	DS	$9,343	$9,343	$9,632	$0	($290)	(3%)	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	$6,721	$3,996	$0	0%	09/30/25	09/30/25	09/30/25	0
Flood Resilience Projects												
Flood Resilience Projects												

* 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:

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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) (+++)
10034360 Lower Alemany Area Stormwater Improvement Project	Other SSIP	PL	$299,555	$299,555	$299,555	$5,492	$0	0%	09/06/28	09/06/28	11/01/28	(56)
10026818 Folsom Area Stormwater Improvement Project	SSIP Phase 1	DS	$38,411	$38,411	$38,411	$14,934	$0	0%	12/27/23	12/27/23	12/27/23	0
10038471 Folsom Area Stormwater Imp. Project Phase 2	Other SSIP	BA	$259,906	$259,906	$282,014	$0	($22,109)	(9%)	06/30/27	06/30/27	06/30/27	0

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**** 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 FY23-32.

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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	$ 2372.62 M
Actual	$ 803.23 M

Project Schedule:

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

Project Percent Complete: 35.1%

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		N/A	07/01/20 A	05/12/28

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 vessels are on-going. Construction crews are nearly complete with the erection of the digesters skirt walls and are proceeding with the formwork for the hoppers for each digester tank. Construction on the adjacent solids pretreatment building is also continuing with the installation of membrane waterproofing and reinforcing steel for the below ground pipe encasement. Bid procurement for remaining construction is ongoing. To date, construction bid and award of most of the major biosolids facilities has been completed, including the digesters, solids pretreatment facility and the chemical feed and No. 2 water facilities.

Placing Concrete in Tank 4 Hopper

Issues and Challenges:

None at this time.

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	$ 679.03 M
Forecast	$ 688.98 M
Actual	$ 436.65 M

Project Schedule:

Approved 03/01/13	09/30/24
Forecast 03/01/13	05/29/26

Project Percent Complete: 64.2%

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		N/A	12/17/18 A	11/14/20 A
	C		N/A	07/22/19 A	02/29/24
	D		10/03/24	03/03/25	11/26/25

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 civil/structural work at the influent junction area, fine screen/grit influent splitter, grit tank/grit handling, primary influent distribution areas, and odor control areas. Completed tie-in of the 48" and 84" steel pipes to the influent junction area. Contractor continued equipment procurement and fabrication. Influent pumping control strategy coordination workshop held in October 2022. The project team continued coordination with Power Enterprises/electrical upgrade projects (WW-662R/DB-130) for Headworks temporary and permanent power cutovers from PG&E power to SFPUC power.

Installation of final piece of 84in SR pipe

Issues and Challenges:

An increase to the project budget and project schedule is being requested as it relates to the demolition of SEP-012 (Existing All-Weather Headworks).

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	$ 62.99 M
Actual	$ 19.13 M

Project Schedule:

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

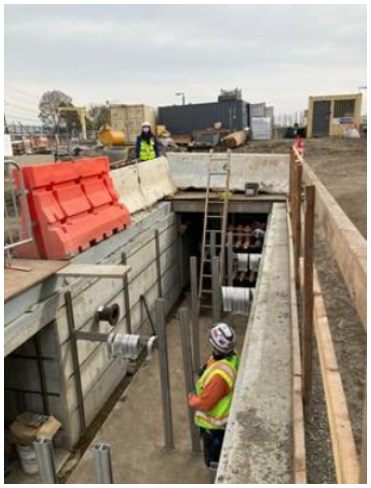
Project Percent Complete: 42.4%

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:

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 NTP represents start of fabrication/manufacturing.

Southeast Plant (SEP) DCS server room hardware and other DCS-related equipment were delivered to the DB-126 Contractor’s San Francisco facility. The project team is now in the planning process to start SEP DCS server room hardware and software operational readiness tests (ORTs) in the upcoming quarter prior to delivery and installation at the final location. The team is also working on the design of the new SEP DCS network, the DCS design associated to various SEP process facilities, and DCS design at Channel Pump Station (CHS). Coordination with the Headworks, Biosolids, and other SSIP project teams at SEP are ongoing.



Ongoing construction in one of Southeast Plant’s conduit trenches

Issues and Challenges:

None at this time.

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 sub-structures to provide adequate power for 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	$ 51.02 M

Project Schedule:

Approved 06/23/14	08/21/24
Forecast 06/23/14	05/30/25

Project Percent Complete: 49.7%

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:

The contractor continued to install various electrical, mechanical and I&C systems, as well as concrete walkways in and around the Primary Power Switchgear building. The PUC power cables were also pulled and terminated at the new outdoor gear and ready for energization. Initial trainings for the indoor and outdoor switchgears were completed.

Issues and Challenges:

The construction schedule needs to be extended by 6-months to accommodate the delay delivery of SFPUC power to SEP and the extra time anticipated for installation of the substations. Project team further anticipates additional 3-months duration to complete the closeout phase.

West Side View of Primary Power Switchgear Building

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:** Planning	**Environmental Status:** Not Initiated

Project Cost:

Approved	$ 20.30 M
Forecast	$ 20.30 M
Actual	$ 0.46 M

Project Schedule:

Approved 01/12/21	02/24/27
Forecast 01/12/21	01/21/28

Project Percent Complete: 2.6%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	11/27/24	12/02/24	07/31/25	07/20/27

Progress and Status:

Project team continues to progress Needs Assessment Report, Alternative Analysis Report, and Conceptual Engineering Report combined deliverable. Project team initiated coordination with Environmental Management Group and CEQA CER checklist.

Issues and Challenges:

Due to wet weather constraints and an actively used Booster Pump Station, the project team requested an extension to the planning phase to accommodate physical pump testing. Furthermore, the discharge manifold lining requires special confined space entry that is heavily impacted by tidal fluctuations and wet weather season.

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	$ 0.30 M

Project Schedule:

Approved 01/18/22	12/10/26
Forecast 01/18/22	12/10/27

Project Percent Complete: 2.1%

Key Milestones		Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	A	03/01/24	10/07/24	06/05/25	06/09/27
	B	03/01/24	10/04/24	06/05/25	06/09/27

Progress and Status:

Project includes multiple construction contracts: (A) Security Enhancements; (B) Fire System Network.

The Draft NAR for the Fire System Network scope of work was issued and a stakeholder presentation was held to facilitate review comments. Also, for the Security Enhancements scope of work, the combined AAR/CER presentation was held to facilitate stakeholder comments. The project team continues to coordinate with WWE, SFPUC IT, SFPUC Security, and other stakeholders regarding configuration of security fiber optic connectivity and servers needed for video recording, management and analytics.

Issues and Challenges:

The increase in overall project duration is a result of additional unforeseen project scope complexity and consultant resource availability during the planning and design phases. The project team continues to monitor potential schedule delays due to resource availability and associated impacts to planning phase and design phase delivery milestones.

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

Project Description: This project will address inadequate ventilation issues, and health and safety concerns, at Southeast Plant buildings 040/041. Extensive cracks and exposed rusted rebar have been observed along the building's walls and joints. Overhead building structural supports are corroded and could potentially fail, and interior columns appear to be insufficient for lateral load transfer. To address these issues, this project will remove the superstructure housing the sedimentation tanks to create an open-air process facility with covered tank openings and an associated odor control system. Replacement and relocation of the utility lines and reconnection to existing equipment is also needed. Furthermore, the existing control room and MCC room (SEP 043) that resides between SEP 040/041 will be effected, and relocation or retrofit would be needed. SEP 040, 041, and 043 are all located within the Southeast Treatment Plant Streamline Moderne Industrial Historic District. SEP 040/41 are considered structures that contribute to the historic district, although they are not individually eligible historic resources. As the objective of the project is to demolish the superstructures of SEP 040/041, impacts to these historic resources are unavoidable.

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

Project Cost:

Approved	$ 27.38 M
Forecast	$ 25.23 M
Actual	$ 1.89 M

Project Schedule:

Approved 01/04/21	09/30/26
Forecast 01/04/21	12/07/26

Project Percent Complete: 8.3%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	09/29/23	10/02/23	06/01/24	06/03/26

Progress and Status:

The project team continues to progress the 65% design deliverable. Hazardous material survey report was completed in October 2022. Project team submitted request to WWE and Program CM for construction staging area. Project team held several risk register development meetings and updated the risk register/risk mitigation plan. The project team also held coordination meeting with WWE regarding guardrails, swing gate locations, and concrete cracks/spalling repairs. The 65% design is due in the next reporting period.

Issues and Challenges:

Decrease represents savings in environmental/design phases due to reduced scope of work, and anticipated construction cost based on 35% design level estimate. The project schedule reflects a program-wide direction to extend the bid and award phase from 6 to 8 months.

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:** Planning	**Environmental Status:** Not Initiated (Cat Ex)

Project Cost:

Approved	$ 40.65 M
Forecast	$ 40.65 M
Actual	$ 0.52 M

Project Schedule:

Approved 01/12/21	09/13/28
Forecast 01/12/21	01/09/29

Project Percent Complete: 1.8%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	12/09/24	04/01/25	11/27/25	06/30/28

Progress and Status:

Project team completed the seismic evaluation study and presented the results to WWE and other SFPUUC stakeholders. Results concluded the proposed scope of work would not trigger a seismic upgrade of the entire maintenance building, however, strengthening of select walls/columns are needed. Following the conclusion of the seismic evaluation study, the project team held Conceptual Engineering Report kickoff meeting with WWE. The project team continues to progress the CER and the planning phase deliverable is anticipated to be complete in the next reporting period.

Issues and Challenges:

Increase to project duration reflects additional time needed during planning phase for seismic evaluation of building and program-wide direction to extend the bid and award phase from 6 to 8 months.

Inside 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:** Planning	**Environmental Status:** Not Initiated (TBD)

Project Cost:

Approved	$ 68.18 M
Forecast	$ 87.15 M
Actual	$ 0.00 M

Project Schedule:

Approved 11/01/22	09/30/26
Forecast 11/01/22	06/25/27

Project Percent Complete: 0.0%

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

Progress and Status:

MOU with Public Works for design services was executed. Kick-off was held in December. Validation of programming is underway.

Issues and Challenges:

The variance between the Forecast and Approved budget and schedule is due to delay in receiving funding and updated escalation construction cost.

SEP Overall Aerial View

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	$ 0.00 M

Project Schedule:

Approved 10/03/22	09/30/27
Forecast 10/03/22	06/26/28

Project Percent Complete: 1.0%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	09/02/24	11/30/24	08/01/25	12/28/27

Progress and Status:

Project was initiated and formal kickoff meeting was held in October 2022. Performing SFPUC resources began development of planning phase work plans. Clarifier launder presentation by manufacture held in December 2022. Project team continues onboarding process of planning phase as-needed staff augmentation services.

Issues and Challenges:

Project will require phasing of construction and will require longer construction duration.

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	$ 89.30 M
Actual	$ 37.06 M

Project Schedule:

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

Project Percent Complete: 84.7%

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	06/27/24

Progress and Status:

Project includes multiple construction contracts: (A) WW-572R WSS 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 has installed the roof membrane on the new Electrical Building and is preparing for delivery of major electrical substation switchgear equipment.

Issues and Challenges:

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. The Project team has provided PG&E supplemental project information in August 2022.

Contractor installing rebar reinforcement at new Electrical Building Roof as of September 2022.

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	$ 55.58 M
Forecast	$ 62.58 M
Actual	$ 39.92 M

Project Schedule:

Approved 10/01/13	09/14/22
Forecast 10/01/13	03/29/24

Project Percent Complete: 74.0%

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	06/01/23

Progress and Status:

WW-639 Oceanside Water Pollution Control Plant Digester Gas Utilization Upgrade contract construction phase activities continue. During this reporting period, Building 800 accepted delivery of major equipment items, cogeneration engines, heat exchangers and loop pumps, electrical substation No. 5 transformer, motor control centers. At Building 800, the Contractor continues to install mezzanine steel, process piping and electrical systems.

Issues and Challenges:

Budget and schedule variances due to changes necessary complete the existing building, mechanical and electrical modifications, including installation of the cogeneration engine assemblies, motor control center equipment, and associated instrumentation within OSP800 that have experienced equipment delivery delays associated with supply chain breakdowns due to COVID-19.

The Gas Holder Tank Building 741 digester gas piping and siloxane removal system.

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:** Planning	**Environmental Status:** Not Initiated (TBD)

Project Cost:

Approved	$ 20.22 M
Forecast	$ 20.22 M
Actual	$ 0.31 M

Project Schedule:

Approved 01/25/22	09/03/26
Forecast 01/25/22	01/12/28

Project Percent Complete: 1.6%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	06/28/24	10/01/24	05/05/25	07/01/27

Progress and Status:

The project team is targeting to issue the draft Conceptual Engineering Report (CER) and associated deliverables in January 2023.

Issues and Challenges:

The project has been delayed due to lack of available resources. The project team continues to monitor potential schedule delays due to resource availability and associated impacts to planning phase and design phase delivery milestones.

Selective equipment demolition to GBT No. 1; this work is expected to be completed prior to the project contract work commencing on the replacement of GBT No. 2 and GBT No. 3.

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 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	$ 7.35 M
Actual	$ 0.10 M

Project Schedule:

Approved 01/26/22	09/03/26
Forecast 01/26/22	05/05/27

Project Percent Complete: 1.5%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	02/01/24	03/21/24	10/22/24	12/28/26

Progress and Status:

The project team issued the draft Conceptual Engineering Report and associated deliverables in December 2022.

Issues and Challenges:

Similar to last quarter, the project has been delayed due to lack of available resources. The project team continues to monitor potential schedule delays due to resource availability and associated impacts to planning phase and design phase delivery milestones.

OSP Building 011 as-found condition of ventilation exhaust systems

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:** Planning	**Environmental Status:** Active (Various)

Project Cost:

Approved	$ 105.10 M
Forecast	$ 105.10 M
Actual	$ 2.28 M

Project Schedule:

Approved 03/03/18	07/06/29
Forecast 03/03/18	07/06/29

Project Percent Complete: 9.3%

Key Milestones		Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	A	12/01/23	01/31/25	06/27/25	06/29/27
	B	10/31/24	10/01/25	03/10/26	03/09/28
	C	04/15/25	10/29/25	04/07/26	04/06/28
	D	03/06/26	08/05/26	01/04/27	01/03/29
	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	05/01/23

Progress and Status:

The project includes multiple construction contracts: (A) OSP 620 Digestion H&S, Mech Improvements, OSP800 Mech Improvements: The draft Conceptual Engineering Report (CER) and associated deliverables was issued in September 2022. (B) OSP 011 Polymer & Ferric Chloride Replacement: Subscope not initiated. (C) OSP 042 Primary Clarifiers Structural and Mechanical Improvements: Subscope not initiated. (D) OSP 200 Aeration Tanks Structural and Mechanical Improvements: Subscope not initiated. (E) WW-648 OSP Building 042 Primary Clarifier Improvements: Construction activities continue, the Contractor has installed compressed air piping in Building 042. (F) WW-669 OSP Building 011 Grit Classifier & Preliminary Influent Slide Gate System Improvements: The contract NTP was issued on December 19, 2022. The Contractor is preparing long-lead equipment submittals. (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.

Contract A; OSP 620 Elevator is subject to modernization under the project.

Issues and Challenges:

None at this time.

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:** Planning	**Environmental Status:** Not Initiated (TBD)

Project Cost:

Project Schedule:

Project Percent Complete: 1.8%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	12/06/23	04/10/24	09/04/24	07/14/26

Progress and Status:

The project team issued the draft Conceptual Engineering Report and associated deliverables in September 2022.

Issues and Challenges:

The project has been delayed due to lack of available resources. The project team continues to monitor potential schedule delays due to resource availability and associated impacts to planning phase and design phase delivery milestones.

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:** Not Initiated

Project Cost:

Approved	$ 13.78 M
Forecast	$ 13.78 M
Actual	$ 0.16 M

Project Schedule:

Approved 08/02/21	06/23/26
Forecast 08/02/21	11/19/27

Project Percent Complete: 3.5%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	01/17/24	05/19/25	01/26/26	04/21/27

Progress and Status:

Project team continues work on the planning phase as-found field verification and Needs Assessment Report deliverables. During the reporting period, the project team continues assembling the draft Needs Assessment Report. The draft Needs Assessment Report is targeted to be issued January 2023.

Issues and Challenges:

The increase in overall project duration is a result of additional unforeseen project scope complexity and consultant resource availability during the planning and design phases. The project team continues to monitor potential schedule delays due to resource availability and associated impacts to planning phase and design phase delivery milestones.

Existing West Vehicle Entrance at Oceanside Water Pollution Control Plant

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	$ 55.00 M
Forecast	$ 55.00 M
Actual	$ 26.98 M

Project Schedule:

Approved 08/15/13	12/29/23
Forecast 08/15/13	12/27/24

Project Percent Complete: 74.2%

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	05/06/24

Progress and Status:

Contractor completed dry weather/wet weather crossover work including relocation of seal water pumps, install of new 48" piping, installation of dowels for new thrust blocks. Contractor continued installation, commissioning, and start-up of Uninterruptable Power Supply (UPS) at SEP 930 basement. Project team working on Commission Agenda Item to request increase to construction duration contingency needed to address COVID supply chain delays related to the procurement of dry weather liquid pumps.

