



SFPUC ADOPTED FY 2022-23 TO FY 2031-32
Ten Year Capital Plan

AND FY 2022-23
Capital Budget



San Francisco
Water Power Sewer

Services of the San Francisco Public Utilities Commission

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Introduction

The San Francisco Public Utilities Commission (SFPUC) provides retail drinking water and wastewater services to the City, wholesale water to three Bay Area counties, and green hydroelectric and solar power to our municipal departments.

The SFPUC supplies water to 2.7 million people in San Francisco and the San Francisco Bay Area. One-third of the water is supplied directly to retail customers primarily in San Francisco, and two-thirds is supplied to wholesale customers through a long-term Water Supply Agreement (WSA). Wastewater services are provided within the City and County of San Francisco (as well as to three neighboring districts, including the San Mateo Sanitation District, Bayshore Sanitary District, and the City of Brisbane). Power is supplied primarily to San Francisco City departments and their tenants, as well as to the Turlock and Modesto Irrigation Districts.

The SFPUC is an Enterprise Department of the City and County of San Francisco (CCSF).

Mission:

The mission of the SFPUC is to provide our customers with high quality, efficient and reliable water, power, and wastewater services in a manner that values environmental and community interests, and sustains the resources entrusted to our care. The SFPUC is an innovative utility leader, recognized for excellent results in service, safety, stewardship and inclusiveness.

Structure:

The SFPUC is comprised of three Enterprises, Infrastructure, CleanPowerSF, and the Bureaus. The three Enterprises are the Water Enterprise, Wastewater Enterprise, and Hetch Hetchy Water and Power Enterprise. Infrastructure manages the planning, design and construction of the capital programs. CleanPowerSF, the electrical power community choice aggregation program, initiated in 2015, is a self-contained program that is managed by the Assistant General Manager (AGM) for Hetch Hetchy Power. The Bureaus comprised of the Office of the General Manager, Business Services, and External Affairs provide critical support services and oversight to the Enterprises and Infrastructure.

What is the Capital Plan

Capital investments are essential for the reliable delivery of clean drinking water, the protection of public health and the environment, including the San Francisco Bay and Pacific Ocean of San Francisco and the continued delivery of clean energy for municipal services. Programmatic projects, part of the capital plan, are mainly comprised of annual programs including facilities maintenance; the programs are funded through operating revenues but are not considered part of regular recurring operations.

The SFPUC Ten-Year Capital Plan provides an assessment of the agency's capital needs aligned with the Commission's Strategic Plan goals, as well as the required investments to meet those needs. The purpose of the capital investment is to extend the useful life of the infrastructure and provide continued reliable and compliant operation of the system components. Therefore, understanding the long-term capital needs of the system and determining how to finance these capital needs are essential to the mission of the SFPUC.

Each Enterprise has a capital budget and Ten-Year Capital Plan, which illustrates continued total growth in capital investments through FY 2031-32.

Capital Budget Summary

ENTERPRISE	FY 2022-23	10 Year Plan Total
Water	111,223,052	2,127,938,750
Wastewater	687,196,456	6,126,993,320
Hetchy Hetchy Water and Power	181,123,342	1,585,491,147
CleanPowerSF	3,727,592	64,529,992
Total Capital Budget	983,270,442	9,904,953,209
Programmatic Projects	53,521,847	634,315,410
Total with Programmatic Projects	1,036,792,289	10,539,268,619

Some highlights in the capital plan include:

Sewer System Improvement Program (SSIP), \$3.5 billion

The Sewer System Improvement Program (SSIP) is the SFPUC's largest program, and helps the Wastewater Enterprise meet the SFPUC goals and levels of service for operational reliability, regulatory compliance, and effective stormwater management. The program includes \$2.2 billion for Treatment Facilities, which is largely driven by the Biosolids Digester Facilities Project at the South East Treatment Plant

Sewer Collection System Repair and Replacement (R&R), \$1.8 billion

There are more than 80 miles of major sewers that have been in service for 100 years or more and are at the end of their useful life. This project includes cleaning and inspection of sewers, as well as the repair and replacement and improvement of structurally inadequate sewers.

Regional Water Treatment Program, \$313.3 million

Major projects include the Sunol Valley Water Treatment Plant (SVWTP) Ozone project to install ozone treatment facilities as a longterm solution to control taste and odor in water.

Local Water Conveyance/Distribution System, \$642.7 million

Includes funding to install, replace and renew distribution system pipelines and service connections for the 1,230 miles of drinking water mains in San Francisco and meet customer level of service goals for uninterrupted service.

Local Water Buildings & Grounds Improvements, \$349.2 million

This provides funding for capital improvements at CDD facilities and structures, including the new CDD headquarters at 2000 Marin. Projects include yard improvements to address health and safety issues and security, continuing renewal and replacement of aging assets at existing buildings and grounds.

Power Retail Distribution Services, \$510.9 million

These projects are consistent with San Francisco Administrative Code Section 99.3 establishing the SFPUC's role as the exclusive electric service provider for existing and new City facilities, and redevelopment and development projects. This includes SFO Substation Improvements for the SFPUC to serve SFO's anticipated load increase. In addition, Distribution Interface Redevelopment Projects which are construction of new electric distribution systems and facilities for the SFPUC to provide electric services to various new developments within San Francisco. And, Grid Connections, which will connect customers to SFPUC owned and operated distribution and transmission infrastructure.

What is a Capital Expenditure?

SFPUC's Capital Budget is comprised of a biennial capital budget for each of the three enterprise departments and an annually updated Ten-Year Capital Plan. Capital projects must result in the addition of new capital assets and/or improvements to existing assets which extend the asset's service life by at least five years. Capital projects may include associated costs of acquisition or construction of new assets and/or expenditures for activities that enhance the function, improve the performance and/or extend the service life of existing assets.

What are Programmatic Projects?

Programmatic projects are considered part of the SFPUC's capital program but are funded as part of the operating budget. Programmatic projects are mainly comprised of annual programs including facilities maintenance. The programs are funded through operating revenues but are not considered part of regular recurring operations. Projects include planned maintenance of various watershed structures and facilities maintenance at the SFPUC's 525 Golden Gate headquarters.



Ten-Year Capital Plan Process

A new approach to Capital Planning

This year the SFPUC took a different approach to Capital Planning that will ultimately allow the agency to budget and spend resources more efficiently, resulting in long-term savings for ratepayers and timely completion of projects in our pipeline. The goal in this process is to execute a plan that is both affordable to the ratepayer in the long term and delivers capital projects in the timeframe they are budgeted for.

During the budget process, the capital plan grew significantly due to cost increases, expanding scope and identified investment needs. However, it was clear based on prior delivery challenges and unspent project balances that there was a historical mismatch between proposed expenditure and delivery capacity. This has occurred for multiple reasons such as lack of project management capacity, contracting delays, market for constructions services, COVID etc.

Rightsizing the capital plan to a deliverable level, however, is a long-term project. It requires understanding of our existing capacity, addressing staffing and contracting challenges and other operational matters. This was not an issue that could be solved during the fall 2021 budget process. So, instead of balancing the Capital Plan by simply assuming long term rate increases, the decision was taken to move forward with an unbalanced 10 Year Capital Plan and to only proposed a one-year balanced capital budget for FY 2022-23, as the agency continued to work on refining our capital plan. The plan is to revisit the both the FY23-24 capital budget and 10 Year Capital Plan in fall 2022.

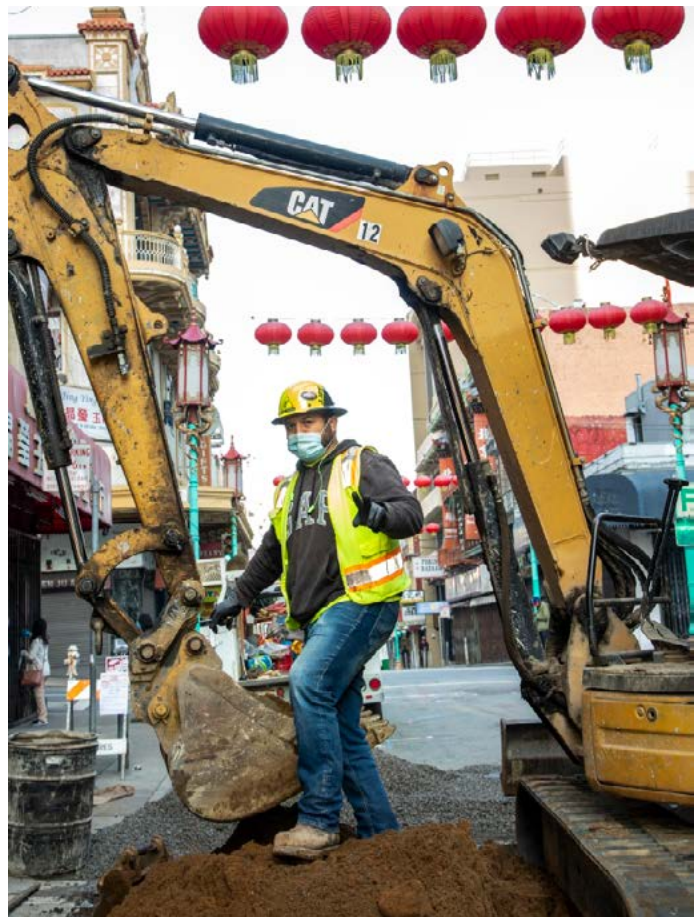
his means that when you look at the capital plans, beyond the FY 22-23 budget year, uses exceed sources and the capital plans are unbalanced. As a result, a portion of each of the Capital plans is “unfunded”. Having a portion of a capital plan “unfunded” is a common practice in government budgeting. The City and County of San Francisco’s overall Capital Plan also includes an unfunded portion.

The plan is to take time over subsequent budget cycles (beginning in fall 2022) to optimize capital spending around an affordable rate trajectory and delivery capacity. It will ultimately mean a more efficient use of ratepayer funds, and more affordable rates for SFPUC customers. Possible outcomes of this process could be a right-sized capital plan that better aligns with actual deliverability, or a recommended strategy to invest in building our delivery capacity.

Ten-Year Capital Plan Process

Charter Section 8B.123 requires that the Commission hold public hearings on an annual basis to review, update, and adopt a Long-Term Capital Improvement Program (the Ten-Year Capital Plan) and a Long- Range Financial Plan (Ten-Year Financial Plan). The Capital Plan is to contain a list of projects to be executed during the 10 year planning horizon, including cost estimates and schedules. The Financial Plan is to contain estimates of operations and maintenance expenses, repair and replacement costs, debt costs and projected rate increases. Together, the two plans provide visibility into the capital investment required to meet service levels and the rate impacts of these investments. In addition, they serve as a basis and supporting documentation for the Commission’s capital budget and the issuance of revenue bonds and other indebtedness to support the SFPUC capital program.

Also, as required by the City & County of San Francisco Charter, the San Francisco Public Utilities Commission (SFPUC) prepares a biennial operating and capital budget, as well as Ten-Year Capital and Financial Plans, for each of its three enterprises.



The development of the plans occurred from June through December 2021 and was directed by the Budget Steering Committee comprised of the SFPUC executive team. The Ten-Year Capital Plan informs and guides managers, policy makers, elected officials, and the public by providing the proposed long-term capital program, projects, and investments. The Ten-Year Capital Plan also guides the Ten-Year Financial Plan and the rate analysis approved every five years. The Ten-Year Capital Plan is not a budget; it is the plan that guides the annual capital budget. As the budget process progresses through the spring and into final adoption in the summer, the annual CIPs can be revised, and final projects, costs, and totals for the two annual CIPs can change. The annual CIPs are based on the Ten-Year Capital Plan, but they do not always match by project or dollar amount.

Project Selection and Scheduling

As a preliminary step to Capital Plan development, a baseline review of all existing project appropriations was completed for potential closeout or repurposing to new capital budget needs. This important step focused on capital project delivery and reduced the FY 2022-23 capital budget request resulting in a more efficient use of financial resources.

The Capital planning decision making process includes prioritizing project submittals and allocating limited resources. The SFPUC's capital planning tool (Unifier) established a project prioritization methodology to assist in the efficient allocation of limited capital resources. The prioritization process included a project criticality score based on a set of factors including:

- 1. Probability and Consequence of Failure** – how likely to fail and potential to result in interruption of service should the asset fail
- 2. Strategic Priority** – does the project advance SFPUC towards meeting agency's overall Strategic Plan goals and objectives
- 3. Project Status** – projects already in progress receive priority over those not yet started
- 4. Dependencies** – are there other projects that require initiation or completion of the project in question
- 5. Regulatory Requirements** – is there a regulatory requirement driving the project, and if so, what is the timeframe for meeting the requirement without penalty
- 6. Impact to Operations** – if the project is not completed are there impacts to Productivity/ Quality/ Reliability/ Revenue/ Supply/ Safety

Capital Plan project submissions were reviewed and validated by the SFPUC Infrastructure Bureau, resulting in a consistent and comprehensive capital planning approach across the agency comprised of individual project datasheets describing the project budget, schedule and scope. This capital planning effort helps assure the 10-Year Capital Plan meets the Enterprises' long-range capital needs, reflects a sound project prioritization process and supports affordability by promoting efficient use of ratepayer funds.

FY 2022-23 Capital Budget Development
The FY 2022-32 Capital Budget is developed along with and is consistent with the Ten-Year Capital Plan. As a preliminary step to Capital budget development, a baseline review of all existing project appropriations was completed for potential closeout or repurposing to new capital budget needs. This important step focused on capital project delivery and reduced to the amount of funding request in the FY 2022-23 Capital budget and more efficient use of existing project appropriations, commercial paper and bond funding issuances.

The budget development and baseline review resulted in project budget re-appropriations and closeouts. The Water Enterprise is re-appropriating \$38.3 million of prior year project appropriations to fund the FY 2022-23 budget request.

Capital Financing

SFPUC's capital program is mostly supported by debt finance. In fact, as a result of this, The SFPUC's single biggest operating cost driver is debt service.

In FY 2022-23, SFPUC's \$983.3 million capital budget is funded by \$838.6 million of debt, or 85%, and \$144.6 million in cash (revenue funding), or 15%. Of the Debt funding, in the majority is Wastewater bonds, with the remainder met by local and regional revenue bonds. Revenue funding includes general sales revenues as well as specific sources in Power such as Cap and Trade and Distributed Antenna revenues. The approximately \$53.5 million annual programmatic project budget is majority cash funded, with about 17% coming from other operating sources including Federal bond interest subsidies and recovery capital. Debt is a major component of SFPUC's budget, with debt service comprising around 27% of total operating costs. In FY 2022-23 debt service costs \$452 million, rising to \$463 million in FY 2023-24. This debt supports about two-thirds of SFPUC's capital budget over the next two years. In the longer term, the Ten-Year Capital and Financial Plans assume significant debt financing of capital needs. The plans assume a financing strategy that utilizes short-term financing via the existing Commercial Paper (CP) program to calibrate financing needs with project spending. Long-term (30-year) 5 percent fixed rate debt issuance is assumed to periodically refund the CP program.

The CP program facilitates short-term financing typically at lower interest rates than longer term debt, which minimizes costs.

Along with the Budget process, the SFPUC financing team seeks Commission adoption of the Charter mandated Financial Plan for the 10-year planning horizon. This rolling 10-year plan is required by Charter Section 8B.123 and is revised annually as a part of the budget process. It serves as a multi-year financial planning tool describing projected sources and uses, resulting fund balances and associated financial reserve ratios. The Capital Plan is to contain a list of projects to be executed during the 10-year planning horizon, including cost estimates and schedules. The Financial Plan is to contain estimates of operations and maintenance expenses, repair and replacement costs, debt costs and projected rate increases. Together, the two plans provide visibility into the capital investment required to meet service levels and the rate impacts of these investments. In addition, they serve as a basis and supporting documentation for the Commission's capital budget and the issuance of revenue bonds and other indebtedness to support the SFPUC capital program. The planning process includes an assessment of SFPUC fiscal capacity so that the final capital plan is based on what can realistically be funded.

Capital Budget Controls

For this budget approved by the Commission, the General Manager would have authority during the next two years to re-allocate project appropriations within the same Authority Code, subject to the procedures set forth in the Infrastructure Division's Procedures Manual on Project Change Management. This procedure establishes a formal process for all SFPUC capital projects or programs to identify, track, and approve or deny Change Authorization Requests to project scope, schedule and/or budgets. However, the reallocation of project appropriations from one Authority Code to a different one would require both Commission and Board of Supervisors approval. This level of capital project budgetary control is consistent with the Board of Supervisors level of control, as determined by the 2-Year Capital budget appropriation ordinances.

Quarterly Reporting

The SFPUC Infrastructure division is responsible for delivering capital improvement projects in accordance with the approved ten-year Capital Plan along with providing reporting on projects budgets, schedules and costs.

Following infrastructure procedures, the project team develops budgets and schedules for all capital improvement projects over \$5 million in total project cost. The project budget is developed consistent with the funding approved in the ten-year capital plan. The project schedules are developed in Primavera Project Manager scheduling software (P6), and are utilized as a management tool to monitor progress and measure performance for Capital Improvement Programs/ Projects. The P6 database is linked with SFPUC Infrastructure Division's electronic timecard system and procedures are in place to capture and report cost data from PeopleSoft.

The project teams provides quarterly update reports to the SFPUC Commission. The reports provide the overall status of the program, including a project status sheet for each project outlining project progress during the reporting quarter, as well as forecasting budget and schedule status at project completion.

Quarterly Projects Reports:

- The SFPUC shall include within the Quarterly Projects Report a detailed status update of each project in the ten-year plan that has an estimated cost greater than \$5 million and a summary of the work completed to date for such projects.
- The Quarterly Projects Report shall focus on projects in the first two years' projects of the ten-year plan but shall also demonstrate a connection to the ten-year plan asset classification and the Level of Service Goals and Objectives.
- The Quarterly Projects Report shall identify any project in the ten-year plan with an estimated cost greater than \$5 million that is behind schedule, and, for each project so identified, shall describe the SFPUC's plan and timeline for either making up the delay or adopting a revised project schedule.

In each fourth quarter of the fiscal year Quarterly Projects Report, the SFPUC will also address the status of projects in the ten-year plan that have an estimated cost of less than \$5 million, noting any such projects that are behind schedule and describing the SFPUC's plan and timeline for either making up the delay or adopting a revised project schedule..

Capital Budget Approval Process

SFPUC's biennial budget cycle begins in September and ends in July. The two-year fixed budget is prepared, reviewed, enacted by the Commission and Board of Supervisors (BOS), signed by the Mayor, and then implemented by departments. The Board of Supervisors approves both years together and may amend the second year through supplemental budget adjustments if increases or decreases in revenues or expenditures are significant¹. SFPUC's two-year budget is comprised of two, single-year spending plans.

In FY 2010-11, the City adopted two-year budgets for the SFPUC and three other pilot departments (the Airport, the Port, and the Municipal Transportation Agency), in accordance with Proposition A passed in 2009. FY 2022-23 & FY 2023-24 represent SFPUC's seventh biennial budget.

Stakeholders

- The Public is invited to all public meetings, notified in advance to ensure stakeholder awareness of any budget items. This includes SFPUC's Citizen Advisory Committee.
- The SFPUC Commission holds publicly-noticed Budget meetings, during business hours for public comment on the proposed budget.
- The Committee on Information Technology (COIT) evaluates all departmental technology plans and makes recommendations for approval and funding of the departmental technologies budget requests.
- The Capital Planning Committee (CPC) reviews SFPUC proposed 10-Year Capital Plan and two-year capital project budget specifics along with associated funding requirements and provides recommendations to the Board of Supervisors' on City-wide priorities for capital and the level of investment needed to meet the priorities identified.
- The Mayor prepares and submits a balanced SFPUC budget to the Board of Supervisors for review and approval on a biennial basis.

- The Board of Supervisors is the City's legislative body and is responsible for budget review and may amend then approve the Mayor's proposed budget. As a function of this review, the Board's Budget and Legislative Analyst examines SFPUC's proposed budget as well as spending and financial projections.
- The Controller is the City's Chief Accounting and Auditing Officer and ensures the accuracy of the final budget.

Calendar and Process

Beginning in September and concluding in July, the biennial two-year budget cycle can be divided into four major stages.

1. Commission Budget Policy Review: budget policy review and implementation.
2. Budget Preparation: budget development and submission to the Commission.
3. Approval: budget review and enactment by the SFPUC, Mayor and Board of Supervisors.
4. Implementation: department execution and budget adjustments.

¹ "Significant increases or decreases in revenues or expenditures shall be defined as greater than five percent difference between the projected and adopted budget for operating or capital expenditures or revenues for the second year of the department's biennial budget." (Resolution 464-11)

Preparation

The SFPUC's budgetary process precedes the citywide budgeting process as managed by the Mayor's Office. SFPUC implemented a "Project Charter" which governs the entire scope of the budget development and adoption cycle, up to and including final adoption by the Board of Supervisors.

Two categories of budgets are prepared:

Enterprise and Bureau Operating Budgets: Enterprise departments generate budgets to support operations based on the projected non-discretionary revenue primarily from charges for services. Operations include personnel, non-personnel services, materials and supplies, equipment, and services of other departments.

Capital Budgets: Comprised of a biennial capital budget for each of the three enterprise departments and CleanPowerSF and also includes an annually updated Ten-Year Capital Plan. Capital projects must result in the addition of new capital assets and/or improvements to existing assets which extend the asset's service life by at least five years. Capital projects may include associated costs of acquisition or construction of new assets and/or expenditures for activities that enhance the function, improve the performance and/or extend the service life of existing assets.

5. Beginning in October, SFPUC Enterprises prepare both their operating and capital budget requests which are then submitted to SFPUC's Budget Team. From November to December, the Assistant General Managers (AGM), the Deputy General Manager, and the General Manager review these requests. In December and early January, the General Manager's proposed budget, which includes all the Enterprises, CleanPowerSF, the Bureaus and Infrastructure, is consolidated and submitted to the SFPUC Commission for deliberation. From January to February, the Commission holds public hearings to review and ultimately approve the operating and capital budget requests, Ten-Year Capital Plan, and Ten-Year Financial Plan. By mid-February, the SFPUC approved budget requests are submitted to the Controller's Office. The Controller consolidates, verifies, and refines all the information the SFPUC has submitted. The Controller submits the SFPUC proposed

budget requests to the Mayor's Office of Public Policy and Finance for review by mid-March.

6. The Mayor's Office meets with community groups to provide budget updates and to hear concerns and requests for funding to improve public services. The Controller ensures that the Mayor's final budget request is balanced, accurate, and based on reasonable assumptions.

Approval

On May 1, the Mayor's proposed budget, which includes the SFPUC's budget is submitted to the Board of Supervisors. The Budget and Finance Committee of the Board of Supervisors holds public hearings during the months of May and June to review the Mayor's proposed budget and to solicit public input. The Board of Supervisors' Budget Analyst then develops recommendations on the budget proposal which are shared and discussed with departments. Based on these discussions, the Board's Budget Analyst forwards budget recommendations to the Budget and Finance Committee for public review. If the Board of Supervisors' budget review lapses into the new fiscal year beginning July 1st, a continuing resolution adopting an Interim Budget--the Mayor's proposed budget with some limitations--is passed by the Board and serves as the operating budget until the budget is adopted. The Mayor typically signs the budget ordinance into law no later than July.

Budget Calendar

	Normal Budget Cycle
September 2021	<ul style="list-style-type: none"> • SFPUC FY 2022-23 and FY 2023-24 budget process launch • Commission budget policy discussion
October 2021	<ul style="list-style-type: none"> • Staff review and analysis: • Operating and capital budget proposals • Ten-Year Capital Plan • Ten-Year Financial Plan
November 2021	<ul style="list-style-type: none"> • General Manager and Assistant General Manager review of budget proposals and plans
December 2021	<ul style="list-style-type: none"> • Budget approved by General Manager
January 2022	<ul style="list-style-type: none"> • Commission budget workshops • Departmental technology plans submitted to COIT • Biennial Capital budget requests submitted Capital Planning Committee • Ten-Year Capital Plan submitted to Capital Planning Commission
February 2022	<ul style="list-style-type: none"> • Commission adopts Operating Budget, Ten-Year Capital Plan, and Ten-Year Financial Plan • Operating and Capital budget requests submittal to Controller and Mayor
March 2022	<ul style="list-style-type: none"> • Mayor's Office and Controller's Office review of budget • CPC reviews Ten-Year Capital Plan and staff recommendations
April 2022	<ul style="list-style-type: none"> • Operating and capital budget requests submitted to Board of Supervisors by Mayor
May 2022	<ul style="list-style-type: none"> • Board review of operating and capital budget
June 2022	<ul style="list-style-type: none"> • Mayor signs budget
August 2022	<ul style="list-style-type: none"> • Final budget adoption by Board of Supervisors and Mayor



Water Enterprise

Mission

The SFPUC serves as the retail water supplier for the City of San Francisco and is responsible for water deliveries to residents and businesses within the City limits, as well as to a number of retail customers outside of the City limits. The SFPUC also sells water to 27 Wholesale Customer entities in San Mateo, Alameda and Santa Clara Counties.

The Water Enterprise operates the Hetch Hetchy Regional Water System, a wholesale and retail drinking water supply system that serves 2.7 million customers in Alameda, Santa Clara, San Mateo and San Francisco counties. The upcountry portion of the system begins with Hetch Hetchy Reservoir in Yosemite National Park. Impounded by O’Shaughnessy Dam, Hetch Hetchy Reservoir water passes through hydroelectric powerhouses before entering the San Joaquin Pipelines, the Tesla Ultraviolet Treatment Facility, and the Coast Range Tunnel on its journey to the Bay Area.

Water Enterprise Capital Budget

In addition to the operating budget, the Water enterprise also prepares a Capital budget and Ten-Year Capital Plan.

In FY 2022-23, the Water Enterprise's capital budget is \$111.2 million, of which \$63.2 million or 57.0 percent is funded by debt and \$48.0 million or 43.0 percent is revenue funded. Debt funding includes local and regional bonds. The majority of the revenue funding is from local and regional water sales revenues.

The Water Enterprises annual programmatic project budget, which is funded in the operating budget but forms part of the capital program, is \$32.8 million in FY 2022-23 and \$32.5 million in FY 2023-24 with the majority revenue funded and the balance coming from Federal bond interest subsidies and recovery capital.

Overview

The Water Enterprise of the San Francisco Public Utilities Commission is responsible for the distribution of high quality water to San Francisco and Bay Area Customers. The Water Distribution System consists of three Regional Water Systems: the Hetch Hetchy System; the Regional Water System (East Bay), Regional Water System (Peninsula/West Bay) and the Local Water distribution which includes an In-City Distribution System.

Hetch Hetchy System: Water is diverted from Hetch Hetchy Reservoir into a series of tunnels and aqueducts from the Sierra Nevada to the San Joaquin Pipelines that cross the San Joaquin Valley to the Coast Range Tunnel which connects to the Alameda system at the Alameda East Portal.

Regional Water System (East Bay):

This includes two reservoirs, San Antonio Reservoir and Calaveras Reservoir, which collect water from the upper Alameda and San Antonio Creek watersheds in Alameda County plus conveyance facilities connecting the Hetch Hetchy System and Alameda water sources to the Peninsula System. These conveyance facilities include pipelines known as the Alameda Siphons that connect the Coast Range Tunnel to the Irvington Tunnel.

Regional Water System (Peninsula/West Bay):

This includes conveyance facilities connecting the Bay Division Pipelines to the In-City Distribution System and to other SFPUC customers on the Peninsula. Three reservoirs, Crystal Springs, San Andreas, and Pilarcitos collect runoff from the San Mateo Creek and Pilarcitos watersheds. Water from these reservoirs serves all wholesale customers, including the Coastside County Water District.

In-City Distribution System: The City's retail water supply is delivered to the City in several major pipelines. Two pipelines provide water to the eastside of the In-City Distribution System and three pipelines serve the west side of the In-City Distribution System. The "In-City Distribution System" delivers water to homes and businesses in the City. Several major pipelines convey water from the Peninsula System to the City.

Water Enterprise Ten-Year Capital Plan

The adopted capital project costs for the Water Enterprise total approximately \$2.1 billion over the next ten years. Identified capital needs will be financed with a combination of bonds and Water Enterprise revenues. Project timelines may be adjusted to match available funding.

As discussed in the overall capital planning section of this book, the SFPUC is in the process of rightsizing its capital plan for deliverability and affordability. As a result, beyond the FY 2022-23 budget year, uses exceed sources and the capital plans are unbalanced. As a result, a portion of each of the Capital plans is "unfunded". Having a portion of a capital plan "unfunded" is a common practice in government budgeting. The City and County of San Francisco's overall Capital Plan also includes an unfunded portion.

The plan is to take time over subsequent budget cycles (beginning in fall 2022) to optimize capital spending around an affordable rate trajectory and delivery capacity. It will ultimately mean a more efficient use of ratepayer funds, and more affordable rates for SFPUC customers.

Water Ten-Year Capital Plan

"\$ Thousands Program/Project"	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2028-32	Plan Total
Spending Plan							
Regional Costs							
Water Treatment Program	17,166	137,220	103,533	10,972	14,820	29,581	313,291
Water Transmission Program	14,182	68,611	39,376	34,590	12,246	33,033	202,037
Water Supply & Storage Program	0	17,249	33,287	59,965	50,866	128,700	290,067
Watersheds & Land Management	0	11,146	3,853	4,068	433	2,053	21,553
Communication and Monitoring Program	0	2,149	3,700	3,750	3,200	7,850	20,649
Long Term Monitoring & Permit Program	0	400	1,682	3,907	2,288	7,352	15,629
Buildings and Grounds Program	16,181	10,642	70,306	70,051	9,143	15,352	191,675
Regional Total	47,528	247,416	255,737	187,302	92,997	223,920	1,054,901
Local Costs							
Water Supply Projects	0	675	1,966	240	0	0	2,881
Water Conveyance /Distribution System	60,160	84,107	93,103	58,440	55,742	291,102	642,655
Systems Monitoring and Control	998	2,318	3,794	3,399	600	600	11,709
Local Tanks/ Reservoir Improvements	0	1,485	1,665	1,649	1,649	2,086	8,534
Pump Station Improvements	0	608	4,583	573	0	0	5,763
Groundwater Project	0	4,410	4,586	0	0	0	8,996
Automated Meter Reading System	0	2,498	2,498	1,624	1,624	35,069	43,313
Buildings & Grounds Improvements	2,537	46,135	121,727	111,018	66,691	1,081	349,188
Local Total	63,695	142,236	233,922	176,943	126,306	329,938	1,073,038
Total Regional & Local	111,223	389,652	489,659	364,245	219,302	553,858	2,127,939
Sources							
Water Revenue	45,874	48,166	77,100	82,100	63,545	290,586	607,370
Water Bonds	63,196	289,745	351,031	239,657	131,669	218,009	1,293,307
Capacity Fee	2,153	2,211	1,520	1,520	1,580	7,996	16,980
Total	111,223	340,121	429,651	323,277	196,794	516,590	1,917,657
Surplus/(Shortfall)	0	(49,531)	(60,007)	(40,968)	(22,508)	(37,268)	(210,282)

The SFPUC's Water Enterprise uses the annual updates to the Ten-Year Capital Plan to ensure projects and investments are in place to ensure adopted levels of service are maintained. To update the Ten-Year Capital Plan, the Water Enterprise relies on the latest information including condition assessments (performance and remaining useful life of existing assets), master plan updates, review of levels of service objectives, and financial data (revenue requirement, project expenditures and cash flow).

Regional Water

The Regional Water Ten-Year Capital Plan is \$1,054.9 million and funds the following projects:

Regional Water Treatment Program, \$313.3 million

This program provides funding for major improvements to the Sunol and Millbrae Yards Projects are identified through condition assessments, operating staff review, level of service and feasibility studies, and alternatives analysis at each plan. Major projects include Sunol Valley Water Treatment Plant (SVWTP) Ozone project to install ozone treatment facilities as a long-term solution to control taste and odor events encountered in the raw water supply from both the San Antonio and Calaveras Reservoir sources. This project will improve the reliability to meet water quality goals especially during warm months and during Hetch Hetchy shutdowns. The SVWTP Short Term Improvements project to improve regional delivery reliability by addressing various conditions and deficiencies of the SVWTP.

Regional Water Transmission Program, \$202.0 million

This program will provide upgrades to the Transmission System including pipeline inspection and repairs, valve replacements, metering upgrades, corrosion protection, and pump station and vault upgrades. As part of the pipeline improvement program, funding is included to monitor, strengthen, and replace older pipeline to achieve higher level performance and reliability. Funding included for the Crystal Springs Pipeline 2 & 3 Rehabilitation This project will relocate approximately 1.5 miles of 60-inch diameter pipe into Crystal Springs Road by removing the abandoned-in-place pipe and replacing with cement mortar lining, and upgrade appurtenances to meet current standards.

Regional Water Supply & Storage Program, \$290.1 million

This program includes upgrades to structures to meet State Division of Safety of Dams requirements including geotechnical work, installation of monitoring systems, and a regional desalination project. The automated data acquisition system in the monitoring system will provide timely, accurate data related to inspections at various dams. The program also includes funding for projects that increase regional water supply diversification and explore alternative methods for expanding water sources including purified water, recycled water and desalination projects.

The program also includes the Daly City Recycled Water Expansion Project to provide 3.4 MGD of recycled water to customers of the Regional Water System and help offset groundwater pumping in the Westside Basin and the Los Vaqueros Reservoir Expansion Project that will enlarge the existing reservoir located in northeastern Contra Costa County from 160,000 acre-feet to 275,000 acre-feet. The main objectives of the expansion include increasing water supply reliability for municipal, industrial, and agricultural customers as well as ecosystem benefits to south-of-Delta wildlife refuges and Delta fisheries

Regional Watersheds & Land Management, \$21.6 million

This program supports projects that improve and/or protect the water quality and/or ecological resources impacted by the siting and operation of SFPUC facilities. Projects include the repair, replacement, maintenance, or construction of roads, fences, or trails, the acquisition of easements and/or fee title of properties, and other ecosystem restoration or public access, recreation, and education projects.

Regional Communications & Monitoring Program, \$20.6 million

This project will provide much needed redundant emergency communications capability and increased bandwidth for security data transfer. Specifically, it will build a microwave backbone to link the entire SFPUC regional water system from the O'Shaughnessy Dam site in Yosemite to the rest of the SFPUC sites (San Francisco, San Mateo, Santa Clara, and Alameda counties).

**Long Term Monitoring and Permit Program
\$15.6 million**

The purpose of this program is to meet the long-term monitoring and permit requirements associated with capital projects and the operation and maintenance of the SFPUC water supply system and watershed/right-of-way lands within the Bay Area. Projects with long-term monitoring required by environmental permits include WSIP-related environmental mitigation and permit requirements (i.e., Bioregional Habitat Mitigation Program) and non-WSIP capital projects.

**Regional Buildings & Grounds Programs,
\$191.7 million**

This program provides funding for major improvements to the Sunol and Millbrae Yards. Sunol Yard improvements include LEED replacement facilities for maintenance shops and equipment storage, a new fueling center and administration building, re-surfacing of the yard, demolition of six dilapidated structures, and on-going renewal and replacement of worn or aging equipment. Millbrae Yard improvements include a new laboratory and office building to update the lab facilities and consolidate staff from the Rollins Road facility, maintenance shop, and equipment storage, demolition of a large unused abandoned building, a new parking lot, and a new vehicle wash site. The upgrades address occupational safety, reliability, and functional regulatory compliance.

Local Water

As shown in the table, the Local Water Ten-Year Capital Plan is \$1,073.0 million and funds the following projects:

Water Supply Projects, \$2.9 million

This program includes planning for local water diversification to explore alternative methods for expanding local water sources. Such sources include the Eastside Water Purification Project and Innovations for San Francisco ratepayers that highlight innovative water supplies and technologies.

**Local Water Conveyance/Distribution System,
\$642.7 million**

Includes funding to install, replace and renew distribution system pipelines and service connections for the 1,230 miles of drinking water mains in San Francisco and meet customer level of service goals for uninterrupted service. The increased investment is needed to improve annual replacement rate to 15 miles per year to minimize main breaks. Improvements include replacement, rehabilitation, re-lining, and cathodic protection of all pipe categories to extend or renew pipeline useful life.

The Renew Services Program provides funding to renew assets between the water main and the customer's service connection, identify lead service lines still in use and the Water Loss Reduction Program to implement of cost-effective and comprehensive strategies to reduce water loss.

Additional projects include the Sunset Pipeline/Potable AWSS, Automated Water Meter Program, New Services Connection Program and Town of Sunol Pipeline projects..

System Monitoring and Control \$11.7 million

Projects include an upgrade to the Customer Service Center Systems that will modernize current existing technology to optimize business processes aligning with current and future Customer Service needs and increased operational effectiveness. Continued improvements to facilities for controlling and monitoring San Francisco's water distribution system including enhancements to the Supervisory Control and Data Acquisition (SCADA) system for remote monitoring of pressure, flow, and valve position status at key locations throughout the distribution system .

Local Tanks/Reservoir Improvements \$8.5 million

Provides long-term funding for renewal and rehabilitation of water storage reservoirs and tanks, within the San Francisco Distribution System. Projects included improvements to the Sunset South and University Mound reservoirs and roof repairs at multiple locations to extend the useful service life of the reservoir.

Local Pump Station Improvements, \$5.8 million

The SFPUC's 12 major water pump stations and seven hydropneumatics tanks that boost pressure within the San Francisco distribution system need ongoing renewal and rehabilitation. This program provides long term funding for renewal and rehabilitation of the water pump stations and hydro-pneumatic tanks that boost water pressure within the distribution system including the automation of the five pump suction valves at Lake Merced Pump Station.

Groundwater Project \$9.0 million

Funding for the Lake Merced Water Level Restoration Project including improvements to the Vista Grande Drainage Basin to address storm related flooding and diverting recycled water from the new Westside Recycled Water facility into Lake Merced to increase and stabilize lake levels.

Automated Meter Reading System (AWMP)- \$43.3 million

This program will provide funding to complete the Automated Water Meter Program (AWMP) and for replacement planning of the AWMP System by the end of useful life. This project provides funding for AWMP Renewals needed through the 20-year system life (ending in 2031) and metering equipment (including automation) for all renewals and new services through 2031.

Local Buildings & Grounds Improvements, \$349.2 million

This provides funding for capital improvements at CDD facilities and structures. Projects include yard improvements to address health and safety issues and security, continuing renewal and replacement of aging assets at existing buildings and grounds including vehicle and pedestrian gates, fencing at reservoirs, exterior lighting improvements at reservoirs and pump stations

Additional funding is included for a new CDD Headquarters at 2000 Marin to address life safety standards for seismic events, building code requirements and facilities that are past useful life. The 2017 Condition Assessment found all buildings aged, water-damaged, and deficient in meeting seismic, ADA, electrical and other building code standards. Existing facilities include administrative offices, warehouse, shops, materials and equipment storage and vehicle fleet.



FY 2022-23 Capital Project Budget

The Water Enterprise FY 2022-23 budget shows a decrease of about \$90 million from the FY 2021-22 budget. A baseline review of all existing project appropriations was completed for potential closeout or repurposing to new capital budget needs

resulting in a reduction to the amount of funding request in FY 2022-23 in the Capital budget.

The table shows the Water Enterprise's capital budget for FY and FY 2021-22 and FY 2022-23 by major programs.

Water One Year Capital Budget

\$ Millions	FY 2021-22 Adopted Budget	FY 2022-23 Adopted Budget
Program/Project		
REGIONAL COSTS		
Water Treatment Program	12.5	17.2
Water Transmission Program	0.0	14.2
Water Supply & Storage Program	29.8	0.0
Watersheds & Land Management	14.9	0.0
Communication and Monitoring Program	0.5	0.0
Long Term Monitoring & Permit Program	4.0	0.0
Buildings and Grounds Program	2.0	16.2
Regional Total	63.7	47.5
LOCAL COSTS		
Water Supply Project	6.7	0.0
Local Water Conveyance /Distribution System	71.4	60.2
Systems Monitoring & Control	0.0	1.0
Local tanks/Reservoir Improvements	5.3	0.0
Pump Station Improvements	0.2	0.0
Westside Recycled Water Projects/Other	4.7	0.0
Automated Meter Reading System	3.0	0.0
Buildings & Grounds Improvements	34.5	2.5
Local Total	125.7	63.7
Financing Cost	23.3	11.2
Total Regional & Local	212.7	122.4
SOURCES		
Water Revenue	55.7	45.9
Water Bonds	155.5	74.3
Capacity Fee	1.5	2.2
Total Sources	212.7	122.4

Water Enterprise capital budget by Major Program

The capital budget includes continuing Renewal and Replacement Projects for the Regional and Local Water Enterprise along with nonrecurring major capital upgrades such as the New CDD Headquarters and Millbrae Yard Projects.

The capital budget is funded by a combination of Water Enterprise revenues, water revenue bonds and capacity fees. Revenue Bonds account for 61 percent of budget sources. The capital budget for FY 2022-23 totals \$122.4 million.

FY 2022-23

As shown in the table, the FY 2022-23 Water Enterprise Capital Budget” is \$122.4 million, which includes financing costs, and decreased \$90.3 million from the FY 2021-22 approved CIP of \$212.7 million.

Major projects in the Water Enterprise FY 2022-23 CIP include:

Regional Water Costs

\$17.2 million for Water Treatment Program including and major improvements to the Sunol Valley Water Treatment Plant (SVWTP) to achieve a higher level of performance and reliability, the SVWTP Ozone Project to install ozone treatment facilities as a long-term solution to control taste odor events encountered in the raw water supply from both the San Antonio and Calaveras Reservoir sources and Polymer Feed Facility Project to build a polymer feed facility that will serve all five sedimentation basins to optimize plant water production.

\$14.2 million for Water Transmission Program including the inspection and rehabilitation and repair of large diameter pipelines and tunnels to minimizing pipeline failures and repair segments of the Bay Division Pipeline #4 where there are high concentrations of breaks, wide circumferential cracks and active leaks.

\$16.2 million for the Buildings & Grounds Programs including redevelopment of the existing Sunol Yard and construction of a Watershed Center near the Sunol Water Temple and the Millbrae Warehouse Settlement project to repair the displacement (settlement) of the slab between the loading dock and the offices.

Local Water Costs

\$60.2 million for the Local Water Conveyance and Distribution program to fund the management of all linear assets in the local water distribution system. Projects to install, replace, and renew pipelines and service connections for the 1,230-mile drinking water distribution system in San Francisco with the goal of replacing 15 miles per year to minimize main breaks and meet customer level of service goals for uninterrupted service.

Additional projects include the Renew Services Program to renew assets between the water main and the customer’s service connection and the Lead Component Services program including the inspection and removal of all known lead user service lines as well as identify all unknown user service lines and Joint Transit projects that coordinate water main replacement with other City Departments.

\$1.0 million for System Monitoring & Control Projects upgrade to the Customer Service Center Systems that will modernize current existing technology to optimize business processes aligning with current and future Customer Service needs and increased operational effectiveness.

\$2.5 million for Local Buildings & Grounds Improvements to fund the New CDD Headquarters Project to address life safety standards for seismic events, building code requirements and facilities that are past useful life existing facilities needed to be replaced include administrative offices, warehouse, shops, materials and equipment storage and vehicle fleet.

Included in the FY 2022-23 budget is \$11.2 million of financing costs.

Water Programmatic Projects

The table shows the Water Enterprise Programmatic Projects, for FY 2021-22, FY 2022-23, and FY 2023-2024, by major programs. Programmatic projects are annually appropriated projects in support of routine maintenance of programs most of which were initiated in support of the capital program. These programmatic projects include monitoring, mitigation, watershed protection, community benefits, and the Water Enterprise share of lease payment and operation of the SFPUC headquarters at 525 Golden Gate Avenue.

Water Two-Year Programmatic Projects Budget

\$ Millions Program/Project	FY 2021-22 Adopted Budget	FY 2022-23 Adopted Budget	FY 2023-24 Adopted Budget
REGIONAL COSTS			
Watershed Protection	1.0	1.2	0.9
WSIP-Related Mitigation & Monitoring	7.8	7.0	4.9
Watershed Structures	3.5	4.5	5.5
Water Resource Planning and Development	0.5	0.1	0.5
Total Cost	12.7	12.7	11.8
LOCAL COSTS			
Landscape Conservation Program	0.0	0.0	1.0
AWSS Maintenance	1.5	2.5	2.5
Treasure Island Facilities Maintenance	1.4	1.4	1.4
Youth Employment Program	1.3	1.3	1.3
Retrofit Grant Program	0.5	0.0	0.5
525 Golden Gate - Operations and Maintenance	4.2	4.3	4.4
525 Golden Gate - Lease Payment	9.8	9.2	9.1
Drought Response Program	0.0	0.5	0.5
Personnel Safety Program	0.0	1.0	0.0
Total Sources	18.6	20.1	20.7
Total Regional & Local	31.4	32.8	32.5
SOURCES			
Infrastructure - Recovery Capital	3.8	3.9	3.9
Federal Bond Interest Subsidy	2.0	1.9	1.9
Water Enterprise Revenue	25.6	27.0	26.7
Total Sources	31.4	32.8	32.5

The Water Enterprise Programmatic Project budget is \$32.8 million in FY 2022-23 and \$32.5 million in FY 2023-24. This level of funding is consistent with the amount of programmatic funding in the prior fiscal years and in FY 2021-22.

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Wastewater Enterprise

Mission

The Mission of the Wastewater Enterprise (WWE) is to operate and maintain the City's water pollution control plants, pumping stations and collection system in full compliance with our Discharge Permits to protect public health and the environment. The WWE maintains 1,900 miles of sewer mains and lateral and 27 pump stations that collect sewage and storm water, moving the wastewater to the three treatment plants for treatment and discharge to the San Francisco Bay and Pacific Ocean.

Capital Budget

In addition to the operating budget, the Wastewater enterprise also prepares a Capital budget and Ten-Year Capital Plan.

In FY 2022-23, the Wastewater Enterprise's capital budget is \$687.2 million, of which \$598.6 million or 87.1% is funded by debt and \$88.6 million or 12.9% is revenue funded. Debt funding consists of revenue bonds. The majority of the revenue funding is from sewer service charges, with the remainder being from capacity fees. The Wastewater Enterprise's annual programmatic project budget, which is funded in the operating budget but forms part of the capital program, is \$6.7 million in FY 2022-23 and \$6.7 million in FY 2023-24, with the majority being revenue funded and the remainder coming from Federal bond interest subsidies and recovery capital.

The Wastewater Enterprise is responsible for the operations, maintenance, capital improvements and repair/replacement of the following wastewater facilities and assets:

Four Water Pollution Control Plants including: Southeast Treatment Plant, Oceanside Treatment Plant, North Point Wet Weather Facility, and Treasure Island Treatment Plant;

- Twenty-nine Pump Stations, including those in Mission Bay, in San Francisco; twenty-eight sanitary pump stations on Treasure and Yerba Buena Islands and six stormwater pump stations on Treasure Island;
- Nine Transport/Storage Facilities with 199 million gallons of capacity for combined sewage;
- Three Bay and one Ocean Outfalls off of San Francisco;
- One Bay Outfall off of Treasure Island;
- Thirty-six Combined Sewer Discharge Structures in San Francisco;
- Fifty stormwater outfalls on Treasure and Yerba Buena Islands;
- Nine hundred and ninety-three miles of Sewers, Tunnels, Force Mains and Transport/Storage facilities;
- Two chemical feed stations for odor control in San Francisco;

- Six continuous deflective separation (CSD) units for stormwater management in San Francisco; and
- One Southeast Community Facility in San Francisco.

San Francisco dry-weather wastewater is treated by two main treatment plants, Southeast and Oceanside, with a combined dry-weather design capacity of 107 MGD. During wet-weather, three plants, Southeast, Oceanside and North Point Facility, with a peak design capacity of 465 MGD, treat the combined sanitary and stormwater flows which are called "combined sewage". Wastewater generated at Treasure Island is treated at the Treasure Island facility with a dry-weather capacity of 2 MGD. The treatment plants are:

- **North Point Wet Weather Facility:** The North Point Wet Weather Facility has been in operation since 1951. The facility provides primary-level treatment and disinfection of combined sewage collected in the north part of the City during rainstorms. The facility has a treatment capacity of 150 MGD. Treated combined sewage is discharged approximately 800 feet into the San Francisco Bay. In a typical year, the North Point Wet-Weather Facility treats about 1.3 billion gallons of combined sewage.
- **Southeast Treatment Plant:** The Southeast Treatment Plant was built in 1952 and has been expanded several times since. The Plant treats an average dry-weather flow of approximately 58 MGD and discharges into the San Francisco Bay through an 810 foot-long pipe. The Plant has a peak wet-weather capacity of 250 MGD which is discharged through both the 810 foot-long pipe into the Bay and an auxiliary wet-weather-only outfall into Islais Creek. In a typical year, the Southeast Treatment Plant treats about 25 billion gallons of combined sewage.
- **Oceanside Treatment Plant:** Completed in 1993, the Oceanside Treatment Plant treats an average dry-weather flow of approximately 16 MGD and has a total capacity of 65 MGD during wet-weather. It treats wastewater from the west side of the City. Treated wastewater is discharged from the plant to the Pacific Ocean through the Southwest Ocean Outfall 4.5 miles offshore. In a typical year, the Oceanside Treatment Plant treats approximately 6.6 billion gallons of combined sewage.

- **Treasure Island Treatment Plant:** The San Francisco Public Utilities Commission, under a 1997 Cooperative Agreement between the U.S. Navy, agreed to operate and maintain the utility systems at Treasure Island, including the Treasure Island Plant, while the Navy retains ownership of all the utility systems. The Plant provides secondary treatment of wastewater from facilities on Treasure Island and Yerba Buena Island. It serves a population of approximately 2,400 and has a design capacity of 2 MGD; daily influent flows measured between December 2005 and June 2009 ranged between 0.35 and 0.50 MGD.

Wastewater Enterprise Ten-Year Capital Plan

The Ten-Year Capital plan is organized into the following five categories – Sewer System Improvement program (SSIP), R&R Treatment Facilities and Collection System, Facilities and Infrastructure Projects and Treasure Island.

The Ten-Year Plan for FY 2022-23 through FY2031-32 increased \$703.5 million (13%) from the prior years approved plan. The SSIP increased \$398.8 million largely due to an increase in the Biosolids Digester Project, \$660.5 million that was offset by decreases to other projects in the SSIP (\$261.7).

The Plan also includes increases in the R&R Collection System and Treatment Plant programs, \$335.0 million (17.6 %) mainly due to the lateral sewer improvement project, \$257.2 million and Treatment Plant Improvement projects, \$91.3 million.

The table shows total projected costs over 10-year period.

Wastewater Enterprise Ten-Year Capital Plan

\$ Thousands	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2028-32	Plan Total
Program/Project							
SPENDING PLAN							
Sewer System Improvement Program							
Program Wide Management	14,000	14,000	15,000	15,000	15,000	70,260	143,260
Treatment Facilities	447,604	503,368	482,782	405,397	136,882	236,335	2,212,368
Sewer/Collection System	58,255	89,566	50,705	29,848	43,436	99,001	370,810
Stormwater Management/Flood Control	63,265	96,318	137,823	197,210	127,019	201,666	823,300
Total SSIP	583,124	703,252	686,309	647,454	322,337	607,262	3,549,738
Renewal and Replacement							
Collection System - Condition Assessment	12,208	17,739	25,941	26,978	28,059	158,040	268,965
Collection System - Sewer Improvements	54,418	85,551	110,634	128,712	126,103	756,706	1,262,125
Collection System - Large Diameter Sewer	10,552	15,594	38,498	40,233	38,045	135,272	278,195
Treatment Plant Improvements	25,680	26,212	35,000	40,000	45,000	253,484	425,376
Total R&R	102,858	145,097	210,073	235,924	237,207	1,303,502	2,234,660
Treasure Island - New Wastewater Treatment Facility	215	65,666	66,929	0	0	0	132,810
Wastewater Facilities & Infrastructure							
Ocean Beach Protection	0	35,779	43,821	43,821	13,821	1,310	138,553
Southeast Outfall Condition Assessment & Rehab	0	1,921	3,962	2,580	5,016	17,433	30,911
Customer Service System	998	1,418	2,894	2,799	0	0	8,109
SWOO Condition Assessment & Rehab	0	0	826	1,864	2,286	27,235	32,211
Total Wastewater Facilities & Infrastructure	988	39,118	51,503	51,065	21,123	45,978	209,784
Total Wastewater	687,196	953,133	1,014,814	934,443	580,666	1,956,741	6,126,993
Sources							
Revenue	82,463	92,038	122,657	125,111	127,613	677,384	1,227,266
Revenue Bonds	598,569	658,379	682,792	618,997	344,576	963,485	3,866,799
Capacity Fee	6,165	6,329	5,695	5,695	5,695	28,475	58,054
Total	687,196	756,746	811,145	749,803	477,883	1,669,345	5,152,118
Surplus/(ShortFall)	0	(196,387)	(203,669)	(184,640)	(102,783)	(287,397)	(974,875)

Capital Program

The Ten-Year Capital Plan shows total project costs for the Wastewater Enterprise of approximately \$6.1 billion of which \$3.6 billion is for the SSIP, \$2.2 billion is for R&R and \$209.8 million is for other Wastewater Facilities & Infrastructure and \$132.8 million is for Treasure Island. Capital investments during the 10-year period are in the following areas:

- Program Management, \$143.3 million;
- Treatment Facilities, \$2.2 billion;
- Sewer/Collection System \$370.8 million;
- Stormwater Management/Flood Control, \$823.3 million;
- Renewal and Replacement, \$2.2 billion;
- Treasure Island, \$132.8 million;
- Wastewater facilities & Infrastructure, \$209.8 million;

Sewer System Improvement Program (SSIP), \$3.5 billion

The San Francisco Public Utilities Commission endorsed a \$6.9 billion Sewer System Improvement Program (SSIP) to help the Wastewater Enterprise meet the SFPUC goals and levels of service for operational reliability, regulatory compliance, effective stormwater management, community benefits, climate change adaptation, economic and environmental sustainability and ratepayer affordability. The SSIP will be implemented in three phases over the next 18 years.

The SSIP evaluated the current treatment and collection system to provide a long-term strategy for wastewater and stormwater management to ensure reliability and resilience. The SSIP is based on a comprehensive planning effort that: (1) outlines a long-term strategy for San Francisco's wastewater and stormwater management; (2) addresses specific system deficiencies, aging infrastructure, and future operational and repair/replacement needs; and (3) provides a roadmap for future capital improvement programs, ensuring reliable service meeting all regulatory requirements. The SSIP will be implemented over a 20 to 30-year timeframe, a portion of which is addressed in the 10-Year Capital Plan.

The 10-Year Capital Plan as adopted anticipates approximately \$3.5 billion of investments in the SSIP, focusing on projects in the following categories:

- **Program-Wide Efforts:** \$143.3 million – the SSIP is a series of capital improvement projects focused on improving the wastewater system to meet the present and future needs of the City. The Program-Wide Management Project will support the SSIP implementation, providing condition assessments (facility inspections), project definition and prioritization, public outreach and education, analysis of the impacts of climate change, sustainability evaluation, and general program management (program controls, change control, constructability).
- **Treatment Facilities:** \$2.2 billion - projects include the Bayside Biosolids (Digester) Project in southeast San Francisco; improvements to the combined sewer transport storage and near shore combined sewer discharge structures; and improvements to the liquid treatment at the Southeast Water Pollution Control Plant, the North Point Wet Weather Facility, the North Shore Pump Station and associated outfalls; and improvements to the Oceanside Water Pollution Control Plant, Westside Pump Station, and Westside Force Main.
- **Sewer/Collection System:** \$370.8 million – includes the proposed Central Bayside System Improvement Project to provide system enhancements to the Channel Drainage Basin and needed redundancy for the existing 66-inch Channel Force Main, hydraulic improvements to sewers/pump stations, and improvements to stormwater management through elements of both grey and green infrastructure. Also provides funding for replacement of existing sewers to increase hydraulic capacity, transportation/storage and combined sewer discharge structures, pump stations and force mains.
- **Stormwater Management/Flood Control:** \$823.3 million program includes work on drainage basins, green infrastructure, flood resilience, and the Green Infrastructure Stormwater Management Grant Program. For drainage basins, the SFPUC will build, monitor, and evaluate the effectiveness of eight green infrastructure projects to minimize stormwater impacts throughout San Francisco's eight urban watersheds. Flood resilience projects

- will address combined sewer flooding caused by heavy rain through capital improvements, financial incentives, Building Code amendments, options for affordable flood insurance, and enhanced coordinated storm response. Green infrastructure construction of permeable surfaces and engineers' subsurface systems will sustainably augment the collection system for the management of stormwater flows. Finally, the Green Infrastructure Stormwater Management Grant Program will incentivize property owners to construct and maintain green infrastructure on large parcels. These projects will support the levels of service goals to minimize flooding, provide benefits to impacted communities, and achieve economic and environmental sustainability. Ancillary benefits may include reduced energy use (reduced pumping and treatment), potable water conservation, groundwater recharge, and improved community aesthetics.

Renewal and Replacement (R&R) Program

The Wastewater R&R program includes two major categories: sewer replacements and treatment facilities. Increase in Collection System R&R is due to moving large diameter sewer projects from SSIP to R&R to better align with the perpetual nature of the need for sewer reinvestments.

Collection System, \$1.8 billion

- **Condition Assessment Project** – There are more than 80 miles of major sewers that have been in service for 100 years or more and are at the end of their useful life. This project includes cleaning and inspection of large diameter sewers, transport/storage boxes and collection system discharge/overflow structures. The results of the inspection program will inform the R&R Spot Repair and Collection System Sewer Improvements Programs, as well as the SSIP regarding needed sewer repairs. This project will assist with the on-going gathering of data necessary for the Wastewater Enterprise Collection Systems Asset Management Program.
- **Sewer Replacement/Improvement Program** – This program maintains the existing functionality of the sewage collection system and includes planned and emergency repairs and replacement of structurally inadequate sewers. Failure of the collection system will reduce the City's

ability to handle and dispose of wastewater and stormwater which can lead to public health, safety and environmental risks and non-compliance with State discharge permit. Projects are identified utilizing an asset management approach which factors in physical condition, age, location, risk, public safety, paving schedule and other factors. This program allows for the renewal and replacement of approximately 15 miles of sewer per year

- **Large Diameter Sewer** - This is a collection of large sewer improvement projects that will rehabilitate and/or replace Large Sewers (sewers greater than 36-inches in diameter or equivalent diameter) that have the highest risk for failure. The collection of projects (or subprojects) were identified from the efforts of SSIP Phase 1 projects.
- **Sewer Lateral Improvements** - The R&R Program Collection System Sewer Lateral Improvement projects consist of localized replacement/rehabilitation of sewer assets (predominantly sewer laterals). The State implementation of the Combined Sewer Overflow Policy requires that sewer utilities must have an on-going inspection, cleaning and repair program for sewer system assets to minimize raw sewage overflows

Treatment Plants, \$425.4 million

The Treatment Plant Improvement program helps maintain the capacity and reliable performance of the Wastewater treatment facilities owned and operated by the Wastewater Enterprise. This is a continuing annual program to extend the useful life of Wastewater treatment assets including Transport Boxes, Discharge Structures, Pump Stations, Force Mains, Tunnels and Treatment Plants.

The projects are prioritized based upon regulatory compliance, condition assessments, operation staff recommendations and Level of Service goals which were formally adopted as part of the SSIP. The completion of projects under the Treatment Plant Improvement program will increase reliability and efficiency of Wastewater Enterprise facilities and will ensure that the performance of the treatment facilities meets the established levels of service.

Treasure Islands Capital Improvement, \$132.8 million

On October 1, 1997, concurrent with the operational closure of the Treasure Island Naval Station, the City entered into a Cooperative Agreement with the U.S. Navy in which the City agreed to take responsibility for caretaker services on Treasure Island and Yerba Buena Island. As a result of this agreement, the SFPUC provides utility operations and maintenance services for the wastewater and stormwater systems.

This project provides continued funding for a new tertiary three-million gallon per day wastewater treatment facility for the Treasure Island/Yerba Buena Island service area to replace the existing, aged facility. The new treatment facility will include influent screening, a combined primary/secondary treatment process, anaerobic sludge digestion, sludge dewatering and truck load-out, disinfection, odor control, and tertiary treatment.

Wastewater Facilities and Infrastructure, \$209.8 million

- **Ocean Beach Protection Process:**
\$138.5 million - This project is to develop comprehensive shoreline management and protection plan in partnership with relevant stakeholders and regulatory agencies and to establish a long-term solution to the erosion issues along Ocean Beach. This long-term solution is necessary to protect the integrity of critical wastewater assets that were planned, built, permitted and constructed to protect public health and the environment. These assets include the Lake Merced Transport/Storage facility, the Westside Pump Station and the Oceanside Treatment Plant which are threatened by sea level rise, and erosion at Ocean Beach
- **Southwest Outfall Condition Assessment:**
\$30.9 million - This project includes the condition assessment of the outfall and needed repairs. The facilities provided all-weather collection and treatment of flows from the westside of the City. The facilities must be monitored and maintained to ensure reliable and safe operation during all weather conditions.

- **Customer Service System:** \$8.1 million - Upgrade to the Customer Service Center Systems that will modernize current existing technology to optimize business processes aligning with current and future Customer Service needs and increased operational effectiveness
- **Southeast Ocean Outfall Condition Assessment:**
\$32.2 million - The Southeast Outfall pipeline conveys treated effluent from the Southeast Plant to the San Francisco Bay. The condition assessment will determine if the pipeline from the onshore force main to offshore outfall can provide reliable service until the offshore outfall is replaced. Funding for rehabilitation is include in the project if determined necessary by the assessment.

FY 2022-23 Capital Budget

The table shows the Wastewater Enterprise's capital budget for , FY 2021-22, and FY 2022-23, by major program

Wastewater One Year Capital Budget

\$ Millions	FY 2021-22 Adopted Budget	FY 2022-23 Adopted Budget
Program/Project		
COST		
SEWER SYSTEM IMPROVEMENT PROGRAM		
Program Wide Management	0.0	14.0
Treatment Facilities	333.6	447.6
Sewer/Collection System	15.0	58.3
Stormwater Management/Flood Control	37.5	63.3
Total SSIP	386.1	583.1
RENEWAL AND REPLACEMENT		
Collection System - Condition Assessment	8.0	12.2
Collection System - Sewer Improvements	107.7	54.4
Collection System - Large Diameter Sewer	0.0	10.6
Treatment Plant Improvements	26.6	25.7
Total R&R	142.3	102.9
Treasure Island - Wastewater Treatment Facility	15.0	0.2
WASTEWATER FACILITIES & INFRASTRUCTURE		
Ocean Beach Protection	2.4	0.0
Islais Creek Crossing	0.0	0.0
Customer Service System	0.0	1.0
Total Wastewater Facilities & Infrastructure	2.4	1.0
Financing Cost	75.9	105.6
Total Cost	621.8	792.8
SOURCES		
Revenue	110.3	82.5
Revenue Bonds	506.3	704.1
Capacity Fee	5.3	6.2
Total Sources	621.8	792.8

The Wastewater FY 2022-23 Capital Budget is \$793.0 million. The capital budget includes continuing Renewal and Replacement (R&R) Projects for the Collection System Sewer R&R and Treatment Plant Facilities Improvements and significant non-recurring capital expenditures for the Sewer System Improvement Program (SSIP), Treasure Island and other Wastewater Facilities and Infrastructure. The budget is funded by a combination of Wastewater Enterprise revenues, Wastewater revenue bonds and capacity fees

As a preliminary step to the Capital budget development, a baseline review of all existing project appropriations was completed for potential closeout or repurposing to new capital budget needs. This important step reduced the amount of funding request in FY 2022-23 in the two-year Capital budget and a more efficient use of existing project appropriations, commercial paper and bond funding issuances.

FY 2022-23

The Wastewater Enterprise's capital budget for FY 2022-23 is \$793.0 million and includes \$687.2 million for Wastewater Capital Projects and \$105.6 million for financing cost. The FY 2022-23 Wastewater Enterprise capital budget, including financing costs, is \$171.0 million more than the FY 2021-22 approved budget because of increases to the SSIP Biosolids Digester Project and Collection System and Treatment Facilities Renewal & Replacement projects.

Major projects include:

Capital Enhancements included in the SSIP

\$14.0 million for Program Wide Management to fund components necessary for successful implementation of the Sewer System Improvement Program (SSIP): condition assessment (facility inspections), technical support and evaluations, water quality studies, progression of project definition and prioritization, public outreach and education, analysis of the impacts of climate change, development of green infrastructure standards and training programs.

\$447.6 million for SSIP Treatment Facilities on-going improvements at the Southeast Plant including the Biosolids Digester Project, Headworks Project, Oceanside Plant Condition Assessment and Improvement Project and the North Shore Wet Weather Improvement Project.

\$58.3 million for Sewer/Collection System including the Kansas and Marin Street Sewer Improvement project, Large Diameter Sewers and Channel Force Main Improvement Projects.

\$63.3 million for Stormwater Management/Flood Control Green Infrastructure Projects to provided sustainable alternatives to the collection system management of stormwater flows and the Green Infrastructure Grant Program.

Renewal and Replacement Projects (Recurring)

\$77.2 million for Collection System R&R projects including sewer condition assessments which support the Collection System Asset Management program, spot sewer repairs (repair that cover less than one block) and planned/emergency projects to repair/replace 15 miles of structurally inadequate sewers to maintain the existing functionality of the collection system.

\$25.7 million for Treatment Plant R&R program to maintain the capacity and reliable performance of the wastewater treatment facilities. Includes repairs to Transport Boxes, Pump Stations, Force Mains, Tunnels and Treatment Plants prioritized by condition assessments, regulatory compliance, staff recommendations and level of service goals.

Capital Enhancements Non-SSIP

\$1.2 million for upgrades to the Customer Service Center Systems that will modernize current existing technology to optimize business processes aligning with current and future Customer Service needs and increased operational effectiveness.

Wastewater Programmatic Projects

The table shows The Wastewater Enterprise Programmatic Projects, for FY 2021-22, FY 2022-23, and FY 2023-24, by major programs. Programmatic projects are annually appropriated projects in support of routine maintenance of programs most of which were initiated in support of the capital program.

Wastewater Two-Year Programmatic Projects Budget

\$ Millions	FY 2021-22 Adopted Budget	FY 2022-23 Adopted Budget	FY 2023-24 Adopted Budget
Program/Project			
Treasure Island Facilities Maintenance	1.5	1.5	1.5
Low Impact Development	0.7	0.7	0.7
Youth Employment Project	0.7	0.7	0.7
525 Golden Gate - Operations & Maintenance	1.3	1.3	1.4
525 Golden Gate - Lease Payments	2.4	2.4	2.4
Total Cost	6.6	6.7	6.7

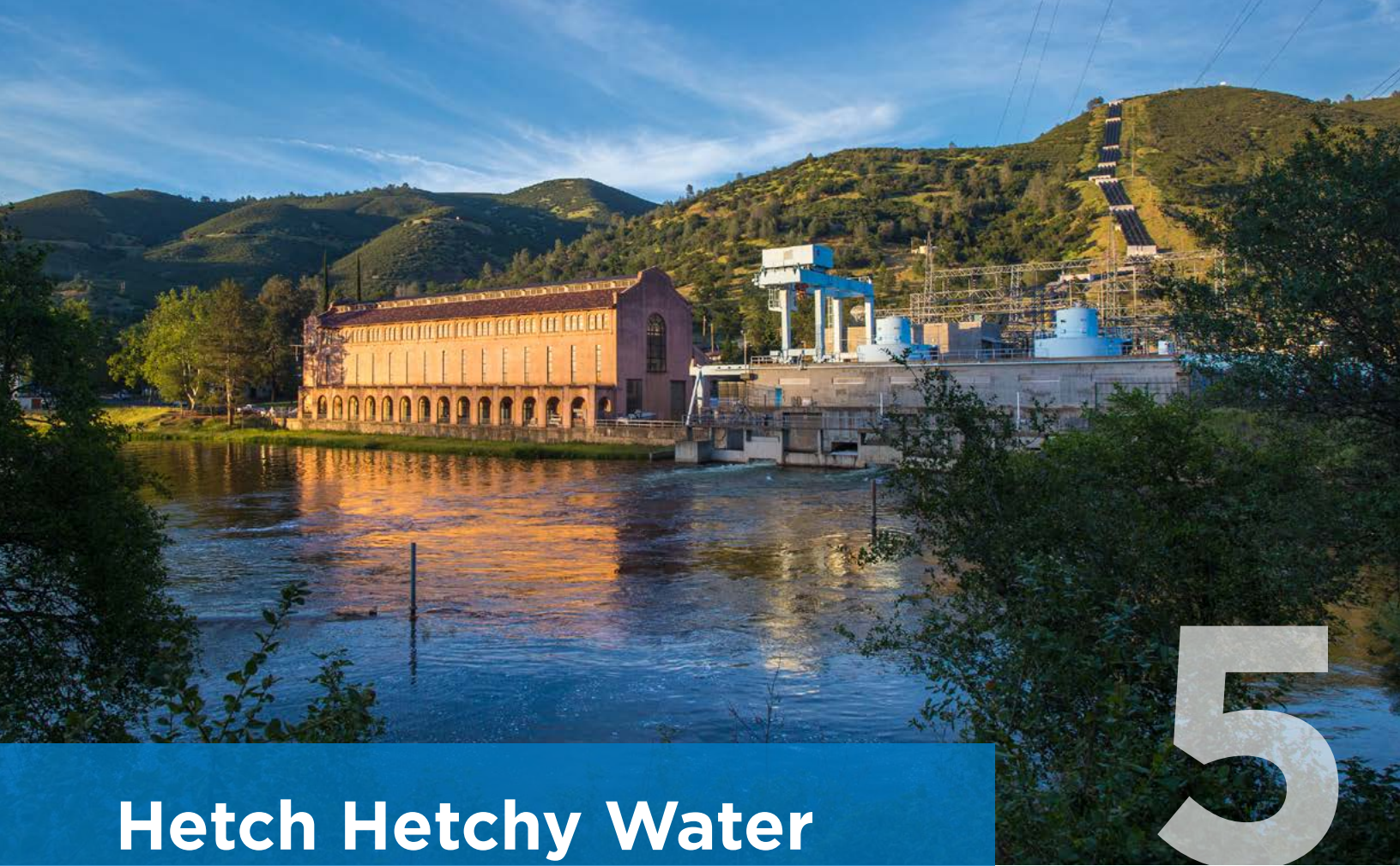
SOURCES			
Infrastructure - Recovery Capital (O&M)	0.3	0.3	0.3
Infrastructure - Recovery Capital (Lease)	1.9	1.9	1.9
Federal Bond Interest Subsidy	0.5	0.5	0.5
Revenue	3.9	4.0	4.0
Total Sources	6.6	6.7	6.7

FY 2022-23

Wastewater Enterprise Programmatic Projects budget for FY 2022-23 is \$6.7 million to fund facilities maintenance activities at Treasure Island, Low Impact Development, Youth Employment Programs, and the SFPUC 525 Golden Gate Headquarters Building.

FY 2023-24

The Wastewater Enterprise Programmatic Project budget for FY 2023-24 is \$6.7 million, and funds projects similar to those in FY 2022-23.



Hetch Hetchy Water and Power Enterprise

Mission

Hetch Hetchy Water and Power is comprised of two components: Hetchy Water, which operates and maintains the Hetch Hetchy Project, and Hetch Hetchy Power, which is responsible for all SFPUC power utility commercial transactions and in-City power operations.

The Hetch Hetchy Project provides both water for distribution through the Water Enterprise and hydroelectric power to municipal and other customers through the Power Enterprise. A number of facilities in the Hetch Hetchy Project are joint assets used for both water conveyance and power generation and transmission, benefiting both Hetchy Water and Hetch Hetchy Power. All power sale revenues are allocated to Hetch Hetchy Power. Operating and capital costs benefitting Hetch Hetchy Water and 55 percent of operating and capital costs that jointly benefit Hetch Hetchy Water and Power are allocated to the Hetch Hetchy Power. Operating and capital costs benefitting Hetchy Water and 45 percent of operating and capital costs jointly benefitting Hetch Hetchy Water and Power are allocated to the Water Enterprise.

Capital Budget

In addition to the operating budget, the Hetch Hetchy Water and Power enterprise also prepares a Capital budget and Ten-Year Capital Plan.

In FY 2022-23, the Hetch Hetchy Enterprise's capital budget is \$181.1 million, of which \$176.8 million or 98.0 percent is funded by debt and \$4.3 million or 2.0 percent is revenue funded. Of the Debt funding, the majority is from power bonds, with the remainder met by water bonds. The majority of the revenue funding is from the Distributed Antenna System and Low Carbon Fuel Standards with the remainder being from power cap and trade revenue. The Hetch Hetchy Enterprise's annual programmatic project budget, which is funded in the operating budget but forms part of the capital program, is \$14.1 million in FY 2022-23 with the majority being funded by revenues, Treasure Island and the remainder coming from Federal bond interest subsidies and recovery capital.

The Hetch Hetchy Water and Power of the San Francisco Public Utilities Commission is responsible for providing reliable, high quality water and electric energy to the City and other customers, operates and maintains facilities to a high standard of safety and reliability, and maximizes revenue opportunities within approved levels of risk.

Hetchy Water operates, maintains, and improves water and power facilities, smaller dams and reservoirs, water transmission systems, power generation facilities, and power transmission assets, including transmission lines to the Newark substation.

Power consists of hydroelectric generation, onsite solar at SFPUC and other City facilities, generation using bio-methane produced at SFPUC wastewater treatment facilities, and third-party purchases.

Hetch Hetchy Water and Power Ten-Year Capital Plan

The SFPUC is required to develop a Ten-Year Capital Plan. Reliability and delivery of high quality water and renewable sources of power are the most critical objectives of Hetch Hetchy Water and Power. The purpose of the capital investment is to extend the useful life of the infrastructure and provide continued reliable operation of the system components. Therefore, understanding the long-term capital needs of the system and determining how to finance these capital needs are essential to the mission of the SFPUC.

The table shows the Hetch Hetchy Water and Power Ten-Year Capital Plan by program and project. The table also shows the different sources of revenue that are expected to finance the plan over these ten-years.

Power Enterprise Capital Program - The program undertakes projects both within San Francisco and up-country and is financed by operating revenues, Cap and Trade Carbon auction revenues, Low Carbon Fuel Standard and Power revenue bonds. Power includes the renewable generation and energy efficiency projects critical to attain greenhouse gas reductions and begin climate change mitigation and transmission and distribution projects consistent with the City's goal of establishing the SFPUC role as the exclusive electric service provider to existing and new City facilities, redevelopment and development projects.

The Hetchy Water Renewal and Replacement Program -

This program is financed by Water revenue bonds, Power revenue bonds and Power revenue; the Hetchy Water Renewal and Replacement budget includes Water Infrastructure, Power Infrastructure and Joint, Water (45 percent)/Power (55 percent) projects that are located up-country and managed by Hetchy Water.

The chart below shows Hetch Hetchy’s capital budget trend over ten years. These trend lines show a small increase in-City Hetchy Power Project budget over the ten years and funding for Hetchy Water increasing in FY 2022-23 for construction on the Mountain Tunnel and SJPL Valve Improvement Projects.

Hetch Hetchy Ten-Year Capital Plan

\$ Thousands Program/Project	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2028-32	Plan Total
SPENDING PLAN							
HETCH HETCHY POWER							
Distribution Services for Retail Customers	57,032	21,643	72,743	75,418	75,418	208,625	510,879
Streetlights	2,259	2,815	3,815	3,815	3,815	19,075	35,594
Redevelopment	1,483	1,483	1,483	1,483	1,204	6,020	13,154
Renewable/Generation	1,000	1,000	1,000	1,000	1,000	5,000	10,000
Energy Efficiency	1,000	1,000	1,000	1,000	1,000	5,000	10,000
Alternative Transmission Project	3,406	4,747	3,053	2,888	2,888	14,440	31,422
Total Hetchy Power	66,179	32,687	83,093	85,603	85,325	258,160	611,049
HETCHY WATER							
Water Infrastructure	45,723	53,980	67,802	17,868	16,204	31,098	232,675
Power Infrastructure	44,140	17,716	36,357	18,536	10,549	65,953	193,250
Joint Projects - Water Infrastructure 45%	11,286	36,066	44,734	49,434	25,186	80,127	246,833
Joint Projects - Power Infrastructure 55%	13,794	44,081	54,675	60,419	30,783	97,933	301,684
Total Hetchy Water	114,944	151,843	203,568	146,256	82,722	275,111	974,442
Total Hetchy Power & Water	181,123	184,530	286,661	231,859	168,047	533,271	1,585,491
SOURCES							
Revenue	2,259	5,047	5,161	10,380	18,015	108,573	149,434
Power Bonds	119,855	79,895	145,298	131,268	87,941	262,163	826,421
Water Bonds	57,009	90,046	112,536	67,301	41,390	111,225	479,507
Low Carbon Fuel Standard	1,220	1,643	1,300	1,300	1,300	6,500	13,263
Cap and Trade Auction Revenue	780	890	1,350	1,350	1,350	6,749	12,468
Total Sources	181,123	177,521	265,645	211,599	149,996	495,210	1,481,094
Surplus/(Shortfall)	0	(7,009)	(21,016)	(20,260)	(18,051)	(38,061)	(104,397)

Power Capital Program

The \$611.0 million per year capital program is comprised of the following:

Distribution Services Retail, \$510.9 million -

These projects are consistent with San Francisco Administrative Code Section 99.3 establishing the SFPUC's role as the exclusive electric service provider for existing and new City facilities, and redevelopment and development projects.

SFO Substation Improvements -

This project provides for the SFPUC to serve SFO's anticipated load increase. The project will plan, design, and construct needed upgrades at the substations to provide reliable and redundant service to the airport.

Distribution Interface Redevelopment

Projects - This project provides for the design and construction of new electric distribution systems and facilities for the SFPUC to provide electric services to various new developments within San Francisco. The project will consider the use and implementation of proven, as well as new and emerging technologies. Beneficial technologies will be identified, researched, and analyzed, prior to making a proposal for any implementation on the project, where ratepayer benefit is demonstrated.

Alice Griffith/Candlestick Point - This project provides for the second phase of development at Hunters Point Shipyard, Candlestick Point, and the Alice Griffith Housing Complex. The Development Team comprised of the Office of Community Investment and Infrastructure and Developer will pay for the installation of the infrastructure and substructure required for the new 12-kV underground electrical distribution system. The SFPUC as the electric utility provider will install the conductors in the conduits, transformers, switches, and metering equipment required for the electric distribution system.

Grid Connections - Project to connect customers to SFPUC owned and operated distribution and transmission infrastructure. Hetchy Power has identified a number of Bay Corridor and current SFPUC grid customers to be connected to our systems including, The Shipyard, 2000 Marin, 1990 Newcomb, UCSF block 34, Wastewater Facilities interconnections and other customers throughout the City.

Streetlights, \$35.6 million

Hetchy provides power to all of San Francisco's 44,528 streetlights, maintains the 25,509 streetlights owned by the City, and funds the maintenance of the 19,019 streetlights owned by Pacific Gas & Electric Company (PG&E). Street lighting area improvements, the conversion of high voltage series loop circuits into multiple standard voltage service and Lighting Emitting Diode (LED) lighting, holiday and festivity pole use, assessments to determine the severity of pole deterioration, streetlight pole rehabilitation, and replacement of poles are all funded through this program.

Treasure Island \$13.2 million

The Cooperative Agreement discussed in the Wastewater Enterprise's Renewal Program also requires the SFPUC to provide utility operations and maintenance services at Treasure Island and Yerba Buena Island for the electrical and natural gas utility systems. The SFPUC has developed a work plan for creating a public power utility on each of the islands.

The SFPUC has developed a work plan for creating a public power utility serving both of the islands. The capital projects identified are required to support the future developments' electric load. Current planning shows that the existing electrical overhead poles, lines, and substation are adequate to serve the first phase of development. When the load approaches the design limit of the lines at approximately 10 megawatts, the lines will have to be upgraded and installed underground

Renewable/Generation Power, \$10.0 million

In accordance with City policies and directives to increase renewable energy and reduce greenhouse gases, Hetchy Power is continuously developing and implementing new renewable generation resources. A series is planned to include small municipal and energy development projects including solar photovoltaic, solar thermal, biogas fuel cells, wind projects, and other renewable energy projects. The power generated from the Renewable/Generation Power projects will offset on-site power need at each project location.

Energy Efficiency, \$10.0 million

Energy efficiency improvements reduce facility operating costs and electric bills for customers, improve system functionality, and reduce the environmental impact of energy use. This program funds energy efficiency investments in City facilities covering the planning, design, and construction of “direct install” projects, as well as technical assistance and project assistance for departments utilizing their own capital funds. Energy retrofits include lighting, heating and ventilation, retro-commissioning, and energy management systems projects. The SFPUC performs eight to ten energy efficiency projects each year. The budget funds efficiency projects in municipal facilities for departments such as Police, Real Estate, Recreation and Parks, SFMTA, Yerba Buena Center, and Fine Arts. Planned funding for lighting and mechanical system efficiency upgrades is consistent with state policies that place emphasis on energy efficiency and that support greenhouse gas reduction.

Alternative Transmission \$31.4 million

The Public Power Expansion Project funds financial, technical, regulatory, and legal analysis and City staff time toward assessment of acquiring PG&E’s electrical assets, preparing to execute the possible transaction, and readying the SFPUC for operation of the acquired system.

Hetchy Water Renewal and Replacement (R&R) Program

The \$974.4 million Hetchy Water Renewal and Replacement Program is comprised of several programs. The proposed program costs will be financed with a combination of water and power revenue bonds.

Many Hetch Hetchy Water and Power facilities and system components are aging and/or have reached/exceeded their useful life. The condition of these facilities and equipment must be or has been assessed and proposed projects evaluated and prioritized based on risk (financial/criticality, safety and regulatory), efficiency of operations, and to provide a safe working environment for employees working in remote areas.

Water Infrastructure, \$232.7 million

The Water Infrastructure Renewal and Replacement program will include concept, development, design, and upgrades for operating, managing, and maintaining the Hetchy Water Infrastructure. In general, this includes water facilities from Hetch Hetchy Reservoir to Alameda East. The new and upgraded systems will have increased coverage, capacity or reliability, or improve employee safety and/or operating efficiency.

The Hetchy water renewal program includes continued rehabilitation to the San Joaquin Pipeline (SJPL) including evaluation and assessment of structural integrity, structural upgrade of the pipeline and other projects including pipeline cathodic protection, coating and lining.

The SJPL Valve and Safe Entry Project to allow safe entry into all sections of the SJPLs for inspection and maintenance while the remainder of the system stays in operation. This project will allow for isolation of the pipelines to prevent a water engulfment hazard during entry into the pipeline for inspections or repairs. Mountain Tunnel Improvement Project includes funding the tunnel portion of the project for improvements to enhance SFPUC’s ability to provide reliable, high-quality water to its customers. This portion of the project was reclassified from Joint to a Water only asset for this capital plan.

Power Infrastructure - \$193.3 million

Many Hetchy Power systems, facilities, and equipment have reached their end of their life expectancy. Power generation will become less reliable if upgrades are not performed.

The Capital Plan provides funding for improvements at the Hetchy Powerhouses. Projects include upgrades to the Moccasin and Kirkwood powerhouses including protection, control and monitoring systems and equipment replacement and upgrades. The plan includes the Moccasin Powerhouse Generator Rewind and GSU Rehabilitation to fund assets at the powerhouse (breakers, generators, switchgears, valves, etc.) that have exceeded their useful life to avoid unplanned outages and increase operational efficiency.

The Capital Plan also includes rehabilitation of transmission lines and distribution systems. Transmission improvements consist of reliability projects to address regulatory requirements. Typical projects include replacement of insulators, switches, tower infrastructure, grounding and protection. Also included are regulatory projects to achieve clearance mitigation and resolve clearance discrepancies and meet regulatory requirements along with the power system impact mitigation project to mitigate impacts on the City's electric system caused by interconnections with private developments.

Joint Projects – Water & Power Infrastructure, \$548.5 million

These projects included assets that are jointly funded by the Water (45 percent) and Power (55 percent) Enterprises.

Communications - Projects provide upgrades of the communication systems elements to maintain pace with the changes in technology, and to maintain overall system reliability. The project will help to increase communications within the Moccasin compound.

Dams and Reservoirs - Projects to upgrade the Dams and Reservoirs to meet the Water Levels of Service and Power Operational Objectives. Funding is included for O'Shaughnessy Dam to address deficiencies of the existing outlet works system, including the drum gates and release system through to Canyon Tunnel and the Tuolumne River and Moccasin Dam to evaluate, design and construct long term solutions for Moccasin Dam and associated appurtenance so that the facilities can handle the updated design flood.

Mountain Tunnel - Improvements to enhance SFPUC's ability to provide reliable, high-quality water to its customers will be carried out through three projects, the Mountain Tunnel Adits & Access Improvements Project to provide access to the tunnel, Inspection and Repair Project to provide for tunnel inspection and updated condition assessment and the Improvement Project to implement the needed improvements to assure reliability of water delivery.

Roads and Bridges - Project to replace bridges as recommended in the condition assessment reports and the road improvements program for upkeep of access to numerous Hetch Hetchy Water and Power facilities.

Utilities - Projects to maintain the power distribution system in a state of good repair consistent with utility best practices to ensure 24/7 power. This project will rehabilitate the HHWP power distribution system consistent with utility best practices to provide reliable electrical necessary to operations at Moccasin Camp and remote sites.

Wildfire Mitigation - New to the plan is funding resulting from the passage of California state law requiring all public and private utilities assess the location of their overhead electrical lines and equipment relative to areas determined to have significant risk of catastrophic wildfires resulting from electrical lines and equipment. The SFPUC owns assets in areas designated "High Fire Threat Zones" and to mitigate threats maintains a Wildfire Mitigation plan.

FY 2022-23 Capital Budget

The FY 2022-23 Capital Budget is \$212.2 million for projects and financing costs for Hetchy Water and Power. As a preliminary step to the FY 2022-23 Capital budget development, a baseline review of all existing project appropriations was completed for potential closeout or repurposing to new capital needs. This important step reduced the amount of funding requested in FY 2022-23 Capital Budget resulting in a more efficient use of existing project appropriations, commercial paper and bond funding issuances.

The table below shows the Hetchy Water and Power capital budget for FY 2021-22 & FY 2022-23 by major programs.

Hetchy Hetchy One Year Capital Budget

\$ Millions Program/Project	FY 2021-22 Adopted Budget	FY 2022-23 Adopted Budget
HETCHY POWER COSTS		
Transmission/Distribution	40.4	57.0
Streetlights	0.0	2.3
Redevelopment	4.3	1.5
Renewable/Generation	1.0	1.0
Energy Efficiency	1.0	1.0
Power Asset Acquisition	0.0	3.4
Total Hetchy Power	46.7	66.2

HETCHY WATER COSTS		
Water Infrastructure	33.7	45.7
Power Infrastructure	10.6	44.1
Joint Projects - Water Infrastructure 45%	30.2	11.3
Joint Projects - Power Infrastructure 55%	36.9	13.8
Total Hetchy Water	111.5	114.9

Financing Cost - Hetchy Water	11.3	10.1
Financing Cost - Hetchy Power	15.8	21.0
Total Financing Costs	27.1	31.1

Total Hetchy Power & Water	185.3	212.2
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SOURCES		
Revenue	2.2	2.3
Power Bonds	105.4	140.9
Water Bonds	75.3	67.1
Low Carbon Fuel Standard	2.0	1.2
Cap and Trade Auction Revenue	0.5	0.8
Total Sources	185.3	212.2

FY 2022-23 Summary

The Hetchy Water and Power Capital budget for FY 2022-23 is \$212.2 million and includes: \$66.2 million for In-City Power projects \$114.9 million for up-country Hetchy Water projects and \$31.1 million for financing cost. The FY 2022-23 CIP is funded by \$2.3 million in Distributed Antenna System Revenue, \$0.8 million Cap and Trade Revenue, \$1.2 million Low Carbon Fuel Standard Revenue, \$140.9 million from the issuance of Power Enterprise revenue bonds for projects considered Power or 55 percent of joint assets, \$67.1 million from the issuance of Water Enterprise revenue bonds for projects considered Water or 45 percent of joint Water's assets.

The budget represents continued investment in upgrading and improving infrastructure to ensure reliability of power generation and water delivery. The budget grows the Power portfolio with continued investment in renewable sources and efficiency.

Power

Projects in the FY 2022-23 capital budget include:

\$57.0 million for Transmission /Distribution Improvements to provide for the design and construction of transmission and distribution facilities to serve new retail customers, installation of Intervening Facilities required under the new Wholesale Distribution Tariff and the development, administration, and incentive payments to new retail customers. Funding is also included for the San Francisco Airport Substation Improvements, Intervening Facilities to provided primary power services from the SFPUC to new customers, and Grid Connection Projects to connect customers to SFPUC owned and operated distribution and transmission infrastructure.

\$2.3 million for Streetlights on going pole rehabilitation, street and pedestrian lite pole assessments and holiday and festivity streetlight projects

\$1.5 million for Redevelopment at Treasure Island- Install a new underground 12 kilovolt (kV) distribution system at Treasure and Yerba Buena Island. The developer will pay for the installation of the new underground 12-kV electric distribution system while the SFPUC, as the electric utility provider, will be responsible for installing the

conduit wires, transformers, switches, and metering equipment and connecting the existing electrical distribution system with the new system.

\$1.0 million for Renewable/Generation projects such as small renewable (solar photovoltaic, solar thermal, wind, geothermal, fuel cells), small hydro (in-line turbines, turbines in existing pipelines, incremental hydro). Power generated from the Renewable/Generation projects will offset on-site power need at each project location.

\$1.0 million for Energy Efficiency Projects for General Fund departments. This project involves retrofitting the City buildings and other facilities to significantly improve operation and energy efficiency and enhance indoor air quality and occupant/public experience.

\$3.4 million for the Public Power Expansion Project to fund financial, technical, regulatory, and legal analysis and City staff time toward assessment of acquiring PG&E's electrical assets, preparing to execute the possible transaction, and readying the SFPUC for operation of the acquired system.

Hetchy Water

Projects in the FY 2022-23 capital budget include:

\$45.7 million for Water Infrastructure projects to fund capital improvement projects to sustain the reliability of the nearly 50-mile-long San Joaquin Pipeline (SJPL) network and the SJPL Valve and Safe Entry Project to allow safe entry into all sections of the SJPLs for inspection and maintenance while keeping the remainder of the system operating

\$44.1 million for Power Infrastructure projects for repairs and upgrade to up-country Hetchy Power assets including the Moccasin Powerhouse GSU Rehabilitation Project, Transmission Lines 7/8 upgrades and Transmission Line Clearance and Wildfire Mitigation Projects.

\$25.1 million for Hetchy Water's joint funded projects, 45 percent Water, 55 percent Power, to fund continued renewal and replacement to Hetchy joint funded assets including Dams & Reservoirs, Communication systems, the Mountain Tunnel Project, Hetchy roads & bridges, utilities upgrades and Wildfire Mitigation Project.

Hetch Hetchy Water and Power Programmatic Projects

The table below shows Hetch Hetchy Water and Power Programmatic Projects, for FY 2021-22, FY 2022-23 and FY 2023-24, by major programs.

Hetch Hetchy Two-Year Programmatic Projects Budget

\$ Millions	FY 2021-22 Adopted Budget	FY 2022-23 Adopted Budget	FY 2023-24 Adopted Budget
Program/Project			
HETCHY COSTS			
Facilities Maintenance	6.3	3.0	3.0
WECC/NERC Compliance	2.5	4.4	4.4
WECC/NERC Transmission Line Clearance	0.0	0.2	0.2
Treasure Island Facilities Maintenance	4.0	4.2	4.4
Youth Employment Project	0.2	0.2	0.2
525 Golden Gate - Operations & Maintenance	0.8	0.8	0.8
525 Golden Gate - Lease Payments	1.2	1.2	1.2
Total Cost	15.0	14.1	14.3
SOURCES			
Infrastructure - Recovery Capital (O&M)	0.1	0.1	0.1
Infrastructure - Recovery Capital (Lease)	0.2	0.2	0.2
Federal Bond Interest Subsidy	0.3	0.3	0.3
Revenue	14.4	13.5	13.7
Total Sources	15.0	14.1	14.3

The Hetch Hetchy Water and Power Programmatic Projects budget for FY 2022-23 is \$14.1 million and is funded at relatively the same amount, \$14.3 million in FY 2023-24. The FY 2022-23 budget is funding the Facilities Maintenance, WECC/NERC, Treasure Island Maintenance, the Youth Employment and 525 Golden Gate projects. The programmatic budget is primarily funded with revenue along with recovery capital and bond interest subsidies.





6

CleanPowerSF

Mission

Hetch Hetchy Water and Power is comprised of two components: Hetchy Water, which operates and maintains the Hetch Hetchy Project, and Hetch Hetchy Power, which is responsible for all SFPUC power utility commercial transactions and in-City power operations.

The Hetch Hetchy Project provides both water for distribution through the Water Enterprise and hydroelectric power to municipal and other customers through the Power Enterprise. A number of facilities in the Hetch Hetchy Project are joint assets used for both water conveyance and power generation and transmission, benefiting both Hetchy Water and Hetch Hetchy Power. All power sale revenues are allocated to Hetch Hetchy Power. Operating and capital costs benefitting Hetch Hetchy Water and 55 percent of operating and capital costs that jointly benefit Hetch Hetchy Water and Power are allocated to the Hetch Hetchy Power. Operating and capital costs benefitting Hetchy Water and 45 percent of operating and capital costs jointly benefitting Hetch Hetchy Water and Power are allocated to the Water Enterprise.

CleanPowerSF Capital Budget

In addition to the operating budget, CleanPowerSF also prepares a Capital budget and 10-Year Capital Plan. CleanPowerSF's capital budget is \$3.7 million in FY 2022-23 and is entirely revenue funded.

A program of the San Francisco Public Utilities Commission, CleanPowerSF is a local solution to the climate crisis, offering renewable, affordable and accessible energy to our community. We empower residents and businesses to choose a more sustainable future. CleanPowerSF buys electricity from sources such as wind and solar, and that electricity is delivered to homes via PG&E's existing poles and wires.

CleanPowerSF Ten-Year Capital Plan

Management of CleanPowerSF's financial business functions include developing and maintaining long-range capital and financial plans. The Capital Plan will evaluate opportunities for local renewable energy development in San Francisco city-owned and regional sites and other opportunities in and near San Francisco.