Issues and Challenges:

Project duration extended due to COVID supply chain delays related to the procurement of dry weather liquid pumps

Completed bar screens in operation

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	$ 7.93 M
Actual	$ 0.24 M

Project Schedule:

Approved 03/01/22	02/03/26
Forecast 03/01/22	08/31/27

Project Percent Complete: 3.3%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	08/26/24	02/03/25	09/03/25	03/10/27

Progress and Status:
The Draft Needs Assessment Report was issued and a stakeholder presentation was held in October 2022 to facilitate review comments. Following the stakeholder presentation, WWE requested the project team to evaluate temporarily relocating WWE staff to modular enclosures within the NPF boundaries to reduce capital cost, as WWE intends to ultimately relocate NPF staff to SEP in the near future under the SEP Campus Plan. Project team initiated topographic survey and coordination with WWE and other stakeholder regarding modular enclosure needs.

Issues and Challenges:
The planning phase has been extended due to the WWE request to evaluate relocating WWE staff to modular enclosures.

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:

Project Schedule:

Project Percent Complete: 1.9%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	10/31/23	11/01/24	07/01/25	07/03/27

Progress and Status:

The Draft Needs Assessment Report was issued and a stakeholder presentation was held in December 2022 to facilitate review comments. The project team continues to coordinate with WWE, SFPUC IT, SFPUC Security, and other stakeholders regarding configuration of servers needed for video recording, management and analytics.

Issues and Challenges:

The increase in overall project duration is a result of additional unforeseen project scope complexity and consultant resource availability during the planning and design phases. The project team continues to monitor potential schedule delays due to resource availability and associated impacts to planning phase and design phase delivery milestones.

10038353 - NPF DCS Upgrades (Construction)

Project Description: This project will replace the aging control system infrastructure at Northpoint as the existing control system equipment becomes obsolete. This is a continuation of the distributed control system (DCS) work that was started under SSIP Phase 1 project CWWSIPSE07 SEP Facility-Wide DCS Upgrade. The DCS scope under this project is specifically centered at Northpoint facilities. The DCS supplier will provide the following services: Network configuration and architecture design; Equipment location and layout design; DCS panel layouts and wiring diagrams; Loop drawing development; Control narrative development support; Human Machine Interface (HMI) screen standards development; DCS application software development. The DCS supplier will provide the following equipment: Process control module panels; Remote I/O (RIO) panels; Server equipment and racks; Main fiber distribution rack panels; Marshalling panels or "B" panels; Fiber optic patch panels and terminal panel; Network switches and routers.

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

Project Cost:

Project Schedule:

Project Percent Complete: 7.7%

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:

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 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.

North Shore Site Visit: Dry Weather Pump Variable Frequency Drive (VFD)

Issues and Challenges:

None at this time.

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	$ 0.00 M

Project Schedule:

Approved 07/05/22	03/10/31
Forecast 11/14/22	07/17/31

Project Percent Complete: 0.3%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	07/17/25	06/15/26	11/09/26	01/10/31

Progress and Status:

Project was initiated and site walk between WWE and project team held in November 2022. Planning phase work plans are being developed by performing bureaus.

Issues and Challenges:

Project start delayed due to SFPUC Engineering resources availability.

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:** Design	**Environmental Status:** Active (Various)

Project Cost:

Approved	$ 114.59 M
Forecast	$ 114.59 M
Actual	$ 18.50 M

Project Schedule:

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

Project Percent Complete: 27.1%

Key Milestones		Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	A	05/09/22 A	06/28/22 A	03/01/23	06/08/26
	B	08/06/20 A	01/19/21 A	08/30/21 A	03/23/23
	C	08/11/21 A	09/23/22 A	03/01/23	05/08/24
	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	08/14/23	09/16/24
	G	06/22/21 A	N/A	03/14/22 A	08/09/24
	H	03/01/23	05/19/23	10/19/23	11/22/24
	I	02/09/23	01/03/24	N/A	N/A
	J	08/23/23	01/18/24	N/A	N/A

Progress and Status:
For a complete list of contracts and subprojects, see Project Descriptions in the Appendices. Subproject (A): Bids were received and contract was awarded to low bid. Subproject (B): Construction (CN) work continues and Substantial Completion is anticipated to be issued next quarter. Subproject (C): Bids were received, and contract was awarded to low bid. Subproject (D): Completed as the remaining scope of work added to Subprojects B & E for contracting convenience. Subproject (E): NTP was established in December 2022 and construction work to begin in January 2023. Subproject (F): 100% design completed and progressing towards bid advertisement. Subproject (G): CN work continued this quarter. SF Public Works is the contracting authority. Subproject (H): Completed 65% design and is progressing towards 95% design. Subproject (I): Project is progressing towards 35% design. CN phase will be funded through the Collection Systems R&R Program. Subproject (J): Planning phase completed, and design phase was initiated. CN phase will be funded through the Collection Systems R&R Program.

Contract B: Spray Mortar Installation (WW-712).

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	$ 30.00 M
Actual	$ 4.36 M

Project Schedule:

Approved 06/10/13	08/30/24
Forecast 06/10/13	04/02/36

Project Percent Complete: 15.6%

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 nearly completed a draft Technical Memorandum prepared by Public Works which is the basis for a revised Alternatives Analysis Report (AAR). The revised AAR will be based on the current SSIP LOS design criteria, which had not yet been adopted when the previous AAR was finalized back in 2014. In addition, the project team began writing the revised AAR during this quarter.

Issues and Challenges:

The Alternative Analysis Report (AAR) will be completed in FY22-23, but the implementation of the selected alternative will be delayed beyond the FY24-33 10-Year Capital Plan at this time. Depending on the outcome of the AAR, the Conceptual Engineering Report (CER), detailed design, and construction may resume in the future when funding is made available.

Kansas and Marin Micro-Tunnel Boring Machine Receiving Area

10033106 - Geary BRT Sewer Improvements Phase 2

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:** Active (Cat Ex)

Project Cost:

Approved	$ 2.00 M
Forecast	$ 2.35 M
Actual	$ 0.75 M

Project Schedule:

Approved 03/15/18	06/30/23
Forecast 03/15/18	09/29/23

Project Percent Complete: 27.9%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	09/29/23	N/A	N/A	N/A

Progress and Status:

During this quarter, the project team completed the 65% Design for the combined SFMTA fiber optics, SFPUC Sewer, and SFPUC Water scope. The project team also initiated the Environmental Phase and outreach efforts. Only the initial planning and design are included in this project within Phase 1 of the SSIP. Bid and award through construction will be part of a separate SSIP project in the future.

Issues and Challenges:

Originally, the construction contract was going to be led by the SFMTA, but the current project scope assumes an SFPUC-led construction contract for the underground work, which will include sewer, water and SFMTA fiber optic conduit. Due to this scope modification and the complexity of working in a congested corridor, additional staff and consultant support are needed for this project, which translates to a higher budget and a longer schedule to perform the work.

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	$ 20.93 M

Project Schedule:

Approved 10/01/13	06/30/23
Forecast 10/01/13	06/30/23

Project Percent Complete: 83.7%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	N/A	N/A	01/16/18 A	03/31/23

Progress and Status:

The Construction Manager/General Contractor (CM/GC) contract was awarded by SFMTA and Notice to Proceed (NTP) was given to Walsh Construction on October 27, 2016 with NTP for the sewer work obtained on January 16, 2018. SFMTA has yet to issue Final Completion (FC). If the FC date continues to slip, the completion of construction will likely be delayed. Claim negotiations, related to schedule and differing site conditions, continue between SFMTA and the contractor. The delay in the FC date and time needed to resolve outstanding claims may continue to impact the project budget and schedule.

Issues and Challenges:

None at this time.

Sewer Completion along Van Ness

10002667 - Better Market Street Sewer Improvements - Phase 1

Project Description: 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.

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

Project Cost:

Approved	$ 15.00 M
Forecast	$ 15.00 M
Actual	$ 2.11 M

Project Schedule:

Approved 01/06/14	10/31/28
Forecast 01/06/14	10/31/28

Project Percent Complete: 18.1%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	10/18/19 A	01/15/25	08/04/25	02/26/27

Progress and Status:

SFPW is the project lead and contracting authority. As reported last quarter, SFPUC's proposed water and sewer scopes of work were deleted from the BMS Phase 1 Contract per the request of SFMTA and SFPW. To mitigate the risk of failure of sewer assets, the project team coordinated with WWE/Sewer Operations to inspect the existing conditions of culverts that were originally part of the BMS Phase 1 Contract. Repair and replacement of at risk culverts were completed via JOC contract. SFPUC's sewer and water work on Market Street, between 5th to 7th Streets, are anticipated to be included in a future BMS contract (BMS Contract 2). SFPW and SFMTA will re-initiate the planning effort for BMS Contract 2 later in 2023 and SFPUC staff will be engaging in this planning effort. The extent of the various scopes is still in discussion between SFPW and SFMTA management and the lead-agency has not been determined.

Better Market Street – Rendering of proposed project

Issues and Challenges:

None at this time.

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 was initiated in 7/19. Segment B is from Sunset Blvd. to West Portal and that construction contract is expected to NTP in early 2020.

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

Project Cost:

Approved	$ 34.50 M
Forecast	$ 34.50 M
Actual	$ 16.75 M

Project Schedule:

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

Project Percent Complete: 52.1%

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	06/13/23

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 continued along Ulloa Street during the holiday moratorium. Construction anticipates to resume along Taraval Street in the upcoming quarter. Contract C: Sewer work was completed in December 2021. However, SFPW has not issued the Substantial and Final completions for the entire contract as work is still on-going.

Issues and Challenges:
None at this time.

Segment B: South Side 12in VCP Installation at Ulloa St between 14th-15th Ave by NTK.

10026828 - Mariposa Dry-Weather Pump Station & Force Main Improvements

Project Description: 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.

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

Project Cost:

Approved	$ 31.93 M
Forecast	$ 31.93 M
Actual	$ 30.74 M

Project Schedule:

Approved 07/01/14	12/30/22
Forecast 07/01/14	06/30/23

Project Percent Complete: 99.4%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	04/25/17 A	04/04/18 A	01/28/19 A	03/01/23

Progress and Status:

During this quarter, contractor continues to work on final punch list items to address various outstanding items and work towards final completion, and delivery of some final punch list parts are delayed. The construction of force main work under the Bay Corridor Transmission and Distribution - Phase 1 Contract (DB-128R2) has been completed, and staff continues to negotiate construction claims with the design-builder, and work towards final completion.

Issues and Challenges:

Schedule has been extended due to additional time to complete project closeout.

On December 6, 2022, the project team and contractor gathered at the pump station to celebrate the successful completion.

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 and 8-inch force main (930 LF); Installation of flow monitoring devices for post-storm evaluation and floatable controls at the overflow structure to CSD 005; Connection from new pump station to CSD 005; Possibly installing a redundant pump for 'n+1' redundancy during wet weather and consider provisions for wet well isolation for maintenance and inspection, if feasible. As the current site is partially on Federal/GGNRA property, locating a suitable site may require additional coordination activities with the Real Estate Division.

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

Project Cost:

Approved	$ 14.68 M
Forecast	$ 16.18 M
Actual	$ 1.23 M

Project Schedule:

Approved 12/07/20	12/31/26
Forecast 12/07/20	03/31/27

Project Percent Complete: 9.8%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	08/07/23	01/24/24	08/09/24	02/13/26

Progress and Status:

The project team has initiated the design phase this quarter and completed field investigations including topographic survey and geotechnical investigation. The project team anticipates completing the 35% deliverable in the upcoming quarter.

Issues and Challenges:

The budget increase reflects additional alternative analysis efforts and the projected increase in construction cost (based on Conceptual Engineering Report). The project schedule reflects a program-wide direction to extend the bid and award phase from six to eight months.

Seacliff Pump Station No.1

10037246 - Seacliff No. 2 PS & FM Upgrade

Project Description: This project includes Planning (including condition assessment, needs identification, alternative analysis and conceptual engineering), Design, Right-of-Way, Environmental, Bid and Award, and Construction for the following scope of work and assumptions: Existing PS can be rehabilitated and upgraded to meet current building codes; Perform seismic retrofit of the existing pump station building and associated mechanical and electrical equipment, piping, and fittings; Address fire, emergency and health and safety requirements; Assume damaged concrete and exposed rebars can be repaired; Assume deterioration of the existing wet-wells can be repaired; Replace the three submersible pumps in kind (47 horsepower pumps); Replace other mechanical and process equipment, including: existing crane, bubbler system, piping, valves, inlet gate and operator, water system components, and washdown pump; Provide protective coating to all exposed metal piping, fittings, and valves; Replace all electrical equipment; Upgrade fiber optic connection; Address PS security needs, including providing: perimeter camera, access key box at gate, egress compliant gate hardware and level lockset or panic hardware exit devise and solid panel surrounding lock; Replace existing eight-inch force main with 16-inch force main in the same alignment.

Program: Pump Stations and Forcemain Improvements	**Project Status:** Planning	**Environmental Status:** Not Initiated (Cat Ex)

Project Cost:

Approved	$ 19.32 M
Forecast	$ 20.80 M
Actual	$ 1.11 M

Project Schedule:

Approved 12/14/20	01/31/28
Forecast 12/14/20	04/03/28

Project Percent Complete: 6.6%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	04/25/23	03/25/24	09/30/24	01/04/27

Progress and Status:

During this quarter, the design team continues to prepare 35% design deliverable.

Issues and Challenges:

The budget increase reflects a refinement of electrical and mechanical scopes of work identified during planning phase. The schedule changed to reflect an eight-month duration for bid and award and a slight extension of the planning phase.

Project team performing field measurements and investigation.

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. Address Other Safety Concerns, including evaluating and adding a gas detection system, as necessary; Add site lighting at egress penthouse and entrance to the station.

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

Project Cost:

Approved	$ 15.54 M
Forecast	$ 15.54 M
Actual	$ 0.72 M

Project Schedule:

Approved 12/14/20	05/29/26
Forecast 12/14/20	12/31/26

Project Percent Complete: 7.6%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	08/31/23	10/24/23	05/14/24	05/15/26

Progress and Status:

Project is progressing towards 35% design.

Issues and Challenges:

The scope addition added from last quarter did not impact the budget; however, the project schedule has been extended in anticipation for long lead items of equipment due to supply chain issues and limited construction work during wet weather season.

Sunnydale Pump Station

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:** Planning	**Environmental Status:** Not Initiated (EIR)

Project Cost:

Approved	$ 9.10 M
Forecast	$ 9.10 M
Actual	$ 0.07 M

Project Schedule:

Approved 06/01/22	05/03/27
Forecast 06/01/22	06/30/27

Project Percent Complete: 1.7%

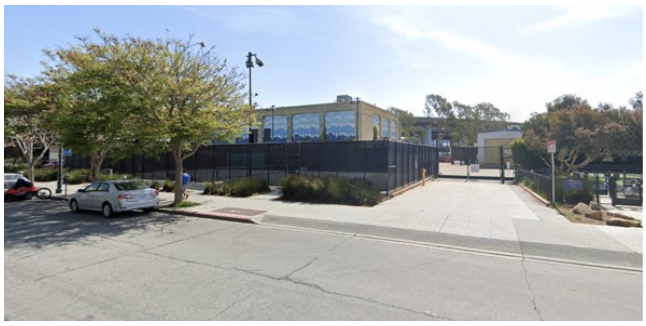
Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	02/29/24	10/21/24	05/27/25	11/18/26

Progress and Status:

During this quarter, the project team continued with the planning phase and began gathering and reviewing existing information, meeting with Operations and Maintenance staff, and setting up site specific visits to help define scope of work for the project.

Issues and Challenges:

The schedule has been updated to reflect an eight-month duration for bid and award.



Channel 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 investigating options to improve maintenance access 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:** Planning	**Environmental Status:** Not Initiated (Cat Ex)

Project Cost:

Approved	$ 1.85 M
Forecast	$ 1.85 M
Actual	$ 0.05 M

Project Schedule:

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

Project Percent Complete: 3.6%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	04/26/23	05/13/24	08/08/24	07/09/25

Progress and Status:

During this quarter, the project team completed the planning phase, and will proceed under the contracting method of Job Order Contract (JOC). The project is initiating design phase.

Issues and Challenges:

None at this time.

Entrance to Geary Underpass Pump Station

10037245 - Brannan (019) CSD Discharge and Baffle Rehabilitation

Project Description: The components of the project at Brannan Combined Sewer Discharge (CSD) involve the following, as recommended in the 2019 AAR: Replace the butterfly valve and hydraulic actuator, two sensors, corroded metal stilling wells, the flap gate with an inline check valve, and access ladder; Install baffle for floatables control; Conduct concrete patching and repair works and repair exposed rebar.

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

Project Cost:

Approved	$ 7.95 M
Forecast	$ 7.95 M
Actual	$ 0.28 M

Project Schedule:

Approved 12/07/20	05/01/26
Forecast 12/07/20	10/30/26

Project Percent Complete: 4.7%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	01/31/24	05/03/24	12/09/24	12/10/25

Progress and Status:

The draft Conceptual Engineering Report is expected to be done in the upcoming quarter.

Issues and Challenges:

The change in schedule was due to added Hydrologic and Hydraulic studies as requested by management to clarify scope and the two-months extension of bid and award phase per program-wide direction.

Brannan CSD Leaking Butterfly Valve.

10037244 - Baker (009) Baffle Improvements and Repair of Backflow Valve

Project Description: The components of the project at Baker CSD involve installing a baffle on the east overflow weir; Patching and coating minor exposed aggregate in the former DAF chamber; Repairing the western array of valves to stop leaking; Repairing the eastern array of valves to prevent leaking; Repairing or replacing deteriorated metal plumbing pipes; Repairing minor defects including missing aggregate and infiltration in connecting sewer.

Program: Combined Sewer Discharge (CSD) and Transport/Storage Structures	**Project Status:** Bid and Award	**Environmental Status:** Completed (Not a project under CEQA)

Project Cost:

Approved	$ 2.86 M
Forecast	$ 2.86 M
Actual	$ 0.43 M

Project Schedule:

Approved 12/07/20	08/30/24
Forecast 12/07/20	10/10/24

Project Percent Complete: 16.5%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	07/15/22 A	10/14/22 A	05/01/23	01/02/24

Progress and Status:

The project team had the bid opening in this quarter and anticipates to award the contract in the upcoming quarter.

Issues and Challenges:

Planning was extended to consider some of the client requests and program-wide direction to extend the bid and award from six to eight months.

Leaky backflow preventor valve at Baker CSD.

10038468 - System-wide CSD & T/S Monitoring Equipment Assessment

Project Description: The project involves a system-wide assessment of all of the 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 the location, condition, reliability, etc for the current monitoring equipment and compare that 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, or 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 the following CSD locations: CSD 001 – Lake Merced (3 sensors); CSD 002 – Vicente (3 sensors); CSD 003 – Lincoln (3 sensors); CSD 005 – Seacliff 1 (3 sensors); CSD 007 – Seacliff 2 (2 sensors); CSD 009 – Baker (1 sensor, relocated from Pierce CSD); CSD 025 – 6th Street (1 sensor); CSD 029 – Mariposa (3 sensors); CSD 031A – Islais Creek (1 sensor); CSD 041 – Yosemite (1 sensor); CSD 043 – Sunnydale (1 sensor). An additional allowance of $2,000,000 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	$ 9.29 M
Actual	$ 0.06 M

Project Schedule:

Approved 01/18/22	02/01/27
Forecast 01/18/22	03/31/27

Project Percent Complete: 1.2%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	09/30/24	02/14/25	09/08/25	08/31/26

Progress and Status:

As part of the needs assessment process, the project team started gathering data and information on existing collection system flow monitoring devices/sensors that are installed at various locations in San Francisco. Resource planning is also underway as part of the project's execution plan.

Issues and Challenges:

The project schedule reflects a program-wide direction to extend the bid and award phase from six to eight months.

Existing field instrumentation equipment installed in a sewer manhole

10038547 - CSD Structure Rehab & Upgrades - Part 1

Project Description: Laguna (CSD 011): Concrete spall and crack repair, rehabilitate existing discharge pipe with carbon fiber wrap or similar material and repair baffles; Howard (CSD 018): Improve floatables control; repair butterfly valve; replace conduit; patch and coat concrete and exposed rebar; repair missing bricks and mortar; seal cracks; Fourth St. North (CSD 023): Patch and coat concrete defects and exposed rebar; investigate potential pipe sag, repair missing bricks and mortar, seal cracks and fractures; 3rd St (CSD 022): Repair areas of spalled concrete, repair missing bricks and mortar and fiber glass lining, repair exposed aggregate, seal major cracks and fractures; 6th S (CSD 027): Repair areas of missing concrete; address general spot repair locations in chamber, repair areas of spalled concrete, Seal major cracks replace baffle wall boards, relocate new bolts inward, and potentially replace brackets; 4th St S (CSD 028): Address general spot repair locations in chamber, repair areas of spalled concrete; Mariposa (CSD 029): Patch and coat concrete and exposed rebar; seal cracks, repair cracks and fractures; repair or replace manhole cover and ladder rungs, replace monitoring line brackets, Evans (CSD 037): Seal infiltration cracks and holes, patch and repair concrete defects, patch and repair exposed rebar and missing aggregate, repair or replace baffle brackets, Lake Merced (CSD 001): Seal infiltration cracks and holes, patch and coat concrete defects and exposed rebars.

Program: Combined Sewer Discharge (CSD) and Transport/Storage Structures	**Project Status:** Planning	**Environmental Status:** Not Applicable (Not a project under CEQA)

Project Cost:

Approved	$ 39.65 M
Forecast	$ 39.65 M
Actual	$ 0.33 M

Project Schedule:

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

Project Percent Complete: 2.4%

Key Milestones		Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	A	10/31/22 A	09/25/23	05/20/24	08/05/25
	B	10/31/22 A	03/01/24	09/23/24	11/07/25
	C	04/04/25	07/31/25	02/27/26	04/16/27

Progress and Status:

This project includes the following Combined Sewer Discharge (CSD) contracts: (A) Laguna & Howard Streets CSDs; (B) Mission Bay CSD; and (C) TBD #1. Contract A: CER for Laguna and Howard Combined Sewer Discharges was completed and design phase is initiated in this quarter. Enhanced condition assessment for Laguna/Howard is anticipated to start in the upcoming quarter. Contract B: Draft CER for Mission Creek CSD was completed and the team anticipates presenting to Technical Steering Committee in the upcoming quarter.

Issues and Challenges:

None at this time.

Howard CSD inspection after cleaning.

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	$ 20.79 M
Forecast	$ 25.59 M
Actual	$ 4.00 M

Project Schedule:

Approved 12/03/12	10/29/27
Forecast 12/03/12	11/08/28

Project Percent Complete: 21.9%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	08/15/17 A	02/01/24	08/29/24	07/31/26

Progress and Status:

During this quarter, the project team validated the project design criteria developed by the prior design consultant in preparation for submittal of the design criteria report. The project team submitted an encroachment permit to SFRPD to perform geotechnical borings.

Issues and Challenges:

The project scope has increased to include ADA improvements required by the Public Works Disability Access Coordinator. In addition, maintenance and repair of the Richmond Green Infrastructure Project (DB05) will be performed under this project. The budget variance is due to the additional scope, increased design costs, and construction cost escalation. The schedule variance results the additional time required to procure consultant services.

View of existing conditions at the Louis Sutter Soccer Field.

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	$ 38.90 M
Forecast	$ 34.11 M
Actual	$ 22.50 M

Project Schedule:

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

Project Percent Complete: 73.5%

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	03/12/24

Progress and Status:

The sewer mains, 8-inch domestic water line, junction structures and 9 out of 12 stormwater inlets were completed in this quarter with trench restoration. With the tunneling, sewer mains, and a majority of sewer structures complete, the project was ready for the storm events in the upcoming quarter. Installation of 36" steel pipe for potable water for firefighting has been ongoing.

Issues and Challenges:

Some of the project construction contingency was released due to completion of the tunneling scope.

Installation of 36-inch steel pipe

10029726 - Watershed Stormwater Management (Planning Only)

Project Description: This project will address long term Green Infrastructure (GI) development process and how it will be integrated and prioritized in the Collection System Plan and UWA report. A portion of the funds will be used to implement billing system upgrades that will enable the roll out the stormwater fee. Funding is also allocated for the Planning GI projects on San Francisco Unified School District (SFUSD) sites.

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

Project Cost:

$ 19.00 M
$ 19.00 M
$ 7.10 M

Project Schedule:

06/30/32
06/30/32

Project Percent Complete: 37.5%

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

Progress and Status:

During the current quarter, the project team continued work on technical support for Flood Resilience Programmatic Strategies, green infrastructure projects and programs, and billing system upgrades.

Issues and Challenges:

None at this time.

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. 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 $765,000 per acre of impervious surface managed, up to $2 million per project.

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

Project Cost:

Approved	$ 61.32 M
Forecast	$ 61.32 M
Actual	$ 3.54 M

Project Schedule:

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

Project Percent Complete: 7.4%

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

Progress and Status:

During this quarter, SFPUC closed its Fall 2022 application cycle on October 31st. Six applications were received for the Fall 2022 cycle, all of which met the minimum program requirements and were awarded grants, totaling $7.25M in new grant awards. Of the six new grantees, four projects will be located on San Francisco Unified School District schools (Everett MS, Visitacion Valley ES, El Dorado ES, and Buena Vista Horace Mann School), one will be at an artist community (Project Artaud), and one will be at a public institution (UCSF Parnassus). One current project, Lycee Francais SF Ortega Campus completed construction during the fourth quarter. Six projects, Crocker Amazon Park, St. Thomas More School, St. Monica, St. Thomas the Apostle, St. Emydius, and St. Anne of the Sunset continued project design.

Proposed Stormwater Schoolyard at Everett Middle School

Issues and Challenges:

None at this time.

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 Rosa Parks Elementary School, led by SFPUC. In addition to the stormwater performance metrics, the project produces the following additional benefits: manage up to 7 acres of DMA; integrate multi-purpose 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; and deliver neighborhood-scale place-making co-benefits in one of San Francisco's identified disadvantaged communities.

Program: Watershed Stormwater Management	**Project Status:** Design	**Environmental Status:** Not Initiated (TBD)

Project Cost:

Approved	$ 9.34 M
Forecast	$ 9.63 M
Actual	$ 0.00 M

Project Schedule:

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

Project Percent Complete: 8.1%

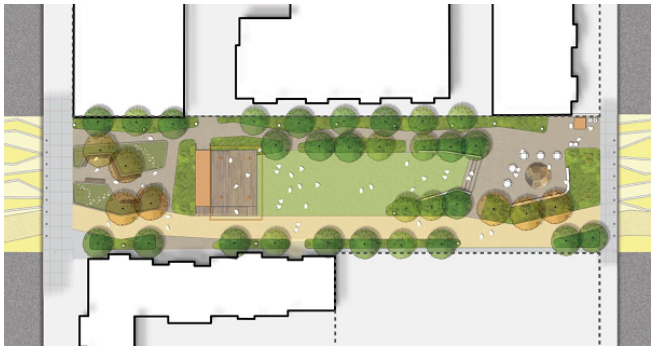
Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	09/29/23	05/01/24	10/31/24	06/30/26

Progress and Status:

This quarter sewer design progressed from 35% Design to 65% Design. In addition, the design team submitted the 35% Design package for the green infrastructure for three of the five blocks in the Buchanan St. Mall. During the quarter, San Francisco Recreation & Parks Department received supplemental grant funding that will enable all five blocks of the Buchanan Street Mall to be constructed in a single phase. Design development of the green infrastructure for the two blocks that were not included in the 35% Design submittal commenced.

Issues and Challenges:

Rehabilitation of the existing brick sewer is required prior to park renovation, and therefore cured-in-place-liner has been added to the project scope for 3 blocks. Off-site GI improvements at Rosa Parks Elementary School, African American Cultural Center, Grove Street Parking Lot and Urban Dry Creek have been deferred. The budget variance results from the scope change and construction cost escalation. In order to meet San Francisco Recreation & Parks schedule, work on the Buchanan St. Mall was initiated under Watershed Stormwater Management Planning.



Concept Design for the McAllister to Fulton Street block of the Buchanan St. 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, or in the future improved through project CWWSIPFCRP01). The real-time data will be coupled with Waste Water Enterprise's (WWE) collection system hydraulic model to project 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	$ 6.72 M
Actual	$ 4.00 M

Project Schedule:

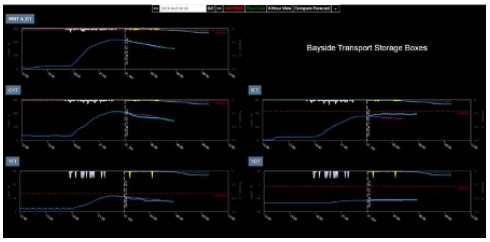
Approved 02/01/17	09/30/25
Forecast 02/01/17	09/30/25

Project Percent Complete: 65.2%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	N/A	12/18/17 A	02/22/18 A	06/30/25

Progress and Status:

This is a software development project. (Notice to Proceed) NTP represents the date of award for software development agreement. Quality assurance and control activities of the operational decision system and the raw data coming from the thirty (30) newly installed flow monitoring devices continued during this quarter. Significant raw data was collected during the heavy Bay Area storms this December. Coordination with SFPUC Information Technology Services (ITS) also continued this quarter.



One of the Operational Decision System screens

Issues and Challenges:

None at this time.

10034360 - Lower Alemany Area Stormwater Improvement Project

Project Description: The primary objective of the Lower Alemany Area Stormwater Improvement Project is to address the Sewer System Improvement Program (SSIP) levels of service (LOS) goals of managing stormwater and protecting and streets and properties from a statistically derived storm lasting 3 hours, with a total of 1.3 inches of rainfall and defined peak rainfall intensity (5-year 3-hour storm, LOS storm). This project will include planning, design, and construction of an improved conveyance system in the Lower Alemany area that manages the stormwater and minimizes flooding in the LOS storms. Detail project scope will be developed based on the preferred alternative identified during the planning phase.

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

Project Cost:

Approved	$ 299.56 M
Forecast	$ 299.56 M
Actual	$ 5.49 M

Project Schedule:

Approved 01/02/19	09/06/28
Forecast 01/02/19	11/01/28

Project Percent Complete: 3.5%

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:

The Technical Steering Committee has approved Conceptual Engineering Report (CER) and the CER was finalized in this quarter. The project team has completed the field studies including topographic survey and potholing. The seismicity report, soil-structure interaction work plan and the geotechnical interpretative report are completed as well. These reports are essential for the design phase and coordination efforts with Caltrans. The project team anticipates to begin the design phase, including Phase 2 geotechnical investigation, and continue the process of establishing co-operative agreement with Caltrans, in the upcoming quarter.

Issues and Challenges:

The project schedule reflects a program-wide direction to extend the bid and award phase from 6 to 8 months.

Flooding at the I-280/Hwy 101 interchange at Lower Alemany area, during the rainfall of February 13, 2019

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 which is anticipated to be complete in December of 2023. Construction will be covered by Folsom Area Stormwater Improvement Project Phase 2.

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

Project Cost:

Approved	$ 38.41 M
Forecast	$ 38.41 M
Actual	$ 14.93 M

Project Schedule:

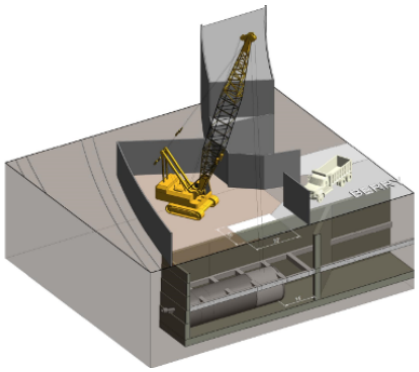
Approved 07/01/16	12/27/23
Forecast 07/01/16	12/27/23

Project Percent Complete: 44.8%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	03/13/23	N/A	N/A	N/A

Progress and Status:

Project includes Planning, Environmental, Right of Way and Design Phases only. Phase 2 of the Folsom Project (10038471) includes bid and award through construction. The project is being implemented through (4) contracts: WW-719A Initial Upstream Pipe WW-719B Tunnel WW-719B Sewer Box WW-719D Large Upstream Pipe In this quarter, the City team finalized the 95% design for the Alameda Street Wet Weather Tunnel, started the 35% design for the Division Sewer Box, and began the Soil-Structure Interaction modeling for the Caltrans Pile Modification (all three are a part of Contract WW-719B). Also, the team nearly completed the 65% design for (Contract WW-719C). In addition, the project team finalized the initial property appraisals for three sub-surface easements necessary for the tunnel alignment (WW-719B). 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:

None at this time.

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:** Bid and Award	**Environmental Status:** Not Initiated (TBD)

Project Cost:

Approved	$ 259.91 M
Forecast	$ 282.01 M
Actual	$ 0.00 M

Project Schedule:

Approved 07/04/22	06/30/27
Forecast 10/17/22	06/30/27

Project Percent Complete: 0.0%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	N/A	11/01/23	12/01/23	12/31/26

Progress and Status:

In this quarter, the project team advertised the first contract for the Folsom Area Stormwater Improvement Project (WW-719A) and held a pre-bid meeting with potential bidders.

Issues and Challenges:

The budget increase reflects the latest engineer's estimates for the major components of this project, such as the need for secant piles for shoring of the tunnel shafts (versus the previously assumed sheet piles) and updated costs for the tunneling efforts based on a more refined design.

Flooding on Folsom Street between 16th and 17th Street.