The CleanPowerSF Ten-Year Capital Plan for FY 2022-23 through FY 2031-32 is \$64.5 million, all of which is funded by CleanPowerSF revenues. CleanPowerSF does not expect to rely on debt to fund its Capital Improvement Program between FY 2022-23 and FY 2031-32.

Local Renewable Energy Program - This program will fund the development of new renewable energy (solar photovoltaic) and battery storage projects on select SFPUC sites. The project is structured around six major phases, including: Planning, Request for Proposals, Construction and Commissioning, Power Purchase Agreement, Asset Management, and Project Buyout. The initial renewable energy facilities developed under this program would be structured as power purchase agreements (PPA) with third parties that would develop and operate the projects for an initial period of time. The PPAs would include a buy-out option for the City.

CleanPowerSF Customer Programs - This program funds the development and implementation of programs that incentivize customers to invest in new clean energy technologies that can reduce their energy costs and further San Francisco's decarbonization goals. Incentives will be available for residents and businesses investing in new clean and efficient equipment like solar power generating equipment, battery storage, electrical vehicle chargers and electric heat pump water heating.

Disadvantaged Community Program (DAC)

The SFPUC received approval of a grant from the CPUC in April 2021 to implement the Disadvantaged Communities Green Tariff and Community Solar Green Tariff Programs (DAC) to increase the use of renewable energy in disadvantaged communities. Eligible customers participating in the Disadvantaged Communities Green Tariff and Community Solar Green Tariff programs will receive 100% renewable energy at a 20% discount off their monthly electricity bill. The SFPUC must procure energy from renewable resources located in disadvantaged communities to serve the customers participating in these programs.

CleanPowerSF Enterprise Ten-Year Capital Plan

\$ Thousands	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2028-32	Plan Total
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SPENDING PLAN

CleanPowerSF Enterprise							
Local Renewable Energy Program	665	669	564	499	234	46,535	49,166
CleanPower SF Customer Program	921	1,519	1,319	1,444	1,369	6,650	13,222
DAC program	2,142	0	0	0	0	0	2,142
Total CleanPowerSF	3,728	2,188	1,883	1,943	1,603	53,185	64,530

SOURCES

Revenue	3,728	2,188	1,883	1,943	1,603	53,185	64,530
Total Sources	3,728	2,188	1,883	1,943	1,603	53,185	64,530

FY 2022-23 Capital Project Budget

The FY 2022-23 CleanPowerSF budget is \$3.7 million for the Local Renewable Energy, CleanPowerSF Customer, and the Disadvantaged Community Programs. The FY 2022-23 budget is revenue funded.

CleanPowerSF One-Year Capital Budget

\$ Millions	FY 2021-22 Adopted Budget	FY 2022-23 Adopted Budget
Program/Project		
CLEANPOWERSF COSTS		
Local Renewable Energy Program	0.5	0.7
CleanPower SF Customer Program	1.9	0.9
DAC program	0.0	2.1
Total CleanPowerSF	2.4	3.7
SOURCES		
Revenue	2.4	3.7
Total Sources	2.4	3.7

Local Renewable Energy Program

This project will fund the development of new renewable energy (solar photovoltaic) and battery storage projects on select SFPUC sites. Funding in FY 2022-23 will go towards planning and design. The budget also includes funding for a Capital Master Plan for renewable energy projects component, that will identify/propose the best path forward for structuring the ownership/financing and operation of the facilities.

CleanPowerSF Customer Programs

This project will fund the development and implementation of new customer programs for CleanPowerSF, including programs supporting demand response, electric mobility, local renewable energy generation, and building decarbonization technologies. The budget will fund the planning, development and operations of a select set of new customer programs to be developed during the next fiscal year and support additional program planning to scale and expand customer programs over the ten-year capital planning period.

Disadvantaged Community Program (DAC)

Funding in FY 2022-23 would primarily go towards providing discounts to participating customers and program management for the Green Tariff program, and program management and procurement to prepare for the launch of the Community Solar Green Tariff program.



Capital Plan Summary Tables

SFPUC Ten-Year Capital Plan (continued on next page...)

USES	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY 31-32
Water Enterprise	111,223,052	389,651,970	489,658,633	364,245,056	219,302,205	121,284,956	134,592,882	109,038,159	102,013,708	86,928,129
Wastewater Enterprise	687,196,456	953,132,925	1,014,813,811	934,442,542	580,666,390	455,161,603	374,001,340	352,015,889	352,993,960	422,568,404
Hetch Hetchy Enterprise	181,123,342	184,530,192	286,661,059	231,858,972	168,046,778	148,798,038	111,570,650	88,357,070	102,640,297	81,904,749
CleanPowerSF Enterprise	3,727,592	2,188,000	1,883,000	1,943,000	1,603,000	1,553,000	1,553,000	1,785,000	20,036,000	28,258,400
Total SFPUC USES	983,270,442	1,529,503,087	1,793,016,503	1,532,489,570	969,618,373	726,797,597	621,717,872	551,196,118	577,683,965	619,659,682
SOURCES										
Water Enterprise										
Debt										
Regional Bonds	22,578,471	189,946,045	197,051,518	138,608,055	58,069,846	24,883,797	38,149,017	16,682,207	12,597,161	741,933
Local Bonds	40,617,900	99,798,716	153,979,890	101,048,757	73,599,144	30,320,274	18,172,037	19,251,307	32,545,598	24,665,271
Subtotal	63,196,371	289,744,761	351,031,408	239,656,812	131,668,989	55,204,071	56,321,054	35,933,513	45,142,758	25,407,204
Revenue										
Capacity Fee	2,152,686	2,211,000	1,520,000	1,520,000	1,580,000	1,644,000	1,644,000	1,634,000	1,554,000	1,520,000
Local Revenue	20,923,995	23,165,658	52,100,000	57,100,000	38,545,000	30,000,000	42,000,000	40,327,975	27,600,000	35,698,998
Regional Revenue	24,950,000	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	20,000,000	19,958,681
Subtotal	48,026,681	50,376,658	78,620,000	83,620,000	65,125,000	56,644,000	68,644,000	66,961,975	49,154,000	57,177,679
Total Water SOURCES	111,223,052	340,121,419	429,651,408	323,276,812	196,793,989	111,848,071	124,965,054	102,895,488	94,296,758	82,584,883

SFPUC Ten-Year Capital Plan (continued)

SOURCES	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY 31-32
Wastewater Enterprise										
<i>Revenue Funding</i>										
Revenue	82,462,744	92,038,000	122,657,438	125,110,586	127,612,798	130,165,054	132,768,355	135,423,722	138,132,197	140,894,841
Capacity Fee	6,164,646	6,329,000	5,695,000	5,695,000	5,695,000	5,695,000	5,695,000	5,695,000	5,695,000	5,695,000
Subtotal	88,627,390	98,367,000	128,352,438	130,805,586	133,307,798	135,860,054	138,463,355	141,118,722	143,827,197	146,589,841
<i>Debt Funding</i>										
Revenue Bonds	598,569,066	658,379,009	682,792,263	618,997,186	344,575,629	245,940,358	181,421,908	162,442,447	161,109,612	212,571,053
Subtotal	598,569,066	658,379,009	682,792,263	618,997,186	344,575,629	245,940,358	181,421,908	162,442,447	161,109,612	212,571,053
Total Wastewater SOURCES	687,196,456	756,746,009	811,144,701	749,802,772	477,883,427	381,800,412	319,885,263	303,561,169	304,936,809	359,160,894
Hetch Hetchy Enterprise										
<i>Revenue</i>										
Power Revenue	0	2,200,000	2,200,000	7,300,000	14,812,500	14,684,500	18,000,000	18,000,000	20,000,000	20,000,000
Distributed Antenna System	2,258,910	2,847,000	2,961,000	3,079,500	3,202,500	3,330,500	3,463,500	3,602,000	3,746,038	3,746,038
Power - Cap and Trade Auction Revenue	780,000	890,000	1,349,767	1,349,767	1,349,767	1,349,767	1,349,767	1,349,767	1,349,767	1,349,767
Low Carbon Fuel Standard	1,220,000	1,643,274	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000
Subtotal	4,258,910	7,580,274	7,810,767	13,029,267	20,664,767	20,664,767	24,113,267	24,251,767	26,395,805	26,395,805
<i>Debt</i>										
Water Bonds	57,009,331	90,046,237	112,535,807	67,301,096	41,389,853	29,757,472	24,539,180	16,938,989	23,726,944	16,262,480
Power Bonds - Up-country	57,934,558	61,796,518	91,031,815	78,954,440	41,331,998	41,165,516	35,961,421	25,533,032	35,713,304	25,512,220
Power Bonds - Local	61,920,543	18,098,122	54,266,383	52,314,001	46,609,306	41,239,174	19,431,392	15,594,027	12,113,087	9,900,124
Subtotal	176,864,432	169,940,877	257,834,005	198,569,537	129,331,157	112,162,162	79,931,993	58,066,048	71,553,335	51,674,824
Total Hetch Hetchy SOURCES	\$181,123,342	177,521,151	265,644,772	211,598,804	149,995,924	132,826,929	104,045,260	82,317,815	97,949,140	78,070,629
CleanPowerSF Enterprise										
Revenues/Reserve	3,727,592	2,188,000	1,883,000	1,943,000	1,603,000	1,553,000	1,553,000	1,785,000	20,036,000	28,258,400
Total Wastewater SOURCES	3,727,592	2,188,000	1,883,000	1,943,000	1,603,000	1,553,000	1,553,000	1,785,000	20,036,000	28,258,400
Total SFPUC SOURCES	\$983,270,442	1,276,576,578	1,508,323,881	1,286,621,389	826,276,340	628,028,412	550,448,577	490,559,471	517,218,707	548,074,805
Surplus/ (Shortfall)	0	(252,926,509)	(284,692,622)	(245,868,181)	(143,342,032)	(98,769,185)	(71,269,295)	(60,636,647)	(60,465,258)	(71,584,876)

SFPUC Ten Year Programmatic Project Budget

USES	FY 22-23 Requested	FY 23-24 Requested	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY 31-32
Water Enterprise	32,798,389	32,496,186	39,486,712	37,463,521	36,812,458	35,864,168	34,939,641	35,189,807	35,250,807	35,584,807
Wastewater Enterprise	6,655,917	6,685,551	6,685,551	6,665,330	6,644,655	6,623,405	6,601,462	6,615,790	6,631,242	6,631,242
Hetch Hetchy Enterprise	14,067,541	14,305,204	20,517,793	21,153,148	21,812,207	22,516,909	23,249,721	24,008,082	24,780,082	25,578,082
Total USES	53,521,847	53,486,941	66,690,056	65,281,999	65,269,320	65,004,482	64,790,824	65,813,679	66,662,131	67,794,131

SOURCES	FY 22-23 Requested	FY 23-24 Requested	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY 31-32
Water Enterprise										
Infrastructure - Recovery Capital (O&M)	1,211,000	1,248,000	1,248,000	1,248,000	1,285,000	1,324,000	1,324,000	1,324,000	1,324,000	1,324,000
Infrastructure - Recovery Capital (Lease)	2,650,000	2,650,000	2,650,000	2,650,000	2,650,000	2,650,000	2,650,000	2,650,000	2,650,000	2,650,000
Federal Bond Interest Subsidy	1,945,000	1,910,000	1,942,000	1,770,000	1,695,000	1,616,000	1,616,000	1,616,000	1,616,000	1,616,000
Subtotal	5,806,000	5,808,000	5,840,000	5,668,000	5,630,000	5,590,000	5,590,000	5,590,000	5,590,000	5,590,000

Revenue	26,992,389	26,688,186	29,646,712	30,795,521	31,182,458	30,274,168	29,349,641	29,599,807	29,660,807	29,994,807
Subtotal	26,992,389	26,688,186	29,646,712	30,795,521	31,182,458	30,274,168	29,349,641	29,599,807	29,660,807	29,994,807

Water Total	32,798,389	32,496,186	35,486,712	36,463,521	36,812,458	35,864,168	34,939,641	35,189,807	35,250,807	35,584,807
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Wastewater Enterprise										
Infrastructure - Recovery Capital (O&M)	265,000	268,000	268,000	268,000	276,000	284,000	284,000	284,000	284,000	284,000
Infrastructure - Recovery Capital (Lease)	1,872,000	1,872,000	1,872,000	1,872,000	1,872,000	1,872,000	1,872,000	1,872,000	1,872,000	1,872,000
Federal Bond Interest Subsidy	514,000	505,000	487,000	468,000	448,000	427,000	427,000	427,000	427,000	427,000
Revenue	4,004,917	4,040,551	4,058,551	4,057,330	4,048,655	4,040,405	4,018,462	4,032,790	4,048,242	4,048,242
Wastewater Total	6,655,917	6,685,551	6,685,551	6,665,330	6,644,655	6,623,405	6,601,462	6,615,790	6,631,242	6,631,242

Hetch Hetchy Enterprise										
Infrastructure - Recovery Capital (O&M)	88,000	90,000	90,000	90,000	93,000	96,000	96,000	96,000	96,000	86,000
Infrastructure - Recovery Capital (Lease)	238,000	238,000	238,000	238,000	238,000	238,000	238,000	238,000	238,000	238,000
Federal Bond Interest Subsidy	265,000	265,000	260,000	251,000	241,000	230,000	230,000	230,000	230,000	267,589
Subtotal	591,000	593,000	588,000	579,000	572,000	564,000	564,000	564,000	564,000	591,589

Revenue										
Treasure Island	4,217,000	4,428,000	4,649,000	4,788,000	4,930,000	5,077,000	5,229,000	5,386,000	5,548,000	5,714,000
Revenue - Power	9,259,541	9,284,204	7,383,793	7,946,148	8,539,207	9,180,909	9,838,721	10,523,082	10,523,082	9,284,185
Subtotal	13,476,541	13,712,204	12,032,793	12,734,148	13,469,207	14,257,909	15,067,721	15,909,082	16,071,082	\$14,998,185

Hetch Hetchy Total	14,067,541	14,305,204	12,620,793	13,313,148	14,041,207	14,821,909	15,631,721	16,473,082	16,635,082	15,589,774
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Total SOURCES	53,521,847	53,486,941	54,793,056	56,441,999	57,498,320	57,309,482	57,172,824	58,278,679	58,517,131	57,805,823
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Surplus/ (Shortfall)	0	0	(11,897,000)	(8,840,000)	(7,771,000)	(7,695,000)	(7,618,000)	(7,535,000)	(8,145,000)	(9,988,308)
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SFPUC WATER ENTERPRISE FY 2023-2032 TEN YEAR PROGRAMMATIC PROJECT BUDGET

USES	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY 31-32		FY 22-31	FY 23-32	Change
Natural Resources Planning	1,162,000	900,000	920,000	940,000	960,000	980,000	1,000,000	1,050,000	1,100,000	1,200,000	1	7,200,490	10,212,000	3,011,510
Landscape Conservation Program	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	-	-	-	-	2	2,500,000	4,000,000	1,500,000
Long-term Monitoring and Permitting	6,971,000	4,890,000	10,933,000	9,365,000	8,454,000	8,425,000	8,420,000	8,647,000	8,658,000	8,892,000	3	124,923,969	83,655,000	(41,268,969)
Watershed Structures Upgrades-Cottages	486,000	486,000	486,000	503,000	503,000	503,000	503,000	514,000	514,000	514,000	4	5,040,000	5,012,000	(28,000)
Watershed & ROW Infrastructure	4,000,000	5,000,000	6,000,000	6,000,000	6,000,000	6,000,000	5,500,000	5,500,000	5,500,000	5,500,000	5	30,000,000	55,000,000	25,000,000
AWSS Maintenance	2,500,000	2,500,000	3,000,000	3,000,000	3,000,000	3,000,000	2,500,000	2,500,000	2,500,000	2,500,000	6	15,000,000	27,000,000	12,000,000
Water Resource Planning and Development	50,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	7	1,000,000	4,550,000	3,550,000
Treasure Island Facilities Maintenance	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	8	11,342,500	13,500,000	2,157,500
Retrofit Grant Program	-	500,000	500,000	-	-	-	-	-	-	-	9	981,862	1,000,000	18,138
Youth Employment Project	1,290,000	1,290,000	1,290,000	1,290,000	1,290,000	1,290,000	1,290,000	1,290,000	1,290,000	1,290,000	10	12,900,000	12,900,000	0
Drought Response Program	500,000	500,000	-	-	-	-	-	-	-	-	11	-	1,000,000	1,000,000
Personnel Safety Program	1,000,000	-	-	-	-	-	-	-	-	-	12	-	1,000,000	1,000,000
Subtotal	19,309,000	18,916,000	25,979,000	23,948,000	23,057,000	22,048,000	21,063,000	21,351,000	21,412,000	21,746,000		210,888,821	218,829,000	7,940,179
525 Golden Gate											13			
525 Golden Gate - Operations and Maintenance	4,311,000	4,441,000	4,445,000	4,531,000	4,851,300	4,995,000	5,145,000	5,200,000	5,200,000	5,200,000	14	45,148,544	48,319,300	3,170,756
525 Golden Gate - Lease Payment	9,178,389	9,139,186	9,062,712	8,984,521	8,904,158	8,821,168	8,731,641	8,638,807	8,638,807	8,638,807	15	89,932,108	88,738,196	(1,193,912)
Subtotal	13,489,389	13,580,186	13,507,712	13,515,521	13,755,458	13,816,168	13,876,641	13,838,807	13,838,807	13,838,807		135,080,652	137,057,496	1,976,844
Total USES	32,798,389	32,496,186	39,486,712	37,463,521	36,812,458	35,864,168	34,939,641	35,189,807	35,250,807	35,584,807		345,969,473	355,886,496	9,917,023
SOURCES														
Other											16			
Infrastructure - Recovery Capital (O&M)	1,211,000	1,248,000	1,248,000	1,248,000	1,285,000	1,324,000	1,324,000	1,324,000	1,324,000	1,324,000	17	12,712,000	12,860,000	148,000
Infrastructure - Recovery Capital (Lease)	2,650,000	2,650,000	2,650,000	2,650,000	2,650,000	2,650,000	2,650,000	2,650,000	2,650,000	2,650,000	18	26,500,000	26,500,000	-
Federal Bond Interest Subsidy**	1,945,000	1,910,000	1,942,000	1,770,000	1,695,000	1,616,000	1,616,000	1,616,000	1,616,000	1,616,000	19	17,691,550	17,342,000	(349,550)
Subtotal	5,806,000	5,808,000	5,840,000	5,668,000	5,630,000	5,590,000	5,590,000	5,590,000	5,590,000	5,590,000	20	56,903,550	56,702,000	(201,550)
Revenue											21			
Revenue	26,992,389	26,688,186	29,646,712	30,795,521	31,182,458	30,274,168	29,349,641	29,599,807	29,660,807	29,994,807	22	289,065,923	294,184,496	5,118,573
Subtotal	26,992,389	26,688,186	29,646,712	30,795,521	31,182,458	30,274,168	29,349,641	29,599,807	29,660,807	29,994,807	23	289,065,923	294,184,496	5,118,573
Total SOURCES	32,798,389	32,496,186	35,486,712	36,463,521	36,812,458	35,864,168	34,939,641	35,189,807	35,250,807	35,584,807	25	345,969,473	350,886,496	4,917,023
Surplus / (Shortfall)	-	-	(4,000,000)	(1,000,000)	-	-	-	-	-	-	27	-	(5,000,000)	(5,000,000)

WATER ENTERPRISE FY 2023-2032 TEN YEAR PROGRAMMATIC BUDGET

USES	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY 31-32		FY 22-31	FY 23-32	Change
Treasure Island Facilities Maintenance	2,600,000	1,519,000	1,519,000	1,519,000	1,519,000	1,519,000	1,519,000	1,519,000	1,519,000	1,519,000	1	17,687,000	16,271,000	(1,416,000)
Low Impact Development	681,000	681,000	681,000	681,000	681,000	681,000	681,000	681,000	681,000	681,000	2	7,323,808	6,810,000	(513,808)
Youth Employment Project	697,000	697,000	697,000	697,000	697,000	697,000	697,000	697,000	697,000	697,000	3	6,970,000	6,970,000	-
Subtotal	3,978,000	2,897,000	2,897,000	2,897,000	2,897,000	2,897,000	2,897,000	2,897,000	2,897,000	2,897,000		31,980,808	30,051,000	(1,929,808)
525 Golden Gate - Operations & Maintenance	1,332,000	1,372,000	1,372,000	1,372,000	1,372,000	1,372,000	1,372,000	1,410,000	1,450,000	1,450,000	4	13,438,000	13,874,000	436,000
525 Golden Gate - Lease Payments	2,426,917	2,416,551	2,416,551	2,396,330	2,375,655	2,354,405	2,332,462	2,308,790	2,284,242	2,284,242	5	23,603,938	23,596,145	(7,793)
Subtotal	3,758,917	3,788,551	3,788,551	3,768,330	3,747,655	3,726,405	3,704,462	3,718,790	3,734,242	3,734,242		37,041,938	37,470,145	428,207
Total USES	7,736,917	6,685,551	6,685,551	6,665,330	6,644,655	6,623,405	6,601,462	6,615,790	6,631,242	6,631,242		69,022,746	67,521,145	(1,501,601)
SOURCES	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY 31-32		FY 22-31	FY 23-32	Change
Infrastructure - Recovery Capital (O&M)	265,000	268,000	268,000	268,000	276,000	284,000	284,000	284,000	284,000	284,000	6	2,734,000	2,765,000	31,000
Infrastructure - Recovery Capital (Lease)	1,872,000	1,872,000	1,872,000	1,872,000	1,872,000	1,872,000	1,872,000	1,872,000	1,872,000	1,872,000	7	18,720,000	18,720,000	-
Federal Bond Interest Subsidy	514,000	505,000	487,000	468,000	448,000	427,000	427,000	427,000	427,000	427,000	8	4,649,724	4,557,000	(92,724)
Revenue	5,940,917	4,660,551	4,058,551	4,057,330	4,048,655	4,040,405	4,018,462	4,032,790	4,048,242	4,048,242	9	42,919,022	42,954,145	35,123
Total SOURCES	8,591,917	7,305,551	6,685,551	6,665,330	6,644,655	6,623,405	6,601,462	6,615,790	6,631,242	6,631,242		69,022,746	68,996,145	(26,601)
Surplus / (Shortfall)	855,000	620,000	-	-	-	-	-	-	-	-		-	1,475,000	1,475,000

SFPUC HETCH HETCHY ENTERPRISE 2023-2032 PROGRAMMATIC PLAN PROJECT BUDGET

USES	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY 31-32		FY 22-31	FY 23-32	Change
Program - Project														
SF Electric Reliability-Trans Bay Cable Funding	-	-	-	-	-	-	-	-	-	-	1	-	-	0
Facilities Maintenance	3,000,000	3,000,000	7,514,000	7,795,000	8,086,000	8,388,000	8,702,000	9,027,000	9,366,000	9,715,000	2	25,969,000	74,593,000	48,624,000
HHW-WECC/NERC Compliance	4,449,000	4,449,000	5,906,000	6,124,000	6,352,000	6,586,000	6,831,000	7,083,000	7,345,000	7,617,000	3	41,602,557	62,742,000	21,139,443
HHW-WECC/NERC Transmission Line Clearance	200,000	208,000	215,000	223,000	232,000	240,000	249,000	259,000	268,000	279,000	4	2,439,000	2,373,000	(66,000)
Treasure Island Facilities Maintenance	4,217,000	4,428,000	4,649,000	4,788,000	4,930,000	5,077,000	5,229,000	5,386,000	5,548,000	5,714,000	5	48,106,000	49,966,000	1,860,000
Youth Employment Project	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	6	1,500,000	1,500,000	0
Subtotal	12,016,000	12,235,000	18,434,000	19,080,000	19,750,000	20,441,000	21,161,000	21,905,000	22,677,000	23,475,000		119,616,557	191,174,000	71,557,443
525 Golden Gate - Operations & Maintenance	802,000	826,000	850,000	850,000	850,000	875,000	900,000	927,000	927,000	927,000	7	8,391,000	8,734,000	343,000
526 Golden Gate - Lease Payments*	1,249,541	1,244,204	1,233,793	1,223,148	1,212,207	1,200,909	1,188,721	1,176,082	1,176,082	1,176,082	8	12,152,904	12,080,769	(72,135)
Subtotal	2,051,541	2,070,204	2,083,793	2,073,148	2,062,207	2,075,909	2,088,721	2,103,082	2,103,082	2,103,082		20,543,904	20,814,769	270,865
Total USES	14,067,541	14,305,204	20,517,793	21,153,148	21,812,207	22,516,909	23,249,721	24,008,082	24,780,082	25,578,082		140,160,461	211,988,769	71,828,308
SOURCES	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY 31-32		FY 22-31	FY 23-32	Change
Other														
Infrastructure - Recovery Capital (O&M)	88,000	90,000	90,000	90,000	93,000	96,000	96,000	96,000	96,000	86,000	9	921,000	921,000	0
Infrastructure - Recovery Capital (Lease)	238,000	238,000	238,000	238,000	238,000	238,000	238,000	238,000	238,000	238,000	10	2,380,000	2,380,000	0
Federal Bond Interest Subsidy	265,000	265,000	260,000	251,000	241,000	230,000	230,000	230,000	230,000	267,589	11	2,469,589	2,469,589	0
Trans Bay Cable Payment	-	-	-	-	-	-	-	-	-	-	12	-	-	0
Subtotal	591,000	593,000	588,000	579,000	572,000	564,000	564,000	564,000	564,000	591,589		5,770,589	5,770,589	0
Revenue														
Treasure Island	4,217,000	4,428,000	4,649,000	4,788,000	4,930,000	5,077,000	5,229,000	5,386,000	5,548,000	5,714,000	15	48,106,000	49,966,000	1,860,000
Revenue - Power	9,259,541	9,284,204	7,383,793	7,946,148	8,539,207	9,180,909	9,838,721	10,523,082	10,523,082	9,284,185	16	86,283,872	91,762,872	5,479,000
Subtotal	13,476,541	13,712,204	12,032,793	12,734,148	13,469,207	14,257,909	15,067,721	15,909,082	16,071,082	14,998,185		134,389,872	141,728,872	7,339,000
Total SOURCES	14,067,541	14,305,204	12,620,793	13,313,148	14,041,207	14,821,909	15,631,721	16,473,082	16,635,082	15,589,774		140,160,461	147,499,461	7,339,000
Surplus / (Shortfall)	-	-	(7,897,000)	(7,840,000)	(7,771,000)	(7,695,000)	(7,618,000)	(7,535,000)	(8,145,000)	(9,988,308)		-	(64,489,308)	(64,489,308)

SFPUC CLEANPOWERSF FY 2023-2032 CAPITAL PLAN SUMMARY

Project	Total Project Budget	Appropriation to Date	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY 31-32	After 23-32 to Project Completion	Prior Plan 22-31	FY Current Proposed Plan FY 23-32	Change
CleanPower SF																
80233 - CleanPowerSF Capital																
21785 - Local Renewable Energy Program	50,112,400	946,000	665,000	669,000	564,000	499,000	234,000	234,000	234,000	391,000	18,727,000	26,949,400	1	62,670,500	49,166,400	(13,504,100)
Local Renewable Energy Program																
21766 - CleanPowerSF Customer Program	16,598,709	3,376,663	921,046	1,519,000	1,319,000	1,444,000	1,369,000	1,319,000	1,319,000	1,394,000	1,309,000	1,309,000	2	13,090,329	13,222,046	131,717
CleanPower SF Customer Program																
New - DAC program	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DAC program	2,141,546	-	2,141,546	-	-	-	-	-	-	-	-	-	-	-	2,141,546	-
Total Uses	66,711,109	4,322,663	3,727,592	2,188,000	1,883,000	1,943,000	1,603,000	1,553,000	1,553,000	1,785,000	20,036,000	28,258,400	1	75,760,829	64,529,992	(13,372,383)
USES																
Revenues/Reserve			3,727,592	2,188,000	1,883,000	1,943,000	1,603,000	1,553,000	1,553,000	1,785,000	20,036,000	28,258,400	2	75,760,829	64,529,992	(13,372,383)
Total Sources			3,727,592	2,188,000	1,883,000	1,943,000	1,603,000	1,553,000	1,553,000	1,785,000	20,036,000	28,258,400	4	75,760,829	64,529,992	(13,372,383)
Surplus/(Shortfall)			-	-	-	-	-	-	-	-	-	-	5	-	-	-

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Capital Budget Sources

SFPUC's capital program is mostly supported by debt finance. In fact, as a result of this, The SFPUC's single biggest operating cost driver is debt service.

In FY 2022-23, SFPUC's \$983.3 million capital budget is funded by \$838.6 million of debt, or 85%, and \$144.6 million in cash (revenue funding), or 15%. Of the Debt funding, in the majority is Wastewater bonds, with the remainder met by local and regional revenue bonds. Revenue funding includes general sales revenues as well as specific sources in Power such as Cap and Trade and Distributed Antenna revenues. The approximately \$53.5 million annual programmatic project budget is majority cash funded, with about 17% coming from other operating sources including Federal bond interest subsidies and recovery capital.

Debt

Debt is a major component of SFPUC’s budget, with debt service comprising around 27% of total operating costs. In FY 2022-23 debt service costs \$452 million, rising to \$463 million in FY 2023-24. This debt supports about two-thirds of SFPUC’s capital budget over the next two years. In the longer term, the Ten-Year Capital and Financial Plans assume significant debt financing of capital needs. The plans assume a financing strategy that utilizes short-term financing via the existing Commercial Paper (CP) program to calibrate financing needs with project spending. Long-term (30-year) 5 percent fixed rate debt issuance is assumed to periodically refund the CP program. The CP program facilitates short-term financing typically at lower interest rates than longer term debt, which minimizes costs.

The following table details the of budgeted principle and interest payments for each year, in aggregate and by enterprise. This table also includes allocated charges from Certificates of Participation (COPs).

Amount of principal and interest payments presented through maturity for each fund
The following table details (in \$ thousands) the future principal and interest payments for debt issues, excluding commercial paper, through maturity for each of the major funds and in total.

Debt Cost Through Maturity (per latest ACFR)

Debt Cost Through Maturity

\$ Thousands	Water			Wastewater		
	Principal	Interest	Total Principal and Interest	Principal	Interest	Total Principal and Interest
	4,899,150	2,690,593	7,589,743	1,599,688	976,894	2,576,582
Power						
\$ Thousands	Power			SFPUC Total		
	Principal	Interest	Total Principal and Interest	Principal	Interest	Total Principal and Interest
	56,307	34,424	90,731	6,555,145	3,701,911	10,257,056

Purpose of the different debt obligations

The Water and Wastewater Enterprise’s outstanding revenue bonds, notes and State Revolving Fund loans provided financing for various capital construction projects and to refund previously issued revenue bonds. The Power Enterprise’s outstanding revenue bonds and tax credit bonds provided financing for various capital construction and facility energy efficiency projects. The outstanding 2009 Certificates of Participation (COPs) Series C and D financed the construction of the headquarters building of the SFPUC at 525 Golden Gate Ave in San Francisco; each of the three enterprises is responsible for a portion of the annual payments based on their ownership percentages less contributed equity (Water-71.4%, Wastewater-18.9% and Power-9.7%.)

Budgeted Principal and Interest Payments

\$ millions	FY 2022-23 Adopted Budget	FY 2023-24 Adopted Budget
Water		
Interest	210.9	205.7
Principal	133.4	143.4
Allocated Charges (COPs)	(9.2)	(9.1)
Subtotal	335.1	340.0
Wastewater		
Interest	77.0	80.4
Principal	38.7	41.5
Allocated Charges (COPs)	(2.4)	(2.4)
Subtotal	113.3	119.5
Hetch Hetchy Water & Power		
Interest	2.8	3.1
Principal	2.4	2.0
Allocated Charges (COPs)ww	(1.2)	(1.2)
Subtotal	4.0	3.9
CleanPowerSF		
Interest	-	-
Principal	-	-
Allocated Charges (COPs)	-	-
Subtotal	0	0
SFPUC Aggregate		
Interest	290.7	289.2
Principal	174.5	186.9
Total	452.4	463.4

Total outstanding debt as of June 30, 2022 is as follows:

	Water	Wastewater	Power
Revenue Bonds	\$4.6B	\$2.1B	\$159.8M
SRF & WIFIA Loans (Executed/Drawn)	\$409.4M/\$129.0M	\$1.5B/\$115.3M -	
Tax Credit Bonds	-	-	\$5.2M
Commercial Paper (Authorized/Drawn)	\$500M/\$206.3M	\$750M/\$379.2M	\$250M/\$40.0

Policies Governing SFPUC's Debt

SFPUC's debt management mission is to serve, within the financial objectives and parameters established by the Commission, the capital financing needs of the respective enterprises in a cost effective, low risk and flexible manner, through the implementation of sound financial decision making and the use of appropriate financing tools. The Debt Policy of the City and County of San Francisco, established by the Mayor's Office of Public Finance and Business Affairs, summarizes the City's existing debt policies and formally establishes them for all future debt. From time to time, the Mayor's Office of Public Finance and Business Affairs may deviate from policies herein. The following policies are relevant and are detailed in the Appendix of this document.

- San Francisco Public Utilities Commission Debt Management Policy and Procedures
- Fund Balance Reserve Policy
- City and County of San Francisco Debt Policy - May 2017
- Debt Service Coverage Policy - March 2017
- Capital Financing Policy - March 2017

SFPUC's Credit Ratings:

SFPUC's Credit ratings are shown in the following table

SFPUC Credit Ratings
As of June 30,2022

	Moody's		Standard and Poor's		Fitch	
	Long Term	Short Term	Long Term	Short Term	Long Term	Short Term
Water Enterprise	Aa2	P-1	AA-	A-1	N/A	N/A
Wastewater Enterprise	Aa2	P-1	AA	A-1+	N/A	N/A
Power Enterprise	N/A	N/A	AA	A-1	AA+	F1+
CleanPowerSF*	A2	N/A	A N/A 2	N/A	N/A	N/A

*On December 9, 2020, Moody's Investors Service, ("Moody's") assigned a first-time A2 Issuer Rating to CleanPowerSF, with a stable outlook.

The ratings issued reflect only the views of such rating agencies to be considered in evaluating various of the SFPUC's debt obligations. No assurance can be given that any rating issued by the rating agency will be retained for any given period of time or that the same will not be revised or withdrawn entirely by such rating agencies.

Solely for the convenience of the user, below are links to various rating agencies. The SFPUC undertakes no responsibility to publish or otherwise disseminate any revision or withdrawal of the ratings. Please click on the links below to proceed to the selected rating agency site. The SFPUC does not endorse or adopt this website, its sponsor, or any of the policies, activities, products, or services offered on the site or by any advertiser on the site. The SFPUC has not participated in the compilation, or selection of information on any other Web Site, and assumes no responsibility or liability for the contents thereof. The SFPUC is rated by three municipal bond rating services. They are:

<http://www.FitchRatings.com>

<http://www.moodys.com/>

<https://www.spglobal.com/ratings/en/>

Current legal debt limit and authorizations (as of June 30, 2022) are as follows:

Water:

Pursuant to the Charter Section 8B.124, the Enterprise can incur indebtedness upon two-thirds vote of the Board of Supervisors, as approved by voters in Proposition E in November 2002.

As of June 30, 2022, the Board of Supervisors has authorized the issuance of \$4.6 billion in revenue bonds under Proposition E, with \$3.9 billion issued against this authorization. The Enterprise can also incur indebtedness of up to \$1.6 billion for improvements to the water system pursuant to Proposition A that was approved by the voters in November 2002. As of June 30, 2022, \$1.5 billion of the \$1.6 billion Proposition A authorized debt was issued. The Enterprise is also authorized to issue up to \$500 million in commercial paper with \$206.3 million outstanding as of June 30, 2022.

Wastewater:

Pursuant to the Charter Section 8B.124, the Enterprise can incur indebtedness upon two-thirds vote of the Board of Supervisors. As of June 30, 2022, the Enterprise had \$4.6 billion in combined debt issuance authorization from the Board of Supervisors under Proposition E, with \$3.4 billion issued against this authorization. The Enterprise has a \$750 million authorized commercial paper program, with \$379.2 million in tax-exempt commercial paper outstanding as of June 30, 2022.

Power Enterprise:

Pursuant to Charter Section 9.107(6), the Power Enterprise can incur indebtedness upon three-fourths vote of the Board of Supervisors, for the purpose of the reconstruction or replacement of existing water facilities and electric power facilities, or combinations thereof, under the jurisdiction of the Public Utilities Commission. Pursuant to Charter Section 9.107(8), the Power Enterprise can issue revenue bonds, without voter approval, upon an affirmative vote of the Board of Supervisors, for the purpose of the acquisition, construction, installation, equipping, improvement, or rehabilitation of equipment or facilities for renewable energy and energy conservation. Pursuant to Proposition A, approved by the San Francisco voters on June 5, 2018, City Charter Section 8B.124 is amended to authorize the Power Enterprise to enter into indebtedness,

including revenue bonds, notes, commercial paper or other forms of indebtedness, when authorized by ordinance approved by a two-thirds vote of the Board of Supervisors to reconstruct, replace, expand, repair, improve or construct new power facilities under the jurisdiction of SFPUC or for any other purpose of the Power Enterprise, and in compliance with City Charter Section 8B.124. Proposition A expressly prohibits the SFPUC from issuing bonds to finance the construction of power plants that generate electricity using fossil fuels or nuclear energy. As of June 30, 2022, \$163.6 million of Hetchy Power revenue bonds were issued against existing authorization of \$555.0 million. The Enterprise is also authorized to issue up to \$250.0 million in commercial paper with \$40.0 million outstanding as of June 30, 2022.

Debt Service Coverage Policy

In addition to debt limits, SFPUC also imposes policy limits on debt service coverage. Pursuant to SFPUC bond covenants entered into with bondholders, enterprise revenues pledged for the repayment of debt service must meet the following financial ratios.

- **Indenture Coverage:** Net Revenues must equal a minimum of 1.25 x annual debt service
- **Current Coverage:** Annual Revenues must equal a minimum of 1.00 x annual debt service

To ensure that the SFPUC maintains access to low-cost capital and retains financial flexibility for contingencies, it is important to adopt and implement financial policies that impose higher standards than the minimum indenture requirements. Therefore, for each enterprise, the SFPUC adopt budgets, rates and financial plans that generate revenues such that:

- Indenture Coverage shall be at least 1.35x
- Current Coverage shall be at least 1.10x

To monitor compliance with this policy, SFPUC presents this information as part of the budget process and the 10-year financial plan. SFPUC is forecast to meet these policy minimums in the FY 2022-23 and FY 2023-24 budget and throughout the 10-year Financial Plan period.

Debt to be issued during the budget period

In the FY 2022-23 and FY 2023-24 period, the SFPUC anticipates issuing the following debt:

Description	Approximate Transaction Size ¹	Estimated Closing ¹
Water - Revenue Bonds	Up to \$406M	Jan-Dec 2023
Wastewater - Revenue Bonds	Up to \$953M	Two or more issuances Jan 2023- June 2024
Wastewater - Revenue Notes	Up to \$672M	Two or more issuances Jan 2023- June 2024
Power - Power Debt Transaction	Up to \$210M	Jan-Dec 2023
Wastewater and Power - Approve renewal or replacement of bank credit facilities for interim funding programs	\$125M-Power \$150M-Wastewater \$200M Wastewater \$150M-Wastewater	3/2023 4/2023 10/2023 3/2024



¹Note: Dates and amounts are approximate and subject to change. FY2023 Debt Issuances currently under development.

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DATA SHEETS



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


Water Enterprise

Fiscal Years 2023-2032

Ten Year CIP

Capital Projects
January 14, 2022

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	21392-Regional Water Treatment RNR
FSP ID	10036527
Project Title:	Tesla UV R&R
Total Budget:	\$ 10,047,981
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Anthony Yu
Facility Category:	Water Treatment Program
Type:	Renewal and Replacement

Description:
 The Tesla UV R&R program is used for maintenance and repair of existing equipment and for replacement or upgrades of worn, aging, or failed equipment. The R&R program budget is used for maintenance, design, engineering support and capital expenditures above \$5,000 that rely on in-house trades, purchase orders, Job Order Contracts, or formal bid contracts to execute maintenance, repair, and replacement work. This program is continuous in order to adapt to the on-going needs that arise from corrective and preventive maintenance work orders, consultant and internal inspections and analysis, and updated codes and regulations.


The budget for this project includes:
 1. Upgrades and modernization of the existing diesel backup generator system, including the diesel fuel system and day tank, fuel polishing system, and diesel fuel piping
 2. Installation of a canopy for the CO2 system and carrier water pumps
 3. Installation of a mercury discharge containment system
 4. Installation of a booster pump for sample analyzers
 5. Installation of chemical pumps for the domestic water system
 6. Replacement of Thomas Shatt Sample Pump #2
 7. Funding for periodic tank inspections and necessary repairs
 8. Capital equipment purchases in support of the System Operations, Distribution Operations, and Maintenance groups

Justification:
 Many of the projects were identified through corrective and preventive maintenance work orders, condition and needs assessments, consultant and internal inspections and analysis, and updated codes and regulations.

Operating Impact:
 None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 59,700	\$ 0	\$ 7,500	\$ 52,200	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,715,300	\$ 0	\$ 549,500	\$ 265,800	\$ 318,000	\$ 293,250	\$ 288,750
CM	\$ 723,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 33,000	\$ 690,000
CN	\$ 6,032,000	\$ 0	\$ 0	\$ 400,000	\$ 400,000	\$ 532,000	\$ 4,760,000
Total	\$ 8,590,000	\$ 0	\$ 557,000	\$ 718,000	\$ 718,000	\$ 858,250	\$ 5,738,750

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	21392-Regional Water Treatment RNR
FSP ID	10036522
Project Title:	East Bay Field R&R
Total Budget:	\$ 14,105,255
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Anthony Yu
Facility Category:	Water Treatment Program
Type:	Renewal and Replacement

Description:
 The East Bay Field R&R program is used for maintenance and repair of existing equipment and for replacement or upgrades of worn, aging, or failed equipment. The R&R program budget is used for maintenance, design, engineering support and capital expenditures above \$5,000 that rely on in-house trades, purchase orders, Job Order Contracts, or formal bid contracts to execute maintenance, repair, and replacement work. This program is continuous in order to adapt to the on-going needs that arise from corrective and preventive maintenance work orders, consultant and internal inspections and analysis, and updated codes and regulations.

The budget for this project includes:
 1. Replacement of outdated chemical metering flowmeters at the Alameda Siphons
 2. Replace the existing chemical injection and electrical shed at Castlewood Reservoir
 3. Replacement or renewal of existing fluoride storage tanks
 4. Funding for periodic tank inspections and necessary repairs
 5. Capital equipment purchases in support of the System Operations, Distribution Operations, and Maintenance groups

Justification:
 Many of the projects were identified through corrective and preventive maintenance work orders, condition and needs assessments, consultant and internal inspections and analysis, and updated codes and regulations.

Operating Impact:
 Water.LOS Goal(s) Supported: Water Quality and Regional Delivery Reliability
 This project ensures better reliability from East Bay Field Facilities.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 72,750	\$ 0	\$ 0	\$ 42,750	\$ 0	\$ 0	\$ 30,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,040,005	\$ 0	\$ 59,255	\$ 210,500	\$ 233,250	\$ 19,500	\$ 517,500
CM	\$ 605,000	\$ 0	\$ 0	\$ 20,000	\$ 0	\$ 285,000	\$ 300,000
CN	\$ 9,987,500	\$ 0	\$ 800,000	\$ 1,247,500	\$ 800,000	\$ 1,940,000	\$ 5,200,000
Total	\$ 11,705,255	\$ 0	\$ 859,255	\$ 1,520,750	\$ 1,033,250	\$ 2,244,500	\$ 6,047,500

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-JW Regional Water Treatment Pr
Authority Level 2:	21392-Regional Water Treatment RNR
FSP ID	10036524
Project Title:	SWWTP R&R
Total Budget:	\$ 6,121,291
Project Start:	7/9/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Anthony Yu
Facility Category:	Water Treatment Program
Type:	Renewal and Replacement

Description:
The Sunol Valley Water Treatment Plant (SWWTP) R&R program is used for maintenance and repair of existing equipment and for replacement or upgrades of worn, aging, or failed equipment. The R&R program budget is used for maintenance, design, engineering support and capital expenditures above \$5,000 that rely on in-house trades, purchase orders, Job Order Contracts, or formal bid contracts to execute maintenance, repair, and replacement work. This program is continuous in order to adapt to the on-going needs that arise from corrective and preventive maintenance work orders, consultant and internal inspections and analysis, and updated codes and regulations.


The budget for this project includes:
 1. Upgrading the diesel particulate filter and lead bank for the existing SWWTP 2MW standby generator
 2. Funding for periodic tank inspections and necessary repairs
 3. Replacement of old PVC process and chemical piping and appurtenances
 4. Mobile Pilot Plant upgrades
 5. Capital equipment purchases in support of the System Operations, Distribution Operations, and Maintenance groups

Justification:
Many of the projects were identified through corrective and preventive maintenance work orders, condition and needs assessments, consultant and internal inspections and analysis, and updated codes and regulations.

Operating Impact: Water Quality
This project ensures better reliability and overall treatment efficiency of the SWWTP.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 400,500	\$ 0	\$ 164,500	\$ 29,500	\$ 29,500	\$ 29,500	\$ 147,500
CM	\$ 270,000	\$ 0	\$ 10,000	\$ 190,000	\$ 10,000	\$ 10,000	\$ 50,000
CN	\$ 3,390,000	\$ 0	\$ 280,000	\$ 800,000	\$ 330,000	\$ 330,000	\$ 1,650,000
Total	\$ 4,060,500	\$ 0	\$ 454,500	\$ 1,019,500	\$ 369,500	\$ 369,500	\$ 1,847,500

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-JW Regional Water Treatment Pr
Authority Level 2:	21392-Regional Water Treatment RNR
FSP ID	10036525
Project Title:	HTWTP R&R
Total Budget:	\$ 13,330,060
Project Start:	7/9/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Anthony Yu
Facility Category:	Water Treatment Program
Type:	Renewal and Replacement

Description:
The HTWTP R&R program is used for maintenance and repair of existing equipment and for replacement or upgrades of worn, aging, or failed equipment. The R&R program budget is used for maintenance, design, engineering support and capital expenditures above \$5,000 that rely on in-house trades, purchase orders, Job Order Contracts, or formal bid contracts to execute maintenance, repair, and replacement work. This program is continuous in order to adapt to the on-going needs that arise from corrective and preventive maintenance work orders, consultant and internal inspections and analysis, and updated codes and regulations.


The budget for this project includes:
 1. Replacement of chemical metering pumps and controls
 2. Replacement of the HTWTP Ozone Power Supply Unit PLC
 3. Valve actuator upgrades
 4. Water quality analyzer instrumentation upgrades
 5. Seismic upgrades to the east chemical storage canopy structure and chemical piping supports
 6. Filter control station upgrades
 7. Double containment for fluoride piping
 8. Installation of a sump pump for the LOX system
 9. Replacement of plant air compressors
 10. Installation of an emergency eyewash station
 11. Piping modifications at the ammonia injection manifold vault
 12. Solids Handling system improvements
 13. Ozone building server room HVAC replacement
 14. Ozone building water heater and boiler flue modifications
 15. Utility water pumps soft starter upgrades
 16. Washwater pumps soft starter upgrades
 17. High Rate Clarifier corrosion repair and rehabilitation
 18. Funding for periodic tank inspections and necessary repairs
 19. Capital equipment purchases in support of the System Operations, Distribution Operations, and Maintenance groups

Justification:
Many of the projects were identified through corrective and preventive maintenance work orders, condition and needs assessments, consultant and internal inspections and analysis, and updated codes and regulations.

Operating Impact: Water Quality
None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 48,638	\$ 0	\$ 37,575	\$ 11,063	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,531,372	\$ 0	\$ 507,300	\$ 261,627	\$ 263,565	\$ 245,315	\$ 245,315
CM	\$ 1,314,400	\$ 0	\$ 75,000	\$ 480,000	\$ 46,900	\$ 20,000	\$ 692,500
CN	\$ 8,247,600	\$ 0	\$ 600,000	\$ 1,920,000	\$ 517,600	\$ 510,000	\$ 4,700,000
Total	\$ 11,142,010	\$ 0	\$ 1,219,875	\$ 2,662,690	\$ 828,065	\$ 793,565	\$ 5,637,815

SFPUC Capital Project Plan
 Water Enterprise
 Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	21392-Regional Water Treatment RNR
FSP ID	10036523
Project Title:	West Bay Field R&R
Total Budget:	\$ 6,513,154
Project Start:	7/9/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Anthony Yu
Facility Category:	Water Treatment Program
Type:	Renewal and Replacement
Description:	The West Bay Field R&R program is used for maintenance and repair of existing equipment and for replacement or upgrades of worn, aging, or failed equipment. The R&R program budget is used for maintenance, design, engineering support and capital expenditures above \$5,000 that rely on in-house trades, purchase orders, Job Order Contracts, or formal bid contracts to execute maintenance, repair, and replacement work. This program is continuous in order to adapt to the on-going needs that arise from corrective and preventive maintenance work orders, consultant and internal inspections and analysis, and updated codes and regulations. The budget for this project includes: 1. Pulpas Dechlorination Facility HVAC replacement 2. Water quality analyzer instrumentation upgrades 3. Funding for periodic tank inspections and necessary repairs 4. Capital equipment purchases in support of the System Operations, Distribution Operations, and Maintenance groups

Justification: Many of the projects were identified through corrective and preventive maintenance work orders, condition and needs assessments, consultant and internal inspections and analysis, and updated codes and regulations.

Operating Impact: Water LOS Goal(s) Supported: Water Quality and Regional Delivery Reliability
 This project ensures reliability and overall treatment efficiency of the West Bay Field Facilities.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 362,000	\$ 0	\$ 32,500	\$ 53,000	\$ 39,500	\$ 39,500	\$ 197,500
CM	\$ 178,000	\$ 0	\$ 0	\$ 20,000	\$ 38,000	\$ 20,000	\$ 100,000
CN	\$ 4,552,000	\$ 0	\$ 400,000	\$ 510,000	\$ 582,000	\$ 510,000	\$ 2,550,000
Total	\$ 5,092,000	\$ 0	\$ 432,500	\$ 583,000	\$ 659,500	\$ 569,500	\$ 2,847,500

SFPUC Capital Project Plan
 Water Enterprise
 Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15479-UW Regional Water Treatment Pr
FSP ID	10027758
Project Title:	Water Quality Monitoring Station
Total Budget:	\$ 2,900,000
Project Start:	4/1/2015
Project Finish:	6/30/2024
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Yolanda Quisao
Facility Category:	Water Treatment Program
Type:	Capital
Description:	This project is in response to Directive No.6 of Citation No. 02.04.15C.005 issued to SFPUC by the State's Division of Drinking Water in connection with the events of March 3rd and 4th of 2015, when untreated water from the San Antonio Reservoir entered the Regional Water System (RWS). Directive No.6 requires that the SFPUC shall evaluate the benefits of additional on-line data sampling locations throughout the RWS. Two locations, Stamford Tunnel East and Ravenswood Valve Lot, were selected with considerations of accessibility, connectivity, reliability and water conservation and other operational aspects. Ravenswood Valve Lot is under construction and would be completed in early 2022. Stamford Tunnel East will start design after completion of construction for Ravenswood Valve Lot. If SFPUC failed to show progress to provide two new sampling stations, SFPUC is in violation of the State's Division of Drinking Water Directive No.6, and additional citations and fines could be imposed on SFPUC. Water LOS Goal(s) Supported: Water Quality None until another incident involving raw water occurs

Justification: Water LOS Goal(s) Supported: Water Quality
 None until another incident involving raw water occurs

Operating Impact: Water LOS Goal(s) Supported: Water Quality
 None until another incident involving raw water occurs

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 2,072,808	\$ 2,072,808	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 2,072,808	\$ 2,072,808	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15479-UW Regional Water Treatment Pr
FSP ID	10015057
Project Title:	Tesla UV Treatment Facility Upgrades
Total Budget:	\$ 8,131,500
Project Start:	7/1/2024
Project Finish:	12/31/2029
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Anthony Yu
Facility Category:	Water Treatment Program
Type:	Capital
Description:	This project will upgrade the chemical metering pumps and controls, replace buried chemical feed piping, upgrade the existing electrical flywheel uninterruptible power supply (UPS) system, and provide a third redundant/backup HVAC air handling unit for the Electrical/UPS room.
Justification:	These improvements are needed to maintain a functioning facility. Without them, electrical hazards, power reliability issues, and power interruptions may result in unscheduled facility shutdowns. Failures of the chemical metering pumps may result in non-compliance of drinking water standards.
Operating Impact:	This project provides water treatment reliability for the Regional Water System.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 100,000	\$ 0	\$ 0	\$ 100,000	\$ 0	\$ 0	\$ 0
ER	\$ 60,000	\$ 0	\$ 0	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000
DS	\$ 1,716,500	\$ 0	\$ 0	\$ 216,500	\$ 500,000	\$ 500,000	\$ 500,000
CM	\$ 1,251,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,251,000
CN	\$ 5,094,000	\$ 0	\$ 0	\$ 331,500	\$ 515,000	\$ 515,000	\$ 5,094,000
Total	\$ 8,131,500	\$ 0	\$ 0	\$ 331,500	\$ 515,000	\$ 515,000	\$ 6,770,000

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15479-UW Regional Water Treatment Pr
FSP ID	TBD
Project Title:	HTWTP Electrical Substation Upgrades
Total Budget:	\$ 7,215,000
Project Start:	7/1/2022
Project Finish:	6/30/2028
Current Active Phase:	Regional Water
Organization:	Regional Water
Project Manager:	Anthony Yu
Facility Category:	Water Treatment Program
Type:	Capital
Description:	This project will replace Substation 4 and Substation 5 that provide utility power to the Harry Tracy Water Treatment Plant (HTWTP). These substations were noted to be in poor physical condition during a November 2020 inspection and testing report. The findings included physical rust and degradation of the outer sheet metal and moisture intrusion on the switches, transformers and in the oil. Other scope of work include replacing obsolete GE Power Break I circuit breakers, CB-20 and CB-21, located downstream of Substation, S6 and Substation S7, replacement of various load interrupter switches, and implementing differential circuit protection across the substation transformers to decrease the incident energy and arc flash hazard.
Justification:	These improvements are needed to maintain a functioning facility. Without them, electrical hazards, power reliability issues and power interruptions may result in unscheduled plant shutdowns.
Operating Impact:	This project provides water treatment reliability for the Regional Water System.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,248,750	\$ 0	\$ 416,250	\$ 416,250	\$ 416,250	\$ 0	\$ 0
CM	\$ 1,110,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,110,000	\$ 0
CN	\$ 4,856,250	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,440,000
Total	\$ 7,215,000	\$ 0	\$ 416,250	\$ 416,250	\$ 416,250	\$ 5,550,000	\$ 4,416,250

SFJUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15479-UW Regional Water Treatment Pr
FSP ID	TBD
Project Title:	SVCF Improvements
Total Budget:	\$ 1,687,500
Project Start:	7/3/2023
Project Finish:	12/29/2028
Current Active Phase:	
Organization:	Regional Water
Project Manager:	Anthony Yu
Facility Category:	Water Treatment Program
Type:	Capital
Description:	This new project will provide planning and design phase funding to seismically upgrade the tank pedestals for 3 sodium hypochlorite and 1 sodium hydroxide storage tank at SVCF, replace the chemical storage tanks, replace the FRP grating within the SVCF chemical storage area, replace aging chemical piping and supports, and install a new leak detection system for the AS4 chemical injection vault.
Justification:	These improvements are needed for a functioning facility. Without them, there can be leaks that compromise the facility, health and safety problems, as well as regulatory violations.
Operating Impact:	This project provides water treatment reliability for the Regional Water System.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 85,000	\$ 0	\$ 85,000	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,602,500	\$ 0	\$ 336,875	\$ 421,875	\$ 421,875	\$ 421,875	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 1,687,500	\$ 0	\$ 421,875	\$ 421,875	\$ 421,875	\$ 421,875	\$ 0

SFJUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15479-UW Regional Water Treatment Pr
FSP ID	TBD
Project Title:	SABPL Valve Redesign
Total Budget:	\$ 1,012,500
Project Start:	7/1/2022
Project Finish:	12/31/2027
Current Active Phase:	
Organization:	Regional Water
Project Manager:	Anthony Yu
Facility Category:	Water Treatment Program
Type:	Capital
Description:	This project will provide planning and design phase funding to address the excess vibration and cavitation occurring through ball valve Y-28 along the 66" San Antonio Backup Pipeline. Excess vibration and cavitation would occur when flow rates are less than 300 MGD. If left unaddressed, damage to the pipeline and a reduced service life of the ball valve is expected. Some proposed solutions include installing parallel throttling valves, installing additional throttling valves, replacing the existing ball valve, or relocating and using a different type of throttling valve.
Justification:	These improvements will protect the integrity of the existing San Antonio Backup Pipeline. Without them, the vibration and cavitation issues could cause pipeline leaks that can compromise water quality.
Operating Impact:	This project provides water transmission reliability for the Regional Water System.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 75,000	\$ 0	\$ 25,000	\$ 25,000	\$ 25,000	\$ 0	\$ 0
DS	\$ 690,000	\$ 0	\$ 230,000	\$ 230,000	\$ 230,000	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 765,000	\$ 0	\$ 255,000	\$ 255,000	\$ 255,000	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15480-UW Tesla Uv Facility
FSP ID	10015057
Project Title:	Tesla Improvements
Total Budget:	\$ 1,705,282
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Annie Li
Facility Category:	Water Transmission Program
Type:	Capital
Description:	The Tesla Improvements project is a repair and replacement project in nature. There have been no separate capital improvements identified with this cycle of the capital program. Any work related to this facility will be combined with and funded from the Tesla UV R&R program.
Justification:	See Tesla UV R&R justification.
Operating Impact:	None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15480-UW Tesla Uv Facility
FSP ID	10015058
Project Title:	Thomas Shaft
Total Budget:	\$ 998,880
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Anthony Yu
Facility Category:	Water Treatment Program
Type:	Capital
Description:	The Thomas Shaft project is a repair and replacement project in nature. There have been no separate capital improvements identified with this cycle of the capital program. Any work related to this facility will be combined with and funded from the Tesla UV R&R program.
Justification:	See Tesla UV R&R justification.
Operating Impact:	None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15481-UW Sunol Valley Water Treatment
FSP ID	10033123
Project Title:	SWWTP Ozone
Total Budget:	\$ 192,815,729
Project Start:	6/27/2017
Project Finish:	6/30/2028
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Bryan Dessaure
Facility Category:	Water Treatment Program
Type:	Capital

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

- The scope of this project is to install a raw water ozonation system at SWWTP including the following major components:
- 10-inch through 66-inch diameter piping, elbows and valves
 - Concrete valve vaults
 - Ozone Generator Building (approx. 10,000 sq. ft. concrete structure)
 - Electrical Building (approx. 1250 sq. ft. concrete structure)
 - Loop Cooling Water Systems (approx. 375 sq. ft. concrete pad, skid system, pumps, valves, piping)
 - Cytogenic Oxygen Tank Systems (approx. 2300 sq. ft. foundation, liquid oxygen system equipment, stainless steel piping, valves, fittings and controls)
 - Liquid Oxygen Vaporizer Systems (equipment, piping, valves, fittings and controls)
 - Ozone Generators (generators, piping, valves, fittings and controls)
 - Ozone Injector Systems (approx. 3200 sq. ft. concrete structure, stainless steel injector units and piping, quenching chemical injection system, 66-inch diameter piping and manifold, valves, pumps and controls)
 - Ozone Contact Basin (approx. 12,000 sq. ft. concrete structure)
 - Ozone Destruct Systems (equipment, piping, valves, fittings and controls)
 - Pre-chloramination Facilities for Biomate Control
 - Instrumentation & Controls
 - Shop Space
 - Solar Panels; Standby Power Systems; High Voltage & Low Voltage Electrical Eq. & Distribution Systems
 - Minor Calaveras Substation Upgrades to support the Ozone facility power needs
 - Underground Utilities; Site Improvements

Justification:
This project resulted from taste and odor outbreaks associated with algal blooms in San Antonio and Calaveras Reservoirs.

Operating Impact:
Water LOS Goal(s) Supported: Water Quality
This project will improve the water quality especially during warm months and during Hetch Hetchy shutdowns...

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 2,000,000	\$ 2,000,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 84,555	\$ 84,555	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 2,833,528	\$ 962,807	\$ 1,870,721	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 23,414,600	\$ 0	\$ 16,758,814	\$ 2,359,290	\$ 2,198,755	\$ 1,880,328	\$ 217,413
CN	\$ 148,924,729	\$ 0	\$ 82,668,729	\$ 66,256,000	\$ 0	\$ 0	\$ 0
Total	\$ 177,257,412	\$ 3,047,362	\$ 101,298,264	\$ 68,615,290	\$ 2,198,755	\$ 1,880,328	\$ 217,413

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15481-UW Sunol Valley Water Treatment
FSP ID	10015064
Project Title:	SWWTP Short Term Improvements
Total Budget:	\$ 60,034,990
Project Start:	3/3/2014
Project Finish:	5/17/2027
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Bryan Dessaure
Facility Category:	Water Treatment Program
Type:	Capital

Description:
The primary objective of the SWWTP Short Term Improvements project is to improve regional delivery reliability by addressing various conditions and deficiencies of the Sunol Valley Water Treatment Plant (SWWTP). Upgrades were identified through condition assessments and operations staff observations, review of level of service, subsequent feasibility studies, and alternative analyses.

- The construction scope of work will include the following:
- Structural and HVAC improvements at the Administration Building;
 - Water Quality Lab remodel at the Administration Building including cabinet, countertop, sink, plumbing and flooring replacement and mold remediation work;
 - Repair concrete spalling in the sedimentation basins;
 - Upgrade washwater tank and access system, and install valve actuator;
 - Upgrade sludge system piping, valves, and monitoring system;
 - Upgrade chemical piping system;
 - Remediate leakage at expansion joint around settled water pipes from sedimentation basin;
 - Replace flocculator variable frequency drives (VFDs) for the flocculation basins;
 - Replace leaking washwater drain valves;
 - Replace corroded air scour piping and chlorine contact tank piping;
 - Install new flowmeters for the washwater backwash system and chlorine contact tank;
 - Install new fixed washdown system at sedimentation basin;
 - Install new lighting and plant intercom and paging systems;
 - Install new server room fire suppression system;
 - Install plate settler washdown piping system;
- Many of the projects are identified through condition assessments, operations staff observations, review of level of service, subsequent feasibility studies, and alternative analyses.

Justification:
Water LOS Goal(s) Supported: Water Quality and Regional Delivery Reliability
This project ensures better reliability of the SWWTP.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 2,000,000	\$ 0	\$ 2,000,000	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,311,856	\$ 0	\$ 634,702	\$ 477,154	\$ 0	\$ 0	\$ 0
CM	\$ 8,317,634	\$ 0	\$ 2,596,847	\$ 2,417,123	\$ 2,378,155	\$ 965,509	\$ 0
CN	\$ 38,277,519	\$ 1,002,715	\$ 19,709,877	\$ 17,564,927	\$ 0	\$ 0	\$ 0
Total	\$ 49,907,009	\$ 1,002,715	\$ 25,101,426	\$ 20,459,204	\$ 2,378,155	\$ 965,509	\$ 0


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15481-UW Sunol Valley Water Treatment
FSP ID	10027759
Project Title:	Pond F3 East Pumps
Total Budget:	\$ 0
Project Start:	9/1/2019
Project Finish:	3/31/2022
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Alisha Reinhardt
Facility Category:	Water Treatment Program
Type:	Capital
Description:	The pumps at Pond F3 East in the East Bay Fields pump from the pond to the San Antonio Reservoir. These are submersible pumps embedded inside a casing and the pumps are inaccessible unless they are pulled using a crane. The terrain and design make maintaining these pumps difficult and sometimes dangerous in adverse weather. The scope includes replacing handrails to provide safe access, pump repair and replacement, and installation of staff gauges to the Pond F3 East.
Justification:	Redesign is necessary to maintain and access these pumps.
Operating Impact:	Water LOS Goal(s) Supported: Regional Delivery Reliability This project better ensures better reliability from East Bay Field Facilities.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15481-UW Sunol Valley Water Treatment
FSP ID	10037277
Project Title:	Sunol Valley Chloramination Facility
Total Budget:	\$ 4,481,000
Project Start:	3/1/2021
Project Finish:	12/1/2024
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Alisha Reinhardt
Facility Category:	Water Treatment Program
Type:	Capital
Description:	The budget for this project includes the expected maintenance and replacement at the Sunol Valley Chloramination Facility of worn components. These include: 1. Replace chemical flowmeters 2. Fluoride piping replacement 3. Update control strategy and system integration for replaced equipment
Justification:	Many of the projects are identified through condition assessments, operations staff observations, review of level of service, subsequent feasibility studies, and alternative analyses at each major plant. The project will result in more reliable performance from East Bay Fields Facilities.
Operating Impact:	Water LOS Goal(s) Supported: Water Quality This project ensures better reliability from East Bay Field Facilities.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 6,000	\$ 0	\$ 6,000	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 6,000	\$ 0	\$ 6,000	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 31,000	\$ 0	\$ 31,000	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 19,000	\$ 0	\$ 19,000	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 125,000	\$ 0	\$ 125,000	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 187,000	\$ 0	\$ 187,000	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15481-UW Sunol Valley Water Treatment
FSP ID	10038328
Project Title:	SWWTP Long Term Improvements
Total Budget:	\$ 10,483,000
Project Start:	11/1/2021
Project Finish:	5/17/2027
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Bryan Dessaure
Facility Category:	Water Treatment Program
Type:	Capital

Description: The primary objective of the SWWTP Long Term Improvements project is to improve regional delivery reliability by addressing various conditions and deficiencies of the Sunol Valley Water Treatment Plant (SWWTP). Upgrades were identified through condition assessments and operations staff observations, review of level of service, subsequent feasibility studies, and alternative analyses.

- The construction scope of work will include the following:
- Emergency Eyewash station installation at chlorine contact tank;
 - Repair bird netting deficiencies at Flocculation/Sedimentation Basins and filters;
 - Install new bird netting for fluoride storage and chemical delivery dock;
 - Replace Main Switchboards 1 and 2, remove ATS-1, ATS-2 and ATS-3 and incorporate functionality into new switchgear;
 - Add redundant 2MW standby generator with active particulate air filters;
 - Replace all GE Power Circuit Breakers (not all are ARC flash rated);
 - Repair concrete pad and coating at Caustic Tank farm;
 - Cat-C polymer feed system re-configuration;
 - Install washwater pumps soft starter system;
 - Install air monitors for aqua ammonia tanks;
 - Roadway and site improvements;

Justification: Many of the projects are identified through condition assessments, operations staff observations, review of level of service, subsequent feasibility studies, and alternative analyses.

Operating Impact: Water LOS Goal(s) Supported: Water Quality and Regional Delivery Reliability
 This project ensures better reliability of the SWWTP.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 3,000,000	\$ 0	\$ 3,000,000	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 1,303,600	\$ 0	\$ 0	\$ 0	\$ 901,679	\$ 401,921	\$ 0
CN	\$ 5,049,400	\$ 0	\$ 0	\$ 5,049,400	\$ 0	\$ 0	\$ 0
Total	\$ 9,353,000	\$ 0	\$ 3,000,000	\$ 5,049,400	\$ 901,679	\$ 401,921	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15481-UW Sunol Valley Water Treatment
FSP ID	(N/A)
Project Title:	Castlewood
Total Budget:	\$ 0
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Annie Li
Facility Category:	Water Transmission Program
Type:	Capital

Description: The Castlewood project is a repair and replacement project in nature. There have been no separate capital improvements identified with this cycle of the capital program. Any work related to this facility will be combined with and funded from the East Bay Field R&R program.

Justification: See East Bay Field R&R justification.

Operating Impact: None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15481-UW Sunol Valley Water Treatment
FSP ID	10037628
Project Title:	SWWTP Polymer Feed Facility
Total Budget:	\$ 19,046,104
Project Start:	7/1/2021
Project Finish:	8/1/2025
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Bryan Dessaure
Facility Category:	Water Treatment Program
Type:	Capital

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

The funding for the project is provided under WECIP and WSIP. The WSIP funding for this project, \$2.19M, is included with other Sunol Valley closeout projects and was completed in the Planning phase and a portion of the Design phase. The remaining funding for the project is provided under Water Enterprise 10-year CIP, \$19,046,104.

The scope of this project includes installation of a new polymer feed facility for SWWTP Basins 1 through 5. The flocculant aid polymer system will consist of the following:

- Polymer Feed Building with polymer totes and tote storage area;
- Batch blending units;
- Batch tanks;
- Tank and tote mixers;
- Batch tanks polymer transfer pump;
- Polymer feed pumps;
- Piping and valving;
- Site improvements.

Justification:
A flocculant aid polymer system is required to achieve a settled water turbidity below 2 NTU in each sedimentation basin when operating at the maximum basin flow rate of 40 mgd.

Operating Impact:
Water LOS Goal(s) Supported: Water Quality and Regional Delivery Reliability
This project ensures reliability and overall treatment efficiency of the SWWTP.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 2,466,105	\$ 0	\$ 1,458,678	\$ 980,046	\$ 27,381	\$ 0	\$ 0
CN	\$ 9,042,999	\$ 9,042,999	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 11,509,104	\$ 9,042,999	\$ 1,458,678	\$ 980,046	\$ 27,381	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15482-UW Htrwb & West Bay Fields
FSP ID	10037349
Project Title:	HTWTP Filter Underdrain Replacement
Total Budget:	\$ 14,404,000
Project Start:	11/2/2020
Project Finish:	6/28/2024
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Janet Ng
Facility Category:	Water Treatment Program
Type:	Capital

Description:
Over twenty projects have been identified to improve the performance and reliability of the Harry Tracy Water Treatment Plant (HTWTP). However, underdrains in two filters in a bank of six have failed since 2019 and replacement of the underdrains is being prioritized to restore the plants treatment capacity and reliability. The remaining projects will be deferred to future CIP Planning.

The scope of work includes the following:

- Remove and dispose existing filter media and provide new filter media,
- Procure and install new stainless steel filter underdrains for 6 filters,
- Modify air distribution piping beneath filter underdrains,
- Clean and recast main air distribution piping,
- Demolition work, and
- Concrete work

Justification:
There are 21 projects identified to improve the reliability and efficiency of the HTWTP but replacing the underdrains of Filters #1 through #6 is the highest priority since 2 of the 6 underdrains have failed and the 6 filters have been placed out of service. The remaining 20 projects will be deferred to future capital planning.

Operating Impact:
Water LOS Goal(s) Supported: Water Quality and Regional Delivery Reliability
This project ensures reliability and overall treatment efficiency of the HTWTP.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 558,000	\$ 0	\$ 558,000	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 558,000	\$ 0	\$ 558,000	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15482-UW Htrwp & West Bay Fields
FSP ID	(N/A)
Project Title:	Pulgas Dechlor Facility
Total Budget:	\$ 0
Project Start:	7/9/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Annie Li
Facility Category:	Water Transmission Program
Type:	Capital
Description:	The Pulgas Dechlor Facility project is a repair and replacement project in nature. There have been no separate capital improvements identified with this cycle of the capital program. Any work related to this facility will be combined with and funded from the East Bay Field R&R program.
Justification:	See East Bay Field R&R justification.
Operating Impact:	None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19056-UW Regional Water Treatment Pr
Authority Level 2:	15479-UW Regional Water Treatment Pr
FSP ID	10037350
Project Title:	Regional Groundwater Treatment Improvements
Total Budget:	\$ 38,600,000
Project Start:	8/13/2020
Project Finish:	2/26/2030
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Janet Ng
Facility Category:	Water Treatment Program
Type:	Capital

Description:
The purpose of this project is to improve the performance of the Regional Groundwater Wells and treatment systems in the South Westside Basin for reliable use during dry years. In normal and wet years, the SFPUC will supply treated surface water to Daly City, San Bruno, and Cal Water to be used in place of their typical groundwater supply, thereby increasing the volume of groundwater in storage that can be pumped as supplemental water in dry years. This project will address emerging well water quality issues that require treatment, will provide additional reliability for treatment systems at the wells, and will evaluate the potential for a consolidated treatment facility (through Alternatives Analysis only). If a centralized treatment alternative is selected, the estimated project cost could potentially be \$250 million, which includes construction of approximately 14 miles of 8" to 24" diameter pipeline, a pump station, storage tanks, treatment facilities, and other ancillary facilities.

This project will build auxiliary water treatment facilities as well as other enhancements to increase the reliability and efficiency for maintenance and operation of the well stations. While an evaluation for providing centralized treatment is included in the project, the current budget only includes design and construction of facilities at individual well sites, including the following:

- Install ammonia analyzer (1 site)
- Construct manganese enclosure (2 sites)
- Construct building, filtration and ammonia analyzer (1 site)
- Upsize pedestal & tank for 2-week storage for sodium hydroxide (5 sites)
- Upsize pedestal & tank for 2-week storage for liquid ammonium sulfate (7 sites)
- Upsize pedestal and tank for 2-week storage for sodium hypochlorite (1 site)
- Install detention (contact) tank to address high levels of ammonia w/o enclosure (1 site)
- Upsize pedestal, tank and overall chemical system for change in chemical concentration from 50% to 25% concentration (5 sites)
- Install chlorine detention (contact) tank to address high levels of ammonia
- Install venturi meter or mag meter with dismantling joint inside concrete vault (6 sites)
- Remove bucket elevator for sodium fluoride (7 sites)
- Study to compare liquid vs powder fluoride
- Study reverse flow (lockout study for minimum shutdown time)
- Reimburse Cal Water for supporting the project design & construction for SSF Main well

Justification:
The project is necessary to improve the performance of Regional Groundwater Storage and Recovery.
Water LOS Goal(s) Supported: Water Quality and Water Supply
Groundwater wells with water quality issues requiring additional treatment will not be able to provide service until construction of improvements is complete.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 4,000,000	\$ 2,000,000	\$ 1,000,000	\$ 500,000	\$ 250,000	\$ 250,000	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 58,260	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 58,260
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 4,058,260	\$ 2,000,000	\$ 1,000,000	\$ 500,000	\$ 250,000	\$ 250,000	\$ 58,260

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15483-UW Water Transmission Program
FSP ID	10033247
Project Title:	Arc Flash Studies
Total Budget:	\$ 1,700,000
Project Start:	5/1/2018
Project Finish:	12/1/2021
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Alisha Reinhardt
Facility Category:	Water Transmission Program
Type:	Capital
Description:	This project funds the arc flash study for various facilities within the Regional Water System. An Arc flash study is the evaluation of a workplace facility by an electrical safety expert to determine hazards and risks in relation to electrical systems. The on-site study results in arc flash equipment labeling, fault current and coordination analysis, recommendations for improvements and requirements for proper personal protective equipment (PPE).
Justification:	Arc flash analysis calculates incident energy and arc flash boundaries. Proper electrical system design, construction of arc resistant equipment, and requirements for safe work practices help minimize the risk of electrical arc flash.
Operating Impact:	Water LOS Goal(s) Supported: Regional Delivery Reliability Some coordination and staff time is needed by Sys Ops and Electricians to provide access.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15483-UW Water Transmission Program
FSP ID	10035029
Project Title:	As-Needed Pipeline Repair
Total Budget:	\$ 7,723,525
Project Start:	7/1/2020
Project Finish:	8/25/2028
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Janet Ng
Facility Category:	Water Transmission Program
Type:	Capital
Description:	Water Supply and Treatment Divisions (WSTD) maintenance and inspection program inspects the regional pipeline system on an ongoing basis. However, when repairs are identified to be needed following inspections and when emergency repairs are needed, a contractor is not readily available to perform the repairs. This project will increase system reliability by reducing the duration and number of outages since a pre-qualified, as-needed contractor will be available to complete repairs immediately following inspections or in emergencies. This project will repair/replace regional pipeline segments that will be inspected over the next five years, in addition to any emergency repairs that may be needed. The initial construction contract will be 3 years and combined with Project 10036840, BDPL 1-4 Lining Repair to provide a sufficient guaranteed scope. Subsequent construction contract(s) will be issued to parallel WSTD's inspection program. The scope of work for the initial construction contract is as follows: <ul style="list-style-type: none"> • Pipeline replacement by open trench • Pipeline repair work • Protecting sensitive (wetland and creek) areas • Protecting utilities and infrastructure • Traffic control • Site/vegetation restoration • Paving restoration • Dewatering and providing temporary safe entry measures to pipelines such as line stops, roll out spool pieces, blind flanging, welding bulkheads, etc. Water transmission pipeline segments, including major pipe leaks and ruptures, can be repaired and replaced in a much shorter time frame as compared to conventional contracting methods.
Justification:	Water LOS Goal(s) Supported: Regional Delivery Reliability
Operating Impact:	Minimize the duration of outages due to unscheduled pipeline shutdowns.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 11,360	\$ 0	\$ 0	\$ 3,896	\$ 3,896	\$ 3,568	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 917,165	\$ 0	\$ 123,367	\$ 193,569	\$ 193,569	\$ 193,569	\$ 213,091
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 928,525	\$ 0	\$ 123,367	\$ 197,465	\$ 197,465	\$ 197,137	\$ 213,091


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15484-UW Corrosion Control
FSP ID	10015071
Project Title:	Corrosion Control
Total Budget:	\$ 36,536,000
Project Start:	1/1/2014
Project Finish:	1/31/2028
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Yolanda Quisao
Facility Category:	Water Transmission Program
Type:	Capital
Description:	<p>This project will implement the corrosion protection and control program as recommended in the Corrosion Control Master Plan completed in August 2010. Sites identified with worst levels of corrosion were bundled up in the master plan in three phases. Each phase will take several years for implementation. The scope for all phases will be similar, but the number of sites will vary at each phase. Phase 1 construction work for ten sites was completed, and accepted on August 27, 2019. Phase 2 has eleven sites, and is currently in the design phase. Phase 3 is anticipated to include work up to twenty sites depending on the funding.</p> <p>This project description is for all four phases. Scope of work includes the following:</p> <ul style="list-style-type: none"> Furnish and install cathodic protection (CP) systems. Install rectifiers and anodes at a depth of approximately 300 feet Install testing station for pipelines. Install specialized galvanic and impressed current CP systems Install remote monitoring units. Install isolation protection systems. Install transformers/switchgears under Phase 3 only
Justification:	A Corrosion Planning Report was completed in 1999. A master plan identified specific projects and costs and was completed in August 2010. Rather than replacing segments of pipelines, investments in corrosion protection are a cost-effective way to significantly extend the usable life of pipelines and appurtenances.
Operating Impact:	Water LOS Goal(s): Supported: Regional Delivery Reliability The project increases operating expenditures per year for activities related to managing corrosion data and monitoring systems that are performed by consultants (professional services).

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 125,000	\$ 0	\$ 105,533	\$ 19,467	\$ 0	\$ 0	\$ 0
DS	\$ 947,576	\$ 0	\$ 518,660	\$ 411,456	\$ 17,460	\$ 0	\$ 0
CM	\$ 1,225,424	\$ 0	\$ 202,064	\$ 23,360	\$ 612,903	\$ 387,097	\$ 0
CN	\$ 20,373,000	\$ 0	\$ 0	\$ 0	\$ 20,373,000	\$ 0	\$ 0
Total	\$ 22,671,000	\$ 0	\$ 826,257	\$ 454,283	\$ 21,003,363	\$ 387,097	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15485-UW Water Transmission Program
FSP ID	10015072
Project Title:	Pipelines & Tunnels Inspection and Repair R&R
Total Budget:	\$ 35,646,233
Project Start:	7/1/2022
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Eric Choi
Facility Category:	Water Transmission Program
Type:	Renewal and Replacement
Description:	<p>This project funds the inspection and minor rehabilitation and repair of large diameter pipelines and tunnels. Periodic internal pipeline inspections are essential to minimizing pipeline failures. WSTD has developed and follows a 20-Year Pipeline Inspection Program. This program provides a basis for prioritizing pipeline replacements.</p> <p>For budgeting purposes, each pipeline shutdown, de-watering, and disinfection costs \$250K. Electromagnetic inspection of prestressed concrete cylinder pipe costs \$30K per mobilization, \$25K per mile of pipe, and \$10K per report. Scope and activities under this project include:</p> <ul style="list-style-type: none"> Repairing pipeline leaks Shutting down, de-watering, and disinfecting pipelines Maintenance of appurtenances such as blow-off valves and air valves Minor repair of cement mortar lining or dielectric lining in short stretches Planning studies for pipeline rehabilitation projects Using remotely operated vehicles and acoustic leak detection technologies Electromagnetic inspections of prestressed concrete cylinder pipe to detect broken prestressed wires Piloting studies of new pipeline inspection technologies InfoWater hydraulic model conversion Inspecting the Stanford, Pulgas, and Hillsborough Tunnels and the Palo Alto Pipeline Sale pipe entry evaluation BD3&4 railroad crossing slip-lining project Crystal Springs Road settlement repair in Hillsborough San Andreas Pipeline No. 2, San Andreas Pipeline No. 3, and Sunset Supply Pipeline corrosion assessment at Baden Mitigating for Sunol SMP-30 Fisures Sunset Supply Pipeline erosion repair near Casey Quarry San Antonio Pipeline No. 2 Lockbar Pipe condition assessment San Bruno Jail Waterline Replacement (Funded by the Sheriff's Dept) Capital equipment purchases in support of the System Operations, Distribution Operations, and Maintenance groups <p>Periodic internal pipeline inspections are essential to minimizing pipeline failures.</p>
Justification:	Water LOS Goal(s): Supported: Regional Delivery Reliability Different sections of pipelines going out of service for inspections must be carefully coordinated to maintain delivery.
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 576,000	\$ 0	\$ 113,000	\$ 9,000	\$ 154,000	\$ 100,000	\$ 200,000
ER	\$ 288,000	\$ 0	\$ 56,500	\$ 4,500	\$ 77,000	\$ 50,000	\$ 100,000
DS	\$ 1,152,000	\$ 0	\$ 226,000	\$ 18,000	\$ 308,000	\$ 200,000	\$ 400,000
CM	\$ 864,000	\$ 0	\$ 169,500	\$ 13,500	\$ 231,000	\$ 150,000	\$ 500,000
CN	\$ 11,203,277	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 5,500,000
Total	\$ 14,083,277	\$ 5,703,277	\$ 565,000	\$ 45,000	\$ 770,000	\$ 500,000	\$ 6,500,000

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15487-UW Pump Station Upgrades
FSP ID	TBD
Project Title:	Calaveras Substation Upgrades
Total Budget:	\$ 39,150,000
Project Start:	7/3/2023
Project Finish:	6/29/2030
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Eric Choi
Facility Category:	Water Transmission Program
Type:	Capital
Description:	This project funds upgrades related to the Calaveras Substation and the electrical poles to and from the Calaveras Substation along Calaveras Road. Upsizing of the substation is required for the future conversion of the diesel San Antonio Pump Station pumps to electric ones. Adding Ozone at the Sunol Valley Water Treatment Plant could also add electric load to the substation.
Justification:	Calaveras Substation is nearing its maximum capacity. Additional electrical loads at Sunol Valley Water Treatment Plant related to Ozone and any upgrades to the San Antonio Pump Station may trigger additional capital work to increase Calaveras Substation capacity.
Operating Impact:	Water LOS Goal(s) Supported: Regional Delivery Reliability None at this time.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,822,500	\$ 0	\$ 0	\$ 607,500	\$ 607,500	\$ 607,500	\$ 0
ER	\$ 1,215,000	\$ 0	\$ 0	\$ 405,000	\$ 405,000	\$ 405,000	\$ 0
DS	\$ 3,037,500	\$ 0	\$ 0	\$ 1,012,500	\$ 1,012,500	\$ 1,012,500	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 6,075,000	\$ 0	\$ 0	\$ 2,025,000	\$ 2,025,000	\$ 2,025,000	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15487-UW Pump Station Upgrades
FSP ID	(N/A)
Project Title:	Crystal Springs Pump Station Upgrades
Total Budget:	\$ 0
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Annie Li
Facility Category:	Water Transmission Program
Type:	Capital
Description:	The Crystal Springs Pump Station Upgrades project is a repair and replacement project in nature. There have been no separate capital improvements identified with this cycle of the capital program. Any work related to this facility will be combined with and funded from the Pump Station Upgrades R&R program.
Justification:	See Pump Station Upgrades R&R justification.
Operating Impact:	None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15487-UW Pump Station Upgrades
FSP ID	TBD
Project Title:	Pulgas Facilities Upgrades
Total Budget:	\$ 7,342,500
Project Start:	7/1/2022
Project Finish:	6/30/2026
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Eric Choi
Facility Category:	Water Transmission Program
Type:	Capital
Description:	The budget for this project includes: 1. Fixing the meter house flooding issues at Pulgas Valve Lot 2. Replacing deteriorating gutters at the Pulgas Dechlorination Facility 3. Replacing the Pulgas Pump Station knife gate valve, slide gate, and all switchgear and medium voltage starters, along with performing short circuit coordination and arc flash hazard analysis. Pump #1 and sump pumps also need to be repaired. Reliability of the Pulgas Pump Station and Pulgas facilities is important to the operations of the Pulgas Balancing Reservoir.
Justification:	Water LOS Goal(s) Supported: Regional Delivery Reliability
Operating Impact:	Pulgas Facilities are integral to the reliability of water delivery.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,488,500	\$ 0	\$ 0	\$ 74,250	\$ 74,250	\$ 337,500	\$ 1,012,500
ER	\$ 993,000	\$ 0	\$ 0	\$ 49,500	\$ 225,000	\$ 675,000	\$ 675,000
DS	\$ 2,497,500	\$ 0	\$ 0	\$ 123,750	\$ 123,750	\$ 562,500	\$ 1,687,500
CM	\$ 247,500	\$ 0	\$ 0	\$ 0	\$ 0	\$ 123,750	\$ 123,750
CN	\$ 1,650,000	\$ 0	\$ 0	\$ 247,500	\$ 247,500	\$ 1,650,000	\$ 0
Total	\$ 6,892,500	\$ 0	\$ 0	\$ 247,500	\$ 247,500	\$ 2,898,750	\$ 3,498,750

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15487-UW Pump Station Upgrades
FSP ID	(N/A)
Project Title:	Baden Pump Station Upgrades
Total Budget:	\$ 0
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Annie Li
Facility Category:	Water Transmission Program
Type:	Capital
Description:	The Baden Pump Station Upgrades project is a repair and replacement project in nature. There have been no separate capital improvements identified with this cycle of the capital program. Any work related to this facility will be combined with and funded from the Pump Station Upgrades R&R program.
Justification:	See Pump Station Upgrades R&R justification.
Operating Impact:	None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15487-UW Pump Station Upgrades
FSP ID	10015076
Project Title:	San Antonio Pump Station MCC Upgrades
Total Budget:	\$ 12,500,000
Project Start:	5/12/2016
Project Finish:	3/19/2025
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Alisha Reinhardt
Facility Category:	Water Transmission Program
Type:	Capital
Description:	<p>The San Antonio Pump Station (SAPS) is one of the key facilities in the Sunol Valley and was constructed in 1965 and modified in 1990. The existing motor control centers (MCC) MCC-A, MCC-B, and MCC-C have been in service since the 1960's and they are approaching the end of their useful life. In order to maintain reliable operation at SAPS, the existing MCCs are being replaced and facility walls are being seismically retrofitted. In order to accommodate the retrofit work, the communications system is being relocated to an adjacent room and the HVAC will be replaced in affected rooms. In addition, a new propane generator will replace the existing diesel generator to serve as reliable backup power to the facility.</p> <p>The scope of work or construction will include the following:</p> <ul style="list-style-type: none"> • Replace existing diesel generator with new 150KW propane generator • Install new fire suppression system • Replace existing lighting system • Replace existing HVAC system • Architectural design to accommodate clean agent fire suppression • Seismic Retrofit of walls • Replace existing MCC • Replace existing underground power and control conductors • Install new RTU with UPS • Replace existing communication system for Control and SCADA room <p>SAPS is integral to moving water within the Sunol Valley.</p>
Justification:	Water LOS Goal(s) Supported: Regional Delivery Reliability
Operating Impact:	SAPS is integral to moving water within the Sunol Valley.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 1,423,706	\$ 0	\$ 1,012,112	\$ 411,594	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 1,423,706	\$ 0	\$ 1,012,112	\$ 411,594	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15487-UW Pump Station Upgrades
FSP ID	TBD
Project Title:	San Antonio Pump Station Upgrades
Total Budget:	\$ 16,312,500
Project Start:	7/3/2023
Project Finish:	6/28/2030
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Eric Choi
Facility Category:	Water Transmission Program
Type:	Capital
Description:	<p>This project is to perform the following work to upgrade the San Antonio Pump Station (SAPS):</p> <ol style="list-style-type: none"> 1. Convert the two remaining diesel pumps to electrical pumps. 2. Upgrade SAPS Substation due to the age of the existing electrical infrastructure, reliability issues with the 52H circuit breaker, and the need to upsize the substation for the future conversion of the diesel pumps to electric pumps. 3. Upsize SAPS Substation to provide power to support six – 1,000 hp pumps operating simultaneously. Scope would include replacement of the whole substation switchgear including CB52H, all protective relays, disconnect switches and replacement of the medium voltage substation transformer. <p>Near accumulator system for pumps P-8, P-9, and P-10 would be needed.</p> <p>SAPS is critical to the operations of the entire Sunol Valley.</p>
Justification:	Water LOS Goal(s) Supported: Regional Delivery Reliability
Operating Impact:	The project provides reliability to water delivery and reduces miscellaneous repairs and unscheduled outages.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,012,500	\$ 0	\$ 0	\$ 253,125	\$ 253,125	\$ 253,125	\$ 253,125
ER	\$ 675,000	\$ 0	\$ 0	\$ 168,750	\$ 168,750	\$ 168,750	\$ 168,750
DS	\$ 1,687,500	\$ 0	\$ 0	\$ 421,875	\$ 421,875	\$ 421,875	\$ 421,875
CM	\$ 1,387,500	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,387,500
CN	\$ 11,250,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 11,250,000
Total	\$ 16,012,500	\$ 0	\$ 0	\$ 843,750	\$ 843,750	\$ 843,750	\$ 13,481,250

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15488-UW Pipeline Improvements
FSP ID	TBD
Project Title:	Sunol Valley Pipelines Seismic Upgrades
Total Budget:	\$ 1,681,250
Project Start:	7/1/2022
Project Finish:	6/28/2030
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Eric Choi
Facility Category:	Water Transmission Program
Type:	Capital

Description: The Calaveras fault runs through the Sunol Valley, crossing multiple water transmission pipelines. In recent years, failures due to seismic activity have been observed on the San Antonio Pipeline, 78" Effluent Pipeline, and Air Gaps #1-3. The following scopes of work need to be developed:

1. San Antonio and Calaveras Pipeline repair and improvements
2. SWWTP 78" Effluent Pipeline repair and improvements
3. Air Gaps #1-3 have experienced uplifting due to creep. Monitoring needs to continue and a plan is needed to relieve the stress on the air gaps.

Additionally, sections of the Alameda Siphons #1-3 are exposed as they cross Alameda Creek. Protection measures need to be added. And finally, fissures paralleling Calaveras Road have developed in the vicinity of Alameda Siphons. A long-term mitigation plan is needed to stabilize the area in order to prevent failure of the nearby water transmission pipelines.

Justification: The pipelines and facilities in the Sunol Valley are critical to water delivery.

Operating Impact: Water LOS Goal(s) Supported: Regional Seismic Reliability and Regional Delivery Reliability
 This project improves reliability and reduces unscheduled outages.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 550,000	\$ 0	\$ 0	\$ 325,000	\$ 75,000	\$ 75,000	\$ 75,000
ER	\$ 200,000	\$ 0	\$ 0	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
DS	\$ 56,250	\$ 0	\$ 0	\$ 125,000	\$ 125,000	\$ 125,000	\$ 125,000
CM	\$ 375,000	\$ 0	\$ 0	\$ 56,250	\$ 0	\$ 0	\$ 0
CN	\$ 1,681,250	\$ 0	\$ 0	\$ 375,000	\$ 0	\$ 0	\$ 0
Total	\$ 1,681,250	\$ 0	\$ 0	\$ 931,250	\$ 250,000	\$ 250,000	\$ 250,000

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15488-UW Pipeline Improvements
FSP ID	(N/A)
Project Title:	Regional Water System Tunnels Inspection
Total Budget:	\$ 0
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Eric Choi
Facility Category:	Water Transmission Program
Type:	Capital


Description: The Regional Water System Tunnels Inspection project is a repair and replacement project in nature. There have been no separate capital improvements identified with this cycle of the capital program. Any work related to this facility will be combined with and funded from the Pipeline and Tunnel Inspection Repair R&R program.

Justification: See Pipeline and Tunnel Inspection Repair R&R justification.