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 - Foundation and Pile Installation (Issued POs for 2 Packages))	07/01/20	08/31/26	04/14/23	$226,946,240	$226,946,240	1,235	$0	96.9%
10015796 - SEP Biosolids Digester Facilities Project - (WW-647R/Scope II.B - Remainder of Scope II (Issued POs for 30 Packages))	07/01/20	08/31/26	05/12/28	$389,279,075	$389,279,075	(620)	$0	23.9%
New Headworks (Grit) Replacement								
10015807 - SEP New Headworks (Grit) Replacement - (WW-628/Scope III - New Headworks (issued POs for 61 Packages))	07/22/19	02/29/24	02/29/24	$347,136,844	$347,136,844	0	$0	58.5%
Southeast Plant (SEP) Improvements								
10015810 - SEP Seismic Reliability and Condition Assessment Improvements (WW-665)	09/09/19	03/31/21	06/22/22	$10,477,273	$9,907,273	(448)	$570,000	98.0%
10002284 - SEP Power Feed and Primary Switchgear Upgrades (WW-662R)	10/05/20	02/23/24	08/21/24	$31,638,483	$31,638,483	(180)	$0	51.0%
Oceanside Plant (OSP) Improvements								
10029736 - Westside Pump Station Reliability Improvements (WW-645R)	04/19/21	02/02/24	06/27/24	$48,999,080	$48,999,080	(146)	$0	86.1%

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	
10029737 - Oceanside Water Pollution Control Plant Digester Gas Utilization Upgrades (WW-639)	11/26/18	03/17/22	06/01/23	$42,028,701	$42,028,701	(441)	$0	27.1%
10036398 - OSP Condition Improvement Projects - Part 2 (Contract E, WW-648)	05/16/22	08/13/24	08/14/24	$6,490,014	$6,490,014	(1)	$0	9.0%
10036398 - OSP Condition Improvement Projects - Part 2 (Contract F, WW-669)	12/19/22	09/04/25	09/05/25	$9,160,000	$9,160,000	(1)	$0	0.0%
North Point Facility (NPF) Improvements								
10026822 - North Shore Pump Station Wet Weather Improvements (WW-685R)	04/19/21	05/08/23	05/06/24	$30,382,865	$30,382,865	(364)	$0	54.0%
Interceptors / Tunnels and Odor Control								
10034718 - Large Diameter Sewer Projects and Channel FM Intertie (Contract E, WW-731)	12/05/22	01/29/24	01/29/24	$10,542,103	$10,542,103	0	$0	0.1%
10034718 - Large Diameter Sewer Projects and Channel FM Intertie (Contract B, WW-712)	08/30/21	03/23/23	03/23/23	$7,564,750	$7,564,750	0	$0	90.0%
10034718 - Large Diameter Sewer Projects and Channel FM Intertie (Contract G, SFPW 1243I)	03/14/22	08/09/24	08/09/24	$2,145,475	$2,145,475	0	$0	4.0%
Interdepartmental Projects								
10002664 - Van Ness BRT Sewer Improvements (No. 1289) ***	01/16/18	12/30/22	03/31/23	$17,649,795	$17,649,795	(91)	$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	36.0%

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	
Pump Stations and Forcemain Improvements								
10026828 - Mariposa Dry-Weather Pump Station & Force Main Improvements (WW-667)	01/28/19	12/30/22	03/01/23	$18,428,202	$18,428,202	(61)	$0	98.0%
Watershed Stormwater Management								
10026816 - Wawona Area Stormwater Improvement Project (WW-711)	07/26/21	03/12/24	03/12/24	$29,312,100	$29,312,100	0	$0	84.0%
Advanced Rainfall and Operation Decision System								
10029730 - Operational Decision System Phase 2 (OM525-101)	02/28/18	06/30/25	06/30/25	$2,261,937	$2,261,937	0	$0	56.0%

	Approved Contract Cost	Current Forecast Cost	Variance	
			Cost	Percent
Program Total for On-Going Construction	**$1,247,442,937**	**$1,246,872,937**	**$570,000**	**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
Sewer System Improvement Program Phase 1				
10002102 - Central Bayside System Improvement Project - Phase 1				
10002303 - Beach and Sansome Street CSD Rehabilitation	04/29/22	06/30/22	$4,337,533	$3,880,127
10002344 - CSD Backflow Prevention and Monitoring	04/12/22	04/12/22	$4,944,414	$4,285,112
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	$7,986,276	$8,064,938
10002485 - Griffith Pump Station Improvements	01/27/21	01/27/21	$11,711,840	$11,465,247
10002670 - Geary BRT Sewer Improvements Phase 1	06/30/22	06/30/22	$7,989,681	$7,872,450
10002687 - Mission Bay Loop Sewer Improvement	12/01/20	12/01/20	$261,347	$261,347
10002760 - Cargo Way Sewer Box Odor Reduction	04/26/22	04/26/22	$4,977,880	$4,791,213
10015810 - SEP Seismic Reliability and Condition Assessment Improvements	09/09/22	06/22/22	$27,884,637	$23,205,875
10026805 - Sunset Green Infrastructure	09/23/21	09/23/21	$4,489,547	$4,316,443
10026809 - Richmond Green Infrastructure	12/30/21	10/28/22	$8,650,888	$8,330,937
10026820 - Hydraulic and Drainage Sewer Improvements	09/08/18	09/08/18	$3,557,202	$3,087,202
TOTAL			**$90,412,337**	**$83,181,983**

10. COMPLETED PROJECTS

Project Title	2016 Baseline Project Completion	2022 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2016 Baseline Project Budget	2022 Approved Project Budget	Current Approved Project Budget	Project Expenditures To Date
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	$45,016,932	$44,802,184
10026826 - SEP Existing Digester Gas Handling Improvements	03/05/19	02/28/20	02/28/20	02/28/20	$22,143,317	$15,878,503	$15,878,581	$15,878,581
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	$1,862,449	$1,862,449
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
Interceptors / Tunnels and Odor Control								
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
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
10002767 - Rutland Sewer Improvements	04/26/18	09/21/18	09/21/18	09/21/18	$1,500,000	$1,500,000	$1,465,319	$1,465,319
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								
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
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
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
Early Implementation Projects								
- Islais Creek Green Infrastructure	10/30/26	04/24/18	04/24/18	04/24/18	$4,929,908	$2,425,008	$2,425,008	$1,008,090

Project Title	2016 Baseline Project Completion	2022 Approved Project Completion	Current Approved Project Completion	Actual Project Completion	2016 Baseline Project Budget	2022 Approved Project Budget	Current Approved Project Budget	Project Expenditures To Date
- Cesar Chavez Green Infrastructure	06/28/13	06/28/13	06/28/13	06/28/13	$1,374,143	$1,374,143	$1,374,143	$1,374,143
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	$6,287,009	$6,287,009
10026808 - Sunnydale Green Infrastructure	11/30/20	09/30/19	09/30/19	09/30/19	$4,950,001	$5,412,268	$5,412,268	$5,073,699
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	$2,198,796
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	$3,206,463	$3,206,463	$3,206,463
10026817 - Cayuga Ave Stormwater Detention Project	01/07/20	03/29/19	03/29/19	03/29/19	$8,253,000	$428,078	$428,078	$426,555
10026819 - 17th and Folsom Permanent Barriers	04/02/18	03/29/19	03/29/19	03/29/19	$2,656,000	$176,151	$175,540	$175,540
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	$84,354,151	$84,354,151
10029734 - Land Reuse of 1801 Jerrold Avenue	12/04/17	12/24/21	12/24/21	12/24/21	$8,244,010	$5,100,000	$767,372	$767,372
TOTAL					**$414,323,972**	**$340,643,123**	**$336,279,843**	**$334,240,603**

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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 for necessary upgrades to aging facilities which are not addressed by the SSIP or R&R to maintain their intended functions. Projects will include improvement to Treasure Island wastewater facilities and improvements to wastewater support facilities (office consolidation, Southeast Community Facility).

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, 2022 and December 31, 2022.
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 shows the total Current Approved Budget for the Facilities and Infrastructure program projects remaining in each phase of the program as of December 31, 2022. The number of projects currently active in each phase is shown in parentheses.

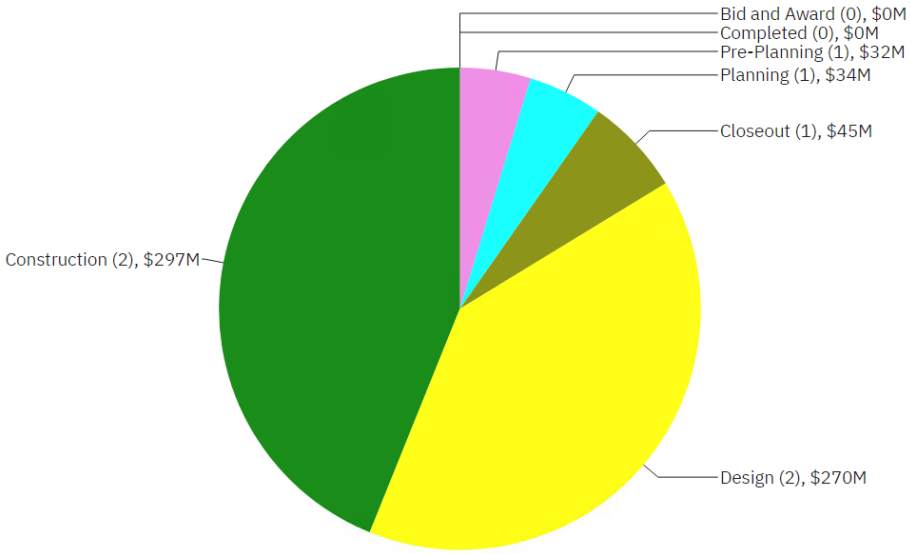


Figure 2.1 Total Current Approved Budget for Facilities and Infrastructure Program Projects Active in Each Phase

Figure 2.2 shows the number of Facilities and Infrastructure Program projects in the following stages of the program as of December 31, 2022: Pre-construction, Construction, and Post-construction.

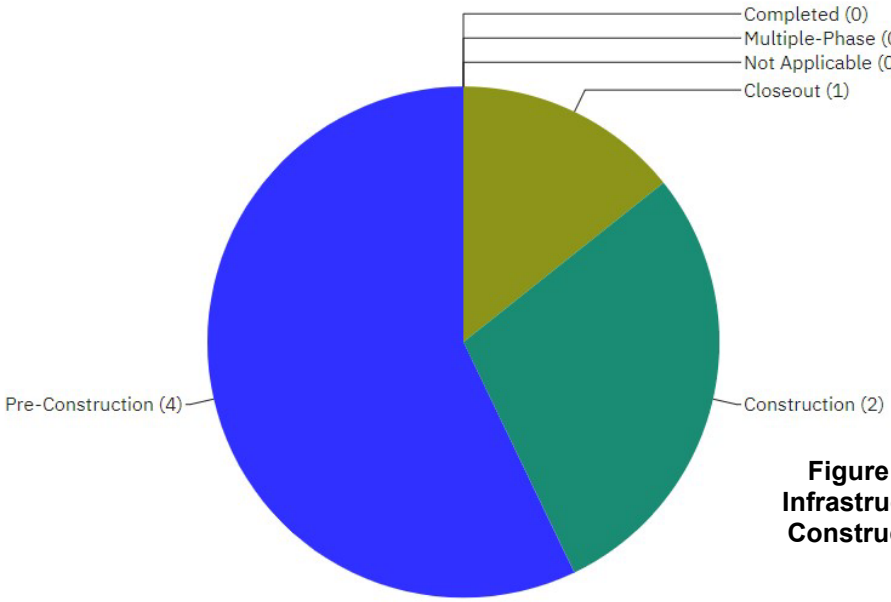


Figure 2.2 Number of Facilities and Infrastructure Program Projects in Pre-Construction, Construction, and Post-Construction

Figure 2.3 summarizes the environmental review and permitting status of the Facilities and Infrastructure Program projects as of December 31, 2022.

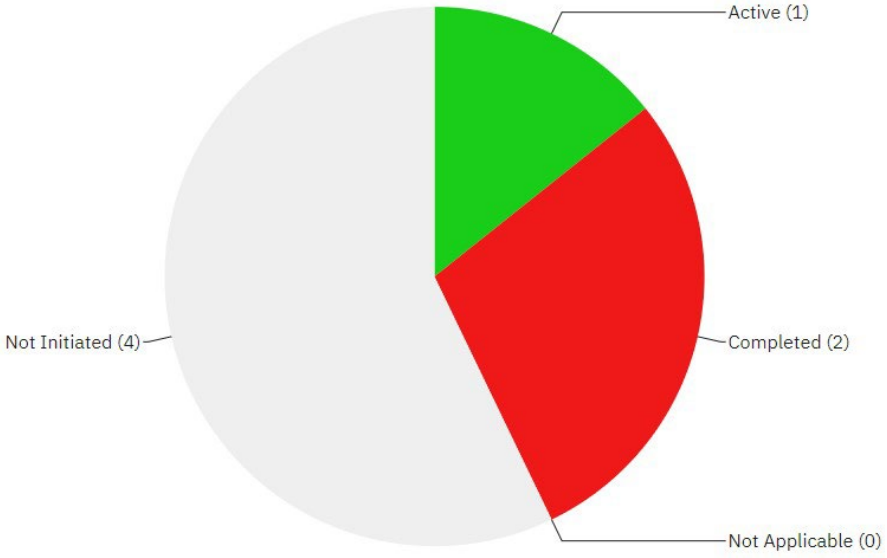


Figure 2.3 Program Environmental and Permitting Status of the Facilities and Infrastructure Program Projects

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/FY22-23 Forecast Costs, Cost Variance between the Current Approved and Forecast Cost, and Variance Over Reporting Period. The Current Approved Budget is $677.8 million and the currently Forecast Cost (based on the proposed project list) at completion is $648.6 million ($29.2 million under the Current Approved Budget).

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	$193.9	$677.8	$648.6	$29.2	$26.2

* 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.

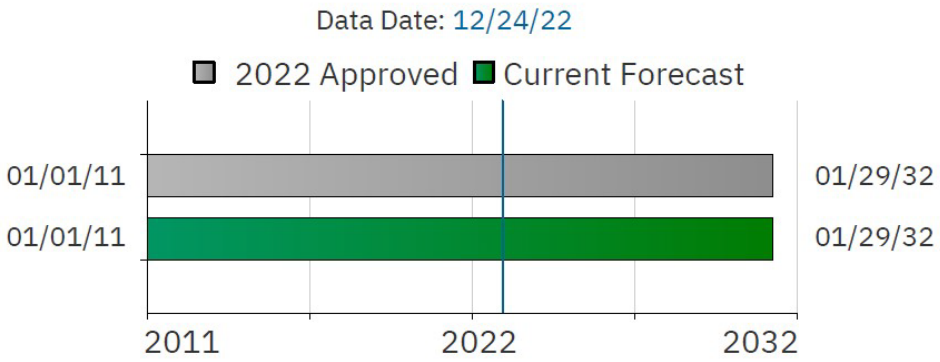


Figure 4. Program Schedule Summary

Table 4. Current Approved vs. Current Forecast 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 A	01/29/32	01/29/32	-

* "A" represents the actual date.

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.

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	FY23-32		07/01/19		06/30/23		08/30/24		06/27/25		01/22/26		Q2 - FY22-23	
	$33.8	04/05/30	$33.8	01/31/28	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	$33.8	09/30/30
10015546 New Treasure Island Wastewater Treatment Plant	FY23-32		06/18/18		04/02/19		TBD[3]		TBD[3]		10/24/22[4]		Q2 - FY22-23	
	$202.2	05/22/26	$67.4	11/01/22	$67.4	01/29/24	TBD	TBD	N/A	N/A	$222.2	08/26/26	$222.2	08/26/26
10015554 Ocean Beach Climate Change Adaptation Project	FY23-32		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) 02/16/23 (D) 02/16/23 (E) 02/16/23		(A) N/A (B) 06/30/22 (C) 03/08/24 (D) 07/03/24 (E) 06/02/26		Q2 - FY22-23	
(A) ACOE Beach Nourishment (B) Ocean Beach Short-Term Improvements (C) Ocean Beach Long-Term Improvements - Intersection (D) Ocean Beach Long-Term Improvements - Seawall (E) Ocean Beach Long-Term Improvements - Planting	$183.4	06/16/28	$126.7	01/30/26	$169.9	07/01/27	$169.9	07/01/27	TBD	TBD	TBD	TBD	$191.0	01/23/32
10015556 Southeast Community Center at 1550 Evans [2]	FY23-32		07/01/19		01/31/18		01/31/18		07/31/19		01/13/20		Q2 - FY22-23	
	$114.0	12/29/23	$108.5	12/19/23	$108.5	12/19/23	$108.5	12/29/23	$108.5	12/29/23	$108.5	12/29/23	$115.4	12/29/23
10015557 Southeast Bay Outfall Islais Creek Crossing Replacement	FY23-32		09/26/16		N/A		N/A		N/A		N/A		Q2 - FY22-23	
	$67.6	06/03/26	$15.0	02/07/22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$13.0	07/03/24

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 Design-Build (DB). All Design and Construction milestones will be determind when the Design Build contractor has been given notice to proceed.
4. 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	$33,775	$1,497	$0	0%	04/05/30	04/05/30	09/30/30	(178)
10015546 New Treasure Island Wastewater Treatment Plant	DS	$202,208	$202,208	$222,170	$8,637	($19,962)	(10%)	05/22/26	05/22/26	08/26/26	(96)
10015554 Ocean Beach Climate Change Adaptation Project	CN	$183,489	$183,489	$191,883	$24,643	($8,394)	(5%)	01/12/28	01/12/28	01/23/32	(1,472)
10015556 Southeast Community Center @ 1550 Evans	CN	$114,000	$114,000	$115,360	$108,918	($1,360)	(1%)	12/29/23	12/29/23	12/29/23	0
10015557 Southeast Bay Outfall Islais Creek Crossing Replacement	DS	$67,600	$67,600	$13,000	$10,377	$54,600	81%	06/03/26	06/03/26	07/03/24	700

* 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 FY23-32.

(++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY23-32, 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	$ 33.78 M
Actual	$ 1.50 M

Project Schedule:

Approved 07/01/19	04/05/30
Forecast 07/01/19	09/30/30

Project Percent Complete: 6.7%

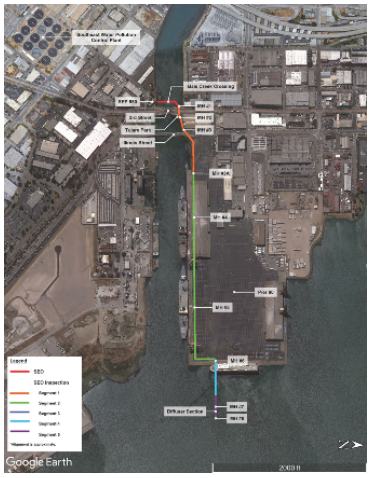
Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	TBD	10/29/25	04/06/26	04/05/30

Progress and Status:

The project team and consultant conducted Workshop No. 7 – SEO Brainstorming on December 8, 2022. This meeting was to review the identified improvements from the last workshop and brainstorm solutions based upon the condition assessment findings on the outfall system. WWE and project team decided on the short-term improvements needed over 15-year planning period and accepted elevated risks until long-term approach would be evaluated. The project team is working on finalizing the needs definition report focusing on short-term improvements approach.

Issues and Challenges:

During the Planning phase, extra time is required to define and perform the condition assessment. As previously reported, due to delay in contract amendment, the outfall inspection was delayed which pushed the forecast project completion further to September 2030.



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:** Design	**Environmental Status:** Completed (EIR)

Project Cost:

Approved	$ 202.21 M
Forecast	$ 222.43 M
Actual	$ 8.64 M

Project Schedule:

Approved 01/01/11	05/22/26
Forecast 01/01/11	08/26/26

Project Percent Complete: 6.4%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	07/31/23 A	12/27/21 A	04/18/23	02/27/26

Progress and Status:

The project delivery method for this project is Design-Build (DB).

The project team completed negotiations with the sole responsive bidder, and on December 13, 2022, the SFPUC Commission awarded the fixed-price design-build contract to PCL Construction, Inc.. Project team continues to work with the contractor and CAB to complete insurance/bonding documentation required to formalize the agreement. NTP is anticipated in January 2023. Project team continues to coordinate with City Attorney, SFPUC Real Estate Services regarding Final property transfer from TIDA to SFPUC.

Issues and Challenges:

The project cost increase is due to the sole responsible bid received and updated soft cost from performing SFPUC bureaus. The increase to the project duration accounts for the negotiations with the sole responsible bidder and delay in issuing NTP.

Surcharge Removal

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	$ 183.49 M
Forecast	$ 191.88 M
Actual	$ 24.64 M

Project Schedule:

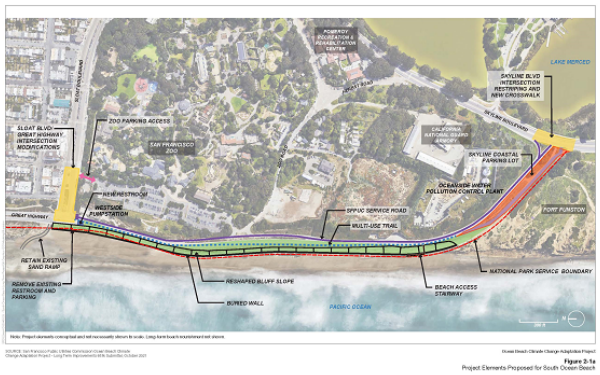
Approved 07/23/12	01/12/28
Forecast 07/23/12	01/23/32

Project Percent Complete: 14.6%

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	01/05/24	09/26/23	03/11/24	01/31/25
	D	01/05/24	01/29/24	07/05/24	09/05/28
	E	01/05/24	01/30/26	06/03/26	07/03/31

Progress and Status:

A) Short Term Improvements: This phase represents multi-year, as-needed protection of the bluff that overlays the Lake Merced Tunnel. Annual monitoring was completed and suggests coarse sand be placed this winter to aid in holding previously placed sand in place. Design details are complete and regulatory approval has been received. Work is being initiated under contract WW-714. B) Army Corps of Engineers (ACOE): This phase of the project will be designed and constructed by the ACOE. The work was completed and placed nearly 300,000 cubic yards of material on Ocean Beach. Contract close-out is still in process. Sand continues to migrate to the Great Highway south of Sloat Boulevard. Sand removal efforts continue. C) Long Term Improvement: This phase represents the first City and County of San Francisco Climate Change Adaptation Project requiring a high level of coordination with other City and County of San Francisco Agencies; negotiations on funding continues at a very slow rate and continues to impact overall project progress. 95% design has been delayed until funding is resolved; Response to Comments on the Draft Environmental Impact Report and Coastal Development Permit are in development.



Proposed Project Components

Issues and Challenges:

The budget and schedule variance is due to slow progress related to non-PUC funding issues, an update to the escalation rates, a total re-structuring of the contracting approach to allow for a separate landscaping/plant procurement and plant establishment contract, extended duration of construction, and complex real estate agreements with the National Park Service.

10015556 - Southeast Community Center @ 1550 Evans

Project Description: 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.

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

Project Cost:

Approved	$ 114.00 M
Forecast	$ 115.36 M
Actual	$ 108.92 M

Project Schedule:

Approved 07/26/12	12/29/23
Forecast 07/26/12	12/29/23

Project Percent Complete: 99.3%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	10/30/18 A	N/A	01/13/20 A	03/31/23

Progress and Status:

Substantial completion was issued on October 1 and the Grand Opening was held on October 22. Final completion is projected for March 31, 2023.

Issues and Challenges:

The increase in project cost is primarily attributed to the delay in getting permanent power from PG&E.

1550 Evans

10015557 - Southeast Bay Outfall Islais Creek Crossing Replacement

Project Description: The project involves replacing 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 ("crossing") is comprised of two ductile iron pipes (36-inch and 42-inch). The crossing is buried in the bottom of the creek bed on piles. The crossing is buried about 20 feet under the lowest point of the creek sediments, and that the water depth is about 30 feet. The crossing was constructed in 1967 and have reached the end of its useful life. The new Islais Creek crossing will consist of two new 54-inch outside diameter high density polyethylene ("HDPE") buried pipes to replace the existing crossing section. New structures on each side of the creek is proposed to tie the new pipes to the existing SEO system. The project will include actuated valves and pipes to divert flow between the new and existing systems, associated electrical and mechanical improvements as needed within the BPS.

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

Project Cost:

Approved	$ 67.60 M
Forecast	$ 13.00 M
Actual	$ 10.38 M

Project Schedule:

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

Project Percent Complete: 16.6%

Key Milestones	Environmental Approval	Bid Advertisement	Construction NTP	Construction Final Completion
Current Forecast	12/29/23	TBD	TBD	TBD

Progress and Status:

As stated previously, after presenting the alternatives to management, the design has been put on hold. Project is being re-evaluated as part of upcoming Capital planning efforts. The design team has been working with the design consultant to transfer project documents and prepare for contract closeout.

Issues and Challenges:

As mentioned previously, due to the challenging alternatives evaluation process, the project scope is currently being reconsidered, thus the schedule and budget is impacted and yet to be determined.

Current pipeline crossing at Islais Creek

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								
10015556 - Southeast Community Center @ 1550 Evans (WW-682R)	01/13/20	12/31/22	03/31/23	$81,140,294	$84,152,806	0	($3,012,512)	94.0%
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	0.0%

	Approved	Current	Variance	
	Contract Cost	Forecast Cost	Cost	Percent
Program Total for On-Going Construction	**$84,274,294**	**$87,286,806**	**($3,012,512)**	**(3.6%)**

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				
10015555 - Collection Division Consolidation (Griffith Yard Improvements)	05/22/19	05/22/19	$16,629,029	$16,629,029
TOTAL			**$16,629,029**	**$16,629,029**

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 a continuing 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.

San Francisco's sewer collection system was installed in phases beginning in the early 1870's. Many of the sewers are near the end of their useful life and are in need of urgent attention in order to continue to function at proper capacity and to meet regulatory standards. An asset management approach was developed to prioritize which assets within the sewer system should get attention first. For the R&R Collection System, the asset management base approach factors in the physical condition of the sewer, age, location, risk, public safety, Department of Public Work's street paving schedule, and various other factors. Approximately 12.4 miles of sewer replacement work was awarded in FY 13-14. In FY 14-15 the sewer replacement mileage target subsequently increases to 15 miles to meet Commission endorsed Level of Service goals.

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 treatment facility assets throughout San Francisco by helping to maintain their treatment capacity and performance and enable WWE to maintain regulatory compliance with Regional Water Quality Control Board (RWQCB) 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, 2022 and December 31, 2022.

The approved project budget and schedule were developed and approved by the appropriate Wastewater Enterprise Manager on December 31, 2022. 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 and 2.2 show 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, 2022.

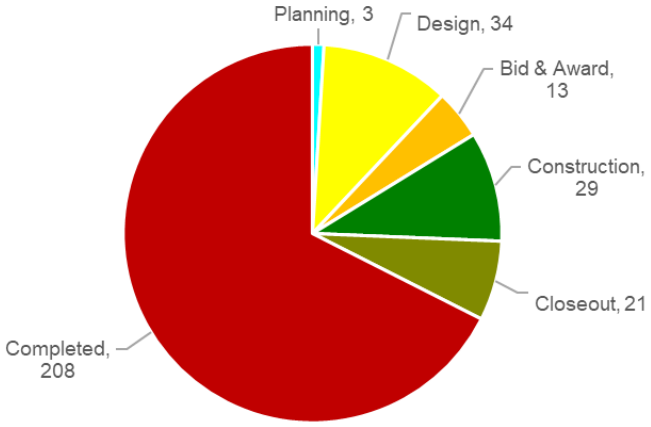


Figure 2.1 Total Number of Active R&R Collection Systems Projects in R&R Program

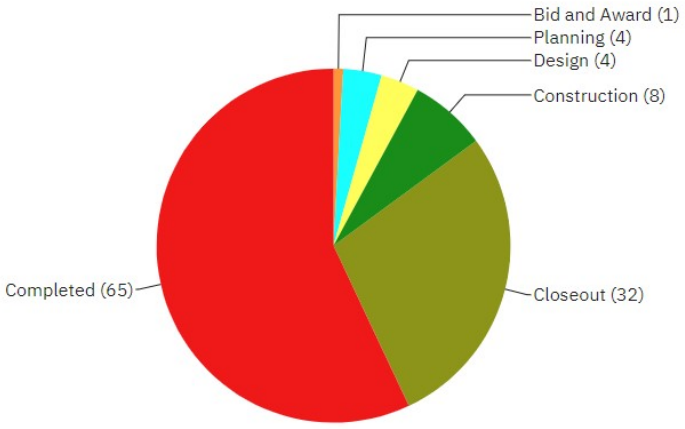
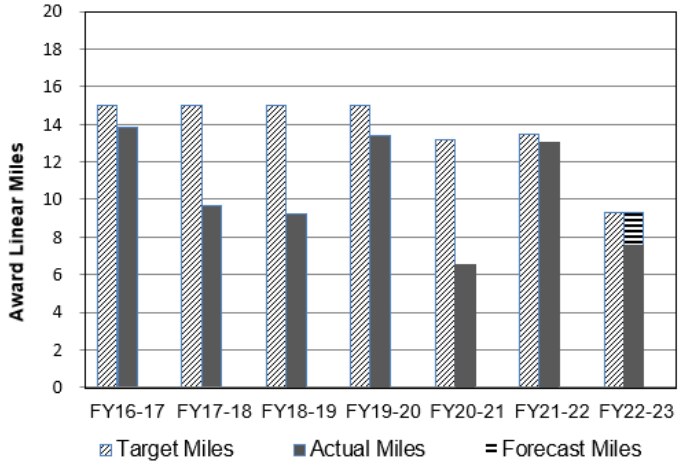


Figure 2.2 Total Number of Active R&R Treatment Facilities Projects in R&R Program

The Wastewater R&R Collection System Sewer Replacement Program has an annual budget of $54.5 million in FY23 to award a target of 9.3 miles of sewer replacement work in San Francisco.

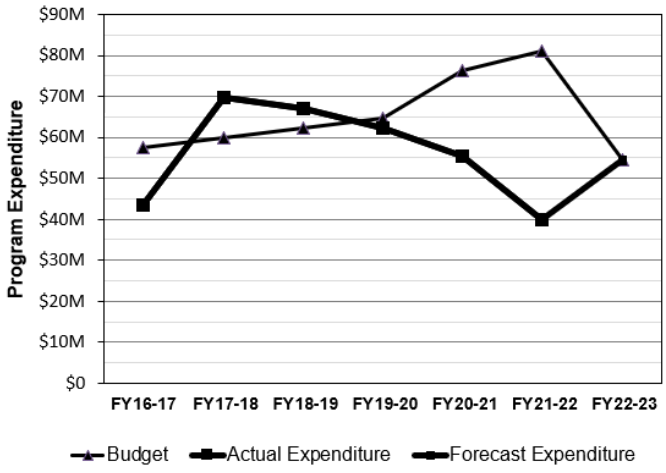
Figure 2.3 shows the target and actual award miles of sewer improvement projects that have been awarded to date and are forecasted to be awarded. The Wastewater R&R Collection System Sewer Replacement Program has awarded approximately 7.6 miles of sewer replacement work in FY23.



	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	FY21-22	FY22-23
Target Miles	15.0	15.0	15.0	15.0	13.2	13.5	9.3
Actual Miles	13.8	9.7	9.2	13.4	6.5	13.0	7.6
Forecast Miles							9.3

Figure 2.3 Wastewater R&R Collection System - Sewer Improvements - Award Linear Miles by Fiscal Year

Figure 2.4 shows the annual total program expenditure by fiscal year for the R&R Collection System Sewer Replacement program.



	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	FY21-22	FY22-23
Budget	$57.6M	$59.9M	$62.3M	$64.8M	$76.3M	$81.2M	$54.5M
Actual Expenditure	$43.4M	$69.7M	$67.0M	$62.4M	$55.5M	$61.9M	$40.4M
Forecast Expenditure							$54.5M

Figure 2.4 Wastewater R&R Collection System - 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 $1,202.03 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	$735.50	$986.69	$986.69	-
R&R Treatment Facilities	$145.78	$215.34	$215.34	-
Program Total	**$881.29**	**$1,202.03**	**$1,202.03**	**-**

4. PROGRAM SCHEDULE SUMMARY

Figure 4 and Table 4 compare the Current Approved Schedule completion dates and Current Forecast Schedule completion dates for the R&R program. The Approved Schedule completion for the overall R&R program is March 2024. The overall R&R Program is currently forecasted to be completed in March 2024.

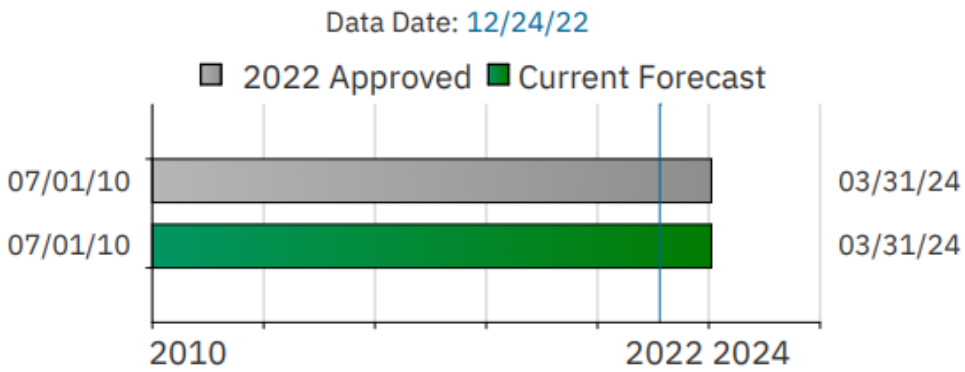


Figure 4. Program Schedule Summary

Table 4 Current Approved vs. Current Forecast Schedule Dates

Sub-Program	Current Approved Project Start	Actual Start *	Current Approved Completion	Current Forecast Completion	Schedule Variance (Months)
R&R Collection Systems	07/01/10	07/01/10 A	03/31/24	03/31/24	-
R&R Treatment Facilities	07/01/10	07/01/10 A	02/14/24	02/14/24	-
Overall Program	**07/01/10**	**07/01/10 A**	**03/31/24**	**03/31/24**	**-**

* "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	MP	$986,690	$986,690	$986,690	$735,504	$0	0%	03/31/24	03/31/24	03/31/24	0
Treatment Facilities											
Renewal & Replacement Program											
15724 R&R Treatment Facilities	MP	$215,341	$215,341	$215,341	$145,782	$0	0%	02/14/24	02/14/24	02/14/24	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 FY23-32.