Operating Impact: None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15488-UW Pipeline Improvements
FSP ID	10015080
Project Title:	San Andreas Pipeline No. 2 Replacement
Total Budget:	\$ 45,642,000
Project Start:	3/1/2016
Project Finish:	12/8/2021
Current Active Phase:	Post-Construction
Organization:	Regional Water
Project Manager:	Janet Ng
Facility Category:	Water Transmission Program
Type:	Capital
Description:	San Andreas Pipeline No. 2 (SAPL2) provides key water supply redundancy from the Harry Tracy Water Treatment Plant (HTWTP) to the Sunset Reservoir. The lockbar steel sections of SAPL2 between the HTWTP and the Golden Gate National Cemetery are almost 90 years old, pitted, deteriorated, and in need of replacement. This project will replace/rehabilitate approximately 6,500 linear feet of 54-inch diameter SAPL2 in the City of San Bruno. The scope of work includes the following: <ul style="list-style-type: none"> • Replace approximately 5,000 feet of 54-inch diameter pipe with welded steel pipe by open trench • Slipline approximately 1,500 feet of 54-inch diameter pipe with 42-inch diameter welded steel pipe • Site restoration work • Protection of utilities • Traffic control • Pavement restoration work
Justification:	In July 2015, a portion of SAPL2 burst, resulting in the loss of millions of gallons of water. Upon inspection of the pipeline, it was discovered that four segments of SAPL2 in San Bruno were deteriorated and had severe pitting/corrosion. This project will replace/rehabilitate 4 segments, approximately 6,500 linear feet, of 54" diameter SAPL2 in San Bruno.
Operating Impact:	SAPL2 provides redundant supply capacity and is currently out of service due to the severity of pitting/corrosion. When this project is completed, redundancy to the system will be restored.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15488-UW Pipeline Improvements
FSP ID	10036840
Project Title:	BDPL 1-4 Lining Repair
Total Budget:	\$ 10,764,095
Project Start:	9/12/2016
Project Finish:	8/25/2028
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Janet Ng
Facility Category:	Water Transmission Program
Type:	Capital
Description:	Water Supply and Treatment Divisions (WSTD) ongoing pipeline inspection program has identified segments of the BDPL 1-4 and other regional pipelines that require lining repairs. In addition, this project will retain an as-needed contractor to repair linings identified to be deficient by WSTD over the next 5-years. This project will repair the lining in segments of the BDPL 1-4 and other regional pipelines over the next 5 years. The initial construction contract for this project will be 3 years and combined with Project 10035029, As-Needed Pipeline Repair to provide a sufficient guaranteed scope. Subsequent construction contract(s) will be issued to parallel WSTD's inspection program. The scope of work entails the following: <ul style="list-style-type: none"> • Cement mortar lining (CML) repair including removal, handling and disposal of existing coal tar lining • Dielectric lining repair • Dewatering and providing temporary safe entry measures, such as line stops, blind flanging, roll out spool pieces, welding bulkheads, etc.
Justification:	Each pipeline shutdown usually takes months of planning for operations coordination, man hours for valving changes, and chemical and water costs for disinfecting and flushing. Instead of a reactive approach, where defects are found and the pipeline restored since no contract is in place to address, this project will minimize the number of repeated shutdowns for inspection and for repair by having a contractor available to complete repairs immediately following WSTD's inspections.
Operating Impact:	Water LOS Goal(s): Supported: Regional Delivery Reliability Minimize number of pipeline shutdown will minimize risk of operational changes in the system.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 1,747,568	\$ 0	\$ 636,607	\$ 318,246	\$ 318,246	\$ 318,246	\$ 356,223
CN	\$ 2,371,693	\$ 2,371,693	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 4,119,261	\$ 2,371,693	\$ 436,607	\$ 318,246	\$ 318,246	\$ 318,246	\$ 356,223

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15468-UW Pipeline Improvements
FSP ID	10036839
Project Title:	BDPL4 PCCP Repair
Total Budget:	\$ 54,750,000
Project Start:	5/1/2020
Project Finish:	5/28/2025
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Janet Ng
Facility Category:	Water Transmission Program
Type:	Capital

Description:
Historically, when pre-stressed concrete cylinder pipe (PCCP) fails due to breaks in the spirally wound wire, the high-pressure failure can have catastrophic consequences. Some segments of the Regional Water System are constructed of PCCP. From recent inspections of Bay Division Pipeline No. 4 (BDPL4) Segment D, miles of pipeline that parallels Edgewood Road in Redwood City. In addition, several leaks have surfaced at circumferential cracks and where the pipeline transitions from PCCP to steel. Segments where wire breaks are concentrated will need to be repaired/replaced to prevent catastrophic failure and circumferential cracks and leaks will also be repaired.

The first phase of this project will be to repair segments where there are high concentrations of wire breaks, wide circumferential cracks and active leaks. This first phase will include planning, design and construction of repairs. The second phase of the project will be to address the remaining 1.25 miles of pipeline, which includes planning, design and partial encumbrance of a construction contract. The project budget will be re-evaluated following completion of the Alternatives Analysis for the second phase.

The first construction contract will increase system reliability by rehabilitating approximately 650 feet of 84-inch diameter BDPL4 PCCP in Redwood City and includes the following work:

- Excavation, shoring, backfilling, and compaction
- Demolition of PCCP
- Replacement of approximately 530 feet of pipeline by open trench
- Sliplining approximately 120 feet of pipeline
- Protecting sensitive (wetland and creek) areas and utilities/infrastructure
- Traffic control and
- Site/Vegetation and paving restoration

Justification:
PCCP modes of failure can have catastrophic consequences.

Operating Impact:
Minimize the duration of outages due to unscheduled pipeline shutdowns.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 470,145	\$ 0	\$ 0	\$ 0	\$ 0	\$ 470,145	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 640,975	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 7,516,098	\$ 5,516,098	\$ 2,000,000	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 8,627,218	\$ 6,157,073	\$ 2,000,000	\$ 0	\$ 0	\$ 470,145	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15468-UW Pipeline Improvements
FSP ID	10034578
Project Title:	CSPL2 Reach 5 Lining Replacement
Total Budget:	\$ 23,696,500
Project Start:	2/25/2019
Project Finish:	4/7/2026
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Janet Ng
Facility Category:	Water Transmission Program
Type:	Capital

Description:
Crystal Springs Pipeline No. 2 (CSPL2) runs from Crystal Springs Pump Station to University Mound Reservoir. It delivers potable and emergency water supply to San Francisco and to several cities along the Peninsula. Reach 5 of CSPL2, 60" in diameter, from Millbrae Yard to Baden Pump Station (approximately 3.8 miles) in the cities of South San Francisco and San Bruno is over 80 years old and has extensive lining failures.

This project would replace approximately 3.8 miles of coal tar lining with cement mortar lining (CML), upgrade 34 appurtenances to meet current standards, and improve access and shutdown flexibility for maintenance by installing 5 manway structures and one 60" diameter valve on CSPL2 and one 48" diameter valve on San Andreas Pipeline No. 1 (SAPL1) near Baden Pump Station. In addition, a recent corrosion investigation found a segment of the CSPL2 to be severely corroded across from the Baden Pump Station due to a gas pipeline crossing and will need to be replaced. Since the Sunset Supply Pipeline, San Andreas Pipeline No. 2, and San Andreas Pipeline No. 3, run parallel to the CSPL2 and are crossed by the gas pipeline, a corrosion investigation will be performed to determine if corrosion has occurred on these pipelines and if any repairs are needed. The scope of work includes the following:

- Complete removal of coal tar lining
- Installation of cement mortar lining
- Installation of manway structures
- Procurement and installation of isolation valves
- Upgrade of appurtenances such as blow-offs, air release valves, etc. to meet current standards
- Replacement of pipeline segments
- Traffic control
- Pavement restoration work

Justification:
The original coal tar lining is due for replacement, and coal tar is believed to be a taste and odor contributor. The added access manways will facilitate future inspection, and the new in-line isolation valves will provide ability to keep Baden Pump Station online while CSPL2 is shut down.

Operating Impact:
Water LOS Goal(s) Supported: Water Quality and Regional Delivery Reliability
Minimize the duration of outages due to unscheduled pipeline shutdowns, and maintain water delivery redundancy.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 15,634,332	\$ 0	\$ 13,564,537	\$ 1,378,088	\$ 671,707	\$ 0	\$ 0
Total	\$ 15,634,332	\$ 0	\$ 13,564,537	\$ 1,378,088	\$ 671,707	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15488-UW Pipeline Improvements
FSP ID:	TBD
Project Title:	Palo Alto Pipeline Replacement
Total Budget:	\$ 1,000,000
Project Start:	7/1/2022
Project Finish:	6/28/2024
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Eric Choi
Facility Category:	Water Transmission Program
Type:	Capital
Description:	The scope of this project rehabilitates 5.1 miles of the 36" Palo Alto Pipeline (PAPL). The PAPL was constructed in 1937 with 1/4" thick welded steel plate. It has experienced numerous leaks since the 1960's. Design and construction of the PAPL will be performed after condition assessment and planning studies are done.
Justification:	This funding request would only be enough to perform a condition assessment. The PAPL is the single pipeline that feeds customers from the City of Palo Alto, Stanford, and Cal Water. There is no redundancy to the PAPL.
Operating Impact:	Minimize the duration of outages due to unscheduled pipeline shutdown and maintain water delivery reliability to wholesale customers.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15488-UW Pipeline Improvements
FSP ID:	10015081
Project Title:	CSPL2 Reaches 2 and 3 Rehabilitation
Total Budget:	\$ 82,812,600
Project Start:	9/12/2016
Project Finish:	2/18/2027
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Janet Ng
Facility Category:	Water Transmission Program
Type:	Capital
Description:	Crystal Springs Pipeline No. 2 (CSPL2) spans from Crystal Springs Pump Station to University Mound Reservoir. It delivers potable water supply to San Francisco and several cities along the Peninsula, Reaches 2 and 3 of CSPL2 in the Town of Hillsborough, unincorporated areas of San Mateo County, the City of San Mateo, and the City of Burlingame are over 80 years old and have deteriorated, with Reach 2 located on eroding slopes with difficult access and Reach 3 containing extensive lining failures. This project will relocate approximately 1.5 miles of 60-inch diameter CSPL2 (portion of Reaches 2 and 3 that traverses through steep terrain with a narrow access road) into Crystal Springs Road by removing the abandoned-in-place 48-inch diameter CSPL1, relining approximately 2.2 miles of CSPL2 (remaining portion of Reach 3) with cement mortar lining, and upgrade appurtenances to meet current standards. The scope of work includes the following: <ul style="list-style-type: none"> Removal of approximately 2.2 miles coal tar lining Installation of approximately 2.2 miles of cement mortar lining Removal of 1.5 miles of existing CSPL1 Pipeline installation work by open trench Upgrade of appurtenances such as blow-offs, air release valves, etc. to meet current standards Traffic control Pavement restoration work
Justification:	CSPL2 traverses through steep terrain with a narrow access road which makes maintenance and repair difficult. The original coal tar lining is due for replacement, and coal tar is believed to be a taste and odor contributor.
Operating Impact:	Water LOS Goal(s) Supported: Water Quality and Regional Delivery Reliability Minimize the duration of outages due to unscheduled pipeline shutdown, and maintain water delivery redundancy.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 41,102	\$ 0	\$ 0	\$ 41,102	\$ 0	\$ 0	\$ 0
CM	\$ 7,646,166	\$ 0	\$ 0	\$ 4,087,369	\$ 2,870,758	\$ 688,039	\$ 0
CN	\$ 70,296,313	\$ 0	\$ 46,986,335	\$ 23,309,978	\$ 0	\$ 0	\$ 0
Total	\$ 77,983,581	\$ 0	\$ 46,986,335	\$ 27,438,449	\$ 2,870,758	\$ 688,039	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15488-UW Pipeline Improvements
FSP ID	TBD
Project Title:	Abandoning Inactive Pipelines
Total Budget:	\$ 3,000,000
Project Start:	7/1/2029
Project Finish:	6/30/2032
Current Active Phase:	Regional Water
Organization:	Eric Choi
Project Manager:	Water Transmission Program
Facility Category:	Capital
Type:	Capital
Description:	There are approximately 20 miles of inactive pipelines of various sizes throughout the Regional Water System. These inactive pipelines are located below public streets and in SFPUC Rights-of-Way, where they had been abandoned in-place (often improperly, without filling of the pipe cavity). This project would either remove or slurry-fill those pipeline segments. A condition assessment and master plan for removing abandoned pipe would need to be developed and prioritized. Removal alternatives would subsequently follow.
Justification:	The scope for this project would not include the removal of BDPL1&2 bay crossing sections. Abandoned pipelines, if left in-place without proper cathodic protection and maintenance, would continue to deteriorate and undermine the subsurface soil, causing damage above ground.
Operating Impact:	None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15488-UW Pipeline Improvements
FSP ID	TBD
Project Title:	Alameda Creek Diversion Tunnel Repair
Total Budget:	\$ 11,250,000
Project Start:	7/1/2024
Project Finish:	6/28/2030
Current Active Phase:	Regional Water
Organization:	Eric Choi
Project Manager:	Water Transmission Program
Facility Category:	Capital
Type:	Capital
Description:	Alameda Creek Diversion Tunnel (ACDT) was inspected in January of 2018 and was found to have large open cracks and areas of large voids in the tunnel liner. Voids are defined as areas behind the tunnel lining that is absent of in-situ rock or concrete/support material. In areas where the lining has degraded and the rock is exposed, the voids may have been formed by the unsupported ground failing or by the tunnel's hydraulic process. For the ACDT repair, ten instances of large voids were encountered. This project would repair all large voids and open cracks. Without this project, the integrity of the overall lining will deteriorate and the chances of failure and loss of ability to divert water into Calaveras Reservoir is high.
Justification:	A tunnel failure will impact diversion of water from Alameda Creek into Calaveras Reservoir.
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 675,000	\$ 0	\$ 0	\$ 168,750	\$ 168,750	\$ 168,750	\$ 168,750
ER	\$ 450,000	\$ 0	\$ 0	\$ 112,500	\$ 112,500	\$ 112,500	\$ 112,500
DS	\$ 1,125,000	\$ 0	\$ 0	\$ 281,250	\$ 281,250	\$ 281,250	\$ 281,250
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 2,250,000	\$ 0	\$ 0	\$ 562,500	\$ 562,500	\$ 562,500	\$ 562,500

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15488-UW Pipeline Improvements
FSP ID	TBD
Project Title:	Decommissioning of BD 1&2 - Newark
Total Budget:	\$ 45,000,000
Project Start:	7/1/2026
Project Finish:	6/30/2032
Current Active Phase:	
Organization:	Regional Water
Project Manager:	Eric Choi
Facility Category:	Water Transmission Program
Type:	Capital
Description:	With the completion of the Bay Tunnel, the bay crossing segments of BDPL1&2 are now abandoned. These sections reside on trestles and bridges. There are also valve houses at both Newark and Ravenswood that have become an attractive nuisance to the public.
Justification:	The project will include removal of all BD1 and BD2 pipe, trestle, and supports on the west side of the bay (Newark).
Operating Impact:	Abandoned facilities pose safety hazards to the public and the environment. They are a liability to the SFPUC. None until there is an incident.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15488-UW Pipeline Improvements
FSP ID	TBD
Project Title:	Decommissioning of BD 1&2 - Ravenswood
Total Budget:	\$ 72,000,000
Project Start:	7/1/2026
Project Finish:	6/30/2032
Current Active Phase:	
Organization:	Regional Water
Project Manager:	Eric Choi
Facility Category:	Water Transmission Program
Type:	Capital
Description:	With the completion of the Bay Tunnel, the bay crossing segments of BDPL1&2 are now abandoned. These sections reside on trestles and bridges. There are also valve houses at both Newark and Ravenswood that have become an attractive nuisance to the public.
Justification:	The project will include removal of all BD1 and BD2 pipe, trestle, and supports on the west side of the bay (Ravenswood).
Operating Impact:	Abandoned facilities pose safety hazards to the public and the environment. They are a liability to the SFPUC. None until there is an incident.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15488-UW Pipeline Improvements
FSP ID	TBD
Project Title:	Regional PCCP Repair(CS3, SAPL, CSBPL, AS3, BD4-A)
Total Budget:	\$ 4,000,000
Project Start:	7/1/2024
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Eric Choi
Facility Category:	Water Transmission Program
Type:	Capital
Description:	<p>This project is scoped to rehabilitate, repair, and replace the 22 miles of Prestressed Concrete Cylinder Pipe (PCCP) in the Regional Water System. PCCP modes of failure usually have catastrophic consequences. The concrete cylinder could rupture without warning when there is loss of prestress wiring.</p> <p>Repair for regional pipelines include Crystal Springs Pipeline No. 3 (CS3), San Antonio Pipeline (SAPL), Crystal Springs Bypass Pipeline (CSBPL), Alameda Siphon No. 3 (AS3), and Bay Division Pipeline No. 4 Section A (BD4-A). (Bay Division Pipeline Section 4D is being covered under another CIP project.) Given that the condition for each PCCP is different, each pipeline's condition and priority is listed below.</p> <p>High Priority</p> <p>-SAPL was inspected in 2016 and was found to be in good condition. However, a leak at the horizontal transition between PCCP and welded steel was found in 2018. Multiple repairs were made on this pipeline, including WEKO-seals, expansion joints, and sections of pipe replacement due to seismic movement in the Sunol Valley. Given that this is the sole pipeline connecting the Regional Water System to the San Antonio Reservoir, its reliability is of high importance. Further planning studies are needed.</p> <p>Medium Priority</p> <p>-AS3 was inspected in 2016 and found to be in good condition. However, given its proximity to the Calaveras fault, further studies are needed to ensure seismic reliability.</p> <p>Low Priority</p> <p>-BD4-A was inspected in 2012. Two sticks of PCCP were replaced due to the high number of broken prestressed wires. The condition of BD4-A should be reassessed after the next inspection cycle.</p> <p>-CS3, both North and South segments, were inspected in 2017 and found to be in good condition. The condition of CS3 should be reassessed after the next inspection cycle.</p> <p>-CSBPL was internally inspected in 2018 and externally inspected in 2020. It was found to be in good condition. This pipeline should be reassessed after the next inspection cycle.</p> <p>PCCP modes of failure usually have catastrophic consequences. The concrete cylinder could rupture without warning when there is loss of prestress wiring. Without proper monitoring and planning for repairs, unplanned outages could interrupt water delivery.</p> <p>This project provides water transmission reliability to the Regional Water System.</p>
Justification:	
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 2,000,000	\$ 0	\$ 0	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
ER	\$ 800,000	\$ 0	\$ 0	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000
DS	\$ 1,200,000	\$ 0	\$ 0	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 4,000,000	\$ 0	\$ 0	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	15489-UW Valve Replacement
FSP ID	10015083
Project Title:	Regional WG Cross Connection Program
Total Budget:	\$ 17,623,300
Project Start:	7/1/2022
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Shailen Talati
Facility Category:	Water Transmission Program
Type:	Capital
Description:	<p>The Regional Cross Connection Controls Project is an ongoing regulatory compliance driven project to reduce risks of potential cross-contamination in the Regional Water System (RWS) to protect public health. The project objective is to ensure that all the appurtenances in the RWS, including air vacuum valves (AVVs), air release valves (ARVs), blowoff valves, and the vaults that house these appurtenances are in compliance with the Title 22, California Waterworks and SFPUC standards. The regulations require that the AVVs and ARVs in the RWS are installed so that the vent opening is above grade, above the calculated 100-year flood water level; readily accessible for maintenance; constructed and designed to prevent exposure to rainwater or runoff; vandalism, and birds, insects, rodents, or other animals; and fitted with a downward-facing screened vent or a domed and screened cap.</p> <p>This project assesses and mitigates/replaces air valves, blow-offs, and other pipeline appurtenances to meet regulatory compliance in the RWS that pose cross-connection problems. This includes structural improvements or valve vaults, as required.</p> <p>Expenditures are required to maintain transmission system reliability and redundancy.</p> <p>Water LOS Goal(s) Supported: Water Quality and Regional Delivery Reliability</p> <p>The project reduces miscellaneous repairs needed within the Regional Water System.</p>
Justification:	
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 9,325,851	\$ 0	\$ 2,431,100	\$ 2,460,585	\$ 2,546,344	\$ 1,046,922	\$ 840,900
Total	\$ 9,325,851	\$ 0	\$ 2,431,100	\$ 2,460,585	\$ 2,546,344	\$ 1,046,922	\$ 840,900

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	21394-Water Transmission R&R
FSP ID	10015092
Project Title:	Valve Replacement R&R
Total Budget:	\$ 2,657,479
Project Start:	7/1/2022
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Eric Choi
Facility Category:	Water Transmission Program
Type:	Renewal and Replacement
Description:	The budget for the Valve Replacement R&R program is used for maintenance and repair of existing equipment and for replacement or upgrades of worn, aging, or failed equipment. The R&R program budget is used for maintenance, design, engineering support and capital expenditures above \$5,000 that rely on in-house trades, purchase orders, Job Order Contracts, or formal bid contracts to execute maintenance, repair, and replacement work. This program is continuous in order to adapt to the on-going needs that arise from corrective and preventive maintenance work orders, consultant and internal inspections and analysis, and updated codes and regulations.
Justification:	Scope in this program can include large diameter isolation valves, air valves, blow-offs, other pipeline appearances and purchases in support of the System Operations, Distribution Operations, and Maintenance groups. Expenditures are required to maintain transmission system reliability and redundancy.
Operating Impact:	Water LOS Goal(s) Supported: Regional Delivery Reliability The project ensures safety and reliability throughout the Regional Water System.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 250,000	\$ 0	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000
ER	\$ 250,000	\$ 0	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000
DS	\$ 250,000	\$ 0	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000
CM	\$ 250,000	\$ 0	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000
CN	\$ 1,000,000	\$ 0	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 500,000
Total	\$ 2,000,000	\$ 0	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 1,000,000


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	21394-Water Transmission R&R
FSP ID	10036562
Project Title:	Pump Station Upgrades R&R
Total Budget:	\$ 3,503,750
Project Start:	7/1/2022
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Eric Choi
Facility Category:	Water Transmission Program
Type:	Renewal and Replacement
Description:	The budget for the Pump Station Upgrades R&R program is used for maintenance and repair of existing equipment and for replacement or upgrades of worn, aging, or failed equipment. The R&R program budget is used for maintenance, design, engineering support and capital expenditures above \$5,000 that rely on in-house trades, purchase orders, Job Order Contracts, or formal bid contracts to execute maintenance, repair, and replacement work. This program is continuous in order to adapt to the on-going needs that arise from corrective and preventive maintenance work orders, consultant and internal inspections and analysis, and updated codes and regulations.
Justification:	Scope can include minor to medium sized overhauls of existing pump stations or systems within treatment plants, such as pump replacement, electrical upgrades, motor control centers, protective relays, and load tap changer replacements. Project scope included: 1. New Human Machine Interface (HMI), Programmable Logic Controllers (PLCs), and Integrate in SCADA for standby power and switchgear at the San Antonio Pump Station (SAPS). 2. Battery replacement at the SAPS 3. Replace all obsolete panelboards and disconnect switches at Baden Pump Station. 4. Site drainage and grading improvements at Baden Pump Station. 5. Capital equipment purchases in support of the System Operations, Distribution Operations, and Maintenance groups Expenditures are required to maintain water transmission system reliability and redundancy.
Operating Impact:	Water LOS Goal(s) Supported: Regional Delivery Reliability The project provides reliability at pump stations.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 274,750	\$ 0	\$ 0	\$ 24,750	\$ 0	\$ 0	\$ 250,000
ER	\$ 266,500	\$ 0	\$ 0	\$ 16,500	\$ 0	\$ 0	\$ 250,000
DS	\$ 291,250	\$ 0	\$ 0	\$ 41,250	\$ 0	\$ 0	\$ 250,000
CM	\$ 306,250	\$ 0	\$ 0	\$ 0	\$ 28,125	\$ 28,125	\$ 250,000
CN	\$ 875,000	\$ 0	\$ 0	\$ 0	\$ 375,000	\$ 0	\$ 500,000
Total	\$ 2,013,750	\$ 0	\$ 0	\$ 82,500	\$ 403,125	\$ 28,125	\$ 1,500,000


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	21394-Water Transmission R&R
FSP ID	10036521
Project Title:	Metering Upgrades R&R
Total Budget:	\$ 2,915,355
Project Start:	7/1/2022
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Eric Choi
Facility Category:	Water Transmission Program
Type:	Renewal and Replacement
Description:	The budget for the Water Metering Upgrade R&R program is used for maintenance and repair of existing equipment and for replacement or upgrades of worn, aging, or failed equipment. The R&R program budget is used for maintenance, design, engineering support and capital expenditures above \$5,000 that rely on in-house trades, purchase orders, Job Order Contracts, or formal bid contracts to execute maintenance, repair, and replacement work. This program is continuous in order to adapt to the on-going needs that arise from corrective and preventive maintenance work orders, consultant and internal inspections and analysis, and updated codes and regulations. The budget for this project will include: 1. Calaveras Pipeline venturi meter improvement 2. Irvington Meters 1 & 2 new pilot tap installation 3. San Antonio forward and reverse meter modification to the pilot tap vault hatch for easier access. Restore sump pump. 4. Installation of new a Sunset Supply Meter at the county-line to replace the existing Sunset and Suito meters at Lake Merced Pump Station. 5. Albers Road venturi meter upgrade to include the Human-Machine Interface (HMI) local display at Remote Terminal Unit (RTU). 6. Bay Division Pipeline Nos.1-5 meters at Pulgas Valve Lot retrofit (to read low flow conditions) 7. Update as-builts at each meter site 8. Capital equipment purchases in support of the System Operations, Distribution Operations, and Maintenance groups
Justification:	Accurate flow measurement is needed for system input and deliveries in real time for day-to-day management of the Regional Water System and for water use reporting purposes.
Operating Impact:	Water LOS Goal(s) Supported: Regional Delivery Reliability Inaccurate meter reads impact accuracy and credibility with wholesale customers.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 108,000	\$ 0	\$ 54,000	\$ 54,000	\$ 0	\$ 0	\$ 0
ER	\$ 36,000	\$ 0	\$ 0	\$ 36,000	\$ 0	\$ 0	\$ 0
DS	\$ 90,000	\$ 0	\$ 0	\$ 90,000	\$ 0	\$ 0	\$ 0
CM	\$ 240,000	\$ 0	\$ 0	\$ 0	\$ 80,000	\$ 80,000	\$ 80,000
CN	\$ 941,355	\$ 0	\$ 41,355	\$ 0	\$ 0	\$ 150,000	\$ 750,000
Total	\$ 1,415,355	\$ 0	\$ 95,355	\$ 180,000	\$ 80,000	\$ 230,000	\$ 680,000

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19057-UW Water Transmission Program
Authority Level 2:	21394-Water Transmission R&R
FSP ID	10036756
Project Title:	Vault Upgrades R&R
Total Budget:	\$ 6,249,047
Project Start:	7/1/2022
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Eric Choi
Facility Category:	Water Transmission Program
Type:	Renewal and Replacement
Description:	The budget for the Vault Upgrades R&R program is used for maintenance and repair of existing equipment and for replacement or upgrades of worn, aging, or failed equipment. The R&R program budget is used for maintenance, design, engineering support and capital expenditures above \$5,000 that rely on in-house trades, purchase orders, Job Order Contracts, or formal bid contracts to execute maintenance, repair, and replacement work. This program is continuous in order to adapt to the on-going needs that arise from corrective and preventive maintenance work orders, consultant and internal inspections and analysis, and updated codes and regulations. Project scope can include SCADA installations and upgrades, actuator replacement and electrical upgrades, sump pump replacement, access improvements, and other OSHA-driven safety improvements. The project would also fund capital equipment purchases in support of the System Operations, Distribution Operations, and Maintenance groups.
Justification:	Expenditures are required to maintain transmission system reliability and redundancy.
Operating Impact:	Water LOS Goal(s) Supported: Regional Delivery Reliability None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 450,000	\$ 0	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000
ER	\$ 225,000	\$ 0	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000
DS	\$ 225,000	\$ 0	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000
CM	\$ 450,000	\$ 0	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000
CN	\$ 3,800,000	\$ 0	\$ 200,000	\$ 450,000	\$ 450,000	\$ 450,000	\$ 2,250,000
Total	\$ 5,150,000	\$ 0	\$ 350,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 3,000,000


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19058-UW Water Supply & Storage
Authority Level 2:	15493-UW Dam Structural Upgrades
FSP ID	10015091
Project Title:	Pilarcitos Dam Improvements
Total Budget:	\$ 30,087,348
Project Start:	4/7/2014
Project Finish:	6/29/2029
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Susan Hou
Facility Category:	Water Supply and Storage Program
Type:	Capital
Description:	The Pilarcitos Dam is an earthen embankment dam that was built in 1866 and raised in 1874; it is the SFPUC's oldest dam regulated by the California Division of Safety of Dams (DSOD). This project will investigate the seismic stability and hydraulic performance of the Pilarcitos Dam and Reservoir facilities and perform necessary upgrades identified during the Planning Phase. The scope of work will be confirmed following the completion of the Condition and Needs Assessments, and Alternative Analysis for the dam and forebay outlet structure, spillway, outlet tunnel, and outlet pipeline. Depending on the findings from the Planning Phase, the scope of work for construction may include the following improvements: <ul style="list-style-type: none"> • Embankment dam • Outlet structure • Outlet tunnel and pipeline • Spillway • Other ancillary facilities
Justification:	In 2008 DSOD notified WTS&D that additional geotechnical information was needed at Pilarcitos Dam based on the age of the dam and the findings from the last inspection. Subsequent investigations and hydraulic studies reveal that the dam has limited retrofit, and the primary forebay structure evaluation shows the structure wouldn't pass the Maximum Creditable Earthquake on San Andreas fault. Furthermore, the existing spillway cannot pass the maximum probable flood.
Operating Impact:	Water LOS Goal(s) Supported: Regional Seismic Reliability and Regional Delivery Reliability Reservoir storage will be restricted during spillway, outlet structure, outlet pipeline, and embankment construction.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,500,000	\$ 0	\$ 1,500,000	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 66,622	\$ 0	\$ 33,244	\$ 33,378	\$ 0	\$ 0	\$ 0
DS	\$ 281,277	\$ 0	\$ 87,856	\$ 105,917	\$ 0	\$ 0	\$ 0
CM	\$ 944,837	\$ 0	\$ 0	\$ 943,322	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 2,792,736	\$ 0	\$ 1,620,748	\$ 121,234	\$ 1,049,239	\$ 0	\$ 0


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19058-UW Water Supply & Storage
Authority Level 2:	15493-UW Dam Structural Upgrades
FSP ID	10015092
Project Title:	San Andreas Dam Facility Improvements
Total Budget:	\$ 32,195,000
Project Start:	12/11/2013
Project Finish:	12/30/2033
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Susan Hou
Facility Category:	Water Supply and Storage Program
Type:	Capital
Description:	The San Andreas dam is a 105-foot-high earthen embankment dam that was built in 1870; it impounds San Andreas Reservoir that is the raw water source for the Harry Tracy Water Treatment Plant, and it is regulated by the California Division of Safety of Dams (DSOD). This project will investigate the seismic stability and hydraulic performance of the San Andreas Dam and Reservoir facilities and perform necessary upgrades identified during the Planning Phase. The objectives are to perform Condition and Needs Assessments and Alternatives Analyses of the dam, spillway, emergency outlet, and ancillary facilities; to develop retrofit options if required; and to implement the selected alternatives. Depending on the findings from the Planning Phase, the scope of work for construction may include improvements to the following facilities: <ul style="list-style-type: none"> • Embankment dam • Emergency outlet and pipeline • Spillway • Other ancillary facilities
Justification:	The 2019 spillway condition assessment by Stanec recommended the existing spillway to be replaced. A permanent emergency release outlet along the spillway will be assessed for flooding impacts during emergency releases. The embankment is due for an updated seismic stability evaluation and it may require upgrade.
Operating Impact:	Water LOS Goal(s) Supported: Regional Seismic Reliability and Regional Delivery Reliability Reservoir storage would need to be lower during construction.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 2,262,294	\$ 0	\$ 2,262,294	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 334,355	\$ 0	\$ 95,257	\$ 95,639	\$ 95,639	\$ 47,820	\$ 0
DS	\$ 1,094,240	\$ 0	\$ 250,960	\$ 337,312	\$ 337,312	\$ 168,656	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 3,690,889	\$ 0	\$ 2,608,511	\$ 432,951	\$ 432,951	\$ 216,476	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19058-UW Water Supply & Storage
Authority Level 2:	15493-UW Dam Structural Upgrades
FSP ID	10036998
Project Title:	Turner Dam and Reservoir Improvements
Total Budget:	\$ 7,500,000
Project Start:	10/1/2020
Project Finish:	6/29/2035
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Susan Hou
Facility Category:	Water Supply and Storage Program
Type:	Capital
Description:	Turner Dam is a 195-foot-high earth embankment dam that was completed in 1965 and impounds San Antonio Reservoir in the East Bay. The dam is regulated by the California Division of Safety of Dams (DSOD). This project is to investigate the seismic stability and hydraulic performance of the Turner Dam and San Antonio Reservoir facilities and to perform necessary upgrades identified during the Planning Phase. The scope of work will be confirmed once Condition and Needs Assessments, and Alternative Analysis of the dam, outlet structures, and spillway are complete. Depending on the findings from the Planning Phase, the scope of work for construction may include improvements to the following facilities: <ul style="list-style-type: none"> • Embankment dam • Outlet tunnel and pipeline • Concrete spillway • Other ancillary facilities
Justification:	The facility has been in service for 65 years without major upgrade or capital improvement. In a recent dam seismic stability evaluation by AECOM, it showed the dam would be subject to settlement and deflection which would reduce the freeboard under the maximum credible earthquake. In 2017, Legislation SB892 directed the SFPUC to perform a condition assessment of the spillway. The spillway condition assessment report recommended repair cracks on spillway. .
Operating Impact:	Water LOS Goal(s) Supported: Regional Seismic Reliability and Regional Delivery Reliability Retrofit of the embankment would require the reservoir level be reduced.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CMI	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 3,500,200	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,500,200
Total	\$ 3,500,200	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,500,200


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19058-UW Water Supply & Storage
Authority Level 2:	15493-UW Dam Structural Upgrades
FSP ID	10015090
Project Title:	Dam Condition Assessments and Related Studies R&R
Total Budget:	\$ 18,767,700
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Siacle Feng
Facility Category:	Water Supply and Storage Program
Type:	Renewal and Replacement
Description:	The Dam Condition Assessments and Related Studies R&R program is used for maintenance and repair of existing equipment and for replacement or upgrades of worn, aging, or failed equipment. The R&R program budget is used for maintenance, design, engineering support and capital expenditures above \$5,000 that rely on in-house trades, purchase orders, Job Order Contracts, or formal bid contracts to execute maintenance, repair, and replacement work. This program is continuous in order to adapt to the on-going needs that arise from corrective and preventive maintenance work orders, consultant and internal inspections and analysis, and updated codes and regulations. The budget for this project includes: <ol style="list-style-type: none"> 1. Calaveras Dam: Annual rodent control and vegetation control 2. Calaveras Dam: Seismic survey automation 3. Turner Dam: Annual rodent control and vegetation control 4. Turner Dam: Vegetation management, culvert replacement and instrumentation route access improvements 5. Turner Dam: Surveying Upgrades 6. Lower Crystal Springs Dam: Annual vegetation control 7. Lower Crystal Springs Dam: Improve access route for survey monitoring and instrumentation upgrade 8. San Andreas Dam: Annual rodent control, vegetation control, and embankment compaction 9. San Andreas Dam: Upstream face riprap augmentation 10. San Andreas Dam: Spillway bridge painting and crack repair 11. Pilarcitos Dam: Annual rodent control, vegetation control, and embankment compaction 12. Emergency Action Plans 13. Survey Reference Network 14. Stone Dam condition assessment 15. Capital equipment purchases in support of the System Operations, Distribution Operations, and Maintenance groups This program implements studies and addresses facility improvements directed by DSOD and legislation SB-92, which requires condition assessments of spillways and emergency action plans. Water LOS Goal(s) Supported: Regional Seismic Reliability and Regional Delivery Reliability Reservoir operations may be restricted.
Justification:	
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 675,000	\$ 0	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 375,000
ER	\$ 1,450,000	\$ 0	\$ 250,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 750,000
DS	\$ 1,300,000	\$ 0	\$ 100,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 750,000
CMI	\$ 695,000	\$ 0	\$ 95,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 375,000
CN	\$ 7,200,000	\$ 0	\$ 1,200,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 3,750,000
Total	\$ 11,320,000	\$ 0	\$ 1,720,000	\$ 1,200,000	\$ 1,200,000	\$ 1,200,000	\$ 6,000,000

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19058-UW Water Supply & Storage
Authority Level 2:	15495-UW Dam Structural Upgrades
FSP ID	10015232
Project Title:	Merced Manor Reservoir Facilities Repairs
Total Budget:	\$ 12,082,000
Project Start:	7/1/2024
Project Finish:	6/30/2031
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Lynn Fong
Facility Category:	Water Supply and Storage Program
Type:	Capital
Description:	Merced Manor Reservoir - Concrete Spalling Repair project The roof structure of the Merced Manor Reservoir was inspected and evaluated by SFPUC structural engineers in 1995. It was determined that seismic strengthening and repair of the roof structure is needed. This project is to implement the recommendations from the seismic evaluation and inspection of the roof structure of Merced Manor Reservoir. Scope of the project will include performing a structural evaluation of the existing roof structure per current seismic code, developing design for seismic strengthening and repair, and construction.
Justification:	Seismic strengthening and repair of the Merced Manor Reservoir roof structure is needed to ensure the function of the reservoir and the ability to deliver water to the Merced Manor zone after a major earthquake.
Operating Impact:	Water LOS Goal(s) Supported: Regional Seismic Reliability Seismic strengthening and repair of the Merced Manor Reservoir roof structure is needed to ensure water delivery to the Merced Manor zone with normal operations and after a major earthquake.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 600,000	\$ 0	\$ 300,000	\$ 300,000	\$ 0	\$ 0	\$ 0
ER	\$ 300,000	\$ 0	\$ 0	\$ 300,000	\$ 0	\$ 0	\$ 0
DS	\$ 1,500,000	\$ 0	\$ 0	\$ 0	\$ 750,000	\$ 750,000	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 2,400,000	\$ 0	\$ 300,000	\$ 600,000	\$ 750,000	\$ 750,000	\$ 0


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19058-UW Water Supply & Storage
Authority Level 2:	15497-UW Calaveras Dam And Reservoir
FSP ID	(N/A)
Project Title:	Calaveras Dam HOS
Total Budget:	\$ 2,071,242
Project Start:	9/1/2021
Project Finish:	12/31/2024
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Alisha Reinhardt
Facility Category:	Water Supply and Storage Program
Type:	Capital
Description:	To address taste and odor and other issues associated with algal blooms in Calaveras Reservoir, the San Francisco Public Utilities Commission (SFPUC) installed a bubble plume (Moblely) type hypolimnetic oxygenation system (HOS) in the reservoir in September 2005. Since then, the HOS has been operated to reduce anoxic conditions in reservoir bottom waters, and thereby prevent release of algal nutrients (internal loading) from the reservoir sediments. Based upon recommendations from the recently updated Algae Monitoring and Mitigation Plan, as well as changes in the reservoir bathymetry following completion of the Calaveras Dam Replacement Project (CDRP), the HOS requires upgrades to have proper oxygenation within the reservoir. The project will repair or replace the current system after an assessment of the reservoir's hypolimnetic dissolved oxygen (DO) to ensure the reservoir is receiving adequate oxygenation.
Justification:	Existing HOS has reached the end of its useful life.
Operating Impact:	None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19058-UW Water Supply & Storage
Authority Level 2:	21388-Purified Water and Other Supplies
FSP ID	10030767
Project Title:	Bay Area Regional Reliability
Total Budget:	\$ 2,131,005
Project Start:	7/1/2021
Project Finish:	6/30/2024
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Manisha Kothari
Facility Category:	Water Transmission Program
Type:	Capital

Description:
 In 2016, eight of the Bay Area's largest water utilities formed a partnership to explore opportunities to transfer and exchange water across service areas to better serve customers, particularly in times of droughts and emergencies. The partnership is intended to leverage the existing infrastructure and interconnections that exist between the partnering agencies. The Bay Area Regional Reliability (BARR) Partnership includes the following agencies: 1) Alameda County Water District (ACWD), 2) Bay Area Water Supply & Conservation Agency (BAWSCA), 3) Contra Costa Water District (CCWD), 4) East Bay Municipal Utility District (EBMUD), 5) Marin Municipal Water District (MMWD), 6) the San Francisco Public Utilities Commission (SFPUC), 7) Valley Water (formerly Santa Clara Valley Water District and 8) Zone 7 Water Agency. The BARR Partnership has received two grants from the U.S. Bureau of Reclamation to support for collaborative drought planning. A Drought Contingency Plan was completed in 2017. Currently, the BARR Partnership is planning to test water transfer scenarios through a Shared Water Access Program (SWAP) so that future transfers can be implemented more readily in times of drought or emergency. The SFPUC is participating in a water transfer simulation with ACWD and BAWSCA that would simulate the use of the South Bay Aqueduct (SBA) for an exchange with ACWD and a transfer into San Antonio Reservoir.

Justification:
 The purpose of this planning effort (BARR) is to identify projects and processes to enhance water supply reliability across the region, leverage existing infrastructure investments, facilitate water transfers during critical shortages, and improve climate change resiliency. The 2017 Drought Contingency Plan identified short-term response actions and longer-term projects that could facilitate the sharing of infrastructure for the benefit of the region including interties, expanded storage, new water supply and operational improvements. To further evaluate the potential for building regional resilience, in 2019 the BARR partners (with the exception of MMWD) initiated development of the Bay Area Shared Water Access Program (Bay Area SWAP). The Bay Area SWAP effort has also received funding support from the U.S. Bureau of Reclamation and is ongoing. The goal of Bay Area SWAP is to develop a Strategy Report outlining an implementation plan to facilitate transfers to and exchanges within the Bay Area, leveraging existing infrastructure and institutional agreements and identifying new components that may be needed. Through the Drought Contingency Plan and Bay Area SWAP efforts, the BARR partner agencies have convened a Stakeholder Task Force to provide stakeholders, interested parties and BARR partners an opportunity for meaningful engagement and input. Funding supports regional collaboration and specific technical and institutional studies that can facilitate water supply exchanges in the region.

Operating Impact:
 None at this time.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19058-UW Water Supply & Storage
Authority Level 2:	21388-Purified Water and Other Supplies
FSP ID	10036484
Project Title:	Purified Water & Other Supplies (Planning)
Total Budget:	\$ 110,000,000
Project Start:	7/1/2020
Project Finish:	12/31/2033
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Manisha Kothari
Facility Category:	Water Supply and Storage Program
Type:	Capital

Description:
 The SFPUC is investigating opportunities and investigating the potential for purified water (potable reuse) projects as well as regional opportunities for transfers, exchanges, groundwater banking, and inter-basin collaborations. The SFPUC is participating in research and regulatory review statewide, and is working with other Bay Area water agencies to develop potential project opportunities for water needs anticipated within the planning horizon. The efforts that are envisioned under include: 1) identifying water supply and storage opportunities; 2) investigating opportunities for groundwater banking in the MID and TID service areas; 3) initiating inter-basin collaborations between parties on the Tuolumne River and those on the Stanislaus River; 4) continuing to pursue dry year transfers with the Irrigation Districts; 5) identifying regional recycled water opportunities in the service area; and other potential regional water supply opportunities. This project supports various planning activities, including progress reporting, planning and analysis.

Justification:
 Feasibility and other technical studies will be necessary to demonstrate the viability of purified water projects, transfers, and groundwater banking. Once the project(s) that will continue to move forward with planning is/are identified, pilot testing, environmental review, design, and construction phases will all be required to implement the project within the planning period. These projects represent water supply options that can help meet long-term LOS goals of the SFPUC and provide dry and normal year supply reliability. All future work is subject to Commission approval.

Operating Impact:
 None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 48,000,000	\$ 0	\$ 0	\$ 6,000,000	\$ 6,000,000	\$ 6,000,000	\$ 30,000,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 48,000,000	\$ 0	\$ 0	\$ 6,000,000	\$ 6,000,000	\$ 6,000,000	\$ 30,000,000

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19058-UW Water Supply & Storage
Authority Level 2:	21388-Purified Water and Other Supplies
FSP ID	10036602
Project Title:	Daily City Recycled Water Expansion Project
Total Budget:	\$ 83,000,000
Project Start:	7/1/2017
Project Finish:	12/31/2027
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Manisha Kothari
Facility Category:	Water Supply and Storage Program
Type:	Capital
Description:	The Daily City Recycled Water Expansion Project was originally envisioned and planned under Local Water CUW 278 (Other Recycled Water Projects). Planning for this and other recycled water projects was completed and identified in the Local CIP. As the planning for the Daily City Recycled Water Expansion Project has evolved, the 3 MGD capacity identified would help offset groundwater pumping in the Westside Basin and potential demands from the Regional Water System (RWS). The project is ready to move into design and construction phases.
Justification:	A feasibility study has been completed as part of CUW278. The project will benefit RWS users and is considered a regional project. By helping to offset pumping in the Westside Groundwater Basin, the project also enhances the Groundwater Storage and Recovery (GSR) project and its ability to deliver water supply during droughts.
Operating Impact:	Water LOS Goal(s) Supported: Water Supply None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 8,000,000	\$ 0	\$ 2,500,000	\$ 5,500,000	\$ 0	\$ 0	\$ 0
CM	\$ 8,000,000	\$ 0	\$ 0	\$ 0	\$ 8,000,000	\$ 0	\$ 0
CN	\$ 57,000,000	\$ 0	\$ 0	\$ 0	\$ 28,500,000	\$ 28,500,000	\$ 0
Other	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 73,000,000	\$ 0	\$ 2,500,000	\$ 5,500,000	\$ 36,500,000	\$ 28,500,000	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19058-UW Water Supply & Storage
Authority Level 2:	21388-Purified Water and Other Supplies
FSP ID	10036483
Project Title:	Crystal Springs Purified Water Project
Total Budget:	\$ 29,000,000
Project Start:	7/1/2020
Project Finish:	6/30/2041
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Manisha Kothari
Facility Category:	Program - Project
Type:	Capital
Description:	The Crystal Springs Purified Water Project can provide 6-12 million gallons per day (MGD) of purified water from Silicon Valley Clean Water (SVCW) and City of San Mateo blended into Crystal Springs Reservoir and treated at Harry Tracy Treatment Plant for use within SFPUC's service area. Two phases of feasibility study have been undertaken, a third phase is planned. Modeling and other technical studies will also need to be completed.
Justification:	This project provides a new water supply to increase long-term reliability in SFPUC's service area.
Operating Impact:	Water LOS Goal(s) Supported: Water Supply Crystal Springs Reservoir is owned and operated by the SFPUC. A new water supply in this reservoir will impact permitting, reservoir management, and treatment plant operations at Harry Tracy.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 3,500,000	\$ 0	\$ 0	\$ 500,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
ER	\$ 2,250,000	\$ 0	\$ 0	\$ 0	\$ 2,000,000	\$ 250,000	\$ 0
DS	\$ 14,250,000	\$ 0	\$ 9,500,000	\$ 1,000,000	\$ 500,000	\$ 250,000	\$ 9,000,000
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 20,000,000	\$ 0	\$ 9,500,000	\$ 1,500,000	\$ 3,500,000	\$ 1,500,000	\$ 10,000,000


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19058-UW Water Supply & Storage
Authority Level 2:	21388-Purified Water and Other Supplies
FSP ID	10036485
Project Title:	ACWD-USD Purified Water Project
Total Budget:	\$ 26,000,000
Project Start:	7/1/2020
Project Finish:	12/31/2041
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Manisha Kothari
Facility Category:	Water Supply and Storage Program
Type:	Capital
Description:	The Project will investigate opportunities for potable reuse with wastewater from Union Sanitary District treated for groundwater recharge and recovery through Alameda County Water District's (ACWD's) service area and the potential to increase capacity at ACWD's Brackish Groundwater Desalination plant.
Justification:	This project provides an opportunity to increase water supply reliability in the SFPUC's service area.
Operating Impact:	Water LOS Goal(s) supported: Water Supply None at this time.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,500,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 500,000	\$ 500,000
ER	\$ 7,000,000	\$ 0	\$ 0	\$ 3,500,000	\$ 500,000	\$ 2,000,000	\$ 1,000,000
DS	\$ 6,500,000	\$ 0	\$ 0	\$ 0	\$ 500,000	\$ 0	\$ 6,000,000
CM	\$ 500,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 15,500,000	\$ 0	\$ 0	\$ 3,500,000	\$ 1,000,000	\$ 2,500,000	\$ 7,500,000

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19058-UW Water Supply & Storage
Authority Level 2:	21388-Purified Water and Other Supplies
FSP ID	10036486
Project Title:	Bay Area Brackish Water Desalination (Regional)
Total Budget:	\$ 8,000,000
Project Start:	7/1/2020
Project Finish:	6/30/2045
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Manisha Kothari
Facility Category:	Water Supply and Storage Program
Type:	Capital
Description:	The Bay Area Brackish Water Treatment (Regional Desalination) Project is a partnership between Contra Costa Water District (CCWD), SFPUC, Valley Water, and Zone 7 Water Agency with EBUD potentially participating. The project could provide 10-20 mgd of new drinking water supply to the region by treating brackish water from CCWD's existing Mallard Slough intake in Contra Costa County. The project relies primarily on available capacity in an extensive network of existing pipelines and interties that already connect the agencies, as well as existing wastewater outfalls and pump stations. Storage through the Los Vaqueros Reservoir Expansion project can provide a dry year benefit from this supply. The new infrastructure needed for this project includes a treatment facility, upgrades to existing facilities and a new intertie between Zone 7 and EBUD. Depending on the conveyance system used, additional pretreatment and/or facility upgrades may be needed. The SFPUC would not directly receive desalinated water, but would take delivery of water through a series of transfers and exchanges. For planning and cost estimation purposes, it was assumed that the SFPUC's share of this new regional water supply would be 9 mgd in all year types; however, if additional capacity is available, the SFPUC may secure up to 15 mgd. The final share would be based on SFPUC needs, and subject to negotiation with other partners.
Justification:	A regional desalination project leverages existing interties and facilities to provide a shared new regional water supply resource.
Operating Impact:	Water LOS Goal(s) Supported: Water Supply None at this time.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 4,500,000	\$ 0	\$ 0	\$ 4,500,000	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 4,500,000	\$ 0	\$ 0	\$ 4,500,000	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19058-UW Water Supply & Storage
Authority Level 2:	21388-Purified Water and Other Supplies
FSP ID	(N/A)
Project Title:	Los Vaqueros Reservoir Expansion Project
Total Budget:	\$ 110,100,000
Project Start:	9/28/2017
Project Finish:	12/31/2031
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Manisha Kothari
Facility Category:	Water Transmission Program
Type:	Capital
Description:	The Los Vaqueros Reservoir Expansion (LVE) Project is a storage project that will enlarge the existing reservoir located in northeastern Contra Costa County from 160,000 acre-feet to 275,000 acre-feet. The main objectives of the expansion include increasing water supply reliability for municipal, industrial and agricultural customers as well as ecosystem benefits to south-of-Delta wildlife refuges and Delta fisheries. While the existing reservoir is owned and operated by Contra Costa Water District (CCWD), the expansion will have regional benefits and will be managed by a Joint Powers Authority that is being set up prior to construction. Meanwhile, Contra Costa Water District is leading the planning, design and environmental review efforts. The LVE Project includes construction of new pipelines, upgrades to existing facilities and reoperation of some facilities. Storage in LVE can provide a dry year water supply benefit to the SFPUC's Regional Water System (RWS). Currently, SFPUC staff are pursuing scenarios of 20,000 - 40,000 acre-feet of storage. In addition, water supply and conveyance to the RWS need to be determined before the SFPUC determines the extent of participation in the LVE project. The Conveyance Alternatives project is linked directly to this project.
Justification:	Water storage can help manage dry year supplies, helping to meet critical water supply needs of the SFPUC's Regional Water System customers.
Operating Impact:	Water LOS Goal(s) supported: Water Supply None at this time.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 3,500,000	\$ 0	\$ 0	\$ 500,000	\$ 500,000	\$ 500,000	\$ 2,000,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 3,500,000	\$ 0	\$ 0	\$ 500,000	\$ 500,000	\$ 500,000	\$ 2,000,000
CN	\$ 91,100,000	\$ 0	\$ 4,000,000	\$ 7,500,000	\$ 7,100,000	\$ 6,200,000	\$ 66,300,000
Total	\$ 98,100,000	\$ 0	\$ 4,000,000	\$ 8,500,000	\$ 8,100,000	\$ 7,200,000	\$ 70,300,000

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19058-UW Water Supply & Storage
Authority Level 2:	15492-UW Water Supply & Storage
FSP ID	10036490
Project Title:	Conveyance Alternatives
Total Budget:	\$ 31,000,000
Project Start:	7/1/2020
Project Finish:	12/31/2031
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Manisha Kothari
Facility Category:	Water Transmission Program
Type:	Capital
Description:	This project explores the mechanism for a dry year water transfer from Contra Costa Water District's Los Vaqueros Reservoir for the benefit of the SFPUC Regional Water System (RWS). The volume of water that can be transferred would be the same volume of water that is stored by SFPUC in Los Vaqueros Reservoir Expansion Project. This project will identify and pursue feasible conveyance alternatives so that SFPUC can realize the benefit of water stored in Los Vaqueros Reservoir. The three conveyance alternatives that will be explored as part of this project using the South Bay Aqueduct include 1) a transfer with ACWD; 2) a transfer with Valley Water; and 3) delivery to San Antonio Reservoir. This project is dependent on participation in the Los Vaqueros Expansion Project. Partners will include the SBA Contractors (ACWD, Zone 7 Water Agency, Valley Water), particularly any agency identified as a feasible transfer partner. Of the three alternatives, only one (delivery to San Antonio) provides a water supply directly into the RWS. This project will likely include pipeline improvements and may also include pretreatment and/or pumping, depending on the alternative pursued. Reliability of the SBA is critical to the viability of these options. In addition, the SFPUC will also consider a new intake with EBMUD that bypasses Hayward.
Justification:	Developing conveyance alternatives provides a mechanism for the SFPUC to realize benefits of regional partnerships and enable transfers and exchanges to the Regional Water System.
Operating Impact:	Water LOS Goal(s) Supported: Supply None at this time.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,200,000	\$ 0	\$ 0	\$ 200,000	\$ 200,000	\$ 0	\$ 800,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,000,000	\$ 0	\$ 1,000,000	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 600,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 600,000
CN	\$ 3,000,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,000,000	\$ 0
Total	\$ 5,800,000	\$ 0	\$ 1,000,000	\$ 200,000	\$ 200,000	\$ 3,000,000	\$ 1,400,000

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19058-UW Water Supply & Storage
Authority Level 2:	21388-Purified Water and Other Supplies
FSP ID	10036467
Project Title:	Calaveras Reservoir Expansion Project
Total Budget:	\$ 7,500,000
Project Start:	7/1/2020
Project Finish:	12/31/2039
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Susan Hou
Facility Category:	Water Supply and Storage Program
Type:	Capital

Description: This storage project envisions the expansion of Calaveras Reservoir to store excess Regional Water System (RWS) supplies or other source water in wet/normal years. No expansion of water rights from the local watershed is anticipated. With the Calaveras Dam Replacement project in place, Calaveras Dam holds a capacity of 96,850 acre-feet, or 31 billion gallons of water. Through an expansion, up to an additional 289,000 acre-feet, or 94 billion gallons of storage could be realized. Calaveras Reservoir is owned and operated by the SFPUC for the benefit of RWS customers. No external partners are anticipated at this time. The expansion of Calaveras Reservoir would provide storage for additional water that can be available in all water year types. Depending on the findings from the Alternatives Analysis, the proposed project would include raising the dam, increasing the capacity of the outlet structures and the spillway, and the addition of any transmission and pumping needed to bring water to Calaveras Reservoir.

Justification: This is an SFPUC-owned and operated reservoir that can provide storage of Tuolumne River and other normal and wet year water sources for use during dry years by Regional Water System customers.

Operating Impact: Water LOS Goal(s) Supported: Water Supply
 Increasing storage at Calaveras Dam will have an impact to reservoir operations and management. Additional facilities may be built for this project, which will also have an operational and asset management impact.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 2,464,685	\$ 0	\$ 0	\$ 1,232,343	\$ 1,232,342	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 1,232,343	\$ 1,232,342	\$ 0	\$ 0
Total	\$ 2,464,685	\$ 0	\$ 0	\$ 1,232,343	\$ 1,232,342	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19059-UW Watershed & Land Management
Authority Level 2:	15503-UW Bay Area Watershed & Flow Pr
FSP ID	(N/A)
Project Title:	Bay Area Watershed and ROW Protection Program
Total Budget:	\$ 2,165,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Tim Ramirez
Facility Category:	Watersheds and Land Management
Type:	Capital

Description: The purpose of this program is to support capital projects that improve and/or protect the water quality and/or ecological resources that affect or are affected by the operation of the SFPUC water supply system within the Bay Area counties. Projects may include the repair, replacement, maintenance, and/or construction of roads, water systems, fences, or trails that meet these purposes. Projects may also include the acquisition of easements and/or fee title of properties that meet these purposes (within the Pilarcitos Creek, San Mateo Creek, or Alameda Creek watersheds), and other ecosystem restoration or public access, recreation, and education projects.

Justification: This program provides funding to support capital projects that protect and restore the natural resources under SFPUC management, and improve the ability to cost-effectively manage trails, fences, roads, water systems and bridges within the watersheds.

Operating Impact: This project provides the resources required for the long-term management of SFPUC watershed and ROW lands, which minimizes the environmental regulatory risk, and long-term costs associated with the protection of natural resources that affect or are affected by the operation of the SFPUC water supply system. All projects are the responsibility of existing Natural Resources and Lands Management Division staff.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 1,675,000	\$ 0	\$ 710,000	\$ 100,000	\$ 105,000	\$ 105,000	\$ 545,000
Total	\$ 1,675,000	\$ 0	\$ 710,000	\$ 100,000	\$ 105,000	\$ 105,000	\$ 545,000

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19059-UW Watershed & Land Management
Authority Level 2:	15503-UW Bay Area Watershed & Row Pr
FSP ID	10015108
Project Title:	Sneath Lane Gate/San Andreas
Total Budget:	\$ 6,698,042
Project Start:	2/1/2021
Project Finish:	8/2/2027
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Mary Tenken
Facility Category:	Watersheds and Land Management
Type:	Capital
Description:	The 2001 Peninsula Watershed Management Plan identified the need for a new trail connection between San Mateo County's Crystal Springs Regional Trail (North San Andreas) to Golden Gate National Recreation Area's (GGNRA) Sweeney Ridge property at the Sneath Lane Gate. The trail is a critical connection among existing regional trails at the north end of the Peninsula watershed, that will serve hikers, bikers and equestrians. The project includes construction of a multi-modal, 6 foot wide trail that would be approximately 1.25 miles long. The project would include a new trailhead south of GGNRA's parking lot located at the end of Sneath Lane in Pacifica. The scope of the project will include the following related construction: <ul style="list-style-type: none"> • Trees removal • Wildlife friendly security fencing • Grading and drainage work • Paving of one trailhead parking areas with educational signage • Protecting sensitive habitat • Site/vegetation restoration
Justification:	This program provides funding to support investments in watershed management compatible with protecting the watershed lands and provides an opportunity to educate the public about the SFPUC water system and watershed land management.
Operating Impact:	The project provides resources required for the long-term management of SFPUC watershed and ROW lands. The project provides access to watershed land for SFPUC employees to monitor, maintain and secure PUC property. The trail will be operated by San Mateo County Parks Department

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 5,281,397	\$ 0	\$ 0	\$ 2,261,397	\$ 3,000,000	\$ 0	\$ 0
Total	\$ 5,281,397	\$ 0	\$ 0	\$ 2,261,397	\$ 3,000,000	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19059-UW Watershed & Land Management
Authority Level 2:	15503-UW Bay Area Watershed & Row Pr
FSP ID	(N/A)
Project Title:	Watershed and ROW Protection - Land Acquisition
Total Budget:	\$ 44,613,501
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Tim Ramirez
Facility Category:	Watersheds and Land Management
Type:	Capital
Description:	The Watershed and Environmental Improvement Program (WEIP) includes the comprehensive identification and protection of critical watershed lands and ecosystem restoration needs within the hydrologic boundaries of the Alameda Creek, Peninsula (San Mateo and Pilarcitos Creeks) and Tuolumne River watersheds, and prioritizes the protection and/or restoration of these lands. Projects under this program will protect source water quality, native species and their habitat; and identify critical watershed lands for protection by purchasing fee title and/or perpetual conservation easements from willing landowners. No funds in this project have been expended to date, because acquisition related expenditures are being charged to 10015142 - Watershed and Environmental Improvement Program. Once the funds in 10015142 have been fully expended, staff will begin charging to this project. This program provides funding to support investments to protect watershed lands that deliver water to SFPUC reservoirs and enhances the SFPUC's ability to protect source water quality and provide reliable water supplies to our customers.
Justification:	The project provides resources required for the long-term protection of watershed lands that deliver water to SFPUC reservoirs. Projects are the responsibility of Natural Resources and Lands Management Division.
Operating Impact:	Water LOS Goal(s): Supported: Water Quality and Sustainability

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 2,610,565	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 2,610,565	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19059-UW Watershed & Land Management
Authority Level 2:	15505-UW Watershed Cottages-Building
FSP ID	10015110
Project Title:	EBRPD Water System
Total Budget:	\$ 5,552,622
Project Start:	6/2/2014
Project Finish:	10/31/2022
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Alisha Reinhardt
Facility Category:	Watersheds and Land Management
Type:	Capital

Description: As a mitigation for the Calaveras Dam Replacement Project, the SFPUC agreed to construct new potable water distribution facilities for the Sunol Regional Wilderness Park (SRP), managed by the East Bay Regional Park District (EBRPD). The EBRPD owns and maintains a water system located at SRP Headquarters which previously supplied potable water to four park facilities, as well as drinking water fountains and picnic areas interspersed throughout the park. Currently, the water system serves non-potable water for use by EBRPD employees only. Since the system stopped producing potable water due to supply and sanitary deficiencies, EBRPD has been supplying park visitors with bottled water trucked in by a contracted vendor. The project purpose is to provide a reliable water supply for potable use at the EBRPD facilities and to provide potable uses at the SRP.

The scope of work includes the following:

- Modify existing High Valley water system
- Install new High Valley pipeline and appurtenances
- Modify existing Headquarter water system
- Install new fire suppression system
- Install new control system
- Replace and install new solar panels
- Micro-surface Geary Road from the Entrance Park Sign to the Entrance of the Ohlone Bridge
- Perform pavement and site restoration along locations where the project requires trench excavation
- Setup wildlife exclusion fence and environmental related mitigation/monitoring
- Site restoration including hydroseeding, hiking trail, asphalt pavement, grading and fences

Justification: The MOU between EBRPD and SFPUC requires SFPUC to provide potable water to EBRPD.

Operating Impact: Water LOS Goal(s) Supported: Regional Delivery Reliability
Currently EBRPD has to provide bottled water.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19059-UW Watershed & Land Management
Authority Level 2:	10015112
Project Title:	ROW Gaps Project
Total Budget:	\$ 4,250,065
Project Start:	7/1/2022
Project Finish:	7/30/2033
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Tim Ramirez
Facility Category:	Watersheds and Land Management
Type:	Capital
Description:	program is to support investments securing, protecting, and maintaining Rights Of Way (ROW) entitlements and access consistent with SFPUC policies.
Justification:	This program provides funding to support investments in ROW assets under SFPUC management, and improves the ability to cost-effectively manage and maintain these assets in good condition.
Operating Impact:	Water LOS Goal(s) supported: Regional Delivery Reliability The project provides resources required for the long-term management of SFPUC ROW lands. Projects are the responsibility of Water Supply and Treatment and Natural Resources and Lands Management Divisions, in coordination with Real Estate Services.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 2,903,008	\$ 0	\$ 256,750	\$ 263,682	\$ 270,802	\$ 278,113	\$ 1,507,340
Total	\$ 2,903,008	\$ 0	\$ 256,750	\$ 263,682	\$ 270,802	\$ 278,113	\$ 1,507,340

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19059-UW Watershed & Land Management
Authority Level 2:	15508-UW Skyline Ridge Trail
FSP ID	10015113
Project Title:	So. Skyline Blvd. Ridge Trail Ext. (approx 5 mi.)
Total Budget:	\$ 25,273,914
Project Start:	10/31/2012
Project Finish:	2/2/2024
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Mary Tienken
Facility Category:	Watersheds and Land Management
Type:	Capital

Description:
The Bay Area Ridge Trail project was started in 1987 by the Bay Area Ridge Trail Council to create an approximately 550-mile long continuous trail for hikers, mountain bicyclists, and equestrians along the ridgelines overlooking San Francisco Bay. The objective of the project is to provide access to the Peninsula watershed, to enhance educational opportunities, and to ensure watershed protection.

South of Highway 92, this proposed extension project would construct a 6-mile-long trail on the Peninsula Watershed in San Mateo County between Highway 92 and the Golden Gate National Recreation Area's (GGNRA) Phleger Estate. The project consists of a 6' foot wide, all-weather surface trails; retaining structures to stabilize cut and/or fill slopes; drainage facilities; a 15,000-square-foot parking lot accommodating up to 14 cars; two pre-fabricated restrooms along the trail; site security features; and landscape restoration. North of Highway 92, the project includes construction of a trail segment adjacent to the Field Cahill Trail that is compliant with the Americans with Disabilities Act, a 16,000-square foot parking lot, and one pre-fabricated restroom. In addition, the project includes the following related construction:

- Removal of 160 trees
- 9.3 miles of wildlife friendly security fencing
- Grading and drainage work
- 2000 LF soldier pile retaining walls
- Paving of two trailheads parking areas with educational signage
- Protecting sensitive habitat
- Traffic control
- Site/vegetation restoration

Justification:
The project will provide public access to the Peninsula Watershed while providing an essential link in of the Bay Area Ridge Trail.

Operating Impact:
Water LOS Goal(s) Supported: Sustainability
The project provides access to watershed land for SFPUC employees to monitor, maintain and secure PUC property.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19059-UW Watershed & Land Management
Authority Level 2:	15511-UW Native Plants Nursery
FSP ID	10015116
Project Title:	Native Plant Nursery
Total Budget:	\$ 5,957,243
Project Start:	7/1/2022
Project Finish:	6/30/2025
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Tim Ramirez
Facility Category:	Water Transmission Program
Type:	Capital

Description:
This project is to construct and maintain a state of the art "clean" nursery to grow pathogen-free native plants to ensure the success of restoration projects on SFPUC watershed land. The plants will be used to landscape capital projects including the Sunol Yard, Alameda Creek Watershed Center, and in the future, restoration projects throughout SFPUC watershed lands.

The Nursery was constructed initially as a temporary facility, and as part of similar updates to the Sunol Yard Improvements Project (e.g., making temporary storage areas permanent), will become a permanent facility.

This program provides funding to support investments in watershed lands under SFPUC management, and ensure the ability to improve the success of restoration projects on SFPUC watershed lands.

Justification:
The project provides resources to continue support for the Sunol Native Plant Nursery. Projects are the responsibility of Natural Resources and Lands Management Division.

Operating Impact:
The project provides resources to continue support for the Sunol Native Plant Nursery. Projects are the responsibility of Natural Resources and Lands Management Division.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
CN	\$ 900,000	\$ 0	\$ 450,000	\$ 450,000	\$ 0	\$ 0	\$ 0
Total	\$ 900,000	\$ 0	\$ 450,000	\$ 450,000	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19059-UW Watershed & Land Management
Authority Level 2:	15512-UW Sa-1 Service Road-Ingoing Road
FSP ID	10030771
Project Title:	Sa-1 Service Road-Ingoing Road
Total Budget:	\$ 15,816,819
Project Start:	6/30/2016
Project Finish:	12/31/2026
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Yolanda Quisao
Facility Category:	Water Transmission Program
Type:	Capital
Description:	The SFPUC has identified landslide and erosion damage that have destabilized service roads (East Shore Service Road and West Shore Service Road) and adjacent areas in three locations on San Francisco Peninsula Watershed lands situated along the San Andreas Reservoir in San Mateo County. The project is to evaluate and repair the damage, and to implement long term solutions for SFPUC staff and contractors to continue to use the roads to access, operate, and maintain SFPUC facilities and watershed lands. Recommendations for the short-term and long-term repairs of the roads are being evaluated. Construction constraints have been identified, which include dewatering the San Andreas Reservoir to 441 feet, and avoiding construction activities in the months of January to March due to Hetch Hetchy shutdown. Depending on the findings, potential scope of work specific to three locations are listed below. <ul style="list-style-type: none"> Construct shoreline riprap north of the east shore service road (approximately 770 feet) Re-align roadway (approximately 350 feet) and construct shoreline riprap (approximately 400 feet) at the east shore service road Construct pile wall (approximately 550 feet) and shoreline riprap (approximately 550 feet) at the west shore service road Install debris boom
Justification:	This project provides funding to support investments in watershed assets under SFPUC management and improves the ability to cost-effectively manage access to and protect water system infrastructure by maintaining roads and bridges in good condition.
Operating Impact:	The project provides resources required for the long-term management of SFPUC watershed lands.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 777,479	\$ 692,396	\$ 50,000	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 9,729,165	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 9,729,165	\$ 777,479	\$ 692,396	\$ 50,000	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19060-UW Communication & Monitoring
Authority Level 2:	15514-UW Microwave Backbone Upgrade
FSP ID	10015120
Project Title:	Microwave Backbone System
Total Budget:	\$ 1,221,861
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Mary Ellen Carroll
Facility Category:	Communication and Monitoring Program
Type:	Capital
Description:	The Microwave Backbone System project is a repair and replacement project in nature. There have been no separate capital improvements identified with this cycle of the capital program. Any work related to this facility will be combined with and funded from the Tesla/Thomas Shaft microwave to SVCF & Radio program.
Justification:	See Tesla/Thomas Shaft microwave to SVCF & Radio justification.
Operating Impact:	None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19060-UW Communication & Monitoring
Authority Level 2:	1514-UW Microwave Backbone Upgrade
FSP ID	10015119
Project Title:	Tesla/Thomas Shaft Microwave to SVCF & Radio Rplmt
Total Budget:	\$ 7,603,198
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Brian Rolley
Facility Category:	Communication and Monitoring Program
Type:	Capital

Description:
 1. This project expands the SFPUC Microwave network to include the Thomas Shaft facility and surrounding area for security, radio communications and SCADA. It includes the development of intermediate radio sites from a leased facility (KHKK Radio Station) to a Hetch Hetchy Water and Power Transmission Tower. Both are required to reach Thomas Shaft.
 2. Replace microwave network equipment with over 10 years of service life. (\$1.0M in 2028)
 3. The radio project replaces the Water Enterprise low frequency land mobile radio system. SFPUC currently uses two radio systems. The first, operated by the Department of Emergency Management ("DEM"), is a Motorola 700/800 MHz standard public safety radio system. It is used by the City and County of San Francisco ("CCSF"). SFPUC's Wastewater Enterprise, Power Enterprise, Customer Service Bureau, as well as the City Distribution Division's Auxiliary Water Supply System personnel and Gatemen. The second system is a low frequency radio system, used by SFPUC's Water Enterprise that spans seven counties.

In January 2017, SFPUC Information Technology Services ("IT Services") issued a Request for Proposal ("RFP") to find a qualified Proposer to replace the Water Enterprise's low frequency radio system with a Motorola Solutions, offered a standard P-25 system at a total capital cost of \$9,121,131 over ten years. Funding will come from multiple sources and divisions.

This project continued the acquisition of radio sites which includes the Design/CEQA/Permits for SFPUC owned properties and private and government leases where SFPUC has no presence but needs coverage. The project will provide much needed redundant emergency communication capability and increased bandwidth for data transfer.
 The project will improve current day to day radio communication and security data provision in additional to providing critical redundant emergency communication capability.

Justification:
Operating Impact:

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 5,250,000	\$ 0	\$ 0	\$ 1,500,000	\$ 1,550,000	\$ 1,000,000	\$ 1,200,000
Total	\$ 5,250,000	\$ 0	\$ 0	\$ 1,500,000	\$ 1,550,000	\$ 1,000,000	\$ 1,200,000

SFPUC Capital Project Plan
Water Enterprise
Regional Water




Authority Level 1:	19060-UW Communication & Monitoring
Authority Level 2:	1514-UW Microwave Backbone Upgrade
FSP ID	10015118
Project Title:	Radio Communication
Total Budget:	\$ 11,312,382
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Brian Rolley
Facility Category:	Water Transmission Program
Type:	Capital

Description:
 The radio project replaces the Water Enterprise low frequency land mobile radio systems. SFPUC currently uses four radio systems. The first system, operated by the Department of Emergency Management (DEM), is a Motorola 700/800 MHz (High Band) standard public safety radio system. It is used by the City and County of San Francisco, SFPUC's Wastewater Enterprise, Power Enterprise, Customer Service Bureau, as well as the City Distribution Division's Auxiliary Water Supply System personnel and Gatemen. The second, third and fourth radio systems are 40 MHz low frequency (Low Band) radio systems, used by the SFPUC's Water Enterprise (City Distribution Division Maintenance and Operations, Water Supply and Treatment and Hetch Hetchy Water and Power). Those three systems span seven counties. The Low Band Radio systems are antiquated and no longer supported by the manufacturer. The goal of this project is to provide one unified interoperable land mobile radio system for business and emergency communications. CDD's, WST's and HHWP's Low Band radio communication systems will be replaced with one High Band radio system.
 The project will provide a much needed communication tool for personnel working at and traveling to isolated facilities. It will also provide redundant emergency communication capability and increased bandwidth for secure data transfers.
 The project will improve day-to-day radio communication in addition to providing critical redundant emergency communication capability.

Operating Impact:

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 11,312,382	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 11,312,382	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19060-UW Communication & Monitoring
Authority Level 2:	15515-UW Security Systems
FSP ID	10015121
Project Title:	WST Security System R&R
Total Budget:	\$ 8,911,862
Project Start:	7/1/2022
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Annie Li
Facility Category:	Communication and Monitoring Program
Type:	Capital

Description:
The Security System R&R program is used for maintenance and repair of existing equipment and for replacement or upgrades of worn, aging, or failed equipment. The R&R program budget is used for maintenance, design, engineering support and capital expenditures above \$5,000 that rely on in-house trades, purchase orders, Job Order Contracts, or formal bid contracts to execute maintenance, repair, and replacement work. This program is continuous in order to adapt to the on-going needs that arise from corrective and preventive maintenance work orders, consultant and internal inspections and analysis, and updated codes and regulations.

The purpose of this project is to design, construct and integrate security infrastructure for the WSTD's major facilities. There are 5 categories of security protection, including fencing or physical barriers, locks (either physical or Lenei system), alarms, video surveillance and short term security services (i.e., security guards).

Major facilities that would require security infrastructure to be installed in FY 23 and FY 24 are as follows:

1. SWWTP Security (gates, locks and keys replaced with LENEI)
2. Irvington Portal New Gate Operator
3. SAPS Security System Modification
4. Alameda East New Gate Operator
5. Thomas Shatt New Exit Gate Loop Sensor
6. Tesla New Intercom System and New Exit Gate Loop Sensor
7. Capital equipment purchases in support of the System Operations, Distribution Operations, and Maintenance groups

Other upgrades related to this program will be developed through condition assessments and then prioritized and phased.

Justification:
While some of the water system facilities have received security system upgrades through WSIP, not all sites were covered, with some sites not fully funded for needed upgrades.

Operating Impact:
The project will improve security at all facilities within Water Supply and Treatment.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 628,767	\$ 0	\$ 68,767	\$ 70,000	\$ 70,000	\$ 70,000	\$ 350,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,260,000	\$ 0	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 700,000
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 4,410,000	\$ 0	\$ 490,000	\$ 490,000	\$ 490,000	\$ 490,000	\$ 2,450,000
Total	\$ 6,298,767	\$ 0	\$ 698,767	\$ 700,000	\$ 700,000	\$ 700,000	\$ 3,500,000

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19060-UW Communication & Monitoring
Authority Level 2:	15515-UW Security Systems
FSP ID	TBD
Project Title:	Regional SCADA PLC Upgrades
Total Budget:	\$ 10,650,000
Project Start:	7/1/2022
Project Finish:	6/29/2029
Current Active Phase:	Regional Water
Organization:	Fonda Dawdis
Project Manager:	Communication and Monitoring Program
Facility Category:	Capital
Type:	Capital

Description:
This program will upgrade about 93 Supervisory Control And Data Acquisition (SCADA) system Programmable Logic Controllers (PLCs) that are or will no longer be supported by manufacturers.

The Water SCADA system provides mission-critical automation, monitoring and control of the SFPUC's Regional Water System Operations. PLCs are the critical component of the SCADA system that enable local process automation, and remote monitoring and control. The existing PLCs do not support the current industry security standards, and will be replaced with PLCs that comply with the latest regulatory and industry security standards. In addition, the associated programming and configuration software runs on older versions of the Windows Operating System which are no longer supported by Microsoft (and the SFPUC) and therefore expose the Water SCADA system to increased security risk.

Program funding is spread across seven years (2023-2029) to accommodate the end of manufacturer support while recognizing the limitations on concurrent operational outages to critical facilities. A prioritized list is available that provides location, but is not published here for security reasons.

There are 34 priority 1 locations, 24 priority 2 locations, 15 priority 3 locations, with the rest being priority 4 and 5 locations.

The existing PLCs do not support the current industry security standards, and will be replaced with PLCs that comply with the latest regulatory and industry security standards.

Operating Impact:
Without this program, SFPUC's SCADA and other systems would be vulnerable to cyber attacks and becoming obsolete as technology evolves.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 850,000	\$ 0	\$ 100,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 300,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,500,000	\$ 0	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 500,000
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 6,750,000	\$ 0	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 1,100,000	\$ 2,350,000
Total	\$ 9,100,000	\$ 0	\$ 1,450,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 3,150,000


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19061-JW Buildings & Grounds - Regio
Authority Level 2:	1517-JW Sunol Long Term Improvement
FSP ID	10015124
Project Title:	Sunol Long Term Improvements
Total Budget:	\$ 104,914,000
Project Start:	1/1/2009
Project Finish:	8/14/2023
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Bryan Dessaure
Facility Category:	Buildings and Grounds Program
Type:	Capital
Description:	<p>The project includes redevelopment of the existing Sunol Yard and construction of a Watershed Center near the Sunol Water Temple. Most of the existing structures at the Sunol Yard date back to 1930 and were converted from the original purpose, residence and barn, to office and shop spaces. The structures contain lead-based paint, asbestos, bats, and bat guano, and did not meet current building, health, or safety codes. The project will demolish six existing dilapidated structures at the Sunol Yard and construct a LEED Gold administration building, shops, fuel station, backup generator system, truck wash station, paving and site restoration.</p> <p>Additional scope was requested for the Watershed Center that was not included as part of the construction contract. The scope is under review by Water Enterprise for consideration and budget. The scope includes backup generator to power the facility, 100 space parking lot, History terrace exhibit, picnic area restoration and fixtures, composing toilets, convert temporary construction areas to permanent areas for WSTD and NRD use and revisions to the interior exhibits.</p> <p>The scope of Center (Phase B) will consist of the following:</p> <ul style="list-style-type: none"> Construction of a one-story LEED Gold facility that will include an interpretive display exhibit area, a freshwater stream profile aquarium, history display alcoves, a watershed discovery lab classroom, a community multi-purpose room, restrooms, an entry plaza, a reception area, patios, and administrative offices. Construction of a 2.5-acre discovery trail area with native plant landscaping, irrigation, meandering trails, seating areas and water and landscape features. Site restoration of the Temple area forecourt. Construction of new stairs and ramps to the picnic area. Installation of underground utilities. Site restoration and paving <p>The SFPUC Alameda Creek Watershed Center (Center) will be a gathering place for increasing the awareness and appreciation of the natural, cultural, scenic, historic and recreational resources of the Alameda Creek watershed. Consistent with the SFPUC Water Enterprise Environmental Stewardship Policy, and as described in the SFPUC Alameda Watershed Management Plan, the Center will enhance public awareness and provide education opportunities related to water quality, water supply, conservation and environmental stewardship issues.</p>
Justification:	Water LOS Goal(s) Supported: Regional Delivery Reliability and Sustainability
Operating Impact:	None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 3,373,802	\$ 3,373,802	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 3,373,802	\$ 3,373,802	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19061-JW Buildings & Grounds - Regio
Authority Level 2:	21395-WTR Buildings and Grounds R&R
FSP ID	10015125
Project Title:	Sunol Yard Improvements R&R
Total Budget:	\$ 5,252,920
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Annie Li
Facility Category:	Buildings and Grounds Program
Type:	Renewal and Replacement
Description:	<p>The budget for the Sunol Yard Interim Improvements R&R program is used for maintenance and repair of existing equipment and for replacement or upgrades of worn, aging, or failed equipment. The R&R program budget is used for maintenance, design, engineering support and capital expenditures above \$5,000 that rely on in-house trades, purchase orders, Job Order Contracts, or formal bid contracts to execute maintenance, repair, and replacement work. This program is continuous in order to adapt to the on-going needs that arise from corrective and preventive maintenance work orders, consultant and internal inspections and analysis, and updated codes and regulations. This would also aid in capital equipment purchases in support of the System Operations, Distribution Operations, and Maintenance groups.</p> <p>Since a long-term project was just completed, only minimal investments will be needed.</p> <p>Renewal and Replacement projects will increase security and decrease maintenance costs.</p>
Justification:	Renewal and Replacement projects will increase security and decrease maintenance costs.
Operating Impact:	Renewal and Replacement projects will increase security and decrease maintenance costs.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 3,176,000	\$ 0	\$ 500,000	\$ 333,000	\$ 333,000	\$ 335,000	\$ 1,675,000
Total	\$ 3,176,000	\$ 0	\$ 500,000	\$ 333,000	\$ 333,000	\$ 335,000	\$ 1,675,000

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19061-UW Buildings & Grounds - Regio
Authority Level 2:	15519-UW Millbrae Yard
FSP ID	10034825
Project Title:	Millbrae Yard Security Upgrades
Total Budget:	\$ 3,900,000
Project Start:	6/1/2020
Project Finish:	12/31/2023
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Yolanda Quisao
Facility Category:	Buildings and Grounds Program
Type:	Capital
Description:	The work includes Level integration, security fence and gates, video surveillance system, site lighting, access card readers at all entry doors to buildings, card access control at select laboratory and administration building perimeter doors, and emergency crash-bar egress.
Justification:	Millbrae Yard facility is vulnerable to unauthorized access because it does not have security in place to deter intruders. This project will provide security measures needed to protect the occupants and City assets in the Millbrae Yard facility.
Operating Impact:	The project will provide security measures necessary for protection of City staff and assets.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19061-UW Buildings & Grounds - Regio
Authority Level 2:	15519-UW Millbrae Yard
FSP ID	10034526
Project Title:	Millbrae Warehouse Settlement & Admin. Bldg. HVAC
Total Budget:	\$ 16,080,000
Project Start:	1/3/2017
Project Finish:	9/30/2024
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Yolanda Quisao
Facility Category:	Buildings and Grounds Program
Type:	Capital
Description:	This project will cover the cost of construction repairs for 2 buildings, the Millbrae Warehouse and the Administration Building, which are both located in the Millbrae Yard facility. For the Millbrae Warehouse Settlement project, a long-term fix will be provided for the displacement (settlement) of the slab between the loading dock and the offices. The slab settlement resulted from expansive clay layers located at 7-feet below the top of the existing concrete slab. For the Millbrae Administration Building HVAC Upgrades, this project will provide a long-term reliable and economical solution to heating and cooling demands. The construction of the Millbrae Warehouse Settlement repairs and the Administration Building HVAC upgrades will be performed under two different contracts. Construction for the Millbrae Warehouse loading dock repair started in June 2021 whereas the Millbrae Administration Building HVAC Upgrades will be constructed in late 2023. Scope of work for Millbrae Warehouse Settlement: <ul style="list-style-type: none"> • Replace soil below existing loading dock with drainage gravel and aggregate base • Install drain for existing eyewash shower • Replace existing slab with new loading dock slab and retaining wall • Modify downspouts to discharge the water away from the loading dock retaining wall and warehouse • Install weep holes along bottom of retaining walls, and appurtenances Scope of work for Millbrae Administration Building HVAC Upgrades: <ul style="list-style-type: none"> • Remove the outdated main HVAC units from the mezzanine level • Place the main components of the new HVAC system outside of the building • Install the duct work system through the existing pouver openings • Lease mobile laboratory trailer during construction The project is necessary to provide health and safety to occupants of the warehouse building and the administration building.
Justification:	Water LOS Goal(s) Supported: Regional Delivery Reliability If the project is implemented, Water Quality Lab issues pertaining to uneven air distribution in the administration building which impacts the efficiency of the water quality testing operation will be resolved. The floor slab displacement due to presence of expansive soil will be corrected which therefore improve safety access into the warehouse.
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 234,999	\$ 143,159	\$ 91,840	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 1,700,001	\$ 1,284,881	\$ 330,239	\$ 84,881	\$ 0	\$ 0	\$ 0
CN	\$ 2,200,000	\$ 9,200,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 11,135,000	\$ 10,628,040	\$ 422,079	\$ 84,881	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19061-UW Buildings & Grounds - Regio
Authority Level 2:	15119-UW Millbrae Yard
FSP ID	10015128
Project Title:	Millbrae Yard Laboratory and Shop Improvements
Total Budget:	\$ 169,563,000
Project Start:	11/22/2015
Project Finish:	3/30/2029
Current Active Phase:	Pre-Construction
Organization:	Regional Water
Project Manager:	Tracy Cael
Facility Category:	Buildings and Grounds Program
Type:	Capital

Description:
SFPUC has determined that the existing Millbrae Administration Building must remain operational following a major earthquake, and therefore needs to be retrofitted or replaced to meet essential facility requirements. SFPUC also wants to expand the existing Millbrae Administration Building to merge and house the Water Enterprise staff and equipment from the Rollins Road Facility. This project is necessary to provide Water Enterprise personnel a long term and sustainable campus, and allow the consolidation of work groups for increased staff efficiency. This project will also alleviate shortage of program space, increase efficiency of operations, improve employee working environment with improved heating, ventilation, and air conditioning, improve employee health and safety, and enhance site and building security. A recent planning study has identified several alternatives to meet the project goals.

The selected alternative for the Millbrae Yard campus improvements will be implemented in three phases. Phase 1 includes a new laboratory office and new south shop building to alleviate Water Enterprise undersized and outdated workspaces and desire to relocate mission-critical functions to code-compliant structures. This project will provide additional spaces in the laboratory building by constructing two additional floors on top of it to accommodate the relocation of all personnel from Rollins Road Facility. Phase 2 includes demolition of the existing Administration Building and construction of a new consolidated Administration Building adjacent to the new laboratory building to accommodate other Water Enterprise staff. Phase 3 includes new covered storage for materials and equipment. Only the scope of work for Phase 1 will be implemented under this project to meet near-term needs, minimize disruptions to operations, and allow gradual buildout of the master plan to stay within the 10-year CIP budget.


- The Phase 1 scope includes the following:
- Construct a new 50,000 square foot 3-story laboratory building
 - Construct a new 12,800 square foot shop building
 - Renovate an existing 7,440 square foot warehouse
 - Perform site improvements such as driveways, hardscape, landscape, and parking (approximately 400 spaces)

The project is necessary for WOD to have a laboratory that meets the regulation requirements for testing and processing water samples. It will also meet NRELMD and WST's current operational and functional needs. New buildings for WST and WOD will provide occupant safety and comfort, mission critical facility function, and will save relocation cost and seismic upgrade cost of the existing administration building.

Operating Impact:
Water LOS Goal(s) Supported: Regional Delivery Reliability and Cost Effectiveness
If implemented, the project will provide long term and sustainable "mission critical" buildings and allow the consolidation of work groups for increased staff efficiency.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,998,607	\$ 0	\$ 1,707,710	\$ 195,950	\$ 94,947	\$ 0	\$ 0
ER	\$ 619,920	\$ 0	\$ 477,895	\$ 142,025	\$ 0	\$ 0	\$ 0
DS	\$ 10,461,794	\$ 2,178,702	\$ 5,926,659	\$ 2,218,478	\$ 45,924	\$ 46,107	\$ 0
CM	\$ 19,659,664	\$ 0	\$ 1,000,000	\$ 3,778,300	\$ 5,022,627	\$ 6,639,135	\$ 3,419,602
CN	\$ 125,375,371	\$ 0	\$ 107,882	\$ 62,539,077	\$ 62,539,077	\$ 108,315	\$ 81,020
Total	\$ 158,315,356	\$ 2,178,702	\$ 9,220,146	\$ 68,873,830	\$ 67,702,575	\$ 6,793,374	\$ 3,546,729

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19061-UW Buildings & Grounds - Regio
Authority Level 2:	21395-WTR Buildings and Grounds R&R
FSP ID	10020298
Project Title:	Millbrae Yard Improvements R&R
Total Budget:	\$ 6,822,988
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Annie Li
Facility Category:	Buildings and Grounds Program
Type:	Renewal and Replacement

Description:
The budget for the Millbrae Yard Interim Improvements R&R program is used for maintenance and repair of existing equipment and for replacement or upgrades of worn, aging, or failed equipment. The R&R program budget is used for maintenance, design, engineering support and capital expenditures above \$5,000 that rely on in-house trades, purchase orders, Job Order Contracts, or formal bid contracts to execute maintenance, repair, and replacement work. This program is continuous in order to adapt to the on-going needs that arise from corrective and preventive maintenance work orders, consultant and internal inspections and analysis, and updated codes and regulations.

Since a long-term project is being planned, only small-sized capital projects will be executed, as resources permit. In FY23 and FY24, items 1 through 4 are being planned:

1. Haz. Mat. Removal \$160,000
2. Building Rot Repair \$184,000
3. Diesel Spill Cleanup \$40,000
4. Address outdoor tripping hazards \$100,000
5. Yard Waste Oil Tank Replacement (out years)
6. Development of secured outdoor storage for warehouse. (out years)
7. Truck Wash and Yard drainage and pavement repairs (out years)
8. Yard Covered parking for equipment & materials storage (out years)
9. Millbrae Yard public announcement system (out years)
10. Millbrae yard fencing along Caltrain Tracks (out years)
11. Capital equipment purchases in support of the System Operations, Distribution, Operations, and Maintenance groups

Justification:
Since a long-term project is being planned, only minimal investments will be needed.

Operating Impact:
Renewal and Replacement projects will increase security and decrease maintenance costs.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 4,675,000	\$ 0	\$ 500,000	\$ 515,000	\$ 515,000	\$ 515,000	\$ 2,630,000
Total	\$ 4,675,000	\$ 0	\$ 500,000	\$ 515,000	\$ 515,000	\$ 515,000	\$ 2,630,000

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19061-UW Buildings & Grounds - Regio
Authority Level 2:	15519-UW Millbrae Yard
FSP ID	10038555
Project Title:	Rollins Road Building Renovation
Total Budget:	\$ 5,191,799
Project Start:	3/1/2018
Project Finish:	6/30/2022
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Mary Tienken
Facility Category:	Buildings and Grounds Program
Type:	Capital

Description:
The SFPUC purchased a property on Rollins Road in September 2017, securing an additional 10,000 square feet of office space for the SFPUC Water Enterprise (WE).

In June 2020, the project scope for the 1657 Rollins Road was decreased significantly, and the scope of the Millbrae Yard Lab & Shop Project was increased. The program for Rollins Road Building Renovation Project will be achieved at the Millbrae Yard by adding two additional floors to the laboratory building as part of its Phase 1 project. The expanded laboratory building will accommodate the Rollins Road building staff. As a result of the scope change, personnel at 1657 Rollins Road will relocate to Millbrae Yard campus following the completion of the Millbrae Yard Lab & Shops Project.

Justification:
The project at 1657 Rollins Road is to implement exterior security improvements, including the following:

- 800-LF of 8-foot high chain link fencing
- Three pedestrian and two vehicular gates with card readers
- New security lighting for the parking lot west of the building
- Electrical work to support new exterior lighting and security infrastructure
- 8-exterior and 3-interior security cameras
- Integration of new security devices with existing Galaxy and Milestone software.

 40% of the building is unusable until the renovation is complete. The improvements will protect City assets and personnel.

Operating Impact:
Water LOS Goal(s) Supported: Regional Delivery Reliability and Cost Effectiveness
The interim improvements will increase security and eliminate loss and damage to PUC fleet. The renovation will extend the useful life of the building.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19061-UW Buildings & Grounds - Regio
Authority Level 2:	15519-UW Millbrae Yard
FSP ID	10034524
Project Title:	SWWTP WQD Trailer
Total Budget:	\$ 3,000,000
Project Start:	9/1/2018
Project Finish:	5/31/2023
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Yolanda Quisao
Facility Category:	Buildings and Grounds Program
Type:	Capital

Description:
The existing WQD trailer has been in service since 1998 and is well past the date of its originally intended end of useful life. Staff have maintained the existing trailer as much as possible, but significant problems have arisen over its 22 years of service including: exterior doors have water damage and are warped; windows have dry rot around the frames, sills, and molding; bathroom plumbing has deteriorated; insufficient electrical receptacles exist for current equipment; and no Americans with Disability Act (ADA) access exists. This project will provide WQD staff with much-needed improvements to working conditions and bring facility office space up to current code and safety standards. Scope of work includes installation of two new trailers, ADA parking, and associated civil, electrical, and plumbing work.
The project is necessary to provide city staff a safe and healthy working environment.

Justification:
Water LOS Goal(s) Supported: Regional Delivery Reliability and Cost Effectiveness
When the project is implemented, it will increase staff production and minimize health and safety hazards.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19061-JW Buildings & Grounds - Regio
Authority Level 2:	TBD - WTR R&R
FSP ID	(N/A)
Project Title:	Rollins Road Building RNR
Total Budget:	\$ 0
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Annie Li
Facility Category:	Buildings and Grounds Program
Type:	Capital
Description:	The Rollins Road Building R&R project is a repair and replacement project in nature. There have been no separate capital improvements identified with this cycle of the capital program. Any work related to this facility will be combined with and funded from the Buildings & Grounds All Locations R&R program.
Justification:	See the Buildings & Grounds All Locations R&R justification.
Operating Impact:	None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19061-JW Buildings & Grounds - Regio
Authority Level 2:	21395-WTR Buildings and Grounds R&R
FSP ID	TBD
Project Title:	Buildings & Grounds All Locations R&R
Total Budget:	\$ 14,000,000
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Annie Li
Facility Category:	Buildings and Grounds Program
Type:	Renewal and Replacement
Description:	The budget for the Buildings and Grounds All Locations R&R program is used for maintenance and repair of existing equipment and for replacement or upgrades of worn, aging, or failed equipment. The R&R program budget is used for maintenance, design, engineering support and capital expenditures above \$5,000 that rely on in-house trades, purchase orders, Job Order Contracts, or formal bid contracts to execute maintenance, repair, and replacement work. This program is continuous in order to adapt to the on-going needs that arise from corrective and preventive maintenance work orders, consultant and internal inspections and analysis, and updated codes and regulations.

Near term work in FY23 and FY24 include building maintenance at Rollins Road Building until Water Quality Bureau, Natural Resources and Lands Management Division and Water Supply Treatment Division staff move to the new campus being planned at Milbrae Yard. Funds here also address roof leaks, dry rot, HVAC, and unexpected building maintenance throughout the Regional Water System.

The following work is scheduled to start planning in FY25.

1. Pulgas Temple Access, Water Conservation and Landscaping Upgrades
2. Pulgas Dechlor storage, lighting, HVAC
3. CSPS - old pump station building repurposing
4. Capital equipment purchases in support of the System Operations, Distribution Operations, and Maintenance groups

Existing facilities are dilapidated, and do not meet present and future needs.