(++) **Current Approved Budget and Schedule:** The budget and schedule approved as part of 10-year CIP for FY23-32, 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

Project Description: The purpose of the Wastewater Enterprise (WWE) Renewal and Replacement Program (R&R) Collection System Sewer Improvements 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, large diameter (greater than 36-inch) sewer condition assessment, large diameter (greater than 36-inch) sewer improvements and sewer transport storage box condition assessment. 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	$ 986.69 M
Forecast	$ 986.69 M
Actual	$ 735.50 M

Project Schedule:

Approved 07/01/10	03/31/24
Forecast 07/01/10	03/31/24

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 projects in each phase of the program as of December 31, 2022. The three-hundred eight (308) WWE Collection Systems projects are distributed as follows:

Planning: 3

Design: 34

Bid & Award: 13

Construction: 29

Closeout: 21

Completed: 208

During this quarter, 6 new projects were initiated, 6 projects were advertised, 4 projects were awarded/awaiting NTP, 3 projects received NTP, 5 projects completed construction and 2 projects 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	$ 215.34 M
Forecast	$ 215.34 M
Actual	$ 145.78 M

Project Schedule:

Approved 07/01/10	02/14/24
Forecast 07/01/10	02/14/24

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 projects in each phase of the program as of December, 2022. The one-hundred and fourteen (114) active WWE Treatment Facility Repair projects are distributed as follows:

Planning: 4

Design: 4

Bid/Award: 1

Construction: 8

Closeout: 32

Completed: 65

Equipment Purchase FY23 to Date: Four (4) equipment purchases completed totaling $199,734.59

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	
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	1.8%
10034813 - As-Needed Main Sewer Replacement No. 8 - WW-697	11/30/20	01/03/23	01/03/23	$7,373,000	$7,373,000	0	$0	98.7%
10035398 - Various Locations Sewer Replacement No. 12 - WW-708	04/18/22	08/15/23	08/15/23	$3,682,947	$3,682,947	0	$0	51.8%
10035861 - As-Needed Sewer Cleaning and Inspection - WW-710R	02/01/22	08/24/23	08/24/23	$1,052,952	$1,052,952	0	$0	57.4%
10037103 - As-Needed Spot Sewer Replacement No. 43 - WW-715	03/01/22	04/04/23	04/04/23	$9,455,123	$9,455,123	0	$0	74.8%
Collection Systems								
10034813 - As-Needed Main Sewer Replacement No. 8 - WW-697	11/30/20	01/03/23	01/03/23	$7,373,000	$7,373,000	0	$0	98.7%
10034815 - As-Needed Spot Sewer Replacement No. 42 - WW-699	11/22/21	01/20/23	01/20/23	$10,396,689	$10,396,689	0	$0	93.6%
10034829 - As-Needed Sewer Cleaning and Inspection (FY21) - WW-700	11/23/20	08/10/23	08/10/23	$2,583,643	$2,583,643	0	$0	76.9%
10035307 - Various Locations Sewer Replacement No. 9 - WW-704	04/18/22	08/31/23	08/31/23	$3,637,362	$3,637,362	0	$0	66.9%
10035397 - Various Locations Sewer Replacement No. 11 - WW-707R	09/12/22	09/26/23	09/23/23	$3,422,168	$3,422,168	3	$0	27.4%
10035398 - Various Locations Sewer Replacement No. 12 - WW-708	04/18/22	08/15/23	08/15/23	$3,682,947	$3,682,947	0	$0	51.8%

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	
10035861 - As-Needed Sewer Cleaning and Inspection (FY22) - WW-710R	02/01/22	08/24/23	08/24/23	$1,052,952	$1,052,952	0	$0	57.4%
10036509 - As-Needed Main Sewer Replacement No. 9 - WW-713	12/13/21	11/23/23	11/23/23	$7,127,740	$7,127,740	0	$0	84.8%
10037103 - As-Needed Spot Sewer Replacement No. 43 - WW-715	03/01/22	04/04/23	04/04/23	$9,455,122	$9,455,122	0	$0	74.8%

	Approved Contract Cost	Current Forecast Cost	Variance	
			Cost	Percent
Program Total for On-Going Construction	**$83,242,660**	**$83,242,660**	**$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.

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

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).

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).

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.

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.

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.

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 Contact Channel 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.

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.

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.

10002284 SEP Power Feed and Primary Switchgear Upgrades

The project is intended to address the deficiency of the existing medium voltage power distribution system at Southeast Plant (SEP). The objective of the project is to increase reliability, redundancy and capacity of the electrical system to meet Sewer System Improvement Program ("SSIP") level-of-service ("LOS") requirements by upgrading the existing primary power feed by PG&E and obtaining a new redundant feed by Power Enterprise. The project will construct an elevated building to house the new Primary Power Switch Station and sub-structures sized to provide adequate power to new facilities in construction under SSIP, upgrade/replace aging existing unit substations, install power monitoring and control system for additional reliability and efficiency, as well as redundant services to the nearby pump stations.

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.

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.

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

This project will address inadequate ventilation issues, and health and safety concerns, at Southeast Plant buildings 040/041. Extensive cracks and exposed rusted rebar have been observed along the building's walls and joints. Overhead building structural supports are corroded and could potentially fail, and interior columns appear to be insufficient for lateral load transfer. To address these issues, this project will remove the superstructure housing the sedimentation tanks to create an open-air process facility with covered tank openings and an associated odor control system. Replacement and relocation of the utility lines and reconnection to existing equipment is also needed. Furthermore, the existing control room and MCC room (SEP 043) that resides between SEP 040/041 will be effected, and relocation or retrofit would be needed. SEP 040, 041, and 043 are all located within the Southeast Treatment Plant Streamline Moderne Industrial Historic District. SEP 040/41 are considered structures that contribute to the historic district, although they are not individually eligible historic resources. As the objective of the project is to demolish the superstructures of SEP 040/041, impacts to these historic resources are unavoidable.

10037331 Maintenance Building (SEP 940) Interim Improvement

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).

10037353 SEP 550 Booster PS Condition Inspection & Interim

This project includes condition assessment of the influent channel and wet wells (confined space entry), 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).

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.

Balboa High School Regional Runoff Reduction Project

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.

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.

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.

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.

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

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.

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; Adjacency to large impervious parcels uphill from the school; Quantity and location of impervious area relative to irrigated open space and potential to combine the cistern with an ultra-high-efficiency irrigation system for the playing fields; 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 the upgradient Muni railyard next to the Balboa Park station, San Miguel Child Development Center, Civic Center Secondary School, James Denman Middle School, as well as the Balboa High School campus itself. Runoff from 17.3 acres is routed to a 690,000-gallon underground cistern tank integrated with an ultra-high-efficiency irrigation system underneath the football field as a replacement to the current artificial turf. This project includes 1,200 ft of separate storm pipe to divert flows from upstream parcels. Synergies with flooding challenges at the school and the desire to re-open basement level cafeteria and courtyard.

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.

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.

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.

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

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.

10037776 SEP Facilities Interim H&S Imp (SEP 850 & 930) - Cancelled

The SEP Buildings 850, 930, and 940 project involves health and safety improvements. Engineering Building (SEP 850), installing power-assisted door opening devices; Address leakage, and structural rehabilitation works on water damaged walls and ceilings; Install fall protection where required, and replace or upgrade the HVAC system. A seismic evaluation will be undertaken later as part of the "Seismic Evaluation and Retrofit" Project, which will assess and recommend seismic improvements to SEP 850; Admin Building (SEP 930), install emergency exit lighting and other required safety equipment; Install power-assisted door opening devices if required; Install fall protection where required; Replace or upgrade HVAC system and ventilation including lab fume hoods, where required; Remove or relocate fire-corridor obstructions; and, address water ponding issues A seismic evaluation will be undertaken at a later stage as part of the "Seismic Evaluation and Retrofit" Project, which will assess and recommend seismic improvements to SEP 930; Maintenance Building (SEP 940), install emergency lighting and exit signs at access door to roll-up door and remove tripping hazards at threshold (uneven door landing on pull side).

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.

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.

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.

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.

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.

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.

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 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.

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.

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.

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, as well as fully redundant influent channels with two redundant coarse bar screens. A 66"" forcemain connection will also be installed. 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, as well as in the T/S structures, pump stations, and outfalls to provide real-time system-wide monitoring and control. Maintenance Facilities Relocation: Involves relocating all the maintenance functions from existing buildings 800, 870, 871, and 925 to a new maintenance facility. Other North Point Facility Reliability and Redundancy Upgrades: Includes the W2/W3 & Transport Odor Control Project to bring W2 or W3 from SEP to NPF, and the Clarifier Tipping Buckets Project to install tipping buckets at the head of each clarifier for easier flushing. Security upgrades will also be completed. Redundant Wet Weather Fine Screens: Provides redundancy for wet weather fine screens by installing an additional 75 MGD fine screen. Jackson and Marina T/S Odor Control: Includes pulling air from the Jackson and Marina T/S structures and treating it at the new odor control facility. Dry Weather Grit Removal: Involves construction of a new 34 MGD gr".

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.

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.

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.

10002102 Central Bayside System Improvement Project - Phase 1

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.

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.

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.

10002760 Cargo Way Sewer Box Odor Reduction

This project will construct a new force main (flushing 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

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.

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

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.

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. As of September 2022, the list of subprojects under 10034718 include: A) Channel Force Main Intertie B) New Montgomery, Mission, Jessie, & Minna Streets Brick Sewer Rehabilitation C) Panhandle and Inner Sunset Sewer Improvements D) Tenderloin and Nob Hill Sewer Improvements E) Chinatown and North Beach Sewer Improvements F) Castro District Sewer Improvements G) South Van Ness Ave Sewer Improvements (joined Paving Project) H) East SOMA Sewer Improvements I) Hayes Valley Sewer Improvements J) West SOMA Sewer Improvements

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 - Phase 1

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.

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 Improvement

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.

10002695 Masonic Avenue Sewer Improvements

The proposed sewer work is as follows: • Furnish and install approximately 4,747 LF of 12-inch, 15-inch, 18-inch, 21-inh, and 24-inch vitrified clay pipe (VCP) • Line existing 12-inch diameter VCP sewer with cured-in-place liner • Construct 6 and/or 8-inch side sewer connections • Cast-in-place or precast manholes and catch basins • Clean/mortar existing manholes.

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 was initiated in 7/19. Segment B is from Sunset Blvd. to West Portal and that construction contract is expected to NTP in early 2020.

10033106 Geary BRT Sewer Improvements Phase 2

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.

10002417 Hudson Ave Pump Station and Outfall Improvements

The original project scope of work included replacing an existing pump with a new pump station to convey combined sewer flows from an easement sewer (located inside private properties) to the SFPUC sewer system. During the needs assessment and alternative analysis phases, the project team confirmed that only two properties located on Innes Avenue are served by the existing pump. Therefore, the selected solution was a “no project” alternative, where it was recommended that Wastewater Enterprise (WWE) de-activate the existing pump and easement sewer, because this would be the most cost-effective option. Wastewater Enterprise would need to work with the Department of Building Inspection and the affected property owners to re-route the sewer flows to the existing sewers located in the Innes Avenue. Therefore, this project completed the Alternative Analysis Report (AAR) and any remaining work is deferred to WWE for implementation.

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.

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.

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.

10002465 Marin Street Sewer Replacement

The purpose of the project is to upsize the existing 24-inch diameter sewers (located between the intersection of 3rd Street and Marin Street and the Marin Street Outfall Structure, or Project Location) to handle additional dry-weather flows projected from the tributary area. The wet-weather conveyance associated with this sewer system would also be evaluated but no wet-weather conveyance issues were included in this project. Hydraulic studies of the watershed area was 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. Based on the results from the hydraulic studies, the existing 24-inch diameter sewers at the Project Location were replaced with 30-inch diameter sewers. CEQA approval was obtained, along with other necessary permits such as BCDC and Caltrans permits. A MOU was executed with the SFMTA to execute this work as a portion of the Project Location is located within SFMTA jurisdiction.

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.

10037251 Seacliff No. 1 PS & FM Upgrade

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 and 8-inch force main (930 LF); Installation of flow monitoring devices for post-storm evaluation and floatable controls at the overflow structure to CSD 005; Connection from new pump station to CSD 005; Possibly installing a redundant pump for 'n+1' redundancy during wet weather and consider provisions for wet well isolation for maintenance and inspection, if feasible. As the current site is partially on Federal/GGNRA property, locating a suitable site may require additional coordination activities with the Real Estate Division.

10037246 Seacliff No. 2 PS & FM Upgrade

This project includes Planning (including condition assessment, needs identification, alternative analysis and conceptual engineering), Design, Right-of-Way, Environmental, Bid and Award, and Construction for the following scope of work and assumptions: Existing PS can be rehabilitated and upgraded to meet

current building codes; Perform seismic retrofit of the existing pump station building and associated mechanical and electrical equipment, piping, and fittings; Address fire, emergency and health and safety requirements; Assume damaged concrete and exposed rebars can be repaired; Assume deterioration of the existing wet-wells can be repaired; Replace the three submersible pumps in kind (47 horsepower pumps); Replace other mechanical and process equipment, including: existing crane, bubbler system, piping, valves, inlet gate and operator, water system components, and washdown pump; Provide protective coating to all exposed metal piping, fittings, and valves; Replace all electrical equipment; Upgrade fiber optic connection; Address PS security needs, including providing: perimeter camera, access key box at gate, egress compliant gate hardware and level lockset or panic hardware exit devise and solid panel surrounding lock; Replace existing eight-inch force main with 16-inch force main in the same alignment.

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. Address Other Safety Concerns, including evaluating and adding a gas detection system, as necessary; Add site lighting at egress penthouse and entrance to the station.

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

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.

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 investigating options to improve maintenance access 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.

10002138 North Shore to Channel F M Drainage Improvement

North Shore Force Main (NSFM) provides critical conveyance of combined sewage and stormwater flows from the northeastern quadrant of San Francisco to SEP. Before this project, this force main did not have any redundancy and could only be taken out of service for no more than 22-hours to meet the NPDES permit requirements. 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. As the construction work progressed, many unforeseen site conditions, including discovery of seven underground storage tanks, caused significant delays to the project and additional funding was needed to complete the construction contract. Since the project contributes to the SSIP Level of Service of ensuring critical functions are built with redundant infrastructure, the project team obtained approval from SFPUC to reallocate funds from SSIP to provide additional construction and construction management funds. The NSCFM is now in service and combined sewage flows are diverted to the NSCFM; thereby, allowing the remaining 240 LF of the DIP section of the NSFM to be rehabilitated. The construction contract became a joint-project between SFPUC Wastewater Enterprise and SFPW Paving Program and was led by SFPUC.

10002299 Richmond Transport/Storage Tunnel Rehabilitation

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 dislodging 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, including preliminary seismic evaluation 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.

10037245 Brannan (019) CSD Discharge and Baffle Rehabilitation

The components of the project at Brannan Combined Sewer Discharge (CSD) involve the following, as recommended in the 2019 AAR: Replace the butterfly valve and hydraulic actuator, two sensors, corroded metal stilling wells, the flap gate with an inline check valve, and access ladder; Install baffle for floatables control; Conduct concrete patching and repair works and repair exposed rebar.

10037244 Baker (009) Baffle Improvements and Repair of Backflow Valve

The components of the project at Baker CSD involve installing a baffle on the east overflow weir; Patching and coating minor exposed aggregate in the former DAF chamber; Repairing the western array of valves to stop leaking; Repairing the eastern array of valves to prevent leaking; Repairing or replacing deteriorated metal plumbing pipes; Repairing minor defects including missing aggregate and infiltration in connecting sewer.

10038547 CSD Structure Rehab & Upgrades - Part 1

A detailed condition inspection should be undertaken prior to design to confirm the scope of structural rehabilitation work. The components of the projects are detailed as follows: Laguna CSD Consolidation: This project involves planning, design and construction of Laguna CSD consolidation. It is assumed Laguna CSD will be filled with lightweight cellular concrete, with a bulkhead installed at the Marina T/S box and at the sea wall. The following general project elements are assumed: clean and prepare the pipe for decommissioning; remove debris and loose materials, and seal infiltration cracks and holes; demolish existing items as required to facilitate construction activities; relocate and/or cap any existing utilities into the CSD; install a permanent bulkhead at the seawall and a permanent bulkhead at Marina T/S box; apply anticorrosive coating to all exposed ferrous metals; perform dewatering within the CSD as required; install lightweight cellular concrete; remove access manholes and backfill; Howard CSD Rehab: improve floatable control on flows discharging through the butterfly valve; repair leaking butterfly valve; replace conduit for valve control; patch and coat concrete defects and exposed rebar; investigate potential void and repair; repair missing bricks and mortar; seal major cracks and fractures; Fourth St North CSD Rehab: Patch and coat concrete defects and exposed rebar; investigate potential pipe sag; repair missing bricks and mortar; seal major cracks and fractures; Mariposa CSD Rehab: Patch and coat concrete defects and exposed rebar; seal infiltration cracks and holes; repair major cracks and fractures; repair or replace manhole cover and ladder rungs; replace monitoring line brackets; Evans (037) CSD Rehab: Seal infiltration cracks and holes; patch and repair concrete defects; patch and repair exposed rebar and missing aggregate; repair or replace baffle brackets if necessary; Lake Merced (001) CSD Rehab: Seal infiltration cracks and holes; patch and coat concrete defects and exposed rebar; Lincoln (003) CSD Rehab: Seal infiltration cracks and holes,

patch and coat concrete defects and exposed rebar; seal major cracks and fractures, remove abandoned-in-place flow monitoring equipment and cables.