Operating Impact: Renewal and Replacement projects will increase security and decrease maintenance costs.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 10,999,625	\$ 0	\$ 0	\$ 499,625	\$ 1,500,000	\$ 1,500,000	\$ 7,500,000
Total	\$ 10,999,625	\$ 0	\$ 0	\$ 499,625	\$ 1,500,000	\$ 1,500,000	\$ 7,500,000


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19069-UW Long Term Monitoring & Perm
Authority Level 2:	15549-UW Long Term Monitoring & Perm
FSP ID	10015233
Project Title:	Long Term Monitoring & Permit Program (Capital)
Total Budget:	\$ 20,062,134
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Tim Ramirez
Facility Category:	Watersheds and Land Management
Type:	Capital
Description:	This program provides the resources to meet the long-term monitoring and permit requirements associated with capital projects and the operation and maintenance of the SFPUC water supply system and watershed/ROW lands within the Bay Area. Projects with long-term monitoring required by environmental permits include WSP-related environmental mitigation and permit requirements (i.e., Bioregional Habitat Restoration (BHR) Mitigation Program) and non-WSP capital projects. The capital component of meeting long-term monitoring and maintenance obligations associated with construction projects is generally limited to those required within the first 5 or 10 years after construction. Long-term monitoring and maintenance obligations that go beyond this time frame and/or are in perpetuity are supported by the Long-Term Monitoring and Permitting Programmatic projects.
Justification:	This program provides the resources to comply with terms and conditions in state and federal environmental permits associated with construction and/or operations and maintenance of the SFPUC water system, and watershed and ROW lands.
Operating Impact:	Water LOS Goal(s) Supported: Sustainability By providing the resources to comply with conditions and state and federal environmental regulatory permits, this program will minimize the risk and long-term costs associated with operation and maintenance of the SFPUC water supply system and watershed and ROW lands. As additional capital projects are completed, long-term monitoring funding will be requested as needed to meet conditions in state and federal environmental regulatory permits.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 3,600,000	\$ 0	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 2,000,000
Total	\$ 3,600,000	\$ 0	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 2,000,000


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19069-UW Long Term Monitoring & Perm
Authority Level 2:	15549-UW Long Term Monitoring & Perm
FSP ID	10015234
Project Title:	Alameda Watershed Monitoring
Total Budget:	\$ 37,119,808
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Tim Ramirez
Facility Category:	Watersheds and Land Management
Type:	Capital
Description:	The purpose of this project is to meet the long-term monitoring and permit requirements associated with capital projects and the operation and maintenance of the SFPUC water supply system and watershed/ROW lands within the Bay Area. Projects with long-term monitoring required by environmental permits include WSP-related environmental mitigation and permit requirements (i.e., Bioregional Habitat Mitigation Program) and non-WSP capital projects in the Alameda Watershed.
Justification:	This project was approved in a prior Capital Improvement Plan. No additional funding is requested. This program provides the resources to comply with terms and conditions in state and federal environmental permits associated with construction and/or operations and maintenance of the SFPUC water system, and watershed and ROW lands.
Operating Impact:	Water LOS Goal(s) Supported: Sustainability By providing the resources to comply with conditions and state and federal environmental regulatory permits, this program will minimize the risk and long-term costs associated with operation and maintenance of the SFPUC water supply system and watershed and ROW lands. As additional capital projects are completed, long-term monitoring funding will be requested as needed to meet conditions in state and federal environmental regulatory permits.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 6,629,178	\$ 0	\$ 0	\$ 180,978	\$ 2,104,200	\$ 1,132,800	\$ 3,211,200
Total	\$ 6,629,178	\$ 0	\$ 0	\$ 180,978	\$ 2,104,200	\$ 1,132,800	\$ 3,211,200


SFPUC Capital Project Plan
Water Enterprise
Regional Water



Authority Level 1:	19069-UW Long Term Monitoring & Perm
Authority Level 2:	15551-UW Peninsula Watershed Monitor
FSP ID	10015235
Project Title:	Peninsula Watershed Monitoring
Total Budget:	\$ 26,332,032
Project Start:	7/3/2023
Project Finish:	6/30/2032
Current Active Phase:	Construction
Organization:	Regional Water
Project Manager:	Tim Ramirez
Facility Category:	Watersheds and Land Management
Type:	Capital
Description:	The purpose of this project is to meet the long-term monitoring and permit requirements associated with capital projects and the operation and maintenance of the SFPUC water supply system and watershed/ROW lands within the Bay Area. Projects with long-term monitoring required by environmental permits include WSIP-related environmental mitigation and permit requirements (i.e., Bioregional Habitat Mitigation Program) and non-WSIP capital projects in the Peninsula Watershed. This project was approved in a prior Capital Improvement Plan. No additional funding is requested.
Justification:	This program provides the resources to comply with terms and conditions in state and federal environmental permits associated with construction and/or operations and maintenance of the SFPUC water system, and watershed and ROW lands.
Operating Impact:	Water LOS Goal(s) Supported: Sustainability By providing the resources to comply with conditions and state and federal environmental regulatory permits, this program will minimize the risk and long-term costs associated with operation and maintenance of the SFPUC water supply system and watershed and ROW lands. As additional capital projects are completed, long-term monitoring funding will be requested as needed to meet conditions in state and federal environmental regulatory permits.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 5,400,267	\$ 0	\$ 0	\$ 1,101,465	\$ 1,402,800	\$ 755,200	\$ 2,140,802
Total	\$ 5,400,267	\$ 0	\$ 0	\$ 1,101,465	\$ 1,402,800	\$ 755,200	\$ 2,140,802

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	80119-Water Supply Projects
Authority Level 2:	20711-Water Diversification Projects
FSP ID	10037520
Project Title:	Groundwater - Irrigation Well Decommission
Total Budget:	\$ 700,000
Project Start:	
Project Finish:	
Current Active Phase:	
Organization:	Local Water
Project Manager:	Tracy Cael
Facility Category:	Water Supply and Storage Program
Type:	Capital
Description:	The SFPUC shall decommission (destroy under permit) the eight (8) irrigation wells (i.e., seal the wells, most likely by pressure grouting) in Golden Gate Park that are not part of the San Francisco Groundwater Supply Phase 2 Project in accordance with the provisions of Chapter 12B of the San Francisco Health Code. The work consists of surveying, removal of the existing well pumps and above-ground valves, and removal, capping and restraining mainline pipes below grade.
Justification:	The project will provide long-term protection of groundwater quality and to facilitate management of groundwater pumping for potable supply use.
Operating Impact:	Decommissioning of the wells will take place only after the Recycled Water Project is operational and reliably providing the irrigation water supply for Golden Gate Park. This is to allow the continuity of existing San Francisco Recreation & Park Department operations for irrigation.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	80119-Water Supply Projects
Authority Level 2:	20711-Water Diversification Projects
FSP ID	10037900
Project Title:	Sunset Boulevard Recycled Water Irrigation Project
Total Budget:	\$ 2,286,000
Project Start:	10/1/2021
Project Finish:	4/1/2025
Current Active Phase:	Not Started
Organization:	Local Water
Project Manager:	Barbara Palacios
Facility Category:	Water Supply and Storage Program
Type:	Capital
Description:	The Sunset Boulevard Recycled Water Irrigation Project will install new recycled water pipelines and associated appurtenances, to provide recycled water from the Westside Enhanced Water Recycling Project to irrigate Sunset Boulevard medians. Recycled water will replace potable water currently used for irrigation. Recycled water will be brought up to the point of connection (i.e., water meter). The project does not include landscaping, irrigation systems, irrigation system retrofits, meters, irrigation booster pumps, or cross connection testing. This is a joint project with DPW. DPW will be applying for a Large Landscape Grant to modify the landscaping and irrigation systems for recycled water use. DPW is responsible for system design and construction of irrigation system including booster pumping (if needed) and any other appurtenances downstream of service meters. Implementing this project will add to the water supply reliability in the SFPUC's service area, both locally and regionally, by delivering recycled water for irrigation.
Justification:	
Operating Impact:	The pipeline will be owned and operated by the SFPUC. Adding this user to the Westside Enhanced Recycled Water Project will impact permitting, infrastructure management and maintenance, and treatment plant operations.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 405,600	\$ 0	\$ 0	\$ 300,600	\$ 105,000	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 405,600	\$ 0	\$ 0	\$ 300,600	\$ 105,000	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	80119-Water Supply Projects
Authority Level 2:	20711-Water Diversification Projects
FSP ID	10037519
Project Title:	San Francisco Zoo Recycled Water Pipeline Project
Total Budget:	\$ 3,200,000
Project Start:	7/1/2020
Project Finish:	10/6/2024
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Barbara Palacios
Facility Category:	Water Supply and Storage Program
Type:	Capital
Description:	The San Francisco Zoo Recycled Water Pipeline Project will convert its current groundwater supply and distribution system to a recycled water supply and distribution system, except for end uses that need to be converted to potable water (e.g., drinking water for animals). Recycled water will replace groundwater currently used to supply various uses including irrigation, cleaning and replenishment of surface water bodies, animal exhibit washdown and pool refilling, and general cleaning. A new recycled water pipeline will be installed connecting the Zoo's groundwater reservoir to the existing Westside Enhanced Recycled Water Project distribution line. Modifications to the existing groundwater well station may be needed for CDD to take ownership, but such costs are not currently accounted for in the project as the changes have not been identified. This project does not include landscaping, irrigation system retrofits, or cross-connection testing. Implementing this project will add to the water supply reliability in the SFPUC's service area, both locally and regionally, by delivering recycled water to offset groundwater currently being used for Zoo operation purposes. The groundwater freed up by this project will be used for supplemental potable water supplies. The pipeline will be owned and operated by the SFPUC. The SFPUC will also take ownership of the existing groundwater well station in the SF Zoo parking lot. Adding this user to the Westside Enhanced Recycled Water Project will impact permitting, infrastructure management and maintenance, and treatment plant operations.
Justification:	
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 90,000	\$ 0	\$ 0	\$ 90,000	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 90,000	\$ 0	\$ 0	\$ 90,000	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	80119-Water Supply Projects
Authority Level 2:	20711-Water Diversification Projects
FSP ID	N/A
Project Title:	SF Eastside Satellite Recycled Water Project
Total Budget:	\$ 4,437,008
Project Start:	7/1/2020
Project Finish:	12/31/2027
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Taylor Nokhodian
Facility Category:	Water Supply and Storage Program
Type:	Capital
Description:	The proposed Satellite Recycled Water Project would provide a tertiary recycled water supply to meet the demands of dual plumbed buildings in San Francisco that do not currently have a non-potable water supply source. This project would provide an appropriate water supply source for non-potable irrigation, as well as residential, commercial and industrial uses.
Justification:	Implementing this project will add to the water supply reliability in the SFPUC's service area by delivering recycled water to offset potable water currently being used for non-potable irrigation, as well as residential, commercial and industrial uses in dual-plumbed buildings in San Francisco.
Operating Impact:	The treatment plant and recycled water distribution system will be owned and operated by the SFPUC. Implementing this project will require permitting, infrastructure management and maintenance, and treatment plant operations. No new funding needs are anticipated at this time.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,935,295	\$ 0	\$ 450,000	\$ 1,350,000	\$ 135,295	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 1,935,295	\$ 0	\$ 450,000	\$ 1,350,000	\$ 135,295	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	80119-Water Supply Projects
Authority Level 2:	20711-Water Diversification Projects
FSP ID	10034505
Project Title:	SF Purified Water / Reuse
Total Budget:	\$ 10,354,327
Project Start:	7/1/2020
Project Finish:	9/30/2028
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Manisha Koithari
Facility Category:	Water Supply and Storage Program
Type:	Capital
Description:	This project includes planning, research, demonstration and outreach for water reuse opportunities in San Francisco. This project assumes that a large-scale demonstration project may be needed and planning design are included, but construction costs are not yet estimated.
Justification:	An investment in purified water as a source of supply in San Francisco will require careful planning, analysis, outreach and training. This project provides planning support for a long-term investment in purified water.
Operating Impact:	This project will provide a local water supply source for the future.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	80119-Water Supply Projects
Authority Level 2:	20711-Water Diversification Projects
FSP ID	10037610
Project Title:	Water Bottling Plant
Total Budget:	\$ 2,300,000
Project Start:	7/1/2021
Project Finish:	12/31/2024
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Taylor Nokhodian
Facility Category:	Local Water Supply Program
Type:	Capital
Description:	The proposed project is to construct a water bottling plant at Sunset Reservoir that would make available 5-gallon reusable containers of water to San Francisco customers during emergencies. The water bottling plant would include components to wash and fill 5-gallon reusable water containers and a capping system to seal the containers. The plant would also include at a minimum filtration and effective germicidal treatment in order to comply with state regulations.
Justification:	Implementing this project will enhance the City's capabilities to provide potable water during a disaster and increasing resiliency, and provide a critical supplement to SFPUC's existing resources and plans for serving customers during an emergency. Following unforeseen emergencies such as water main breaks or after natural disasters such as earthquakes that cause damage to SFPUC water infrastructure and extended disruption of water service, the SFPUC (in conjunction with the City and County of San Francisco emergency response structure) could use this plant to quickly distribute 5-gallon reusable water containers to residents and businesses.
Operating Impact:	The bottling plant will be owned and operated by the SFPUC. Implementing this project will require licensing by the state, construction management, operations and maintenance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 50,000	\$ 0	\$ 25,000	\$ 25,000	\$ 0	\$ 0	\$ 0
CN	\$ 400,000	\$ 0	\$ 200,000	\$ 200,000	\$ 0	\$ 0	\$ 0
Total	\$ 450,000	\$ 0	\$ 225,000	\$ 225,000	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19063-UW Local Water Conveyance-dist
Authority Level 2:	15527-UW New Services
FSP ID	10015135
Project Title:	UW New Services
Total Budget:	\$ 138,514,741
Project Start:	7/14/2015
Project Finish:	9/14/2033
Current Active Phase:	Construction
Organization:	Local Water
Project Manager:	Michael Gardiner
Facility Category:	Water Transmission Program
Type:	Capital
Description:	The CDD New Services Program budget line item covers costs for CDD office and field resources (and a small number of CSB staff) to administer and construct New Service Flat Fee Installation requests. This work is performed solely in response to external customer requests. Historical data trends have been used to project the anticipated budgetary needs for this period including conservative increases to anticipated applications and escalations for FY22-23 and FY23-24.
Justification:	This budget item allows for our resources to perform the installation work for which the fees are collected.
Operating Impact:	Without sufficient budget to perform this work, CDD staff cannot complete the new service installations and customers cannot receive water service delivery without a direct impact to CDD's existing operations or other capital project budgets

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 571,429	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 86,000,000	\$ 8,000,000	\$ 8,000,000	\$ 8,000,000	\$ 8,000,000	\$ 8,000,000	\$ 40,000,000
Total	\$ 86,571,429	\$ 8,000,000	\$ 8,000,000	\$ 8,000,000	\$ 8,000,000	\$ 8,000,000	\$ 40,000,000

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19063-UW Local Water Conveyance-dist
Authority Level 2:	15528-UW Renew Services
FSP ID	10015136
Project Title:	UW Renew Services
Total Budget:	\$ 92,300,376
Project Start:	7/14/2015
Project Finish:	9/14/2027
Current Active Phase:	Construction
Organization:	Local Water
Project Manager:	Michael Gardiner
Facility Category:	Water Transmission Program
Type:	Capital
Description:	This long-term program funds management of linear assets in the potable water distribution system between transmission or storage and final customer service connection. Starting in FY21-22, Renew services will be a standalone project to allow for improved tracking of budget vs. expenditures. Renew Services: renews assets between the water main and the customer's service connection, including: repair or replacement of damaged or plastic 1-inch to 8-inch diameter service pipes which will be replaced with copper or ductile iron; broken meter boxes; outdated or broken meters and associated piping; and subsequent associated sidewalk and roadway restoration. This program also renews gate valves and installs pressure reducing valves in the pipe network.
Justification:	Renew services will be a standalone project to allow for improved tracking of budget vs. expenditures.
Operating Impact:	On-going maintenance of existing water services is essential to ensure reliable water service delivery and to ensure the effective & efficient operation of the water distribution system.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 10,285,715	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 5,000,000
CN	\$ 92,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 15,000,000
Total	\$ 42,285,715	\$ 4,000,000	\$ 4,000,000	\$ 4,000,000	\$ 4,000,000	\$ 4,000,000	\$ 20,000,000

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19063-UW Local Water Conveyance-dist
Authority Level 2:	15528-UW Renew Services
FSP ID	10036918
Project Title:	GIS Program
Total Budget:	\$ 7,515,000
Project Start:	9/14/2021
Project Finish:	9/30/2032
Current Active Phase:	Construction
Organization:	Local Water
Project Manager:	Teresa Woo
Facility Category:	Water Transmission Program
Type:	Capital

Description: CDD is building an asset management system under the Linear Asset Management Program (LAMP). This long-term program will fund the management of the enterprise Geographic Information System (eGIS), as the hub and system of record for linear assets. CDD's asset management system and eGIS platform is used in daily operations to analyze system water conveyance, locate facilities, manage preventive maintenance, respond to emergencies, and optimize field work through GIS data analysis. The GIS platform will be used for a wide array of applications that utilizes innovative software such as machine learning and pro-active leak detection software. CDD's GIS applications will also include analysis of main breaks and leak information to assess likelihood and consequence of pipe failures. The asset management system will also be crucial for hydraulic modeling and analysis. Other CDD programs that will be determined by the GIS platform includes the lead component program, as well as the integration efforts with Maximo and CC&B.

STAFFING: 1-1054 IS Business Analyst who will manage the GIS program and 1-1052 IS Business Analyst who will be responsible for the data intake and editing to the GIS platform.

DEVELOPMENT: Upgrade to Utility Network, Enterprise system integration, new business applications, future operating procedures.

IMPLEMENTATION: GIS Enterprise integration, GIS pilot applications, Enterprise system integration support for Maximo and CC&B.

MAINTENANCE: Licenses, database, applications

Beginning FY 21, the program will further incorporate industry standards by modernizing the GIS framework to the Utility Network, and integration with other enterprise business software. The GIS program will focus on: 1) coordination with IT on enterprise GIS platform design and implementation needs for CDD; 2) migration of GIS data assets into updated industry standard data model; 3) Implementation of critical web and desktop solutions; 4) Enterprise business system integrations; 5) Digitization of all records, data optimization and data modeling to move database schemas into industry-standard data models; 6) training CDD staff on the use of professional desktop and web tools.

Justification: This new program supports critical enhancements such as the Hydraulic and Risk Assessment model software where the GIS data is used as the foundation for the hydraulic model with future enterprise system integrations (i.e. MAXIMO).

Operating Impact: The lack of a long-term asset management program and GIS database will impact CDD's daily operations by causing service disruption to SFPUC customers, impact response time to emergencies and fires, and can cause liability problems if assets or facilities are improperly identified. Furthermore, GIS is currently funded by LAMP, having outdated software can cause interruptions to the end users, while impacting the overall data maintenance processes, and delineate from industry standards. A delineation could result in significant unforeseen costs trying to achieve the most relevant technology. These costs will ultimately impact the Linear Asset Management Program as well as the 15 miles of pipeline replacement goals.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 870,629	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 93,829
CN	\$ 3,100,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 200,000	\$ 1,000,000
Total	\$ 3,970,629	\$ 540,000	\$ 540,000	\$ 540,000	\$ 540,000	\$ 293,829	\$ 1,469,142

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19063-UW Local Water Conveyance-dist
Authority Level 2:	15528-UW Renew Services
FSP ID	10036916
Project Title:	Local Water - Lead Component Services Program
Total Budget:	\$ 37,000,000
Project Start:	9/13/2021
Project Finish:	12/13/2025
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Lisa Chau
Facility Category:	Water Transmission Program
Type:	Capital

Description:
 In September 2016, the California State Legislature passed Senate Bill 1398 (SB 1398) requiring all public water systems to complete an inventory of known lead user service lines in use in its distribution system and identify areas that may have lead user service lines. In addition, SB 1398 requires public water systems to provide a timeline to the board for the replacement of user service lines whose content cannot be determined. This new CIP program funds the management of and replacement of a.) Unknown user service lines, and b.) Galvanized service lines with possible lead whips or appurtenances over a 10-year period:
 a.) Unknown user service lines: There are 10,912 unknown user service lines. CDD has field investigated 900 unknown user service lines distributed throughout the City and based upon a recommended statistical analysis, approximately 4% (36) of the 900 have been identified as galvanized. The new CIP program will continue the discovery of the remaining 10,012 service lines through consultant services over a 2-year period at a cost of approximately \$1 million/year. In addition, the program estimates that approximately 15% (1,640) of the unknown service lines will need to be renewed; however, this figure may change depending on the results of the discovery process: \$2.0M over 2 years to determine the service line material for unknown appurtenances. \$24.6M over 10 years to renew approximately (15%) 1,640 services potentially found to have a galvanized service. Although only 4% of unknown services have currently been found to be galvanized, this new CIP program is projecting that conservatively 15% of unknown services will be renewed.
 b.) Galvanized service lines: There are 4,524 galvanized services with a potential lead whip or appurtenances. Currently, CDD has field inspected 200 galvanized services and 20% are galvanized with the remaining 80% consisting of another material. Based on this, the new CIP program will fund the continuation of field investigations as well as the service renewal of 30% (1,360) galvanized services over a 10-year period; \$1.0M over 2 years to confirm the service line material for galvanized services; \$20.4M over 10 years to renew 1,360 galvanized services. Although only 20% of galvanized services have been found to be galvanized, this new CIP program is projecting that conservatively 30% of the services will be found to actually be galvanized. The new CIP program identifies crucial funds to fulfill SB 1398 requirements, including the inspection & removal of all known lead user service lines, as well as identify all unknown user service lines. This program demonstrates the SFPUC's commitment to adhere to State requirements.
Justification:
 The lack of a dedicated funding source as well as a identified program may result in the State requiring CDD to replace all 10,912 unknown services as well as the 4,524 galvanized services in an abbreviated timeframe of less than 10 years. This could result in State mandated requirements of renewing 15,436 services, instead of a projected 3,000 services at a total cost of \$231M, instead of \$48M. This may result in very significant impacts over the next several years to the main replacement program, including reducing the number of miles that are planned, designed, and constructed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,900,000	\$ 200,000	\$ 200,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 3,500,000	\$ 0	\$ 300,000	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 3,500,000	\$ 0	\$ 500,000	\$ 500,000	\$ 1,500,000	\$ 500,000	\$ 500,000
CN	\$ 28,255,000	\$ 7,000,000	\$ 6,200,000	\$ 6,500,000	\$ 5,000,000	\$ 1,500,000	\$ 2,055,000
Total	\$ 33,955,000	\$ 7,200,000	\$ 7,200,000	\$ 7,500,000	\$ 7,000,000	\$ 2,500,000	\$ 2,555,000

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19063-UW Local Water Conveyance-dist
Authority Level 2:	15528-UW Renew Services
FSP ID	10036917
Project Title:	Water Loss Reduction Program
Total Budget:	\$ 6,114,000
Project Start:	10/20/2020
Project Finish:	9/15/2027
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Juan Ryan
Facility Category:	Water Transmission Program
Type:	Capital

Description:
 This program will develop a master plan to guide the implementation of cost-effective and comprehensive strategies to reduce water loss and ensure the SFPUC is compliant with State Board regulations.
 The master plan will make recommendations, quantified estimated water loss reduction to be achieved, and proposed implementation strategies in the following areas:
 1. Re-active and pro-active leak detection (equipment review, installing, contracting, staffing requirements, reporting, repairs).
 2. Pressure Management (data collection, hydraulic review, customer impacts, post-implementation data collection & analyses, GIS updates).
 3. Water Loss Quantification (developing methodologies and algorithms for improved quantification of water losses during leaks & break events, flushing & disinfection events, training staff to estimate and record field information).
 4. Water Facility Surveys (identify sources of water losses at facilities, e.g. reservoir underdrains, leaking valves, reservoir sealing).
 5. Large Meter Assessment (prioritization methodology for large meter calibration and replacement, cost/benefit analysis for manifold meter change-outs).
 6. Data Reporting and Integration with Maximo and GIS (develop data recording tools in Maximo with GIS interfaces).
 7. Annual Water Audit (develop standard procedures and methodologies for documenting and reporting water consumption and losses, prepare quarterly data gathering activities to ensure SFPUC is meeting its water loss reduction targets).
Justification:
 In 2015 California Senate adopted SB 555 which added language to the California Water Code requiring on October 1, 2017, and each year thereafter, for urban retail water suppliers to submit a completed standardized retail water loss audit for the previous fiscal year. Based upon the findings from over 400 water utilities' audits, by July 2020 the State Board will require urban retail water suppliers to meet performance standards for the volume of water loss. To meet the water audit reporting requirements and to be compliant with State Board regulations, the SFPUC needs to reduce its water losses which are strongly correlated to leaks & breaks and missing or incorrect data in information systems.
Operating Impact:
 Since the SFPUC began conducting the standardized water audit in 2014, it has documented a 10% increase in total water losses. For FY18, SFPUC reported water losses of 2,550 MG or 7,830 AF, which represents a potential retail revenue loss of \$50M. Without improvements to its water loss reduction strategies, it is reasonable to estimate 10% or greater increases in water loss into the foreseeable future and the SFPUC will be at-risk for monetary penalties for non-compliance with State Board regulations.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 670,000	\$ 40,000	\$ 315,000	\$ 315,000	\$ 0	\$ 0	\$ 0
CN	\$ 2,378,000	\$ 900,000	\$ 720,000	\$ 720,000	\$ 226,000	\$ 206,000	\$ 206,000
Total	\$ 3,048,000	\$ 940,000	\$ 1,035,000	\$ 1,035,000	\$ 226,000	\$ 206,000	\$ 206,000

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19063-UW Local Water Conveyance-dist
Authority Level 2:	15526-UW Renew Services
FSP ID	10036919
Project Title:	Water Quality Distribution System
Total Budget:	\$ 15,709,000
Project Start:	9/14/2020
Project Finish:	6/14/2031
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Alan Wong
Facility Category:	Water Transmission Program
Type:	Capital
Description:	<p>Capital planning to improve water quality in the SF Water System were last initiated 20 years ago. Since that time, numerous changes have been made to the local water system, including change in disinfectant, addition of groundwater wells, demand reductions, conveyance changes, and many other in-house modifications. These changes, along with aging facilities prompt the need to document changes, and plan engineered improvements to ensure reliable operations, maintain and improve drinking water quality to comply with drinking water regulations and ensure consumer protection. Tasks include the following:</p> <ul style="list-style-type: none"> Enhanced water quality monitoring and update online water quality analyzer instruments at transmission storage reservoirs. Relubish, upgrade and add additional reservoir mixers. Chlorine Station Refurbishment. New Sunset Reservoir Chlorine Station. Swing Check Valve Replacement Pilot. Forest Hill, LaGrande Tank and Crocker Amazon HPS Circulation Improvements. Maintenance and replacement of Sample Stations. Hydrant Use – Provides coordination and development for use of low pressure fire hydrants by stakeholders other than SFPUC (e.g. DPW, SFFD, contractors, etc). Stakeholder use of low pressure fire hydrants have potential for backflow contamination, water system upsets and customer disturbance. <p>This project will help to maintain or update existing equipment to ensure reliable distribution operations. Changes are needed as outdated chemical facilities, equipment and operations present safety risks to personnel, loss of productivity due to obsolete chemical handling, electrical and SCADA failures due to obsolete equipment and increased risk of treatment upsets and impacts to customers.</p> <p>This equipment, such as chlorine stations, reservoir mixers, water quality analyzers are all critical to the local water operations. Current limitations in these equipment have required facilities to remain out of service (e.g. Sunset, Suro, Summit, McLaren Forest Hill Reservoirs) due to degrading water. Improvements to these sites will allow continuous operations of facilities.</p> <p>CDD Shops and Buildings and Grounds have provided maintenance and in-house repairs for existing facilities such that some facilities (e.g. chlorine stations) no longer reflect the last as-builts drawings completed over 20 years ago.</p> <p>It is essential that the facilities that will be addressed for this project have engineered design improvements with formal planning and construction improvements. This will provide a record of existing facilities and allow design improvements and a clearer operating strategy.</p>
Justification:	
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 910,000	\$ 190,000	\$ 427,500	\$ 292,500	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 1,494,350	\$ 73,600	\$ 120,600	\$ 345,000	\$ 129,500	\$ 129,500	\$ 566,650
CN	\$ 7,520,500	\$ 261,000	\$ 216,000	\$ 1,543,500	\$ 700,000	\$ 700,000	\$ 3,400,000
Total	\$ 9,924,850	\$ 524,600	\$ 764,100	\$ 2,181,000	\$ 829,500	\$ 829,500	\$ 3,966,650

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19063-UW Local Water Conveyance-dist
Authority Level 2:	15526-UW Local Water Conveyance-dist
FSP ID	10015526
Project Title:	Local Water Conveyance / Distribution System
Total Budget:	\$ 14,743,066
Project Start:	7/1/2010
Project Finish:	
Current Active Phase:	
Organization:	Local Water
Project Manager:	Ryan Freeborn
Facility Category:	Water Transmission Program
Type:	Capital
Description:	This program was approved in a prior Capital Planning Program. Remaining funding for this program under this authority will be spent and the project closed. Future work will be performed under the Main Replacement Program described on the following page.
Justification:	N/A
Operating Impact:	N/A

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19063-UW Local Water Conveyance-dist
Authority Level 2:	15531-UW Pipeline Replacement
FSP ID	10015134
Project Title:	Local Water Conveyance / Distribution System
Total Budget:	\$ 1,055,174,364
Project Start:	7/1/2010
Project Finish:	6/17/2030
Current Active Phase:	Construction
Organization:	Local Water
Project Manager:	Ryan Freeborn
Facility Category:	Water Transmission Program
Type:	Capital

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

Justification:
The proposed budget will include the following: 1) replacement of distribution pipelines at \$4.5M per mile; 2) replacement of 1 mile with seismically reliable pipelines at \$6.0M per mile; and 3) Pipe relining at \$3M per mile. FY20 budget will be allocated from existing budget balance.

Operating Impact:
Extensive review of pipe age and condition revealed that a higher replacement rate is needed to continue meeting LOS goals to minimize disruption or service to customers. Currently, 16% of the system's 1,230 miles of mains exceed their typical 100-year useful life. At past replacement rate of 6 miles/year, over 20% of the mains will exceed the recommended useful life by year 2025. By 2040, over 50% of mains will exceed the useful life, increasing the rate of main breaks, resulting in expensive property/street damage, domestic/commercial service disruption, and the potential threat to public health/safety. Maintaining overall funding for a replacement/renewal rate to 15 miles/year will enhance the probability of maintaining LOS goals for customer service through year 2035. In 2035, more aggressive capital improvements may be necessary to maintain LOS goals. Coordinating main replacements with transit corridor street improvement project stakes advantage of current construction opportunities and minimizes risk of main breaks from old pipes and community disruption after construction.

Operating Impact:
Main breaks due to aging infrastructure cause service disruption and result in costly property damage and need for emergency repairs. Increasing the pipeline renewal rate will help prevent potential increased rate of main breaks, thus maintaining or slightly increasing operational costs to respond to main and service connection breaks.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 71,969,193	\$ 0	\$ 6,900,000	\$ 6,169,000	\$ 8,888,200	\$ 5,621,822	\$ 36,293,261
CN	\$ 326,801,293	\$ 18,801,293	\$ 36,000,000	\$ 36,000,000	\$ 20,000,000	\$ 25,000,000	\$ 154,000,000
Total	\$ 998,770,486	\$ 18,801,293	\$ 42,300,000	\$ 42,169,000	\$ 29,888,200	\$ 30,621,822	\$ 190,293,261

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19063-UW Local Water Conveyance-dist
Authority Level 2:	15531-UW Pipeline Replacement
FSP ID	10015134
Project Title:	Local Water Conveyance Better Market Street
Total Budget:	\$ 65,960,896
Project Start:	
Project Finish:	
Current Active Phase:	Construction
Organization:	Local Water
Project Manager:	Ryan Freeborn
Facility Category:	Water Transmission Program
Type:	Capital

Description:
This project provides separate funding outside of the Main Replacement Program for the Better Market Street Project lead by San Francisco Public Works. The objective of the Better Market Street Project is to deliver transportation, streetscape, and safety improvements along with replacement of aging underground utilities which are beyond or nearing the end of its useful life within the 2.2 miles of Market Street between O'Connell Boulevard and The Embarcadero. This project will be delivered in 5 phases with the first phase, Phase 1A, between 5th and 8th Streets, estimated begin construction in FY21. The estimated construction duration for each phase is 2 years with overall project completion estimated in FY27. SFPUC-CDD water scope includes replacement of approximately 3.3 miles of distribution and transmission pipelines ranging in size from 8-inch to 36-inch. The estimated construction cost is \$8M per mile escalated over the 7 year construction duration for a total estimated cost of \$31.4M. Program escalation is assumed to be 6% for FY22 budget and 3% for FY23 through FY27. The overall project construction is estimated between \$800M and \$1,000M.

Justification:
Market Street is San Francisco's busiest thoroughfare in terms of pedestrians, bicyclists, and transit. To balance the needs between these modes, major elements of the project will include intersection safety enhancements, a renewed pedestrian realm and streetscape, continuous protected bicycling facilities, and optimizing transit operations. Additionally, the project will replace much of the existing infrastructure along Market Street, which is beyond or nearing the end of its useful life. This project includes replacement of existing SFMTA railway tracks in which SFPUC water pipelines are routed under these tracks at street intersections to provide redundancy within the water distribution system. It is important that SFPUC join this project to allow for replacement of these pipelines during the transit shutdown. Additionally, due the planned improvement along with the crowded utility corridor it is important that SFPUC closely coordinate with city agencies and provide utilities in order to carefully plan and design the location of the replacement pipelines in order to minimize the distribution to SFPUC, other city agencies, and the public during future repairs and replacement.

Operating Impact:
Main breaks due to aging infrastructure cause service disruption and result in costly property damage along major transit corridors and need for emergency repairs. Additionally, the transit and streetscape improvement projects typically include new street surface features such as special thermoplastic painting for bike and transit dedicated lanes, transit boarding islands, and bulbouts and other features that are expensive to repair and replace. Renewing these important assets will improve reliability and redundancy of the water distribution system and reduce the risks associated with pipeline failure.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 524,700	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 6,159,443	\$ 0	\$ 524,700	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 34,800,000	\$ 0	\$ 0	\$ 1,067,440	\$ 1,002,267	\$ 1,302,000	\$ 2,767,736
Total	\$ 41,484,143	\$ 0	\$ 524,700	\$ 5,000,000	\$ 4,000,000	\$ 4,000,000	\$ 21,800,000
				\$ 5,002,267	\$ 5,002,267	\$ 5,302,000	\$ 24,567,736

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19063-UW Local Water Conveyance-dist
Authority Level 2:	15531-UW Pipeline Replacement
FSP ID	10015134
Project Title:	Local Water Conveyance Joint Transit Project
Total Budget:	\$ 71,657,600
Project Start:	7/3/2013
Project Finish:	12/17/2037
Current Active Phase:	Construction
Organization:	Local Water
Project Manager:	Ryan Freeborn
Facility Category:	Water Transmission Program
Type:	Capital
Description:	This project provides separate funding outside of the Main Replacement Program for the L-Taraval Joint Transit Project lead by San Francisco Municipal Transit Agency (SFMTA). The objective of the L-Taraval Project is to deliver transportation, streetscape, and safety improvements along with replacement of aging underground utilities which are beyond or nearing the end of its useful life on Taraval Street from Sunset Boulevard to 15th Avenue. Joint transit and streetscape improvement projects along major transit corridors are more expensive to implement due to their complexity, traffic and transit impacts, and multi-agency coordination. This program provides funding for 4 miles at a cost of \$6.0M per mile. The funding for the Main Replacement Program will be reduced during FY21 to FY23 based on the separate funding for this project and Better Market Street funding.
Justification:	Providing funding for projects within transit corridors advantage of current construction opportunities and minimizes risk of main breaks from old pipes and community disruption after construction.
Operating Impact:	Main breaks due to aging infrastructure cause service disruption and result in costly property damage along major transit corridors and need for emergency repairs. Additionally, the transit and streetscape improvement projects typically include new street surface features such as special thermoplastic painting for bike and transit dedicated lanes, transit boarding islands, and bulbouts and other features that are expensive to repair and replace.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 11,243,840	\$ 2,800,000	\$ 5,264,000	\$ 3,179,840	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 31,000,000	\$ 5,000,000	\$ 10,000,000	\$ 13,000,000	\$ 0	\$ 0	\$ 0
Total	\$ 42,243,840	\$ 10,800,000	\$ 15,264,000	\$ 16,179,840	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19063-UW Local Water Conveyance-dist
Authority Level 2:	15531-UW Pipeline Replacement
FSP ID	10015170
Project Title:	Van Ness BRT Project
Total Budget:	\$ 4,000,000
Project Start:	7/2/2014
Project Finish:	12/17/2024
Current Active Phase:	Construction
Organization:	Local Water
Project Manager:	Ryan Freeborn
Facility Category:	Water Transmission Program
Type:	Capital
Description:	This project provides separate funding outside of the Main Replacement Program for final construction and construction closeout associated with SFPUC-CDD's portion of the Van Ness Bus Rapid Transit Project. Construction of SFMTA's Van Ness Bus Rapid Transit (VNBRT) Project started in October 2016. Substantial completion of water pipeline replacement work associated with VNBRT is anticipated in 2021 with overall project completion anticipated in 2023. Additional funding of \$4M is requested based on current project expenditures along with risk registry trending potential change orders and construction claims. Initial construction funding in the amount of approximately \$25M is provided as part of the Main Replacement Program.
Justification:	The VNBRT Project is a major transit improvement project along Van Ness Avenue which is also US-101 (CalTrans Right of Way). Due to the transportation throughput within the city limits of San Francisco, additional CalTrans requirements, and utility conflicts, additional construction funding is required to complete this complex, but very beneficial project.
Operating Impact:	Main breaks due to aging infrastructure cause service disruption and result in costly property damage along major transit corridors and need for emergency repairs. Additionally, the transit and streetscape improvement projects typically include new street surface features such as special thermoplastic painting for bike and transit dedicated lanes, transit boarding islands, and bulbouts and other features that are expensive to repair and replace. Renewing these important assets will improve reliability and redundancy of the water distribution system and reduce the risks associated with pipeline failure.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19063-UW Local Water Conveyance-dist
Authority Level 2:	15531-UW Pipeline Replacement
FSP ID	10033816
Project Title:	Potable Emergency Firefighting Water System
Total Budget:	\$ 55,000,000
Project Start:	8/12/2019
Project Finish:	6/30/2028
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Ryan Freeborn
Facility Category:	Candidates
Type:	Capital

Description: This project provides funding for the design and construction of about 2 to 3 miles of large diameter earthquake resistant pipeline to improve the fire water and potable supply reliability in the western area of San Francisco, particularly in the Sunset and Richmond Districts. This project is part of a larger effort to construct approximately 14 miles of the Potable Emergency Firefighting Water System (PEFWS), which also includes two planned pump stations. Current funding will fund the aforementioned 2 to 3 miles of pipeline and design work for a Lake Merced Pump Station. The pipeline will be designed as a potable AWSS pipeline, meaning it will convey low pressure potable water with connections to the distribution system during normal operations but can be isolated with motorized valves and operate under high pressure for firefighting after a major seismic event or emergency conditions by activating associated pumps. This funding will provide planning and design through FY 22-23 with construction funding in FY24 and 25. Additional funding will be provided by existing Earthquake Safety & Emergency Response (ESER) general obligation bond funds, with additional funding possibly approved in the March 2020 ESER referendum. The total Local Water funding commitment to this project is \$55M with \$12M carryover from FY 18-19 and FY19-20 budgets.

Justification: This project was identified as part of the ESER program to improve the fire water supply reliability in the western area of San Francisco, particularly in the Sunset and Richmond areas. Planning studies evaluated the City's fire suppression water requirements following a magnitude 7.8 earthquake. As a result, the PEFWS project was proposed to improve the fire suppression capabilities in the Sunset and Richmond. PEFWS will also improve potable water supply seismic reliability under normal operation and provide potable water after a seismic event.

Operating Impact: None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 5,632,800	\$ 0	\$ 700,000	\$ 1,040,000	\$ 973,200	\$ 973,200	\$ 1,946,400
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 18,000,000	\$ 0	\$ 2,000,000	\$ 4,000,000	\$ 3,000,000	\$ 3,000,000	\$ 6,000,000
Total	\$ 23,632,800	\$ 0	\$ 2,700,000	\$ 5,040,000	\$ 3,973,200	\$ 3,973,200	\$ 7,946,400

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19063-UW Local Water Conveyance-dist
Authority Level 2:	20504-New Services Connection Program
FSP ID	10033817
Project Title:	Asset Management Platform
Total Budget:	\$ 6,165,000
Project Start:	6/13/2016
Project Finish:	6/13/2033
Current Active Phase:	Construction
Organization:	Local Water
Project Manager:	Heather Pohl
Facility Category:	Candidates
Type:	Capital

Description: This project includes asset and work management innovations including design, development, and implementation of a CDD Asset Management Platform (CAMP), Maximo Improvement Roadmap, Maximo-GIS interface, mobile workforce pilot project, a New Service Customer Web Portal design and deployment, and improvements in materials management including a barcode pilot project. The project moves CDD from a reactive paper-based way of performing work to a proactive and planned asset-based work management program giving field mapping tools to CDD staff and with data presentation also provided to the SF Fire Department for hydrant maintenance coordination work. The work was initiated under the New Services Connection Process Improvement Project (NSCPIP) which identified mobile Maximo and work management business process improvements as a key task to improve the customer experience with the New Service Application and Construction process. The NSCPIP Portal has been designed and is preparing to enter the software RFP phase for a third time with some level of coordination with other City departments. The Maximo Roadmap was drafted in 2019 and a Pilot project for Hydrants is partially implemented with full implementation expected in October 2021 and a minimum 6-month pilot period prior to taking on additional Asset classes. It is anticipated that a portion of the existing budget through FY 21-22 will be carried over to complete the NSCPIP portal implementation and Maximo roadmap as well as to cover costs for additional improvements such as inventory barcoding and GIS-Maximo interfacing being led by ITS.

The remaining FY 2023-2033 budget for the project is being cut by 5% and will allow continued consultant and project management support to CDD for future rollout of the new system to additional Asset classes.

Justification: This project began in June 2016 under charter by two Assistant General Managers in response to continued customer complaints regarding the new water service application and installation process delays and poor customer communications as part of the NSCPIP. The mobile Maximo NSCPIP task is being piloted at CDD using hydrant assets, with the remainder of this project budget dedicated toward the NSCPIP customer portal and additional Maximo asset and work management improvements for additional asset classes, as well as for GIS-Maximo interfacing support for CDD.

Operating Impact: The project provides data improvements and work records related to our operating assets. It also provides the ability to track the status of all work requested using our Maximo system minimizing the loss of data or work requests and providing accountability and reporting regarding current staff responsible for work completion at each status step.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 1,036,233	\$ 0	\$ 410,400	\$ 288,900	\$ 227,500	\$ 15,635	\$ 78,165
Total	\$ 1,036,233	\$ 0	\$ 410,400	\$ 288,900	\$ 227,500	\$ 15,635	\$ 78,165

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19063-JW Local Water Conveyance-dist
Authority Level 2:	20505-Town of Sunol Pipeline
FSP ID	10033818
Project Title:	Town of Sunol Pipeline
Total Budget:	\$ 6,662,650
Project Start:	6/17/2019
Project Finish:	4/4/2025
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Alisha Reinhardt
Facility Category:	Water Transmission Program
Type:	Capital

Description:
 Since 2000 the SFPUC has replaced the majority of the Town of Sunol pipeline system through the Town of Sunol Fire Suppression project, except for two segments. This project will complete the replacement of the last two segments of the system, by replacing sections of the pipeline that crosses the Arroyo de Laguna Creek (Creek Crossing) and under Highway 680.

The upstream section of pipeline that feeds both the potable line and fire suppression line to the Town of Sunol is exposed under the creek and in danger of failing under Highway 680. Pipeline failure at either location has significant consequences, since all fire and potable water in the Town of Sunol is dependent on the rehabilitation of this 12" line. This project will reduce maintenance from pipe breaks and have less main flushing which may lower impact on operating expenses.

This project is broken up into two portions and the scope of work will include the following:
 Creek Crossing
 • Replace approximately 550 feet of 12" diameter pipeline crossing Arroyo de Laguna Creek with 12" diameter Ductile Iron Pipe (DIP) class 53
 • Open cut trench across the creek
 • New tie in points with gate valves
 • Creek restoration and tree removal in pipeline alignment

Highway 680 Crossing
 • MOU agreement with Alameda County Transportation Commission (ACTC) to replace existing 12" diameter Town of Sunol pipelines under Highway 680 for \$1.3M

Justification:
 The upstream section of pipeline that feeds both the potable line and fire suppression line is exposed under the creek and in danger of failing under HWY 680. Pipeline failure at either location has significant consequences. Reduced maintenance from pipe breaks and less main flushing may lower operating expenses. All fire and potable water in the TOS is dependent on the rehabilitation of this 12" line.

Operating Impact:

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 101,851	\$ 0	\$ 0	\$ 101,851	\$ 0	\$ 0	\$ 0
CN	\$ 1,368,900	\$ 0	\$ 1,368,900	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 1,470,751	\$ 0	\$ 1,368,900	\$ 101,851	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19065-JW Systems Monitoring & Control
Authority Level 2:	15534-UW Systems Monitoring & Control
FSP ID	(N/A)
Project Title:	Customer Service System
Total Budget:	\$ 8,108,715
Project Start:	7/1/2022
Project Finish:	6/30/2026
Current Active Phase:	Local Water
Organization:	Kristen McGuire
Project Manager:	Communication and Monitoring Program
Facility Category:	Capital
Type:	

Description:
 This project will transform the Customer Service experience at the SFPUC. It will modernize our technology and enable us to optimize business processes to align with current and future Customer Service needs and bring increased operational effectiveness. The project has 3 main components - a) Migrating to a modern, flexible cloud-based contact center solution, b) Migrating from our legacy "My Account" platform to a new digital self-service and customer engagement platform, and c) Migrating from our on-premises legacy Customer Information System (CIS) CC&B (Oracle "Customer Care & Billing") to Oracle's replacement CIS solution - Oracle CCS ("Customer Cloud Service"). These are all significant changes across our Customer Service - IT infrastructure.

Justification:
 The current systems are all between 8 and 20 years old. A lack of modern, flexible technology is making it impossible to improve Customer Service business process, and restricts how customers access their data. This project will increase customer satisfaction, reduce frustration and improve the experience of our staff.

Operating Impact:
 The call center telephony and supporting applications are around 20 years old. Not completing this project puts the PUC at risk as it will fall further behind in its technology and what customers expect from a modern utility. Customer's now demand modern access (txt, mobile, chat etc) to their billing and usage information, and this project will improve the customer experience, engagement and overall satisfaction. Not completing this work will increase customer frustrations, making it challenging to retain staff, and could impact our ability to collect revenue in a timely manner.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 8,108,715	\$ 998,326	\$ 1,417,558	\$ 2,894,314	\$ 2,798,517	\$ 0	\$ 0
Total	\$ 8,108,715	\$ 998,326	\$ 1,417,558	\$ 2,894,314	\$ 2,798,517	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19065-UW Systems Monitoring & Control
Authority Level 2:	15534-UW Systems Monitoring & Control
FSP ID	10015218
Project Title:	Systems Monitoring and Control
Total Budget:	\$ 1,009,000
Project Start:	7/1/2022
Project Finish:	7/31/2029
Current Active Phase:	Construction
Organization:	Local Water
Project Manager:	Don Lampe
Facility Category:	Water Supply and Storage Program
Type:	Capital

Description:
 This program funds various systems monitoring and control projects:
 1. Improvements to facilities for controlling and monitoring San Francisco's water distribution system. Facilities include enhancements to the Supervisory Control and Data Acquisition (SCADA) for remote monitoring of pressure, flow, and valve position status at key locations throughout the distribution system. Facilities also include flow and pressure monitoring devices, remotely controlled valves and valve actuators, pressure reducing valves, associated back-up power where required, and other ancillary equipment required to meet system reliability requirements. This project will also replace Programmable Logic Controllers (PLC) that have exceeded their useful service life and are at the end of the manufacturers term of support.
 2. Installation of fiber optic communications to critical facilities to meet the demand for network bandwidth of the process control and security platforms.
 3. Security installations not completed under this program.

Justification:
 1. Remote monitoring and control capabilities will also assist in optimizing system operations, resulting in decreased energy/pumping costs, and more efficient staffing requirements. Customers will experience increased reliability as back-up emergency water service capabilities are added through remote valve operation capability, allowing customers to be fed water through multiple pipe pathways from multiple pressure zones.
 2. Fiber optic connections will allow the use of video to quickly determine the criticality of the alarms produced and the level of the response needed.
 3. The completion of the security system installations is crucial to protecting the Divisions assets and provides a permanent record of all personnel entering and exiting facilities.

Operating Impact:
 1. Operations should become more efficient as a result of these improvements. Day-to-day and emergency staffing needs may decrease due to remote response capabilities. Response speed and effectiveness may increase. Monitoring capabilities may help optimize pumping and reduce energy costs. Failure to upgrade existing PLC's leaves the water system open to outside threats and failures where replacement components are no longer available nor supported.
 2. Increased reliability and functionality of the SCADA and security networks. Possible reduced labor costs associated with using video to confirm remote conditions/alarms.
 Enhanced security capabilities including the ability to account for personnel entering and exiting facilities. Video surveillance and documentation of remote sites. Reduced operating costs associated with remote confirmation of alarm conditions.
 3. Completion of the Lenel security system to all City Distribution Division sites will allow the division to control access to remote sites and provide real time information on employee access. Video will provide real time assessment and after incident documentation of attempts and breaches of security and allow personnel to coordinate an appropriate response.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19065-UW Systems Monitoring & Control
Authority Level 2:	15537-UW Controls
FSP ID	10015221
Project Title:	SCADA & Controls
Total Budget:	\$ 7,457,300
Project Start:	7/5/2022
Project Finish:	12/17/2024
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Don Lampe
Facility Category:	Water Supply and Storage Program
Type:	Capital


Description:
 This program funds various systems monitoring and control projects:
 1. Improvements to facilities for controlling and monitoring San Francisco's water distribution system. Facilities include enhancements to the Supervisory Control and Data Acquisition (SCADA) for remote monitoring of pressure, flow, and valve position status at key locations throughout the distribution system. Facilities also include flow and pressure monitoring devices, remotely controlled valves and valve actuators, pressure reducing valves, associated back-up power where required, and other ancillary equipment required to meet system reliability requirements.
 2. Installation of fiber optic communications to critical facilities to meet the demand for network bandwidth of the process control and security platforms.
 3. Security installations not completed under this program.

Justification:
 1. San Francisco's water distribution system includes over 22 pressure zones, 10 large storage reservoirs, 13 storage and hydropneumatic tanks, 4 pump stations, 1,230 miles of pipe, and many varied valves, and pressure control facilities. Existing monitoring, only located at large reservoirs and pump stations, is inadequate to accurately assess flow and pressure throughout the distribution system. Remote control capability for closing valves is minimal. When pipes break or an unexpected operation occurs, it is difficult to remotely determine cause and effect of the event. Most of the emergency response must occur manually at the emergency site. While this can typically be responded to for individual pipe breaks, a large-scale event such as an earthquake or flood could result in multiple pipe breaks that would be difficult to locate, and even more difficult to shut off without also interrupting service to customers.
 Remote monitoring and control capabilities will also assist in optimizing system operations, resulting in decreased energy/pumping costs, and more efficient staffing requirements. Customers will experience increased reliability as back-up emergency water service capabilities are added through remote valve operation capability, allowing customers to be fed water through multiple pipe pathways from multiple pressure zones.
 2. Fiber optic connections will allow the use of video to quickly determine the criticality of the alarms produced and the level of the response needed.
 3. The completion of the security system installations is crucial to protecting the Divisions assets and provides a permanent record of all personnel entering and exiting facilities.

Operating Impact:
 1. Operations should become more efficient as a result of these improvements. Day-to-day and emergency staffing needs may decrease due to remote response capabilities. Response speed and effectiveness may increase. Monitoring capabilities may help optimize pumping and reduce energy costs.
 2. Increased reliability and functionality of the SCADA and security networks. Possible reduced labor costs associated with using video to confirm remote conditions/alarms.
 Enhanced security capabilities including the ability to account for personnel entering and exiting facilities. Video surveillance and documentation of remote sites. Reduced operating costs associated with remote confirmation of alarm conditions.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 660,000	\$ 0	\$ 180,000	\$ 180,000	\$ 100,000	\$ 100,000	\$ 100,000
CN	\$ 2,840,000	\$ 0	\$ 720,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
Total	\$ 3,600,000	\$ 0	\$ 900,000	\$ 900,000	\$ 600,000	\$ 600,000	\$ 600,000

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19066-UW Local Reservoir-tank Improv
Authority Level 2:	15538-UW Local Reservoir - Budget
FSP ID	10015224
Project Title:	Sunset South Basin
Total Budget:	\$ 8,000,000
Project Start:	7/4/2022
Project Finish:	12/31/2032
Current Active Phase:	Not Started
Organization:	Local Water
Project Manager:	Lynn Fong
Facility Category:	Water Transmission Program
Type:	Capital

Description: This project provides funding to implement recommendations from AECOM's Report, "Structural and Seismic Performance Review for DSDO Jurisdictional Reservoirs", dated August 7, 2018. The report includes seismic rehabilitation recommendations for four reservoirs under DSDO jurisdiction, including Sunset South Basin, U Mound South Basin, Stanford Heights, and Summit Reservoir. The funding will support additional investigation and/or risk remediation measures, including an assessment of the seismic risk level for the reservoir's embankments as well as structural elements including the reservoir roof, divider walls, liners, gate towers, inlet-outlet conduit, and other ancillary features.


Sunset South Basin: In a 1996 study, SFPUC recommended seismic strengthening of the roof structure and other associated reservoir structural elements at the Sunset Reservoir South Basin. However, due to subsequent prioritization decisions made by SFPUC under WSP, those recommendations were deferred. Since the study is now 22 years old, the recommendations should be reviewed and updated prior to developing and implementing a structural improvement project. The South Basin contains less dam embankment in comparison to the North Basin; therefore, an analysis of the embankment based on up-to-date geotechnical and seismic inputs are recommended. Additional data should be obtained to better characterize the embankment fill, foundation materials, and piezometric conditions. The reservoir roof structure and other structural elements should be strengthened, based upon previously performed studies, and would bring the structural components to current standards.

Justification: Sunset South Basin needs to be assessed for seismic stability and risk level in order to address DSDO requirements and obligations. Sunset South Basin is critical to the water supply distribution system, and will need to be seismically reliable following a major seismic event. If repairs are not made, the long term repairs will be significantly more costly, and collapse or rupture of the embankment or roof could result in a major interruption to water service.

Operating Impact: Replacement and repair work may cause a short duration outage of the reservoir; however, impact should be minimal based upon operational work-arounds. However, if the reservoir embankment or structures fail, it would result in a significant impact to Operations to reliably supply water to the distribution zones.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,800,000	\$ 0	\$ 900,000	\$ 900,000	\$ 0	\$ 0	\$ 0
CM	\$ 570,000	\$ 0	\$ 0	\$ 0	\$ 285,000	\$ 285,000	\$ 0
CN	\$ 1,600,000	\$ 0	\$ 0	\$ 0	\$ 800,000	\$ 800,000	\$ 0
Total	\$ 3,970,000	\$ 0	\$ 900,000	\$ 900,000	\$ 1,085,000	\$ 1,085,000	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19066-UW Local Reservoir-tank Improv
Authority Level 2:	15538-UW Local Reservoir - Budget
FSP ID	12427140
Project Title:	Summit Reservoir
Total Budget:	\$ 225,000
Project Start:	7/3/2023
Project Finish:	12/31/2027
Current Active Phase:	Not Started
Organization:	Local Water
Project Manager:	Lynn Fong
Facility Category:	Water Transmission Program
Type:	Capital

Description: This project provides funding to implement recommendations from AECOM's Report, "Structural and Seismic Performance Review for DSDO Jurisdictional Reservoirs", dated August 7, 2018. The report includes seismic rehabilitation recommendations for four reservoirs under DSDO jurisdiction, including Sunset South Basin, U Mound South Basin, Stanford Heights, and Summit Reservoir. The funding will support additional investigation and/or risk remediation measures, including an assessment of the seismic risk level for the reservoir's embankments as well as structural elements including the reservoir roof, divider walls, liners, gate towers, inlet-outlet conduit, and other ancillary features.

Summit Reservoir: Additional investigation to verify the conclusions of a 2017 seismic engineering evaluation should be conducted, including subsurface investigations, installation of piezometers, and laboratory testing of retrieved samples because of the limited subsurface materials and conditions information, particularly in the area of the embankment fill where the original inlet-outlet conduit was constructed. Planning for this project will begin in FY 20 to determine the scope of seismic improvements required and additional project funding will be requested in future budget.

Justification: Summit Reservoir Dam needs to be assessed for seismic stability and risk level in order to address DSDO requirements and obligations. Summit Reservoir is critical to the water supply distribution system and will need to be seismically reliable following a major seismic event. If repairs are not made, the long term repairs will be significantly more costly, and collapse or rupture of the embankment or roof could result in a major interruption to water service.

Operating Impact: Replacement and repair work may cause a short duration outage of the reservoir; however, impact should be minimal based upon operational work-arounds. However, if the reservoir embankment or structures fail, it would result in a significant impact to Operations to reliably supply water to the distribution zones.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19066-UW Local Reservoir-tank improv
Authority Level 2:	15538-UW Local Reservoir - Budget
FSP ID	(N/A)
Project Title:	Stanford Height Reservoir
Total Budget:	\$ 225,000
Project Start:	7/1/2022
Project Finish:	7/3/2023
Current Active Phase:	Not Started
Organization:	Local Water
Project Manager:	Lynn Fong
Facility Category:	Water Transmission Program
Type:	Capital

Description: This project provides funding to implement recommendations from AECOM's Report, "Structural and Seismic Performance Review for DSOD Jurisdictional Reservoirs", dated August 7, 2018. The report includes seismic rehabilitation recommendations for four local reservoirs under DSOD jurisdiction, including Sunset South Basin, U Mound South Basin, Stanford Heights, and Summit Reservoir.

Justification: Stanford Heights Reservoir: Due to the age of the previous 1993 analysis performed on the reservoir, an updated seismic stability and deformation analysis check of the embankment is recommended. Based on the stability analysis investigation, further design may be necessary. Planning for this project will begin in FY 26
Stanford Reservoir Dam needs to be assessed for seismic stability and risk level in order to address DSOD requirements and obligations. Stanford Height Reservoir is critical to the water supply distribution system and will need to be seismically reliable following a major seismic event. If repairs are not made, the long term repairs will be significantly more costly, and collapse or rupture of the embankment or roof could result in a major interruption to water service.

Operating Impact: Replacement and repair work may cause a short duration outage of the reservoir; however, impact should be minimal based upon operational work-arounds. However, if the reservoir embankment or structures fail, it would result in a significant impact to Operations to reliably supply water to the distribution zones.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19066-UW Local Reservoir-tank improv
Authority Level 2:	15538-UW Local Reservoir - Budget
FSP ID	10015225
Project Title:	U Mound South Basin Improvements (15541)
Total Budget:	\$ 2,375,000
Project Start:	7/14/2022
Project Finish:	12/31/2027
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Lynn Fong
Facility Category:	Water Transmission Program
Type:	Capital

Description: This project provides funding to implement recommendations from AECOM's Report, "Structural and Seismic Performance Review for DSOD Jurisdictional Reservoirs", dated August 7, 2018. The report includes seismic rehabilitation recommendations for four reservoirs under DSOD jurisdiction, including Sunset South Basin, U Mound South Basin, Stanford Heights, and Summit Reservoir. The funding will support additional investigation and/or risk remediation measures, including an assessment of the seismic risk level for the reservoir's embankments as well as structural elements including the reservoir roof, divider walls, liners, gate towers, inlet-outlet conduit, and other ancillary features.

Justification: U Mound South Basin: In a 1996 study, SFPUC recommended seismic strengthening of the roof structure and other associated reservoir structural elements. However, due to subsequent prioritization decisions made by SFPUC under WSIP, those recommendations were deferred. Since the reservoir study is over 22 years old now, the recommendations should be reviewed and updated. The recommendations and subsequent improvements will bring the structural seismic condition up to current standards.
U Mound South Basin needs to be assessed for seismic stability and risk level in order to address DSOD requirements and obligations. Sunset South Basin is critical to the water supply distribution system and will need to be seismically reliable following a major seismic event. If repairs are not made, the long term repairs will be significantly more costly, and collapse or rupture of the embankment or roof could result in a major interruption to water service.

Operating Impact: Replacement and repair work may cause a short duration outage of the reservoir; however, impact should be minimal based upon operational work-arounds. However, if the reservoir embankment or structures fail, it would result in a significant impact to Operations to reliably supply water to the distribution zones.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 1,201,220	\$ 0	\$ 270,000	\$ 450,000	\$ 173,740	\$ 173,740	\$ 133,740
Total	\$ 1,201,220	\$ 0	\$ 270,000	\$ 450,000	\$ 173,740	\$ 173,740	\$ 133,740

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19066-UW Local Reservoir-tank Improv
Authority Level 2:	15538-UW Local Reservoir - Budget
FSP ID	10037794
Project Title:	Reservoir Roof and Tank Coatings
Total Budget:	\$ 8,600,000
Project Start:	7/1/2021
Project Finish:	6/15/2027
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Jonathan Cantu
Facility Category:	Water Supply and Storage Program
Type:	Capital
Description:	The City Distribution Division (CDD) tanks and reservoirs that were upgraded during the Water System Improvement Project (WSIP) are currently, or in the very near future, in need of replacement of their exterior coatings and/or roofing. The useful service life of most of these coatings is approximately ten years and many have begun to deteriorate in the last few years due to the harsh marine environment to which they are exposed. This project will provide the R&R funding necessary to maintain these coating and extend the useful service life of these critical assets.
Justification:	Replacement of exterior and roof coatings will substantially increase the useful service life of the potable and auxiliary water supply systems storage facilities in the City and County of San Francisco. Additionally, the roof coating on the north basin of the University Mound Reservoir was completed under the WSIP in 2010 and the roof coating and maintenance contract expire in the coming year. This coating has reached the end of its useful and warranted service life. A maintenance contract for the coating is also needed to maintain the proper reflectivity of the coating or the heat loading will increase to dangerous levels that could cause damage to the structural integrity of the reservoirs north basin. Most of the other storage facilities were completed around the same period and need to be recoated to protect the structural integrity of these facilities.
Operating Impact:	Failure to recoat and maintain the roof of the north basin of the University Mound Reservoir will lead to heat loading from exposure to the sun, that will exceed the original design specifications and cause damage to the structural elements of the north basin. Failure to recoat the other tanks and reservoirs will lead to premature failure and the subsequent need to replace these critical storage facilities.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 90,000	\$ 0	\$ 45,000	\$ 45,000	\$ 0	\$ 0	\$ 0
CM	\$ 813,476	\$ 0	\$ 45,000	\$ 45,000	\$ 90,476	\$ 90,476	\$ 452,048
CN	\$ 2,850,000	\$ 0	\$ 225,000	\$ 225,000	\$ 300,000	\$ 300,000	\$ 1,500,000
Total	\$ 3,753,476	\$ 0	\$ 315,000	\$ 315,000	\$ 390,476	\$ 390,476	\$ 1,952,048

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19066-UW Local Reservoir-tank Improv
Authority Level 2:	15539-UW College Hill Reservoir
FSP ID	10015223
Project Title:	College Hill Reservoir
Total Budget:	\$ 19,263,145
Project Start:	1/24/2013
Project Finish:	4/24/2024
Current Active Phase:	Local Water
Organization:	Ryan Freeborn
Project Manager:	Water Supply and Storage Program
Facility Category:	Capital
Type:	
Description:	This project provides funding for the design and construction of the College Hill Reservoir Outlet Structure and Pipeline Upgrade Project to address seismic, water quality, electrical, structural, and other deficiencies. This project includes installation of a new control valve vault; replacement of reservoir inlet and outlet piping; replacement of reservoir transmission pipelines up to Cortland Avenue; reservoir roof replacement; and miscellaneous piping, security, site access, electrical, instrumentation, and water quality improvements. This project is currently in final design phase with a 24-month construction duration starting in 2020. The estimated budget is \$18 million with \$14M in funding provided for FY1920 and additional \$3M provided for FY2021 and \$1M FY2021 for roof replacement.
Justification:	This project will improve the overall reliability of this important reservoir system which provides water to the eastern and northern areas of San Francisco, including San Francisco General Hospital, the City's trauma center. College Hill Reservoir supplies a critical mid-elevation portion of the distribution system, including San Francisco General Hospital, Upper Market Street, the Civic Center, and City Hall, and needs to be seismically reliable following a major seismic event. This project is one part of the SF General Hospital Water Seismic Reliability Program that provides seismically reliable piping from College Hill Reservoir to SF General Hospital. Bypass will be installed prior to the start or construction to allow for the reservoir to be take out of service during the entire 24-month construction duration.
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19066-UW Local Reservoir-tank improv
Authority Level 2:	21006-UW Local Reservoir - Budget
FSP ID	1003819
Project Title:	Lombard Geotechnical Improvements
Total Budget:	\$ 3,340,000
Project Start:	9/14/2020
Project Finish:	9/10/2025
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Jonathan Cantu
Facility Category:	Water Supply and Storage Program
Type:	Capital
Description:	This project includes the design and construction of about 15,000 SF of geotechnical improvements to the Northeast slope of the Lombard Reservoir. More specifically, the slope on the south side of Lombard Street from the intersection with Hyde Street extending approximately 200 feet west and on the west side of Hyde Street from the intersection with Lombard Street extending approximately 100 feet south. No additional funding is needed to supplement the existing appropriated funds of \$2,665M for the Lombard Geotechnical Project which will be used for construction and construction management of this project; construction NTP is forecasted to occur in FY23. Additional funding is being requested for construction and construction management of upcoming grate installation work at Suro Reservoir to address safety concerns with an open U-ditch around the perimeter of the reservoir and public walking path. A recent consultant study of the slopes stability indicated the need to stabilize the slope to provide an adequate safety factor against failure. Failure to mitigate the slopes stability could lead to premature failure of the slope during major rain events due to soil saturation.
Justification:	
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19067-UW Pump Station Improvements
Authority Level 2:	15543-UW Pump Station Improvements
FSP ID	10037633
Project Title:	LMPS and APS Suction Valve Automation
Total Budget:	\$ 1,328,000
Project Start:	7/1/2020
Project Finish:	6/30/2023
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Don Lampe
Facility Category:	Pump Stations
Type:	Capital
Description:	This project funds the automation of the five pump suction valves at Lake Merced Pump Station, R&R of the LMPS discharge valves, R&R of the LMPS diesel particulate filters. Installation of Central PS and Alemany PS 12KV snubbers, LMPS mechanical seal conversion and R&R of the Summit PS emergency generator. The valves are currently manually operated and require an electric motor to be held in place and operated for approximately one hour to close the valve and isolate the suction header from the individual pump. This is not only extremely time consuming but can lead to fatigue and injury of the employee holding the electric motor operator or multiple employees must be utilized to close the valve. Installing electric actuators will decrease the closing time and eliminate the need for personnel to isolate the pumps. Should a leak occur in the pump or adjacent piping the timely closure of the suction valves will prevent possible damage to the facility and it's assets. Funding has been reduced by 5% over the life of the project and by \$1,000,000 in funding provided in project 10037633 Pump Station Improvements. Automation of the suction valves will increase efficiencies and eliminate possible employee injury. R&R for pump station equipment is required to meet levels of service goals. Failure to automate these valves could lead to employee injuries when closing the valves and/or facility damage during a piping or pump failure. Failure to R&R obsolete pump station equipment could lead to failures and reduced levels of service.
Justification:	
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 887,120	\$ 0	\$ 427,500	\$ 427,500	\$ 32,120	\$ 0	\$ 0
Total	\$ 887,120	\$ 0	\$ 427,500	\$ 427,500	\$ 32,120	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19067-UW Pump Station Improvements
Authority Level 2:	15546-UW Bay Bridge West Pump Station
FSP ID	10015230
Project Title:	Bay Bridge West PS
Total Budget:	\$ 409,489
Project Start:	7/3/2023
Project Finish:	6/30/2024
Current Active Phase:	Not Started
Organization:	Local Water
Project Manager:	Don Lampe
Facility Category:	Pump Stations
Type:	Capital
Description:	This project funds the hydraulic analysis, design and construction of improvements to the Bay Bridge Pump Station to meet the increased demand of the fully built out Treasure Island development. The planned population will require additional demand that the current pump station is not expected to meet without decreased levels of service. The transmission line located on the San Francisco Bay Bridge will also be evaluated for reliability and remaining life span. Current estimates of water usage on the island after full build out will require approximately eighteen hours of pump operation daily. Maintenance and breakdowns could leave the island susceptible to insufficient fire demand supply.
Justification:	The final build out of the Treasure Island development will result in an island population of approximately 20,000. Reliable operation of the pump station and transmission main is critical to maintain adequate levels of service to the island. Increased pump station capacity will increase available supply to the island in the event of a large fire or island main break.
Operating Impact:	Failure to evaluate and subsequently increase pump station and transmission main capacity and reliability could result in questionable levels of service and available capacity to meet the islands demand should a breakdown occur at the pump station or on the transmission main.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 180,000	\$ 0	\$ 180,000	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 180,000	\$ 0	\$ 180,000	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19067-UW Pump Station Improvements
Authority Level 2:	15547-UW Harding Park Pump Station
FSP ID	10015231
Project Title:	Harding Park PS
Total Budget:	\$ 6,527,140
Project Start:	6/28/2021
Project Finish:	4/3/2026
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Barbara Palacios
Facility Category:	Pump Stations
Type:	Capital
Description:	This project funds long term improvements to the Harding Park Pump Station to increase reliability and correct conditions that have led to the premature corrosion and failure of critical components. The current design places the pumping facility on top of the recycled water reservoir leading to high humidity levels within the facility. This project will seal the reservoir from the pump room, improve the HVAC system for humidity control, and relocate critical electrical panel and components out of the pump room. The project will also modify the current electrical feed to allow for the safe maintenance of the water pump electrical components while leaving the buildings lighting and auxiliary loads powered.
Justification:	The current design of the facility has led to the premature failure of critical components and a costly shutdown while the temporary repairs were performed. Long term solution to address the humidity and electrical panel issues is required to prevent future component failure and shutdown of facility.
Operating Impact:	Failure to perform the needed improvements will lead to premature and costly failures within the facility and hazardous conditions when performing maintenance. Operation of Harding Park Golf Course and the delivery of recycled water from Daly City will be impacted.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 76,000	\$ 0	\$ 0	\$ 76,000	\$ 0	\$ 0	\$ 0
CM	\$ 1,340,428	\$ 0	\$ 0	\$ 800,000	\$ 540,428	\$ 0	\$ 0
CN	\$ 3,279,000	\$ 0	\$ 0	\$ 3,279,000	\$ 0	\$ 0	\$ 0
Total	\$ 4,695,428	\$ 0	\$ 0	\$ 4,155,000	\$ 540,428	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19071-UW Groundwater Project
Authority Level 2:	15555-UW Lake Merced Water Level Res
FSP ID	10015239
Project Title:	Lake Merced Water Level Restoration
Total Budget:	\$ 42,667,508
Project Start:	6/3/2016
Project Finish:	3/3/2027
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Ohi Nzewi
Facility Category:	Water Transmission Program
Type:	Capital
Description:	The project consists of the following subprojects. (1) The City of Daly City is proposing and working in coordination with the SFPUC to implement the Vista Grande Drainage Basin Improvements project to address storm related flooding in the Vista Grande Watershed Drainage Basin while providing the benefit of restoring connection to the natural watershed of Lake Merced. (2) The SFPUC is evaluating diversion of highly treated recycled water from the new Westside Recycled Water facility into Lake Merced to increase and stabilize lake levels.
Justification:	Project is needed to manage stormwater that currently exceeds the Vista Grande system current capacity, as well as augmenting lake levels to provide robust emergency water supply for the City of San Francisco. In addition the project would also ensure ensuring higher lake levels and continued availability of lake recreation and the watershed. Additional budget is being requested to augment SFPUC contribution to construction activities as requested by AGM
Operating Impact:	Completing the project would allow the SFPUC meet its goal of reliable emergency water supply an augment Lake Merced declining levels.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 225,000	\$ 0	\$ 0	\$ 225,000	\$ 0	\$ 0	\$ 0
CN	\$ 6,771,228	\$ 0	\$ 4,410,000	\$ 4,361,228	\$ 0	\$ 0	\$ 0
Total	\$ 8,996,228	\$ 0	\$ 4,410,000	\$ 4,586,228	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19072-UW Recycled Water Project
Authority Level 2:	15556-UW Recycled Water Project
FSP ID	10015242
Project Title:	San Francisco Westside Recycled Water
Total Budget:	\$ 213,316,323
Project Start:	3/3/2003
Project Finish:	4/6/2023
Current Active Phase:	Construction
Organization:	Local Water
Project Manager:	Barbara Palacios
Facility Category:	Base Funded by WSIP
Type:	Capital
Description:	This project includes all facilities to produce and deliver about 2 mgd of recycled water for irrigation use in the western end of San Francisco. The project includes a new recycled water treatment facility consisting of membrane filtration, reverse osmosis, and ultraviolet light disinfection; a 1.1 million gallon storage reservoir; distribution pumping facilities; and 5 to 6 miles of new pipelines.
Justification:	This project is funded through construction and close-out up to the budget specified in WSIP. The project scope was unconfirmed with respect to treatment facility siting at the time it was funded. With the recommendation of an alternate site, the project budget has increased due to additional pipeline costs, additional engineering and environmental review for the new alternative, and added escalation costs due to delay. Additional funding is requested through the Local CIP to cover the cost differential. The additional funding will be needed when the project goes to construction. Proposed baseline budget is current, Commission-approved baseline budget for the project, as rebaselined in 2018.
Operating Impact:	A minimum O&M cost of approximately \$1.6 M per year (chemicals, power, staffing, etc.) would be anticipated.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	1912-UW Automated Meter Reading Sys
Authority Level 2:	19612-UW Automated Meter Reading Sys
FSP ID	10015425
Project Title:	AWMP Completion (FY21) & Repl. Planning (FY22-26)
Total Budget:	\$ 11,636,479
Project Start:	7/1/2010
Project Finish:	6/30/2031
Current Active Phase:	Construction
Organization:	Local Water
Project Manager:	Don Lampe
Facility Category:	Local Water
Type:	Capital
Description:	This project will provide funding to complete the Automated Water Meter Program (AWMP) during FY21 and for replacement planning of the AWMP System by the end of useful life.
Justification:	The Automated Water Meter Program implementation began in 2010 and has a 20-year life expectancy. Renewal rates are currently at about 3% annually and that is expected to increase as the system ages and eventually is out of warranty and recommended AWMA useful life in 2030.
Operating Impact:	If SFPUC does not complete the remaining AWMP "hard to construct" locations, those accounts will continue to need manual meter reading by CSB staff resources that should transition their work focus on AMI Quality Assurance field visits for the 99% of infrastructure previously installed. The operating impact also includes revenue losses as most of those remaining accounts have very old and inaccurate meters. In order to upgrade or replace the AWMP and metering system in its entirety by the end of its system life, planning costs are required in FY 24-26 to evaluate technology options and develop an implementation plan, budget, RFP, and contract. If the system is not upgraded or replaced by the end of its 20-year life expectancy, operating impacts may include: <ul style="list-style-type: none"> inability to upgrade existing technology systems and no vendor support for aged technology systems and equipment, expired warranty on 100% of our hardware, inability for customers to view hourly water consumption usage on My Account web portal and to receive leak notifications from our I-info system, reducing our ability to achieve water conservation and water loss objectives, reduced accuracy of bills due to aging meters, and required use of bill estimations and/or hiring additional manual meter reading resources (for monthly billing this is a minimum increase of 20 meter reading staff and one supervisor). Note: System Procurement and Installation costs for the system upgrade or replacement are not included in this budget request.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 3,600,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,000,000
CN	\$ 30,420,000	\$ 0	\$ 0	\$ 0	\$ 210,000	\$ 210,000	\$ 25,000,000
Total	\$ 34,020,000	\$ 0	\$ 0	\$ 0	\$ 210,000	\$ 210,000	\$ 28,000,000

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	1912-UW Automated Meter Reading Sys
Authority Level 2:	19612-UW Automated Meter Reading Sys
FSP ID	10037413
Project Title:	AWMP Renewal and Meters
Total Budget:	\$ 17,937,240
Project Start:	7/1/2020
Project Finish:	6/30/2034
Current Active Phase:	Construction
Organization:	Local Water
Project Manager:	Don Lampe
Facility Category:	Water Transmission Program
Type:	Capital
Description:	This project will provide funding for AWMP Renewals needed through the life of the AWMP and metering equipment (including automation) for all renewals and new services. Updates for the FY23-24 budget cycle removes the escalation and incorporates a 5% reduction in costs to comply with the budget instructions to reduce spending.
Justification:	The Automated Water Meter Program implementation began in 2010 and has a 20-year life expectancy. Renewal rates are currently at about 3% annually and that is expected to increase as the system ages. The AWMP system upkeep is critical to maintain automated reading in lieu of manual meter reads or bill estimations.
Operating Impact:	If SFPUC does not have sufficient budget to purchase metering and AWMP equipment to fulfill new service requests and to upkeep the existing AWMP and metering systems including annual renewals, the impact may include the following for a portion of our customers: <ul style="list-style-type: none"> inaccurate bills based on estimations of previous water use patterns inability to view hourly water consumption usage on SFPUC's MyAccount web portal and to receive leak notifications from our I-info system for early detection of leaks in the home Not having AWMP data for a portion of our customers also reduces SFPUC's ability to achieve certain water conservation and customer service objectives.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 9,624,457	\$ 0	\$ 1,476,000	\$ 1,476,000	\$ 834,058	\$ 834,057	\$ 4,170,285
Total	\$ 9,624,457	\$ 0	\$ 1,476,000	\$ 1,476,000	\$ 834,058	\$ 834,057	\$ 4,170,285

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19112-UW Automated Meter Reading Sys
Authority Level 2:	15612-UW Automated Meter Reading Sys
FSP ID	10037414
Project Title:	Large Meter Renewals
Total Budget:	\$ 12,685,439
Project Start:	7/1/2019
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Local Water
Project Manager:	Don Lampe
Facility Category:	Water Transmission Program
Type:	Capital

Description: There are approximately 1,200 large (3" - 10") water meters in the City and County of San Francisco. The accuracy of these meters directly affects not only local water ratepayers but has a direct effect on the funding of the SFPUC Local Water Enterprise. The City Distribution Division (CDD) is proposing staffing and funding the replacement of the Unit Measuring Elements (UME) of these meters over an ongoing 4-year period. The current staffing of the Meter Shop at CDD limits its ability to perform renewals of these meters in a timely manner and leads to an ever-growing population of possibly inaccurate water meters. CDD is requesting funding for the cost of labor & materials to replace these UMES over a 4 year period (\$4,202,577). Approximately 50% of these replacements will occur on overtime to minimize the disruption to customers and interference with local pedestrian and vehicle traffic. The updated 10 year capital spending plan removes the escalation and reduces the budget 5%.

Justification: As-received testing of a statistical sampling of 61 large water meters revealed a net loss of approximately \$94,374 per month with 18 meters showing a decrease in consumption and 43 meters showing an increase in consumption. Extrapolating this loss in revenue over the entire large meter population of 1072 for one year, the potential loss in revenue to the Local Water Enterprise of the SFPUC is approximately \$19,902,084.

Operating Impact: Failure to fund this program will result in lost revenue to the Local Water Enterprise of the SFPUC and inaccurate customer billing over the aggregate of the large water meter population within the City and County of San Francisco.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 6,641,969	\$ 0	\$ 1,016,000	\$ 1,018,000	\$ 575,749	\$ 575,749	\$ 2,878,742
Total	\$ 6,641,969	\$ 0	\$ 1,016,000	\$ 1,018,000	\$ 575,749	\$ 575,749	\$ 2,878,742

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19112-UW Automated Meter Reading Sys
Authority Level 2:	15612-UW Automated Meter Reading Sys
FSP ID	10037415
Project Title:	BCC Meter Program
Total Budget:	\$ 980,811
Project Start:	7/1/2019
Project Finish:	6/30/2033
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Don Lampe
Facility Category:	Water Transmission Program
Type:	Capital

Description: This project includes improvements, equipment upgrades and automation of the Building & Contractors (B&C) metering program. This proposal includes hardware, software and labor costs through 2033. The total budget for this program through FY19-33 is \$906,619 which includes both hardware to automate the meters and the yearly costs for software and data subscriptions. Updates for this budget cycle remove escalation and incorporate a 5% reduction in costs to comply with the budget instructions.

Justification: Automating the B&C meters will provide more timely billing, access for SFPUC and customers to view hourly water use on the Badger Beacon web portal, and eliminate the requirement for a monthly site visit and the cost of labor to manually read the B&C meters every month at the water department corporation yard.

Operating Impact: If SFPUC does not replace B&C meters and upgrade the system to automated reads the operating impacts may include: (1) continued inability for SFPUC to monitor B&C customer water use, produce bills, and collect revenue timely from B&C customers if the meter isn't brought to the meter shop monthly as required, (2) reduced accuracy of bills due to aging meters, (3) delays in the timely billing of customers offered by electronics reads and (4) the increasing cost of labor to manually read the B&C meters to bill the customer.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 40,645	\$ 0	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 20,000
Total	\$ 40,645	\$ 0	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 20,000

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19114-UW Buildings & Grounds Improve
Authority Level 2:	15617-UW Building & Grounds Improvem
FSP ID	10015427
Project Title:	Buildings & Grounds Improvement - Local
Total Budget:	\$ 5,677,671
Project Start:	6/15/2022
Project Finish:	12/15/2027
Current Active Phase:	Construction
Organization:	Local Water
Project Manager:	Don Lampe
Facility Category:	Buildings and Grounds Program
Type:	Capital
Description:	On-going R&R at existing buildings and grounds, e.g. repair or replacement of vehicle & pedestrian gates and fencing at reservoirs, exterior lighting improvements at reservoirs and pump stations
Justification:	Need to maintain and upgrade all buildings and grounds to protect health & safety and ensure all facilities remain functional.
Operating Impact:	In ability to access and safety work at facilities.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 276,000	\$ 0	\$ 0	\$ 0	\$ 125,333	\$ 125,333	\$ 125,334
Total	\$ 276,000	\$ 0	\$ 0	\$ 0	\$ 125,333	\$ 125,333	\$ 125,334

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19114-UW Buildings & Grounds Improve
Authority Level 2:	15617-UW Building & Grounds Improvem
FSP ID	10032373
Project Title:	Additional Newcomb Yard Improvements - NEW
Total Budget:	\$ 13,483,168
Project Start:	9/9/2019
Project Finish:	9/9/2027
Current Active Phase:	Construction
Organization:	Local Water
Project Manager:	Jean Ryan
Facility Category:	Buildings and Grounds Program
Type:	Capital
Description:	This program will fund interim improvements at CDD Headquarters at 1890 Newcomb Avenue that are required to address health and safety concerns and to renovate existing facilities to accommodate the division's staffing needs while a new SFPUC Headquarters at 2000 Marin is designed and constructed, estimated to be move-in ready by 2027.

The majority of the City Distribution Division (CDD) staff (about 260 of 300) are located at the Newcomb Yard facility. Three primary buildings, Administrative Building, Shops Building, and Warehouse, were constructed in 1962, and overtime several other smaller buildings have been erected around the 300,000 square foot site. In 2017 a Condition Assessment was performed, and found all buildings to be aged, water-damaged, and deficient in meeting San Francisco building codes. Several of the buildings, including the Administration Building where most people work, were found to not meet the minimum Life Safety Standard for seismic events. Consequently, a Needs Assessment was performed and determined that to meet the division and the agency's needs for the next 30 years, a new facility is required; CDD is working with the Project Management Bureau to design and construct a new facility, estimated to be move-in ready by 2027 years.

But during the next 6 years, CDD needs to maintain and renovate its facilities at Newcomb Yard to meet health and safety requirements and to develop new office facilities to accommodate the growing number of staff required to operate and maintain the portable, recycled and ground water distribution systems and the emergency fire-fighting water system. Interim improvements include: re-roofing the Administration, Shops and Warehouse Building; Emergency Communication Facilities at Newcomb Yard and Lake Merced Pump Station; developing approximately 4,000 square feet of new office space; renovating the Shops Building mechanical systems; developing Incident Command Structure facilities; developing access control systems; and street and sidewalk improvements.

Code deficiencies, coupled with water damage, unreliable electrical service, and outdated undersized work spaces, result in lower productivity, excessive building maintenance, and uncomfortable work environment. The CDD Headquarters at 1990 Newcomb Avenue is a critical emergency response department, responding to approximately 40 fires and 120 emergency main breaks annually, as well as variety of other major and minor water system emergencies. Interim improvements are necessary to ensure that CDD can perform its duties and responsibilities in a safe and habitable work environment without interruption.

Without interim improvements, the facilities at Newcomb Yard will continue to deteriorate, require excess building maintenance, and negatively impact CDD performing its core responsibilities and functions. Following a city-wide emergency, the communication and mechanical systems at Newcomb Yard CDD may be significantly compromised resulting in CDD's inability to perform its duties as a Coordination Center for water system repair and operation.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 533,714	\$ 0	\$ 0	\$ 200,000	\$ 41,714	\$ 41,714	\$ 208,572
Total	\$ 533,714	\$ 0	\$ 0	\$ 200,000	\$ 41,714	\$ 41,714	\$ 208,572

SFPUC Capital Project Plan
Water Enterprise
Local Water



Authority Level 1:	19114-LW Buildings & Grounds Improve
Authority Level 2:	21596 - New CDD Headquarter
FSP ID	10037249
Project Title:	New CDD Headquarters
Total Budget:	\$ 393,601,466
Project Start:	2/1/2020
Project Finish:	6/28/2028
Current Active Phase:	Pre-Construction
Organization:	Local Water
Project Manager:	Shelby Campbell
Facility Category:	Buildings and Grounds Program
Type:	Capital

Description:
 The City Distribution Division (CDD) Headquarters, currently located at 1990 Newcomb Avenue, San Francisco, was constructed in 1962. The majority of CDD's staff are located at Newcomb (approx. 260 people). Existing facilities include administrative offices, warehouse, shops, materials and equipment storage and vehicle fleet. CDD oversees the retail water distribution system with the City and County of San Francisco, responsible for the physical infrastructure of San Francisco's potable, auxiliary water system, groundwater, and recycled water systems. CDD's responsibilities include 24/7 emergency response to water main breaks and two-alarm or larger fires in addition to day-to-day operations and maintenance of over 1,250 miles of water main, 12 reservoirs, 9 pump stations, 7 hydro-pneumatic stations, 6 tanks, the water meter program serving over 176,000 customers, and maintaining CDD's physical plant, equipment and vehicles and over 1,100 acres of grounds throughout the City.

Justification:
 The 2017 Condition Assessment found all buildings aged, water-damaged, and deficient in meeting seismic, ADA, electrical and other building code standards. Several buildings, including the Administration Building where people work 24 hours per day were found to have extensive overcrowded conditions, do not meet the minimum Life Safety Standard for seismic events, and may be expected to experience catastrophic failure during a large event. It was recommended that all buildings be rebuilt at the same time to optimize space and cost.

Operating Impact:
 Severe seismic, structural and other code deficiencies, coupled with water damage, unreliable electrical service, inadequate ventilation, and outdated and undersized work spaces, has resulted in lower productivity, excessive building maintenance, and risk of injury during a seismic event. If the CDD continues operating at its current headquarters, the SFPUC's ability to meet its In-City Seismic Reliability and In-City Delivery Reliability Level of Service Goals is significantly compromised. CDD is a critical emergency response operation and is staffed 24 hours per day. Given the current condition of the facilities there is a high probability that the facilities designated to deploy and coordinate Emergency Response personnel, equipment and resources to restore the water distribution system will not be able to respond because it will have sustained significant damage. There is no backup facility that could provide even limited service as a Coordination Center, and the City may be required to call upon mutual aid from state and local agencies.

In addition to significantly compromising CDD's ability to respond to a city-wide emergency, the current headquarters impede the Division's ability to meet the agency's Sustainability Level of Service Goal, namely the Workforce Support component. The outdated and deficient facilities make it difficult for the Division to attract, develop and retain a healthy, safe and well-trained, productive and well-equipped work force. With projections that 50% of the CCSF workforce will be retire within the next ten years, it is more critical than ever that the CDD be able to attract, train and retain the workforce required to meet its 24/7 emergency and day-to-day responsibilities.


Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 12,367,227	\$ 0	\$ 7,226,875	\$ 4,470,043	\$ 393,320	\$ 138,218	\$ 138,771
CM	\$ 19,589,814	\$ 0	\$ 10,608,478	\$ 7,191,107	\$ 591,107	\$ 591,107	\$ 608,015
CN	\$ 316,063,270	\$ 28,000,000	\$ 109,866,230	\$ 109,866,230	\$ 65,784,203	\$ 0	\$ 0
Total	\$ 348,020,311	\$ 2,536,607	\$ 45,855,353	\$ 121,527,380	\$ 110,850,657	\$ 66,525,528	\$ 746,786



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

Water Enterprise
Fiscal Years 2023-2032
Ten Year CIP
Programmatic Projects
January 14, 2022

SFPUC Capital Project Plan
Water Enterprise
Programmatic



Authority Level 1:	19047-UW Watershed Protection
Authority Level 2:	15415-UW Watershed Protection
FSP ID	10014854
Project Title:	Natural Resources Planning
Total Budget:	\$ 10,212,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Programmatic
Project Manager:	Tim Ramirez
Facility Category:	Watershed Protection Program
Type:	Programmatic
Description:	The purpose of this program is to support planning efforts for projects to improve and/or protect the water quality and/or ecological resources that affect or are affected by the operation of the SFPUC water supply system within the Bay Area counties. Examples of these projects include collaborative efforts with members of watershed workgroups, leading-edge research with local universities, and education programs with community groups. Many of these projects also include cost-share from project partners.
Justification:	This program provides the foundation for the long-term stewardship of natural resources under SFPUC management by supporting collaborative planning and environmental regulatory compliance efforts.
Operating Impact:	By providing for the long-term stewardship of natural resources and protection of water quality, this program will minimize the environmental regulatory risk and long-term costs associated with not proactively managing the natural resources that affect or are affected by the operation of the SFPUC water system. All projects are managed by existing Natural Resources and Lands Management Division staff.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 11,444,000	\$ 1,162,000	\$ 900,000	\$ 920,000	\$ 940,000	\$ 960,000	\$ 5,330,000
Total	\$ 11,444,000	\$ 1,162,000	\$ 900,000	\$ 920,000	\$ 940,000	\$ 960,000	\$ 5,330,000

SFPUC Capital Project Plan
Water Enterprise
Programmatic



Authority Level 1:	19052-UW Landscape Conservation Prog
Authority Level 2:	15455-UW Landscape Conservation Budg
FSP ID	10015023
Project Title:	Landscape Conservation Program
Total Budget:	\$ 4,000,000
Project Start:	9/1/2005
Project Finish:	9/30/2045
Current Active Phase:	Pre-Construction
Organization:	Programmatic
Project Manager:	Julie Ortiz
Facility Category:	Program - Project
Type:	Programmatic
Description:	This budget funds the Large Landscape Conservation Retrofit Program (former Famis # CUW26501, current FSP Project #10015023) that funds the replacement of old, water-wasting irrigation equipment and plantings at large landscapes in the SFPUC's retail service area. The program is part of the SFPUC's Retail Water Conservation Plan that guides how the SFPUC will meet near-term and long-term local and state water conservation goals and directives. Annual Large Landscape Retrofit Program funding covers approximately 3 to 4 projects a year. Large landscape retrofits are not restricted by code and are envisioned to continue. The program overall will be re-evaluated periodically.
Justification:	The program is an important element of the SFPUC's retail conservation plan for meeting demand reduction and conservation goals and requirements. Without additional funding, the program will not be able to achieve targeted customer participation and meet water-savings goals.
Operating Impact:	None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 400,000	\$ 0	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 0
CM	\$ 1,600,000	\$ 0	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 0
CN	\$ 2,000,000	\$ 0	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 0
Total	\$ 4,000,000	\$ 0	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Programmatic



Authority Level 1:	19055-UW Long Term Monitoring & Perm
Authority Level 2:	15468-UW Long Term Monitoring & Perm
FSP ID	10015046
Project Title:	Long Term Monitoring & Permitting
Total Budget:	\$ 83,655,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Post-Construction
Organization:	Programmatic
Project Manager:	Tim Ramirez
Facility Category:	Programmatic
Type:	Programmatic
Description:	This program provides the resources to meet the long-term monitoring and permit requirements associated with capital projects and the operation and maintenance of the SFPUC water supply system and watershed/ROW lands within the Bay Area. Projects with long-term monitoring required by environmental permits include the Alameda Watershed Habitat Conservation Plan, WSP-related environmental mitigation and permit requirements (i.e., National Marine Fisheries Service) and non-WSP capital projects. The capital component of meeting long-term monitoring and maintenance obligations associated with construction projects is generally limited to those required within the first 5 or 10 years after construction. Long-term monitoring and maintenance obligations that go beyond this time frame and/or are in perpetuity are supported by these Long-Term Monitoring and Permitting Programmatic projects.
Justification:	This program provides the resources to comply with terms and conditions in state and federal environmental permits associated with construction and/or operations and maintenance of the SFPUC water system, and watershed and ROW lands.
Operating Impact:	By providing the resources to comply with conditions and state and federal environmental regulatory permits, this program will minimize the risk and long-term costs associated with operation and maintenance of the SFPUC water supply system and watershed and ROW lands. As additional capital projects are completed, long-term monitoring funding will be requested as needed to meet conditions in state and federal environmental regulatory permits.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 92,787,000	\$ 6,971,000	\$ 4,890,000	\$ 10,933,000	\$ 9,365,000	\$ 8,454,000	\$ 43,042,000
Total	\$ 92,787,000	\$ 6,971,000	\$ 4,890,000	\$ 10,933,000	\$ 9,365,000	\$ 8,454,000	\$ 43,042,000

SFPUC Capital Project Plan
Water Enterprise
Programmatic



Authority Level 1:	19159-UW Water Enterprise-watershed
Authority Level 2:	
FSP ID	10016979
Project Title:	Watershed Structures Upgrades -Cottages
Total Budget:	\$ 5,012,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Programmatic
Project Manager:	Tim Ramirez
Facility Category:	Water Enterprise Watershed Protection
Type:	Programmatic
Description:	This program supports investment in watershed cottages on the Peninsula and Alameda Watersheds in the Bay Area.
Justification:	Expenditures are required to maintain watershed cottages to be occupied by SFPUC staff to protect, operate, and maintain SFPUC water system infrastructure and watershed and ROW lands.
Operating Impact:	The program provides resources required for cost-effective long-term management of SFPUC watershed cottages.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 5,526,000	\$ 486,000	\$ 466,000	\$ 486,000	\$ 503,000	\$ 503,000	\$ 2,548,000
Total	\$ 5,526,000	\$ 486,000	\$ 466,000	\$ 486,000	\$ 503,000	\$ 503,000	\$ 2,548,000

SFPUC Capital Project Plan
Water Enterprise
Programmatic



Authority Level 1:	19158-UW Water Enterprise-watershed
Authority Level 2:	15830-UW Water Enterprise-watershed
FSP ID	10016976
Project Title:	Watershed & ROW Infrastructure
Total Budget:	\$ 55,000,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Programmatic
Project Manager:	Tim Ramirez
Facility Category:	Water Enterprise Watershed Protection
Type:	Programmatic
Description:	This program supports investments in watersheds and ROW-related capital assets, including: roads, security fences and gates, bridges, culverts and stock ponds. This program also supports wildfire risk reduction work on the watersheds and ROW, including: fuel breaks, tree removal, prescribed burns (in coordination with CalFire), and non-native vegetation management.
Justification:	Expenditures are required to maintain access to SFPUC water system infrastructure, watershed lands and ROW, and also to reduce wildfire risk consistent with state requirements. This program provides funding to support investments in watershed and ROW assets under SFPUC management, to cost-effectively maintain these assets in good condition.
Operating Impact:	The project supports ongoing maintenance of SFPUC watershed lands and ROW assets. Projects are the responsibility of Natural Resources and Lands Management Division.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 60,500,000	\$ 4,000,000	\$ 5,000,000	\$ 6,000,000	\$ 6,000,000	\$ 6,000,000	\$ 28,000,000
GN	\$ 60,500,000	\$ 4,000,000	\$ 5,000,000	\$ 6,000,000	\$ 6,000,000	\$ 6,000,000	\$ 28,000,000
Total	\$ 60,500,000	\$ 4,000,000	\$ 5,000,000	\$ 6,000,000	\$ 6,000,000	\$ 6,000,000	\$ 28,000,000

SFPUC Capital Project Plan
Water Enterprise
Programmatic



Authority Level 1:	19158-UW Awsss Maintenance - Cdd
Authority Level 2:	15828-UW Awsss Maintenance - Cdd
FSP ID	(N/A)
Project Title:	AWSSS Maintenance
Total Budget:	\$ 27,000,000
Project Start:	7/1/2011
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Programmatic
Project Manager:	Don Lampe
Facility Category:	Program - Project
Type:	Programmatic
Description:	Maintenance of the Auxiliary Water Supply System (AWSS) requires numerous trades, materials and supplies. The original transfer of function from the San Francisco Fire Department (SFFD) to the City Distribution Division (CDD) in 2010 included 10 on-budget operating positions and \$1.5 million in programmatic ACP funding. Over the last nine years the programmatic funding necessary to maintain the system has dramatically increased. A recent San Francisco Civil Grand report pointed out the ongoing maintenance needs and called for immediate action. Division spending to operate and maintain the AWSS in fiscal year 18-19 was a record \$2.8 million and is expected to increase to meet the Civil Grand Jury's recommendations. The City Distribution Division requires additional funding to meet the Civil Grand Jury recommendations. An increase in the programmatic funding to \$3 million will support the positions as well as material and supplies to meet valve exercising, equipment maintenance and replacement, joint training exercises with the SFFD and engineering design support. Furthermore, improvements to the sewage collection system through the Sewer System Improvement Program (SSIP) has required the removal and realignment of AWSS pipelines that are found to transect sewage transports at a substantial cost to the division (~\$500k per site).
Justification:	The AWSS is a complex and distributed system that provides emergency firefighting water in the days and hours following a catastrophic event. The system is also used several times a year to fight large configurations that exceed the available supply of the potable water system. This much needed and independent firefighting system was installed in 1913 and has and is undergoing upgrades and expansion under two Emergency Safety and Emergency Response (ESER) bonds. Although the upgrades will improve and expand the system, failure to fully fund maintenance and other day to day expenses will leave the system in a less than optimal state of readiness. This was recognized in the civil grand jury's report and failure to follow through on recommendations does a disservice to the citizens of the CCSF.
Operating Impact:	Failure to fully fund maintenance and expenses of the AWSS will leave the City and County of San Francisco more vulnerable to catastrophic fires that nearly obliterated the city in 1906. It is the duty of the City Distribution Division to maintain the system in the highest state of readiness and to request the funding and manpower to do so.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
GN	\$ 29,500,000	\$ 2,500,000	\$ 2,500,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 13,000,000
Total	\$ 29,500,000	\$ 2,500,000	\$ 2,500,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 13,000,000

SFPUC Capital Project Plan
Water Enterprise
Programmatic



Authority Level 1:	19458-UW Water Resources Planning An
Authority Level 2:	17676-UW Water Resources Planning-bu
FSP ID	10025206
Project Title:	Water Resources Planning and Development
Total Budget:	\$ 4,550,000
Project Start:	9/1/2005
Project Finish:	12/30/2045
Current Active Phase:	Pre-Construction
Organization:	Programmatic
Project Manager:	Taylor Nokhouldian
Facility Category:	Program - Project
Type:	Programmatic
Description:	Building on the findings of the Water Supply Master Plan, the SFPUC completed and adopted a water supply program to meet future demand through 2018 as part of the Phased Water System Improvement Program (WSIP). The program includes developing 20 million gallons per day (mgd) of recycled water, conservation and/or groundwater in the retail and wholesale customer service areas. In addition, the SFPUC has projected a shortfall of available water supply to meet its level of service goals and contractual obligations. The SFPUC continued studies on recycled water, groundwater projects, conservation and graywater in the SFPUC service area and regional desalination and purified water. Activities associated with implementation of this program, include updating water demand projections, conducting planning studies for additional recycled water, conservation and groundwater potential, updating the billing system to respond to droughts, continuing studies on dry-year water supplies and providing water supply impact analyses. Additionally, staff will study the potential water supply benefits from alternative water supplies, such as graywater, blackwater, stormwater and seepage water.
Justification:	This program supports critical water supply planning necessary for implementing the Phased WSIP, including planning work for groundwater and recycled water supplies, conservation, and alternative water supplies such as graywater and blackwater.
Operating Impact:	The water supply planning budget is to support the implementation of the Phased WSIP Variant adopted by the Commission on October 30, 2008.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 5,050,000	\$ 50,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 2,500,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
GM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 5,050,000	\$ 50,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 2,500,000

SFPUC Capital Project Plan
Water Enterprise
Programmatic



Authority Level 1:	19459-UW Treasure Island - Maintena
Authority Level 2:	17681-UW Treasure Island - Water
FSP ID	(N/A)
Project Title:	Treasure Island Facilities Maintenance
Total Budget:	\$ 13,500,000
Project Start:	7/1/2021
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Programmatic
Project Manager:	Don Lampe
Facility Category:	Program - Project
Type:	Programmatic
Description:	This project funds the operation and maintenance of the potable water distribution system at Treasure Island (TI) and Yerba Buena Island (YBI) on behalf of the Treasure Island Development Authority (TIDA). Potable water to TI/YBI is supplied by a dedicated pump station in San Francisco via a transmission main on the western span of the Oakland/Bay Bridge. The potable water distribution system on TI/YBI is comprised of four reservoirs, six pump stations, and a distribution piping network. The pump stations and reservoirs are being replaced by three water tanks and a single pump station being built by the islands developer.
Justification:	This programmatic project funds the routine maintenance required to keep the Water Facilities on Treasure Island functional and providing potable water to the residents of both islands.
Operating Impact:	Failure to provide maintenance funding could lead to loss of the potable water system and fire fighting capabilities.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
GM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 14,850,000	\$ 1,350,000	\$ 1,350,000	\$ 1,350,000	\$ 1,350,000	\$ 1,350,000	\$ 6,750,000
Total	\$ 14,850,000	\$ 1,350,000	\$ 1,350,000	\$ 1,350,000	\$ 1,350,000	\$ 1,350,000	\$ 6,750,000

SFPUC Capital Project Plan
Water Enterprise
Programmatic



Authority Level 1:	19463-UW Retrofit Grant Program
Authority Level 2:	17685-UW Retrofit Grant Program
FSP ID	10025211
Project Title:	Retrofit Grant Program
Total Budget:	\$ 1,000,000
Project Start:	3/1/2011
Project Finish:	9/30/2030
Current Active Phase:	Pre-Construction
Organization:	Programmatic
Project Manager:	Taylor Nokhodian
Facility Category:	Program - Project
Type:	Programmatic

Description:
The Retrofit Grant Program provides assistance to SFPUC retail customers to help reduce the consumption of SFPUC potable water. The Retrofit Grant Program provides assistance to SFPUC retail customers to help reduce the consumption of SFPUC potable water. Customers can use grant funds in accordance with SFPUC guidelines for the following types of projects: 1) to collect, treat, and use alternate water sources onsite for non-potable applications such as toilet and urinal flushing, cooling tower applications, and outdoor irrigation; 2) for onsite treatment and reuse of brewery process water to reduce the consumption of SFPUC potable water; and 3) for the conversion of a customer's irrigation system to accept SFPUC recycled water. Grants requests will be reviewed by SFPUC staff on a case-by-case basis, and grant awards are subject to the terms and conditions of the SFPUC. The program will be cash-funded (not bond-funded). We anticipate increased participation in the grant program as we expand the program to obtain greater SFPUC potable water offsets, as heat recovery is incorporated to make onsite water systems more energy efficient, and as development is rapidly unfolding in San Francisco.

Justification:
By providing financial assistance to our customers, the SFPUC can realize the full potential of our efforts to diversify our water supplies by funding projects that will add to the water supply reliability in the SFPUC's service area.

Operating Impact:
None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,000,000	\$ 0	\$ 500,000	\$ 500,000	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 1,000,000	\$ 0	\$ 500,000	\$ 500,000	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Programmatic



Authority Level 1:	17726-GE Youth Employment & Environm
Authority Level 2:	17726-GE Youth Employment & Environm
FSP ID	(N/A)
Project Title:	Youth Employment Project
Total Budget:	\$ 12,900,000
Project Start:	
Project Finish:	
Current Active Phase:	Construction
Organization:	Programmatic
Project Manager:	Carol Isen
Facility Category:	Program - Project
Type:	Programmatic

Description:
The Earth Stewards is a collaborative effort by the SFPUC, the San Francisco Sheriff's Department and the Garden Project to provide at-risk, young San Franciscans with horticultural and landscaping work experience on SFPUC properties. The program currently has capacity for 12 at-risk youth and develops an individualized 24-month program for each participant. Since inception, Earth Stewards Apprentices and Trainees participants have totaled 389. In the past the Earth Stewards have performed landscaping and maintenance services for the City Distribution Division (CDD), Hetch Hetchy, and Crystal Springs Reservoir.

Justification:
The project provides at-risk, young San Franciscans with work experience with the intent of reducing recidivism among ex-offenders and inmates of the San Francisco County Jail.

Operating Impact:
None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 14,190,000	\$ 1,290,000	\$ 1,290,000	\$ 1,290,000	\$ 1,290,000	\$ 1,290,000	\$ 6,450,000
Total	\$ 14,190,000	\$ 1,290,000	\$ 1,290,000	\$ 1,290,000	\$ 1,290,000	\$ 1,290,000	\$ 6,450,000

SFPUC Capital Project Plan
Water Enterprise
Programmatic



Authority Level 1:	New
Authority Level 2:	15492-UW Water Supply & Storage
FSP ID:	(N/A)
Project Title:	Drought Response Program
Total Budget:	\$ 1,000,000
Project Start:	
Project Finish:	
Current Active Phase:	
Organization:	Programmatic
Project Manager:	Julie Ortiz
Facility Category:	Program - Project
Type:	Programmatic
Description:	This budget funds a new Drought Response Program that will enable the SFPUC to add customer water rationing functionality into the Customer Care and Billing System and to conduct drought response actions outlined in the SFPUC's Emergency Drought Response Plan.
Justification:	This program is necessary to enable the SFPUC to implement different levels of customer water rationing during drought when a water shortage has been declared.
Operating Impact:	None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,000,000	\$ 500,000	\$ 500,000	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 1,000,000	\$ 500,000	\$ 500,000	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Programmatic



Authority Level 1:	New
Authority Level 2:	TBD
FSP ID:	(N/A)
Project Title:	Personnel Safety Program
Total Budget:	\$ 1,000,000
Project Start:	
Project Finish:	
Current Active Phase:	
Organization:	Programmatic
Project Manager:	Don Lampe
Facility Category:	Program - Project
Type:	Programmatic
Description:	This program is comprised of two elements, one being arc flash labeling updates and the other being equipment specific lock out/tag out (LOTO) procedures. <ul style="list-style-type: none"> All electrical equipment is required, by Cal/OSHA and The National Fire Protection Association (NFPA), to have arc flash rating labels. Arc flash labels indicate the maximum available fault current that the equipment can generate during a faulted condition, the safe working distances from the electrical source and the proper level of personal protective equipment that personnel should wear to minimize injury when working on the energized equipment. CDD is requesting funding to develop equipment specific lock out/tag out (LOTO) procedures to safeguard personnel performing the cleaning, repairing, servicing, setting up and adjusting of machines and equipment. Per Cal/OSHA requirements: "The employer's hazardous energy control procedure shall include separate procedural steps for the safe lockout/tagout of each machine or piece of equipment affected by the hazardous energy control procedure." The current arc flash labeling is over five years old and required to be updated. This survey was originally performed by SFPUC engineering personnel and an estimate has been provided to the division in the amount of \$750,000 to perform an arc flash survey based on current requirements. This will also include facilities that the division has acquired since the last survey was performed. Equipment specific LOTO procedures will protect not only employees and contractors performing work on equipment at the divisions many facilities but will safeguard the equipment from accidental energization and operation that could lead to damage and costly repairs.
Justification:	
Operating Impact:	<ul style="list-style-type: none"> Failure to update the current labeling and include the new facilities will present a danger to staff and place the division in violation of current regulations and policy. Updates to the regulatory standards has also occurred in the intervening years furthering the need to replace the labels with ones that meet the current regulations and policies. Failure to provide the funding to develop the necessary procedures could lead to regulatory fines, equipment damage and potentially endanger personnel performing these tasks.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 1,000,000	\$ 1,000,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 1,000,000	\$ 1,000,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Water Enterprise
Programmatic



Authority Level 1:	19460-UW 525 Golden Gate - O & M
Authority Level 2:	17682-UW 525 Golden Gate - O & M
FSP ID	(NA)
Project Title:	525 Golden Gate - Operations & Maintenance
Total Budget:	\$ 48,319,300
Project Start:	
Project Finish:	
Current Active Phase:	Construction
Organization:	Programmatic
Project Manager:	[None]
Facility Category:	525 Golden Gate
Type:	Programmatic
Description:	This project is required to cover annual operating and maintenance costs of the building and generally reflects an increase of 3.0% per year. These costs include building engineering, property management, janitorial and maintenance service contracts.
Justification:	The headquarters for the San Francisco Public Utilities Commission, 525 Golden Gate, is a 13-story building plus basement for total building area of 277,500 square feet, which houses over 900 PUC employees. It is a LEED Platinum certified building that includes solar and wind renewable energy sources, an on-site wastewater system called the Living Machine, and Smart Building features with fully integrated systems.
Operating Impact:	None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 53,519,300	\$ 4,441,000	\$ 4,441,000	\$ 4,445,000	\$ 4,531,000	\$ 4,851,300	\$ 25,740,000
Total	\$ 53,519,300	\$ 4,441,000	\$ 4,441,000	\$ 4,445,000	\$ 4,531,000	\$ 4,851,300	\$ 25,740,000

SFPUC Capital Project Plan
Water Enterprise
Programmatic



Authority Level 1:	19461-UW 525 Golden Gate - Lease Pay
Authority Level 2:	17683-UW 525 Golden Gate - Lease Pay
FSP ID	(NA)
Project Title:	525 Golden Gate - Lease Payment
Total Budget:	\$ 88,738,196
Project Start:	
Project Finish:	
Current Active Phase:	Construction
Organization:	Programmatic
Project Manager:	[None]
Facility Category:	525 Golden Gate
Type:	Programmatic
Description:	This project provides financing to cover the planning and construction costs for the office building housing the SFPUC.
Justification:	The headquarters for the San Francisco Public Utilities Commission, 525 Golden Gate is a 13-story building plus basement for total building area of 277,500 square feet, which houses over 900 PUC employees. It is a LEED Platinum certified building that includes solar and wind renewable energy sources, an on-site wastewater system called the Living Machine, and Smart Building features with fully integrated systems.
Operating Impact:	None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 97,377,003	\$ 9,178,389	\$ 9,139,389	\$ 9,062,712	\$ 8,984,521	\$ 8,904,158	\$ 43,469,230
Total	\$ 97,377,003	\$ 9,178,389	\$ 9,139,389	\$ 9,062,712	\$ 8,984,521	\$ 8,904,158	\$ 43,469,230



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

Wastewater Enterprise

Fiscal Years 2023-2032

Ten Year CIP

Capital Projects
January 14, 2022

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15733-WW SSIP Program-wide Management
FSP ID	10015803/10029732
Project Title:	SSIP Phase 1 Program Management
Total Budget:	\$ 195,000,000
Project Start:	9/12011
Project Finish:	5/1/2029
Current Active Phase:	
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	SSIP Program-Wide
Type:	Capital

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

Justification: The SSIP capital program is being developed to address specific wastewater needs with prioritized projects and schedules that satisfy affordability and sustainability criteria. Asset Management, Condition Assessment, and Program Management activities will support the development and implementation of the SSIP. This project provides programmatic support to overall SSIP projects in order for them to meet the endorsed SSIP Level-of-Service (LOS) goals by providing full compliance with State and Federal regulatory requirements applicable to the treatment and disposal of sewage and stormwater, and Wastewater Enterprise (WWE) goal of providing a compliant, reliable, resilient, and flexible system that can respond to catastrophic events.

Operating Impact: The aging wastewater infrastructure needs replacement, improvements and modifications to ensure reliable performance and to meet future regulatory standards. Many of the collection system components and treatment processes have surpassed their useful lives. Failure of the wastewater system will result in non-compliance with State and Federal regulations that govern the operation of the wastewater system and will impair the City's ability to properly handle and dispose of wastewater and stormwater, which can lead to risk in the areas of: water quality/environmental, public health and safety.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 54,959,817	\$ 14,000,000	\$ 14,000,000	\$ 11,000,000	\$ 8,000,000	\$ 7,700,000	\$ 259,817
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 54,959,817	\$ 14,000,000	\$ 14,000,000	\$ 11,000,000	\$ 8,000,000	\$ 7,700,000	\$ 259,817

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15733-WW SSIP Program-wide Management
FSP ID	(N/A)
Project Title:	PM02
Total Budget:	\$ 145,000,000
Project Start:	
Project Finish:	
Current Active Phase:	
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	SSIP Program-Wide
Type:	Capital

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

Justification: The SSIP capital program is being developed to address specific wastewater needs with prioritized projects and schedules that satisfy affordability and sustainability criteria. Asset Management, Condition Assessment, and Program Management activities will support the development and implementation of the SSIP. This project provides programmatic support to overall SSIP projects in order for them to meet the endorsed SSIP Level-of-Service (LOS) goals by providing full compliance with State and Federal regulatory requirements applicable to the treatment and disposal of sewage and stormwater, and Wastewater Enterprise (WWE) goal of providing a compliant, reliable, resilient, and flexible system that can respond to catastrophic events.

Operating Impact: The aging wastewater infrastructure needs replacement, improvements and modifications to ensure reliable performance and to meet future regulatory standards. Many of the collection system components and treatment processes have surpassed their useful lives. Failure of the wastewater system will result in non-compliance with State and Federal regulations that govern the operation of the wastewater system and will impair the City's ability to properly handle and dispose of wastewater and stormwater, which can lead to risk in the areas of: water quality/environmental, public health and safety.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 102,300,000	\$ 0	\$ 0	\$ 4,000,000	\$ 7,000,000	\$ 7,300,000	\$ 70,000,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 102,300,000	\$ 0	\$ 0	\$ 4,000,000	\$ 7,000,000	\$ 7,300,000	\$ 70,000,000

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15733-WW SSIIP Program-wide Management
FSP ID	10029733
Project Title:	Land Reuse of 1800 Jerrold Avenue
Total Budget:	\$ 44,354,150
Project Start:	9/17/2013
Project Finish:	12/31/2019
Current Active Phase:	
Organization:	SSIP
Project Manager:	Shelby Campbell
Facility Category:	SSIP Program-Wide
Type:	Capital
Description:	This project includes the acquisition of this site for possible near-term and long-term SFPUC use. This 6.04 acre site on Jerrold Avenue between Quint and Rankin, is adjacent to the Southeast Plant and is currently occupied by another city department, Fleet Management under the Office of Contract Administration. The site is used as a central shop for vehicle repairs. Acquisition of the site by the SFPUC would be beneficial because there are very few empty or underutilized sites around the SEP; and, after completion of any necessary planning and environmental review, this site can serve a variety of functions to support the SEP's short and long term efforts.
Justification:	Project completed, no additional funding is requested.
Operating Impact:	Project completed, no additional funding is requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15733-WW SSIIP Program-wide Management
FSP ID	10029734
Project Title:	Land Reuse of 1801 Jerrold Avenue
Total Budget:	\$ 5,100,000
Project Start:	9/30/2013
Project Finish:	6/30/2022
Current Active Phase:	
Organization:	SSIP
Project Manager:	Shelby Campbell
Facility Category:	SSIP Program-Wide
Type:	Capital
Description:	This project includes the acquisition of this site for SFPUC both near-term and long-term use. This 1.54 acre site is currently under the jurisdiction of the Department of Public Works. It was formerly used as an asphalt plant that has not been operational for many years. Acquisition of the site by the SFPUC would be beneficial because there are very few empty or underutilized sites around the SEP; and, after completion of any necessary planning and environmental review, this site can serve a variety of functions to support the SEP's short and long term efforts.
Justification:	Project completed, no additional funding is requested.
Operating Impact:	Project completed, no additional funding is requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr						
Authority Level 2:	15733-WW SSIP Program-wide Management						
FSP ID	10015553						
Project Title:	Biofuel Alternative Energy						
Total Budget:	\$ 1,857,887						
Project Start:	7/1/2011						
Project Finish:	3/31/2016						
Current Active Phase:	SSIP						
Organization:	SSIP Program-Wide						
Project Manager:	Carolyn Chiu						
Facility Category:	SSIP Program-Wide						
Type:	Capital						
Description:	The Biofuel/Alternative Energy Program will determine if it is feasible and cost-effective for the SFPUC to generate bioenergy (e.g. Biogas or cogenerated power) as a byproduct of processing the fats, oils, and grease (FOG) and/or food waste collected throughout the City. Feasibility will be determined through pilot studies and analysis that will evaluate whether adoption of Biogas programs into the SFPUC's wastewater infrastructure (collection systems and/or treatment processes) would reliably and cost effectively enhance performance and sustainability.						
Justification:	Project completed, no additional funding is requested.						
Operating Impact:	Project completed, no additional funding is requested.						
Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15728-WW SSIP Biosolids-digester Project
FSP ID	10015796
Project Title:	Biosolids/Digester Project
Total Budget:	\$ 2,372,615,289
Project Start:	7/1/2011
Project Finish:	5/1/2029
Current Active Phase:	SSIP
Organization:	SSIP
Project Manager:	Carolyn Chiu
Facility Category:	Treatment Facilities
Type:	Capital
Description:	This project would provide a new digester and solids handling facility, replacing the existing aged and failing facility at the Southeast Plant (SEP). The new facility would include updated/modern treatment processes, producing Class A (EPA 40 CFR 503) biosolids. Biosolids treatment processes would include solids thickening, screening, pre-Thermal Hydrolysis Pretreatment (THP) dewatering, THP, digestion, post-THP dewatering, gas handling, biogas utilization, odor control, and associated operations and maintenance facilities. The facility will promote the beneficial reuse of resources for sustainability and other environmental benefits.
Justification:	The existing digester and solids handling system are extremely operation and maintenance intensive. Constructed in 1952, the SEP digesters are currently operating well beyond their useful lives. There is visible corrosion of structural elements and frequent failures of digester roof covers. Due to the aging infrastructure, the digester facility has become a known source of nuisance odors in the surrounding neighborhood. Constructing a new facility that produces biosolids meeting Class A requirements would ensure future reliable and sustainable treatment, disposal, and reuse of biosolids. Construction of a replacement facility is much needed to maintain permit compliance and reliability.
Operating Impact:	Replacement of the aging digester facility is critically needed. The failure of the digestion and/or solids handling processes would be catastrophic, resulting in large volumes of undigested sludge requiring special transport and disposal. The City's ability to treat wastewater will be compromised, resulting in severe public health, safety, regulatory, and environmental impacts. Construction of a replacement facility is much needed to maintain permit compliance and reliability.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 113,442,569	\$ 28,698,653	\$ 29,022,242	\$ 30,053,988	\$ 1,452,908	\$ 24,214,799	\$ 0
CN	\$ 1,261,505,838	\$ 375,532,448	\$ 342,463,471	\$ 313,104,164	\$ 213,530,466	\$ 15,860,761	\$ 1,014,527
Total	\$ 1,374,948,427	\$ 375,532,448	\$ 371,162,124	\$ 342,126,406	\$ 243,584,454	\$ 17,313,669	\$ 25,229,326

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	10015807
Project Title:	SEP New Headworks (Grit) Replacement
Total Budget:	\$ 679,025,000
Project Start:	3/1/2013
Project Finish:	9/30/2024
Current Active Phase:	Construction
Organization:	SSIP
Project Manager:	Jignesh Desai
Facility Category:	Treatment Facilities
Type:	Capital
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-Compactors 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 substations; 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.

Justification: The SEP has two existing Headworks facilities, and both have reached the end of their useful service life. The existing facilities do not meet the current seismic standards. In addition, these Headworks facilities are inefficient in capturing grit. As a result, the downstream liquid and solids treatment processes get overwhelmed with grit, reducing process performance and available volume capacity.

Operating Impact: The South East Plant (SEP) New 250 MGD Headworks project will ensure that the SEP remains operationally compliant with State and Federal regulatory requirements, increases reliability, and provides the ability to respond to a full range of operating requirements by utilizing the latest technology in treatment and instrumentation. SEP New Headworks will include architectural components and will have major odor control systems to meet the Commission endorsed Goals and Levels of Service, reducing the negative impacts to the surrounding neighborhoods.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
GM	\$ 600,499	\$ 0	\$ 0	\$ 600,499	\$ 0	\$ 0	\$ 0
CN	\$ 26,213,120	\$ 18,443,061	\$ 7,770,059	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 26,813,619	\$ 18,443,061	\$ 7,770,059	\$ 600,499	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	10026824
Project Title:	SEP Oxygen Generation Plant
Total Budget:	\$ 11,135,740
Project Start:	8/23/2012
Project Finish:	6/10/2016
Current Active Phase:	SSIP
Organization:	Jignesh Desai
Project Manager:	Treatment Facilities
Facility Category:	Capital
Type:	Capital
Description:	The Oxygen Generation Plant (SEP01) involved installation of two packaged vacuum pressure swing absorption (VPSA) oxygen generation systems to provide gaseous oxygen (GOX) supply.
Justification:	This project was part of a group of projects previously approved to address the liquid treatment portion of the improvements at SEP to complete some imminent upgrades to the existing digester facility until the new biosolids facility is constructed.
Operating Impact:	Project completed, no additional funding is requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
GM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	10015808
Project Title:	SEP Existing Digester Roof Repairs
Total Budget:	\$ 15,438,647
Project Start:	
Project Finish:	
Current Active Phase:	
Organization:	SSIP
Project Manager:	Murat Bozkurt
Facility Category:	Treatment Facilities
Type:	Capital
Description:	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.
Justification:	Project completed, no additional funding is requested.
Operating Impact:	Project completed, no additional funding is requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PI	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	10026825
Project Title:	SEP Primary and Secondary Clarifier Upgrades
Total Budget:	\$ 32,583,576
Project Start:	7/1/2013
Project Finish:	1/21/2019
Current Active Phase:	
Organization:	SSIP
Project Manager:	Jignesh Desai
Facility Category:	Treatment Facilities
Type:	Capital
Description:	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.
Justification:	Project completed, no additional funding is requested.
Operating Impact:	Project completed, no additional funding is requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PI	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	10002192
Project Title:	SEP 521/522 and Disinfection Ujgr (SEP Bid Replace)
Total Budget:	\$ 45,016,932
Project Start:	
Project Finish:	
Current Active Phase:	
Organization:	SSJIP
Project Manager:	Murat Bozkurt
Facility Category:	Treatment Facilities
Type:	Capital
Description:	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.
Justification:	In order to meet SSJIP Level of Service goals and anticipated future plant demands, the Post-Chlorination Building and electrical and hydraulic controls needed upgrades. This project will also provide higher flow capacity W3 pumps to meet future treatment plant needs.
Operating Impact:	The Southeast Plant (SEP) 521 and 522 facilities remain operationally compliant with State and Federal regulatory requirements.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	10002220
Project Title:	SEP Primary Sludge Handling Improvements
Total Budget:	\$ 2,064,253
Project Start:	
Project Finish:	
Current Active Phase:	
Organization:	SSJIP
Project Manager:	Murat Bozkurt
Facility Category:	Treatment Facilities
Type:	Capital
Description:	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 WWRE R&R program for consideration.
Justification:	Project completed, no additional funding is requested.
Operating Impact:	Project completed, no additional funding is requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	10015809
Project Title:	SEP Facility-wide DCS Control Upgrades
Total Budget:	\$ 62,987,772
Project Start:	2/13/2014
Project Finish:	12/30/2027
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Maria Kristel Cruz
Facility Category:	Treatment Facilities
Type:	Capital
Description:	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 (NPWF), 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, NPWF, 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.
Justification:	This is phase 1 of a system-wide project that is scoped to replace the existing wastewater DCS that was installed back in the 1990s. This automation system is essential to ensure delivery of reliable & good quality sewer services in the City of San Francisco. This SEP DCS focused project also supports the implementation of other Sewer System Improvement Program (SSIP) projects such as the new Biosolids and the new Headworks projects, which are scoped to deliver innovative, state-of-the-art instrumentation and processes at SEP.
Operating Impact:	The distributed control system is the primary control system that Wastewater Enterprise (WWE) uses in order to provide reliable combined sewer system services in San Francisco.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 685,682	\$ 0	\$ 685,682	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 912,773	\$ 0	\$ 912,773	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 15,035,222	\$ 0	\$ 11,300,343	\$ 916,439	\$ 916,439	\$ 916,439	\$ 985,562
Total	\$ 16,633,877	\$ 0	\$ 12,898,998	\$ 916,439	\$ 916,439	\$ 916,439	\$ 985,562

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	10015810
Project Title:	SEP Seismic Reliability and Condition Assessment I
Total Budget:	\$ 44,152,197
Project Start:	6/3/2013
Project Finish:	9/9/2022
Current Active Phase:	Construction
Organization:	SSIP
Project Manager:	Murat Bozkurt
Facility Category:	Treatment Facilities
Type:	Capital
Description:	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, and 6' reinforced concrete pipe from SEP 540 to Booster Pump Station, Conduits C/DE, SEP 525 Box Channel, and 9' reinforced concrete pipe to Junction Structure #5) will be completed.
Justification:	Various facilities and equipment in the SEP are exposed to highly corrosive conditions and require repair or replacement or are nearing the end of their useful life. In order to meet SSIP Level of Service (LOS) goals, this project will retrofit essential structures that are not covered in other near-term SSIP Phase 1 project. The existing facilities do not meet the current seismic standards. At the end of this project, within 72 hours, SEP will be able to operate in dry weather mode after a major earthquake.
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	10026826
Project Title:	SEP Existing Digester Gas Handling Improvements
Total Budget:	\$ 15,876,503
Project Start:	6/16/2014
Project Finish:	2/29/2020
Current Active Phase:	SSJIP
Organization:	Murat Bozkurt
Project Manager:	Treatment Facilities
Facility Category:	Capital
Type:	Capital
Description:	As part of the Sewer System Improvement Program (SSJIP), 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 South East Plant (SEP) until all planning, design, construction, and commissioning activities for new facilities are completed. 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, OCU and upgrading ventilation and OCUs, roof replacement and air compressor. (BAAQMD Permit Application) will also be completed.
Justification:	Many of the facilities reached its useful life. Until the new biosolids handling facility is in operation, the existing digesters and associated facilities needs to be repaired and/or improved in order to continue to be functional and operational.
Operating Impact:	The existing digesters and associated facilities will be more reliable after completion of this project.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	10002284
Project Title:	SEP Power Feed and Primary Switchgear Upgrades
Total Budget:	\$ 95,875,000
Project Start:	6/23/2014
Project Finish:	8/21/2024
Current Active Phase:	Construction
Organization:	SSJIP
Project Manager:	Roland Sun
Facility Category:	Treatment Facilities
Type:	Capital
Description:	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 ("SSJIP") 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 SSJIP, 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.
Justification:	The new power system will provide adequate power for the existing SEP electrical loads and new SSJIP facilities demand and peak loads, as well as a reliable and resilient electrical system that can respond to catastrophic events. The project will enhance the ability of SEP operations to maintain full compliance with State and Federal regulatory requirements and meet the SSJIP LOS goals.
Operating Impact:	The existing primary switch station and majority of substations have reached the end of their useful service life. Construction of an upgraded power system with redundant electric service and additional capacity is essential to provide SEP operations the ability to meet the power demands of treatment facilities and remain operationally compliant with State and Federal regulatory requirements.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 14,857,862	\$ 0	\$ 14,857,862	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	10015811
Project Title:	SEP Oxygen Generation Plant 01
Total Budget:	\$ 8,687,217
Project Start:	
Project Finish:	
Current Active Phase:	SSJIP
Organization:	
Project Manager:	Murat Bozkurt
Facility Category:	Treatment Facilities
Type:	Capital
Description:	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.
Justification:	This project will ensure the new LOX facility meets permit requirements and safety codes.
Operating Impact:	This Waste Water Enterprise (WWE) will be able to operate SEP 200 Aeration tanks in a much more reliable way in addition to meeting permit and safety requirements.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	10037353
Project Title:	SEP 550 Booster PS Condition Inspection & Interim
Total Budget:	\$ 20,288,184
Project Start:	1/12/2021
Project Finish:	2/24/2027
Current Active Phase:	Pre-Construction
Organization:	SSJIP
Project Manager:	Murat Bozkurt
Facility Category:	Treatment Facilities
Type:	Capital
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 firm 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).
Justification:	Booster Pump Station was constructed in 1967 and upgraded in 2002, and operates in dry and wet weather. The pump station supplies the necessary head pressure to pump and convey up to 110 MGD of treated effluent from Southeast Plant (SEP) to the Bay through the Southeast Bay Outfall. During wet weather when flows exceed the design capacity of Booster Pump Station, treated effluent may also be discharged from the Quint Street Outfall located in Islais Creek. An initial look at the pump wet wells in 2015 indicated that two of the four wet wells exhibit deterioration of the below grade structural elements such as structural distress of the beams and wet well dividing walls. An in-depth interior inspection was not performed at the time due to confined space and shutdown complications. This inspection, along with as-needed structural rehab is required to meet Operational Reliability level of service (LOS) Goals (State of Good Repair).
Operating Impact:	During Construction: Plant shutdowns and/or diversions through QSO are required to perform the condition assessments and likely, subsequent improvements. Post Construction: This project involves in-kind rehabilitation and replacement, and does not impact operations once the project is completed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 23,663	\$ 0	\$ 23,663	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,035,003	\$ 0	\$ 959,938	\$ 75,065	\$ 0	\$ 0	\$ 0
CM	\$ 3,234,100	\$ 0	\$ 0	\$ 1,304,063	\$ 1,581,761	\$ 0	\$ 0
CN	\$ 13,430,408	\$ 0	\$ 13,430,408	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 17,723,174	\$ 0	\$ 14,414,009	\$ 1,379,128	\$ 1,581,761	\$ 348,276	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	SEP, Booster PS, & BFS Security Enhancements
Total Budget:	\$ 35,759,000
Project Start:	1/18/2022
Project Finish:	12/10/2026
Current Active Phase:	Not Started
Organization:	SSJP
Project Manager:	Murat Bozkurt
Facility Category:	Treatment Facilities
Type:	Capital
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 table-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 (MDFR) to BFS, SEP, Fire Alarm, PA system, business network and radio communications.
Justification:	A security evaluation was performed in 2017 to identify the security risks towards WWC facilities, assets, staff, and operations from outside malevolent acts. The evaluation identified improvements at the Southeast Water Pollution Control Plant, Islais Creek (Booster) Pump Station & Bruce Flynn Pump Station (BFS). As part of the Health, Safety & Security level-of-service (LOS) goal, security measures at these sites shall be enhanced to protect staff, assets, and facilities.
Operating Impact:	Security of these facilities are very important to operate safely and securely.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 5,000,000	\$ 5,000,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 445,528	\$ 0	\$ 445,528	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,693,611	\$ 0	\$ 1,435,926	\$ 257,685	\$ 0	\$ 0	\$ 0
CM	\$ 5,312,000	\$ 0	\$ 0	\$ 2,084,478	\$ 3,061,022	\$ 186,500	\$ 0
CN	\$ 20,955,000	\$ 0	\$ 0	\$ 10,477,500	\$ 10,477,500	\$ 0	\$ 0
Total	\$ 33,406,139	\$ 5,000,000	\$ 1,881,454	\$ 12,819,663	\$ 13,538,522	\$ 186,500	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Oxygen Generation (SEP 275) Reliability Upgrades
Total Budget:	\$ 12,288,109
Project Start:	7/5/2033
Project Finish:	1/7/2038
Current Active Phase:	Not Started
Organization:	SSJP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital
Description:	An evaluation of the VPSA oxygen generation system is required and should include a root cause analysis to determine why the existing oxygen system is not operating per design. Measures to reliably meet current oxygen demands and long-term alternatives such as adding or replacing VPSA modules, or replacing the entire system with an alternative oxygen supply system, should also be evaluated. Future projected oxygen demands should be considered, which may change based on plant operation modifications. If more stringent nutrient removal regulations are imposed in the future, South East Plant (SEP) will no longer employ a pure oxygen process. The cost allowance for the project is based on adding a third module to the current VPSA system to provide redundancy, although this is not necessarily the preferred outcome for the project.
Justification:	The vacuum pressure swing adsorption (VPSA) units at SEP 275 supply oxygen to the aeration tanks for secondary treatment. The system was designed to operate via one duty VPSA unit (with another VPSA on standby). However, the units have not been able to operate at their design capacity and accordingly, operation of both duty and standby VPSA units are needed to meet oxygen demands. The plant also has liquid oxygen (LOX) that can be used as an emergency backup. However, this system is not intended to be a dedicated standby system, as it involves continuous trucking of LOX to the site which disturbs neighboring communities and interferes with site construction work.
Operating Impact:	The VPSA units cannot meet their design capacity, are unreliable, and often need to be taken offline for maintenance. To meet Operational Reliability (Provide Continued Operation, Maintenance and Regulatory Compliance) level-of-service (LOS) goals, an oxygen generation reliability upgrade is required. During construction: Short-term plant shutdowns and/or diversions may be required to facilitate construction work, depending on the construction scheduling and installation methods for the new oxygen system. Post Construction: Depending on the outcomes of the process evaluation, the project may have an impact on long-term future operations if a new oxygen process is selected.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	10037776
Project Title:	SEP Facilities Interim H&S Imp (SEP 850 & 930)
Total Budget:	\$ 5,000,000
Project Start:	3/1/2022
Project Finish:	9/4/2026
Current Active Phase:	Not Started
Organization:	SSJP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital

Description:
The SEP Buildings 850, 930, and 940 project involves health and safety improvements. 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).

Justification:
A condition assessment of the SEP was completed in November 2013. The findings, conclusions, and recommendations were reviewed in detail with WVE O&M and Infrastructure staff in subsequent workshops, and input was incorporated into the Final Report. The condition assessments revealed various health and safety improvement needs. Health and safety improvement needs were identified at the Operators Building & Engineering Offices, Administration Building, and Maintenance Building which are occupied daily. These buildings are slated for replacement as part of the future SEP Campus Vision. While this long-term site programming strategy is developed the following issues need to be addressed to meet Health, Safety & Security LOS goals.

Engineering Building does not have power-assisted door opening devices; There is leakage within the building and the walls and suspended ceilings exhibit water damage; There is no fall protection for rooftop maintenance access requirements at the southwest corner of the low roof; The columns at one end of the building are potentially unsafe; The HVAC system needs replacement.
Admin Building has insufficient emergency lighting; The HVAC rooftop room has no door landing on the push side; There is no fall protection at rooftop hatches and equipment that are within 10 feet from the edge of the roof (per current CBC); The MCC room on the second floor has inadequate ventilation; Furniture and accessories are blocking the fire-corridor on the second floor; There is water ponding at the lower roof near the access ladder to upper roof; The lab fume hood ventilation needs to be repaired; There may be deficiencies with power-assisted door opening devices; Maintenance Building has insufficient emergency lighting, exit signs and the building has tripping hazards.

Operating Impact:	N/A						
Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 4,245,155	\$ 0	\$ 4,245,155	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 4,245,155	\$ 0	\$ 4,245,155	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	10037330
Project Title:	Primary Treatment (SEP 040/041) H&S Improvements
Total Budget:	\$ 27,382,164
Project Start:	1/4/2021
Project Finish:	9/30/2026
Current Active Phase:	Pre-Construction
Organization:	SSJP
Project Manager:	Mazin Hijazi
Facility Category:	Treatment Facilities
Type:	Capital


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 040, 041, and 043 are all located within the Southeast Treatment Plant Streamline Moderne Industrial Historic District, SEP 040/041 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.

Justification:
SEP 040/041 were built in the 1950s and served as SEP's only primary treatment facility until a newer primary treatment facility (SEP 042) was constructed in the 1980s. The primary sedimentation tanks in SEP 040/041 provide additional operational flexibility, currently providing added capacity to SEP 042 tanks to handle wet weather flows as well as to serve as a backup during dry weather conditions when some or all tanks at SEP 042 need to be taken offline. Although numerous R&R projects have provided more modern equipment over the years, much of the existing equipment and infrastructure in SEP 040/041 shows signs of deterioration and needs to be replaced due to failure or high risk of failing.

Operating Impact:
During Construction: Wet weather constraints.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 23,446	\$ 0	\$ 23,446	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 44,733	\$ 0	\$ 44,733	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 2,651,005	\$ 0	\$ 511,527	\$ 1,092,833	\$ 929,856	\$ 116,789	\$ 0
CN	\$ 20,193,140	\$ 0	\$ 10,000,000	\$ 0	\$ 0	\$ 10,193,140	\$ 0
Total	\$ 22,912,324	\$ 0	\$ 10,579,706	\$ 1,092,833	\$ 929,856	\$ 10,309,929	\$ 0


SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Secondary Clarifiers (SEP 230) Rehabilitation
Total Budget:	\$ 51,952,231
Project Start:	10/3/2022
Project Finish:	9/30/2027
Current Active Phase:	
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital
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).
Justification:	The purpose of the secondary clarifiers (SEP 230) is to separate the activated sludge in the mixed liquor from the treated wastewater. Return activated sludge (RAS) is returned to the aeration tanks and waste activated sludge (WAS) is transferred to the solids handling facilities. The sedimentation tanks consist of sixteen reinforced concrete circular tanks which are divided into two groups of eight, designated as the North and South clarifiers by their relative position on the plant site. Equipment included in SEP 230 includes diffusers to mix the flow in the mixed liquor channels, gates and valves to control flow and sludge/scum collection equipment in the clarifiers. A condition assessment study of SEP was implemented between 2012 and 2013, which identified structural deficiencies and needs for equipment replacement. The SEP condition assessment identified that structural rehabilitation of the clarifiers is needed. The clarifiers were found to be corroded and failure of existing clarifier related components had contributed to numerous and repeated temporary repairs and extended clarifier downtime. Through the CWWS/SEP04/WW-626 Primary & Secondary Clarifier Upgrades Project, concrete spill repair, secondary clarifier mechanism replacement, and clarifier concrete coating were completed for eight of the sixteen tanks as part of a phased implementation approach, to meet Operational Reliability (State of Good Repair) LOS goals, this project addresses rehabilitation works for the remaining eight tanks. During Construction: While short-term shutdowns and/or diversions are not expected, work should be coordinated outside of wet weather when possible as the clarifiers will need to be taken offline for inspection and to facilitate construction work. Post Construction: This project involves in-kind rehabilitation and replacement and will not impact future operations once construction is complete.
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,869,425	\$ 1,687,675	\$ 181,750	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 467,970	\$ 422,112	\$ 45,458	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 7,670,040	\$ 0	\$ 3,168,558	\$ 2,598,482	\$ 0	\$ 0	\$ 0
CM	\$ 7,481,634	\$ 0	\$ 908,248	\$ 3,646,965	\$ 2,831,853	\$ 94,568	\$ 0
CN	\$ 36,366,562	\$ 0	\$ 7,273,312	\$ 18,183,281	\$ 10,909,969	\$ 0	\$ 0
Total	\$ 51,952,231	\$ 2,109,787	\$ 9,395,766	\$ 10,780,042	\$ 21,830,246	\$ 13,741,822	\$ 94,568

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	New Trades and Maintenance Buildings
Total Budget:	\$ 68,178,928
Project Start:	10/3/2022
Project Finish:	9/30/2028
Current Active Phase:	
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital
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 and SEP 870: Site clearance includes demolition of both SEP 850 and SEP 870, and 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 Jerrald 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. This project would provide space for the Trades, Mechanical Maintenance, and shower and locker facilities for the Plant. In preparation for the BDFP project, Trades was relocated from SEP 870 to the North Point Facility. Mechanical Maintenance was relocated to overcrowded conditions in SEP 940. Showers and locker facilities are no longer safe for occupancy without a substantial investment to upgrade the buildings. Replacement of SEP 850 has become a priority due to its disrepair, but also because the opportunity to capture greater economies by expanding the footprint to accommodate the displacement of these groups, makes it prime location for construction of the trades, maintenance and locker facilities needed for the SEP campus. This project is part of an overall strategy to renovate the SEP Campus, with key objectives being: Create a campus environment and plan for future needs; Maximize SFPUC property assets and create new opportunities for the SFPUC and the community; Connect people, process, and place in a safe and healthy work environment; Respond to the surrounding urban fabric and demonstrate the SFPUC's investment in the community. During Construction: SEP-515 bisulfite tanks need to be relocated (through another project) prior to demolition of Building 850.
Justification:	
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 2,351,963	\$ 2,351,963	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 613,610	\$ 613,610	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 7,366,272	\$ 1,841,568	\$ 5,524,704	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 10,121,833	\$ 0	\$ 0	\$ 6,129,448	\$ 3,837,615	\$ 154,770	\$ 0
CN	\$ 47,725,250	\$ 0	\$ 0	\$ 31,816,833	\$ 15,908,417	\$ 0	\$ 0
Total	\$ 68,178,928	\$ 4,807,141	\$ 5,524,704	\$ 37,946,281	\$ 19,746,032	\$ 154,770	\$ 0


SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	SEP Condition Improvement Projects - Part 1
Total Budget:	\$ 22,479,270
Project Start:	9/15/2031
Project Finish:	3/9/2037
Current Active Phase:	Not Started
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital
Description:	Specific rehabilitation and mechanical equipment related work include, Primary Sed Tanks (SEP 042) Rehab; Evaluate primary effluent butterfly valves and isolation sluice gates; Repair exposed aggregate and concrete spalling on deck; Evaluate influent gates A, B & C on top of deck (gate C is leaking on Headworks construction site); Install emergency lighting in the below grade gallery. Plant Effluent Control Structure (SEP 540) Rehab; Repair piping and evaluate mixers; Sodium Bisulfite Tanks (SEP 515) Rehab; Replace sump pumps, recirculation pump, storage tanks, valves on transfer pumps, and address corrosion on pump unit; Evaluate the feasibility of relocating the system closer to the Headworks area; Assess health and safety signage on tank (was observed to be inconsistent) and replace if required; Evaluate safety barrier at top of ladder, (none observed) and install if required.
Justification:	Improvements needed to address aging infrastructure and State of Good Repair.
Operating Impact:	Schedule Sed Tank work to occur during dry weather. Coordination needed for start up of new Sodium Bisulfite tanks and decommissioning of existing tanks.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 664,000	\$ 523,783	\$ 140,207	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 1,130,000	\$ 778,044	\$ 607,302	\$ 344,654	\$ 0	\$ 0	\$ 0
DS	\$ 7,710,000	\$ 0	\$ 803,442	\$ 829,597	\$ 76,961	\$ 0	\$ 0
CM	\$ 2,981,000	\$ 89,974	\$ 75,422	\$ 75,724	\$ 1,038,594	\$ 1,303,875	\$ 427,411
CN	\$ 15,994,270	\$ 0	\$ 0	\$ 0	\$ 5,792,455	\$ 7,388,336	\$ 2,813,479
Total	\$ 22,479,270	\$ 761,811	\$ 1,626,373	\$ 1,249,975	\$ 6,908,010	\$ 8,692,211	\$ 3,240,890


SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Pipe Gallery (SEP 960) Rehab
Total Budget:	\$ 14,591,564
Project Start:	10/1/2023
Project Finish:	3/29/2029
Current Active Phase:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital
Description:	Specific rehabilitation and mechanical equipment related work at SEP 960 includes an evaluation to identify structural deficiencies (cracks and infiltration); Repair structural deficiencies (cracks and infiltration); Replacing HVAC, sump pumps, and associated controls and wiring; Repairing all stairwell access lighting and perform concrete repairs; Improving access to the gallery (access hatches are generally inaccessible and very difficult to open)
Justification:	This project represents improvements to the existing facilities at SEP 960 (Pipe Gallery) identified to address aging, deterioration, and reliability of existing assets to meet the Operational Reliability level-of-service (LOS) goals (State of Good Repair).
Operating Impact:	During Construction: Short-term shutdowns or workarounds may be required to facilitate construction work. Post Construction: This project involves in-kind rehabilitation and replacement, and will not impact future operations once construction is complete.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 664,613	\$ 0	\$ 0	\$ 529,758	\$ 134,855	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,635,648	\$ 0	\$ 0	\$ 0	\$ 611,018	\$ 817,824	\$ 206,806
CM	\$ 2,077,208	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,077,208
CN	\$ 10,214,095	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 10,214,095
Total	\$ 14,591,564	\$ 0	\$ 0	\$ 529,758	\$ 745,873	\$ 817,824	\$ 12,498,109

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Aeration Tanks (SEP 200) Rehab-Cond Asmt and Plan
Total Budget:	\$ 2,226,544
Project Start:	1/1/2023
Project Finish:	7/31/2025
Current Active Phase:	
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital

Description: This project assumes condition assessment of Aeration Tanks 1 – 6 and 8. The work to be performed is similar in scope to Aeration Tank 7. The work will be performed over several dry weather periods to reduce impacts to Plant. Confined space internal inspections will be performed. Tasks include visual concrete assessment, Equipment visual assessment. Additional equipment may include the RAS splitter gates, sensors, and switchboards which feed the MCCs for aeration mixers, conduits, reassess design point for eight RAS butterfly valves, hydraulic conduit between SEP 042 and SEP 200, Parshall Flume underneath splitter box. Assessment or equipment is contingent upon access and availability of equipment asset information. Non-destructive concrete testing; testing concrete cores; Erection of scaffolding in stages requiring concrete core extraction; and, general recommendations for rehabilitation and improvements for concrete and equipment. Detailed structural evaluations will be performed in Project SEP 10B, which will continue this effort through design and construction.

Justification: A condition assessment study of SEP was implemented between 2012 and 2013, which identified structural deficiencies and needs for equipment replacement. In 2020, a confined space inspection and materials testing was performed inside Aeration Tank No.7. Only one train could be inspected due to operational and seasonal time constraints. The condition of the facility was documented, including the location and severity of notable defects, improvement recommendations were made, conceptual-level improvement costs were developed, and a structural evaluation was performed to assess the structural capacity of the facility under both static and seismic conditions. A full concrete rehabilitation was recommended on the interior of the entire SEP 200 facility to remove deteriorated concrete and restore the concrete surface to its original thickness. Based on the results of the exterior and interior wall calculations, the Aeration Tanks do not appear to have sufficient capacity to handle design seismic loads. To meet Operational Reliability LOS goals, it is recommended that additional inspections are performed for the remaining tanks to identify rehabilitation requirements at SEP 200. This project includes condition assessment and planning only. Project SEP-10B will continue the project through design and construction.

Operating Impact: During Construction: Plant shutdowns and/or diversions are not likely, as the project will be undertaken during the dry season when the facility can allow up to two tanks to be taken offline.
Post Construction: This project will not impact future operations.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 2,226,544	\$ 433,608	\$ 856,893	\$ 860,334	\$ 75,709	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 2,226,544	\$ 433,608	\$ 856,893	\$ 860,334	\$ 75,709	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	SEP Condition Improvement Projects - Part 2
Total Budget:	\$ 11,817,897
Project Start:	10/1/2030
Project Finish:	3/1/2035
Current Active Phase:	
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital

Description: Specific rehabilitation and mechanical equipment related work includes Mag Meter Vault (SEP 065) Condition Assessment; Evaluation of assets condition; Junction Structure (SEP 526) Sluice Gate Replacement; Assessment of sluice gates #5, #13 and #33 and rehabilitate or replace if required; Rehabilitation of Primary Influent Channel Dewatering (SEP 015); Patching and coating vault concrete; Repairing structural defects; Rehabilitating or replacing equipment and pipe supports; Rehabilitating Emergency Generator Building (SEP 990); Improving access to read engine data; and, replacing or repairing access door on generator to ensure it remains closed.

Justification: This list of improvements represents improvements to the existing facilities at SEP identified to address age, deterioration, and reliability of existing assets to meet the Operational Reliability LOS goals (State of Good Repair).

Operating Impact: During Construction: Short-term shutdowns or workarounds may be required to facilitate construction. Post Construction: This project involves in-kind rehabilitation and replacement and will not impact future operations once construction is complete.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 433,478	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 433,478
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,327,474	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 732,510
CM	\$ 277,073	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 8,272,527	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 10,310,562	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,165,988

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Treatment Plants DCS Support & Upgrades Project
Total Budget:	\$ 2,841,924
Project Start:	10/1/2027
Project Finish:	3/29/2035
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital
Description:	This project addresses distributed control system (DCS) support and upgrades within the Southeast Water Pollution Control Plant (SEP), Oceanside Water Pollution Control Plant (OSP), North Point Wet Weather Treatment Facility (NPF), Channel Pump Station (CHS), Westside Pump Station (WSS), and Bruce Flynn Pump Station (BFS). The intent of this project is to cover the support period as part of Emerson's contract for all the facilities noted above and various wastewater pump stations.
Justification:	The distributed control system (DCS) is the primary control system that WME uses in order to provide reliable combined sewer system services in San Francisco. Both hardware and software upgrades integrating 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.
Operating Impact:	During Construction: Short-term shutdowns and/or diversions are not expected; however process functions may be slightly impacted during construction and workarounds may be required to facilitate construction work. Post Construction: The new system will interface to the computerized maintenance management system (CMMS), which will allow SFPUC to better protect public assets. Maintenance planning may be based on predictive data about equipment condition and actual runtime.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 852,576	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 800,422
CN	\$ 1,989,347	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,989,347
Total	\$ 2,841,923	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,789,769


SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	10037331
Project Title:	Maintenance Building (SEP 940) Interim Improvement
Total Budget:	\$ 40,651,899
Project Start:	1/12/2021
Project Finish:	9/13/2028
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital
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).
Justification:	Currently, crews are shoehorned into facilities not designed for the maintenance of electronic equipment. A new robust shop area is essential to maintaining reliable treatment facilities. The new maintenance shops included under Blossolds Digester Facilities Project (BDFP) do not address these crews.
Operating Impact:	None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,397,099	\$ 0	\$ 827,768	\$ 569,331	\$ 0	\$ 0	\$ 0
CM	\$ 2,418,533	\$ 0	\$ 50,920	\$ 109,403	\$ 1,171,866	\$ 1,171,866	\$ 914,478
CN	\$ 33,809,002	\$ 0	\$ 881,584	\$ 569,049	\$ 10,943,254	\$ 10,943,254	\$ 10,871,861
Total	\$ 38,624,634	\$ 0	\$ 1,560,272	\$ 1,247,783	\$ 12,115,120	\$ 12,115,120	\$ 11,586,339

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Retrofit SEP 940 & Upgrade 930 (Scope 1)
Total Budget:	\$ 0
Project Start:	7/1/2033
Project Finish:	12/31/2035
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Treatment Facilities
Facility Category:	Capital
Type:	Capital
Description:	Elements included in this project will be further defined in subsequent planning efforts, but this project has been scoped to include the Retrofit of Southeast Plant (SEP) 940 and Upgrade of SEP 930. Built in 1981, SEP 940 is a maintenance building that allows for equipment storage and maintenance. It includes spare parts, utility water and a crane. Also included are office spaces, freight elevator, and restrooms. This project includes seismic retrofit, as well as structural rehab to extend its useful life. Equipment such as HVAC, MCC, compressor, roll-up doors, cranes, and hot water recirculation pumps will also be replaced under this project. Also built in 1981, SEP 930 currently serves as the primary center for plant administration, laboratory services, and overall supervisory control for the plant. Once staff is relocated to 1800 Oakdale and the new Northside Facility (where SEP 850 currently is), the laboratory will be upgraded and the building will be converted to include shared spaces such as training centers and meeting rooms. This project also includes seismic retrofit of the building, as well as structural rehabilitation to extend its useful life. Equipment such as HVAC, water heater, air compressors, vacuum pumps, elevators, UPS, MCC, and sump pumps will also be replaced as needed under this project.
Justification:	Changes to BDFP scope may impact SEP/NPF Campus Vision. Campus Vision will continue to be developed in CWWSP/PLP1.
Operating Impact:	Delay may prolong meeting seismic reliability (life safety) goals and the provision of updated People Facilities. 10-Yr CIP does not include funding for improvements from the Campus Vision.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Aeration Tank (SEP 200) Rehab - DESIGN & CONSTRUCT
Total Budget:	\$ 55,507,536
Project Start:	10/1/2026
Project Finish:	3/29/2033
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Treatment Facilities
Facility Category:	Capital
Type:	Capital
Description:	As a placeholder for the project cost estimate, the proposed improvements listed below are used as a basis. These assumptions and costs will be updated through the conceptual design development in SEP-10A and will be further informed by SEP-10B. This project (SEP-10C) will address the remaining four of eight aeration tanks; Address structural repairs identified from the interior inspection (a budget allowance is carried, but a firmer estimate to complete repairs will depend on the results of the inspection); Assess all interior equipment, especially mixers, paddles, and shafts, and repair/replace if required; Repair equipment; Evaluate the RAS splitter gate.
Justification:	A condition assessment study of SEP was implemented between 2012 and 2013, which identified structural deficiencies and needs for equipment replacement. In 2020, a confined space inspection and materials testing was performed inside Aeration Tank No.7. Only one tank could be inspected due to operational and seasonal time constraints. The condition of the facility was documented, including the location and severity of notable defects; improvement recommendations were made; conceptual-level improvement costs were developed, and a structural evaluation was performed to assess the structural capacity of the facility under both static and seismic conditions. A full concrete rehabilitation was recommended on the interior of the facility to remove deteriorated concrete and restore the concrete surface to its original thickness. Based on the results of the exterior and interior wall calculations, the Aeration Tanks do not appear to have sufficient capacity to handle design seismic loads.
Operating Impact:	Project SEP-10A includes condition assessment and planning. SEP-10B includes design and construction of four of eight aeration tanks. This project (SEP-10C) will continue the project through design and construction for the remaining aeration tanks. During Construction: Plant shutdowns and/or diversions are not likely, as the project will be undertaken during the dry season when the facility can allow up to two tanks to be taken offline. Post Construction: This project involves in-kind rehabilitation and replacement and will not impact future operations once construction is complete.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 6,551,117	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,924,271
CM	\$ 7,854,377	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 5,758,759
CN	\$ 40,432,128	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 40,432,128
Total	\$ 54,837,622	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 51,115,158

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15735-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Aeration Tank (SEP 200) Rehab - DESIGN & CONSTRUCT
Total Budget:	\$ 65,121,367
Project Start:	10/1/2030
Project Finish:	3/1/2038
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Treatment Facilities
Facility Category:	Capital
Type:	

Description: As a placeholder for the project cost estimate, the proposed improvements listed below are used as a basis. These assumptions and costs will be updated through the conceptual design development in SEP-10A and will be further informed by SEP-10B. This project (SEP-10C) will address the remaining four of eight aeration tanks. Address structural repairs identified from the interior inspection (a budget allowance is carried, but a firmer estimate to complete repairs will depend on the results of the inspection); Assess all interior equipment, especially mixers, paddles, and shafts, and repair/replace if required; Repair equipment; Evaluate the RAS splitter gates.

Justification: A condition assessment study of SEP was implemented between 2012 and 2013, which identified structural deficiencies and needs for equipment replacement. In 2020, a confined space inspection and materials testing was performed inside Aeration Tank No.7. Only one tank could be inspected due to operational and seasonal time constraints. The condition of the facility was documented, including the location and severity of notable defects. Improvement recommendations were made, conceptual-level improvement costs were developed, and a structural evaluation was performed to assess the structural capacity of the facility under both static and seismic conditions. A full concrete rehabilitation was recommended on the interior of the facility to remove deteriorated concrete and restore the concrete surface to its original thickness. Based on the results of the exterior and interior wall calculations, the Aeration Tanks do not appear to have sufficient capacity to handle design seismic loads.

Project SEP-10A includes condition assessment and planning. SEP-10B includes design and construction of four or eight aeration tanks. This project (SEP-10C) will continue the project through design and construction for the remaining aeration tanks.

Operating Impact: During Construction: Plant shutdowns and/or diversions are not likely, as the project will be undertaken during the dry season when the facility can allow up to two tanks to be taken offline.
Post Construction: This project involves in-kind rehabilitation and replacement and will not impact future operations once construction is complete.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 7,033,170	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,473,792
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 7,033,170	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,473,792

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP




Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	10028821
Project Title:	NPF Outfall System Rehabilitation
Total Budget:	\$ 18,183,639
Project Start:	5/22/2013
Project Finish:	10/31/2018
Current Active Phase:	SSIP
Organization:	Kirt Bavishi
Project Manager:	Treatment Facilities
Facility Category:	Capital
Type:	

Description: North Point Facility (NPF), 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 connector 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. Distributed Control System (DCS)/Telemetry System Upgrade; Includes upgrades to the communications, sensors, and control devices at NPF, as well as in the Treatment/Storage(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 South East Plant (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 grit.

Justification: Infrastructure improvements and modifications will ensure that the North Shore Wet Weather Pump Station and North Point Facility Outfall will remain operationally compliant with State and Federal regulatory requirements. The North Point Facility and associated facilities must be monitored and maintained to ensure reliable and safe operation during all wet weather conditions. The failure of any major component of the treatment processes could be catastrophic, compromising the City's ability to handle and treat wastewater, which could result in severe public health, safety, regulatory, and environmental impacts.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJF




Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	10026822
Project Title:	North Shore Wet Weather Pump St. Impr. and Disinfect
Total Budget:	\$ 55,000,000
Project Start:	8/15/2013
Project Finish:	12/29/2023
Current Active Phase:	Construction
Organization:	SSJF
Project Manager:	Kirit Bavishi
Facility Category:	Treatment Facilities
Type:	Capital

Description: 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 grt.

Justification: Infrastructure improvements and modifications will ensure that the North Shore Wet Weather Pump Station and North Point Facility Outfall will remain operationally compliant with State and Federal regulatory requirements. The North Point Facility and associated facilities must be monitored and maintained to ensure reliable and safe operation during all wet weather conditions. The failure of any major component of the treatment processes could be catastrophic, compromising the City's ability to handle and treat wastewater, which could result in severe public health, safety, regulatory, and environmental impacts.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 11,314,730	\$ 5,314,730	\$ 6,000,000	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 11,314,730	\$ 5,314,730	\$ 6,000,000	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJF



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Sedimentation (NPF 040/041) Tanks Condition Improv
Total Budget:	\$ 54,248,649
Project Start:	7/5/2022
Project Finish:	3/10/2031
Current Active Phase:	Not Started
Organization:	SSJF
Project Manager:	Michael Tran
Facility Category:	Treatment Facilities
Type:	Capital

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.

Justification: A condition assessment of the sedimentation buildings and tanks/channels were implemented as part of the North Point Facility Condition Assessment study between 2012 and 2013. The issues described above need to be addressed to meet Operational Reliability LOS goals for NPF 040, 041, and adjacent facilities. Based on WVE staff feedback, overall improvements are needed due to dilapidated conditions and various gaps in current operations.

Operating Impact: During Construction: There may be some disturbance to occupants during construction. There will need to be heavy coordination with operations staff to incorporate new improvements, particularly scheduling around wet weather season. Post Construction: There will be an overall facility improvement, including but not limited to structural rehabilitation, functional ingress / egress for occupants, and general operational reliability.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 555,117	\$ 0	\$ 555,117	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 2,408,788	\$ 0	\$ 0	\$ 1,564,189	\$ 811	\$ 202,834	\$ 640,954
DS	\$ 5,130,170	\$ 0	\$ 2,006,177	\$ 1,856,777	\$ 1,267,216	\$ 0	\$ 0
CM	\$ 7,315,035	\$ 0	\$ 0	\$ 105,178	\$ 111,367	\$ 1,652,620	\$ 5,445,870
CN	\$ 37,163,500	\$ 0	\$ 0	\$ 0	\$ 11,262,000	\$ 11,262,000	\$ 14,639,500
Total	\$ 52,572,610	\$ 0	\$ 2,561,294	\$ 3,526,144	\$ 12,641,394	\$ 13,117,454	\$ 20,726,324

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Admin Bldg (NPF 930) Evaluation & Interim H&S Impr
Total Budget:	\$ 7,934,054
Project Start:	1/3/2022
Project Finish:	2/3/2026
Current Active Phase:	Not Started
Organization:	SSIP
Project Manager:	Michael Tran
Facility Category:	Treatment Facilities
Type:	Capital
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 E&I; Inspect and replace guardrails/handrails; Install fire sprinklers, alarms, and exit lighting; Replace and install new lighting.
Justification:	NPF was constructed in the 1950s and the function of the facility has changed over time. The administration building on the Southside (NPF 930, including all basement levels) is deteriorating. All process equipment has been abandoned-in-place. The facility is currently functioning as an administration building and houses staff from the Collection System Division laboratory. An interim study will assess the short-term needs for the facility and include an alternatives evaluation to provide interim health and safety protection, including cordoning off abandoned areas or relocating the laboratory and employees. The evaluation will also consider the "NPF Future Facilities (Design, Demolition & Construction)" project, which is intended to provide a holistic view of all NPF facilities.
Operating Impact:	During Construction: Construction work may have an impact on day-to-day operations of staff and personnel who are stationed at this facility. Post-Construction: The project will have no impact on operations as the improvements are isolated to the administration building only, which has no process functions. There will be an overall benefit to operations as the occupants of the administration buildings will be able to perform job duties more efficiently.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 155,305	\$ 0	\$ 155,305	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 963,206	\$ 0	\$ 256,350	\$ 611,177	\$ 93,679	\$ 0	\$ 0
CN	\$ 5,550,185	\$ 0	\$ 2,174,378	\$ 2,874,107	\$ 501,700	\$ 0	\$ 0
Total	\$ 6,668,696	\$ 0	\$ 2,586,033	\$ 3,485,284	\$ 595,379	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Dechlorination Process (NPF 500) Evaluation & Inte
Total Budget:	\$ 5,603,878
Project Start:	7/1/2024
Project Finish:	11/9/2029
Current Active Phase:	Not Started
Organization:	SSIP
Project Manager:	Michael Tran
Facility Category:	Treatment Facilities
Type:	Capital
Description:	The interim rehabilitation components of the project at NPF 500 include but is not limited to: Repair deteriorated concrete surfaces; Leakage into the lower level pump room needs to be addressed; Repair or dechlorination of Palmer-Bowling flume (effective flow monitoring is needed and currently not available); Assess the dewatering system pumps and piping; dewatering pumps and suction lines to be inspected and repaired/replaced; Repair general piping, metal items corrosion; Upgrade/replace the HVAC systems; Evaluate if new sampling system is needed. If required, replace sample pumps and ISCO samplers, or provide a sampling system; Assess functional need for replacement of chlorine residual analyzers (currently not in use); Assess disinfection (typo contact) and dechlorination (bisulfite contact) functional needs; Evaluate condition of two seat water pumps. In addition, a process evaluation of the facility should be undertaken, which will involve evaluation of the long-term plan for the facility. This will determine whether the Roundhouse should be upgraded, or eliminated and replaced by another type of disinfection & dechlorination system.
Justification:	The Roundhouse (NPF 500) serves as temporary storage for chlorinated clarified wastewater and commercial-grade sodium bisulfite (NAHSO3) solution is metered into the roundhouse outlet. At workshops in 2017, OEM staff raised concerns over the structural integrity of the Roundhouse, and noted that a strategy needs to be developed to determine if the Roundhouse should be upgraded or eliminated and replaced by another type of dechlorination system. This project aims to develop the long-term dechlorination strategy, while performing interim structural repairs at the Roundhouse. Through the condition inspection in 2013, the interim structural repairs were recommended to meet the Operational Reliability Goals (State of Good Repair). The long-term strategy for the Roundhouse will be implemented at a later stage.
Operating Impact:	During Construction: Plant shutdowns and/or diversions are not likely, as the project will be undertaken during the dry season when the plant is offline. There will need to be a heavy coordination between the project delivery team and operations. Post Construction: Depending on the outcomes of the process evaluation, the project may have an impact on long-term future operations if a new dechlorination process is selected.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 36,135	\$ 0	\$ 0	\$ 0	\$ 36,135	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 361,911	\$ 0	\$ 0	\$ 0	\$ 181,733	\$ 180,178	\$ 0
CM	\$ 1,283,118	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,05,129	\$ 1,177,989
CN	\$ 3,922,714	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,566,104	\$ 356,610
Total	\$ 5,603,878	\$ 0	\$ 0	\$ 0	\$ 217,868	\$ 3,851,411	\$ 1,534,599

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	10037904
Project Title:	NPF & NSS Security Enhancements
Total Budget:	\$ 17,848,746
Project Start:	1/18/2022
Project Finish:	12/10/2026
Current Active Phase:	
Organization:	SSJIP
Project Manager:	Murat Bozkurt
Facility Category:	Treatment Facilities
Type:	Capital
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.
Justification:	A security evaluation was performed in 2017 to identify the security risks towards WWT facilities, assets, staff, and operations from outside malevolent acts. The evaluation identified improvements at the North Point Facility & North Shore Pump Station. As part of the Health, Safety, & Security LOS goal, security measures at these sites shall be enhanced to protect staff, assets, and facilities.
Operating Impact:	During Construction: None Post Construction: None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 140,711	\$ 0	\$ 140,711	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 680,346	\$ 0	\$ 591,908	\$ 98,438	\$ 0	\$ 0	\$ 0
CM	\$ 2,024,000	\$ 0	\$ 797,964	\$ 1,170,536	\$ 0	\$ 0	\$ 0
CN	\$ 12,402,316	\$ 0	\$ 12,402,316	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 15,257,373	\$ 0	\$ 732,619	\$ 13,298,718	\$ 1,170,536	\$ 55,500	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	NPF DCS Upgrades (Construction)
Total Budget:	\$ 11,072,530
Project Start:	1/1/2021
Project Finish:	12/30/2027
Current Active Phase:	
Organization:	SSJIP
Project Manager:	Maria Kristel Cruz
Facility Category:	Treatment Facilities
Type:	Capital
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 SSJIP Phase 1 project CWWSPSE07 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; DCS 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; Network switches and routers; Fiber optic patch panels and terminal panel; Network switches and routers. In order to provide real-time, system-wide monitoring and control, upgrades and improvements must be made to the Distributed Control System (DCS) system at Northpoint facilities.
Justification:	In order to provide real-time, system-wide monitoring and control, upgrades and improvements must be made to the Distributed Control System (DCS) system at Northpoint facilities.
Operating Impact:	During Construction: Process functions may be slightly impacted during installation and workarounds may be required to facilitate installation work. Post Construction: None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 3,175,146	\$ 0	\$ 671,693	\$ 815,160	\$ 815,160	\$ 815,160	\$ 57,973
CN	\$ 6,000,000	\$ 6,000,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 9,175,146	\$ 6,000,000	\$ 671,693	\$ 815,160	\$ 815,160	\$ 815,160	\$ 57,973

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	NPF Future Facilities (Design, Demolition & Constr
Total Budget:	\$ 0
Project Start:	7/1/2033
Project Finish:	12/31/2035
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Treatment Facilities
Facility Category:	Capital
Type:	Capital
Description:	Specific recommendations and strategies presented in the preceding studies will be implemented through this project. The current budget is based on an allowance. This project includes design, demolition, construction and will address the following facilities: Admin Building; Materials Testing Lab; Maintenance Facilities; Roundhouse/Dechlorination; Tunnels connecting the 'southside' of the plant with the 'northside'.
Justification:	NPF was originally constructed in the 1950s, but the function of the facility has changed once it was converted to operate only during wet-weather. As a result, there are a number of abandoned and/or repurposed facilities at NPF that have happened organically overtime. With age, many of these facilities have deteriorated and now pose health and safety risks. This project includes a comprehensive assessment and programming of staff facilities, including evaluation of the long-term needs for the abandoned and repurposed facilities, with the goal of identifying and prioritizing "people program" upgrades and projects that are required to create a safe and healthy work environment for WVE staff.
Operating Impact:	During Construction: Plant shutdowns and/or diversions are not likely, as the project impacts mainly staff facilities. Post Construction: Depending on the outcomes of the dechlorination process evaluation, the project may have an impact on long-term future operations if a new process is selected.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	North Shore PS (WW) Improvements
Total Budget:	\$ 15,250,121
Project Start:	10/1/2024
Project Finish:	9/1/2029
Current Active Phase:	Not Started
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital
Description:	A condition assessment of the NSS should be performed at the start of this project once CWMSIPTNP02 is completed. The following improvements are carried as allowances, and should be confirmed during the planning phase: Replace the existing wet weather bar screen, add screening washer, and slide gate; Evaluate washer compactors; Evaluate current 800 KW generator; Evaluate effluent flow monitoring; Replace air compressor tank for bubbler system; Replace air compressors (2) for service air system; Evaluate and replace No.2 Water piping; Replace blowers for channel aeration system and install piping for testing and startup; Evaluate electrical equipment, hydraulic system components, washdown pumps, flushing pumps, sump pumps, suction, and discharge pipe; Address water leakage through concrete on the stairway from ground level to level 1. North Shore Pump Station (NSS) is located between Bay Street and North Point Street, and extends inside the property lines of the North Point Wet Weather Facility (NPF). NSS is designed to handle the raw sewage and storm runoff accumulated from the Jackson Street and Marina 1/5 and Beach Street Sewers. In dry weather, flows are conveyed to Channel Pump Station. In wet weather, flows are conveyed to NPF. A project (CWMSIPTNP02) is underway to provide operational reliability and shared redundancy during an unplanned outage. While that project addresses facility-wide improvements, the focus of the project is for dry weather operation. This project aims to address the Operational Reliability LOS goal (state of good repair) that may not be covered in the Phase 1 project.
Justification:	During Construction: Facility shutdowns and/or diversions will not likely be required, as the project predominantly involves the wet weather facilities, and construction will be undertaken during the dry season when the wet weather facilities are not in use. Post Construction: This project involves in-kind rehabilitation and replacement and will not affect future operations.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 552,368	\$ 0	\$ 0	\$ 477,863	\$ 74,505	\$ 0	\$ 0
ER	\$ 137,249	\$ 0	\$ 0	\$ 118,737	\$ 18,512	\$ 0	\$ 0
DS	\$ 1,699,189	\$ 0	\$ 0	\$ 0	\$ 1,145,003	\$ 554,166	\$ 0
CM	\$ 2,186,229	\$ 0	\$ 0	\$ 0	\$ 0	\$ 187,359	\$ 1,998,870
CN	\$ 10,675,086	\$ 0	\$ 0	\$ 0	\$ 0	\$ 852,708	\$ 9,822,378
Total	\$ 15,250,121	\$ 0	\$ 0	\$ 596,600	\$ 1,238,020	\$ 1,594,253	\$ 11,821,248

SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID:	(N/A)
Project Title:	North Point Outfall Diffuser Rehab
Total Budget:	\$ 28,541,107
Project Start:	10/29/2032
Project Finish:	3/1/2036
Current Active Phase:	
Organization:	SSJP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital
Description:	The condition assessment and repair work of the North Point Outfall should include: External inspection of the outfall's cathodic protection system and pipes located beneath the piers, including any sediment removal required to complete inspection; Diffuser pipe removal and replacement; Removal of sediments from within the pipeline in preparation of the removal of the diffuser pipes and pipe supports; Fabrication and installation of new diffuser pipes and pipe supports; Careful coordination with the San Francisco Port Authority is required since the diffuser pipes and pipe supports are connected to the Port's two piers.
Justification:	The North Point Outfall System Rehabilitation Project, completed in 2018 upgraded the aged and deteriorated outfall system in order to restore its hydraulic capacity, increase its reliability, and maintain its functionality for 30 years (to 2047). The Project as originally scoped included the complete replacement of the four existing diffuser pipes and pipe supports with new 48-inch diffuser pipes and pipe supports. However, the project was unable to replace the existing diffuser pipes and their supports. The sediment overlaying and surrounding the diffusers was removed, the sediment within the diffusers was removed through the diffuser ports, and the flanges at the end of the diffusers were removed to allow a diver to enter the diffusers and remove any remaining sediment.
Operating Impact:	Since the North Point Outfall System Rehabilitation Project was unable to replace the four existing diffuser pipes and associated pipe supports which are over 40 years old, this project includes a limited condition assessment of the outfall and replacement of the four diffuser pipes and pipe supports in order to ensure the outfall's functionality through 2047.
Operating Impact:	During Construction: Plant shutdowns and/or diversions will not be required, as construction will be undertaken during the dry season when the plant is offline. Post Construction: This project involves in-kind rehabilitation and replacement, and will not affect future operations.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,033,774	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 301,267	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 1,335,041	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID:	(N/A)
Project Title:	NPF Condition Improvement Projects
Total Budget:	\$ 18,774,551
Project Start:	10/1/2025
Project Finish:	3/1/2030
Current Active Phase:	
Organization:	SSJP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital
Description:	The Water Pump Station (NPF 925) contains a storage tank and water pumps for the No. 2 (W2) Water system. To maintain system reliability, the equipment will need to be addressed. The needs include: Replacing clayton valves, isolation valves, pumps, and equipment/tanks; Redundant backflow preventers for each system; Evaluating and replacing starters, wiring, and water. Receiving Structure (NPF 019) is the headworks facility that receives influent wastewater and screens the influent to protect downstream equipment. To maintain system reliability, the equipment will need to be addressed. Then needs include: Patching and coating concrete; Repairing deteriorated pipe and equipment anchors; Replacing HVAC equipment, air diffusers, and odor control unit; Rehabilitate bar screens, compact dumpsters, and screening conveyors. NPF Tunnels (NPF 961-965) rehab will include concrete repairs of delaminated and cracked areas of NPF 961 to 965 to address leakage in tunnels including two large leaks at NPF 010 and NPF 019.
Justification:	This list of improvements represents improvements to the existing facilities at the NPF to address age deterioration, and reliability of existing assets to meet the Operational Reliability LOS goals (State of Good Repair). Detailed condition assessment will reveal the actual improvements required. However, Water Pump Station (NPF 925) and Receiving Structure (NPF 019) are included for consideration based on the 2014 Condition Assessment Report finding. Depending on the outcomes of the detailed condition assessment, this project may address some or all of the defects identified in the referenced facilities.
Operating Impact:	During Construction: Plant shutdowns and/or diversions will not be required, as construction will be undertaken during the dry season when the plant is offline. Post Construction: This project involves in-kind rehabilitation and replacement, and will not affect future operations.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 663,382	\$ 0	\$ 0	\$ 0	\$ 663,382	\$ 0	\$ 0
ER	\$ 168,971	\$ 0	\$ 0	\$ 0	\$ 168,971	\$ 0	\$ 0
DS	\$ 2,059,386	\$ 0	\$ 0	\$ 0	\$ 195,499	\$ 1,758,375	\$ 105,512
CM	\$ 2,740,628	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,740,628
CN	\$ 0	\$ 13,142,184	\$ 0	\$ 0	\$ 0	\$ 0	\$ 13,142,184
Total	\$ 18,774,551	\$ 0	\$ 0	\$ 0	\$ 1,027,852	\$ 1,758,375	\$ 15,988,324

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Sedimentation Tanks (NPF 040/041) Flushing System
Total Budget:	\$ 14,720,149
Project Start:	10/1/2030
Project Finish:	3/1/2035
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Treatment Facilities
Facility Category:	Capital
Type:	Capital
Description:	This project involves planning and design and construction of a flushing system for the sedimentation tanks. Pre-planning will be performed separately as a programmatic study. The AAR should confirm the most appropriate flushing solution including evaluating improvement of the W1/W2 system (piping, location of hose bibs, etc.) to improve efficiency and safety of washdown operations. As a cost basis, this project assumes tipping buckets will be installed at the upstream end of each sedimentation tank at NPF. A fabricated metal bucket spanning the sedimentation tank section and mounted on an eccentric axis will tip when filled with water and quickly dump the contents to flush the tank floor. It is assumed that there will be twelve 30' x 10' self-actuated tipping buckets in NPF 040 and another twelve units in NPF 041. Structural supports and tank slope modifications may be required as well.
Justification:	At present, the sedimentation tanks are manually flushed with hoses after a wet weather event. In order to make the flushing process more efficient and less labor-intensive, this project includes design and construction of a flushing system for the sedimentation tanks at NPF (040 & 041).
Operating Impact:	During Construction: Plant shutdowns and/or diversions will not be required, as construction will be undertaken during the dry season when the plant is offline. Post Construction: Depending on the outcomes of the AAR, this project may impact future operations if a new flushing system is selected.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 523,628	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 523,628
ER	\$ 132,481	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 132,481
DS	\$ 1,621,341	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,513,366
CM	\$ 715,137	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 3,246,312	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 6,238,899	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,169,475


SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	10029736
Project Title:	Westside Pump Station Reliability Improvements
Total Budget:	\$ 89,239,543
Project Start:	6/13/2013
Project Finish:	12/31/2024
Current Active Phase:	Construction
Organization:	SSIP
Project Manager:	Brian Carlomagno
Facility Category:	Treatment Facilities
Type:	Capital
Description:	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.
Justification:	The efficacy evaluation of WSS identified several issues associated with the pump station including inadequate cooling of the variable frequency drives (VFDs), dry and wet weather screen operational issues including excessive vibration, inefficient and labor intensive handling, lack of screen redundancy, and accumulation and deposition of grit at the pump station and transport boxes. There is also no backup power service. These issues will be addressed to ensure that the applicable level of service (LOS) goals are met. Details include: Replacement of existing pretreatment barscreens, addition of screening washing and compaction systems; New HVAC system (cooling / ventilation improvements) to manage rejected heat from electrical equipment; Replacement of main wet-weather pumps with four new submersible pumps, associated force main, increased power feeder capacity, dilution ventilation improvements supply/exhaust fans, and ducting.
Operating Impact:	Construction Phase impacts: During construction, the project improvements will occur sequentially and phased in such a way that pumping and preliminary treatment functions remain available at the pump station facility at all times. Seasonal outages and special coordinated system outages will allow Contractor access to inactive areas of the facility to perform selective project improvements without interruption. As a result of Contractor construction activities, it is anticipated that increased vehicle and pedestrian traffic flow in the vicinity of and on site are anticipated. The Contractor will be required to stage materials and park off-site to facilitate access to process areas that are to remain in operation during construction. City staff day-to-day operations impacts will trigger modifications to existing site security protocols pertaining to: perimeter site controls, staff badging/identification, procedures to access to the site. Service Life: The Westside Pump Station must be monitored and maintained to ensure reliable and safe operation during all weather conditions. The failure of any major components of the pump station facility could be catastrophic, compromising the City's ability to handle and convey wastewater, which could result in severe public health, safety, regulatory, and environmental impacts. As a result of the reliability improvement project, the site will achieve increased reliability and redundancy for critical wastewater process and conveyance functions including: on-site electrical redundancy, replacement of bar screens and providing a cross-connection channel for redundancy, replacement ventilation equipment and improvements, and redundant wet-weather discharge force main.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 1,500,000	\$ 0	\$ 1,014,739	\$ 485,261	\$ 0	\$ 0	\$ 0
CN	\$ 851,823	\$ 0	\$ 851,823	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 2,351,823	\$ 0	\$ 1,014,739	\$ 1,337,084	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJF



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	10029738
Project Title:	Westside Pump Station Redundant Force Main Impr
Total Budget:	\$ 726,974
Project Start:	1/2/2014
Project Finish:	1/29/2016
Current Active Phase:	SSIP
Organization:	Brian Carlomagno
Project Manager:	Treatment Facilities
Facility Category:	Capital
Type:	
Description:	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.
Justification:	A new force main is needed between Westside Pump Station (WSS) and OSP to provide reliable conveyance between these two facilities, and to mitigate the potential failure of the existing pre-stressed concrete cylinder pipe (PCCP) force main. The existing 48-inch diameter force main is the only connection between WSS and OSP. The objective of the project is to provide operational improvements that will increase the reliability/redundancy of the essential infrastructure and to address the needs noted.
Operating Impact:	During Construction: The early rehab work to replace a segment of the existing 48" force main may require shutdowns and/or diversions, and would occur during dry weather. Tie-in of the new redundant force main would need to be coordinated and likely to occur during the dry season. Post Construction: Flow balancing should be undertaken to determine if any changes to the wet weather operating strategy is needed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJF



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	10029735
Project Title:	OSP Fine Screen and Grit Removal Enhancements
Total Budget:	\$ 510,275
Project Start:	7/1/2013
Project Finish:	11/20/2015
Current Active Phase:	SSIP
Organization:	Brian Carlomagno
Project Manager:	Treatment Facilities
Facility Category:	Capital
Type:	
Description:	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 12-inch fine screens; evaluation/upgrade of the three existing Pistia-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.
Justification:	During Construction: Facility shutdowns and/or diversions are not likely if work is undertaken during dry weather, as there are 1 duty and 2 standby grit units. Post Construction: Based on this alternative, additional ongoing maintenance may be required for the new baffles system.
Operating Impact:	Project completed - no additional funding is requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	10029737
Project Title:	OSP Digester Gas Utilization Upgrade
Total Budget:	\$ 55,577,253
Project Start:	10/1/2013
Project Finish:	9/14/2022
Current Active Phase:	Construction
Organization:	SSIP
Project Manager:	Brian Carlomagno
Facility Category:	Treatment Facilities
Type:	Capital


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.

Justification:
The condition assessment of the existing digester gas storage and conditioning system revealed corrosion of the equipment. The gas conditioning system is over 20 years old and has reached the end of its useful life. The existing gas holder at OSP is showing signs of corrosion. The system operates inefficiently and impacts the beneficial use of biogas. The two internal combustion (IC) engines run infrequently. The engines have also reached the end of their useful life and require replacement. It is therefore necessary to replace the equipment to meet the level of service (LOS) of 100% beneficial use of biogas. Gas conditioning system: The gas cleaning system includes a 350 cfm system for moisture, H2S, and siloxanes removal. The project includes the replacement of the gas holder storage tank assembly and Cogeneration IC Engines.

Operating Impact:
Construction Phase impacts: The improvements are to occur sequentially and phased in such a way that biogas will continue to be used all times during the construction period. Special coordinated system outages will allow contractor access to inactive areas of the facility to perform selective project improvements without interruption of process operations. It is anticipated that vehicle and pedestrian traffic flow will increase. Materials will be staged with limited parking in designated areas. City staff day-to-day operations impacts will trigger modifications to existing site security protocols, and health and safety considerations of all staff on site shall include site vehicle restrictions, emergency response plans, safety and security training, and site safety coordination, which will require modified access to facilitate wastewater process treatment and regulatory compliance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	10029739
Project Title:	OSP Condition Assessment Repairs
Total Budget:	\$ 11,630,774
Project Start:	
Project Finish:	
Current Active Phase:	SSIP
Project Manager:	Brian Carlomagno
Facility Category:	Treatment Facilities
Type:	Capital

Description:
The Ocean Side Plant (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 Sewer System Improvement Program (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.

Justification:
The majority of the facilities at OSP will remain in service for at least 30 years and will require improvements to maintain operational reliability, improve seismic performance and extend useful life. A number of SSIP projects will implement process enhancements and rehabilitation of specific process areas. This project includes improvements to address age, deterioration and reliability of existing assets at the plant that are not specifically included in the other SSIP projects. As part of the condition assessment effort, seismic, condition and operational issues associated with the existing facilities will require remedial attention while other program projects are completed. This project represents improvements to the existing facilities at OSP identified as part of the condition assessment effort. This project includes rehabilitation of building structures, rehabilitation or replacement of mechanical and electrical equipment, and seismic retrofit. Improvements focus on maintaining operational reliability and extending the service life of buildings that are required to remain in operation for 30+ years. 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, 510 - Chemical Storage, 530 - Chlorine Contact Channels, 620 - Digester Operations, 800 - Cogeneration, 821 - Gas Burner, 930 - Administration and Lab. The construction/implementation/improvements are proposed to continue in SSIP Phase 2 and Phase 3.

Operating Impact:
The condition assessment repairs project is a long-term, phased project, that provides facility seismic retrofit and equipment repair/replacement improvements and modifications will ensure that the OSP facilities remain operationally compliant with State and Federal regulatory requirements. The majority of the facilities at OSP will remain in service for at least 30 years and will require improvements to maintain operational reliability, improve seismic performance and extend useful life. A number of SSIP projects will implement process enhancements and rehabilitation of specific process areas. The operating impact of the project will provide improvements to address age, deterioration and reliability of existing assets at the plant that are not specifically included in the other SSIP projects. The final design and continued construction implementation are proposed in subsequent phases of the SSIP program.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	10029740
Project Title:	OSP Odor Control Optimization
Total Budget:	\$ 1,207,197
Project Start:	
Project Finish:	
Current Active Phase:	SSIP
Organization:	Brian Carfomagnano
Project Manager:	Treatment Facilities
Facility Category:	Capital
Type:	

Description: Although the odor control facilities at OSP have been effective at collecting and treating odors generated in various locations throughout the facility, the efficacy evaluation of the process identified inherent inefficiencies that can result in opportunities for significant O&M cost reduction. 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 may be covered and only air from the primary clarifier basins would be scrubbed. The main components of this project includes planning, design, environmental review and construction/upgrades of new covers for the five primary clarifiers and 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. Depending on the results of the alternative analysis, the project might forego covering the primary clarifiers and/or implement other optimization measures in its place.

Justification: The odor optimization project will provide improvements and modifications will ensure that the OSP facilities remain operationally compliant with State and Federal regulatory requirements. The improvements proposed are focused on optimizing energy efficiency, while maintaining equipment reliability by replacing/modifying key odor control process equipment and improving treatment process odor control efficiency by utilizing the latest technology in treatment and instrumentation.

Operating Impact: The operating impact of the project will provide further odor control process control/optimization features, while modifying existing treatment plant odor control equipment without compromising reliability or other increasing any existing operation functions.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Westside FM Reliability Project - Planning
Total Budget:	\$ 1,091,800
Project Start:	10/22/2022
Project Finish:	3/29/2024
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Treatment Facilities
Facility Category:	Capital
Type:	

Description: 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 to 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.

Justification: A new force main is needed between Westside Pump Station (WSS) and OSP to provide reliable conveyance between these two facilities, and to mitigate the potential failure of the existing pre-stressed concrete cylinder pipe (PCCP) force main. The existing 48-inch diameter force main is the only connection between WSS and OSP. The objective of the overall project is to provide operational improvements that will increase the reliability/redundancy of the essential infrastructure and to address the needs noted. Planning up to development of the Alternatives Analysis Report (AAR) for the Westside Pump Station Redundant Force Main Improvements Project (CWWSIPT-POP04) was part of Phase 1 of the SSIP. This project continues previous efforts through the rest of planning, including risk analysis and development of risk mitigation strategies. Project OSP-1B - Westside Force Main Reliability Project - Design and Construction will continue the project through design and construction. The project should be coordinated with the Ocean Beach Adaptation Project, which includes work on the Great Highway in the vicinity of the force main during the same time frame.

Operating Impact: None - planning only

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 417,886	\$ 0	\$ 417,886	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 417,886	\$ 0	\$ 417,886	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Solids Thickening (OSP 011) Process Upgrade
Total Budget:	\$ 20,222,162
Project Start:	7/6/2021
Project Finish:	9/3/2026
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital

Description: Depending on the status of the R&R project (CWWRRNRTFA8) 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 washer 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 liles; 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.

Justification: The mechanical condition of the existing gravity belt thickeners (GBTs) at the OceanSide Water Pollution Control Plant (OSP) needs to be addressed to meet the Health, Safety & Security LOS goals, as well as the Operational Reliability LOS goals (Meet Performance Requirements and State of Good Repair). OSP Operations, Engineering and Maintenance (OEM) staff have noted that the current system generates significant amounts of aerosols within the thickening room that operators find difficult to work in. There are currently three GBTs, although there is a JOC Task Order (CWWRRNRTFA8) that will remove one of the GBT's (GBT No. 1) and replace it with a similarly sized rotary drum thickener (RDT) unit. There is another JOC Task Order that will rehabilitate one of the GBTs that is currently out of service. The enclosed design of the RDT's should provide for a more effective way to capture the contaminated gases/aerosols emitted by the thickening process. In addition, the existing GBTs are currently used to co-thicken primary sludge and waste activated sludge. Capacity issues were identified with the GBT's over the SSIP planning horizon, and should be considered in the planning and design of an upgraded solids thickening system.

Operating Impact: During Construction: Facility shutdowns and/or diversions are not likely as there is at least one standby thickening unit that may be used. However, construction work may impact the day-to-day operations of plant staff, and system tie-in would require coordination.
Post Construction: A new solids thickening technology will be installed and may require training and O&M plan updates.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,000,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 1,000,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 168,375	\$ 0	\$ 168,375	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 2,525,146	\$ 0	\$ 586,112	\$ 1,106,032	\$ 798,114	\$ 34,888	\$ 0
CN	\$ 14,598,783	\$ 0	\$ 3,487,565	\$ 5,908,965	\$ 5,202,253	\$ 0	\$ 0
Total	\$ 19,292,904	\$ 2,000,000	\$ 4,142,052	\$ 7,014,997	\$ 6,000,367	\$ 34,888	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	OSP Plant-wide Ventilation (HVAC) Upgrades
Total Budget:	\$ 7,353,514
Project Start:	7/6/2021
Project Finish:	9/3/2026
Current Active Phase:	Not Started
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital

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.

Justification: The deteriorated state of many of the heating, ventilation, and air conditioning (HVAC) systems located throughout the OceanSide Water Pollution Control Plant (OSP) poses health and safety risks and should be addressed to meet the Health, Safety & Security LOS Goal. These hazards include ventilation system performance that may not meet code requirements and inadequate/deteriorating ducts and duct supports.

Operating Impact: During Construction: Construction work may impact the day-to-day operations of plant staff; however no plant shutdowns and/or diversions are expected.
Post Construction: The plant-wide ventilation strategy, including air balancing, will be modified through this project.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 115,200	\$ 0	\$ 26,799	\$ 53,588	\$ 35,803	\$ 0	\$ 0
DS	\$ 64,857	\$ 0	\$ 64,857	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 975,741	\$ 0	\$ 209,585	\$ 393,118	\$ 285,579	\$ 91,459	\$ 0
CN	\$ 5,115,000	\$ 0	\$ 5,115,000	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 6,274,798	\$ 0	\$ 5,415,240	\$ 446,716	\$ 321,383	\$ 91,459	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15/36-WW Treatment Plant Improvement
FSP ID	10036398
Project Title:	OSP Condition Improvement Projects - Phase 2
Total Budget:	\$ 105,100,000
Project Start:	1/4/2021
Project Finish:	7/6/2029
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Brian Carlomagno
Facility Category:	Treatment Facilities
Type:	Capital

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.

Justification:
The majority of the facilities at OSP will remain in service for at least 30 years and will require improvements to maintain operational reliability, improve seismic performance and extend useful life. A number of SSIP projects will implement process enhancements and rehabilitation of specific process areas. This project includes improvements to address age, deterioration, and reliability of existing assets at the plant that are not specifically included in the other SSIP projects. As part of the condition assessment effort, seismic condition, and operational issues associated with the existing facilities will require remedial attention, while other program projects are completed. This project represents improvements to the existing facilities at OSP identified as part of the condition assessment effort. This project includes rehabilitation of building structures, rehabilitation or replacement of mechanical and electrical equipment, and seismic retrofit. Improvements focus on maintaining operational reliability and extending the service life of buildings required to remain in operation for 30+ years. A preliminary evaluation identified improvements to be addressed in various phases of the project, including those at the following buildings: OSP011 Pretreatment/Solids OSP042, Primary Clarifiers OSP 200, Aeration Basins OSP510, Chemical Storage OSP530, Chlorine Contact Chambers OSP620, Digester Operations OSP900, Cogeneration OSP821, Gas Burner OSP930 - Administration and Lab. The construction/implementation/improvements are proposed to continue in subsequent phases of the SSIP program.

Operating Impact:
The condition assessment repairs project is a long-term, phased project, that provides facility seismic retrofit and equipment repair/replacement improvements and modifications will ensure that the OSP facilities remain operationally compliant with State and Federal regulatory requirements. The majority of the facilities at OSP will remain in service for at least 30 years and will require improvements to maintain operational reliability, improve seismic performance and extend useful life. A number of SSIP projects will implement process enhancements and rehabilitation of specific process areas. The operating impact of the project will provide improvements to address age, deterioration and reliability of existing assets at the plant that are not specifically included in the other SSIP projects. The final design and continued construction implementation are proposed in subsequent phases of the SSIP program.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 465,000	\$ 0	\$ 0	\$ 465,000	\$ 0	\$ 0	\$ 0
ER	\$ 6,618,832	\$ 0	\$ 221,289	\$ 2,447,593	\$ 3,279,862	\$ 222,178	\$ 447,910
DS	\$ 3,034,885	\$ 0	\$ 1,663,584	\$ 501,457	\$ 797,067	\$ 72,777	\$ 0
CM	\$ 18,950,004	\$ 0	\$ 3,192,521	\$ 4,041,674	\$ 4,096,845	\$ 3,045,988	\$ 4,572,976
CN	\$ 66,185,019	\$ 20,000,000	\$ 2,169,728	\$ 12,878,444	\$ 13,232,344	\$ 9,188,643	\$ 6,715,860
Total	\$ 95,253,740	\$ 20,000,000	\$ 1,747,122	\$ 20,334,168	\$ 21,406,118	\$ 12,929,586	\$ 13,736,746

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15/36-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	OSP Odor Control Upgrades
Total Budget:	\$ 23,256,546
Project Start:	7/5/2022
Project Finish:	9/8/2027
Current Active Phase:	Not Started
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital

Description:
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.

Justification:
The condition of existing odor control units at the Aeration Tanks (OSP 200) and Secondary Clarifiers (OSP 230) need to be refurbished to meet Operational Reliability LOS goals (State of Good Repair). There is also an opportunity to improve the foul air collection and overall ventilation in OSP 042, OSP 200, OSP 230 and OSP 530 by covering the primary clarifiers, and secondary clarifier influent and effluent channels.

Operating Impact:
During Construction: Construction work may impact the day-to-day operations of plant staff; however no plant shutdowns and/or diversions are expected.
Post Construction: The plant-wide odor control strategy will be modified through this project.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 292,296	\$ 0	\$ 0	\$ 292,296	\$ 0	\$ 0	\$ 0
CM	\$ 3,699,324	\$ 0	\$ 0	\$ 819,283	\$ 1,665,208	\$ 1,181,660	\$ 33,173
CN	\$ 17,415,366	\$ 0	\$ 0	\$ 3,197,963	\$ 7,511,308	\$ 6,706,095	\$ 0
Total	\$ 21,406,986	\$ 0	\$ 0	\$ 4,309,542	\$ 9,176,516	\$ 7,887,755	\$ 33,173

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	OSP Communication & Safety Monitoring Upgrades
Total Budget:	\$ 27,449,748
Project Start:	10/3/2022
Project Finish:	3/31/2028
Current Active Phase:	Not Started
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital

Description: This project includes the following: 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 consist of DCS connections, horns, beacon lights, and other notifications. OSP 01: Install two (2) fixed hydrogen sulfide sensors in the Inlet Channel Room (OSP 011-107); Install two (2) fixed ammonia sensors in the Screw Press Room (OSP 011-207). OSP 04: Install four (4) fixed hydrogen sulfide monitors in the Primary Clarifier Building. OSP 230: Relocate fixed gas monitoring system notification locations that are currently considered to be close to potential gas sources; Modernize Elevator. OSP 620: Relocate fixed gas monitoring system notification locations that are currently considered to be close to potential gas sources; Modernize Elevator. OSP 930: Modernize 930 Freight Elevator and upsize capacity from 6000-lbs to 8000-lbs; Public Address System / Emergency Evacuation Notification System: Replace the existing Public Address System at OSP, which is old and in disrepair; Replace the existing Emergency Evacuation Notification System at OSP which is old and in disrepair; Install repeaters at Westside PS and replace existing repeaters (loss of communication outside of plant for radios). Fire Alarm System: 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.

Justification: To further protect Wastewater Enterprise (WWE) staff from potentially dangerous process-related gases (specifically hydrogen sulfide, ammonia and explosive atmospheres), WWE is requiring changes to its fixed gas monitoring systems. The scope of the fixed gas monitoring improvements at the Oceanside Water Pollution Control Plant (OSP) are covered under this project. Public Address System, Emergency Evacuation Notification System, Fire Alarm System upgrades, elevator modernization and communication infrastructure improvements at OSP and the Westside Pump Station (WSS) are also covered under this project. These improvements will help address the Health, Safety and Security LOS goals.

Operating Impact: During Construction: None
Post Construction: None

Phase	2023-2032	2024	2025	2026	2027	2028-2032
PL	\$ 234,070	\$ 0	\$ 234,070	\$ 0	\$ 0	\$ 0
ER	\$ 57,949	\$ 0	\$ 57,949	\$ 0	\$ 0	\$ 0
DS	\$ 3,722,403	\$ 0	\$ 1,493,849	\$ 2,131,082	\$ 97,472	\$ 0
CM	\$ 2,922,221	\$ 0	\$ 0	\$ 522,727	\$ 1,839,043	\$ 560,451
CN	\$ 19,339,902	\$ 0	\$ 0	\$ 9,065,934	\$ 8,381,968	\$ 1,892,000
Total	\$ 26,276,545	\$ 0	\$ 1,785,868	\$ 2,131,082	\$ 9,686,133	\$ 2,452,451

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Admin Bldg (OSP 930) Health & Safety Improvements
Total Budget:	\$ 5,708,648
Project Start:	2/1/2022
Project Finish:	10/1/2026
Current Active Phase:	Not Started
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital

Description: A wide range of health and safety-related improvements were identified as part of the Oceanside Plant (OSP) Condition Assessment Repairs Project. Specific work includes repairing concrete deficiencies, water infiltration, and drainage issues within OSP 930 per conceptual engineering report (CER) "Concrete Surface Condition Assessment and Repair TM"; Replace the three (3) OSP 930 building sump pumps, nine (9) Laboratory Fume Hoods, and laboratory and freight elevators (freight elevator is a higher priority).

Justification: This project represents improvements to the existing Administration Building (930) at the Oceanside Water Pollution Control Plant (OSP) identified as part of the OSP Condition Assessment Repairs Project to address health and safety issues.

Operating Impact: During Construction: Construction work may impact the day-to-day operations of plant staff; however no plant shutdowns and/or diversions are expected.
Post Construction: None

Phase	2023-2032	2024	2025	2026	2027	2028-2032
PL	\$ 1,500,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 1,500,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 250,919	\$ 0	\$ 240,675	\$ 10,244	\$ 0	\$ 0
CN	\$ 760,463	\$ 0	\$ 760,463	\$ 0	\$ 0	\$ 0
Total	\$ 4,011,382	\$ 0	\$ 1,001,138	\$ 10,244	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(NA)
Project Title:	OSP DCS Upgrade (Construction)
Total Budget:	\$ 44,942,038
Project Start:	9/1/2023
Project Finish:	7/31/2029
Current Active Phase:	Not Started
Organization:	SSIP
Project Manager:	Maria Kristel Cruz
Facility Category:	Treatment Facilities
Type:	Capital

Description: This project will replace the aging control system infrastructure at Oceanside and other satellite wastewater facilities like Westside Pump Station (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 initiated and specified under SSIP Phase 1 project CWMS/PSE07 SEP Facility-Wide Distributed Control System Upgrades Project. The DCS supplier will provide manufacturing 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 Contractor. OSP 011 Building: Replace panels, 25 standard disconnect switches, and 20 Class 17/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 panels; OSP 230 Secondary Clarifiers: Replace control panel and refurbish the annunciator panel; OSP 620 Digestion Operations: Replace control panel 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.

Justification: In order to provide real-time, system-wide monitoring and control, upgrades and improvements must be made to the Distributed Control System (DCS) system at the Oceanside Water Pollution Control Plant (OSP) and other satellite pump stations, such as the Westside Pump Station (WSS).

Operating Impact: During Construction: Process functions may be slightly impacted during installation and workarounds may be required to facilitate installation work. Post Construction: The new system will interface to the computerized maintenance management system (CWMS), which will allow SFPUC to better protect public assets. Maintenance planning may be based on predictive data about equipment condition and actual runtime. Control system security and simulation solutions implemented may enhance protection against cyber threats.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 2,801,164	\$ 2,801,164	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 8,104,138	\$ 0	\$ 1,200,638	\$ 1,457,086	\$ 1,457,086	\$ 1,457,086	\$ 2,532,242
CN	\$ 34,036,736	\$ 0	\$ 7,009,184	\$ 9,009,184	\$ 9,009,184	\$ 9,009,184	\$ 0
Total	\$ 44,942,038	\$ 2,801,164	\$ 8,209,822	\$ 10,466,270	\$ 10,466,270	\$ 10,466,270	\$ 2,532,242

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	10037777
Project Title:	OSP & WSPS Security Enhancements
Total Budget:	\$ 13,776,330
Project Start:	8/2/2021
Project Finish:	6/23/2026
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Murat Bozkurt
Facility Category:	Treatment Facilities
Type:	Capital

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 prime 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.

Justification: A security evaluation was performed in 2017 to identify the security risks towards WVE facilities, assets, staff, and operations from outside malevolent acts. The evaluation identified improvements at Oceanside Water Pollution Control Plant and Westside Pump Station. As part of the Health, Safety & Security LOS goal and security measures, these sites shall be enhanced to protect staff, assets, and facilities. Security of these facilities are very important to operate safely and securely.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 753,301	\$ 0	\$ 699,705	\$ 53,596	\$ 0	\$ 0	\$ 0
CM	\$ 1,816,000	\$ 0	\$ 0	\$ 1,164,175	\$ 651,825	\$ 0	\$ 0
CN	\$ 9,349,359	\$ 0	\$ 9,349,359	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 11,918,660	\$ 0	\$ 10,049,064	\$ 1,217,771	\$ 651,825	\$ 0	\$ 0

SFUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	OSP Condition Improvement Projects - Part 3
Total Budget:	\$ 194,014,670
Project Start:	10/1/2031
Project Finish:	9/1/2036
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital

Description: A wide range of mechanical equipment related improvements was identified as part of the OSP Condition Improvement Project. Specific structural and mechanical equipment-related work includes Secondary Clarifiers (230) Structural Refurbishment; Patch and coat concrete areas and address structural defects per CER "Confined Space Wetted Concrete Condition Assessment and Repair Report" and CER "Concrete Surface Condition Assessment and Repair TM (Sep. 2017)." Secondary Clarifiers (230) Mechanical: Replace the two (2) mixed liquor blowers and motors; Replace spray, recirculation, and discharge valves; Replace the seven (7) sludge collectors, motor drives, and sludge piping and check valves; Replace the seven (7) scum collector components and seven (7) scum troughs; Evaluate and replace the eleven (11) RAS pumps and resolve leakage at piping/check valves; Assess clarifier influent and effluent sluice gates for possible deterioration) and replace as necessary; Replace drainage sump pumps and dewatering pumps. Perform retaining wall repairs per Mechanically Stabilized Earth (MSE) Wall Report, November 28, 2017, prepared by Geotechnical Consultants, Inc. as part of the Condition Assessment and Seismic Repairs Project CER.

Justification: Perform pipe support seismic evaluation per Seismic Analysis and Evaluation Report, June 1, 2017, prepared by Structus, Inc. as part of the Condition Assessment and Seismic Repairs Project CER.

Operating Impact: This list of improvements represents improvements to the existing facilities at the Oceanside Water Pollution Control Plant (OSP) identified as part of the OSP Condition Assessment Repairs Project to address age, deterioration, and reliability of existing assets to meet the Operational Reliability LOS goals (State of Good Repair).

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 6,893,474	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 6,287,402
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 15,900,518	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 22,893,992	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 6,287,402

SFUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Gaseous Oxygen System (OSP 011) Upgrades
Total Budget:	\$ 22,350,810
Project Start:	1/3/2022
Project Finish:	3/7/2028
Current Active Phase:	Not Started
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital


Description: The appropriate technology and alternative would be explored in the projects planning phase, but as a basis for this project, replacement of the PSA units with vacuum pressure swing adsorption (VPSA) units is assumed. VPSA reduces the desorption pressure compared to VP-SA, 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 and includes demolishing/removing the three (3) existing 10 ton per day PSAs, installing two (2) new 10 ton per day VPSAs; Replacing the GOX line connecting the VPSAs to the OSP 200 Aeration Basins.

Justification: The existing secondary process at Oceanside Water Pollution Control Plant (OSP) uses a high purity oxygen system consisting of three 10-ton-per-day pressure swing adsorption (PSA) units and a backup liquid oxygen (LOX) storage system. The PSA units are nearing the end of their useful lives and require frequent maintenance by staff. The GOX line connecting the VPSAs to the OSP 200 Aeration Basins needs to be replaced due to its condition. Improvements are needed to address the Operational Reliability LOS goals (State of Good Repair), and through this major renewal process, also provides an opportunity to modernize the system's technology and efficiency.

Operating Impact: During Construction: impacts are not anticipated as OSP has a redundant oxygen system through the LOX system. Post Construction: Based on this alternative, a new oxygen generation technology will be installed and may require training and O&M plan updates.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,400,000	\$ 1,400,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,347,884	\$ 0	\$ 791,889	\$ 552,374	\$ 3,621	\$ 0	\$ 0
CM	\$ 3,509,491	\$ 0	\$ 261,508	\$ 541,216	\$ 1,185,723	\$ 1,199,375	\$ 321,669
CN	\$ 15,546,300	\$ 0	\$ 0	\$ 0	\$ 6,428,823	\$ 6,506,906	\$ 2,610,571
Total	\$ 21,803,675	\$ 1,400,000	\$ 1,053,387	\$ 1,093,590	\$ 7,618,167	\$ 7,706,281	\$ 2,932,240

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Grit Removal (OSP 011) Upgrades - Planning
Total Budget:	\$ 1,103,582
Project Start:	1/3/2023
Project Finish:	6/29/2024
Current Active Phase:	Not Started
Organization:	SSJIP
Project Manager:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital
Description:	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.
Justification:	A significant amount of grit passes through the grit removal system at the Oceanside Water Pollution Control Plant (OSP) which is carried over to downstream processes including the primary sedimentation tanks and the digesters. This has resulted in additional wear and tear of the solids handling equipment and its presence reduces the solids handling capacity of the digesters. The existing grit removal system requires improvements to meet the Operational Reliability LOS goals (Meet Performance Requirements). A Needs Assessment Report and Alternatives Analysis Report was developed through the OSP Fine Screen and Grit Removal Enhancements Project in SSJIP Phase 1. This project continues previous efforts through the rest of planning. Project OSP-12B: Grit Removal (OSP 011) Upgrades – Design and Construction will continue the project through design and construction.
Operating Impact:	None – Planning only.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 573,034	\$ 0	\$ 573,034	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 33,200	\$ 0	\$ 33,200	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 606,234	\$ 0	\$ 606,234	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Biosolids Cake Hopper (OSP 011) Reliability Upgrad
Total Budget:	\$ 5,046,494
Project Start:	10/1/2024
Project Finish:	9/1/2029
Current Active Phase:	SSJIP
Organization:	Stephen Robinson
Facility Category:	Treatment Facilities
Type:	Capital
Description:	Specific mechanical equipment related work includes conducting a pilot study to address existing material bridging issues in the biosolids cake hoppers (potential solutions include the provision of vibrators, installation of hopper liners, installation of a different type of hopper gate); Refurbishing the three (3) biosolids cake hoppers, including replacement of the discharge gates and actuators (type of gate to be determined by pilot study), load cells and ultrasonic level instrumentation.
Justification:	The existing dewatering screw presses at Oceanside Water Pollution Control Plant (OSP) are used to dewater the thermally phased anaerobic digested biosolids. When OSP was originally constructed, the Belt Filler Presses (BFFPs) were utilized to dewater the mesophilic digested sludge. As part of the TPAD conversion project, the plant replaced the existing three BFFPs with two (one duty and one standby) screw presses. Each screw press is capable of dewatering between 10 and 15 dry tons of digested biosolids per day at an inlet solids concentration of 1.5 percent or higher. Therefore, the maximum feed flow rate will vary with the digested biosolids inlet concentration. Currently, the screw presses thicken greater than 25% solids, causing solids to stick to the sides of the hoppers. Overall improvements to the cake hoppers are needed to meet the Operational Reliability LOS goals. During Construction: Construction work may impact the day-to-day operations of plant staff; however, no plant shutdowns and/or diversions are expected.
Operating Impact:	Post Construction: None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 182,787	\$ 0	\$ 0	\$ 158,132	\$ 24,655	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 662,287	\$ 0	\$ 0	\$ 356,885	\$ 205,402	\$ 0	\$ 0
CM	\$ 765,873	\$ 0	\$ 0	\$ 0	\$ 0	\$ 62,000	\$ 706,873
CN	\$ 3,532,547	\$ 0	\$ 0	\$ 0	\$ 0	\$ 282,174	\$ 3,250,373
Total	\$ 5,046,494	\$ 0	\$ 0	\$ 158,132	\$ 381,540	\$ 549,576	\$ 3,957,246

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Admin Bldg (OSP 930) Seismic Retrofit
Total Budget:	\$ 12,749,903
Project Start:	10/1/2028
Project Finish:	9/1/2033
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Treatment Facilities
Facility Category:	Capital
Type:	

Description: From the 2017 Seismic Analysis and Evaluation Report (refer to document for plans and details), improvements include site prep (demo portion of floor slab, lightweight backfill, excavation); installation of FRP around columns (624 SF), 12" thick shotcrete wall (110 CY), 18" thick shotcrete above the opening (1 CY), 18" thick shotcrete wall (46 CY), 6" thick shotcrete wall (7 CY), 6" thick shotcrete floor slab (4 CY), 6" thick shotcrete above the opening (14 CY), 30" thick shotcrete above the opening (2 CY), 24" x 48" straight continuous footing (6 CY), and mechanical and electrical alterations.

Justification: To meet Seismic Reliability Goals (provide treatment within 72 hours of an earthquake, provide life safety protection for occupied facilities), the Administration Building requires seismic retrofits. A seismic analysis was performed by STRUCTUS Engineering and Carollo in 2017, and the findings form the basis of this project.

The Administration Building is a three-level structure, with two full levels plus a partial basement level. It is approximately 135 ft. X 258 ft. in plan, including the Parking Area which is structurally a part of Administration Building. The building is structurally separated via a one-inch wide expansion joint from the Primary Clarifiers Building to the north; and a two-inch expansion joint from West Tunnel/Parking structure to the west. The east side of the building and portions of the north side of the building is buried directly against soil and retaining approximately 40 ft. of soil. Except for the sloping roof over parking where the roof is supporting approximately 6 ft. of soil, the entire roof of the building is overlain by approximately 9 inches of soil over drain rock, sand, insulation and waterproofing. The lower level of the building houses shops, storage, a mechanical room and parking, while the upper level houses operation control rooms, offices and laboratories. At the south west corner of the building, there is a pre-cast double T concrete bridge that connects the Administration Building to a concrete site stair structure.

Operating Impact: During Construction: Construction work may impact the day-to-day operations of plant staff; however no plant shutdowns and/or diversions are expected.
Post Construction: None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 461,765	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 461,765
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,420,775	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,420,775
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 1,882,540	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,882,540

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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Pretrat. & Solids Bldg (OSP 011), Struct. & Seismi
Total Budget:	\$ 15,310,915
Project Start:	10/1/2028
Project Finish:	9/1/2033
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Treatment Facilities
Facility Category:	Capital
Type:	

Description: From the 2017 Seismic Analysis and Evaluation Report (refer to document for plans and details), improvements include installing FRP around columns (400 SF), 6" thick shotcrete wall (105 CY, 30" straight wall -8' high (163 CY), 6" shotcrete against ex. beam (13 CY); Mechanical and electrical alterations; Perform concrete repairs (including concrete work on interior wall in the 2nd-floor fan room) per the "Concrete Surface Condition Assessment and Repair TM (Sep 2017)", prepared by Carollo Engineers, Inc., Lee Corp, and Structus, Inc.; Perform concrete repairs per the "Confined Space Wetted Concrete Condition Assessment & Repair Report (May 2018)", prepared by Carollo Engineers Inc.

Justification: To meet Seismic Reliability Goals (provide treatment within 72 hours of an earthquake, provide life safety protection for occupied facilities), the Pretreatment & Solids Building requires seismic retrofits. A seismic analysis was performed by STRUCTUS Engineering and Carollo in 2017, and the findings form the basis of the project.

Pre-treatment & Solids Building is a three-level structure, approximately 106 feet by 264 feet in plan. The building is structurally separated by a 2-inch wide expansion joint from the Chemical Storage Building to the west; and separated from the Digester Building underground pipe gallery by an expansion joint (without any width noted on Section P Drawing 620-S-20) at the northeast corner. The south side of the building is buried directly against soil and retaining approximately 40 feet of soil above the first-floor level. The entire roof of the building is overlain by 9 inches of soil over 4 inches of drain rock, 2 inches of concrete topping, and waterproofing. The basement level houses three vortex grit tanks, with concrete channel structures hung from the first-floor structure. The first-floor houses polymer and sodium hypochlorite tanks, pure oxygen generation system, HVAC Room, Electrical Room, etc. The second-floor houses Operations Room, Sludge Thickening, Sludge Dewatering, HVAC Rooms, Electrical Rooms, and other functions.

Operating Impact: During Construction: Construction work may impact the day-to-day operations of plant staff; however, no plant shutdowns and/or diversions are expected.
Post Construction: None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 554,517	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 554,517
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,706,161	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,706,161
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 2,260,678	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,260,678

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Primary Clarifier (OSP 042) Structural & Seismic R
Total Budget:	\$ 46,700,088
Project Start:	10/1/2028
Project Finish:	9/1/2033
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Treatment Facilities
Facility Category:	Capital
Type:	Capital
Description:	From the 2017 Seismic Analysis and Evaluation Report (refer to document for plans and details), improvements include site prep (demo portion of floor slab, lightweight backfill, excavation); installing 6" thick shotcrete roof slab (274 CY), 6" thick shotcrete wall (84 CY), 6" thick shotcrete against ex. beam (116 CY), FRP around beam (220 SF), FRP around wall (15,232 SF); Mechanical and electrical alternations; Perform concrete repairs per the "Concrete Surface Condition Assessment and Repair TM (Sep 2017)", prepared by Canollo Engineers, Inc., Lee Corp. and Structus, Inc.; Perform concrete repairs per the "Confined Space Wetted Concrete Condition Assessment & Repair Report (May 2018)", prepared by Canollo Engineers Inc.
Justification:	To meet Seismic Reliability Goals (provide treatment within 72 hours of an earthquake, provide life safety protection for occupied facilities), the Primary Clarifiers require seismic retrofits. A seismic analysis was performed by STRUCTUS Engineering and Canollo in 2017, and the findings form the basis of this project. Primary Clarifiers is a one-story building constructed around 1977. It is rectangular Primary Clarifier Building is a two-level structure, approximately 230 ft. X 230 ft., in plan. The building is structurally separated via one-inch wide expansion joints from the Chemie Contact Channels Building, and West Tunnel/Parking structure to the west, from Secondary Clarifiers Building and Aeration Basin Building to the north, and from West Tunnel/Parking structure to the south. The east side of the building is buried directly against soil and retaining 33.5 ft. of soil. The entire roof of the building is overlain by a minimum of 6 ft. of soil. The lower level houses primary clarifiers, launders and spray piping and support systems, as well as an effluent channel and pump galleries which are depressed from the clarifiers' level. The Operation Level does not have a complete floor diaphragm as major floor openings occupy more than 80% of the projected floor area. An influent channel and monorail hang from the sloping Operation Level floor at the west side of the building where the West Surface Gallery is located. The North Surface Gallery floor is essentially flat. As hydro-dynamic forces will be very significant part of the seismic response, careful modeling of contained liquid and inclusion of various combinations of full and empty tanks will be needed to capture the most critical load cases against dividing walls and perimeter walls of the clarifiers.
Operating Impact:	During Construction: Construction work may impact the day-to-day operations of plant staff; however, no plant shutdowns and/or diversions are expected. Post Construction: None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,691,341	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,691,341
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 5,203,988	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 5,203,988
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 6,895,329	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 6,895,329

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Westside FM Reliability Project - DESIGN & CONSTRU
Total Budget:	\$ 104,679,475
Project Start:	10/1/2030
Project Finish:	9/1/2037
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Treatment Facilities
Facility Category:	Capital
Type:	Capital
Description:	Project OSP-1A Westside Force Main Reliability Project - Planning will advance the existing AAR through CER, and in the process, also consider risk mitigation strategies with the 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. As a placeholder for the project cost estimate, the proposed alignment from AAR (Alternative 1) is used as a basis. The alignment is approximately 2,765 total linear feet and requires a short overall pipeline length. This alignment 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. These assumptions and costs will be updated through development of the conceptual design in OSP-1A. A new force main is needed between Westside Pump Station (WSS) and OSP to provide reliable conveyance between these two facilities, and to mitigate the potential failure of the existing pre-stressed concrete cylinder pipe (PCCP) force main. The existing 48-inch diameter force main is the only connection between WSS and OSP. The objective of the project is to provide operational improvements that will increase the reliability/redundancy of the essential infrastructure and to address the needs noted. Planning up to development of the Alternatives Analysis Report (AAR) for the Westside Pump Station Redundant Force Main Improvements Project (CWWSP1POPO4) was part of Phase 1 of the SSIP. Project 1A: Westside Force Main Reliability Project - Planning continues previous efforts through the rest of planning. This project (OSP-1B) advances the project through design, and construction. The project should be coordinated with the Ocean Beach Adaptation Project, which includes work on the Great Highway in the vicinity of the force main during the same time frame. During Construction: Tie-in of the new redundant force main would need to be coordinated and likely to occur during the dry season. Post Construction: Flow balancing should be undertaken to determine if any changes to the wet weather operating strategy is needed.
Justification:	A new force main is needed between Westside Pump Station (WSS) and OSP to provide reliable conveyance between these two facilities, and to mitigate the potential failure of the existing pre-stressed concrete cylinder pipe (PCCP) force main. The existing 48-inch diameter force main is the only connection between WSS and OSP. The objective of the project is to provide operational improvements that will increase the reliability/redundancy of the essential infrastructure and to address the needs noted. Planning up to development of the Alternatives Analysis Report (AAR) for the Westside Pump Station Redundant Force Main Improvements Project (CWWSP1POPO4) was part of Phase 1 of the SSIP. Project 1A: Westside Force Main Reliability Project - Planning continues previous efforts through the rest of planning. This project (OSP-1B) advances the project through design, and construction. The project should be coordinated with the Ocean Beach Adaptation Project, which includes work on the Great Highway in the vicinity of the force main during the same time frame. During Construction: Tie-in of the new redundant force main would need to be coordinated and likely to occur during the dry season. Post Construction: Flow balancing should be undertaken to determine if any changes to the wet weather operating strategy is needed.
Operating Impact:	During Construction: Tie-in of the new redundant force main would need to be coordinated and likely to occur during the dry season. Post Construction: Flow balancing should be undertaken to determine if any changes to the wet weather operating strategy is needed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 12,189,157	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 10,019,604
CM	\$ 1,006,693	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 4,371,380	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 17,567,230	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 10,019,604

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15736-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	Grit Removal (OSP 011) Upgrades - DESIGN & CONSTRU
Total Budget:	\$ 22,239,869
Project Start:	10/1/2030
Project Finish:	3/1/2036
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Treatment Facilities
Facility Category:	Capital

Description: As a placeholder for the project cost estimate, the proposed alternative from the AAR (Alternative 1) is used as a basis. These assumptions and costs will be updated through the development of the conceptual design in OSP-12A. AAR Alternative 1: Install S&L Baffle System to Existing PISTA® 270 Units, the existing channels, and grit chambers would not require structural modifications. All worn out mechanical components such as grit pumps, classifiers, and cyclones will be replaced in the near term via the OSP Grit Classifier System Replacement project. Due to Building 011's access hatch restrictions (3 feet by 3 feet), the baffle can be constructed in several smaller pieces and assembled inside the grit chamber. According to S&L, up to 1 foot of headloss may be incurred by the baffle system. This will be confirmed with S&L pending additional OSP measurements. The hydraulics at the headworks will need to be verified to ensure that the installation of the baffle system does not cause flow backup of the influent channel at peak flow conditions. Additional work includes: Modifying the process drains to discharge to the well structure where the raw influent enters the plant to prevent grit problems downstream; Refurbishing pretreatment screening conveyors, VFDs, screen controls, screening hopper, lead cell, and ultrasonic level equipment; Replace screen gearbox, motors, and rebar bar screens. Add a third train of grit classifier and cyclone.

Justification: A significant amount of grit passes through the grit removal system at the Oceanside Water Pollution Control Plant (OSP) which is carried over to downstream processes including the primary sedimentation tanks and the digesters. This has resulted in additional wear and tear of the solids handling equipment and its presence reduces the solids handling capacity of the digesters. The existing grit removal system requires improvements to meet the Operational Reliability LOS goals (Meet Performance Requirements). A Needs Assessment Report and Alternatives Analysis Report was developed through the OSP Fine Screen and Grit Removal Enhancements Project in SSIP Phase 1. Project OSP-12A continues previous efforts through the rest of planning. This project (OSP-12B) will continue the project through design and construction and will be based on the conceptual design developed in OSP-12A.

Operating Impact: As a placeholder for the project cost estimate, the proposed improvements listed below is used as a basis. These assumptions and costs will be updated through development of the conceptual design in SEP-10A. This project (SEP-10B) will address four of the eight aeration tanks - structural repairs identified from the interior inspection (a budget allowance is carried, but a firmer estimate to complete repairs will depend on the results of the inspection); Assess and repair interior equipment; Evaluate the RAS splitter gates.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 2,671,720	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,176,145
CM	\$ 331,554	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 1,482,110	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 4,485,384	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,176,145

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15727-WW Central Bayside System Improvement
FSP ID	10002102
Project Title:	Central Bayside System Improvement Project (CBSIP)
Total Budget:	\$ 38,519,390
Project Start:	7/2/2012
Project Finish:	12/30/2021
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Manfred Wong
Facility Category:	Sewer and Collection System
Type:	Capital


Description: 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/grey infrastructure improvements within the watersheds.

Justification: Project completed to 35% Design - no additional funding requested.

Operating Impact: Project completed to 35% Design - no additional funding requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr.
Authority Level 2:	15726-WW Central Bayside System Improvement
FSP ID	(N/A)
Project Title:	Channel FM Reliability Project
Total Budget:	\$ 684,684,111
Project Start:	10/1/2029
Project Finish:	1/30/2037
Current Active Phase:	
Organization:	SSIP
Project Manager:	Bessie Tam
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	According to the Operational Reliability LOS Goals, all major dry weather force mains (ADWFs 1 mgd) should have the operational flexibility to perform maintenance, and that dry weather force mains conveying to treatment plants shall also have provisions to convey design flows following an unplanned outage. The objective of this project is to improve the reliability of the Channel Force Main to meet the Operational Reliability LOS Goal outlined above. An evaluation was performed in 2021 to identify feasible alternatives pipelines to convey all weather flows and provide redundancy to the CHFM to the extent practicable, all without requiring upgrades to the pumps at CHS. A proposed approximately 11,000 foot, 66-inch concrete segmental tunnel, installed 70-130 feet below grade by tunnel boring machine (TBM) methodology, was selected as the preferred option. This option follows the approximate alignment of the previously proposed CBSIP Channel Tunnel (CHTL). Other options include a 66-inch micro-tunnel (MTBM) installed at approximately 70-130 feet below grade that follows a similar alignment to the TBM option was considered. This project allows for the conceptual engineering planning, detailed design, and construction of the proposed alignment with the costs based on the recommended TBM option described above. Preliminary Planning was performed in 2021. Final Planning and design will be deferred to start in 2029.
Justification:	Currently, the 66-inch diameter Channel Force Main (CHFM) conveys flows from Channel Pump Station (CHS) to the Southeast Water Pollution Control Plant (SEW). Evaluations performed of the 66-inch, 2.12 mile CHFM have shown that sections are vulnerable to damage from a major earthquake and long-term settlement. There is no alternative flow path from the Channel T/S Box to the SEP aside from the CHFM, and the SFPUC does not have the ability to take the force main out of service for inspection and repair. During Construction: Shutdowns and/or diversions will likely be required to facilitate construction work. Post Construction: Depending on the preferred alternative, it is likely that this project will not change future operations of the Channel Pump Station.
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 24,466,232	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 15,692,135
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 70,265,711	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 94,731,943	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 15,692,135

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr.
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002299
Project Title:	Richmond Transport/Storage Tunnel Rehabilitation
Total Budget:	\$ 589,972
Project Start:	6/1/2015
Project Finish:	12/31/2020
Current Active Phase:	
Organization:	SSIP
Project Manager:	Saed Toloui
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	Under the Richmond Transport Modeling Project, recommendations for handling the reported issues within this system were developed. The purpose of this project is to execute the recommendations of the Modeling Project. The scope of this project includes the evaluation of rehabilitation methods for the Richmond/Transport Storage Tunnel to confirm the previous findings and recommendations included in the physical modeling performed by PMC, and presented in October 2013 to resolve historical surge issues identified. The model identified the causes of geysering through vent holes and dislodged manhole covers in various areas, and included modification recommendations including odor solutions that will be verified during the Planning Phase of this project. This project meets the endorsed Level of Service (LOS) goals of the SSIP by improving and restoring the Transport Storage (T/S) and near shore Combined Sewer Discharge (CSD) structures to a state of good repair. Loss of T/S or CSD structures or the failure/uptset of the secondary treatment processes due to saltwater intrusion at the wastewater treatment plants can have serious implications in terms of public health, safety, regulatory and environmental compliance. This project would allow Waste Water Enterprise (WWE) to maintain compliance with the Regional Water Quality Control Board's National Pollutant Discharge Elimination System (NPDES) permit and other State and Federal requirements by bringing the T/S and CSD structures into a state of good repair. Wastewater Enterprise relies on critical system components like T/S and CSD structures to maintain compliance with the NPDES operating permits. The immediate concerns are to address function and capacity deficiencies through structural/corrosion improvements, and to protect the secondary/biological treatment processes by preventing saltwater intrusion. If saltwater intrusion is not controlled, the elevated chloride levels from the intrusion could lead to process upsets and potential non-compliance with the NPDES permits, which could translate into fines or other actions from the State and/or Federal regulators.
Justification:	
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002300
Project Title:	Baker/Laguna/Pierce CSD & Outfall
Total Budget:	\$ 8,536
Project Start:	6/29/2015
Project Finish:	11/20/2015
Current Active Phase:	SSIP
Organization:	SSIP
Project Manager:	Saad Toloui
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	Project has been deferred to Phase 2.
Justification:	This project meets the endorsed Level of Service (LOS) goals of the SSIP by improving and restoring the Transport Storage (T/S) and near shore Combined Sewer Discharge (CSD) structures to a state of good repair. Loss of T/S or CSD structures or the failure/upset of the secondary treatment processes due to saltwater intrusion at the wastewater treatment plants can have serious implications in terms of public health, safety, regulatory and environmental compliance. This project would allow WVE to maintain compliance with the Regional Water Quality Control Board's NPDES permit and other State and Federal requirements by bringing the T/S and CSD structures into a state of good repair.
Operating Impact:	Wastewater Enterprise relies on critical system components like T/S and CSD structures to maintain compliance with the NPDES operating permits. The immediate concerns are to address function and capacity deficiencies through structural/corrosion improvements, and to protect the secondary/biological treatment processes by preventing saltwater intrusion. If saltwater intrusion is not controlled, the elevated chloride levels from the intrusion could lead to process upsets and potential non-compliance with the NPDES permits, which could translate into fines or other actions from the State and/or Federal regulators.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002303
Project Title:	Beach and Sansome Street CSD Rehabilitation
Total Budget:	\$ 5,600,000
Project Start:	3/14/2016
Project Finish:	5/31/2022
Current Active Phase:	Construction
Organization:	SSIP
Project Manager:	Saad Toloui
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	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.
Justification:	This project meets the endorsed Level of Service (LOS) goals of the SSIP by improving and restoring near shore Combined Sewer Discharge (CSD) structures to a state of good repair. Loss of T/S or CSD structures or the failure/upset of the secondary treatment processes due to saltwater intrusion at the wastewater treatment plants can have serious implications in terms of public health, safety, regulatory and environmental compliance. This project would allow WVE to maintain compliance with the regulatory permits by bringing the CSD structures into a state of good repair.
Operating Impact:	Wastewater Enterprise relies on critical system components like CSD structures to maintain compliance with the NPDES operating permits. The immediate concerns are to address function and capacity deficiencies through structural/corrosion improvements, and to protect the secondary/biological treatment processes by preventing saltwater intrusion. If saltwater intrusion is not controlled, the elevated chloride levels from the intrusion could lead to process upsets and potential non-compliance with the regulatory permits, which could translate into fines or other actions from the State and/or Federal regulators.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002344
Project Title:	CSD Backflow Prevention and Monitoring
Total Budget:	\$ 11,759,901
Project Start:	12/30/2022
Project Finish:	7/25/2016
Current Active Phase:	Construction
Organization:	SSIP
Project Manager:	Saad Taboui
Facility Category:	Sewer and Collection System
Type:	Capital

Description: 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 tides: 17, Jackson Street, 10 Pierce Street, 28 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 Seely Street, and 41 Yosemite. The project scope will be fluid and subject to change based on monitoring results.

Justification: This project meets the endorsed Level of Service (LOS) goals of the SSIP by improving and restoring near shore Combined Sewer Discharge (CSD) structures to a state of good repair. Loss of 1/5 or CSD structures or the failure/upset of the secondary treatment processes due to saltwater intrusion at the wastewater treatment plants can have serious implications in terms of public health, safety, regulatory and environmental compliance. This project would allow WWE to maintain compliance with the regulatory permits by bringing the CSD structures into a state of good repair.

Operating Impact: Wastewater Enterprise relies on critical system components like CSD structures to maintain compliance with the NPDES operating permits. The immediate concerns are to address function and capacity deficiencies through structural/corrosion improvements, and to protect the secondary/biological treatment processes by preventing saltwater intrusion. If saltwater intrusion is not controlled, the elevated chloride levels from the intrusion could lead to process upsets and potential non-compliance with the regulatory permits, which could translate into fines or other actions from the State and/or Federal regulators.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002378
Project Title:	5th, North 6th and Division Street CSD Rehab
Total Budget:	\$ 5,234,600
Project Start:	7/1/2016
Project Finish:	5/31/2022
Current Active Phase:	Post-Construction
Organization:	SSIP
Project Manager:	Saad Taboui
Facility Category:	Sewer and Collection System
Type:	Capital

Description: 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, (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 repair necessary to restore the condition 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 battie at Division CSD.

Justification: This project meets the endorsed Level of Service (LOS) goals of the SSIP by improving and restoring near shore Combined Sewer Discharge (CSD) structures to a state of good repair. Loss of 1/5 or CSD structures or the failure/upset of the secondary treatment processes due to saltwater intrusion at the wastewater treatment plants can have serious implications in terms of public health, safety, regulatory and environmental compliance. This project would allow WWE to maintain compliance with the regulatory permits by bringing the CSD structures into a state of good repair.

Operating Impact: Wastewater Enterprise relies on critical system components like CSD structures to maintain compliance with the NPDES operating permits. The immediate concerns are to address function and capacity deficiencies through structural/corrosion improvements, and to protect the secondary/biological treatment processes by preventing saltwater intrusion. If saltwater intrusion is not controlled, the elevated chloride levels from the intrusion could lead to process upsets and potential non-compliance with the regulatory permits, which could translate into fines or other actions from the State and/or Federal regulators.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10033745
Project Title:	Mission St 16th to Cesar Chavez St Brick Swr Rehab
Total Budget:	\$ 8,857,300
Project Start:	7/2/2018
Project Finish:	11/30/2022
Current Active Phase:	Construction
Organization:	SSIP
Project Manager:	Suzanne Huang
Facility Category:	Sewer and Collection System
Type:	Capital

Description: 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 CWWSIPCCSR02). 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.

Justification: This project helps meet the SSIP Level-of-Service (LOS) by providing full compliance with State and Federal regulatory requirements applicable to the treatment and disposal of sewage and storm water, and Wastewater Enterprise (WWE) goal of providing a compliant, reliable, resilient, and flexible system that can respond to catastrophic events.

Operating Impact: This project will have a positive operating impact. When completed, the rehabilitated sewers will have additional 50-year life. Therefore, it reduces the risk of failure and associated potential operating costs to address emergency failures and monitoring of the existing 100-year-old sewers.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10033106
Project Title:	Geary BRT Sewer Improvements Phase 2 PreCon
Total Budget:	\$ 2,000,000
Project Start:	3/15/2018
Project Finish:	6/30/2023
Current Active Phase:	SSIP
Organization:	SSIP
Project Manager:	Manfred Wong
Facility Category:	Sewer and Collection System
Type:	Capital

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 side 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 bulb-outs. 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.

Justification: This group of projects helps meet the SSIP Level-of-Service (LOS) by providing full compliance with State and Federal regulatory requirements applicable to the treatment and disposal of sewage and storm water, and Wastewater Enterprise (WWE) goal of providing a compliant, reliable, resilient, and flexible system that can respond to catastrophic events. The Interdepartmental projects will further benefit the City by integrating sewer improvements into transit improvement projects.

Operating Impact: Many of San Francisco's sewers are at or nearing the end of their useful life and are critically in need of upgrades. In addition, our sewer system was not built to withstand a major earthquake or impacts of climate change. Thus, it is important to invest now in these assets to avoid more costly future emergency repairs and potential regulatory fines.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002554
Project Title:	Richmond Transport Modeling
Total Budget:	\$ 86,883
Project Start:	3/25/2013
Project Finish:	6/30/2014
Current Active Phase:	
Organization:	SSJP
Project Manager:	Bessie Tam
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	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 simulate 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.
Justification:	Project completed and closed-out. no additional funding is requested.
Operating Impact:	Project completed and closed-out. no additional funding is requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002641
Project Title:	Collection System Condition Assessment
Total Budget:	\$ 4,909,939
Project Start:	5/9/2013
Project Finish:	3/31/2021
Current Active Phase:	
Organization:	SSJP
Project Manager:	Suzanne Huang
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	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 the 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 SSJP Sewer Improvement Projects.
Justification:	Project completed - no additional funding is requested.
Operating Impact:	Project completed - no additional funding is requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002652
Project Title:	Kansas and Marin Streets Sewer Improvements
Total Budget:	\$ 30,000,000
Project Start:	6/10/2013
Project Finish:	8/30/2024
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Derek Adams
Facility Category:	Sewer and Collection System
Type:	Capital

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.

Justification: Upstream improvements have been completed; therefore, this project is necessary to complete the hydraulic capacity increase for this portion of the Islais Creek watershed system.

Operating Impact: The project will have an overall positive impact to operations. The tunnel will provide additional hydraulic capacity to minimize flood risk to the surrounding areas; therefore, reduce the need for wastewater staff to respond to flooding complaints or issues.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 15,000,000	\$ 15,000,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 15,000,000	\$ 15,000,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002644
Project Title:	Van Ness BRT Sewer Improvements
Total Budget:	\$ 25,000,000
Project Start:	10/1/2013
Project Finish:	6/30/2023
Current Active Phase:	Construction
Organization:	SSIP
Project Manager:	Manfred Wong
Facility Category:	Sewer and Collection System
Type:	Capital

Description: The Van Ness Bus Rapid Transit (BRT) Project is lead 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.


Justification: This project meets the SSIP Level-of-Service (LOS) by providing full compliance with State and Federal regulatory requirements applicable to the collection of sewage and storm water, and Wastewater Enterprise (WWE) goal of providing a compliant, reliable, resilient, and flexible system that can respond to catastrophic events. The interdepartmental projects will further benefit the City by integrating sewer and water improvements into transit improvement projects.

The SSIP Phase 1 Re-Baselined Program budget is \$21.1M. Due to the significant claims on this SFMTA construction contract, a revised budget of \$25M is requested to cover project wide claim related cost sharing. The funding request for F20-21 was for an additional \$4,200,205 to cover claim costs and extended CM/ESDC services. There is a potential need to request additional funds upon resolution of construction claims.

Operating Impact: Many of San Francisco's sewers are at or nearing the end of their useful life and are critically in need of upgrades. In addition, our sewer system was not built to withstand a major earthquake or impacts of climate change. Thus, it is important to invest now in these assets to avoid more costly future emergency repairs and potential regulatory fines.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002667
Project Title:	Better Market Street Sewer Improvements
Total Budget:	\$ 15,000,000
Project Start:	1/6/2014
Project Finish:	10/31/2028
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Bessie Tam
Facility Category:	Sewer and Collection System
Type:	Capital
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.
Justification:	This group of projects helps meet the SSIP Level-of-Service (LOS) by providing full compliance with State and Federal regulatory requirements applicable to the treatment and disposal of sewage and storm water, and Wastewater Enterprises (WWE) goal of providing a compliant, reliable, resilient, and flexible system that can respond to catastrophic events. The interdepartmental projects will further benefit the City by integrating sewer improvements into transit improvement projects.
Operating Impact:	Many of San Francisco's sewers are at or nearing the end of their useful life and are critically in need of upgrades. In addition, our sewer system was not built to withstand a major earthquake or impacts of climate change. Thus, it is important to invest now in these assets to avoid more costly future emergency repairs and potential regulatory fines.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 207,270	\$ 0	\$ 207,270	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 2,720,000	\$ 0	\$ 0	\$ 1,500,000	\$ 1,220,000	\$ 0	\$ 0
CN	\$ 9,856,000	\$ 0	\$ 0	\$ 9,856,000	\$ 0	\$ 0	\$ 0
Total	\$ 12,783,270	\$ 0	\$ 207,270	\$ 11,356,000	\$ 1,220,000	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002670
Project Title:	Geary BRT Sewer Improvements Phase 1
Total Budget:	\$ 11,905,089
Project Start:	1/6/2014
Project Finish:	12/30/2022
Current Active Phase:	Construction
Organization:	SSIP
Project Manager:	Manfred Wong
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	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 buses. 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.
Justification:	Construction completed - no additional funds will be requested.
Operating Impact:	Construction completed - no additional funds will be requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002672
Project Title:	Central Subway Sewer Improvements
Total Budget:	\$ 3,108,430
Project Start:	1/6/2014
Project Finish:	6/28/2019
Current Active Phase:	SSIP
Organization:	SSIP
Project Manager:	Manfred Wong
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	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 Braman 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 Braman Street).
Justification:	Project completed - no additional funding is requested.
Operating Impact:	Project completed - no additional funding requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002687
Project Title:	Mission Bay Loop Sewer Improvement
Total Budget:	\$ 718,200
Project Start:	5/2/2014
Project Finish:	12/30/2022
Current Active Phase:	Post-Construction
Organization:	SSIP
Project Manager:	Ming Yee
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	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 WVE operations, and SFMTA's contract has issued substantial completion to its contractor.
Justification:	Construction completed and project was fully funded. No additional funding is requested.
Operating Impact:	Existing assets were replaced with new ones. As such, no operational impacts are anticipated with this project and Wastewater Enterprise will continue to perform routine maintenance of these assets.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002689
Project Title:	Drumm and Jackson Streets Sewer System Improvement
Total Budget:	\$ 6,470,881
Project Start:	5/26/2015
Project Finish:	12/31/2020
Current Active Phase:	SSJIP
Organization:	Suzanne Huang
Project Manager:	Sewer and Collection System
Facility Category:	Capital
Type:	Capital
Description:	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 Lbox 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 WVE 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.
Justification:	Fully funded before FY20-21
Operating Impact:	Project completed - no additional funding is requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002695
Project Title:	Masonic Avenue Sewer Improvements
Total Budget:	\$ 2,995,772
Project Start:	10/27/2014
Project Finish:	6/28/2019
Current Active Phase:	SSJIP
Organization:	Manfred Wong
Project Manager:	Sewer and Collection System
Facility Category:	Capital
Type:	Capital
Description:	SFPW's Masonic Avenue Complete Streets Project will take place on Masonic Avenue between Geary Boulevard and Fell Street. The project includes sidewalk and streetscape improvements; median and bicycle lane additions on Masonic Avenue; construction of a small park on the southwest corner of Geary Boulevard and Masonic Avenue; and incorporation of public art elements along this corridor. In conjunction with the aforementioned SFPW Masonic Avenue Complete Streets Project, the Masonic Avenue Sewer Replacement Project includes rehabilitating/realigning existing sewers as well as constructing new sewer mains, manholes, side sewers and catch basins. The sewer scope includes approximately 4,700 linear feet of sewers ranging from 12-inch to 24-inch in diameter.
Justification:	Project completed - no additional funding requested.
Operating Impact:	Project completed - no additional funding requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002760
Project Title:	Cargo Way Sewer Box Odor Reduction
Total Budget:	\$ 8,742,633
Project Start:	4/13/2015
Project Finish:	12/30/2022
Current Active Phase:	Construction
Organization:	SSIP
Project Manager:	Carman Luk
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	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.
Justification:	The Bay Area Air Quality Management District (BAAQMD) and the public have filed several odor complaints against SFPUC for the reported odors near the project vicinity. This project will address the odor complaints from BAAQMD and the public. As the surrounding areas are being developed by the City, more people are expected to be present in the area and an increased number of odor complaints would be expected.
Operating Impact:	Operations will need to continue to respond to odor complaints, monitor odors, and install temporary odor-control measures in manholes.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002767
Project Title:	Rutland Sewer Improvements
Total Budget:	\$ 1,500,000
Project Start:	10/30/2017
Project Finish:	9/21/2018
Current Active Phase:	SSIP
Organization:	SSIP
Project Manager:	Manfred Wong
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	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 consists of multiple improvements along Rutland Street (from Visitation 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 Visitation Valley Green Nodes Project.
Justification:	Project completed, no additional funds will be requested.
Operating Impact:	Project completed, no additional funds will be requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002776
Project Title:	Taraval Sewer Improvements
Total Budget:	\$ 34,500,000
Project Start:	3/14/2016
Project Finish:	7/31/2025
Current Active Phase:	Construction
Organization:	SSJP
Project Manager:	Bessie Tam
Facility Category:	Sewer and Collection System
Type:	Capital
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 Ullea 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.
Justification:	This group of projects helps meet the SSJP Level-of-Service (LOS) by providing full compliance with State and Federal regulatory requirements applicable to the treatment and disposal of sewage and storm water, and Wastewater Enterprise (WWE) goal of providing a compliant, reliable, resilient, and flexible system that can respond to catastrophic events. The interdepartmental projects will further benefit the City by integrating sewer improvements into transit improvement projects.
Operating Impact:	Many of San Francisco's sewers are at or nearing the end of their useful life and are critically in need of upgrades. In addition, our sewer system was not built to withstand a major earthquake or impacts of climate change. Thus, it is important to invest now in these assets to avoid more costly future emergency repairs and potential regulatory fines.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 5,000,000	\$ 5,000,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 5,000,000	\$ 5,000,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	Large Diameter Sewer Initial Projects
Total Budget:	\$ 114,592,400
Project Start:	8/1/2019
Project Finish:	12/7/2026
Current Active Phase:	Pre-Construction
Organization:	SSJP
Project Manager:	Bessie Tam
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	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 (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.
Justification:	Over 60-miles of large-diameter sewers (sewers greater than 36-inches in diameter) have been in service for 100-years or more and are in need of rehabilitation before failure occurs. Since these are large diameter sewers, any failures could have significant impacts to the public health and safety.
Operating Impact:	This project will have a positive operating impact, as it reduces the risk of sewer failures in the aging sewer system. The bypass, or the Channel Force Main Tee, will provide a means for one-third of the existing Channel Force Main to undergo condition assessment or rehabilitation while maintaining regulatory compliance; and the bypass will provide operational flexibility that allows dry weather flows to be diverted away from headworks during dry weather seasons.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 677,249	\$ 0	\$ 677,249	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,237,160	\$ 0	\$ 1,237,160	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 5,186,866	\$ 0	\$ 1,200,000	\$ 3,986,866	\$ 0	\$ 0	\$ 0
CN	\$ 52,239,429	\$ 35,000,000	\$ 17,239,429	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 59,340,704	\$ 35,000,000	\$ 20,353,838	\$ 3,986,866	\$ 0	\$ 0	\$ 0

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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	Judah Street Twin Sewer Construction Project
Total Budget:	\$ 106,805,362
Project Start:	10/1/2031
Project Finish:	9/26/2036
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Sever and Collection System
Facility Category:	Capital
Type:	

Description: This interdepartmental sewer project would replace aging infrastructure such as the sewers which are made of bricks and are over 100 years old. Preliminary project estimate costs are based on the assumption that 78% of the existing sewers are recommended in need of replacement, where 34% of the existing sewers are over 100 years old. Condition assessment of the remaining 22% of sewers will be performed and replacement needs will be determined; Sewer replacement work is recommended along the Judah corridor and cross streets intersecting Judah Street. About 9% of the sewers have been identified for replacement and half of these segments are currently under construction. The replacement work is assumed with an open trench construction technique ("open-cut"). Hydraulic analysis would be performed to determine the appropriate pipe sizes and project scope/estimate will be adjusted accordingly. Sewer access for construction, inspection, cleaning and maintenance will require de-energization of the OCS and may be conducted when trains are not in service. Two alternatives were assumed for the cost analysis: 1) in-situ open-cut replacement on each side of the tracks. Although Alternative 1 is more cost effective, Alternative 2 would reduce long-term maintenance costs, and benefit both SFMTA and SFPUC by ensuring minimal impacts to SFMTA operations from periodic sewer maintenance and repair activities while allowing SFPUC access to sewer infrastructure without disrupting the rapid transit service.

Justification: Interdepartmental sewer projects are projects initiated by other City and County agencies that can be strategically coordinated with SSIP projects. These synergies are also a factor considered when prioritizing sewer improvements. Limits of work for the N Judah Rapid Transit Project include Judah Street between 9th Avenue and Lower Great Highway. As part of MUNI Forward, SFMTA has determined to include the Judah corridor as part of their Rapid Network. The proposed project transit improvement will include, but not limited to, transit priority lanes, new boarding zones, new median platforms, new lane configurations and buffer zones, transit bulb-outs, side improvement and parking changes.

Operating Impact: During Construction: Minor workarounds or flow bypass may be required to facilitate construction work, however major shutdowns and/or diversions are not likely required. Post Construction: This project involves in-kind rehabilitation and replacement, and will not impact operations once the project is completed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 3,718,374	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,718,374
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 11,245,143	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 10,323,856
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 14,963,517	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 14,042,230

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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	Geary BRT Sewer Improvements - Phase 2 Constructio
Total Budget:	\$ 21,220,723
Project Start:	7/3/2023
Project Finish:	1/27/2027
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Sever and Collection System
Facility Category:	Capital
Type:	

Description: 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 center-running dedicated lanes on Geary Blvd. will be directly above existing sewers. This sewer replacement alignment is recommended with a twin system outside of the new transit platforms and center-running BRT lanes for ease of future maintenance and prevention of service disruption to MUNI. Approximately 22% of the street blocks within the project limit have an existing twin collection system. 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.

Justification: Interdepartmental sewer projects are projects initiated by other City and County agencies that can be strategically coordinated with SSIP projects. These synergies are also a factor considered when prioritizing sewer improvements. The proposed center-running BRT lanes on Geary Boulevard will be directly above the existing sewer currently located along the centerline of Geary Boulevard. The proximity of the existing sewer to the proposed BRT lane location may impact SFPUC's ability to perform future maintenance, repair and/or replacement. In addition, approximately 70% of the pipe segments within the Geary BRT Phase 2 limits are over 50 years old and 37% of the segments are 100-year or older. The purpose of the sewer work is to coordinate with Geary BRT Project Phase 2 to relocate main sewers outside of the transit lanes and locations of platforms and bulb-outs along the Geary Corridor. In line with SSIP's strategy to work with other City and County agencies on projects they initiated to protect value and function of wastewater facilities, the Geary BRT Sewer Replacement Project would be completed in SSIP.

Operating Impact: During Construction: Bypass and/or diversions may be required to facilitate construction work. Post Construction: This project involves in-kind rehabilitation and replacement, and will not impact operations once the project is completed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 103,296	\$ 103,296	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 9,550,476	\$ 0	\$ 1,800,000	\$ 1,750,476	\$ 0	\$ 0	\$ 0
CN	\$ 17,566,951	\$ 0	\$ 17,566,951	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 21,220,723	\$ 103,296	\$ 19,366,951	\$ 1,750,476	\$ 0	\$ 0	\$ 0

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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	T/S Box Seismic Evaluation
Total Budget:	\$ 3,006,784
Project Start:	7/1/2024
Project Finish:	6/30/2027
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Sewer and Collection System
Facility Category:	Capital
Type:	Capital
Description:	This work includes evaluation of seismic vulnerabilities, assessment of seismic reliability, identification of deficiencies, and potential conceptual improvement strategies of the following Treatment/Storage (T/S) facilities: Marina T/S, Jackson T/S, Channel T/S, Mariposa T/S, Islais Creek T/S, Yosemite T/S, Sunnydale T/S, Richmond T/S, Westside T/S, and Lake Merced T/S. As part of the T/S Box Tier 1 Condition Assessment, potential vulnerabilities will be identified through a desktop review of drawings. Although the range of these potential seismic issues will be identified upon completion of that study, some examples of vulnerabilities are anticipated to include ground shaking, ground deformation (e.g., liquefaction), interactions with other structures, and points of connection with other wastewater assets. The T/S boxes were constructed with a range of configurations, from single box sections to tunnels and multi-box monolithic structures. Due to this variability in configuration and the types of seismic vulnerabilities, the review of available drawings, geotechnical information, basis of design/design criteria, and Tier 1 condition assessment and other prior condition assessment information; Development of an analytical approach; Evaluation of seismic vulnerabilities; Analysis of select representative structural cross-sections; Determination of seismic reliability, deficiencies, and potential improvement strategies; Preparation of engineering report.
Justification:	After a major earthquake, the Transport/Storage boxes (T/S Boxes) will be required to be functional to collect and store wastewater and to convey it to the treatment plants, per Seismic Reliability LOS Goals. In addition, many of the T/S boxes provide a connection point to the system's combined sewer discharge structures. Although the T/S boxes are considered to be some of the more recently constructed assets in the collection system, most were not designed using current seismic practices. A seismic evaluation of the T/S boxes is needed to assess their vulnerability, identify deficiencies and determine if improvements are required for them to remain functional following a major earthquake
Operating Impact:	None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 3,006,784	\$ 0	\$ 0	\$ 1,002,261	\$ 1,002,261	\$ 1,002,261	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 3,006,784	\$ 0	\$ 0	\$ 1,002,261	\$ 1,002,261	\$ 1,002,261	\$ 0

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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	T/S Box Improvements (Initial Allowance)
Total Budget:	\$ 7,069,245
Project Start:	1/2/2025
Project Finish:	6/29/2034
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Sewer and Collection System
Facility Category:	Capital
Type:	Capital
Description:	This project includes an allocation of funding to perform improvements to Treatment/Storage (T/S) boxes identified following Tier 2 field inspections. Information from Tier 2 work will be used to identify needs, develop, and prioritize projects. Due to the wide range in asset sizes, type of construction, field conditions, and level of deterioration, improvement costs will be highly variable. Due to the size and current life cycle state of the T/S boxes, it is anticipated that improvements will consist primarily of rehabilitation of internal defects using trenchless methods. Examples of potential improvements may include restoration of internal concrete and reinforcement, structural repairs, equipment repairs, and flushing systems.
Justification:	San Francisco has approximately 17 miles of T/S structures around its perimeter, varying in size up to 25 feet wide and up to 52 feet deep. T/S boxes store and convey combined sanitary and stormwater flow to SFPUC's treatment plants. These assets were constructed between the late 1970s and early 1990s, making the oldest structures over 40 years old. Given the corrosive environment within these facilities and their importance and value, improvements may be needed to maintain reliability. To protect SFPUC investments, it may be more effective to address defects before accelerated deterioration, least to more costly repairs in the future. This project involves SFPUC's transport/storage box (T/S Box) facilities, Marina T/S, Jackson T/S, Channel T/S, Mariposa T/S, Islais Creek T/S, Yosemite T/S, Sunnydale T/S, Richmond T/S, Westside T/S, and Lake Merced T/S.
Operating Impact:	During Construction: Minor workarounds may be required to facilitate construction work, however major shutdowns and/or diversions are not likely required. Post Construction: This project involves in-kind rehabilitation and replacement, and will not impact operations once the project is completed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 237,663	\$ 0	\$ 0	\$ 237,663	\$ 0	\$ 0	\$ 0
ER	\$ 114,796	\$ 0	\$ 0	\$ 0	\$ 57,398	\$ 57,398	\$ 0
DS	\$ 751,028	\$ 0	\$ 0	\$ 0	\$ 350,000	\$ 350,000	\$ 101,028
CM	\$ 1,017,287	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,017,287
CN	\$ 4,948,471	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,948,471
Total	\$ 7,069,245	\$ 0	\$ 0	\$ 237,663	\$ 357,398	\$ 407,398	\$ 6,066,786

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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10037245
Project Title:	Branman (019) CSD Discharge & Baffle Rehab
Total Budget:	\$ 7,949,300
Project Start:	12/7/2020
Project Finish:	5/1/2026
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Saed Toloui
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	The components of the project at Branman 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.
Justification:	The Branman St. Combined Sewer Discharge ("Branman CSD") is located at Branman and Embarcadero. Branman CSD was originally constructed in 1912. The following issues need to be addressed to meet Operational Reliability LOS goals (State of Good Repair): Butterfly Valve: The sensors are currently not in functions and is stuck in the closed position. As a result, the Branman CSD is not currently functioning; Flap Gate: During the construction of the Embarcadero promenade, concrete was demolished and dropped on the existing gate. This damaged the frame and gate, preventing the gate from sitting against the wall and damaging the flap. The gate no longer functions in restraining seawater and sea life from entering the sewer; Baffle: Branman CSD does not currently have a baffle for floatables control. The 2019 AAR recommended installation of a baffle; Structural Rehab: Annual inspection of the outfall has revealed that the structure exhibits concrete degradation and spalling, exposed rebar and biological growth. In addition, the access ladder into the outfall is missing the bottom rungs
Operating Impact:	Conceptual design is completed under the R&R Project TF76. During Construction: This project will have no impact to operations during construction, as the project will be undertaken during the dry season when the asset is not in use. Post Construction: This project involves in-kind rehabilitation and replacement, and does not impact operations once the project is completed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 403,790	\$ 0	\$ 403,790	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 784,300	\$ 0	\$ 550,000	\$ 225,000	\$ 9,300	\$ 0	\$ 0
CN	\$ 5,500,500	\$ 0	\$ 5,500,500	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 6,688,590	\$ 0	\$ 6,454,290	\$ 225,000	\$ 9,300	\$ 0	\$ 0


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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10037244
Project Title:	Baker (009) Baffle Imp & Backflow Valve Repair
Total Budget:	\$ 2,861,400
Project Start:	12/7/2020
Project Finish:	8/30/2024
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Saed Toloui
Facility Category:	Sewer and Collection System
Type:	Capital
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.
Justification:	Baker CSD (CSD 009) is located at the northern end of Baker St. adjacent to the Little Marina Green Picnic Area. Baker CSD was originally constructed in 1971. During storm events, when the treatment and storage Marina T/S box to discharge to the Bay. The following issue needs to be addressed to meet Operational Reliability LOS goals (Performance Requirements): East Baffle Wall: Baker CSD was originally constructed in 1971 and has a weir elevation of -4.0 feet. The CSD has two weirs: the "east overflow weir" and the "west overflow weir". Each weir is approximately 39 feet in length. While the west overflow weir has a wooden baffle that is noted to be in good condition, recent inspections have noted that the baffle adjacent to the east overflow weir is missing. The following issues need to be addressed to meet Operational Reliability LOS goals (State of Good Repair): LCV Check Valves: In 2015, LCV Check Valves (flap gates) were installed on each (east and west) weir to prevent tidal backflow into the sewer system. There are six check valves on each weir (12 in total). Recent inspections have noted that the western array of check valves may leak during king tides due to the adhesive peeling away from the concrete. The adhesive on the eastern array of check valves are also showing signs of deterioration in a similar fashion. Structural Rehab: Annual CSD inspections have also revealed minor structural deficiencies at Baker CSD, such as deteriorated metal plumbing pipes (2-inch diameter) at one end of the discharge structure, minor missing aggregate, stains, and patched circumferential cracks in the rectangular portion of the connecting sewer, and minor exposed aggregate in the former DAF chamber.
Operating Impact:	During Construction: This project will have no impact to operations during construction, as the project will be undertaken during the dry season when the asset is not in use. Post Construction: This project involves in-kind rehabilitation and replacement, and does not impact operations once the project is completed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 160,336	\$ 0	\$ 153,036	\$ 7,300	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 160,336	\$ 0	\$ 153,036	\$ 7,300	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	System-wide Monitoring Equipment Assessment
Total Budget:	\$ 9,268,649
Project Start:	1/18/2022
Project Finish:	2/1/2027
Current Active Phase:	SSJIP
Organization:	Maria Kristel Cruz
Project Manager:	Sewer and Collection System
Facility Category:	Capital
Type:	

Description: The project involves a system-wide assessment of all of the WW'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 WW'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 – Seaciff 1 (3 sensors), CSD 007 – Seaciff 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.

Justification: The data collected from monitoring equipment is currently used by OEM for wet-weather operations and permit required reporting. This data is also used by WME for Storm Watch operations, support flooding claims, and for continuous refinement of the hydrologic and hydraulic model. WME has a long-term vision to develop a collection system-wide monitoring strategy for the collection system to provide a comprehensive understanding of the collection system's performance during a dry or wet weather event. Monitoring equipment typically involves sensors installed in sewer pipes, T/S boxes, outfall structures, etc. to convey the data through either wireless networks (e.g. Telog) or through the distributed control system (DCS) hard-wired networks. The reliability of sensor data depends on a number of factors, including: the location of the probe, the suitability of technology to the particular application, the reliability of the communication line, calibration of the sensors, the condition of the sensors, and a reliable power supply. To meet WW's long-term vision, a system-wide assessment of all current sensors is recommended to assess the purpose, current condition, recommended replacement, and maintenance requirements. This assessment would identify the importance of each monitoring location based on requirements stemming from WME operations, permit compliance, and other needs. The outcome of this assessment would allow prioritizing installation of new monitoring equipment over a multi-year timeframe. This assessment would also develop a long-term plan to continuously update and maintain the sensors.

Operating Impact: During Construction: This project will have no impact to operations during construction, as the project will be undertaken during the dry season when the asset is not in use.
Post Construction: Conversion to wireless communication for sensors may require an update to the control/communications strategy and will require changes to maintenance activities (for example, battery replacements).

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 2,000,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 25,984	\$ 0	\$ 0	\$ 25,984	\$ 0	\$ 0	\$ 0
CM	\$ 756,582	\$ 0	\$ 0	\$ 254,309	\$ 332,047	\$ 170,226	\$ 0
CN	\$ 5,772,168	\$ 0	\$ 0	\$ 5,772,168	\$ 0	\$ 0	\$ 0
Total	\$ 8,554,734	\$ 2,000,000	\$ 0	\$ 6,052,461	\$ 332,047	\$ 170,226	\$ 0

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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	CSD Structure Rehab & Upgrades - Part 1
Total Budget:	\$ 39,653,100
Project Start:	1/3/2022
Project Finish:	1/31/2029
Current Active Phase:	Not Started
Organization:	SSJIP
Project Manager:	Saeed Toloui
Facility Category:	Sewer and Collection System
Type:	Capital

Description: 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 floatables 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; infiltration cracks and holes; 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.

Justification: This project encompasses condition assessment and improvements at the following seven CSD Structures: Laguna (011), Howard (018), Fourth St. North (023), Mariposa (029), Evans (037), Lake Merced (001), and Lincoln (003). Improvements on the CSD structures are required to meet Operational Reliability LOS goals (Performance Requirements and State of Good Repair).

Operating Impact: During Construction: This project will have no impact to operations during construction, as the project will be undertaken during the dry season when the asset is not in use.
Post Construction: None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,321,860	\$ 300,000	\$ 600,000	\$ 380,000	\$ 41,860	\$ 0	\$ 0
ER	\$ 536,700	\$ 45,000	\$ 250,000	\$ 135,000	\$ 106,700	\$ 0	\$ 0
DS	\$ 5,185,000	\$ 500,000	\$ 1,000,000	\$ 1,600,000	\$ 1,200,000	\$ 465,000	\$ 420,000
CM	\$ 4,329,000	\$ 0	\$ 30,000	\$ 570,000	\$ 1,400,000	\$ 1,400,000	\$ 929,000
CN	\$ 28,280,540	\$ 0	\$ 0	\$ 6,822,800	\$ 13,128,700	\$ 7,914,800	\$ 414,240
Total	\$ 39,653,100	\$ 845,000	\$ 1,880,000	\$ 9,507,800	\$ 15,877,260	\$ 9,779,800	\$ 1,763,240

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	Islais Creek (031A) CSD Rehab & Backflow Prevention
Total Budget:	\$ 17,919,276
Project Start:	10/2/2023
Project Finish:	4/27/2029
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Stephen Robinson
Facility Category:	Sewer and Collection System
Type:	Capital

Description: The components of the project at Islais Creek North CSD involve the following: Condition assessment of the CSD structure; install check valve on all weir openings for backflow prevention; Patch and coat concrete defects; Seal infiltration cracks.
A hydraulic study should be completed in the planning stage to review head loss and ventilation impacts of a backflow prevention device at Islais Creek North CSD. For preliminary scoping purposes, it is assumed that overflow check valves (composed of a stainless steel mounting frame with a flexible rubber flap attached to the top of the mounting plate) will be anchored to the creek-side of all weir openings to provide backflow prevention. The appropriate backflow prevention technology for this CSD configuration should be explored during AAR.

Justification: Islais Creek North (031A) CSD was originally constructed in 1994. The CSD is located adjacent to Tulare St in between Indiana St and Tennessee St. During storm events when the treatment and storage in the system is maximized, the structure allows combined sanitary sewer and stormwater runoff from the Islais Creek T/S box to discharge into receiving waters at Islais Creek and ultimately into the Bay. The following issues needs to be addressed to meet Operational Reliability LOS goals (Performance Requirements): Backflow Prevention: Islais Creek North CSD is the largest outfall structure in the City based on weir length. The weir at Islais Creek North CSD is at an elevation of ~3.0 feet. Due to the low elevation, the CSD currently experiences tidal breaching during king tides (very high astronomical tides typically occurring 2-3 times per year). The CSD has a total effective weir length of 600 feet which makes the CSD susceptible to seawater intrusion. Installation of a backflow prevention device would mitigate seawater intrusion into the sewer system and protect the CSD structure against accelerated concrete degradation; Structural Rehab: The 2019 CSD inspection revealed structural deficiencies, including multiple cracks and infiltration. The inspection of the weir revealed hairline cracks in multiple places. It is recommended that structural rehabilitation work be conducted to meet the Operational Reliability LOS goals (State of Good Repair).

Operating Impact: During Construction: This project will have no impact to operations during construction, as the project will be undertaken during the dry season when the asset is not in use.
Post Construction: Backflow prevention will require changes to operation and maintenance activities and updates to the plans. Hydraulic impacts of backflow prevention will need to be undertaken and may require updates to the wet weather operational strategy.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 646,835	\$ 0	\$ 623,687	\$ 23,148	\$ 0	\$ 0	\$ 0
ER	\$ 161,274	\$ 0	\$ 80,637	\$ 80,637	\$ 0	\$ 0	\$ 0
DS	\$ 1,992,523	\$ 0	\$ 0	\$ 1,813,379	\$ 159,667	\$ 19,477	\$ 0
CM	\$ 2,575,151	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,020,135	\$ 1,555,016
CN	\$ 12,543,493	\$ 0	\$ 0	\$ 0	\$ 0	\$ 12,543,493	\$ 0
Total	\$ 17,919,276	\$ 0	\$ 704,324	\$ 1,917,164	\$ 159,667	\$ 13,583,105	\$ 1,555,016

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	CSD Structure Rehab & Upgrades - Part 2
Total Budget:	\$ 28,274,039
Project Start:	1/2/2030
Project Finish:	12/27/2035
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Stephen Robinson
Facility Category:	Sewer and Collection System
Type:	Capital

Description: A detailed condition inspection should be undertaken prior to design to confirm the scope of structural rehabilitation work. The components of various projects are detailed as follows: 3rd Street (022) CSD [to be coordinated with Project CSD 4, which may include rehab of this structure]; Seal infiltration cracks and holes; Patch and coat concrete defects and exposed rebar; Seal major cracks and fractures; 4th Street S. (028) CSD [to be coordinated with Project CSD 4, which may include rehab of this structure]; Clean and prepare pipe for decommissioning; remove debris and loose materials, and seal infiltration cracks and holes; Relocate and/or cap existing utilities into the CSD; Install permanent bulkheads at the seawall and incoming sewer; Apply anticorrosive coating to exposed ferrous metals; Perform dewatering within the CSD; Install lightweight cellular concrete; Remove access manholes and backfill; Replace manhole covers with asphalt concrete; Seal/fix/Brick (006) CSD; Seal infiltration cracks and holes; Patch and coat concrete defects and exposed rebar; Seal major cracks and fractures; Replace access ladder to extend to manhole rim; Replace corroded dewatering pipes; Lincoln (003) CSD; 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; Replace access gates, associated attachment structure, access ladder to extend to manhole rim flushing line and install backflow flap valve; Mile Rock (004) CSD; Seal infiltration cracks and holes; Repair facility access door and install gasket; 3rd St N (031) CSD; Repair and patch exposed aggregate and rebar; Repair damaged manor on weir wall; Mar (032) CSD; Includes installation of a check valve on all weir openings for backflow prevention; Selby (033) CSD; Includes installation of a check valve on all weir openings for backflow prevention; 3rd St. S (035) CSD; Install check valve on all weir openings for backflow prevention; Repair concrete surfaces; patch cracks and exposed rebar; Assess and address ventilation requirements, as needed; Fitch Street (042) CSD; Project CSD 4 includes rehab of the Fitch Street CSD. However, rehab of that CSD may be completed under this project instead. Currently, the cost to address Fitch Street CSD is in Project CSD-4 and is not included in this project.

Justification: This project encompasses improvements at CSD structures in response to structural deterioration. Detailed condition assessment would reveal the actual improvements required, however the following CSD structures are included for consideration: CSD (022) 3rd Street (located in Mission Creek); CSD (028) 4th Street S. (located in Mission Creek); CSD (006) Seaciff/ e Brick; CSD (003) Lincoln; CSD (004) Mile Rock; CSD (031) 3rd Street N (located in Islais Creek Channel – North side); CSD (032) Mann Street; CSD (033) Selby Street; CSD (035) 3rd Street S. (located in Islais Creek Channel – South side)
Depending on the outcomes of the detailed condition assessment, this project may address some or all of the defects identified in any of the above CSD structures.

Operating Impact: During Construction: This project will have no impact to operations during construction, as the project will be undertaken during the dry season when the asset is not in use.
Post Construction: None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 989,772	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 989,772
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 3,082,232	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,082,232
CM	\$ 1,359,363	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 19,791,827	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 25,223,194	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,072,004

SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002138
Project Title:	North Shore to Channel F M Drainage Improvement
Total Budget:	\$ 17,300,000
Project Start:	5/29/2012
Project Finish:	6/6/2017
Current Active Phase:	SSJP
Organization:	Bessie Tam
Project Manager:	Sewer and Collection System
Facility Category:	Capital
Type:	Capital
Description:	North Shore Force Main (NSFM) provides critical conveyance of combined sewage and stormwater flows and before this project, the force main did not have any redundancy. Approximately 2,750 LF of the 8,000 LF of this force main were located in The Embarcadero Roadway and either constructed of steel pipe or ductile iron pipe (both are susceptible to corrosion). After emergency repairs in 2008, a project was initiated under the Wastewater Capital Improvement Program to construct a redundant force main (North Shore to Channel Force Main (NSCFM)), so the 2,750 LF of the existing NSFM may be taken out of service for a complete repairs.
Justification:	Project completed in 2017 - no additional funding requested.
Operating Impact:	Project completed in 2017 - no additional funding requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002417
Project Title:	Hudson Ave Pump Station and Outfall Improvements
Total Budget:	\$ 281,639
Project Start:	3/31/2014
Project Finish:	3/31/2017
Current Active Phase:	SSJP
Organization:	Bessie Tam
Project Manager:	Sewer and Collection System
Facility Category:	Capital
Type:	Capital
Description:	This project involves working with other City departments as necessary to request two affected property owners to install sewer laterals from their properties to the sewer main on Innes Avenue. The project also involves working with other City departments to determine the feasibility and possibility of implementing a loan program or other financial assistance to the property owners for their construction of the lateral connection to the sewer main. After the affected properties have sewer lateral connections to the sewer main in place on Innes Avenue, the Hudson Avenue Pump Station and the 1-block of 8-inch easement sewer will be deactivated by plugging and capping the pipe with light weight concrete. Coordination with SFPW will be required on sidewalk encroachment issues related to one of the affected properties. External outreach will also be needed to implement the solution, in coordination with SFPUC Communications. The project assumes that the property owners will hire and pay for their own contractor to install necessary pumps or laterals to make a connection to the sewer on Innes Avenue.
Justification:	Project Completed - no additional funding needed
Operating Impact:	Project Completed - no additional funding needed

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

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SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002419
Project Title:	Force Main Rehab at Embarcadero and Jackson Street
Total Budget:	\$ 11,009,047
Project Start:	7/7/2014
Project Finish:	9/29/2022
Current Active Phase:	Construction
Organization:	SSIP
Project Manager:	Ming Yee
Facility Category:	Sewer and Collection System
Type:	Capital

Description:
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 Wastewater 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 (MIND) has been approved by City Planning. Extensive public outreach to the community will also be conducted, including stakeholders along SF Port's waterfront area.
Justification:
Operational redundancy for critical sewer infrastructure. North Shore Force Main conveys combined sewage flows from the North Shore and Channel Watershed Basins to the Southeast Treatment Plant for treatment, and needs to be in service all the time to meet regulatory compliance.
Operating Impact:
WWE will need to operate and maintain new aboveground and underground assets constructed under this project, including 1) one new underground valve-vaults (with mechanical valve and associated components inside) that allow combined sewage flows to be diverted either to the NSCFM or the to NSFM, and 2) new electrical and controls cabinets located on The Embarcadero.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10026828
Project Title:	Mariposa Dry-Weather Pump Station & Force Main Imp
Total Budget:	\$ 31,932,461
Project Start:	7/1/2014
Project Finish:	12/30/2022
Current Active Phase:	Construction
Organization:	SSIP
Project Manager:	Carman Luk
Facility Category:	Sewer and Collection System
Type:	Capital

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.
Justification:
This project is needed to meet state regulatory requirements associated with the National Pollution Discharge Elimination Permit (NPDES Permit), which is part of the Clean Water Act. Mariposa Dry-Weather Pump Station conveys dry-weather and wet-weather combined sewage flows from the Channel watershed to the existing Southshore Wastewater Treatment Plant. This station was originally completed in 1954 with dry-weather pumping capacity of 1.2 million-gallon-per-day (MGD). Due to recent developments from the upstream area (Mission Bay, Dogpatch, Potrero Hill areas) the pump station needs to be upsized to convey 5.0 MGD of dry-weather sewage flows to prevent dry-weather sewage flows from discharging into the San Francisco Bay. Project has been fully funded as of FY21-22 and no additional funding is requested at this time.
Operating Impact:
This is an asset replacement project and existing operation and maintenance staffs will have a new pump station and force main to operate when the project is completed. The operation and maintenance of the new pump station is expected to be similar or less than the previous station due to updates in the instrumentation and controls included in the new pump station.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
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SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10026829
Project Title:	Cesar Chavez Pump Station
Total Budget:	\$ 178,360
Project Start:	9/8/2014
Project Finish:	5/26/2016
Current Active Phase:	SSJIP
Organization:	Bessie Tam
Project Manager:	Sewer and Collection System
Facility Category:	Capital
Type:	Capital
Description:	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, WVE 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 WVE 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 WVE R&R program for consideration. This SSJIP project will end at the Draft AAR phase. Project was stopped at draft AAR (in 2016) and no additional funding request. Project was stopped at draft AAR (in 2016) and no additional funding request.
Justification:	
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

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SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002465
Project Title:	Marin Street Sewer Replacement
Total Budget:	\$ 5,968,190
Project Start:	7/1/2015
Project Finish:	1/23/2020
Current Active Phase:	SSJIP
Organization:	Ming Yee
Project Manager:	Sewer and Collection System
Facility Category:	Capital
Type:	Capital
Description:	Project completed and fully funded, no additional funding is being requested in FY22-23. The project will upsze the 24-inch diameter sewer (located between the intersection of 3rd Street and Marin Street and the Marin Street Outfall Structure) and associated sewers to handle the additional dry-weather flows projected from the tributary area. The wet-weather conveyance associated with this sewer system would also be evaluated but any identified scope for addressing wet-weather conveyance issues is not included in this project. Hydraulic studies of the watershed area will be performed to determine the hydraulic adequacy of the pipelines in the area based on expected flows from approved developments, as well as to confirm the necessary pipe size. The existing 24-inch diameter sewer in the vicinity of Marin Street, between Indiana Street and Marin Street CSD (located under southbound Highway 280) will also be upsized. The existing 24-inch diameter sewer on Marin Street, between 3rd street and Indiana Streets, will be replaced with a larger diameter sewer.
Justification:	Project completed and fully funded, no additional funding is being requested.
Operating Impact:	Project completed and fully funded, no additional funding is being requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
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SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10002485
Project Title:	Griffith Pump Station Improvements
Total Budget:	\$ 15,377,500
Project Start:	3/14/2016
Project Finish:	6/30/2022
Current Active Phase:	Post-Construction
Organization:	SSIP
Project Manager:	Suzanne Huang
Facility Category:	Sewer and Collection System
Type:	Capital

Description: 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.

Justification: Griffith Pump Station is an all weather facility that serves as the primary sewage and stormwater pumping station for the southeastern area of San Francisco to the Southeast Treatment Plant. The facility conveys flows from the southeastern area of San Francisco to the Southeast Treatment Plant. The station is over 20-years old and many mechanical and electrical components have reached the end of its useful lives, and are in need of replacement or refurbishment in order to keep the facility operational.

Operating Impact: Many of the components inside this pump station are replaced or refurbished.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

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SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	10037251
Project Title:	Seacliff No. 1 PS & FM Upgrade
Total Budget:	\$ 14,682,200
Project Start:	12/7/2020
Project Finish:	12/31/2026
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Suzanne Huang
Facility Category:	Sewer and Collection System
Type:	Capital

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.

Justification: Seacliff No.1 PS was constructed in 1929 and operates in dry and wet weather via two pumps. An 8-inch diameter force main (930 LF) connects the pump station to a sewer on El Camino Del Mar Drive that drains to the Richmond Transport Tunnel. Overflows from the sump drain to China Beach via CSD 005. The pump station has deteriorated, and the following issues need to be addressed to meet Operational Reliability LOS Goals (State of Good Repair): Controls and communication equipment are in need of repair or replacement; Electrical systems are aging, with surface rusting due to harsh marine environment; Leakage from manhole cover and wall penetration on the uphill side; Piping system is old and in need of repair or replacement.

As the overflow structure for CSD 005 is located within Seacliff No. 1 Pump Station, the following are opportunities to meet the Operational Reliability LOS Goal (Performance Requirements & Water Quality): Improve floatables control in the overflow chamber; Upsize the station's conveyance capacities to enhance combined sewer discharge control and reduce discharge in the typical year. The deteriorated state of the pump station poses health and safety risks, and should be addressed to meet the Health, Safety & Security LOS. These hazards include HVAC ventilation fans are in need of replacement; Wet well cover is rusting and deteriorated, and there is difficulty accessing the building due to topography, narrow steps to entry door, lack of site lighting, etc.

Operating Impact: During Construction: Depending on the location of the new pump station, shutdowns and/or diversions may be required.
Post Construction: This project involves upsizing the pump station, and is therefore not a replace-in-kind project. Future operations may differ slightly from current operations.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 201,099	\$ 0	\$ 201,099	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 99,659	\$ 0	\$ 99,659	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 53,000	\$ 0	\$ 53,000	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 2,082,190	\$ 0	\$ 500,000	\$ 900,000	\$ 500,000	\$ 182,190	\$ 0
CN	\$ 9,813,005	\$ 0	\$ 9,813,005	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 12,248,953	\$ 0	\$ 10,666,763	\$ 900,000	\$ 500,000	\$ 182,190	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	100037246
Project Title:	Seacliff No. 2 PS & FM Upgrade
Total Budget:	\$ 19,915,100
Project Start:	12/14/2020
Project Finish:	1/31/2028
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Carman Luk
Facility Category:	Sewer and Collection System
Type:	Capital

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.

Justification: Seacliff No. 2 Pump Station (S2S) was constructed in 1940 and conveys dry and wet weather flows with three submersible pumps. An eight-inch diameter force main (FM), approximately 1,060 linear feet long, connects the pump station to an existing sewer on El Carrino Del Mar Drive and drains to the Richmond Transport Tunnel. The overflow structure for Combined Sewer Discharge (CSD) 007 is located in Seacliff No. 2 PS and permitted overflows from CSD 007 drain to Baker Beach. There is also a CSD 006 as part of the drainage system to S2S. The purpose of this project is to rehabilitate Seacliff No. 2 PS and FM, in accordance with the Operational Reliability Level-of-Service Goals (State of Good Repair) and to improve its operational performance and reduce CSD activations (at both CSD 006 and CSD 007). The station has historically staged a rented, portable generator on site for backup power, and it suffers from corrosion due to the marine environment. This project will also provide a stationary generator installed indoors so that it is protected and eliminates the expense of the continuous rented unit.

Operating Impact: The Seacliff No. 2 Pump Station and Force Main allows WWE to transport combined sewage flows to the Richmond Transport Tunnels before the system reaches capacity and results in a CSD outfall overflow. This is an important asset in this system to reduce the number of overflows at CSD 006 and CSD 007. The management of CSD overflows is a vital performance requirement for WWE to maintain compliance with the NPDES permit.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 44,862	\$ 0	\$ 44,862	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 353,832	\$ 0	\$ 353,832	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 2,456,987	\$ 0	\$ 200,000	\$ 1,400,000	\$ 856,987	\$ 0	\$ 0
CN	\$ 13,641,825	\$ 0	\$ 13,641,825	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 16,497,506	\$ 0	\$ 14,240,519	\$ 1,400,000	\$ 856,987	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	100037303
Project Title:	Sunnydale PS Safety Improvements
Total Budget:	\$ 15,541,500
Project Start:	12/14/2020
Project Finish:	5/29/2026
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Ming Yee
Facility Category:	Sewer and Collection System
Type:	Capital

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, recording servers, management server and alarming to security; Furnish, install and configure video connected to an intrusion detection panel and alarming to security; Furnish, install and configure video site lighting at egress penthouse and entrance to the station; Address Other Safety Concerns, including evaluating and adding a gas detection system, as necessary; Add install video camera units and local recording.

Justification: Sunnydale Pump Station is a below-grade pump station constructed in 1991 and serves the Sunnydale drainage basin during wet weather. The station is prone to groundwater intrusion, which has corroded the building structure, electrical equipment, and mechanical equipment (including the HVAC system). Additionally, the exposure of electrical equipment to water (e.g., a leak is evident above the 80 Volt main breaker station) has made the working conditions hazardous. Security risks to the facility are also a concern. This project aims to address improvement needs to mitigate health, safety, and security risks to meet the Health, Safety, & Security LOS Goal. Longer-term improvements at this station are in a separate project and scheduled later in the capital improvement program.

Operating Impact: During Construction: Shutdowns and/or diversions will not be required as the work can be undertaken during dry weather when the pump station is offline.
Post Construction: This project involves replacement-in-kind and will not affect future operations.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 1,952,943	\$ 0	\$ 900,000	\$ 1,052,943	\$ 0	\$ 0	\$ 0
CN	\$ 11,484,215	\$ 0	\$ 11,484,215	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 13,437,158	\$ 0	\$ 12,384,215	\$ 1,052,943	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	Pump Station Security Upgrades (Cesar Chavez, GFS)
Total Budget:	\$ 9,104,872
Project Start:	6/1/2022
Project Finish:	5/3/2027
Current Active Phase:	SSIP
Organization:	Murat Bozkurt
Project Manager:	Sewer and Collection System
Facility Category:	Capital
Type:	Capital
Description:	The scope of security upgrades at the four pump stations is provided below – refer to "SFPUC WWS Security Evaluation Matrix (September 2017)" for further details. Cesar Chavez Pump Station: Upgrade card readers and door contacts; Add interior presence sensing; connected to an intrusion detection panel and alarm security; Replacing perimeter fence; Add protective cage around outdoor chemical/electrical equipment; Install video recording servers, management server, and analytic servers including UPS; Configure security fiber optic connectivity back to SEP; Upgrade lighting; Add new security signage. Griffith Pump Station: Add bullet-resistant glass at perimeter windows; Upgrade card readers and door contact; Add interior presence sensing, connected to an intrusion detection panel and alarm security; Install two new gates, replace gate and gate operator at one location, including structural support and electrical power and controls; Replace perimeter fence; Add protective cage around outdoor chemical/electrical equipment; Install recording servers, management server, and analytic servers UPS; Upgrade lighting; Add new security signage; Add video camera units and local recording. Channel Pump Station: Repair card reader operation at swing gate; Repair any door contacts requiring upgrades; Upgrade card readers Add interior presence sensing, connected to an intrusion detection panel and alarming to security; Replace gate and gate operator at one location including structural support and electrical power and controls; Replace perimeter fence; Install video recording servers, management server, and analytic servers including UPS; Install wireless mesh network; Configure security fiber optic connectivity back to SEP; Upgrade lighting; Add new security signage; Add video camera units and local recording. Merlin Morris Pump Station: Add new security signage; Upgrade lighting; Convert roof and perimeter fencing to be non-porous to protect staff from freeway debris and safety and security risks posed by the public. A security evaluation was performed in 2017 to identify the security risks towards WWS facilities, assets, staff, and operations from outside malevolent acts. The evaluation identified security improvements based on security vulnerability (factoring in location, signage, perimeter protection, lighting, surveillance, and access). The following pump stations are included in this project: Cesar Chavez Pump Station, Griffith Pump Station, Channel Pump Station, and Merlin Morris Pump Station. As part of the Health, Safety & Security LOS goal, security measures at these sites shall be enhanced to protect staff, assets, and facilities. As noted, Sunnydale PS will be addressed through a separate project, and Mariposa PS is considered to be completed. Security of these facilities are very important to operate safely and securely.
Justification:	
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 649,465	\$ 0	\$ 471,585	\$ 177,900	\$ 0	\$ 0	\$ 0
CM	\$ 1,129,000	\$ 0	\$ 0	\$ 500,000	\$ 500,000	\$ 129,000	\$ 0
CN	\$ 6,277,972	\$ 0	\$ 0	\$ 6,277,972	\$ 0	\$ 0	\$ 0
Total	\$ 8,056,457	\$ 0	\$ 471,585	\$ 6,955,872	\$ 500,000	\$ 129,000	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	Geary Underpass PS Safe Access Enhancements
Total Budget:	\$ 1,853,600
Project Start:	1/10/2022
Project Finish:	5/29/2026
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Carman Luk
Facility Category:	Sewer and Collection System
Type:	Capital
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. This project addresses safe access and healthy and safety issues at the existing pump station. Geary Underpass Pump Station was built in 1960 and operates in wet weather to manage flooding of the Geary Boulevard underpass. The pump station is located below Fillmore Street and consists of an upper level that houses electrical equipment and a lower level that houses the mechanical equipment. Access to this pump station is difficult as staff must walk beside high traffic on a narrow pathway to reach the station. A positive operating impact is anticipated since the project will address safety access and health and safety concerns at this station. Since this is an existing station, no additional operation and maintenance needs would be required.
Justification:	
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 16,000	\$ 16,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 291,000	\$ 291,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 995,800	\$ 0	\$ 250,000	\$ 748,800	\$ 0	\$ 0	\$ 0
CN	\$ 547,800	\$ 0	\$ 547,800	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 1,853,600	\$ 307,000	\$ 797,800	\$ 748,800	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	Griffith DW FM Rehab
Total Budget:	\$ 4,914,864
Project Start:	10/1/2024
Project Finish:	9/27/2028
Current Active Phase:	
Organization:	SSJP
Project Manager:	Stephen Robinson
Facility Category:	Sewer and Collection System
Type:	Capital

Description: This project involves condition assessment and rehabilitation of the Griffith dry weather force main. It is recommended that a complete CCTV inspection is performed as the 2017 inspection was only partially performed due to standing water in the pipeline. Although rehabilitation is a potential option and should be explored in Planning & Design, the project cost assumes an in-kind replacement of the entire length (640 LF) of existing dry weather force main.