10038468 System-wide CSD & T/S Monitoring Equipment Assessment

The project involves a system-wide assessment of all of the 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 the location, condition, reliability, etc for the current monitoring equipment and compare that 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, or 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 the following CSD locations: CSD 001 – Lake Merced (3 sensors); CSD 002 – Vicente (3 sensors); CSD 003 – Lincoln (3 sensors); CSD 005 – Seacliff 1 (3 sensors); CSD 007 – Seacliff 2 (2 sensors); CSD 009 – Baker (1 sensor, relocated from Pierce CSD); CSD 025 – 6th Street (1 sensor); CSD 029 – Mariposa (3 sensors); CSD 031A – Islais Creek (1 sensor); CSD 041 – Yosemite (1 sensor); CSD 043 – Sunnydale (1 sensor). An additional allowance of $2,000,000 is also included for reliability improvements at other collection system locations based on the assessment results.

10026813 Islais Creek Green Infrastructure (SPLIT)

No information available.

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".

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.

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.

10029726 Watershed Stormwater Management (Planning Only)

This project will address long term Green Infrastructure (GI) development process and how it will be integrated and prioritized in the Collection System Plan and UWA report. A portion of the funds will be used to implement billing system upgrades that will enable the roll out the stormwater fee. Funding is also allocated for the Planning GI projects on San Francisco Unified School District (SFUSD) sites.

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 Rosa Parks Elementary School, led by SFPUC. In addition to the stormwater performance metrics, the project produces the following additional benefits: manage up to 7 acres of DMA; integrate multi-purpose 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; and deliver neighborhood-scale place-making co-benefits in one of San Francisco's identified disadvantaged communities.

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 $765,000 per acre of impervious surface managed, up to $2 million per project.

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.

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, or in the future improved through project CWWSIPFCRP01). The real-time data will be coupled with Waste Water Enterprise's (WWE) collection system hydraulic model to project 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.

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.

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.

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 which is anticipated to be complete in December of 2023. 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.

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 (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.

10034360 Lower Alemany Area Stormwater Improvement Project

The primary objective of the Lower Alemany Area Stormwater Improvement Project is to address the Sewer System Improvement Program (SSIP) levels of service (LOS) goals of managing stormwater and protecting and streets and properties from a statistically derived storm lasting 3 hours, with a total of 1.3 inches of rainfall and defined peak rainfall intensity (5-year 3-hour storm, LOS storm). This project will include planning, design, and construction of an improved conveyance system in the Lower Alemany area that manages the stormwater and minimizes flooding in the LOS storms. Detail project scope will be developed based on the preferred alternative identified during the planning phase.

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.

APPENDIX A. PROJECT DESCRIPTION

RNR

Renewal & Replacement Program

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.

15722 R&R Collection Systems

The purpose of the Wastewater Enterprise (WWE) Renewal and Replacement Program (R&R) Collection System Sewer Improvements 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, large diameter (greater than 36-inch) sewer condition assessment, large diameter (greater than 36-inch) sewer improvements and sewer transport storage box condition assessment. 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.

APPENDIX A. PROJECT DESCRIPTION

FI

Facilities and Infrastructure Program

10015555 Collection Division Consolidation (Griffith Yard Improvements)

The WWE Facilities Plan Project will address the need for a comprehensive master plan for WWE facilities to meet the present and future needs of the Wastewater Enterprise. The effort will include an assessment of current facilities, a plan for current and future staffing needs, and site planning to determine the best utilization of WWE property to accommodate the WWE over the next 50 years. The Plan will focus on the consolidation of operations, maximizing the operational efficiency and functionality of the WWE, and best approach to maximize the value of WWE's assets. The outcome will result in a plan for prioritization of capital improvement projects over the next two decades essential to supporting the WWE's delivery of services for the next generation.

10015556 Southeast Community Center @ 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.

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 condition assessment 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.

10015557 Southeast Bay Outfall Islais Creek Crossing Replacement

The project involves replacing 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 ("crossing") is comprised of two ductile iron pipes (36-inch and 42-inch). The crossing is buried in the bottom of the creek bed on piles. The crossing is buried about 20 feet under the lowest point of the creek sediments, and that the water depth is about 30 feet. The crossing was constructed in 1967 and have reached the end of its useful life. The new Islais Creek crossing will consist of two new 54-inch outside diameter high density polyethylene ("HDPE") buried pipes to replace the existing crossing section. New structures on each side of the creek is proposed to tie the new pipes to the existing SEO system. The project will include actuated valves and pipes to divert flow between the new and existing systems, associated electrical and mechanical improvements as needed within the BPS.

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

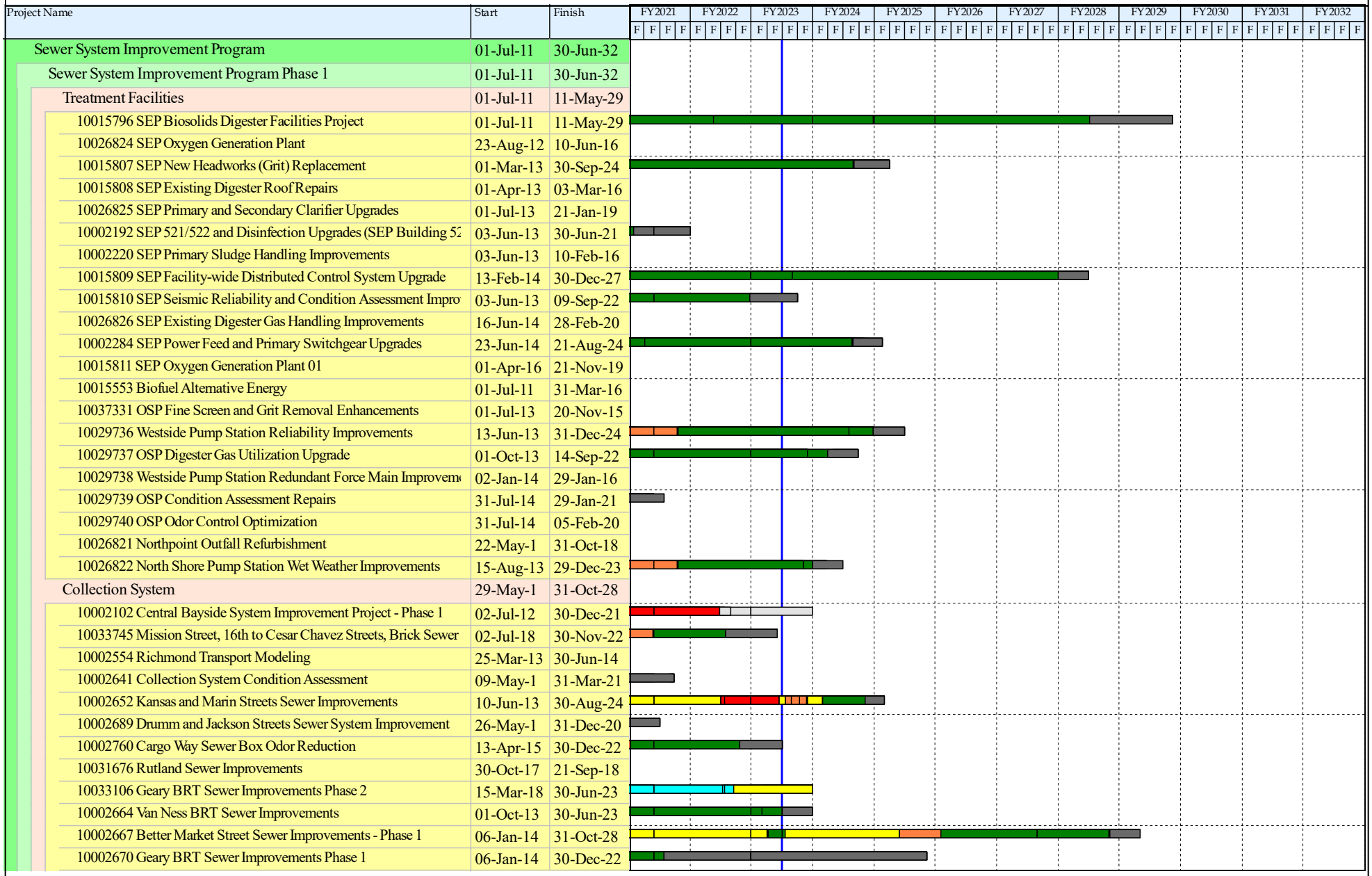
Chronic erosion problems along Ocean Beach south of Sloat Boulevard have been threatening City and County of San Francisco (CCSF) assets since the late 1990's. The city, via Public Works, declared erosion emergencies 3 times in 15 years in order to place stabilization measures (i.e., large rock revetments 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.

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.

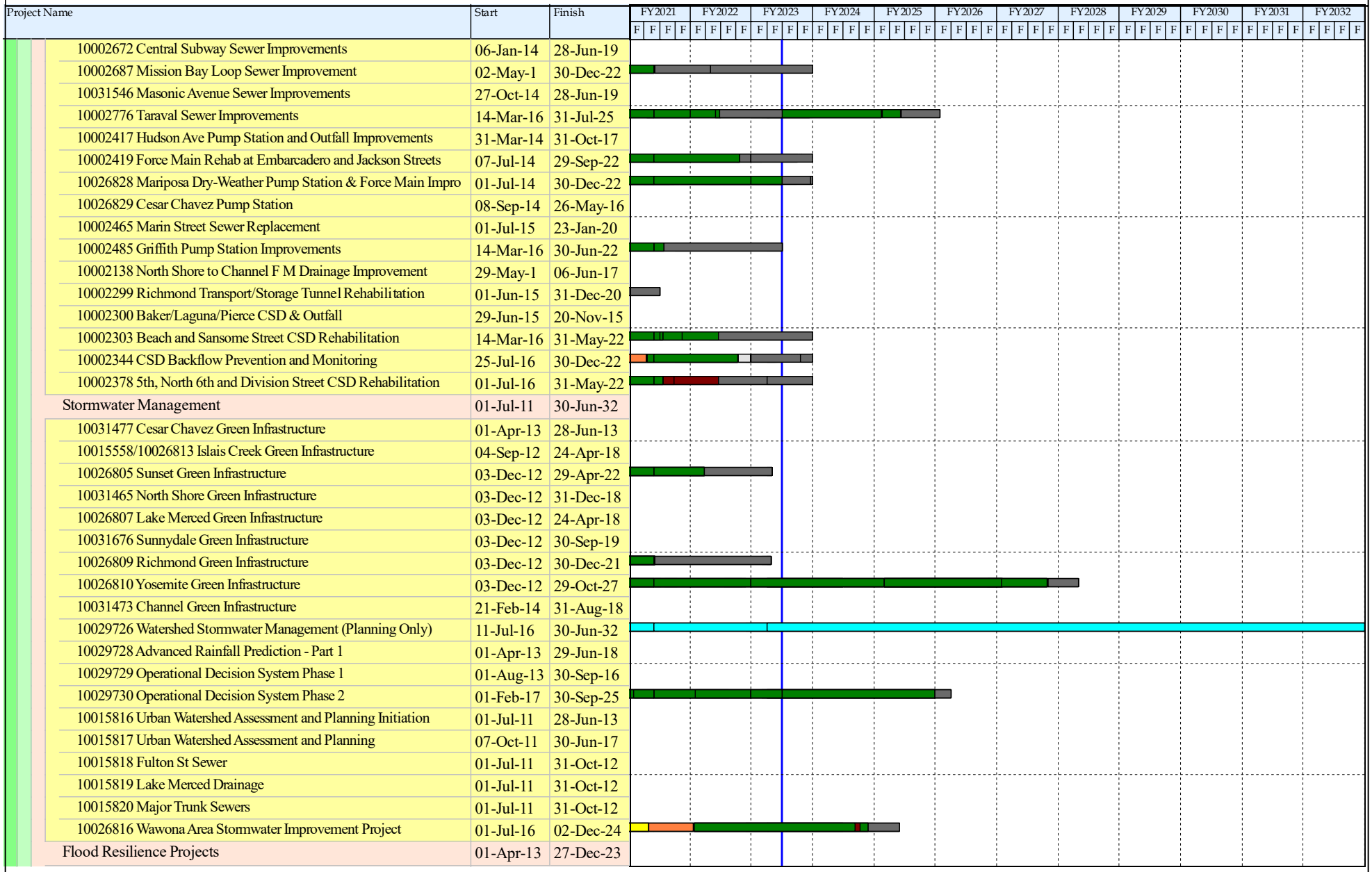
Appendix B.1 Sewer System Improvement Program (SSIP) Phase 1 - Approved Project-Level Schedules

Project Name	Start	Finish
Sewer System Improvement Program	01-Jul-11	30-Jun-32
Sewer System Improvement Program Phase 1	01-Jul-11	30-Jun-32
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	30-Sep-24
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 52	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	21-Aug-24
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	14-Sep-22
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-1	31-Oct-18
10026822 North Shore Pump Station Wet Weather Improvements	15-Aug-13	29-Dec-23
Collection System	29-May-1	31-Oct-28
10002102 Central Bayside System Improvement Project - Phase 1	02-Jul-12	30-Dec-21
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-1	31-Mar-21
10002652 Kansas and Marin Streets Sewer Improvements	10-Jun-13	30-Aug-24
10002689 Drumm and Jackson Streets Sewer System Improvement	26-May-1	31-Dec-20
10002760 Cargo Way Sewer Box Odor Reduction	13-Apr-15	30-Dec-22
10031676 Rutland Sewer Improvements	30-Oct-17	21-Sep-18
10033106 Geary BRT Sewer Improvements Phase 2	15-Mar-18	30-Jun-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	30-Dec-22



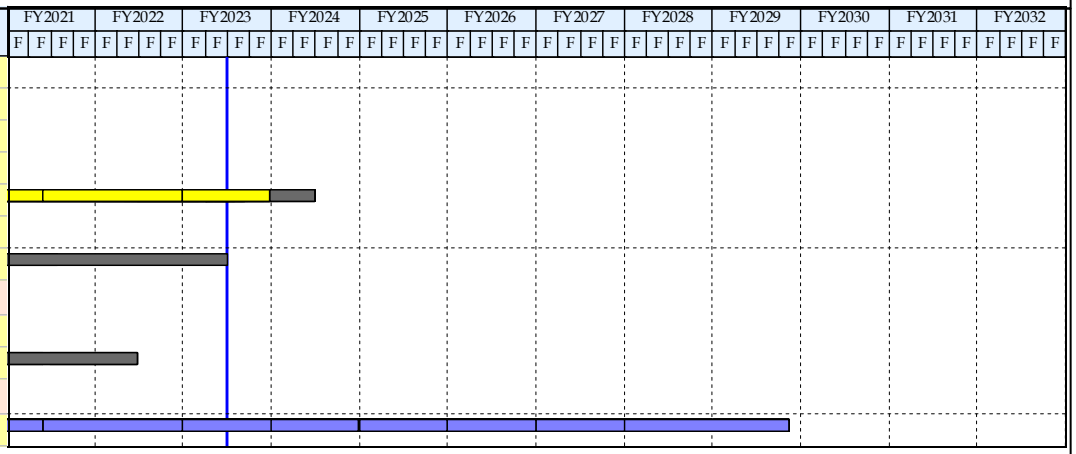
Appendix B.1 Sewer System Improvement Program (SSIP) Phase 1 - Approved Project-Level Schedules

Project Name	Start	Finish
10002672 Central Subway Sewer Improvements	06-Jan-14	28-Jun-19
10002687 Mission Bay Loop Sewer Improvement	02-May-1	30-Dec-22
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	29-Sep-22
10026828 Mariposa Dry-Weather Pump Station & Force Main Impro	01-Jul-14	30-Dec-22
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-Jun-22
10002138 North Shore to Channel F M Drainage Improvement	29-May-1	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	31-May-22
10002344 CSD Backflow Prevention and Monitoring	25-Jul-16	30-Dec-22
10002378 5th, North 6th and Division Street CSD Rehabilitation	01-Jul-16	31-May-22
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	29-Apr-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-Dec-21
10026810 Yosemite Green Infrastructure	03-Dec-12	29-Oct-27
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