Justification: Griffith Street Pump Station (GFS) is located at 1601 Griffith Street at the intersection of Griffith Street and Thomas Avenue in the southeast area of the City. This station is an important component of the Yosemite/Fitch and Sunnydale facilities, which are an interconnected, integrated system of wastewater and stormwater pumping and transport/storage for the southern Bayside system. Griffith Street Pump Station pumps a nominal flow of less than 10 MGD in dry weather and up to 120 MGD in wet weather from the Yosemite/Fitch Transport to South East Plant (SEP). The dry weather force main was originally constructed in 1985 and is comprised of approximately 450 linear feet (LF) of 21-inch reinforced concrete pipe and 190 LF of 20-inch steel pipes. The force main discharges to a sewer outside the station on Griffith Street and Shafter Avenue. The dry weather flow continues on to meet the Hunter's Point tunnel sewer at Griffith Street and Palou Avenue and eventually arrives at SEP for treatment. A desktop condition assessment study (SSIP TOR#21 Phase 1 Force Main Screening evaluation Report) performed in 2014 indicated that the condition of this force main could potentially be of concern due to potentially corrosive soils and the ability of the load capacity of the pipe in a potentially deteriorated state. A partial multi-sensor condition assessment was performed in 2017 involving CCTV and laser data capture. It was determined that the force main has deteriorated in 2017 involving CCTV and laser data capture. It Reliability LOS Goals (State of Good Repair). During Construction: Flows may be diverted to the Griffith Wet Weather Force Main during construction as it is connected to the Dry Weather Force Main. Post Construction: This project involves in-kind rehabilitation and replacement, and will not affect future operations.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 176,372	\$ 0	\$ 0	\$ 0	\$ 176,372	\$ 0	\$ 0
ER	\$ 46,003	\$ 0	\$ 0	\$ 0	\$ 46,003	\$ 0	\$ 0
DS	\$ 280,800	\$ 0	\$ 0	\$ 0	\$ 280,800	\$ 0	\$ 0
CM	\$ 633,668	\$ 0	\$ 0	\$ 0	\$ 0	\$ 520,000	\$ 313,668
CN	\$ 3,578,021	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,578,021	\$ 0
Total	\$ 4,914,864	\$ 0	\$ 0	\$ 0	\$ 503,175	\$ 4,098,021	\$ 313,668

SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	PS & FM Seismic Evaluation
Total Budget:	\$ 4,677,202
Project Start:	10/2/2023
Project Finish:	3/31/2026
Current Active Phase:	
Organization:	SSJP
Project Manager:	Stephen Robinson
Facility Category:	Sewer and Collection System
Type:	Capital

Description: This project includes seismic evaluation of the pump stations and force mains listed as follows: Bruce Flynn Pump Station & Bruce Flynn Force Main (2 mains), Channel Pump Station & Channel Force Main, Griffith Pump Station & Griffith Force Main (DW), North Shore Pump Station & North Shore Force Main (To Channel Box), Sunnydale Pump Station & Sunnydale Force Main and Westside Pump Station & Westside Force Main. Seismic evaluations will be guided by industry accepted standards such as ASCE 31 and ASCE 41. Depending on the structure type and the expected level of performance during an earthquake, the standards will prescribe the appropriate level and methodology of seismic evaluation. An initial planning phase will include confirmation of the required seismic levels of service for each pump station, determination of the seismic performance level (e.g. life safety or immediate occupancy), and selection of the appropriate evaluation methodology. If appropriate, a tiered evaluation approach may be implemented to facilitate prioritization and progressive decision-making regarding investment in seismic improvements.

Justification: The depth of analysis and level of detail will be defined during the planning phase of the project. The range in materials, joint types and failure modes associated with pipe asset will necessitate varying seismic analysis methodologies. Similar to the pump station evaluation, an initial planning phase will confirm performance requirements and identify seismic evaluation approaches for each force main. Results of the analysis will identify potential seismic vulnerabilities and failure modes, likelihood of failure and potential mitigation strategies.

Operating Impact: After a major earthquake, pump stations and force mains will be required to convey wastewater from the collection system to the treatment plants. Most pump stations were not constructed to current seismic codes and may require improvements to ensure seismic reliability. Based on the Seismic Reliability LOS Goals, one of the objectives is that facilities can convey flows for treatment within 72 hours of a major earthquake (M7.8, San Andreas). These pump stations and force mains need to be seismically reliable to meet the LOS goal. The Pump Station Condition Assessment Report (January 2014) summarized prior seismic evaluations and recommended additional seismic analyses for pump stations. This work is needed to assess existing vulnerabilities, determine the need for seismic rehabilitation, and to identify potential improvement options. The SSIP Phase 1 Force Main Screening Evaluation Report (December 2014) focused on physical condition, material degradation, and risk due to non-seismic loading. Therefore, a seismic evaluation of force mains is required to assess their seismic vulnerability and determine improvements needed to ensure reliable operation after an earthquake. During Construction: Shutdowns and/or diversions will likely be required during construction to facilitate CCTV inspection and subsequent repair or replacement of the pipe. Post Construction: This project involves upgrades to buildings and structural elements only, and will not affect future operations.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 4,677,202	\$ 0	\$ 1,385,426	\$ 1,849,312	\$ 1,442,464	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 4,677,202	\$ 0	\$ 1,385,426	\$ 1,849,312	\$ 1,442,464	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	Cesar Chavez PS & FM Improvements
Total Budget:	\$ 13,340,600
Project Start:	7/1/2025
Project Finish:	9/26/2029
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Sewer and Collection System
Facility Category:	Capital

Description: The scope of this project aims to address the following operational reliability areas, which should be confirmed through assessments as part of project planning. Buildings, underground structures, wet wells, and surrounding site: Assess concrete repairs required and perform needed structural rehabilitation of the CCS facilities and inverted siphons; Install lighted flood warning sign on Bayshore Blvd. to warn motorists of flooding (coordinate with Caltrans). Electrical equipment, power service, generator system, level monitoring system; Replace all electrical and I&C equipment (level controls, power controls, lighting, and safety warning lights). Process equipment (crane/lifting system, suction/discharge piping, wet-weather lift pumps); Replace all mechanical equipment (natural gas emergency generator with Tier 4 diesel generator) and ventilation system in pump room (HVAC ducting and fans in poor condition); Perform inspection of wet well-confined space at the earliest convenience and perform structural rehab as needed; Assess and replace 14" (150ft long) RCCP force main.

Justification: The Cesar Chavez Pump Station (CCS) was constructed in 1975 and pumps groundwater accumulation and storm runoff (wet weather only) from the area around Cesar Chavez and the Hwy 101 Freeway. The pump station discharges through a 14-inch force main into a 24-inch sewer located approximately 150 feet east of the pump station.

The Cesar Chavez Pump Station was initially included in SSIP Phase 1, but the project was stopped at AAR phase. The 2015 planning efforts recommended that the pump station be replaced or rehabilitated to ensure Operational Reliability LOS goals are met (State of Good Repair). At the time of AAR development, it appeared that replacement of the station was the preferred alternative but since then, the security issues that were driving that alternative have been improved through local efforts by Caltrans. The Pump Station Security Upgrades project (PS-4) will implement additional security enhancements to the site. Therefore, the basis of this project is the alternative to rehabilitate the existing station.

Operating Impact: During Construction: Shutdowns and/or diversions will not be required as the work can be undertaken during dry weather when the pump station is offline.
Post Construction: This project involves replacement-in-kind and will not affect future operations.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 484,953	\$ 0	\$ 0	\$ 0	\$ 484,953	\$ 0	\$ 0
ER	\$ 124,868	\$ 0	\$ 0	\$ 0	\$ 124,868	\$ 0	\$ 0
DS	\$ 1,510,999	\$ 0	\$ 0	\$ 0	\$ 759,200	\$ 751,799	\$ 0
CM	\$ 1,507,823	\$ 0	\$ 0	\$ 0	\$ 0	\$ 312,000	\$ 1,195,823
CN	\$ 9,711,957	\$ 0	\$ 0	\$ 0	\$ 0	\$ 9,711,957	\$ 0
Total	\$ 13,340,600	\$ 0	\$ 0	\$ 0	\$ 1,286,153	\$ 10,848,624	\$ 1,195,823

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	Tennessee PS & FM Improvements
Total Budget:	\$ 2,366,086
Project Start:	10/1/2025
Project Finish:	3/29/2030
Current Active Phase:	SSIP
Organization:	Howard Fung
Project Manager:	Sewer and Collection System
Facility Category:	Capital

Description: The scope of this project aims to address the following operational reliability areas, which should be confirmed through assessments as part of project planning. Buildings, underground structures, wet wells, and surrounding site: Inspect wet well and patch and coat concrete/basin areas exposed to wet conditions to extend life and repair defects; Repair exposed rebar; Repair or replace access ladder; Electrical equipment, power service, generator system, level monitoring system; Remove and update schematic diagrams if Pac Bell connection is no longer used; Evaluate adequacy of weatherproof enclosure; Evaluate PLC replacement as part of ongoing effort to replace PLCs system-wide (replace pedestal as part of electrical upgrade); Bubbler system is currently in good condition but it will require replacement during the service life of the building; Process equipment; Purchase and install new pumps; Replace 4-inch check valves and associated discharge piping; Add two discharge isolation valves; Perform thickness test on critical piping to determine remaining useful life; Guide rails and chains are currently in good condition, but will require replacement during the service life of the building; HVAC: Confirm existing equipment, replace/install equipment as appropriate to meet safety and code regulations. Electrical equipment, power service, generator system, level monitoring system; Remove and update schematic diagrams if Pac Bell connection is no longer used; Evaluate adequacy of weatherproof enclosure; Evaluate PLC replacement as part of ongoing effort to replace PLCs system-wide (replace pedestal as part of electrical upgrade); Bubbler system is currently in good condition but it will require replacement during the service life of the building; Process equipment; Purchase and install new pumps; Replace 4-inch check valves and associated discharge piping; Add two discharge isolation valves; Perform thickness test on critical piping to determine remaining useful life; Guide rails and chains are currently in good condition, but will require replacement during the service life of the building; HVAC: Confirm existing equipment, replace/install equipment as appropriate to meet safety and code regulations.

Justification: The Tennessee Pump Station was constructed in 1966 and conveys dry- and wet-weather flows for a small neighborhood drainage area. Dry-weather flow enters the station from an 8-inch sewer running south on Tennessee Street. During wet weather, two stormwater inlets located in the unpaved area also feed the station. Condition improvements are needed at this station to address the Operational Reliability LOS Goal (state of good repair).

Operating Impact: During Construction: Minor shutdowns and/or diversions may be required to facilitate construction. Post Construction: This project involves in-kind rehabilitation and replacement, and will not impact operations once the project is completed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 89,958	\$ 0	\$ 0	\$ 0	\$ 89,958	\$ 0	\$ 0
ER	\$ 21,295	\$ 0	\$ 0	\$ 0	\$ 0	\$ 21,295	\$ 0
DS	\$ 272,192	\$ 0	\$ 0	\$ 0	\$ 0	\$ 225,000	\$ 47,192
CM	\$ 326,381	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 326,381
CN	\$ 1,656,260	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,656,260
Total	\$ 2,366,086	\$ 0	\$ 0	\$ 0	\$ 89,958	\$ 246,295	\$ 2,029,893

SFFUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	Rankin WW FS Improvements
Total Budget:	\$ 1,810,607
Project Start:	10/1/2025
Project Finish:	3/29/2030
Current Active Phase:	
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	This project should be coordinated with the proposed Storm Resilience Project (Alemamy Pipe Isolation and Rankin Wet Weather Pump Station Expansion), which may alter the conveyance strategy in the drainage area. The scope of this project aims to address the following operational reliability areas, which should be confirmed through assessments as part of project planning: Buildings, structures: Rehabilitate structure, repair/replace equipment/piping supports as required; Perform inspection of wet well-confined space at earliest convenience considering operational constraints. Although the wet well was unavailable for visual inspection, recommended improvements include patch and coat concrete/basin areas exposed to wet conditions to extend life and repair defects and evaluate potential future impacts of climate change and sea-level rise on the pump station; Electrical and controls, level monitoring includes upgrading the level control system. Process equipment: Pump station equipment is expected to reach the end of its useful life within the next 10 to 15 years and will need replacement to continue reliable operation.
Justification:	Rankin Wet Weather Pump Station is a small wet-weather pump station located north of Rankin and Davidson Streets. The pump and electrical system were installed in 1998. The level control system needs upgrades to meet the Operational Reliability LOS goal (state of good repair) and improvements to provide a provision for backup power is recommended.
Operating Impact:	During Construction: Shutdowns and/or diversions will not be required during construction as work can be undertaken during dry weather periods when the pump station is offline. Post Construction: This project involves in-kind rehabilitation and replacement and will not impact operations once the project is completed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 68,838	\$ 0	\$ 0	\$ 0	\$ 68,838	\$ 0	\$ 0
ER	\$ 16,296	\$ 0	\$ 0	\$ 0	\$ 0	\$ 16,296	\$ 0
DS	\$ 208,290	\$ 0	\$ 0	\$ 0	\$ 0	\$ 170,000	\$ 38,290
CM	\$ 249,758	\$ 0	\$ 0	\$ 0	\$ 0	\$ 249,758	\$ 0
CN	\$ 1,267,425	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,267,425
Total	\$ 1,810,607	\$ 0	\$ 0	\$ 0	\$ 68,838	\$ 186,296	\$ 1,555,473

SFFUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	Berry St PS Improvements
Total Budget:	\$ 10,407,907
Project Start:	10/1/2025
Project Finish:	3/28/2031
Current Active Phase:	
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	This project should be coordinated with the proposed Storm Resilience Project (Berry Street Pump Station Expansion and Pipe Enhancement), which may alter the conveyance strategy in the drainage area. The scope of this project aims to address the following operational reliability areas, which should be confirmed through assessments as part of project planning: Buildings, underground structures, wet wells, and surrounding site: Repair valve vault drainage issues; Recommended improvements include patch and coat concrete/basin areas exposed to wet conditions to extend life and repair defects; Add provision for temporary railings around pump station; Evaluate potential future impacts of climate change and sea level rise on pump station; Electrical equipment, power service, generator system, level monitoring system; Perform repairs to critical controls and electrical system; All electrical equipment is expected to reach the end of useful life by 2032 and should be replaced; Pump controls and additional monitoring via the Distributed Control System (DCS); Evaluate PLC need replacement to maintain system reliability; Concurrently pedestal and pump; Clean and recast discharge piping, valves, and fittings and provide protective coating; Perform thickness test on critical piping to determine remaining useful life, and replace if necessary; Replace isolation valves.
Justification:	The Berry Street Pump Station, constructed in 1997 is a wet-weather facility. Situated below grade, the pump station lifts combined sewage during wet weather from the low points of the Berry Street drainage area to a sewer on 5th Street. The valve chamber is a dry well that contains the discharge valves and the discharge piping. The Berry Street Pump Station is below ground level and equipped with two submersible pumps. The controls and electrical systems need evaluation and upgrades to meet the Operational Reliability LOS goal (state of good repair). Other improvements are also noted as part of this project to ensure the station continues to be in a state of good repair.
Operating Impact:	During Construction: Shutdowns and/or diversions will not be required during construction as work can be undertaken during dry weather periods when the pump station is offline. Post Construction: This project involves in-kind rehabilitation and replacement, and will not impact operations once the project is completed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 380,509	\$ 0	\$ 0	\$ 0	\$ 380,509	\$ 0	\$ 0
ER	\$ 93,671	\$ 0	\$ 0	\$ 0	\$ 0	\$ 50,000	\$ 43,671
DS	\$ 1,166,926	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,000,000	\$ 166,926
CM	\$ 1,481,266	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,481,266
CN	\$ 7,285,535	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 7,285,535
Total	\$ 10,407,907	\$ 0	\$ 0	\$ 0	\$ 380,509	\$ 1,050,000	\$ 8,977,998

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	Davidson PS & FM Improvements
Total Budget:	\$ 2,490,473
Project Start:	10/1/2025
Project Finish:	9/27/2030
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Sewer and Collection System
Facility Category:	Capital
Type:	

Description:
The scope of this project aims to address the following operational reliability areas, which should be confirmed through assessments as part of project planning:
Buildings, underground structures, wet wells, and surrounding site. Consider options for providing camera and verify area lighting; Consider using corrugated metal panels for increased durability; Provide clear paved path with 5'x5' min landing to control cage gate and steps with handrail and landing to transformer; Provide graded paved walks < 5% slope from street to gate and to transformer; Perform inspection of wet well confined space. Recommended improvements include patch and coat concrete/basin areas exposed to wet conditions to extend life and repair defects; Electrical equipment, power service, generator system, level monitoring system; All electrical equipment components will need replacement to maintain system reliability; Controls and communication equipment to SEP need to be evaluated; Add control and more monitoring to SCADA/DCS; Process equipment; Replace all submerged equipment, dewatering pump, deteriorated parts of pump lifting rails/system; Perform thickness test on critical piping to determine remaining useful life. Replace wet-weather pump; Evaluate upgrading control panel for Selby valve on gate or integration with pump station control panel and upgrade as needed; Force Main: Replace the existing force main as pipe is shallow and evaluate new discharge point (closer to Davidson box would be better).

Justification:
The Davidson Wet Weather Pump Station has a peak capacity of 1 MGD, and operates with a single submersible pump. A sump pump is also located in the wet well. The pump station consists of a locked cage, aboveground electrical and controls console. The wet well is located below ground and accessed via a locked steel grate. The discharge manifold is steel and transitions to aboveground high density polyethylene (HDPE) until it discharges to the nearby gravity transport system. This pump station prevents flooding for one business owner in the area. Condition improvements to address pump lifting rail, dewatering pumps and pipes, and wet weather pump are needed at this station to maintain the station and force main in a state of good repair (Operational Reliability LOS Goal).

Operating Impact:
During Construction: Shutdowns and/or diversions will not be required during construction as work can be undertaken during dry weather periods when the pump station is offline.
Post Construction: This project involves in-kind rehabilitation and replacement, and will not impact operations once the project is completed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 92,691	\$ 0	\$ 0	\$ 0	\$ 92,691	\$ 0	\$ 0
ER	\$ 22,414	\$ 0	\$ 0	\$ 0	\$ 0	\$ 22,414	\$ 0
DS	\$ 282,512	\$ 0	\$ 0	\$ 0	\$ 0	\$ 282,512	\$ 0
CM	\$ 949,525	\$ 0	\$ 0	\$ 0	\$ 0	\$ 949,525	\$ 0
CN	\$ 1,743,331	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,743,331
Total	\$ 2,490,473	\$ 0	\$ 0	\$ 0	\$ 92,691	\$ 252,414	\$ 2,145,368

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	Sunnydale PS & FM Improvements
Total Budget:	\$ 3,719,550
Project Start:	10/1/2030
Project Finish:	9/26/2036
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Sewer and Collection System
Facility Category:	Capital
Type:	

Description:
The scope of this project aims to address the following operational reliability areas, which should be confirmed through assessments as part of project planning: Buildings, structures: Perform inspection of wet well confined space; recommended improvements include patch and coat concrete/basin areas exposed to wet conditions; Repair leaks in manifold room and conode piping; Evaluate and repair water-tight doors to wet well; Repair pump station discharge check valve; Evaluate and perform minor retrofit to toilet room to bring it to current standards/ADA compliance; Perform lighting improvements on stairway to wet well; Evaluate feasibility of ADA access (possibly through elevator) to the pump station; Evaluate options to improve overall access to station and area for security (including secure staff parking). Electrical and controls, level monitoring: Electrical equipment is in good condition but some is expected to reach the end of their useful lives in 10 to 15 years and will need replacement to maintain system reliability. Compressors are currently in fair condition, but they will need to be replaced during the service life of the building; Process equipment: Renew protective coatings on the discharge piping, fittings, and valves; Recommend thickness test on critical piping in manifold room; Replace dewatering pumps and piping, in conjunction with pump replacement, evaluate ways to mitigate grit issues and the need for flushing system; Pumps are expected to reach the end of their useful lives around 2030 and will need replacement; Water heaters are expected to reach the end of their useful lives during the service life of the building and will need replacement to maintain system reliability; Force Main: Perform detailed evaluation on the condition of the existing force main and complete improvements according (allowance for rehabilitation, not full replacement).

Justification:
Sunnydale Pump Station is a below grade pump station constructed in 1991, and serves the Sunnydale drainage basin during wet-weather.
This project addresses the longer-term improvements to meet the Operational Reliability LOS goal (state of good repair), and should be coordinated with the preceding Sunnydale PS Safety Improvements project (PS-3).

Operating Impact:
During Construction: This project will have no impact to operations during construction, as the project will be undertaken during the dry season when the pump station is offline.
Post Construction: This project involves in-kind rehabilitation and replacement, and will not impact future operations.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,379,870	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,379,870
ER	\$ 334,076	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 334,076
DS	\$ 4,207,403	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,500,000
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 5,921,349	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 5,213,946

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Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	Channel PS Improvements
Total Budget:	\$ 37,624,826
Project Start:	10/1/2029
Project Finish:	9/27/2035
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Sewer and Collection System
Facility Category:	Capital
Type:	Capital
Description:	The scope of this project is dependent on the strategy selected in the Channel Force Main Reliability Project. In June 2017, the Central Bayside System Improvement Project team issued a technical memo describing the recommended scope of work for the Channel Pump Station rehab. While the recommendations will likely change significantly, the cost allowance for this project is based on the memo and modified based on WWE input in 2021. The scope includes: Evaluate installation of automatic gate; Provide self-illuminating exit sign; Evaluate stair geometry, handrails and guardrails for compliance, and trip hazards caused by containment curb at channel area; Provide cable for ladder to roof and ladder after inlet gates for fall protection; Inspect wet wells and rehab structure as needed; Evaluate and upgrade PLC as part of the as part of ongoing effort to replace PLCs system-wide; Replace main pump, main pump flywheel assembly and two (#3 and #6) main pump VFDs; Evaluate and repair motors; Replace inlet, outlet gates, washdown system, bar screen inlet gates, hydraulic actuators, and replace roll-up doors (except the main door); Evaluate piping inside station and repair; Evaluate and provide screen/trash compactor; Evaluate odor control; HVAC equipment, suction pumping for lift pumps; Patch and coat wet wells and bar screen channel; Provide shoreline protection and bypass bar-rack for bar screen. The Channel Pump Station (CHS) is an all-weather/wastewater pump station that collects wastewater flows from the northeast portions of the Bayside Drainage Basin, consisting of the North Shore and Channel Watersheds. The CHS was constructed in 1979 and is designed to pump wastewater flows during wet weather to the SEP via the existing 66-inch-diameter Channel Force Main (CHFM). Currently, there is a project planned (Channel Force Main Reliability Project) to provide the operational flexibility to convey dry weather design flows following an unplanned outage. The strategy to provide this flexibility may or may not include the construction of another pump station. Regardless of the strategy selected under the Channel Force Main Reliability Project, it is expected that improvements to the Channel Pump Station is needed to meet the Operational Reliability LOS goals (state of good repair), and potentially Seismic Reliability goals depending on the CHFM reliability strategy. The purpose of this project is to perform the rehab required. During Construction: Shutdowns and/or diversions will likely be required to facilitate construction work and should be completed during dry weather when flows are lower. Post Construction: Depending on the preferred alternative, future operations of the Channel Pump Station may be impacted.
Justification:	
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,398,777	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,398,777
ER	\$ 338,623	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 338,623
DS	\$ 4,264,921	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,750,000
CM	\$ 450,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 26,337,378	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 32,789,699	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 5,487,400


SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	Zoo WW PS & FM Improvements
Total Budget:	\$ 17,146,032
Project Start:	10/1/2030
Project Finish:	9/26/2036
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Sewer and Collection System
Facility Category:	Capital
Type:	Capital
Description:	The scope of this project aims to address the following operational reliability areas, which should be confirmed through assessments as part of project planning: Buildings, structures: Verify fire rating for door; provide compliant door; Perform wet well inspection; Recommended improvements include patch and coat concrete/basin areas exposed to wet conditions; Provide additional fencing around facility and accessible threshold at main entry, accessible parking egress gate, security camera, and security access key box (at gate and as required on building); Verify containment curb requirements for fuel tank and generator, and provide if required; Perform improvements on guardrails; Electrical and controls, level monitoring; Evaluate PLC replacement; Replace transfer switch with a functional ATIS, or formalize a contingency plan so that backup power can be supplied in a timely manner; Replace UPS; HVAC: Check HVAC code ventilation requirements for the generator room; Replace HVAC equipment; Process equipment: Inspect and clean pipes to determine the depth of pitting; Perform thickness test on critical piping; Inspect air receiver and compressor for internal corrosion; Replace the bubbler system at the end of useful life; Based on the current age, it is expected that the pumps will reach the end of their useful lives during the service life of the building and will need replacement to maintain system reliability; Replace gates and connecting j-bolts in access chamber for pumps; Provide concrete blocks for housing pumps; Force Main: Perform detailed evaluation on the condition of the existing force main and complete improvements accordingly. Zoo Wet Weather Pump Station collects wet-weather flows and discharges to the Westside T/S Box. The facility was originally constructed in 1998 and has had various improvements since. The Zoo force main was identified as the 54-inch pipe from the Zoo Wet Weather Pump Station to the Westside Transport, and appears to operate both as a gravity sewer and a force main based on best available information. The corrosivity of the soils around the force main may pose a high corrosion risk, and the force main should be inspected to confirm the condition. Within the station, improvements are needed to meet the Operational Reliability LOS goal (state of good repair) such as addressing surface corrosion observed on equipment and piping, and replacing/repairing the automatic transfer switch. During Construction: Shutdowns and/or diversions will not be required during construction as work can be undertaken during dry weather periods when the pump station is offline. Post Construction: This project involves in-kind rehabilitation and replacement, and will not impact future operations.
Justification:	
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 637,381	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 637,381
ER	\$ 154,315	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 154,315
DS	\$ 1,943,457	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,700,000
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 2,735,153	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,491,696

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Collection System Improvement
FSP ID	(N/A)
Project Title:	CHFM Inspection and Rehabilitation - Southern Port
Total Budget:	\$ 51,004,753
Project Start:	4/1/2024
Project Finish:	9/30/2030
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Sewer and Collection System
Facility Category:	Capital
Type:	
Description:	According to the Operational Reliability LOS Goals, all major dry weather force mains (ADWF \geq 1 mgd) should have the operational flexibility to perform maintenance, and that dry weather force mains conveying to treatment plants shall also have provisions to convey design flows following an unplanned outage. In addition, assets should be maintained in good working order. This project allows for the internal inspection of the CHFM south of the intertie structure to SEP, which is assumed to be performed by a multi-sensor remote operated vehicle (ROV). It is assumed that the ROV will contain video camera, sonar, and lidar data capture equipment. Once the condition of the facility is evaluated, the design and construction for the required level of rehabilitation will be performed. The assumed rehabilitation budget assumes cured-in-place lining (CIP/L) for the entirety of the 2,600-foot length.
Justification:	Currently, the 66-inch diameter Channel Force Main (CHFM) conveys flows from Channel Pump Station (CHS) to the Southeast Water Pollution Control Plant (SEW). Evaluations performed of the 66-inch, 2.12 mile CHFM have shown that sections are vulnerable to damage from a major earthquake and long-term settlement. This facility cannot be taken out of service for a significant timeframe to perform maintenance, thus the internal condition is largely unknown. In addition, recent limited testing indicate that portions of the system may be deteriorating, and improvements may be required to extend the pipeline's useful life.
Operating Impact:	This project has a positive impact on operations and helps ensure a critical conveyance facility is brought to a good state of repair and helps meet the Operational Reliability LOS. When complete, the project will also reduce future O&M costs since the risks of emergency repair or rehabilitation would be mitigated. Construction work should be restricted to dry-weather season where flows can be diverted away from the existing CHFM to Islais Creek Transport/Storage box through a proposed intertie (which would be constructed by F'2025).

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,954,888	\$ 0	\$ 500,000	\$ 1,454,888	\$ 0	\$ 0	\$ 0
ER	\$ 459,043	\$ 0	\$ 0	\$ 300,000	\$ 159,043	\$ 0	\$ 0
DS	\$ 5,898,961	\$ 0	\$ 0	\$ 0	\$ 4,500,000	\$ 1,000,000	\$ 398,961
CM	\$ 6,988,534	\$ 0	\$ 0	\$ 500,000	\$ 0	\$ 500,000	\$ 5,988,534
CN	\$ 35,703,327	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 35,703,327
Total	\$ 51,004,753	\$ 0	\$ 500,000	\$ 1,754,888	\$ 5,159,043	\$ 1,500,000	\$ 42,090,822


SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	(N/A)
Project Title:	Cesar Chavez Green Infrastructure
Total Budget:	\$ 1,374,143
Project Start:	4/4/2013
Project Finish:	6/28/2013
Current Active Phase:	SSIP
Organization:	Mary Tenken
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	
Description:	Funds for flood control projects and green infrastructure projects will appear under CWWSIP/CDB. Of the remaining funds, \$1M will be provided to SFDPW in accordance with the SFPUC-SFDPW memorandum of understanding (MOU) for the Cesar Chavez Streetscape Improvement Project (CCSIP). These funds are for the planning, design and construction of green infrastructure to be implemented as part of the CCSIP.
Justification:	This project will help achieve four of the five levels-of-service (LOS) goals identified in the Sewer System Improvement Program, including: 1) Providing a compliant, reliable, resilient and flexible system that can respond to catastrophic events; 2) Manage stormwater; 3) Provide benefits to impacted communities, and 4) Achieve economic and environmental sustainability. Green Infrastructure (GI) improvements will provide sustainable alternatives to the collection system for the management of stormwater flows. Strategically placed GI facilities will increase the efficiency of our collection and treatment facilities during wet weather. Ancillary benefits may include improved public safety, community aesthetics, and biodiversity. This project will be monitored to evaluate the stormwater management performance to set minimum performance standards for future GI projects. This project is consistent with SFPUC's Technology Policy by pursuing innovative green technologies for system improvements to meet LOS goals and regulatory compliance.
Operating Impact:	This project will improve stormwater management within the watershed and maximize opportunities for passive stormwater collection, treatment, and infiltration. SFPUC will be developing a long-term maintenance plan, providing O&M staff training, and monitoring program to ensure the long-term performance of these wastewater assets. Additional maintenance staff will be needed to support the projects after they are implemented.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	10026813
Project Title:	Islais Creek Green Infrastructure
Total Budget:	\$ 2,425,008
Project Start:	9/4/2012
Project Finish:	4/24/2018
Current Active Phase:	SSIP
Organization:	SSIP
Project Manager:	Mary Tienken
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
Description:	The proposed green features include approximately 4,700 square feet of bio-filtration beds, 18,000 square feet of permeable paving in the parking lanes, and 2 new plazas with permeable paving. These features will also enhance street greening, bicycle safety, pedestrian safety, and community beautification. As part of this project additional stormwater flows will be managed along 29th Street, Tiffany Avenue, Duncan Street, and San Jose Avenue. This project is also referred to as "Mission & Valencia Green Gateway".
Justification:	This project will help achieve four of the five levels-of-service goals identified in the Sewer System Improvement Program, including: 1) Providing a compliant, reliable, resilient and flexible system that can respond to catastrophic events; 2) Manage stormwater; 3) Provide benefits to impacted communities, and 4) Achieve economic and environmental sustainability. Green Infrastructure improvements will provide sustainable alternatives to the collection system for the management of stormwater flows. Strategically placed GI facilities will increase the efficiency of our collection and treatment facilities during wet-weather. Ancillary benefits may include improved public safety, community aesthetics, and biodiversity. This project will be monitored to evaluate the stormwater management performance to set minimum performance standards for future GI projects. This project is consistent with SFPUC's Technology Policy by pursuing innovative green technologies for system improvements to meet LOS goals and regulatory compliance.
Operating Impact:	This project will improve stormwater management within the Islais Creek watershed and maximize opportunities for passive stormwater collection, treatment and infiltration. SFPUC will be developing a long-term maintenance plan, train O&M staff, and monitoring program to ensure the long-term performance of these wastewater assets. Additional maintenance staff will be needed to support the projects after they are implemented.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
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SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	10026805
Project Title:	Sunset Green Infrastructure
Total Budget:	\$ 8,738,194
Project Start:	12/9/2012
Project Finish:	4/29/2022
Current Active Phase:	Post-Construction
Organization:	SSIP
Project Manager:	Mary Tienken
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
Description:	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".
Justification:	This project will help achieve four of the five levels-of-service (LOS) goals identified in the Sewer System Improvement Program, including: 1) Providing a compliant, reliable, resilient and flexible system that can respond to catastrophic events; 2) Manage stormwater; 3) Provide benefits to impacted communities, and 4) Achieve economic and environmental sustainability. Green Infrastructure (GI) improvements will provide sustainable alternatives to the collection system for the management of stormwater flows. Strategically placed GI facilities will increase the efficiency of our collection and treatment facilities during wet weather. Ancillary benefits may include improved public safety, community aesthetics, and biodiversity. This project will be monitored to evaluate the stormwater management performance to set minimum performance standards for future GI projects. This project is consistent with SFPUC's Technology Policy by pursuing innovative green technologies for system improvements to meet LOS goals and regulatory compliance.
Operating Impact:	This project will improve stormwater management within the Sunset watershed and maximize opportunities for passive stormwater collection, treatment and infiltration. SFPUC will be developing a long-term maintenance plan, providing O&M staff training, and monitoring program to ensure the long-term performance of these wastewater assets. Additional maintenance staff will be needed to support the projects after they are implemented.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	10028806
Project Title:	North Shore Green Infrastructure
Total Budget:	\$ 1,721,677
Project Start:	12/3/2012
Project Finish:	12/31/2018
Current Active Phase:	SSIP
Organization:	Mary Tienken
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	
Description:	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".
Justification:	This project will help achieve four of the five levels-of-service (LOS) goals identified in the Sewer System Improvement Program, including: 1) Providing a compliant, reliable, resilient and flexible system that can respond to catastrophic events; 2) Manage stormwater; 3) Provide benefits to impacted communities, and 4) Achieve economic and environmental sustainability. Green Infrastructure (GI) improvements will provide sustainable alternatives to the collection system for the management of stormwater flows. Strategically placed GI facilities will increase the efficiency of our collection and treatment facilities during wet weather. Ancillary benefits may include improved public safety, community aesthetics, and biodiversity. This project will be monitored to evaluate the stormwater management performance to set minimum performance standards for future GI projects. This project is consistent with SFPUC's Technology Policy by pursuing innovative green technologies for system improvements to meet LOS goals and regulatory compliance.
Operating Impact:	This project will improve stormwater management within the North Shore watershed and maximize opportunities for passive stormwater collection, treatment and infiltration. SFPUC will be developing a long-term maintenance plan, train O&M staff, and monitoring program to ensure the long-term performance of these wastewater assets. Additional maintenance staff will be needed to support the projects after they are implemented.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	10028807
Project Title:	Lake Merced Green Infrastructure
Total Budget:	\$ 6,287,009
Project Start:	12/3/2012
Project Finish:	4/24/2018
Current Active Phase:	SSIP
Organization:	Mary Tienken
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	
Description:	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".
Justification:	This project will help achieve four of the five levels-of-service (LOS) goals identified in the Sewer System Improvement Program, including: 1) Providing a compliant, reliable, resilient and flexible system that can respond to catastrophic events; 2) Manage stormwater; 3) Provide benefits to impacted communities, and 4) Achieve economic and environmental sustainability. Green Infrastructure (GI) improvements will provide sustainable alternatives to the collection system for the management of stormwater flows. Strategically placed GI facilities will increase the efficiency of our collection and treatment facilities during wet weather. Ancillary benefits may include improved public safety, community aesthetics, and biodiversity. This project will be monitored to evaluate the stormwater management performance to set minimum performance standards for future GI projects. This project is consistent with SFPUC's Technology Policy by pursuing innovative green technologies for system improvements to meet LOS goals and regulatory compliance.
Operating Impact:	This project will improve stormwater management within the Lake Merced watershed and maximize opportunities for passive stormwater collection, treatment and infiltration. SFPUC will be developing a long-term maintenance plan, train O&M staff, and monitoring program to ensure the long-term performance of these wastewater assets. Additional maintenance staff will be needed to support the projects after they are implemented.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	10026808
Project Title:	Sunnydale Green Infrastructure
Total Budget:	\$ 5,412,266
Project Start:	12/9/2012
Project Finish:	9/30/2019
Current Active Phase:	SSIP
Organization:	SSIP
Project Manager:	Mary Tienken
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
Description:	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 "Visitation Valley Green Nodes".
Justification:	This project will help achieve four of the five levels-of-service (LOS) goals identified in the Sewer System Improvement Program, including: 1) Providing a compliant, reliable, resilient and flexible system that can respond to catastrophic events; 2) Manage stormwater; 3) Provide benefits to impacted communities, and 4) Achieve economic and environmental sustainability. Green infrastructure improvements will provide sustainable alternatives to the collection system for the management of stormwater flows. Strategically placed GI facilities will increase the efficiency of our collection and treatment facilities during wet-weather. Ancillary benefits may include improved public safety, community aesthetics, and biodiversity. This project will be monitored to evaluate the stormwater management performance to set minimum performance standards for future GI projects. This project is consistent with SFPUC's Technology Policy by pursuing innovative green technologies for system improvements to meet LOS goals and regulatory compliance.
Operating Impact:	This project will improve stormwater management within the Sunnydale watershed and maximize opportunities for passive stormwater collection, treatment and infiltration. SFPUC will be developing a long-term maintenance plan, train O&M staff, and monitoring program to ensure the long-term performance of these wastewater assets. Additional maintenance staff will be needed to support the projects after they are implemented.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	10026809
Project Title:	Richmond Green Infrastructure
Total Budget:	\$ 13,008,390
Project Start:	12/9/2012
Project Finish:	12/30/2021
Current Active Phase:	Construction
Organization:	SSIP
Project Manager:	Mary Tienken
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
Description:	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".
Justification:	This project will help achieve four of the five levels-of-service (LOS) goals identified in the Sewer System Improvement Program, including: 1) Providing a compliant, reliable, resilient and flexible system that can respond to catastrophic events; 2) Manage stormwater; 3) Provide benefits to impacted communities, and 4) Achieve economic and environmental sustainability. Green infrastructure (GI) improvements will provide sustainable alternatives to the collection system for the management of stormwater flows. Strategically placed GI facilities will increase the efficiency of our collection and treatment facilities during wet-weather. Ancillary benefits may include improved public safety, community aesthetics, and biodiversity. This project will be monitored to evaluate the stormwater management performance to set minimum performance standards for future GI projects. This project is consistent with SFPUC's Technology Policy by pursuing innovative green technologies for system improvements to meet LOS goals and regulatory compliance.
Operating Impact:	This project will improve stormwater management within the Richmond watershed and maximize opportunities for passive stormwater collection, treatment and infiltration. SFPUC will be developing a long-term maintenance plan, train O&M staff, and monitoring program to ensure the long-term performance of these wastewater assets. Additional maintenance staff will be needed to support the projects after they are implemented.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	10026810
Project Title:	Yosemite Green Infrastructure
Total Budget:	\$ 20,793,192
Project Start:	12/3/2012
Project Finish:	10/29/2027
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Mary Tienken
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
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".
Justification:	This project will help achieve four of the five levels-of-service (LOS) goals identified in the Sewer System Improvement Program, including: 1) Providing a compliant, reliable, resilient and flexible system that can respond to catastrophic events; 2) Manage stormwater; 3) Provide benefits to impacted communities, and 4) Achieve economic and environmental sustainability. Green Infrastructure (GI) improvements will provide sustainable alternatives to the collection system for the management of stormwater flows. Strategically placed GI facilities will increase the efficiency of our collection and treatment facilities during wet weather. Ancillary benefits may include improved public safety, community aesthetics, and biodiversity. This project will be monitored to evaluate the stormwater management performance to set minimum performance standards for future GI projects. This project is consistent with SFPUC's Technology Policy by pursuing innovative green technologies for system improvements to meet LOS goals and regulatory compliance.
Operating Impact:	This project will improve stormwater management within the Yosemite watershed and maximize opportunities for passive stormwater collection, treatment and infiltration. SFPUC will be developing a long-term maintenance plan, train O&M staff, and monitoring program to ensure the long-term performance of these wastewater assets. Additional maintenance staff will be needed to support the projects after they are implemented.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 143	\$ 0	\$ 0	\$ 143	\$ 0	\$ 0	\$ 0
DS	\$ 1,339,730	\$ 1,296,685	\$ 0	\$ 21,148	\$ 21,897	\$ 0	\$ 0
CM	\$ 1,313,612	\$ 0	\$ 702,639	\$ 592,223	\$ 18,750	\$ 0	\$ 0
CN	\$ 12,635,622	\$ 0	\$ 11,520,795	\$ 1,114,827	\$ 0	\$ 0	\$ 0
Total	\$ 15,289,107	\$ 1,296,685	\$ 12,223,434	\$ 1,728,341	\$ 40,647	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	10026812
Project Title:	Charmel Green Infrastructure
Total Budget:	\$ 2,263,671
Project Start:	2/21/2014
Project Finish:	6/31/2018
Current Active Phase:	SSIP
Organization:	SSIP
Project Manager:	Mary Tienken
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
Description:	This project is also referred to as the "Wiggle Neighborhood Green Corridor". The purpose of the Wiggle Neighborhood Green Corridor project is to implement low impact stormwater management along the Wiggle bike route between Duboce Street and Fell Street in order to reduce flooding and provide additional stormwater management benefits to the SSIP. Key features of this project will include installation of bulb-outs on selected street corners, bioretention planters, and permeable pavement.
Justification:	This project will help achieve four of the five levels-of-service (LOS) goals identified in the Sewer System Improvement Program, including: 1) Providing a compliant, reliable, resilient and flexible system that can respond to catastrophic events; 2) Manage stormwater; 3) Provide benefits to impacted communities, and 4) Achieve economic and environmental sustainability. Green Infrastructure (GI) improvements will provide sustainable alternatives to the collection system for the management of stormwater flows. Strategically placed GI facilities will increase the efficiency of our collection and treatment facilities during wet weather. Ancillary benefits may include improved public safety, community aesthetics, and biodiversity. This project will be monitored to evaluate the stormwater management performance to set minimum performance standards for future GI projects. This project is consistent with SFPUC's Technology Policy by pursuing innovative green technologies for system improvements to meet LOS goals and regulatory compliance.
Operating Impact:	This project will improve stormwater management within the Charmel watershed and maximize opportunities for passive stormwater collection, treatment and infiltration. SFPUC will be developing a long-term maintenance plan, train O&M staff, and monitoring program to ensure the long-term performance of these wastewater assets. Additional maintenance staff will be needed to support the projects after they are implemented.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	10026813
Project Title:	Islands Creek Green Infrastructure (SPLIT)
Total Budget:	\$ 3,223,408
Project Start:	4/8/2016
Project Finish:	4/24/2018
Current Active Phase:	SSIP
Organization:	Mary Tenken
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	Capital
Description:	This project will incorporate green stormwater management into an urban design to meet the neighborhood's needs and the stormwater performance goals for the Islands 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 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 12 bioretention planters and a subsurface infiltration gallery. This project is also referred to as the "Mission and Valencia Streets Green Gateway".
Justification:	This project will help achieve four of the five levels-of-service (LOS) goals identified in the Sewer System Improvement Program, including: 1) Providing a compliant, reliable, resilient and flexible system that can respond to catastrophic events; 2) Manage stormwater; 3) Provide benefits to impacted communities, and 4) Achieve economic and environmental sustainability. Green Infrastructure (GI) improvements will provide sustainable alternatives to the collection system for the management of stormwater flows. Strategically placed GI facilities will increase the efficiency of our collection and treatment facilities during wet weather. Ancillary benefits may include improved public safety, community aesthetics, and biodiversity. This project will be monitored to evaluate the stormwater management performance to set minimum performance standards for future GI projects. This project is consistent with SFPUC's Technology Policy by pursuing innovative green technologies for system improvements to meet LOS goals and regulatory compliance.
Operating Impact:	This project will improve stormwater management within the Islands Creek watershed and maximize opportunities for passive stormwater collection, treatment and infiltration. SFPUC will be developing a long-term maintenance plan, train O&M staff, and monitoring program to ensure the long-term performance of these wastewater assets. Additional maintenance staff will be needed to support the projects after they are implemented.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	10037194
Project Title:	Balboa High School Regional Runoff Reduction Proje
Total Budget:	\$ 15,393,019
Project Start:	2/1/2022
Project Finish:	3/31/2027
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	Capital
Description:	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 system 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 railway 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.
Justification:	The primary objective of the Balboa High School Regional Runoff Reduction Project is to address the Sewer System Improvement Project (SSIP) LOS goal to "Integrate Green and Grey Infrastructure to Manage Stormwater and Minimize Flooding." This LOS goal includes managing stormwater from a statistically derived storm lasting 3 hours, with a total of 1.3 inches of rainfall and a defined peak rainfall intensity (5-year 3-hour storm, LOS storm). This project reduces runoff volume in the Cayuga and Alemany areas, which currently do not meet the defined SSIP LOS. Grey infrastructure projects - namely Foerster Street Auxiliary and Mangels/Hearst/Detroit Sewer Replacement Project - have been completed in Phase 1 of SSIP to increase the peak conveyance capacity in this area. Another major upsizing project underway is the Lower Alemany Stormwater Improvement Project. The Balboa High School Regional Runoff Reduction Project would complement the grey projects by reducing the amount of runoff entering the upstream sewers, thereby reducing peak flows in the challenge areas. This project sheet describes the green infrastructure capital projects that have been identified as the most effective candidates to address stormwater management in this area. These projects form the cost and performance basis for the Balboa High School Regional Runoff Reduction Project.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,840,108	\$ 532,178	\$ 1,307,930	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 700,000	\$ 0	\$ 700,000	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 11,534,911	\$ 0	\$ 0	\$ 10,797,073	\$ 737,838	\$ 0	\$ 0
Total	\$ 14,075,019	\$ 532,178	\$ 1,307,930	\$ 11,497,073	\$ 737,838	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	10037195
Project Title:	Regional School/Park: Giannini Middle School
Total Budget:	\$ 7,298,362
Project Start:	2/1/2022
Project Finish:	3/31/2027
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	
Description:	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.
Justification:	The primary objective of this project is to address the SSIP level of service (LOS) to "Integrate Green and Grey Infrastructure to Manage Stormwater and Minimize Flooding." This LOS includes managing stormwater from a statistically derived storm lasting 3 hours, with a total of 1.3 inches of rainfall and a defined peak rainfall intensity (5-year, 3-hour storm, LOS storm). This project reduces runoff volume in the area, which currently do not meet the defined SSIP LOS.
Operating Impact:	During Construction: None Post Construction: The installation of new green infrastructure will require additional regular maintenance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 837,230	\$ 837,230	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 583,634	\$ 0	\$ 0	\$ 583,634	\$ 0	\$ 0	\$ 0
CN	\$ 5,223,498	\$ 0	\$ 0	\$ 5,223,498	\$ 0	\$ 0	\$ 0
Total	\$ 6,644,362	\$ 837,230	\$ 0	\$ 5,807,132	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	(NA)
Project Title:	Regional School/Park: Lowell High School
Total Budget:	\$ 40,472,495
Project Start:	10/1/2030
Project Finish:	9/27/2035
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	
Description:	This regional stormwater project is located at Lowell High School in the Lake Merced neighborhood. In addition to the stormwater performance metrics, the considerations that led to this project being selected as a preferred regional GI site for schools and parks include ideal location relative to surrounding flood risks; Preferred geotechnical conditions based on the best available information (e.g., slope, projected soil type, no contaminated soils, depth to groundwater/bedrock, etc.); Quantity and location of impervious area relative to irrigated open space and available surface space for green infrastructure; Overlaps with SFPUC collection system reliability priorities (e.g., improvements in disadvantaged communities). Lowell High School Regional Runoff Reduction Project (Basis): Regional stormwater collection from 32 acres routed to a 1,260,000-gallon underground cistern integrated with an ultra-high-efficiency irrigation system underneath three large playing fields as a replacement to the current fields. If the basis project is not feasible, the following alternate projects are recommended for consideration as cost-effective replacements: Jackson Playground Runoff Reduction; Downtown High School Runoff Reduction; Marina Middle School Regional Runoff Reduction; Marshall High School Runoff Reduction; Rossi Playground Runoff Reduction; Sunset Recreation Center Runoff Reduction; West Portal Playground Runoff Reduction.
Justification:	The primary objective of the Regional School/Park GI Projects is to address the SSIP level of service (LOS) to "Integrate Green and Grey Infrastructure to Manage Stormwater and Minimize Flooding." This LOS includes managing stormwater from a statistically derived storm lasting 3 hours, with a total of 1.3 inches of rainfall and a defined peak rainfall intensity (5-year, 3-hour storm, LOS storm). This project reduces runoff volume from large areas in and around schools and parks that have been strategically identified upstream from priority stormwater management areas currently not meeting the SSIP LOS.
Operating Impact:	During Construction: None Post Construction: The installation of new green infrastructure will require additional regular maintenance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,646,439	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,646,439
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 5,070,186	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,629,423
CM	\$ 573,697	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 26,800,886	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 34,091,208	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,275,862

SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	(N/A)
Project Title:	Balboa Park GI Project
Total Budget:	\$ 591
Project Start:	1/1/2021
Project Finish:	3/1/2026
Current Active Phase:	SSJP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	
Description:	This project reduces runoff volume in the Cayuga and Alemany areas, which currently do not meet the defined Sewer System Improvement Program (SSIP) level-of-service (LOS). The basis and alternate projects include managing runoff from Young Street and on-street parking (0.7 acres), police station parking lot (0.5 acres), sump from the playground (0.2 acres, and tennis courts (0.5 acres) using four new infiltrative bioretention facilities; Improving drainage in the parking area behind Boxer press box (0.2 acres). If the basis project is not feasible due to coordination or engineering feasibility issues determined in the Alternative Assessment Report (AAR), the following alternate projects, June Jordan School for Equity Regional Runoff Reduction or Cleveland Elementary Runoff Reduction, are recommended for consideration as cost-effective replacements. However, their performance in complementing the SFPUC's priority focus on managing areas that may be inundated in the LOS storm must be confirmed prior to incorporation as a substitute project. The primary objective of this project is to address the SSIP level of service (LOS) to "Integrate Green and Grey Infrastructure to Manage Stormwater and Minimize Flooding." This LOS includes managing stormwater from a statistically derived storm lasting 3 hours, with a total of 1.3 inches of rainfall and a defined peak rainfall intensity (5-year 3-hour storm, LOS storm). This project reduces runoff volume in the area, which currently does not meet the defined SSIP LOS.
Justification:	In addition to the stormwater performance metrics, the considerations that led to this project being selected as the preferred regional GI site includes the ideal location relative to surrounding flood risks; Positive synergy with providing a solution to historic 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 LOS by providing benefits to a disadvantaged community; Synergy with Balboa Park Area Plan by the San Francisco Planning Department. Grey infrastructure projects – namely Foerster Street Auxiliary and Mangels/Hearst/Detroit Sewer Replacement Project – have been completed in Phase 1 of SSIP to increase the peak conveyance capacity in this area. Another major upsizing project underway is the Lower Alemany Stormwater Improvement Project. The Cayuga Runoff Reduction Project would complement the grey projects by reducing the amount of runoff entering the upstream sewers, thereby reducing peak flows in the challenge areas.
Operating Impact:	During Construction: None Post Construction: The installation of new green infrastructure will require additional regular maintenance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
GM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	(N/A)
Project Title:	Ocean Storm Area GI: Aptos School and Playground
Total Budget:	\$ 7,690,226
Project Start:	10/1/2024
Project Finish:	9/27/2029
Current Active Phase:	SSJP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	
Description:	A single relatively large-scale green infrastructure (GI) project forms the cost and performance basis for the Ocean Runoff Reduction Project. The project is a regional stormwater project centered around Aptos Middle School in the Ingleside neighborhood. The basis and alternate projects include regional stormwater collection from adjacent upstream right-of-way as well as the school campus. Runoff from 6.5 acres routed to a 200,000-gallon underground cistern tank integrated with an ultra-high-efficiency irrigation system underneath the football field to replace the existing field. The regional stormwater collection is only from adjacent intersections, so no significant new storm drain infrastructure is needed in the right-of-way. The primary objective of this project is to address the SSIP level of service (LOS) to "Integrate Green and Grey Infrastructure to Manage Stormwater and Minimize Flooding." This LOS includes managing stormwater from a statistically derived storm lasting 3 hours, with a total of 1.3 inches of rainfall and a defined peak rainfall intensity (5-year 3-hour storm, LOS storm). This project reduces runoff volume in the area, which currently does not meet the defined SSIP LOS.
Justification:	In addition to the stormwater performance metrics, the considerations that led to this project being selected as the preferred regional GI site include the ideal location relative to surrounding flood risks and quantity and location of impervious area relative to irrigated open space and available surface space for green infrastructure. The Urbano Drive and Victoria Street Drainage Sewer Improvements have been proposed within Phase 1 of SSIP to increase the peak conveyance capacity at the downstream end of this area via pipe upsizing. The Ocean Runoff Reduction Project would complement this grey project by reducing the amount of runoff entering the upstream sewers, and decreasing peak flows in the challenge area.
Operating Impact:	During Construction: None Post Construction: The installation of new green infrastructure will require additional regular maintenance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 375,655	\$ 0	\$ 0	\$ 326,504	\$ 49,151	\$ 0	\$ 0
ER	\$ 93,990	\$ 0	\$ 0	\$ 81,171	\$ 12,219	\$ 0	\$ 0
DS	\$ 1,156,001	\$ 0	\$ 0	\$ 0	\$ 596,819	\$ 559,182	\$ 0
GM	\$ 1,487,957	\$ 0	\$ 0	\$ 0	\$ 0	\$ 127,433	\$ 1,360,524
CN	\$ 4,577,223	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,577,223	\$ 0
Total	\$ 7,690,226	\$ 0	\$ 0	\$ 407,675	\$ 658,189	\$ 5,263,838	\$ 1,360,524

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	(N/A)
Project Title:	SFPUC Parcel: Merced Manor Reservoir
Total Budget:	\$ 2,272,413
Project Start:	10/1/2024
Project Finish:	9/27/2029
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital

Description: This green infrastructure project manages stormwater from a covered drinking water reservoir. The basis and alternate projects are described below.
Divert runoff from the 1.85-acre reservoir roof to a 75,000-gallon underground cistern to satisfy onsite irrigation demand of the extensive turf lawn used by the YMCA. In addition, the 0.23-acre rooftop of the pump house would be diverted via downspout disconnect to a rain garden located in front of the building. Ocean Avenue to the south of the site is overly wide and could be narrowed to extend the sidewalk width to create additional treatment area. If the basis project is not feasible, the following alternate projects are recommended for consideration as cost-effective replacements. However, their performance in complementing the SFPUC's priority focus on managing areas that may be inundated in the level-of-service (LOS) storm must be confirmed prior to incorporation as a substitute project.
University Round Reservoir Runoff Reduction Project: Rerouting the existing storm drain for the 12-acre southern reservoir at the University Ave and Woolsey St intersection to the adjacent 770 Woolsey St parcel where half the flows would go to a 120,000-gallon cistern to satisfy onsite irrigation demands and the other half would go to infiltrative rain gardens on that parcel. Land acquisition and/or teaming with Project Greenhouse would be necessary. Otherwise, an infiltration gallery in the ROW could be a viable alternative.

Justification: The primary objective of this project is to address the Sewer System Improvement Program (SSIP) LOS to "Integrate Green and Grey Infrastructure to Manage Stormwater and Minimize Flooding." This LOS includes managing stormwater from a statistically derived storm lasting 3 hours, with a total of 1.3 inches of rainfall and a defined peak rainfall intensity (5-year 3-hour storm, LOS storm). This project reduces runoff volume in the area, which currently does not meet the defined SSIP LOS. In addition to the stormwater performance metrics, the considerations that led to this project being selected as the preferred regional GI site include locations within the area of influence to flood risks; Preferred geotechnical conditions based on the best available information (e.g., slope, projected soil type, no known soil contamination, depth to groundwater/bedrock, etc.); Ability to manage stormwater from a large impervious PUC asset draining to a single point; Proximity to very low velocity (0-0.5 ft/s) sewer pipes.
Grey infrastructure projects – primarily pipe upsizing – have been proposed within SSIP to increase the peak conveyance capacity. The SFPUC Parcel GI Projects would complement the grey projects by reducing the amount of runoff entering the upstream sewers, thereby reducing peak flows in the stormwater management area.

Operating Impact: During Construction: None
Post Construction: The installation of new green infrastructure will require additional regular maintenance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 140,894	\$ 0	\$ 0	\$ 122,459	\$ 18,435	\$ 0	\$ 0
ER	\$ 35,026	\$ 0	\$ 0	\$ 30,444	\$ 4,582	\$ 0	\$ 0
DS	\$ 433,572	\$ 0	\$ 0	\$ 0	\$ 223,844	\$ 209,728	\$ 0
CM	\$ 558,074	\$ 0	\$ 0	\$ 0	\$ 0	\$ 47,795	\$ 510,279
CN	\$ 1,104,847	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,104,847	\$ 0
Total	\$ 2,272,413	\$ 0	\$ 0	\$ 152,903	\$ 246,861	\$ 1,362,370	\$ 510,279

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	(N/A)
Project Title:	Upper Channel Storm Area GI: DMV Runoff Reduction
Total Budget:	\$ 1,988,361
Project Start:	10/1/2024
Project Finish:	9/27/2029
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital


Description: This project is located immediately adjacent to the Panhandle open space and the existing EIP on Fell Street. In addition to the stormwater performance metrics summarized in the attached score card, the considerations that led to these projects being selected as the preferred regional GI sites in Upper Channel include: Ideal location relative to surrounding flood risks; Preferred geotechnical conditions based on best available information (e.g., slope, projected soil type, no contaminated soils, depth to groundwater/bedrock, etc.); Quantity and location of impervious area relative to irrigated open space and available surface space for green infrastructure; Overlaps with SFPUC collection system reliability priorities and community benefit LOS; (e.g., improvements in disadvantaged communities); Connectivity to the existing Early Implementation Project at Fell/Oak, as a way to leverage existing GI infrastructure, expand its visual presence, and build continuity. Basis Project: DMV Runoff Reduction Project - Manage runoff from hardscape (1.7 acres) through 3,703 sf of bioretention. Disconnect downspout and harvest runoff from roof (0.39 acres) in 9,750-gallon cistern. In contrast to conventional infrastructure projects, the regional green infrastructure stormwater project is contingent upon a willingness of the agency partner. As such, if the basis project is not feasible, the following alternate projects are recommended for consideration as cost-effective replacements. Gateway High School Runoff Reduction; Golden Gate Webster Housing Runoff Reduction; Hayward Playground Runoff Reduction; Hutch Community Center Runoff Reduction; Post Baker Housing Runoff Reduction; Rosa Parks Elementary Runoff Reduction; Woodland Creek and Grattan Reach; Islais Creek - Alemany Reach. However, their performance in complementing the SFPUC's priority focus on managing areas that may be inundated in the LOS storm must be confirmed prior to incorporation as a substitute project.

Justification: The primary objective of the Upper Channel Storm Area GI Project is to address the SSIP level of service (LOS) to "Integrate Green and Grey Infrastructure to Manage Stormwater and Minimize Flooding." This LOS includes managing stormwater from a statistically derived storm lasting 3 hours, with a total of 1.3 inches of rainfall and a defined peak rainfall intensity (5-year 3-hour storm, LOS storm). This project reduces runoff volume in the Western Addition and Panhandle areas, which currently do not meet the defined SSIP LOS. Grey infrastructure projects – namely, pipe upsizing – have been proposed within SSIP to increase the peak conveyance capacity at the downstream end of this area. The Project would complement the grey projects by reducing the amount of runoff entering the upstream sewers. This project sheet describes the green infrastructure capital projects that have been identified as the most effective candidates to address stormwater management in this area. These projects form the cost and performance basis for the Project. Because these projects are contingent upon interagency coordination and additional site investigation to be conducted during the AAR phase, alternate GI candidate projects are also described.

Operating Impact: During Construction: None
Post Construction: The installation of new green infrastructure will require additional regular maintenance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 123,282	\$ 0	\$ 0	\$ 107,152	\$ 16,130	\$ 0	\$ 0
ER	\$ 90,649	\$ 0	\$ 0	\$ 26,639	\$ 4,010	\$ 0	\$ 0
DS	\$ 379,375	\$ 0	\$ 0	\$ 0	\$ 195,863	\$ 183,512	\$ 0
CM	\$ 488,314	\$ 0	\$ 0	\$ 0	\$ 0	\$ 41,821	\$ 446,493
CN	\$ 966,741	\$ 0	\$ 0	\$ 0	\$ 0	\$ 966,741	\$ 0
Total	\$ 1,988,361	\$ 0	\$ 0	\$ 133,791	\$ 216,003	\$ 1,192,074	\$ 446,493

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15728-WW Stormwater Management
FSP ID	(N/A)
Project Title:	SFPUC Parcel: Sunset Reservoir
Total Budget:	\$ 8,087,997
Project Start:	10/1/2024
Project Finish:	9/27/2029
Current Active Phase:	
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
Description:	This green infrastructure project manages stormwater from a covered drinking water reservoir. The basis and alternate projects are described below. Capture runoff from 12-acre northern half of reservoir. Manage portion (2.3 acres) with bioretention in northwest corner of site. Manage remainder (9.5 acres) using in-street infiltration gallery. Gallery may be deep due to water mains and sewer lines that need to be crossed on Omega Street. Candidate for silt dry well technology. If the basis project is not feasible, the following alternate projects are recommended for consideration as cost-effective replacements. However, their performance in complementing the SFPUC's priority focus on managing areas that may be inundated in the level-of-service (LOS) storm must be confirmed prior to incorporation as a substitute project. University Mound Reservoir Runoff Reduction Project: Rerouting the existing storm drain for the 12-acre southern reservoir at the University Ave and Woolsey St intersection to the adjacent 770 Woolsey St parcel where half the flows would go to a 120,000-gallon cistern to satisfy onsite irrigation demands and the other half would go to infiltrative rain gardens on that parcel. Land acquisition and/or teaming with Project Greenhouse would be necessary. Otherwise, and infiltration gallery in the ROW could be a viable alternative.
Justification:	The primary objective of this project is to address the SSIP level of service (LOS) to "Integrate Green and Grey Infrastructure to Manage Stormwater and Minimize Flooding." This LOS includes managing stormwater from a statistically derived storm lasting 3 hours, with a total of 1.3 inches of rainfall and a defined peak rainfall intensity (5-year 3-hour storm, LOS storm). This project reduces runoff volume in the area, which currently do not meet the defined SSIP LOS. In addition to the stormwater performance metrics, the considerations that led to this project being selected as the preferred regional GI site include locations within area of influence to flood risks; Preferred geotechnical conditions based on best available information; Ability to manager stormwater from a large impervious PUC asset draining to a single point; Proximity to very low velocity (0-0.5 ft/s) sewer pipes. Grey infrastructure projects – primarily pipe upsizing – have been proposed within SSIP to increase the peak conveyance capacity. The SFPUC Parcel GI Projects would complement the grey projects by reducing the amount of runoff entering the upstream sewers, thereby reducing peak flows in the stormwater management areas.
Operating Impact:	During Construction: None Post Construction: The installation of new green infrastructure will require additional regular maintenance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 395,087	\$ 0	\$ 0	\$ 343,393	\$ 51,694	\$ 0	\$ 0
ER	\$ 98,219	\$ 0	\$ 0	\$ 85,369	\$ 12,850	\$ 0	\$ 0
DS	\$ 1,215,796	\$ 0	\$ 0	\$ 0	\$ 627,690	\$ 588,106	\$ 0
CM	\$ 1,564,919	\$ 0	\$ 0	\$ 0	\$ 1,337,731	\$ 1,431,188	\$ 0
CN	\$ 4,813,976	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,813,976	\$ 0
Total	\$ 8,087,997	\$ 0	\$ 0	\$ 428,762	\$ 692,234	\$ 5,595,813	\$ 1,431,188

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	(N/A)
Project Title:	Upper Channel Storm Area GI: Hamilton Playground
Total Budget:	\$ 6,440,037
Project Start:	10/1/2025
Project Finish:	9/27/2030
Current Active Phase:	
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
Description:	This project is a regional stormwater project centered around Hamilton Playground in Western Addition. In addition to the stormwater performance metrics, the considerations that led to this project being selected as a preferred regional Green Infrastructure (GI) site in Upper Channel include: ideal location relative to surrounding flood risks; preferred geotechnical conditions based on best available information; quantity and location of impervious area relative to irrigated open space and available surface space for green infrastructure; overlaps with SFPUC collection system reliability priorities and community benefit level of service (LOS). The project includes capture of runoff from Hamilton Playground impervious area as well as parts of Scott St, Pierce St, Steiner St, Post St and Bosworth Way (4.85 acres DMA in total). Store a portion of runoff (3 acres of DMA) under the hardscape play area in a 120,000-gallon cistern and use to irrigate the field. Manage the remainder of DMA (1.65 acres) with 4,000 sf of bioretention. In contrast to conventional infrastructure projects, the regional green infrastructure stormwater project is contingent upon a willingness of the agency partner. If the project is not feasible, the alternate projects are recommended for consideration as cost-effective replacements. However, their performance in complementing the SFPUC's priority focus on managing areas that may be inundated in the LOS storm must be confirmed prior to incorporation as a substitute project. Gateway High School Runoff Reduction Project: Golden Gate Webster Housing Runoff Reduction Project; Post Hayward Playground Runoff Reduction Project; Hutch Community Center Runoff Reduction Project; Post Baker Housing Runoff Reduction Project; Rosa Parks Elementary Runoff Reduction Project; Woodland Creek and Grattan Beach; Islais Creek – Alemany Reach.
Justification:	The primary objective of the Upper Channel Storm Area GI Project is to address the SSIP level of service (LOS) to "Integrate Green and Grey Infrastructure to Manage Stormwater and Minimize Flooding." This LOS includes managing stormwater 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 reduces runoff volume in the Western Addition and Panhandle areas, which currently do not meet the defined SSIP LOS. Grey infrastructure projects – namely, pipe upsizing – have been proposed within SSIP to increase the peak conveyance capacity at the downstream end of this area. The Upper Channel Storm Area GI Project would complement the grey projects by reducing the amount of runoff entering the upstream sewers.
Operating Impact:	During Construction: None Post Construction: The installation of new green infrastructure will require additional regular maintenance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 397,365	\$ 0	\$ 0	\$ 0	\$ 355,954	\$ 42,031	\$ 0
ER	\$ 99,267	\$ 0	\$ 0	\$ 0	\$ 88,768	\$ 10,499	\$ 0
DS	\$ 1,223,972	\$ 0	\$ 0	\$ 0	\$ 0	\$ 672,447	\$ 551,525
CM	\$ 1,588,268	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,588,268
CN	\$ 3,131,145	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,131,145
Total	\$ 6,440,037	\$ 0	\$ 0	\$ 0	\$ 444,122	\$ 724,977	\$ 5,270,938

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	(N/A)
Project Title:	Regional School/Park: Lincoln High School
Total Budget:	\$ 10,676,047
Project Start:	10/1/2025
Project Finish:	9/27/2030
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	

Description: This regional stormwater project is located at Lincoln High School in the Sunset District. In addition to the stormwater performance metrics, the considerations that led to this project being selected as a preferred regional Green Infrastructure (GI) site for schools and parks include: Ideal location relative to surrounding flood risks; Preferred geotechnical conditions based on best available information (e.g., slope, projected soil type, no contaminated soils, depth to groundwater/bedrock, etc.); Quantity and location of impervious area relative to irrigated open space and available surface space for green infrastructure; Overlaps with SFPUC collection system reliability priorities and community benefit LOS, (e.g., improvements in disadvantaged communities); Basis Project: Lincoln High School Runoff Reduction Project - Onsite stormwater collection from 9 acres routed to green infrastructure facilities, including 1.8 acres of rooftop diverted to rain gardens and 7.2 acres of hardscape diverted to a 230,000-gallon underground cistern integrated with an ultra-high-efficiency irrigation system underneath the football field as a replacement to the current field. In contrast to conventional infrastructure projects, the regional green infrastructure stormwater project is contingent upon a willingness of the agency partner. As such, if the basis project is not feasible, the following alternate projects are recommended for consideration as cost-effective replacements. However, their performance in complementing the SFPUC's priority focus on managing areas that may be inundated in the LOS storm must be confirmed prior to incorporation as a substitute project.

Jackson Playground Runoff Reduction; Downtown High School Runoff Reduction; Marina Middle School Regional Runoff Reduction; Marshall High School Runoff Reduction; Rossi Playground Runoff Reduction; Sunset Recreation Center Runoff Reduction; West Portal Playground Runoff Reduction Project.

Justification: The primary objective of the Regional School/Park GI Projects is to address the SSIP level of service (LOS) to managing stormwater 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 reduces runoff volume from large areas in and around schools and parks that have been strategically identified upstream from priority stormwater management areas currently not meeting the defined SSIP LOS.

Grey infrastructure projects – primarily pipe upsizing – have been proposed within SSIP to complement the peak conveyance capacity in the priority areas. The Regional School/Park GI Projects would increase the grey infrastructure capacity by reducing the amount of runoff entering the upstream sewers. This project sheet describes the green infrastructure capital projects that have been identified as the most effective candidates to address stormwater management at schools and parks. These projects form the cost and performance basis for the Regional School/Park GI Projects. Because these projects are contingent upon interagency coordination and additional site investigation to be conducted during the AAR phase, alternate GI candidate projects are also described in this sheet.

Operating Impact: None
During Construction: None
Post Construction: The installation of new green infrastructure will require additional regular maintenance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 519,015	\$ 0	\$ 0	\$ 0	\$ 464,119	\$ 54,896	\$ 0
ER	\$ 129,650	\$ 0	\$ 0	\$ 0	\$ 115,937	\$ 13,713	\$ 0
DS	\$ 1,598,600	\$ 0	\$ 0	\$ 0	\$ 0	\$ 876,267	\$ 720,333
CM	\$ 2,074,389	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,074,389
CN	\$ 6,354,383	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 6,354,383
Total	\$ 10,676,047	\$ 0	\$ 0	\$ 0	\$ 580,056	\$ 946,876	\$ 9,149,115

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	(N/A)
Project Title:	Streetscape Synergy Projects: Bayside
Total Budget:	\$ 54,416,882
Project Start:	4/1/2030
Project Finish:	3/29/2035
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	

Description: Streetscape Synergy projects are capital projects led by other agencies where SFPUC would contribute funds to pay for the stormwater management improvement portion of the project. The Bayside Drainage Basin contains several "full treatment" streetscape projects proposed by other City agencies. The highest density of these projects is in the drainage areas for the Western Addition, Panhandle, and SOMA flood areas. The City agency streetscape projects with the scope, schedule, and scale to best enable synergies with SSIP green infrastructure (GI) projects were identified using available information from interagency working groups, the City's Envisia capital project database, and agency reports. The segments of these streets that had the best physical conditions for green infrastructure implementation were then developed into GI streetscape synergy project concepts and evaluated further using hydraulic and hydrologic modeling. The concepts that performed the best for flood reduction effectiveness were then selected as the preferred streetscape synergy projects to prioritize on the Bayside.

Basis Projects: Hayes Street Green Street; Haight Street Green Street; Fell Street Green Street; Eddy Street Green Street; Golden Gate Green Street; Post Street Green Street; Spenner Street Green Street; Post Street Green Street. These projects are contingent upon interagency coordination and additional site investigation to be conducted during the Alternative Assessment Report (AAR) phase, alternate GI candidate projects are also identified.


Justification: The primary objective of this project is to address the SSIP level of service (LOS) to "Integrate Green and Grey Infrastructure to Manage Stormwater and Minimize Flooding." This LOS includes managing stormwater 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 reduces runoff volume in the area, which currently do not meet the defined SSIP LOS.

Grey infrastructure projects – primarily pipe upsizing – have been proposed within SSIP to increase the peak conveyance capacity. The Bayside Streetscape Synergy Projects would complement the grey projects by reducing the amount of runoff entering the upstream sewers.

Operating Impact: None
During Construction: None
Post Construction: The installation of new green infrastructure will require additional regular maintenance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,971,294	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,971,294	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 6,067,963	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,893,535
CM	\$ 2,636,530	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 98,091,818	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 48,767,625	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 6,884,829

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	(N/A)
Project Title:	Streetscape Synergy, Projects: Westside
Total Budget:	\$ 16,325,064
Project Start:	4/1/2030
Project Finish:	3/29/2035
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	


Description:
Streetscape Synergy projects are capital projects led by other agencies where SFPUC would contribute funds to pay for the stormwater management improvement portion of the project. The Westside Drainage Basin contains several "full treatment" streetscape projects proposed by other City agencies. The City agency streetscape projects with the scope, schedule, and scale to best enable synergies with SSIP green infrastructure (GI) projects were identified using available information from interagency working groups, the City's Envisia capital project database, and agency reports. The segments of these streets that had the best physical conditions for green infrastructure implementation were then developed into GI streetscape synergy project concepts and evaluated further using hydraulic and hydrologic modeling. The concepts that performed the best for flood reduction effectiveness were then selected as the preferred streetscape synergy projects to prioritize on the Westside. Basis Projects: Taraval Street Green Street, Noriega Street Green Street, Holloway Avenue Green Street, and Lake Street Green Street. Because these projects are contingent upon interagency coordination and additional site investigation to be conducted during the Alternative Assessment Report (AAR) phase, alternate GI candidate projects are also identified.

Justification:
The primary objective of this project is to address the SSIP level of service (LOS) to "Integrate Green and Grey Infrastructure to Manage Stormwater and Minimize Flooding." This LOS includes managing stormwater from a statistically derived storm lasting 3 hours, with a total of 1.3 inches of rainfall and a defined peak rainfall intensity (5-year, 3-hour storm, LOS storm). This project reduces runoff volume in the area, which currently do not meet the defined SSIP LOS.

Operating Impact:
During Construction: None
Post Construction: The installation of new green infrastructure will require additional regular maintenance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 591,388	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 591,388
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,820,394	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,468,060
CM	\$ 790,829	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 11,427,545	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 14,630,156	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,059,448

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	(N/A)
Project Title:	Twin Peaks: Suito Reservoir Stormwater Space
Total Budget:	\$ 28,662,253
Project Start:	10/2/2028
Project Finish:	9/27/2033
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	

Description:
The project involves creek daylighting in an area where historical creeks used to exist but have since been put into pipes as the collection system expanded across the City. The alignments of these historical creeks are strongly associated with flooding. This project is a creek daylighting project following the alignment of Brotherhood Way from Alemany Boulevard down to Lake Merced. The basis and alternate projects are described as follows, rerouting of runoff from the rooftop of the Suito Reservoir into an existing 42" storm drain pipe that conveys an existing creek under the reservoir, and also rerouting of the majority of the Laguna Honda Hospital campus. The part of the Laguna Honda Hospital parcel where the creek currently runs will be enhanced to retain and infiltrate the maximum amount of stormwater prior to discharge into Laguna Honda Reservoir. If the basis project is not feasible due to coordination or engineering feasibility issues, determined in the Alternative Assessment Report (AAR), the following alternate project is recommended for consideration as cost-effective replacements - Hayes Creek - Civic Center Reach: Daylight 1,419 feet of the creek, capture runoff from surrounding areas (10.6 acres DMA) and manage through 23,043 square feet of bioretention along the creek. However, performance in complementing the SFPUC's priority focus on managing areas that may be inundated in the level of service (LOS) storm must be confirmed prior to incorporation as a substitute project.

Justification:
The primary objective of this project is to address the SSIP level of service (LOS) to "Integrate Green and Grey Infrastructure to Manage Stormwater and Minimize Flooding." This LOS includes managing stormwater from a statistically derived storm lasting 3 hours, with a total of 1.3 inches of rainfall and a defined peak rainfall intensity (5-year 3-hour storm, LOS storm). This project reduces runoff volume in the area, which currently does not meet the defined SSIP LOS.

In addition to the stormwater performance metrics, the considerations that led to this project being selected as the preferred regional GI site include the ideal location relative to surrounding flood risks; Preferred geotechnical conditions based on best available information; Project footprint follows the alignment of a historical creek; Overlaps with high priority SFPUC collection system reliability priorities; Synergies with high priority Interagency Plan Implementation Committee and Green Connections; Ability to discharge into an existing lake or reservoir, so all flows are kept out of the collection system.

Operating Impact:
During Construction: None
Post Construction: The installation of new green infrastructure will require additional regular maintenance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,169,462	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,169,462
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 3,593,871	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,593,871
CM	\$ 4,571,582	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,759,651
CN	\$ 18,980,144	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 18,980,144
Total	\$ 28,315,059	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 26,503,028

SFJUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-MW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	(N/A)
Project Title:	Twin Peaks: Addl Drainage Area Stormwater Space
Total Budget:	\$ 8,749,942
Project Start:	10/2/2028
Project Finish:	9/27/2033
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	

Description:
The project involves creek daylighting in an area where historical creeks used to exist but have since been put into pipes as the collection system expanded across the City. The alignments of these historical creeks are strongly associated with flooding. This project is a creek daylighting project following the alignment of Brotherhood Way from Alemany Boulevard down to Lake Merced.
The basis and alternate projects are described as follows, rerouting of runoff from the rooftop of the Suro Reservoir into an existing 42" storm drain pipe that conveys an existing creek under the reservoir, and also rerouting of the majority of the Laguna Honda Hospital campus. The part of the Laguna Honda Hospital parcel where the creek currently runs will be enhanced to retain and infiltrate the maximum amount of stormwater prior to discharge into Laguna Honda Reservoir.
If the basis project is not feasible due to coordination or engineering feasibility issues determined in the Alternative Assessment Report (AAR), the following alternate project is recommended for consideration as cost-effective replacements - Hayes Creek - Civic Center Reach: Daylight 1,419 feet of the creek, capture runoff from surrounding areas (10.6 acres DMA) and manage through 23,043 square feet of bioretention along the creek. However, performance in complementing the SFJUC's priority focus on managing areas that may be inundated in the level of service (LOS) storm must be confirmed prior to incorporation as a substitute project.

Justification:
The primary objective of this project is to address the SSIP level of service (LOS) to "Integrate Green and Grey Infrastructure to Manage Stormwater and Minimize Flooding." This LOS includes managing stormwater from a statistically derived storm lasting 3 hours, with a total of 1.3 inches of rainfall and a defined peak rainfall intensity (5-year, 3-hour storm, LOS storm). This project reduces runoff volume in the area, which currently does not meet the defined SSIP LOS.
In addition to the stormwater performance metrics, the considerations that led to this project being selected as the preferred regional GI site include the ideal location relative to surrounding flood risks; Preferred geotechnical conditions based on best available information; Project footprint follows the alignment of a historical creek; Overlaps with high priority SFJUC collection system reliability priorities; Synergies with high priority Interagency Plan Implementation Committee and Green Connections; Ability to discharge into an existing lake or reservoir, so all flows are kept out of the collection system.

Operating Impact:
During Construction: None
Post Construction: The installation of new green infrastructure will require additional regular maintenance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 427,821	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 427,821
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,314,735	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,314,735
CM	\$ 1,672,404	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,672,404
CN	\$ 5,207,966	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 5,207,966
Total	\$ 8,622,926	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 7,960,195

SFJUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-MW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	(N/A)
Project Title:	Brotherhood Way Creek Stormwater Space
Total Budget:	\$ 48,987,441
Project Start:	4/1/2030
Project Finish:	3/29/2035
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	

Description:
The project involves creek daylighting in an area where historical creeks used to exist but have since been put into pipes as the collection system expanded across the City. The alignments of these historical creeks are strongly associated with flooding. This project is a creek daylighting project following the alignment of Brotherhood Way from Alemany Boulevard down to Lake Merced. The basis and alternate projects are described below.
Funding a daylighted creek running 1 mile along Brotherhood Way from Alemany Blvd down to a Wastewater Enterprise parcel located southeast of the Lake Merced Blvd intersection that would be used for retention and infiltration. Stormwater from 80 acres would be directed to the creek for conveyance to the parcel, where it would be infiltrated to recharge lake levels. Flows during extreme events would overflow from the parcel directly to the south lake forebay via an existing pipe.
If the basis project is not feasible due to coordination or engineering feasibility issues determined in the Alternative Assessment Report (AAR), the following alternate projects are recommended for consideration as cost-effective replacements - Hayes Creek - Civic Center Reach: Daylight 1,419 feet of creek, capture runoff from surrounding areas (10.6 acres DMA) and manage through 23,043 square feet of bioretention along creek. However, performance in complementing the SFJUC's priority focus on managing areas that may be inundated in the LOS storm must be confirmed prior to incorporation as a substitute project.

Justification:
The primary objective of this project is to address the SSIP level of service (LOS) to "Integrate Green and Grey Infrastructure to Manage Stormwater and Minimize Flooding." This LOS includes managing stormwater 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 reduces runoff volume in the area, which currently does not meet the defined SSIP LOS.
In addition to the stormwater performance metrics, the considerations that led to this project being selected as the preferred regional GI site include the ideal location relative to surrounding flood risks; Preferred geotechnical conditions based on best available information; Project footprint follows the alignment of a historical creek; Overlaps with high priority SFJUC collection system reliability priorities; Synergies with high priority Interagency Plan Implementation Committee and Green Connections; Ability to discharge into an existing lake or reservoir, so all flows are kept out of the collection system.

Operating Impact:
During Construction: None
Post Construction: The installation of new green infrastructure will require additional regular maintenance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,995,209	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,995,209
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 6,150,832	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,946,176
CM	\$ 2,656,429	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 32,439,483	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 43,244,953	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 6,944,385

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	(N/A)
Project Title:	Wawona St & 15th Ave Stormwater Detention REALIGN
Total Budget:	\$ 0
Project Start:	
Project Finish:	
Current Active Phase:	SSIP
Organization:	Saed Toloui
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	
Description:	The neighborhood surrounding Wawona St. and 15th Ave. has been susceptible to recurring inundation associated with moderate and heavy storms. The primary objective of the Wawona Area Stormwater Improvement Project is to address the SSIP Level of Service (LOS) goals of managing stormwater. This project will include planning, design, and construction of an improved stormwater conveyance from the intersection of Vicente and Wawona to Vicente at 34th Ave, minimizing stormwater inundation at the level of service storm in the Wawona/15th area.
Justification:	The Wawona area does not meet LOS storm events and is susceptible to recurring stormwater inundation in moderate to heavy storms. The intersection of Wawona St. and 15th Ave. can experience up to several feet of stormwater during rain events, resulting in property damage, and potential health and safety issues. The primary objective of the project is to meet the Stormwater Management Level of Service goals in the neighborhood by improving stormwater conveyance.
Operating Impact:	This project will provide the necessary capacity in the existing sewer on Wawona St. during the wet season, by diverting a large amount of flow from the upstream of Wawona into a new conveyance on Vicente, providing an improved conveyance system.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	10029726
Project Title:	Watershed Stormwater Management (Planning Only)
Total Budget:	\$ 19,000,000
Project Start:	7/11/2016
Project Finish:	6/30/2032
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Mary Tienken
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
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.
Justification:	This funding is essential to plan and develop green infrastructure programmatic strategies before work commences on individual green infrastructure capital projects.
Operating Impact:	Planning funds ensure that future GI projects and programs roll out smoothly and expeditiously.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 9,000,000	\$ 0	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 5,000,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 9,000,000	\$ 0	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 5,000,000

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	GI-17
Project Title:	Buchanan Street Mall
Total Budget:	\$ 9,342,668
Project Start:	10/3/2022
Project Finish:	12/28/2026
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	

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 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 bio-retention; Deliver neighborhood-scale place-making co-benefits in one of San Francisco's identified disadvantaged communities.

Justification: The primary objective of the Buchanan Street Mall Neighborhood Green Infrastructure Project is to partner with San Francisco Recreation and Parks Department and San Francisco Unified School District to integrate green infrastructure into interagency improvement projects to manage stormwater and minimize flooding in the Western Addition neighborhood, including Buchanan Street Mall, adjacent rights-of-way, and Rosa Parks Elementary School. This project reduces runoff volume from 7 acres of roadway and parcel areas by utilizing multi-benefit green infrastructure.

The green infrastructure features of this project will capture and reduce approximately 3.7 million gallons of runoff per year. The project is also expected to capture 53,000 gallons during the Level of Service (LOS) event. This project sheet describes the green infrastructure capital project components that have been identified as the most effective candidates to address stormwater management in this area. The multiple phases of this project form the cost and performance basis for the Buchanan Street Mall Neighborhood GI Project.

Operating Impact: None
During Construction: None
Post Construction: The installation of new green infrastructure will require regular maintenance on RPD and SFUSD parcels, as well as adjacent streets.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 560,371	\$ 152,159	\$ 203,697	\$ 204,515	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,940,972	\$ 527,038	\$ 705,550	\$ 708,384	\$ 0	\$ 0	\$ 0
CM	\$ 863,229	\$ 109,102	\$ 215,606	\$ 216,472	\$ 216,472	\$ 105,577	\$ 0
CN	\$ 5,978,096	\$ 755,507	\$ 1,493,025	\$ 1,499,022	\$ 1,499,022	\$ 731,520	\$ 0
Total	\$ 9,342,668	\$ 1,543,806	\$ 2,617,876	\$ 2,628,393	\$ 1,715,494	\$ 837,087	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	10034553
Project Title:	GI For Stormwater Management (Grant)
Total Budget:	\$ 61,317,958
Project Start:	7/1/2018
Project Finish:	6/30/2023
Current Active Phase:	SSIP
Organization:	Mary Tiemken
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	

Description: The Green Infrastructure (GI) Grant Program funds green infrastructure projects on public and private properties throughout San Francisco. By providing grants to owners of large, impervious parcels the SFPUC will encourage further green infrastructure projects that manage stormwater and improve the City's collection system performance during wet weather. The grants will cover costs of design and construction of approved stormwater management features, such as rain gardens, permeable pavement, cisterns, and vegetated roofs. Grantees will be eligible to receive \$765,000 per acre of impervious surface managed, up to \$2 million per project.

Justification: Most impervious surface in the City of San Francisco is on privately owned parcels. By implementing the GI grant program, Wastewater Enterprise is responding to feedback from SFPUC commission to look for lower unit cost alternatives for GI. In addition, the grant program provides an opportunity for customers to mitigate future stormwater charges and advance of the new rate structure implementation.