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

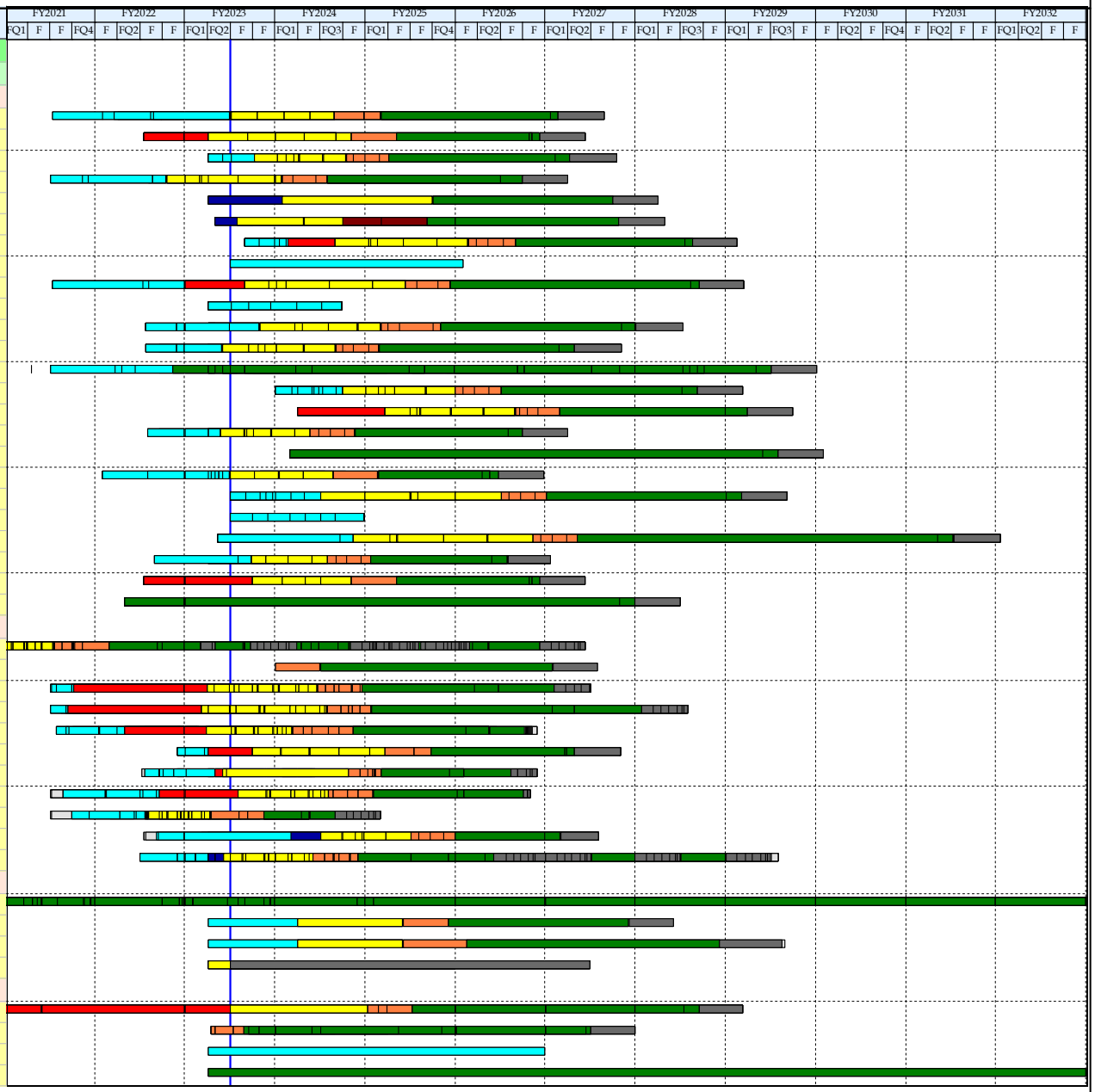
Project Name	Start	Finish
10026811 17th and Folsom Wet Weather Storage	01-Apr-13	06-May-16
10026814 Flood Resilience Analysis (Planning Phase Only)	30-Jun-15	28-Feb-17
10026815 Flood Resilience - Early Projects (Planning Phase Only)	26-Oct-15	30-Dec-16
10026817 Cayuga Ave Stormwater Detention Project	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-1	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	11-May-29
10015803/10029732 SSIP Progam Management	01-Sep-11	11-May-29



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

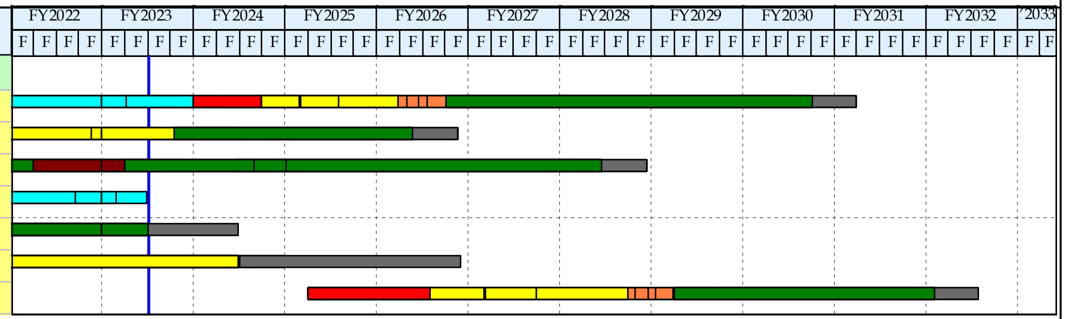
Appendix B.1 Sewer System Improvement Program (SSIP) Other - Approved Project Level Schedules (CONT'D)

Project Name	Start	Finish
Sewer System Improvement Program	03-Mar-18	30-Jun-33
Other SSIP	03-Mar-18	30-Jun-33
Treatment Facilities	03-Mar-18	10-Mar-31
10037353 SEP 550 Booster PS Condition Inspection & Interim	12-Jan-21	24-Feb-27
SEP-2 SEP, Booster PS, & BFS Security Enhancements	18-Jan-22	10-Dec-26
10037776 SEP Facilities Interim H&S Imp (SEP 850 & 930)	01-Jul-22	14-Jan-27
10037330 Primary Treatment (SEP 040/041) H&S Improvements	04-Jan-21	30-Sep-26
SEP-6N Secondary Clarifiers (SEP230) Rehabilitation	03-Oct-22	30-Sep-27
SEP-7N New Trades & Maintenance Buildings	03-Oct-22	30-Sep-26
SEP-8 SEP Condition Improvement Projects - Part 1	01-Mar-23	15-Aug-28
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	13-Sep-28
OSP-1A Westside FM Reliability Project - PLANNING	03-Oct-22	29-Mar-24
10037733 Solids Thickening (OSP 011) Process Upgrade	25-Jan-22	03-Sep-26
10037734 OSP Plant-wide Ventilation (HVAC) Upgrades	26-Jan-22	03-Sep-26
10036398 OSP Condition Improvement Projects - Part 2	03-Mar-18	06-Jul-29
OSP-5 OSP Odor Control Upgrades	05-Jul-23	07-Sep-28
OSP-6 OSP Communication & Safety Monitoring Upgrades	02-Oct-23	30-Mar-29
10037735 Admin Bldg (OSP 930) Health & Safety Improvements	01-Feb-22	01-Oct-26
OSP-8 OSP DCS Upgrade (Construction)	01-Sep-23	31-Jul-29
10037777 OSP & WSPS Security Enhancements	02-Aug-21	23-Jun-26
OSP-11 Gaseous Oxygen System (OSP 011) Upgrades	03-Jan-23	07-Mar-29
OSP-12A Grit Removal (OSP 011) Upgrades - PLANNING	03-Jan-23	28-Jun-24
NPF-1 Sedimentation (NPF 040/041) Tanks Condition Improvemen	05-Jul-22	10-Mar-31
10037325 Admin Bldg (NPF 930) Evaluation & Interim H&S Impr	01-Mar-22	03-Feb-26
10037904 NPF & NSS Security Enhancements	18-Jan-22	10-Dec-26
NPF-6 NPF DCS Upgrades (Construction)	01-Nov-21	30-Dec-27
Collection System	01-Aug-19	31-Jan-29
10034718 Large Diameter Sewer Projects and Channel FM Intertie	01-Aug-19	07-Dec-26
LDS-6 Geary BRT Sewer Improvements - Phase 2 (CON)	03-Jul-23	27-Jan-27
10037251 Seacliff No. 1 PS & FM Upgrade	07-Dec-20	31-Dec-26
10037246 Seacliff No. 2 PS & FM Upgrade	14-Dec-20	31-Jan-28
10037303 Sunnydale PS Safety Improvements	14-Dec-20	29-May-26
PS-4 Pump Station Security Upgrades (Cesar Chavez, Griffith, Char	01-Jun-22	03-May-27
PS-5 Geary Underpass PS Safe Access Enhancements	10-Jan-22	29-May-26
10037245 Brannan (019) CSD Gate & Baffle Rehab	07-Dec-20	01-May-26
10037244 Baker (009) Baffle Improvements	07-Dec-20	30-Aug-24
CSD-3 System-wide CSD & T/S Monitoring Equipment Assessmen	18-Jan-22	01-Feb-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-Oct-22	03-Dec-27
GI-3 Regional School/Park: Giannini Middle School	03-Oct-22	26-Feb-29
GI-17 Buchanan Street Mall	03-Oct-22	28-Dec-26
Flood Resilience Projects	02-Jan-19	30-Jun-32
10034360 Lower Alemany Area Stormwater Improvement Project	02-Jan-19	06-Sep-28
FR-1Folsom Area Stormwater Imp. Project Phase 2	04-Jul-22	30-Jun-27
FR01 Flood Resiliency Planning	03-Oct-22	30-Jun-26
FR02 Floodwater Management Grant Assistance Program (Grant)	03-Oct-22	30-Jun-32



Appendix B.2 WWE F&I Project Approved-Level Schedules

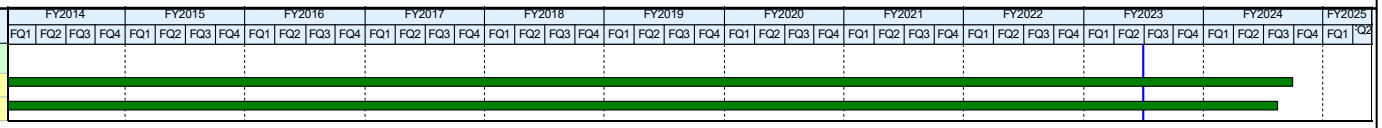
Project Name	Start	Finish
Wastewater Facilities and Infrastructure Programs	01-Jan-11	29-Jan-32
10033820 Southeast Outfall Condition Assessment Rehabilitation	01-Jul-19	05-Apr-30
CWP11001 New Treasure Island Wastewater Treatment Plant	01-Jan-11	22-May-26
CWWFAC01 Ocean Beach Climate Change Adaptation Project	23-Jul-12	12-Jan-28
CWWFAC02 Collection Division Consolidation (Griffith Yard Improvem	01-Mar-13	30-Dec-22
CWWFAC03 Southeast Community Center @ 1550 Evans	26-Jul-12	29-Dec-23
CWWFAC04 Southeast Bay Outfall Islais Creek Crossing Replacement	26-Sep-16	03-Jun-26
SWOO Southwest Ocean Outfall (SWOO)	01-Oct-24	29-Jan-32



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

APPENDIX B.3. WWE R&R Project-Level Approved Schedule

Project Name	Start	Finish
WWE Renewal & Replacement Program	01-Jul-10	31-Mar-24
15722 R&R Collection Systems	01-Jul-10	31-Mar-24
15724 R&R Treatment Facilities	01-Jul-10	14-Feb-24



Project Management
Environmental
Bid & Award
Construction
Planning
Design
Construction Mgmt
Close-Out

APPENDIX C. LIST OF ACRONYMS

AAR	Alternative Analysis Report
ACOE	Army Corps of Engineers (also shown as USACE)
ADA	Americans with Disabilities Act
ADEIR	Administrative Draft Environmental Impact Report
AGM	Assistant General Manager
BAAQMD	Bay Area Air Quality Management District
BCDC	Bay Conservation and Development Commission
BDFP	Biosolids Digester Facilities Project
BEM	Bureau of Environmental Management
BFS	Bruce Flynn Pump Station
BMS	Better Market Street
BRT	Bus Rapid Transit
CAB	Contract Administration Bureau
Caltrans	California Department of Transportation
CATEX	Categorical Exemption
CBSIP	Central Bayside System Improvement Project
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
CM/GC	Construction Manager/General Contractor
COVID-19	Coronavirus Disease of 2019
CPAS	Combined Primary Activated Sludge
CSAMP	Collection System Asset Management Program
CSD	Combined Sewer Discharge
CTLS	Channel Tunnel Lift Station
DCS	Distributed Control System
DEIR	Draft Environmental Impact Report
DIP	Ductile Iron Pipe
DW	Dry Weather
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMMS	Energy Monitoring and Management System
EPA	Environmental Protection Agency
F&I	Facilities and Infrastructure
FAT	Factory Acceptance Testing
FC	Final Completion
FEMA	Federal Emergency Management Agency
FOG	Fats, Oils, and Grease
FTA	Federal Transit Administration
FY	Fiscal Year
GBT	Gravity Belt Thickener
GFS	Griffith Pump Station
GGNRA	Golden Gate National Recreation Area
GI	Green Infrastructure
GIGP	Green Infrastructure Grant Program
GOX	Gaseous Oxygen
GPS	Griffith Pump Station
HDPE	High Density Polyethylene
HMI	Human Machine Interface
HPO	High Purity Oxygen
HSW	High-Strength Waste
HVAC	Heating, Ventilation and Air Conditioning
I&C	Instrumentation and Controls
I&I	Infiltration and Inflow
IC	Internal Combustion
ICM	Integrated Catchment Model
ICT	Islais Creek Transport/Storage
IKG	Inedible Kitchen Grease
ISP	Iron Stone Pipe
JOC	Job Order Contract
JST	Jackson Street Transport/Storage Box
KV	Kilovolt
LBE	Local Business Enterprise
LED	Light-Emitting Diode
LF	Linear Feet
LID	Low Impact Development
LOS	Levels of Service
LOX	Liquid Oxygen
LTI	Long-term Improvements
MCC	Motor Control Center
MDF	Main Distribution Frame
MG	Million Gallons
MGD	Million Gallons per Day
MND	Mitigated Negative Declaration

MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPM	Minor Project Modification
MPS	Mariposa Pump Station
MTA	Municipal Transportation Agency (also shown as SFMTA)
MTBM	Micro-Tunnel Boring Machine
MV PDS	Medium Voltage Power Distribution System
MW	Megawatt
N/A	Not Applicable
NAR	Needs Assessment Report
NEG DEC	Negative Declaration (also shown as ND)
NOD	Notice of Determination
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
OBMP	Ocean Beach Master Plan
OCA	Office of Contract Administration
OCU	Odor Control Unit
ODS	Operational Decision System
OEM	Operations, Engineering, and Maintenance
OPS	Operations
OSP	Oceanside Water Pollution Control Plant
OSWPCP	Oceanside Water Pollution Control Plant
PLC	Programmable Logic Controller
PM	Program Management; Project Manager
PMC	Program Management Consultant
PO	Purchase Order
PS	Pump Station
PUC	Public Utilities Commission
QA	Quality Assurance
QC	Quality Control
QSO	Quint Street Outfall
R&R	Renewal and Replacement (also shown as RnR)
RCP	Reinforced Concrete Pipe
RFP	Request for Proposal
RFQ	Request for Qualification
ROW	Right-of-Way
RWQCB	Regional Water Quality Control Board
SELS	Southeast Lift Station
SEP	Southeast Plant; Southeast Water Pollution Control Plant
SEWPCP	Southeast Water Pollution Control Plant
SF	San Francisco
SFCTA	San Francisco County Transportation Authority
SFMTA	San Francisco Municipal Transportation Agency (also shown as MTA)
SFPORT	Port of San Francisco
SFPUC	San Francisco Public Utilities Commission
SFPW	San Francisco Public Works (formerly SFDPW)
SFRPD	San Francisco Recreation & Parks Department (also shown as RPD)
SFUSD	San Francisco Unified School District
SSIP	Sewer System Improvement Program
SSMP	Sewer System Master Plan
STATEX	Statutory Exemption
STI	Short-term Improvements
SWOO	Southwest Ocean Outfall
T/S	Transport and Storage
TAP	Transient Analysis Program
TBD	To be determined
TBL	Triple Bottom Line
TICD	Treasure Island Community Development
TIDA	Treasure Island Development Authority
TM	Technical Memorandum
TPD	Tons Per Day
TSC	Technical Steering Committee
UPS	Uninterruptable Power Supply
USEPA	United States Environmental Protection Agency
UWA	Urban Watershed Assessment
VCP	Vitrified Clay Pipe
VFD	Variable Frequency Drives
VPSA	Vacuum Pressure Swing Adsorption
VWS	Vactor Waste Station

WSPS	West Side Pump Station (also shown as WSS)
WSS	Westside Pump Station (also shown as WSPS)
WWE	Wastewater Enterprise
WWE CIP	Wastewater Enterprise Capital Improvement Program
WWTP	Wastewater Treatment Plant

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