Operating Impact: The facilities constructed by the Green Infrastructure Grant Program will be operated and maintained by others. The Grant Program reduces stormwater flow to the sewer system with no ongoing operating cost to the SFPUC.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 6,127,893	\$ 0	\$ 817,893	\$ 590,000	\$ 590,000	\$ 590,000	\$ 2,950,000
CN	\$ 43,190,065	\$ 10,000,000	\$ 9,500,065	\$ 3,410,000	\$ 3,410,000	\$ 2,410,000	\$ 12,050,000
Total	\$ 49,317,958	\$ 10,000,000	\$ 10,317,958	\$ 4,000,000	\$ 4,000,000	\$ 3,000,000	\$ 15,000,000

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Stormwater Management
FSP ID	10029728
Project Title:	Advanced Rainfall Prediction - Part 1
Total Budget:	\$ 1,491,236
Project Start:	4/1/2013
Project Finish:	6/29/2018
Current Active Phase:	SSJIP
Organization:	Stefani Harrison
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	Capital
Description:	This project includes planning, design, and environmental review for three new radar equipment stations to collect additional data. Although the installation of all three radar equipment stations is not proposed at this time, there is a regional project with other Bay Area agencies moving forward under a grant from the State, which will require some coordination and site activities to take place this is accounted for in the project. Once all equipment stations are installed and running, the data would be provided in real-time to a new Advanced Quantitative Precipitation Information (AQPI) system, which would perform rainfall prediction modeling for short-term and long term precipitation forecasts, and deliver the resulting forecast to SFPUC automatically in real-time. The AQPI system would be delivered to SFPUC as a turnkey system, providing operators with important tools to help inform their decisions.
Justification:	Project completed, no additional funding is requested.
Operating Impact:	Project completed, no additional funding is requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15726-WW Stormwater Management
FSP ID	10029729
Project Title:	Operational Decision System Phase 1
Total Budget:	\$ 944,709
Project Start:	8/1/2013
Project Finish:	9/30/2016
Current Active Phase:	Post-Construction
Organization:	SSJIP
Project Manager:	Stefani Harrison
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
Description:	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 WWVE's collection system hydraulic model to project the likely impact of approaching storms and generate specific operational recommendations for managing flows.
Justification:	Project completed, no additional funding is requested.
Operating Impact:	Project completed, no additional funding is requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	10029790
Project Title:	Operational Decision System Phase 2
Total Budget:	\$ 6,720,649
Project Start:	2/1/2017
Project Finish:	9/30/2025
Current Active Phase:	Construction
Organization:	SSIP
Project Manager:	Maria Kristel Cruz
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
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 Enterprises (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.
Justification:	In response to an approaching storm, SFPUC's WWE operators use the best available information to make decisions. SFPUC desires a more consistent and transparent basis for making decisions that make best use of available data in an automated way. The Operational Decision System would provide better reliability between operators and shifts, and full transparency as to how operational decisions are made. Additionally, it would help operators to adjust to shifting or uncertain future hydrologic patterns that may arise with climate change.
Operating Impact:	This project would increase confidence in operational decision making of Wastewater Enterprise operators before and during the storm events.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 1,260,649	\$ 1,000,000	\$ 260,649	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 1,260,649	\$ 1,000,000	\$ 260,649	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	10026811
Project Title:	17th and Folsom Wet Weather Storage
Total Budget:	\$ 898,622
Project Start:	4/1/2013
Project Finish:	5/6/2016
Current Active Phase:	SSIP
Organization:	Saed Tolou
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	Capital
Description:	The neighborhood surrounding 17th Street, 18th Street and Folsom Street has been experiencing flooding with 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 delisted except for residual funds for ongoing response activities as directed by management, including certain outreach activities related to flooding.
Justification:	N/A
Operating Impact:	N/A

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15730-WW Flood Resilience-Hydraulic
FSP ID	10026814
Project Title:	Flood Resilience Analysis (Planning Phase Only)
Total Budget:	\$ 2,176,246
Project Start:	6/30/2015
Project Finish:	2/28/2017
Current Active Phase:	
Organization:	SSIP
Project Manager:	Saed Toloui
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
Description:	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.
Justification:	This project was created for preliminary development of framework for hydraulic and other analyses for flooding risks assessment.
Operating Impact:	No operating impacts

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15730-WW Flood Resilience-Hydraulic
FSP ID	10026815
Project Title:	Flood Resil - Early Projects (Planning Phase Only)
Total Budget:	\$ 3,206,463
Project Start:	10/26/2015
Project Finish:	12/30/2016
Current Active Phase:	
Organization:	SSIP
Project Manager:	Stefani Harrison
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
Description:	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.
Justification:	Project completed and fully funded, no additional funding is being requested.
Operating Impact:	None - planning only.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15730-WW Flood Resilience-Hydraulic
FSP ID	10028816
Project Title:	Wawona Area Stormwater Improvement
Total Budget:	\$ 38,900,000
Project Start:	7/1/2016
Project Finish:	12/2/2024
Current Active Phase:	Construction
Organization:	SSIP
Project Manager:	Saad Toloui
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
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.
Justification:	The Wawona Area Stormwater Improvement will provide an auxiliary sewer that captures the street runoff, upstream of 15th and Wawona and conveys it to back into the system, where there is capacity downstream. Without this project, the neighbors and properties of Wawona area will continue getting inundated during LOS storms.
Operating Impact:	During construction, the bypass system will be built to assure that the sewer conveyance is not impacted. There is no impact on operation of collection system after the construction is completed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 1,448,253	\$ 0	\$ 1,268,092	\$ 180,161	\$ 0	\$ 0	\$ 0
CN	\$ 2,463,723	\$ 0	\$ 1,088,000	\$ 1,375,725	\$ 0	\$ 0	\$ 0
Total	\$ 3,911,978	\$ 0	\$ 2,356,092	\$ 1,555,886	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15730-WW Flood Resilience-Hydraulic
FSP ID	10028817
Project Title:	Cayuga Ave Stormwater Detention Project
Total Budget:	\$ 428,078
Project Start:	7/1/2016
Project Finish:	3/29/2019
Current Active Phase:	SSIP
Organization:	SSIP
Project Manager:	Saad Toloui
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
Description:	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.
Justification:	Project completed, no additional funding is requested.
Operating Impact:	Project completed, no additional funding is requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

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Authority Level 1:	19142-WW Sewer System Improvement Pr.
Authority Level 2:	15730-WW Flood Resilience-hydraulic
FSP ID	10026818
Project Title:	Folsom Area Stormwater Improvement Project
Total Budget:	\$ 38,410,859
Project Start:	7/1/2016
Project Finish:	12/27/2023
Current Active Phase:	Pre-Construction
Organization:	SSJP
Project Manager:	Derek Adams
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
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 1 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.
Justification:	Lower-lying areas in the vicinity can experience up to several feet of stormwater inundation during rain events, resulting in property damage, and potential health and safety issues. The primary objective of the project is to improve the stormwater conveyance in the area to meet the SFPUC endorsed Level of Service (LOS) goals.
Operating Impact:	The FASIP will provide redundancy to the Division Street Sewer, which conveys a major urban watershed sewer and stormwater flows, covering much of the Inner Mission and Soma. The project will also upsized portions of the pipe and box sewer network in the neighborhood, providing improved facilities and operational capacity to a strained and aging combined sewer network. In addition, the project will repair an existing sluice gate at 16th and Treat, which will provide operational flexibility for routing flows to either North Shore pump station or Channel Pump Station.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 5,000,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 5,000,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

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Authority Level 1:	19142-WW Sewer System Improvement Pr.
Authority Level 2:	15730-WW Flood Resilience-hydraulic
FSP ID	10026819
Project Title:	17th and Folsom Permanent Barriers
Total Budget:	\$ 176,151
Project Start:	5/20/2016
Project Finish:	3/29/2019
Current Active Phase:	SSJP
Organization:	Saeed Toloui
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	Capital
Description:	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.
Justification:	Project completed, no additional funding is requested.
Operating Impact:	Project completed, no additional funding is requested.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15730-WW Flood Resilience-Hydraulic
FSP ID	10028820
Project Title:	Hydraulic and Drainage Sewer Improvements
Total Budget:	\$ 4,569,941
Project Start:	7/1/2016
Project Finish:	12/30/2021
Current Active Phase:	Post-Construction
Organization:	SSIP
Project Manager:	Saad Toloui
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
Description:	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.
Justification:	The neighborhood surrounding Joost/Foerster and Urbano/Victoria streets has been susceptible to recurring stormwater inundation associated with moderate to heavy storms. Areas in the vicinity can experience up to several feet of stormwater inundation during rain events, resulting in property damage, and potential health and safety issues. The primary objective of the project is to meet the Stormwater Management Level of Service goals in the neighborhood by improving stormwater conveyance.
Operating Impact:	This project will provide redundancy to the Division Street Sewer, which conveys a major urban watershed covering much of the Inner Mission and Soma. The project will also upsizes portions of the pipe and box sewer network in the neighborhood, providing improved facilities and operational capacity. This project will improve stormwater management at critical flood prone neighborhoods and maximizes opportunities for passive stormwater collection.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15730-WW Flood Resilience-Hydraulic
FSP ID	10034360
Project Title:	Lower Alemany Area Stormwater Improvement Project
Total Budget:	\$ 299,555,016
Project Start:	1/2/2019
Project Finish:	9/6/2028
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Suzanne Huang
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
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 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.
Justification:	This project will provide an auxiliary conveyance that captures excess runoff during medium to heavy storms in the Lower Alemany area. The new sewer then conveys the flows downstream back to the system, where there is sufficient capacity for the added flow. Without this project, the neighbors and properties in the Lower Alemany area will continue getting inundated during LOS storms.
Operating Impact:	This project will not impact the system operation during construction, given that the conveyance bypass will be in place for tie-in to the new sewer. There is no operating impact after the construction is completed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 5,449,301	\$ 0	\$ 3,594,301	\$ 1,855,000	\$ 0	\$ 0	\$ 0
DS	\$ 18,979,664	\$ 10,000,000	\$ 8,838,417	\$ 2,141,247	\$ 0	\$ 0	\$ 0
CM	\$ 31,871,979	\$ 0	\$ 260,490	\$ 6,353,092	\$ 9,014,777	\$ 9,008,005	\$ 7,235,515
CN	\$ 223,121,712	\$ 0	\$ 0	\$ 32,352,645	\$ 81,439,425	\$ 72,142,686	\$ 37,183,956
Total	\$ 279,422,556	\$ 10,000,000	\$ 10,693,208	\$ 42,701,984	\$ 90,454,202	\$ 81,150,691	\$ 44,422,471

SFPUC Capital Project Plan
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SSJP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15730-WW Flood Resilience-Hydraulic
FSP ID	(N/A)
Project Title:	Folsom Area Stormwater Imp. Project Phase 2
Total Budget:	\$ 259,905,607
Project Start:	1/3/2022
Project Finish:	6/30/2027
Current Active Phase:	Not Started
Organization:	SSJP
Project Manager:	Derek Adams
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
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 (OB14) 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.
Justification:	Lower-lying areas in the vicinity can experience up to several feet of stormwater inundation during rain events, resulting in property damage, and potential health and safety issues. The primary objective of the project is to improve the stormwater conveyance in the area to meet the SFPUC endorsed Level of Service (LOS) goals. The FASIP will provide redundancy to the Division Street Sewer, which conveys a major urban watershed sewer and stormwater flows, covering much of the Inner Mission and SOMA. The project will also upsized portions of the pipe and box sewer network in the neighborhood, providing improved facilities and operational capacity to a strained and aging combined sewer network. In addition, the project will repair an existing sluice gate at 16th and Treat, which will provide operational flexibility for routing flows to either North Shore Pump Station or Channel Pump Station.
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 151,242	\$ 0	\$ 151,242	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 25,732,639	\$ 0	\$ 6,988,135	\$ 7,005,990	\$ 7,005,990	\$ 4,716,724	\$ 0
CN	\$ 234,021,526	\$ 30,000,000	\$ 44,300,778	\$ 54,664,696	\$ 85,308,018	\$ 19,748,034	\$ 0
Total	\$ 259,905,607	\$ 30,000,000	\$ 51,450,155	\$ 61,673,686	\$ 92,317,008	\$ 24,464,758	\$ 0

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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15730-WW Flood Resilience-Hydraulic
FSP ID	(N/A)
Project Title:	Southeast Area Stormwater Improvement Project
Total Budget:	\$ 0
Project Start:	7/1/2032
Project Finish:	7/1/2034
Current Active Phase:	SSJP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	
Description:	The primary objective of the Southeast Area Stormwater Improvement Project is to address the SSIP levels of service (LOS) goals of managing stormwater and minimizing flooding 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 and design to improve stormwater conveyance away from the low-lying areas close to Southeast Water Pollution Plant to minimize flooding in the LOS storm. The main components of this project may include isolating the Selby box sewer from some of the wet weather local flows, and installing a detention tank and/or a pump station on a private property to collect and convey those flows. The project scope will be developed based on the preferred alternative identified during the planning phase.
Justification:	Alameda Stormwater Project is being delayed, and this project is intended to occur after that. FR-3 is a Priority 2 project based on flood risk analysis. Delay may prolong meeting the LOS storm in this neighborhood.
Operating Impact:	Alameda Stormwater Project is being delayed, and this project is intended to occur after that. FR-3 is a Priority 2 project based on flood risk analysis. Delay may prolong meeting the LOS storm in this neighborhood.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15730-WW Flood Resilience-Hydraulic
FSP ID	(N/A)
Project Title:	Noriega Corridor Connection
Total Budget:	\$ 1,541,727
Project Start:	10/1/2027
Project Finish:	6/30/2031
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	
Description:	This project would include construction of a new junction structure at the intersection of Noriega Street and 40th Avenue and approximately 100 LF of new 54-inch sewer from the end of the existing 54 inch sewer to the 4-foot x 6-foot collection system. The new junction structure would convey storm flows away from the 4-foot x 6-foot collection system on 40th Avenue to the 8-foot collection system on 47th Avenue through the existing 54 inch sewer on Noriega.
Justification:	The primary objective of the Noriega Corridor Connection Project is to address the SSIP levels of service (LOS) goals of managing stormwater 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). Hydraulic model simulations have shown that the neighborhood surrounding Noriega Street from 47th Avenue to 40th Avenue has been subject to inundation during moderate to heavy storms. The Noriega neighborhood from 47th Avenue to 40th Avenue is bounded by two major trunk line sewers flowing north, the 4-foot x 6-foot collection system to the east collects runoff from 405 acres upstream of the Noriega neighborhood. There is no major flow splits upstream of the Noriega neighborhood, and the 8-foot circular sewer to the west collects runoff from 2,950 acres upstream of the Noriega neighborhood. There are major flow splits at 47th Avenue and Noriega, 47th Avenue and Ulloa Street, and 45th Avenue and Vicente Street convey storm runoff toward the Westside Transport Storage Box.
Operating Impact:	During Construction: The construction of a new junction structure may require flow bypass and likely to occur during the dry season. Post Construction: Flow balancing should be undertaken to determine if any changes to the wet weather operating strategy is needed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 57,352	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 57,352
ER	\$ 13,876	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 13,876
DS	\$ 174,772	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 174,772
CM	\$ 216,518	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 216,518
CN	\$ 1,079,209	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,079,209
Total	\$ 1,541,727	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,541,727

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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15730-WW Flood Resilience-Hydraulic
FSP ID	(N/A)
Project Title:	Ocean and Urbano Pipe Enhancement
Total Budget:	\$ 52,286,644
Project Start:	10/1/2028
Project Finish:	3/29/2034
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	
Description:	The project will consist of the following project components: Upsize 1,235 LF of existing non-circular sewer on Ocean Avenue between Miramar and Lee to increase conveyance. This project component will remove the hydraulic constriction on Ocean Avenue from Miramar Avenue to Lee Avenue during a LOS 5-year, 3-hour storm; Upsize 3,280 LF of existing sewer upstream of Ocean Avenue to increase conveyance. This project component will remove the hydraulic constrictions on various sewer segments upstream of the Ocean Avenue sewers; Upsize 1,615 LF of existing sewer mains on Urbano Drive from Montcada Way to Pico Ave to increase conveyance capacity in response to recommended upstream improvements Potential Alternatives: Holloway Alternative Alignment - Upsizing pipes along Ocean Avenue would be difficult to construct due to adjacent MUNI tracks. This alternative diverts a percentage of stormflow away from the Ocean Avenue Sewers between Miramar and Lee using a new auxiliary system and realignment of existing sewers on Holloway, and includes the following components: Holloway Auxiliary: Construct 2,385 LF of 36" and 42" Circular Pipe Holloway auxiliary collection system on: Existing Holloway Sewer Alignment; Appurtenances; Upsize Existing Sewers: Upsize 215 LF of existing sewer to 36" on Miramar to convey the stormflows from the existing collection system and the proposed Holloway Auxiliary. Another alternative to consider in conjunction with the conveyance improvements is green infrastructure at Balboa Reservoir to reduce the peak runoff to the collection system.
Justification:	The primary objective of the Ocean and Urbano Pipe Enhancement Project is to address the SSIP levels of service (LOS). The LOS includes managing stormwater and minimizing flooding 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). The existing Urbano and Ocean area does not meet the defined SSIP LOS. Within the Lake Merced Watershed, the Ingleside system in the north and the Brotherhood Way system in the south convey flows from the eastern part of the watershed to the west. Within the Ingleside Way system in the primarily collected in the Ocean Avenue sewer, and then travel through the Ingleside Terraces neighborhood to the Lyndhurst Drive trunk sewer near 19th Avenue and San Francisco State University (SFSU) Cox Stadium. At this point, the steep upstream Ingleside collection system transitions to the relatively flat 10-foot x 11.25-foot Park Merced Tunnel. Flows from the Brotherhood Way system tie in to the 10-foot x 11.25-foot sewer immediately downstream from the end of the Park Merced Tunnel. The combined flows surpass the sewer conveyance capacity on Westgate Drive from Ocean Avenue to Upland Drive and on Ocean Avenue from Miramar Avenue to Lee Avenue during a LOS storm.
Operating Impact:	During Construction: Upsizing sewers may require flow bypass and likely to occur during the dry season. Post Construction: Flow balancing should be undertaken to determine if any changes to the wet weather operating strategy is needed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,920,332	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,920,332
ER	\$ 470,580	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 470,580
DS	\$ 5,883,965	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 5,883,965
CM	\$ 7,411,116	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 7,411,116
CN	\$ 36,600,651	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 36,600,651
Total	\$ 52,286,644	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 48,581,066

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15730-WW Flood Resilience-Hydraulic
FSP ID	(N/A)
Project Title:	Alemany Pipe Isolation and Rankin WW FS Expansion
Total Budget:	\$ 26,843,892
Project Start:	10/1/2030
Project Finish:	11/27/2035
Current Active Phase:	
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
Description:	This project would include construction of pipe system isolation from the larger collection system. Project alternatives will be developed in the project planning stage, but the following concept was used as a basis: Previously routed to the Selby Transport/Storage Box, the project would direct flows to the existing Rankin Wet Weather Pump Station after the project. The capacity of Rankin would increase from 6.9 MGD to 7.9 MGD. This effort shall be coordinated with the Rankin Wet Weather Pump Station Improvements Project. There would be 738 LF of new 36 inch pipe constructed to reroute flows. There would be 3419 LF of pipe to be upsized from 12 inches and 15 inches to 36 inches. A minimum of 2 feet free board will be met.
Justification:	The primary objective of the Alemany Pipe Isolation and Rankin Wet Weather Pump Station Project is to address the SSIP levels of service (LOS). The LOS includes managing stormwater and minimizing flooding 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). The existing Evans Ave and Rankin Street does not meet the defined SSIP LOS. The Evans Ave and Rankin Street area has been prone to flooding. Several hydrologic and hydraulic factors contribute to flood challenges in the area, such as local topography, Evans Ave, and Rankin Street vicinity are low lying; in some cases below the official City grade of zero. When system flows surpass the combined carrying capacity of the underground sewers, and overland streets, buildings areas flood; Conveyance capacity, this area is adjacent to two major treatment structures for the Islais Creek Watershed, the Selby Transport/Storage Box and the Southeast Plant. As a result, once the collection system reaches its capacity from upstream rainfall, collection system flows exit the catch basins to produce flooding in this area. Land settlement, because the area is built on a historical creek and landfill, settlement and subsidence of land in this area has potentially resulted in lower property elevations. During Construction: Construction and tie-in of new sewers may require flow bypass and likely to occur during the dry season. Modifications to the Rankin WW Pump Station would also need to occur during the dry season. Post Construction: Flow balancing should be undertaken to determine if any changes to the wet weather operating strategy is needed. Any changes to the Rankin WW Pump Station would require update to the station's O&M Plan and operating strategy as needed.
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,050,079	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,050,079
ER	\$ 259,595	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 259,595
DS	\$ 3,225,069	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,464,660
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 4,534,743	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,774,334

SFPUC Capital Project Plan
Wastewater Enterprise
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Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15730-WW Flood Resilience-Hydraulic
FSP ID	(N/A)
Project Title:	Berry Pipe Enhancement
Total Budget:	\$ 0
Project Start:	7/1/2033
Project Finish:	12/31/2034
Current Active Phase:	
Organization:	SSIP
Project Manager:	Stephen Robinson
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
Description:	This project aims to isolate smaller sewers from large diameter sewers that backflow during storm events and cause excursions. Project components include constructing 4,250 LF of 12-inch to 24-inch diameter and 3,700 LF of 12-inch to 24-inch diameter sewer mains; Increasing the Berry Street Pump Station capacity located at the intersection of 5th St and Berry St by approximately 6,000 GPM; Replacing 500 LF of 12-inch to 24-inch diameter sewer mains. This effort shall be coordinated with the Berry Street Pump Station Improvements Project. Potential alternatives include raising street grades to meet official grade and heavily implementing green infrastructure; Upsize the sewers along 5th St and the corresponding outfall; Assuming the existing Caltrain station is being relocated to a new underground station, incorporating into the redevelopment a recessed open-space area that can temporarily store overland flow and reduce the peak flows and volumes through the sewers along 5th Street.
Justification:	FR-7 is a Priority 2 project based on flood risk analysis. FR-7 may prolong meeting the LOS storm in this neighborhood.
Operating Impact:	FR-7 is a Priority 2 project based on flood risk analysis. FR-7 may prolong meeting the LOS storm in this neighborhood.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFUC Capital Project Plan
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Authority Level 1:	19142-MW Sewer System Improvement Pr
Authority Level 2:	15730-MW Flood Resilience-Hydraulic
FSP ID	(N/A)
Project Title:	Braman Pipe Enhancement
Total Budget:	\$ 7,749,433
Project Start:	10/1/2030
Project Finish:	11/27/2034
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	

Description: Project alternatives will be developed in the project planning stage, but the following concept was used as a basis. This project will construct 1,800 LF of new sewer ranging 12 inches to 18 inches in diameter. The flow direction along Townsend St is to be reversed and isolated from the large diameter sewer main along 7th St. Additionally, sewers along Gilbert St and Butte St are to be isolated from the sewer main on Braman St and connected to the proposed new sewer, which flows to the pump station at Harriet Street.

Justification: The objective of the Braman Pipe Enhancement Project is to address the SSIP levels of service (LOS) of managing stormwater and minimizing flooding 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). The neighborhood bounded by Braman St, Townsend St, 7th St, and 6th St, has been subject to flooding during moderate to heavy storms. Several hydrologic and hydraulic factors contribute to flood challenges in the area, including local topography. The project area is a naturally low-lying area. As a result, once the collection system reaches its capacity, stormwater runoff collects when it is unable to enter the collection system. Conveyance capacity, downstream system flows surpass the combined carrying capacity of the underground sewers and overland streets. Land settlement, because the area is built on landfill, settlement and subsidence of land in this area has potentially resulted in lower property elevations.

Operating Impact: During Construction: Tie-in of the new sewers would need to be coordinated and likely to occur during the dry season. Post Construction: Flow balancing should be undertaken to determine if any changes to the wet weather operating strategy is needed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 292,207	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 292,207
ER	\$ 697,745	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 697,745
DS	\$ 886,373	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 886,373
CM	\$ 1,076,506	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,076,506
CN	\$ 5,424,602	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 5,424,602
Total	\$ 7,749,433	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 792,133

SFUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-MW Sewer System Improvement Pr
Authority Level 2:	15730-MW Flood Resilience-Hydraulic
FSP ID	(N/A)
Project Title:	SOMA Stormwater Corridor
Total Budget:	\$ 0
Project Start:	7/1/2033
Project Finish:	12/31/2035
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	

Description: This project would seal two manholes along the 5th and Berry St intersection as well as lower the grade of a portion of 5th St and the existing overland flow outlet from Berry to Mission Creek. This would improve flows through the existing overland flow relief infrastructure.

Justification: Potential Alternatives include raising street grades to meet official grade and heavily implementing green infrastructure; Upsizing the sewers along 5th Street and the corresponding outfall; Assuming the existing Caltrain station is being relocated to a new underground station, incorporating into the redevelopment a recessed, open-space area that can temporarily store overland flow and reduce the peak flows and volumes through the sewers along 5th Street.

The primary objective of the SOMA Stormwater Corridor Project is to address the SSIP levels of service (LOS). The LOS includes managing stormwater and minimizing flooding from a statistically derived storm lasting 3 hours, with a total of 1.3 inches of rainfall and a defined peak rainfall intensity (5-year, 3-hour storm, LOS storm). The SOMA neighborhood near the project location has been subject to flooding during moderate to heavy storms. Several hydrologic and hydraulic factors contribute to flood challenges in the area. It is naturally low-lying, and once the collection system reaches its capacity, this neighborhood is where stormwater runoff collects when it is unable to enter the collection system. The area draining to the vicinity of the 5th and Berry St is highly urbanized. Rainfall on the drainage area becomes runoff almost immediately, enters the combined collection system, and is conveyed to points downstream. Because the downstream area by 5th and Berry Streets is fairly flat and forms a bowl-like shape, water is retained in the intersection of the existing Caltrain Railyard until the overland flow is deep enough to flow on the surface to the Mission Creek Channel or reenter the collection system after there is available capacity in the transport storage box located directly along Berry St. The large drainage basin combined with the steep terrain can lead to significant flow in the collection system in a short period during large storms, including some short storms with high rainfall intensity. The downstream system flows surpass the combined carrying capacity of the underground sewers and overland streets. Because the area is built on a historical wetland and landfill, settlement and subsidence of land have potentially resulted in lower property elevations.

Operating Impact: During Construction: None based on the project basis (re-evaluate if an alternative is selected). Post Construction: Flow balancing should be undertaken to determine if any changes to the wet weather operating strategy is needed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15730-WW Flood Resilience-Hydraulic
FSP ID	(N/A)
Project Title:	Gough Pipe Enhancement
Total Budget:	\$ 24,987,696
Project Start:	10/1/2029
Project Finish:	8/27/2035
Current Active Phase:	SSJIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	
Description:	Project alternatives will be developed in the project planning stage, but the following concept was used as a basis: This project will constitute of two sections. The first one is the construction of approximately 1,000 LF of new 78-inch sewer main along Oak St., from Gough St. to Van Ness Ave. The second one is the upsizing of approximately 1,000 LF of existing 54-inch sewer main to 78-inch along Gough St., from Grove St. to Oak St. This new sewer alignment provides additional capacity and relief for sewer mains along Octavia St. and Fell St. that have exceeded their capacity during the LOS storm, thus reducing surface flooding in the project vicinity.
Justification:	The primary objective of the Gough Pipe Enhancement Project is to address the SSJIP levels of service (LOS) of managing stormwater and minimizing flooding 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). The Western Addition neighborhood has been subject to flooding during moderate to heavy storms. Several hydrologic and hydraulic factors contribute to flood challenges in the area, including local topography. The large diameter sewer mains along Octavia St. and the surrounding vicinity form a flow path. As a result, once the collection system reaches its capacity, it experiences excursions and flows travel southeast via overland flow paths through the Western Addition Area, toward the Mission Area. Conveyance capacity, system flows surpass the combined carrying capacity of the underground sewers and overland streets.
Operating Impact:	During Construction: Construction and tie-in of new sewers may require flow bypass and likely to occur during the dry season. Post Construction: Flow balancing should be undertaken to determine if any changes to the wet weather operating strategy is needed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 926,374	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 926,374
ER	\$ 224,869	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 224,869
DS	\$ 2,829,095	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,926,502
CM	\$ 461,439	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 17,491,387	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 21,933,184	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,077,765

SFPUC Capital Project Plan
Wastewater Enterprise
SSJIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15729-WW Stormwater Management
FSP ID	(N/A)
Project Title:	Kearny Seated Manholes
Total Budget:	\$ 0
Project Start:	10/1/2022
Project Finish:	6/30/2032
Current Active Phase:	SSJIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	
Description:	The Grant Program will provide grants to cover the costs of design and construction of an approved floodproofing project to improve flood resilience of the property. All potential grantees will be able to access technical assistance to inform the design and selection of their proposed project. Project eligibility and other program procedures are documented in the Commission approved Grant Program requirements and terms.
Justification:	In 2013 the SFPUC established the Floodwater Management Grant Assistance Program (Grant Program) providing San Francisco property owners with grants for the cost of some floodproofing measures to improve flood resilience for San Francisco businesses and residents. The SFPUC has since expanded the types of projects eligible for grant funding, as well as the cost sharing and total grant amount. While the existing Grant Program has made multiple improvements to expand project types, increase funding caps, reduce financial burden, and improve the reimbursement structure, the SFPUC will further improve and expand the program. The primary goal of the Grant Program is to encourage the implementation of site-specific floodproofing measures by providing grants to property owners to implement projects and improve their flood resilience in heavy rains. It is one of the various flood resilience programmatic strategies that the SFPUC has developed and continues to implement.
Operating Impact:	None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15730-WW Flood Resilience-Hydraulic
FSP ID	(N/A)
Project Title:	Flood Resiliency Planning
Total Budget:	\$ 9,600,000
Project Start:	10/1/2022
Project Finish:	6/30/2026
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	

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

Justification: 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. As a result, the SFPUC has identified the need for flood resilience programmatic strategies to complement capital project implementation and improve overall flood resilience. This project supports technical analysis for the identification, prioritization, and development of programmatic strategies in coordination with other City agencies, including development of an updated floodwater grant, and alternative flood resilience planning studies.

Operating Impact: None – planning only.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 9,600,000	\$ 1,909,732	\$ 2,556,578	\$ 2,566,845	\$ 2,566,845	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 9,600,000	\$ 1,909,732	\$ 2,556,578	\$ 2,566,845	\$ 2,566,845	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15730-WW Flood Resilience-Hydraulic
FSP ID	(N/A)
Project Title:	Floodwater Management Grant Assistance Program (Gr
Total Budget:	\$ 15,000,000
Project Start:	10/1/2022
Project Finish:	6/30/2032
Current Active Phase:	SSIP
Organization:	Stephen Robinson
Project Manager:	Storm Water Management - Flood Control
Facility Category:	Capital
Type:	


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

Justification: The Grant Program will provide grants to cover the costs of design and construction of an approved floodproofing project to improve flood resilience of the property. All potential grantees will be able to access technical assistance to inform the design and selection of their proposed project. Project eligibility and other program procedures are documented in the Commission approved Grant Program requirements and terms.

Operating Impact: None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 15,000,000	\$ 1,145,791	\$ 1,533,881	\$ 1,540,041	\$ 1,540,041	\$ 1,540,041	\$ 7,700,205
Total	\$ 15,000,000	\$ 1,145,791	\$ 1,533,881	\$ 1,540,041	\$ 1,540,041	\$ 1,540,041	\$ 7,700,205

SFPUC Capital Project Plan
Wastewater Enterprise
SSIP



Authority Level 1:	19142-WW Sewer System Improvement Pr
Authority Level 2:	15737-WW Urban Watershed Assessment
FSP ID	10015816
Project Title:	Watershed Assessment
Total Budget:	\$ 17,409,222
Project Start:	7/1/2011
Project Finish:	6/30/2017
Current Active Phase:	Pre-Construction
Organization:	SSIP
Project Manager:	Saed Tobul
Facility Category:	Storm Water Management - Flood Control
Type:	Capital
Description:	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 well 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.
Justification:	Watershed Assessment was approved in a prior planning cycle and all work has been completed.
Operating Impact:	There are no operating impacts.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19141-WW Wwe Repair And Replacement
Authority Level 2:	15722-WW Wwe Rnr Collection System
FSP ID	(N/A)
Project Title:	Collection System - Salt Water Intrusion
Total Budget:	\$ 0
Project Start:	
Project Finish:	
Current Active Phase:	Non-SSIP WWE
Organization:	Johnny Wong
Project Manager:	Wastewater Renewal & Replacement
Facility Category:	Capital
Type:	
Description:	The sewer collection program includes Sewer System Improvement Program (SSIP) and Renewal and Replacement Program (R&R); together, the respective programs address long-term planning and immediate/ongoing needs to support the sewer collection system. The R&R Program Collection System Salt Water Intrusion projects will reduce salt water intrusion into the sewer system. Projects will consist of sewer pipeline joint sealing work.
Justification:	Infiltration and intrusion sewer improvements can be folded into other sewer RNR improvement budgets. Salt water intrusion projects at CSD outfalls are covered in Capital (SSIP) improvements.
Operating Impact:	None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19141-WW Wwe Repair And Replacement
Authority Level 2:	15722-WW Wwe Rnr Collection System
FSP ID	(NA)
Project Title:	Collection System-Sewer Improvements-Small Dia
Total Budget:	\$ 1,728,864,801
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Pre-Construction
Organization:	Non-SSIP WWE
Project Manager:	Johnny Wong
Facility Category:	Wastewater Renewal & Replacement
Type:	Capital
Description:	The sewer collection program includes Sewer System Improvement Program (SSIP) and Renewal and Replacement Program (R&R); together, the respective programs address long-term planning and immediate/ongoing needs to support the sewer collection system. The R&R Program Collection System Improvements projects maintain the existing functionality of the sewage collection system and includes planned and emergency projects for repair and replacement of structurally inadequate sewers. Projects will consist of replacing structurally inadequate main sewers throughout San Francisco.
Justification:	Projects include trenchless rehabilitation and open cut replacement of existing sewer pipelines with the emphasis to utilize more trenchless applications.
Operating Impact:	The aging wastewater infrastructure needs replacement and modification to ensure reliable operation and to meet future regulatory standards. Over 70% of the sewers have surpassing their useful life cycles of 50 to 100 years. Failure of the collection system will reduce the City's ability to properly handle and dispose of wastewater and stormwater, which can lead to negative public health, safety and environmental risks. These projects help mitigate future years' costs and overtime incurred by timely maintenance of the Wastewater Collection System.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 88,347,025	\$ 4,954,482	\$ 6,233,058	\$ 8,645,765	\$ 8,645,239	\$ 8,270,627	\$ 42,272,326
CM	\$ 141,223,428	\$ 7,718,938	\$ 9,710,922	\$ 13,469,200	\$ 13,555,041	\$ 13,155,153	\$ 68,458,764
CN	\$ 742,713,491	\$ 41,922,540	\$ 53,703,955	\$ 67,303,955	\$ 73,152,023	\$ 69,982,230	\$ 67,688,911
Total	\$ 972,283,945	\$ 54,595,960	\$ 69,699,495	\$ 89,418,920	\$ 95,352,303	\$ 91,408,010	\$ 468,420,001

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19141-WW Wwe Repair And Replacement
Authority Level 2:	15722-WW Wwe Rnr Collection System
FSP ID	(NA)
Project Title:	Collection System-Condition Assessment-Small Dia
Total Budget:	\$ 182,420,014
Project Start:	7/1/2022
Project Finish:	6/30/2022
Current Active Phase:	Construction
Organization:	Non-SSIP WWE
Project Manager:	Johnny Wong
Facility Category:	Wastewater Renewal & Replacement
Type:	Capital
Description:	The sewer collection program includes Sewer System Improvement Program (SSIP) and Renewal and Replacement Program (R&R); together the respective programs address long-term planning and immediate/ongoing needs to support the sewer collection system. The R&R Program Collection System Condition Assessment projects consist of annual funding of staff including off-budget WWE Sewer Operations positions and contracts to perform video inspection and condition assessment of main sewers less than and equal to 36 inch diameter. The work is necessary to perform inspections of the subject facilities in support of the Wastewater Enterprise's Collection System Asset Management Program (CSAMP).
Justification:	This project will assist with the on-going inspections/data gathering necessary for SFPUC's Wastewater Enterprise's Collection System Asset Management Program (CSAMP). The State implementation of the Combined Sewer Overflow Policy requires that sewer utilities must have an on-going inspection, cleaning and repair program for sewer system assets to minimize raw sewage overflows. This project is consistent with SFPUC's Technology Policy by utilizing advanced equipment to remotely clean, inspect, and access the condition of collection system assets.
Operating Impact:	This project will help mitigate future years' costs and overtime incurred by timely maintenance of the Wastewater Collection System.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 38,368,670	\$ 2,845,000	\$ 2,958,800	\$ 3,077,152	\$ 3,200,238	\$ 3,328,248	\$ 18,747,937
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 14,645,506	\$ 499,091	\$ 793,555	\$ 1,261,752	\$ 1,312,222	\$ 1,364,711	\$ 7,687,382
CM	\$ 14,645,506	\$ 499,091	\$ 793,555	\$ 1,261,752	\$ 1,312,222	\$ 1,364,711	\$ 7,687,382
CN	\$ 107,400,375	\$ 3,660,000	\$ 5,819,400	\$ 9,252,846	\$ 9,622,960	\$ 10,007,878	\$ 56,374,133
Total	\$ 175,080,056	\$ 7,503,182	\$ 10,365,309	\$ 14,853,501	\$ 15,447,642	\$ 16,065,547	\$ 90,496,833

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19141-WW Wwe Repair And Replacement
Authority Level 2:	15722-WW Wwe Rnr Collection System
FSP ID	(N/A)
Project Title:	Collection System-Sewer Improvements-Spot Sewer
Total Budget:	\$ 51,555,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Pre-Construction
Organization:	Non-SSIP WWE
Project Manager:	Johnny Wong
Facility Category:	Wastewater Renewal & Replacement
Type:	Capital
Description:	The sewer collection program includes Sewer System Improvement Program (SSIP) and Renewal and Replacement Program (R&R); together, the respective programs address long-term planning and immediate/ongoing needs to support the sewer collection system. The R&R Program Collection System Spot Sewer Replacement projects consist of replacement/rehabilitation of approximately 3 miles of main sewers in FY 23-24 and approximately 6 miles starting FY 24-25.
Justification:	Collection system spot sewer replacement projects are identified utilizing an asset management approach, which factors in: physical condition, age, location, risk, public safety, paving schedule and other factors. The State implementation of the Combined Sewer Overflow Policy requires that sewer utilities must have an on-going inspection, cleaning and repair program for sewer system assets to minimize raw sewage overflows. This project will be in compliance with the SFPUC Technology Policy by utilizing proven technologies to meet Level of Services (LOS) goals and achieve regulatory compliance, and strives to incorporate new and innovative technology.
Operating Impact:	The aging wastewater infrastructure needs replacement and modification to ensure reliable operation and to meet future regulatory standards. Over 70% of the sewers have surpassing their useful life cycles of 50 to 100 years. Failure of the collection system will reduce the City's ability to properly handle and dispose of wastewater and stormwater, which can lead to negative public health, safety and environmental risks. These projects help mitigate future years' costs and overtime incurred by timely maintenance of the Wastewater Collection System.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19141-WW Wwe Repair And Replacement
Authority Level 2:	15722-WW Wwe Rnr Collection System
FSP ID	(N/A)
Project Title:	Collection System-Condition Assessment - Large Dia
Total Budget:	\$ 63,157,000
Project Start:	7/1/2022
Project Finish:	12/31/2035
Current Active Phase:	Pre-Construction
Organization:	Non-SSIP WWE
Project Manager:	Bessie Tam
Facility Category:	Wastewater Renewal & Replacement
Type:	Capital
Description:	This project is intended to provide funding to prepare and procure annual contracts for inspecting and providing condition assessment efforts of sewers greater than 36-inches in diameter (or Large Diameter Sewers). The program is budgeted to inspect up to 4-miles in starting in FY22-23 of Large Diameter Sewers, including the associated laterals and culverts. Results from this project would be utilized to plan the Large Diameter Sewer Improvements that would be implemented and funded by Project ID CWWRRNCS-SI.
Justification:	There are over 50-miles of Large Diameter Sewers (sewers with diameter greater than 36-inches) or LDS that are up to 140-years old. Many of the LDS have exceeded its useful life and are in need of rehabilitation or replacement before the asset fails. Before rehabilitating these sewers, an inspection and condition assessment effort is needed to confirm its condition and obtain information to plan, prioritize and determine appropriate rehabilitation or repair methods in a separate project funded by Project ID CWWRRNCS-SI. This project helps meet the State implementation of the Combined Sewer Overflow Policy, which requires sewer utilities to have an ongoing inspection program.
Operating Impact:	This project may help mitigate emergency and unplanned repairs in future years, and mitigate future years' costs and overtime by providing timely information about the condition of Large Diameter Sewers in the Wastewater Collection System. Starting in FY22-23, approximately \$50k or as-needed consultant support for WWE would be funded through this project.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 47,287,000	\$ 2,104,000	\$ 3,587,000	\$ 3,931,000	\$ 4,088,000	\$ 4,252,000	\$ 23,946,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 20,747,000	\$ 1,183,000	\$ 1,560,000	\$ 1,702,000	\$ 1,770,000	\$ 1,842,000	\$ 10,367,000
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 68,034,000	\$ 3,287,000	\$ 5,147,000	\$ 5,633,000	\$ 5,858,000	\$ 6,094,000	\$ 34,313,000

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19141-WW Wwe Repair And Replacement
Authority Level 2:	15722-WW Wwe Rnr Collection System
FSP ID	(N/A)
Project Title:	Collection System-Cond. Assessment-Sewer Laterals
Total Budget:	\$ 41,007,087
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Pre-Construction
Organization:	Non-SSIP WWE
Project Manager:	Johnny Wong
Facility Category:	Wastewater Renewal & Replacement
Type:	Capital
Description:	This project will proactively inspect and assess existing sewer laterals on an ongoing yearly basis for SFPUC's Wastewater Enterprise's Collection System Asset Management Program (CSAMP).
Justification:	This project will assist with the on-going inspections/data gathering necessary for SFPUC's Wastewater Enterprise's Collection System Asset Management Program (CSAMP). The State implementation of the Combined Sewer Overflow Policy requires that sewer utilities must have an on-going inspection, cleaning and repair program for sewer system assets to minimize raw sewage overflows. This project is consistent with SFPUC's Technology Policy by utilizing advanced equipment to remotely clean, inspect, and access the condition of collection system assets.
Operating Impact:	This project will help mitigate future years' costs and overtime incurred by timely maintenance of the Wastewater Collection System.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 40,365,557	\$ 1,418,000	\$ 2,227,120	\$ 3,469,824	\$ 3,608,617	\$ 3,752,962	\$ 21,140,341
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 40,365,557	\$ 1,418,000	\$ 2,227,120	\$ 3,469,824	\$ 3,608,617	\$ 3,752,962	\$ 21,140,341


SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19141-WW Wwe Repair And Replacement
Authority Level 2:	15722-WW Wwe Rnr Collection System
FSP ID	(N/A)
Project Title:	Collection System-Sewer Improvements - Large Dia
Total Budget:	\$ 483,853,000
Project Start:	7/1/2022
Project Finish:	12/31/2035
Current Active Phase:	Not Started
Organization:	Non-SSIP WWE
Project Manager:	Bessie Tam
Facility Category:	Wastewater Renewal & Replacement
Type:	Capital
Description:	This project is intended to replace and/or rehabilitate Large Diameter Sewers (sewers greater than 36- inches in diameter) in the Wastewater Collection System. FY24-25 will provide partial construction funds for 1-mile of sewers and FY24-25 will include construction funds for 1 mile of Large Diameter Sewer from SSIP Project 10034718. Starting in FY24-25, the budget includes design budget for 1 mile of sewer, with the construction phase budgets in the year following the design. For example, FY24-25 includes the design for 1-mile of sewer, which will translate to the construction cost for the same 1-mile of sewer in FY25-26, and so on.
Justification:	There are over 50-miles of Large Diameter Sewers (sewers with diameter greater than 36-inches) that are up to 140-years old. Many of the Large Diameter Sewers have exceeded its useful life and are in need of rehabilitation or repair, and these assets provide critical conveyance functions that should be rehabilitated before failure. This project helps meet the State implementation of the Combined Sewer Overflow Policy, which requires sewer utilities to have an ongoing inspection, cleaning and repair program for sewer system assets to minimize raw sewage overflows.
Operating Impact:	This project will help mitigate emergency and unplanned repairs in future years and associated future years' costs and overtime by replacing or rehabilitating Large Diameter Sewers in the Wastewater Collection System.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 45,645,000	\$ 0	\$ 0	\$ 2,992,000	\$ 3,111,000	\$ 3,236,000	\$ 29,267,000
CM	\$ 40,914,000	\$ 0	\$ 1,852,000	\$ 1,742,000	\$ 2,892,000	\$ 3,008,000	\$ 24,765,000
CN	\$ 383,499,000	\$ 0	\$ 14,000,000	\$ 16,481,000	\$ 27,357,000	\$ 25,451,000	\$ 234,254,000
Total	\$ 470,058,000	\$ 0	\$ 15,852,000	\$ 21,215,000	\$ 33,360,000	\$ 34,695,000	\$ 286,286,000

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19141-WW Wwe Repair And Replacement
Authority Level 2:	15722-WW Wwe Rnr Collection System
FSP ID	(N/A)
Project Title:	T/S Box Tier 1 (Desktop) Condition Assessment
Total Budget:	\$ 2,178,000
Project Start:	12/7/2020
Project Finish:	12/17/2023
Current Active Phase:	Pre-Construction
Organization:	Non-SSIP WWE
Project Manager:	Stephen Robinson
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	Based on the extent and complexity of the asset inventory, availability of information, and current knowledge base regarding existing physical condition and structural performance of the Transport/Storage boxes (T/S Boxes), assumptions have been made regarding the anticipated elements to be included in the Tier 1 evaluation and the anticipated level of effort. As data is collected and reviewed, refinements and additional specificity regarding the evaluation tasks may be required. The following tasks are anticipated in this Tier 1 Condition Assessment: Data Collection; Geotechnical Information Review; Review of Prior Condition Assessment Info; Review Maintenance History; Hydraulic Analysis; O&M Needs Evaluation (odor, Debris/Grit, Flushing Systems, etc.); Structural Assessment; Visual Screening-Level Field Inspection; Evaluate Condition.
Justification:	The Tier 1 condition assessment in this project is intended to provide a desktop evaluation to better understand the current condition of the assets and identify appropriate field inspections, if required. Field data collection and detailed engineering analyses are not the objective of the Tier 1 evaluation, however the results of this study would identify and inform prioritization of subsequent more detailed analyses. Because a detailed condition assessment of the Jackson T/S Box has been performed, evaluation of that facility is not included in this project. Locations include: Marina T/S, Jackson T/S, Channel T/S, Mariposa T/S, Islais Creek T/S, Yosemite T/S, Sunnydale T/S, Richmond T/S, Westside T/S, and Lake Merced T/S.
Operating Impact:	None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19141-WW Wwe Repair And Replacement
Authority Level 2:	15722-WW Wwe Rnr Collection System
FSP ID	(N/A)
Project Title:	T/S Box Tier 2 (Field) Condition Assessment
Total Budget:	\$ 21,991,974
Project Start:	12/7/2022
Project Finish:	7/1/2031
Current Active Phase:	Non-SSIP WWE
Organization:	Stephen Robinson
Project Manager:	Stephen Robinson
Facility Category:	Sewer and Collection System
Type:	Capital

Description:
Condition assessment of the Treatment and Storage (T/S) Boxes is envisioned to follow the tiered condition assessment approach for linear collection system assets developed under the Sewer System Improvement Program (SSIP). The Tier 2 condition assessments in this project are intended to follow the previously performed Tier 1 condition assessments and in coordination with the T/S Box Seismic Evaluations. The specific assets to be inspected, as well as their priorities, will be identified based on the Tier 1 information and other considerations. Tasks that would be performed as part of the inspection include information collection and review, planning and execution of field inspection work. Tasks include Collection and review of supplemental information required for field work and review of Tier 1 condition assessment information for the assets to be inspected; Planning of Tier 2 field inspection including selection of inspection technique, logistical planning, and condition; Execution of field inspection work; Review and analysis of inspection results, assessment of condition, development of recommendations and preparation of condition assessment reports.
Due to the wide range in the sizes of the boxes, physical configuration and operational conditions, variability in approach is anticipated for each specific asset. Upon selection and prioritization of the T/S boxes to be inspected, asset-specific methodologies and budgets will be developed. Based on the size of the boxes, a limited number, if any, may be inspected using robotic multi-sensor equipment due to technological limitations, such as lighting and video quality. Personnel entry may be required. Logistical components such as access, safety and flow bypass may be identified during the planning phase. If existing access points are not suitable to support inspection (person entry or robotic), improvements to or creation of access points may be required. Based on an assumed cost of \$1,000,000 per mile, the budget for this project may address inspection of up to 10 miles of T/S boxes.

Justification:
San Francisco has approximately 17 miles of T/S structures around its perimeter, varying in size up to 25 feet wide and up to 52 feet deep. T/S boxes store and convey combined sanitary and stormwater flow to SFPUC's treatment plants. These assets were constructed between the late 1970's to early 1990's, making the oldest structures currently over 40 years old. Given the corrosive environment within these facilities, as well as their importance and value, it is appropriate to perform condition assessments, to characterize their condition and deterioration rates and plan for improvements if necessary.
This scope of work includes the SFPUC's transport/storage box (T/S Box) facilities, including the following assets: Marina T/S, Jackson T/S, Channel T/S, Mariposa T/S, Islais Creek T/S, Yosemite T/S, Sunnydale T/S, Richmond T/S, Westside T/S, Lake and Merced T/S.

Operating Impact:
During Construction: Minor workarounds or bypass pumping may be required to facilitate construction work; however, major shutdowns and/or diversions are not likely required.
Post Construction: This project involves condition assessment only, and will not impact operations once the project is completed.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 661,440	\$ 0	\$ 0	\$ 661,440	\$ 0	\$ 0	\$ 0
CM	\$ 2,239,046	\$ 0	\$ 0	\$ 876,408	\$ 1,78,853	\$ 186,008	\$ 1,047,777
CN	\$ 15,333,468	\$ 0	\$ 0	\$ 446,772	\$ 1,984,839	\$ 1,960,233	\$ 11,041,944
Total	\$ 18,283,974	\$ 0	\$ 0	\$ 1,984,320	\$ 2,065,692	\$ 2,146,241	\$ 12,088,721

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19141-WW Wwe Repair And Replacement
Authority Level 2:	15722-WW Wwe Rnr Collection System
FSP ID	10015687
Project Title:	WW Outfall Inspection – Receiving
Total Budget:	\$ 7,011,303
Project Start:	
Project Finish:	
Current Active Phase:	
Organization:	Non-SSIP WWE
Project Manager:	[None]
Facility Category:	Wastewater Renewal & Replacement
Type:	Capital
Description:	This project was previously approved as part of the following group: CWW/RNR - Collection System - Salt Water Intrusion. The sewer collection program includes Sewer System Improvement Program (SSIP) and Renewal and Replacement Program (R&R); together, the respective programs address long-term planning and immediate/ongoing needs to support the sewer collection system. The R&R Program Collection System Salt Water Intrusion projects will reduce salt water intrusion into the sewer system. Projects will consist of sewer pipeline joint sealing work.
Justification:	Collection system salt water intrusion projects are identified as part of the ongoing Collection System Asset Management Program (CSAMP). The State implementation of the Combined Sewer Overflow Policy requires that sewer utilities must have an on-going inspection, cleaning and repair program for sewer system assets to minimize raw sewage overflows. This project is consistent with SFPUC's Technology Policy by utilizing proven technologies to achieve regulatory compliance, and will strive to collaborate with City agencies to jointly incorporate innovative green technology.
Operating Impact:	Salt water intrusion can affect the treatment process and result in permit violation(s). These projects help mitigate future years' costs and overtime incurred by timely maintenance of the Wastewater Collection System.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 19,467,487	\$ 992,250	\$ 1,876,255	\$ 2,395,517	\$ 2,491,338	\$ 2,331,892	\$ 7,883,986
CM	\$ 39,766,828	\$ 1,105,000	\$ 1,775,200	\$ 5,323,372	\$ 5,536,307	\$ 5,161,963	\$ 17,519,969
CN	\$ 221,032,952	\$ 7,452,500	\$ 10,704,000	\$ 29,278,546	\$ 30,449,688	\$ 28,500,908	\$ 96,359,832
Total	\$ 280,267,267	\$ 9,549,750	\$ 14,355,455	\$ 36,997,435	\$ 38,477,333	\$ 36,014,784	\$ 121,763,788

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19141-WW Wwe Repair And Replacement
Authority Level 2:	15722-WW Wwe Rnr Collection System
FSP ID	(N/A)
Project Title:	Sewer Lateral Improvements
Total Budget:	\$ 257,158,545
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	
Organization:	Non-SSIP WWE
Project Manager:	Johnny Wong
Facility Category:	Sewer and Collection System
Type:	Capital
Description:	The sewer collection program includes Sewer System Improvement Program (SSIP) and Renewal and Replacement Program (R&R); together, the respective programs address long-term planning and immediate/ongoing needs to support the sewer collection system. The R&R Program Collection System Sewer Lateral Improvement projects consist of localized replacement/rehabilitation of sewer assets (predominantly sewer laterals). Collection system spot sewer replacement projects are identified utilizing an asset management approach, which factors in: physical condition, age, location, risk, public safety, paving schedule and other factors. The State implementation of the Combined Sewer Overflow Policy requires that sewer utilities must have an on-going inspection, cleaning and repair program for sewer system assets to minimize raw sewage overflows. This project will be in compliance with the SFPUC Technology Policy by utilizing proven technologies to meet LOS goals and achieve regulatory compliance, and strives to incorporate new and innovative technology.
Justification:	The aging wastewater infrastructure needs replacement and modification to ensure reliable operation and to meet future regulatory standards. Over 70% of the sewers have surpassing their useful life cycles of 50 to 100 years. Failure of the collection system will reduce the City's ability to properly handle and dispose of wastewater and stormwater, which can lead to negative public health, safety and environmental risks. These projects help mitigate future years' costs and overtime incurred by timely maintenance of the Wastewater Collection System.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 19,467,487	\$ 992,250	\$ 1,876,255	\$ 2,395,517	\$ 2,491,338	\$ 2,331,892	\$ 7,883,986
CM	\$ 39,766,828	\$ 1,105,000	\$ 1,775,200	\$ 5,323,372	\$ 5,536,307	\$ 5,161,963	\$ 17,519,969
CN	\$ 221,032,952	\$ 7,452,500	\$ 10,704,000	\$ 29,278,546	\$ 30,449,688	\$ 28,500,908	\$ 96,359,832
Total	\$ 280,267,267	\$ 9,549,750	\$ 14,355,455	\$ 36,997,435	\$ 38,477,333	\$ 36,014,784	\$ 121,763,788

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19141-WW Wwe Repair And Replacement
Authority Level 2:	15724-WW Wwe Rnr Collection System
FSP ID	(N/A)
Project Title:	Collection System - Sewer Cleaning - Large Dia
Total Budget:	\$21,036,000
Project Start:	7/1/2022
Project Finish:	12/31/2035
Current Active Phase:	Non-SSIP WWE
Organization:	Bessie Tam
Project Manager:	Wastewater Renewal & Replacement
Facility Category:	Capital
Type:	Capital
Description:	This is for cleaning of existing sewers that are 36-inches or larger in diameter. Cleaning of large diameter sewers is a critical activity needed to maintain hydraulic capacity and continue to provide sewer services to the ratepayers. The estimated contract costs are shown in the Planning Phase and the soft costs to support the contract is shown in the Design Phase.
Justification:	Cleaning of large diameter sewers is a critical activity to maintain hydraulic capacity and help provide sewer services to the ratepayers.
Operating Impact:	This project will provide cleaning contracts to support the Wastewater Collection System's O&M efforts, and would reduce O&M costs elsewhere. WWE staff costs associated with this project are included as part of the design and CM support costs shown in the 'Design Phase'.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 17,341,000	\$ 720,000	\$ 891,000	\$ 1,079,000	\$ 1,263,000	\$ 1,460,000	\$ 9,712,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 6,777,000	\$ 282,000	\$ 343,000	\$ 422,000	\$ 493,000	\$ 570,000	\$ 3,796,000
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 24,118,000	\$ 1,002,000	\$ 1,239,000	\$ 1,501,000	\$ 1,756,000	\$ 2,030,000	\$ 13,508,000

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19141-WW Wwe Repair And Replacement
Authority Level 2:	15724-WW Wwe RNR Treatment Facilities
FSP ID	(N/A)
Project Title:	Treatment Plant Improvements
Total Budget:	\$ 680,063,736
Project Start:	7/1/2010
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Non-SSIP WWE
Project Manager:	Daniel Alvarado
Facility Category:	Wastewater Renewal & Replacement
Type:	Capital
Description:	The purpose of the Wastewater Enterprise (WWE) Repair 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 failure of any major component of the wastewater treatment facilities could be catastrophic, compromising the SFPUC's ability to handle and treat wastewater, which could result in severe public health, safety, regulatory, and environmental impacts.
Justification:	The completion of projects under the WWE R&R Program Treatment Plant Improvement program increase reliability and efficiency of Wastewater Enterprise (WWE) facilities and will ensure that the performance of the treatment facilities meets the established levels of service. This program will enable quick response to critical repairs which would reduce operability and reliability. These projects will enable WWE to maintain full compliance with Regional Water Quality Control Board National Pollutant Discharge Elimination System (NPDES) permits and Bay Area Air Quality Management (BAAQMD) requirements. The State requires that provisions be made for the periodic repair and replacement of sewer system facilities. This project is consistent with SFPUC's Technology Policy by replacing worn and outdated equipment with newer more energy efficient equipment and updating controls and various systems to more advanced technology.
Operating Impact:	These projects will help to address future years' repair and replacement costs and to reduce overtime costs by timely maintenance of Wastewater Enterprise's Treatment Facilities.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 33,460,157	\$ 2,793,710	\$ 2,933,395	\$ 3,080,065	\$ 1,750,000	\$ 2,000,000	\$ 15,163,735
ER	\$ 35,537,688	\$ 4,210,110	\$ 4,420,616	\$ 4,641,648	\$ 700,000	\$ 800,000	\$ 12,116,285
DS	\$ 63,797,315	\$ 1,396,855	\$ 1,466,698	\$ 1,540,033	\$ 7,000,000	\$ 8,000,000	\$ 41,524,103
CM	\$ 45,762,518	\$ 2,234,968	\$ 2,346,716	\$ 3,080,065	\$ 3,500,000	\$ 4,000,000	\$ 24,861,517
CN	\$ 303,757,627	\$ 15,044,492	\$ 22,658,191	\$ 27,050,000	\$ 30,200,000	\$ 30,200,000	\$ 159,818,257
Total	\$ 482,315,305	\$ 25,680,135	\$ 26,211,917	\$ 35,000,000	\$ 40,000,000	\$ 45,000,000	\$ 253,483,897

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19134-WW Treasure Island Capital Imp
Authority Level 2:	15707-WW Treasure Island Capital Imp
FSP ID	10015546
Project Title:	Treasure Island New WWTP and RWF
Total Budget:	\$ 202,208,000
Project Start:	1/1/2011
Project Finish:	5/22/2026
Current Active Phase:	Pre-Construction
Organization:	Non-SSIP WWE
Project Manager:	Jignesh Desai
Facility Category:	Treasure Island
Type:	Capital
Description:	The new Treasure Island Water Resource Recovery Facility will be located on the northeast corner of Treasure Island in San Francisco, California and will provide tertiary treatment and wetlands to achieve an average dry weather flow capacity of at least 1.3 million gallons per day (MGD) and peak wet weather flow of 3.9 MGD. The project will include design, construction, start-up, commissioning, and training for the new wastewater treatment facilities
Justification:	The aged, unreliable wastewater treatment facilities at Treasure Island require replacement and to support new/future development.
Operating Impact:	Project will ensure that the treatment facility will meet State and Federal regulatory requirements, increase reliability and provides the ability to respond to a full range of operating requirements by utilizing the latest technology.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 989,910	\$ 215,247	\$ 462,039	\$ 312,624	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 11,054,979	\$ 0	\$ 7,438,697	\$ 3,616,282	\$ 0	\$ 0	\$ 0
CN	\$ 120,765,111	\$ 0	\$ 57,765,111	\$ 63,000,000	\$ 0	\$ 0	\$ 0
Total	\$ 132,810,000	\$ 215,247	\$ 65,665,847	\$ 66,928,906	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19139-WW Facilities & Infrastructure
Authority Level 2:	New
FSP ID	(N/A)
Project Title:	Customer Service System
Total Budget:	\$ 8,108,715
Project Start:	7/1/2022
Project Finish:	6/30/2026
Current Active Phase:	Non-SSIP WWE
Organization:	Kristen McGuire
Project Manager:	Kristen McGuire
Facility Category:	Wastewater Facilities & Infrastructure
Type:	Capital
Description:	This project will transform the Customer Service experience at the SFPUC. It will modernize our technology and enable us to optimize business processes to align with current and future Customer Service needs and bring increased operational effectiveness. The project has 3 main components - a) Migrating to a modern, flexible cloud-based contact center solution, b) Migrating from our legacy "My Account" platform to a new digital self-service and customer engagement platform, and c) Migrating from our on-premises legacy Customer Information System (CIS) CC&B (Oracle "Customer Care & Billing") to Oracle's replacement CIS solution - Oracle CCS ("Customer Cloud Service"). These are all significant changes across our Customer Service and IT infrastructure. The current systems are all between 8 and 20 years old. A lack of modern, flexible technology is making it impossible to improve Customer Service business process, and restricts how customers access their data. This project will increase customer satisfaction, reduce frustration and improve the experience of our staff. The call center telephony and supporting applications are around 20 years old. Not completing this project puts the PUC at risk as it will fall further behind in its technology and what customers expect from a modern utility. Customer's now demand modern access (xt, mobile, chat etc) to their billing and usage information, and this project will improve the customer experience, engagement and overall satisfaction. Not completing this work will increase customer frustrations, making it challenging to retain staff, and could impact our ability to collect revenue in a timely manner.
Justification:	The current systems are all between 8 and 20 years old. A lack of modern, flexible technology is making it impossible to improve Customer Service business process, and restricts how customers access their data. This project will increase customer satisfaction, reduce frustration and improve the experience of our staff. The call center telephony and supporting applications are around 20 years old. Not completing this project puts the PUC at risk as it will fall further behind in its technology and what customers expect from a modern utility. Customer's now demand modern access (xt, mobile, chat etc) to their billing and usage information, and this project will improve the customer experience, engagement and overall satisfaction. Not completing this work will increase customer frustrations, making it challenging to retain staff, and could impact our ability to collect revenue in a timely manner.
Operating Impact:	The call center telephony and supporting applications are around 20 years old. Not completing this project puts the PUC at risk as it will fall further behind in its technology and what customers expect from a modern utility. Customer's now demand modern access (xt, mobile, chat etc) to their billing and usage information, and this project will improve the customer experience, engagement and overall satisfaction. Not completing this work will increase customer frustrations, making it challenging to retain staff, and could impact our ability to collect revenue in a timely manner.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 8,108,715	\$ 998,326	\$ 1,417,558	\$ 2,894,314	\$ 2,798,517	\$ 0	\$ 0
Total	\$ 8,108,715	\$ 998,326	\$ 1,417,558	\$ 2,894,314	\$ 2,798,517	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19139-WW Facilities & Infrastructure
Authority Level 2:	15136-WW Treatment Plant Improvement
FSP ID	(N/A)
Project Title:	SWOO Condition Assessment & Rehab
Total Budget:	\$ 32,211,349
Project Start:	10/1/2024
Project Finish:	4/3/2030
Current Active Phase:	Construction
Organization:	Non-SSIP WWE
Project Manager:	Brian Carlomagno
Facility Category:	Wastewater Facilities & Infrastructure
Type:	Capital

Description:
This project addresses Oceanside Plants (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 will 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.

Justification:
This Sewer System Improvement Program (SSIP) project will include assessment and improvements to the SWOO where all of OSP's effluent is discharged. OSP is the SFPUC's second largest wastewater facility treating almost 20% of the City's dry and wet weather flows.
The SWOO was last inspected in December 2005 by Underwater Resources, Inc. (URI) under a contract with Carolis Engineers Inc. Given that the last outfall condition assessment occurred 14 years ago and involved a very limited internal inspection due to the amount of sediment buildup in the pipe, another condition assessment is required to determine both the external and internal outfall pipe condition and perform some repairs based upon the condition assessment results.

Operating Impact:
During Construction: Plant shutdowns may be required to perform the condition assessments and subsequent improvements; however, it may be possible to perform the work under low flow conditions.
Post Construction: None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,179,495	\$ 0	\$ 0	\$ 662,798	\$ 516,697	\$ 0	\$ 0
ER	\$ 289,902	\$ 0	\$ 0	\$ 162,906	\$ 126,996	\$ 0	\$ 0
DS	\$ 3,611,759	\$ 0	\$ 0	\$ 0	\$ 1,220,702	\$ 2,285,921	\$ 105,136
CM	\$ 22,547,944	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 22,547,944
CN	\$ 4,582,249	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,582,249
Total	\$ 32,211,349	\$ 0	\$ 0	\$ 825,704	\$ 1,864,395	\$ 2,285,921	\$ 27,235,329

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19139-WW Facilities & Infrastructure
Authority Level 2:	15174-WW Ocean Beach Project
FSP ID	10015554
Project Title:	Ocean Beach Climate Change Adaptation Project
Total Budget:	\$ 183,488,601
Project Start:	7/23/2012
Project Finish:	1/12/2028
Current Active Phase:	Construction
Organization:	Non-SSIP WWE
Project Manager:	Anna M. Roche
Facility Category:	Wastewater Facilities & Infrastructure
Type:	Capital

Description:
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 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.

Justification:
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. To resolve these issues, CCSF settled the litigation and sought a new permit with the Coastal Commission, both of which commits CCSF to implementation of this project. In addition, the Lake Merced Tunnel continues to be in imminent danger. If a failure were to occur, untreated wastewater and stormwater would enter the Pacific Ocean and threaten public health and the environment. This project will protect this facility from failure.

Operating Impact:
The Lake Merced Tunnel is a critical infrastructure element of the City's Wastewater Collection System. Continued shoreline bluff recession will reduce the thickness of soil cover around the structure, potentially resulting in the structure "floating" upwards due to uplift, or "sliding" laterally due to lateral earth pressure. Failure of the Lake Merced Tunnel would be catastrophic, compromising the City's ability to capture, store and treat combined stormwater and wastewater within the City's Westside System, and could result in severe public health, safety, regulatory, and environmental impacts.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 9,803	\$ 0	\$ 9,803	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 18,543,646	\$ 0	\$ 0	\$ 3,821,473	\$ 3,821,473	\$ 3,821,473	\$ 1,309,715
CN	\$ 120,000,000	\$ 0	\$ 30,000,000	\$ 40,000,000	\$ 40,000,000	\$ 10,000,000	\$ 0
Total	\$ 138,553,449	\$ 0	\$ 35,779,315	\$ 43,821,473	\$ 43,821,473	\$ 13,821,473	\$ 1,309,715

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19139-WW Facilities & Infrastructure
Authority Level 2:	15716-WW Collection Division Consol
FSP ID	10015556
Project Title:	WWE Facilities Plan
Total Budget:	\$ 44,500,000
Project Start:	31/2013
Project Finish:	12/30/2022
Current Active Phase:	Post-Construction
Organization:	Non-SSIP WWE
Project Manager:	Shelby Campbell
Facility Category:	Wastewater Facilities & Infrastructure
Type:	Capital

Description: 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.

Justification: The WWE continues to experience increasing operational inefficiencies and functionality challenges. The cost to operating under these conditions is the diversion of resources to keep outdated facilities operating. These challenges will become exacerbate as new infrastructure is commissioned. Developing adequate facilities to effectively meet the operating needs, and requirements of the WWE and a long term plan to maximize the value of WWE's assets is essential to operating an efficient and reliable enterprise. This project is consistent with SFPUC's Technology Policy by replacing obsolete building components and systems with high efficiency new technologies. The project is aligned with the policy's environmental principles for addressing climate change and the use of limited resources and economic principles of total cost approach for optimizing long-term life cycle costs.

Operating Impact: The plan will provide for significant cost savings and productivity benefits in the long-term. These can be attributed to monetary savings from currently leased spaces, increased productivity of workforce with the improved functionality and centralization of core operational functions, and efficiencies from having a consolidated administration and operations facilities.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19139-WW Facilities & Infrastructure
Authority Level 2:	15716-WW Southeast Community Center
FSP ID	10015556
Project Title:	Southeast Community Center Improvements
Total Budget:	\$ 114,000,000
Project Start:	7/26/2012
Project Finish:	12/29/2023
Current Active Phase:	Construction
Organization:	Non-SSIP WWE
Project Manager:	Shelby Campbell
Facility Category:	Wastewater Facilities & Infrastructure
Type:	Capital

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, caté, 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.

Justification: The South East Community Facility (SECF) is an important community center offering educational, training and other programs. The SECF building components and systems are outdated and near the end of their life spans. The indoor environmental quality is below standard. This project will revitalize the facility, increase occupant comfort, increase functionality, improve building reliability, and address various code and energy efficiency deficiencies. This building improvement project is expected to achieve LEED (Leadership in Energy and Environmental Design) Gold certification. LEED-certified buildings are designed to incorporate advanced building technologies to lower operating costs, reduce waste, conserve resources, and reduce impacts on the environment, which is consistent with the SFPUC's Technology Policy.

Operating Impact: This project will increase the comfort level of the occupants, reduce energy and water consumption, and reduce impacts to normal building operations, which will be accomplished by improving indoor environmental conditions, installing energy and water efficient fixtures and systems, and upgrading aged equipment. Upon completion of this project, this center with its valuable resources will become welcoming and vibrant again.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19139-WW Facilities & Infrastructure
Authority Level 2:	15717-WW Islais Creek Outfall
FSP ID	10015557
Project Title:	Islais Creek Outfall Crossing
Total Budget:	\$ 67,600,000
Project Start:	9/26/2016
Project Finish:	9/3/2026
Current Active Phase:	Pre-Construction
Organization:	Non-SSIP WWE
Project Manager:	Kirit Bavishi
Facility Category:	Wastewater Facilities & Infrastructure
Type:	Capital

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.

Justification: The existing Islais Creek crossings are failing and need immediate replacement. The pipes were installed in 1967 and have reached the end of their useful life.

Operating Impact: Aging infrastructure is costly to operate and maintain as it requires constant attention to maintain operation. Failures in the system require emergency actions by the Wastewater Enterprise and can potentially compromise compliance with the Regional Water Quality Control Board. These pipelines WILL continue to fail until they are replaced or possibly fully rehabilitated.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Wastewater Enterprise
Non-SSIP WWE



Authority Level 1:	19139-WW Facilities & Infrastructure
Authority Level 2:	20507-SE Outfall Assessment & Rehab
FSP ID	10033820
Project Title:	Southeast Outfall Condition Assessment and Rehab
Total Budget:	\$ 33,775,280
Project Start:	7/1/2019
Project Finish:	4/5/2030
Current Active Phase:	Pre-Construction
Organization:	Non-SSIP WWE
Project Manager:	Roland Sun
Facility Category:	Wastewater Facilities & Infrastructure
Type:	Capital

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 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.

Justification: The Southeast outfall system was last inspected in 2011 and it was found to generally exhibit a fair condition. The 2012 Condition Assessment report recommended re-inspection and condition assessment of the outfall system every 10 years. The report also called for as need rehab work to be performed.

Operating Impact: The project will provide continued reliable service of the SEO and enhance the ability of SEP operations to maintain full compliance with State and Federal regulatory requirements.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 1,122,618	\$ 0	\$ 890,350	\$ 232,268	\$ 0	\$ 0	\$ 0
DS	\$ 5,900,000	\$ 0	\$ 922,931	\$ 3,621,471	\$ 1,355,598	\$ 0	\$ 0
CM	\$ 6,483,668	\$ 0	\$ 107,388	\$ 107,819	\$ 260,666	\$ 1,064,171	\$ 7,943,624
CN	\$ 17,405,000	\$ 0	\$ 0	\$ 0	\$ 964,222	\$ 3,951,730	\$ 12,485,048
Total	\$ 30,911,286	\$ 0	\$ 1,920,669	\$ 3,961,558	\$ 2,590,486	\$ 5,015,901	\$ 17,432,672

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

Wastewater Enterprise

Fiscal Years 2023-2032

Ten Year CIP

Programmatic Projects

January 14, 2022

SFPUC Capital Project Plan
Wastewater Enterprise
Programmatic



Authority Level 1:	19459-UW Treasure Island - Marina
Authority Level 2:	17679-UW Treasure Island - Wastewater
FSP ID	(N/A)
Project Title:	Treasure Island Facilities Maintenance
Total Budget:	\$ 15,190,000
Project Start:	
Project Finish:	
Current Active Phase:	Construction
Organization:	Programmatic
Project Manager:	Lori Regier
Facility Category:	Program - Project
Type:	Programmatic
Description:	Since 1997, the SFPUC Wastewater Enterprise has operated and maintained the stormwater and wastewater collection systems at Treasure Island and Yerba Buena Island (TI/YBI) and 2-million gallon per day (MGD) wastewater treatment plant located at TI, on behalf of the Treasure Island Development Authority (TIDA). The TI wastewater treatment plant is regulated under the Clean Water Act through a National Pollutant Discharge Elimination System (NPDES) permit issued to the U.S. Navy by the California Regional Water Quality Control Board (CRWQCB). The Wastewater Enterprise operates and maintains the collection systems at TI/YBI which consists of approximately 52,600 feet of sewer pipe, 29 wastewater pump stations, and the 2-MGD treatment plant that was constructed in 1961 and upgraded to provide secondary treatment in 1969. The Wastewater Enterprise also operates and maintains six storm pump stations at TI and monitors the 24 outfalls at TI and 26 outfalls at YBI. The storm water system is regulated under a General Industrial Storm Water NPDES permit issued to the Navy by the CRWQCB.
Justification:	None
Operating Impact:	None

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 15,190,000	\$ 1,519,000	\$ 1,519,000	\$ 1,519,000	\$ 1,519,000	\$ 1,519,000	\$ 7,595,000
Total	\$ 15,190,000	\$ 1,519,000	\$ 1,519,000	\$ 1,519,000	\$ 1,519,000	\$ 1,519,000	\$ 7,595,000

SFPUC Capital Project Plan
Wastewater Enterprise
Programmatic



Authority Level 1:	19466-WW Low Impact Development
Authority Level 2:	17704-WW Low Impact Development
FSP ID	(N/A)
Project Title:	Low Impact Development
Total Budget:	\$ 6,810,000
Project Start:	
Project Finish:	
Current Active Phase:	Construction
Organization:	Programmatic
Project Manager:	TBD
Facility Category:	Program - Project
Type:	Programmatic
Description:	The Urban Watershed Management Program conducted Watershed Planning activities that included two Eastside Basin design workshops and began analysis of the projects proposed in the workshops. Other activities included participating in the SF Better Streets (BSP) Master Plan efforts and conducting a citywide analysis of the potential for rain harvesting. Future efforts include continued participation in the BSP and design workshops for the Westside Drainage Basins. Projects include: - Low Impact Design (LID) Demonstration along Cedar Chavez - Project Review and Technical Assistance Program will continue to review projects to comply with the new SF Green Building Ordinance and the National Pollution Discharge Elimination System permits (NPDES). - Outreach and Education efforts to promote onsite stormwater management; initiated a small community grants partnership with the City Administrator's Community Challenge Grants to encourage onsite stormwater management and rainwater harvesting. - Policy, Planning and Research program to develop standard designs for streets and drainage, investigation of needs related to updating the Subdivision Guidelines and finalizing a handbook for analyzing the triple bottom line for stormwater project.
Justification:	N/A
Operating Impact:	N/A

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 6,810,000	\$ 681,000	\$ 681,000	\$ 681,000	\$ 681,000	\$ 681,000	\$ 3,405,000
Total	\$ 6,810,000	\$ 681,000	\$ 681,000	\$ 681,000	\$ 681,000	\$ 681,000	\$ 3,405,000

SFPUC Capital Project Plan
Wastewater Enterprise
Programmatic



Authority Level 1:	17726-GE Youth Employment & Environm
Authority Level 2:	17726-GE Youth Employment & Environm
FSP ID	(N/A)
Project Title:	Youth Employment Project
Total Budget:	\$ 6,970,000
Project Start:	
Project Finish:	
Current Active Phase:	Construction
Organization:	Programmatic
Project Manager:	TBD
Facility Category:	Program - Project
Type:	Programmatic
Description:	The Earth Stewards is a collaborative effort by the SFPUC, the San Francisco Sheriff's Department and the Garden Project to provide at-risk, young San Franciscans with horticultural and landscaping work experience on SFPUC properties. The Garden Project is a non-profit corporation founded in 1992 for the purpose of reducing recidivism among ex-offenders and inmates of the San Francisco County Jail. Earth Stewards, a program funded by the SFPUC, was created in response to a 2004-2005 Board of Supervisors add-back appropriation in the amount of \$2.5 million for youth employment.
Justification:	The purpose of Earth Stewards is to provide at-risk, young San Franciscans with horticultural and landscaping work experience, with the goal of reducing recidivism among ex-offenders and inmates of the San Francisco County Jail.
Operating Impact:	N/A

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 6,970,000	\$ 697,000	\$ 697,000	\$ 697,000	\$ 697,000	\$ 697,000	\$ 3,485,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 6,970,000	\$ 697,000	\$ 697,000	\$ 697,000	\$ 697,000	\$ 697,000	\$ 3,485,000

SFPUC Capital Project Plan
Wastewater Enterprise
Programmatic



Authority Level 1:	19460-UW 525 Golden Gate - O & M
Authority Level 2:	17682-UW 525 Golden Gate - O & M
FSP ID	(N/A)
Project Title:	525 Golden Gate - Operations & Maintenance
Total Budget:	\$ 13,974,000
Project Start:	
Project Finish:	
Current Active Phase:	Construction
Organization:	Programmatic
Project Manager:	[None]
Facility Category:	Program - Project
Type:	Programmatic
Description:	The headquarters for the San Francisco Public Utilities Commission, 525 Golden Gate is a 13-story building plus basement for total building area of 277,500 square feet, which houses over 900 PUC employees. It is a LEED Platinum certified building that includes solar and wind renewable energy sources, an on-site wastewater system called the Living Machines, and Smart Building features with fully integrated systems.
Justification:	The Maintenance Project is required for costs related to the annual operating and maintenance costs of the building as shown below. The cost to operate and maintain the building on an annual basis is estimated to have an average annual increase of 3.0%. These costs include building engineering, property management, janitorial and maintenance service contracts.
Operating Impact:	N/A

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 15,324,000	\$ 1,332,000	\$ 1,372,000	\$ 1,372,000	\$ 1,372,000	\$ 1,372,000	\$ 7,054,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 15,324,000	\$ 1,332,000	\$ 1,372,000	\$ 1,372,000	\$ 1,372,000	\$ 1,372,000	\$ 7,054,000

SFPUC Capital Project Plan
Wastewater Enterprise
Programmatic



Authority Level 1:	19461-UW 525 Golden Gate - Lease Pay
Authority Level 2:	17683-UW 525 Golden Gate - Lease Pay
FSP ID	(N/A)
Project Title:	525 Golden Gate - Lease Payments
Total Budget:	\$ 23,596,145
Project Start:	
Project Finish:	
Current Active Phase:	Construction
Organization:	Programmatic
Project Manager:	Charles Perl
Facility Category:	Program - Project
Type:	Programmatic
Description:	The headquarters for the San Francisco Public Utilities Commission, 525 Golden Gate is a 13-story building plus basement for total building area of 277,500 square feet, which houses over 900 PUC employees. It is a LEED Platinum certified building that includes solar and wind renewable energy sources, an on-site wastewater system called the Living Machine, and Smart Building features with fully integrated systems.
Justification:	In October of 2009, the City and County of San Francisco issued its \$38,120 Certificates of Participation, Series 2009C, (525 Golden Gate Avenue) San Francisco Public Utilities Commission Office Project) (Tax-Exempt) and its \$129,550 Certificates of Participation, Series 2009D (525 Golden Gate Avenue) San Francisco Public Utilities Commission Office Project) (Federally Taxable). Build America Bonds Direct Payment) to provide financing for the planning and construction of a new office building for the SFPUC. Under the terms of a Memorandum of Understanding between the City and the SFPUC dated October 1, 2009, the SFPUC will make annual Base Rental Payments to the City for the building equal to annual debt service on the Certificates.
Operating Impact:	N/A

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 25,880,387	\$ 2,426,917	\$ 2,416,551	\$ 2,416,551	\$ 2,396,330	\$ 2,375,655	\$ 11,564,141
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 25,880,387	\$ 2,426,917	\$ 2,416,551	\$ 2,416,551	\$ 2,396,330	\$ 2,375,655	\$ 11,564,141



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


Hetch Hetchy Enterprise

Fiscal Years 2023-2032

Ten Year CIP

Capital Projects
January 14, 2022

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15363-UH Hetchy Water - Water Only
Authority Level 2:	15363-UH Hetchy Water - Water Only
FSP ID	10034364
Project Title:	HHW - R&R SJPL Life Extension Program
Total Budget:	\$ 68,729,538
Project Start:	7/1/2019
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Blake Rothflus
Facility Category:	Water Infrastructure
Type:	Capital

Description:
 SCOPE: Deliver capital improvement projects to sustain the reliability of the nearly 50-mile long San Joaquin Pipeline (SJPL) network conveying water from HHWP's Oakdale Portal through the pipelines to the Tesla Valvehouse.

PROJECT DESCRIPTION: The HHWP has developed a program to extend the life of these assets prior to wholesale replacement. The program will include inspections, condition assessments, design, environmental evaluations, and construction when appropriate. It is expected that the program will be able to delay the need for planned large-scale replacement for 20 to 60 years, depending on type of pipe, conditions, valves and operators, instrumentation, & control obsolescence, cyber security evolution, environmental factors and initial installation practices. HHWP's SJPL R&R Program will extend the life of the asset through installation, renewal/replacement, which will constitute betterments to the asset. Typical activities include: inspection, condition assessment, design, construction, lining & coating replacement, anti-corrosion systems, emergency response, physical & cyber security, regulatory compliance, and other life extension activities.

ASSETS: Represented asset families include: Oakdale Portal, valvehouses, & stand-pipes; San Joaquin Pipelines #1, #2, #3, & #4; Inletting stations; Emery Crossovers; Roselle Crossovers; Pelican Crossovers; San Joaquin Valvehouse; Tesla Valvehouse; corrosion and condition monitoring systems; regulating & control valves; generators, and power; instrumentation & controls, and SCADA.

These linear water conveyance assets are essential for meeting the Regional Delivery Reliability and Water Supply Levels of Service.


The assets were first placed into service in 1931 and vary in age from 50- to over 90-years old. Recent and ongoing pipeline condition assessments, in conjunction with the Asset Risk-Based Modeling Tool, indicate decreasing reliability and need for continued renewal & replacement of the pipelines.

Limited water conveyance redundancy demands sustainable asset reliability to meet LOS objectives. There are no water conveyance alternatives to respond to curtailments. Three 50-mile long pipelines cross the San Joaquin Valley and a fourth pipeline crosses 17 miles of the Valley. Multiple pipeline cross-over manifolds allow water to be rerouted around pipe outages or curtailments. However, this redundancy places increased reliance on instrumentation & controls, remote control of valves, and emergency repairs.

Operating Impact:
 HHWP's Risk Based Decision Model assigned these assets a HIGH operational risk for current conditions. Increased water delivery interruptions caused by major leaks and pipeline failures. Reduced operational flexibility to respond quickly to localized water conveyance and water quality problems. Increased emergency repair costs and personnel overtime costs.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 4,060,000	\$ 70,000	\$ 140,000	\$ 490,000	\$ 490,000	\$ 490,000	\$ 1,890,000
ER	\$ 4,640,000	\$ 80,000	\$ 160,000	\$ 560,000	\$ 560,000	\$ 560,000	\$ 2,160,000
DS	\$ 5,800,000	\$ 100,000	\$ 200,000	\$ 700,000	\$ 700,000	\$ 700,000	\$ 2,700,000
CM	\$ 5,600,000	\$ 100,000	\$ 200,000	\$ 700,000	\$ 700,000	\$ 700,000	\$ 2,700,000
CN	\$ 37,700,000	\$ 650,000	\$ 1,300,000	\$ 4,550,000	\$ 4,550,000	\$ 4,550,000	\$ 17,550,000
Total	\$ 88,000,000	\$ 1,000,000	\$ 2,000,000	\$ 7,000,000	\$ 7,000,000	\$ 7,000,000	\$ 27,000,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15363-UH Hetchy Water - Water Only
Authority Level 2:	15363-UH Hetchy Water - Water Only
FSP ID	10035574
Project Title:	HHW - SJPL Tesla Valves Replacement
Total Budget:	\$ 3,740,001
Project Start:	5/1/2019
Project Finish:	12/30/2022
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Water Infrastructure
Type:	Capital

Description:
 This original project was to replace four large diameter butterfly valves, TUV 101 to 401, omissode Tesla Valve Vault so that the San Joaquin Pipelines (SJPL) could be safely isolated individually without the entire system shutdown. This would also improve safety to enter the pipelines for maintenance and inspection purposes. After the planning phase of the SJPL Valve and Safe Entry Improvement project (Project 10035575), it was recommended that the scope of the SJPL Tesla Valve Replacement be reduced to focus on completing the replacement of TUV101 only. The remainder of the work will be combined with the work of SJPL Valve and Safe Entry Improvement.

Justification:
 The proposed baseline has been reduced by \$3,64m, from \$7,38m to \$3,74m, to reflect this reduction in scope. The SJPL asset is required for LOS Regional Delivery Reliability and Water Supply. This project aims to meet the SFPUC guidelines on confined space safe entry. The project was approved in an earlier CIP and no funding is being requested in this plan.

Operating Impact:
 Inability to safely access the SJPL for inspection, maintenance, rehabilitation, and/or replacement.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hech Hetchy Enterprise
Hech Hetchy Water



Authority Level 1:	15363-UH Hechty Water - Water Only
Authority Level 2:	15363-UH Hechty Water - Water Only
FSP ID	10035575
Project Title:	HHW - SJPL Valve and Safe Entry Improvement
Total Budget:	\$ 142,661,975
Project Start:	7/1/2019
Project Finish:	3/13/2028
Current Active Phase:	Pre-Construction
Organization:	Hech Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Water Infrastructure
Type:	Capital
Description:	The SJPL Entry Assessment and Valve Improvement Project involves the three parallel transmission pipelines that stretch approximately 48-miles across the San Joaquin Valley from Oakdale Portal on the east to Tesla Portal near the City of Tracy on the west, with a partial fourth pipeline consisting of a 6.4-mile Eastern Segment and an 11-mile Western Segment. The four pipelines were built between 1932 and 2012, respectively, and range from 56- to 79.5-inches in diameter. As part of the WSIP, valve vaults were constructed along the SJPL System at various locations to increase operational flexibility and the overall reliability of the SJPL System. The valves are not sufficiently rated for hydrostatic or transient/surge pressures resulting in an unsafe condition for personnel to enter the pipelines unless there is a complete shutdown of the Hech Hetchy Regional Water System (HHRWS). Given the age and condition of the SJPLs, work must be able to occur while the HHRWS is in service.
Justification:	The objective of this project is to allow safe entry into any and all sections of the SJPLs for inspection and maintenance while the remainder of the system stays in operation. This project will allow for isolation of the pipelines to prevent a water equipment hazard during a Permit-Required Confined Space (PRCS) entry of a pipeline. In addition, replacement of the butterfly valves TUV 201 through 401, originally planned under SJPL Tesla Valves Replacement will be completed under this project. This project aims to meet the SFPUC, OSHA, and industry safety guidelines for pipeline entry. This project was approved in an earlier CIP. The increase in proposed baseline of \$47.378M from \$95.284M to \$142.662M is due to the additional scope of installing TUVs 201 through 401, a change in valve design, and increased costs due to current market conditions.
Operating Impact:	Water LOS Goal(s) Supported: Regional Delivery reliability and Water Supply. Inability to safely access the SJPL for inspection, maintenance, rehabilitation, and/or replacement.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 430,291	\$ 430,291	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 2,119,274	\$ 2,119,274	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 16,221,503	\$ 4,561,150	\$ 4,514,862	\$ 2,593,092	\$ 2,593,092	\$ 1,959,307	\$ 0
CN	\$ 98,870,771	\$ 37,089,285	\$ 36,485,138	\$ 25,296,348	\$ 0	\$ 0	\$ 0
Total	\$ 117,641,839	\$ 44,200,000	\$ 41,000,000	\$ 27,889,440	\$ 2,593,092	\$ 1,959,307	\$ 0

SFPUC Capital Project Plan
Hech Hetchy Enterprise
Hech Hetchy Water



Authority Level 1:	15363-UH Hechty Water - Water Only
Authority Level 2:	15363-UH Hechty Water - Water Only
FSP ID	10036415
Project Title:	HHW - Priest-Moccasin Water Transmission Line AAR
Total Budget:	\$ 674,988
Project Start:	7/1/2020
Project Finish:	6/30/2021
Current Active Phase:	Pre-Construction
Organization:	Hech Hetchy Water
Project Manager:	Tom Walker
Facility Category:	Water Infrastructure
Type:	Capital
Description:	SCOPE: Delivered an Alternatives Analysis Report (AAR) evaluating the benefits and costs of a water transmission pipeline & energy dissipator between West Portal Valvehouse and Moccasin Reservoir. PROJECT DESCRIPTION: Hech Hetchy water deliveries must pass through Moccasin Powerhouse (generator or generator bypass) on their way to San Francisco. Water normally passes through the two hydroelectric generators before entering Moccasin Reservoir. However, during emergencies when the hydroelectric generators are off-line, the water is diverted through two generator bypasses (one bypass each unit) that reduce the water pressure. The existing bypass systems are not designed for extended operational use. This project develops alternatives to convey 300 MGD and dissipate the flowing water's energy when Moccasin Powerhouse is unavailable for long periods.
ASSETS:	none
Justification:	NOTE: No additional funds are being requested for this project. This future linear water conveyance asset would be essential for meeting the Regional Delivery Reliability and Water Supply Levels of Service. The two hydroelectric generators, Generator Step Up transformers and ancillary equipment at Moccasin Powerhouse have exceeded their useful life. The Priest/Moccasin Water Transmission Line would provide needed redundancy to ensure reliability to SFPUC water customers. This project was approved in an earlier CIP and no funding is being requested in this plan. Increased water delivery reliability by de-coupling powerhouse and water conveyance.
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
 Hetch Hetchy Enterprise
 Hetch Hetchy Water



Authority Level 1:	15363-UH Hetchy Water - Water Only
Authority Level 2:	15363-UH Hetchy Water - Water Only
FSP ID	10033156
Project Title:	HHW- Moccasin Reservoir Perimeter Security Fence
Total Budget:	\$ 3,436,867
Project Start:	2/17/2020
Project Finish:	8/20/2021
Current Active Phase:	Post-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Water Infrastructure
Type:	Capital
Description:	HHWP installed an approximately 5,000 feet long perimeter security fence system around Moccasin Reservoir to discourage trespassers. Moccasin Reservoir covers approximately 32 acres. Construction for this project has been completed and the project is currently in closeout.
Justification:	Moccasin Reservoir is easily accessible from Highway 49 and the town of Moccasin. Improved security fencing was installed discourage trespassers. SFPUC was successful in meeting its commitment to the State Water Resources Control Board by completing the fence installation by October 2020. This project was approved in an earlier CIP and no funding is being requested in this plan.
Operating Impact:	In an effort to protect water quality, this project will discourage trespassers from accessing Moccasin Reservoir.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
 Hetch Hetchy Enterprise
 Hetch Hetchy Water



Authority Level 1:	15363-UH Hetchy Water - Water Only
Authority Level 2:	15363-UH Hetchy Water - Water Only
FSP ID	10014072
Project Title:	HHW- Water Project Development - CUH100-PD
Total Budget:	\$ 9,472,203
Project Start:	3/26/2012
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Water Infrastructure
Type:	Capital
Description:	The Project Development (PD) Account captures Program level expenditures. There are four types of charges that will be allocated to the PD Account: 1) Task orders for overall program management and project prioritization tasks, where the costs should be distributed over all CIP Projects. 2) Infrastructure and Hetchy staff performing program level tasks including: capital plan development, budget management (including fund management, and cost reallocations); Unifier and Quarterly Report generation tasks, where the costs should be distributed over all CIP Projects. 3) Portal support for the existing SharePoint Portal (includes document management and project dashboard reporting) 4) Work Outreach program
Justification:	The Project Development Account (PD Accounts) funds the capital improvement administrative staff, the project management staff and the professional services that could not be defined to one project detail as the charges would span across the overall program.
Operating Impact:	Water LOS Goal(s) Supported: To Be Determined as projects are developed Programmatic support is an integral part of the capital program.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 6,822,200	\$ 523,000	\$ 541,000	\$ 560,000	\$ 560,000	\$ 600,000	\$ 3,298,200
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 6,822,200	\$ 523,000	\$ 541,000	\$ 560,000	\$ 560,000	\$ 600,000	\$ 3,298,200

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15363-UH Hetchy Water - Water Only
Authority Level 2:	15363-UH Hetchy Water - Water Only
FSP ID	10014114
Project Title:	HHW - Mt. Tunnel Imp. Project (Tunnel)
Total Budget:	\$ 119,438,601
Project Start:	10/3/2011
Project Finish:	6/3/2027
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Randy Anderson
Facility Category:	Joint Infrastructure
Type:	Capital

Description:
Constructed between 1917-25, Mountain Tunnel (MT) is a critical, non-redundant link in the Hetch Hetchy water system, conveying SFPUC water supply from Kirkwood Powerhouse to Priest Reservoir. Due to the tunnel's 90 years of operation, deferred maintenance, as well as the construction deficiencies in the early 1900s, sections of the tunnel have deteriorated, some more extensively than others. MT improvements to enhance SFPUC's ability to provide reliable, high-quality water to its customers, will be carried out through three projects: 1. MT Adits & Access Improvement 2. MT Inspection and Repair 3. MT Tunnel Improvements. Mountain Tunnel Adits & Access Improvement Project will enlarge Adits 5/6 and 8/9 to accommodate quick entry of construction crews and equipment into the tunnel; and will improve access roads to the said adits. Mountain Tunnel Inspection & Repairs Project provides for a tunnel inspection in 2017 to update the Condition Assessment conducted in 2008, as well as short-term repairs in 2017 and 2018 to reduce the risk of failures in the concrete lining prior to the long-term project being implemented. Mountain Tunnel Improvements (Rehabilitation) Project was selected for the design and construction of the preferred engineering alternative that will keep this vital component of the Hetch Hetchy Water and Power System in reliable service for years to come. Budget and schedule is based on the Mountain Tunnel Improvement which has an anticipated construction phase between from 2021 to 2027 (MRN 238-241, 244, 245) ** This is the Water portion of the Mountain Tunnel project.

Justification:
A catastrophic failure, is possible, with continued tunnel lining degradation. The likely type of anticipated failures are "local collapses", which would not impact power generation but would create water quality events in terms of turbidity in the water supply. The likelihood of localized collapses is moderate to high. Depending on the configuration of the system, this type of event could interrupt the delivery of the Tuolumne diversion to the Regional Water System. Technology Policy: The project provides for reliable, high quality service, but is not specifically technology-related.

Operating Impact:
Water LOS Goal(s) Supported: Regional Delivery Reliability
Depending on the configuration of the system, a "local collapse" could interrupt the delivery of the Tuolumne diversion to Water Supply and Treatment. Continual degradation of the asset could lead to a catastrophic failure.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 22,574,464	\$ 0	\$ 3,527,996	\$ 6,757,725	\$ 5,944,449	\$ 6,344,294	\$ 0
CM	\$ 32,506,137	\$ 0	\$ 6,911,335	\$ 25,594,802	\$ 0	\$ 0	\$ 0
CN	\$ 55,080,601	\$ 0	\$ 10,439,331	\$ 32,352,927	\$ 5,944,449	\$ 6,344,294	\$ 0
Total							

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15363-UH Hetchy Water - Water Only
Authority Level 2:	15363-UH Hetchy Water - Water Only
FSP ID	10014068
Project Title:	Lower Cherry Aqueduct
Total Budget:	\$ 12,466,245
Project Start:	2/1/2014
Project Finish:	4/30/2021
Current Active Phase:	Post-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Tim Parkan
Facility Category:	Water Infrastructure
Type:	Capital

Description:
The Lower Cherry Aqueduct (LCA) delivers water from Cherry Creek to supplement the primary Hetch Hetchy reservoir supply during a drought. Due to drought conditions as described in the Declaration of Emergency issued on February 21, 2014, there is a need for this reliable backup water supply to be re-established in the LCA. However, due to damage during the Rim Fire Emergency and age, the LCA is in need of restoration before it can become a reliable asset. This project consisted of improvements such as emergency debris removal and tunnel cleaning, temporary structures installation, monitoring and instrumentation, and forebay and diversion dam repairs. This project is in closeout.

Justification:
This project was approved in an earlier CIP and no funding is being requested in this plan.

Operating Impact:
N/A

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total							

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15363-UH Hetchy Water - Water Only
Authority Level 2:	15363-UH Hetchy Water - Water Only
FSP ID	(N/A)
Project Title:	HHW - R&R Water Conveyance Life Extension (Water)
Total Budget:	\$ 2,100,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	
Organization:	Hetch Hetchy Water
Project Manager:	Blake Rohlfuss
Facility Category:	Water Infrastructure
Type:	Capital

Description: SCOPE: Deliver capital improvement projects to sustain the reliability of the SFPUC's water conveyance assets from the Moccasin powerhouse tailrace reservoir to Alameda East Portal, excluding the San Joaquin Pipeline.

PROJECT DESCRIPTION: The HHWP has developed a program to extend the life of these assets prior to wholesale replacement. The program will include inspections, condition assessments, design, environmental evaluations, and construction when appropriate to sustain the reliability of the water conveyance assets with capital improvements. Water is conveyed from upcountry reservoirs to the hydroelectric powerhouses via a network of tunnels, pipelines, penstocks and canals, through valves, gates, portals, penstocks and reservoir bypasses.

NOTE: This project addresses reliability improvements for water conveyance from Moccasin Tailrace to Oakdale Portal, and Tesla Valvehouse to Alameda East Portal. The R&R Water Conveyance Life Extension (Power & Joint) and the SJP Life Extension Project address reliability improvements for other segments of the Regional Water System.

ASSETS: Facilities classified as Water conveyance assets include the Moccasin Reservoir Bypass; Moccasin Creek Bypass; Moccasin Reservoir gates and towers; Foothill Tunnel and adits; Red Mountain Bar Siphon; Rock River Shaft & lime dosing facility; Coast Range Tunnel; Mocco Shaft; Thomas Shaft; overflow shafts; surge shafts & abandoned construction shafts; sand traps; valves, gates & actuators; power systems; instrumentation & controls; SCADA.

Justification: These linear water conveyance assets are essential for meeting the Regional Delivery Reliability Levels of Service. Redundant water conveyance capacity does not exist.

Operating Impact: Most of the SFPUC's water conveyance system was commissioned in 1923 and are operating well beyond the original service life. Proactive evaluation of water conveyance assets and planned capital investments reduces the water delivery curtailments and interruptions in water delivery.

HHWP's Risk Based Decision Model assigned these assets an unmitigated HIGH risk.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 147,000	\$ 0	\$ 0	\$ 0	\$ 70,000	\$ 21,000	\$ 56,000
ER	\$ 163,000	\$ 0	\$ 0	\$ 0	\$ 80,000	\$ 24,000	\$ 64,000
DS	\$ 210,000	\$ 0	\$ 0	\$ 0	\$ 100,000	\$ 90,000	\$ 80,000
CM	\$ 210,000	\$ 0	\$ 0	\$ 0	\$ 100,000	\$ 90,000	\$ 80,000
CN	\$ 1,365,000	\$ 0	\$ 0	\$ 0	\$ 650,000	\$ 195,000	\$ 520,000
Total	\$ 2,100,000	\$ 0	\$ 0	\$ 0	\$ 1,000,000	\$ 300,000	\$ 800,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15363-UH Hetchy Water - Water Only
Authority Level 2:	15363-UH Hetchy Water - Water Only
FSP ID	(N/A)
Project Title:	HHW - R&R Dam/Reservoir Cond Assmt & Rehab (Water)
Total Budget:	\$ 750,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	
Organization:	Hetch Hetchy Water
Project Manager:	Blake Rohlfuss
Facility Category:	Water Infrastructure
Type:	Capital

Description: SCOPE: Deliver capital improvement projects to sustain the reliability and safety of the Lower Moccasin Dam. PROJECT DESCRIPTION: The HHWP has developed a program to extend the life of this asset prior to replacement. The program will include inspections, condition assessments, design, environmental evaluations, and construction when appropriate.

ASSETS: Represented asset families include: Lower Moccasin Dam; Upstream Diversion Dam, and reservoir; spillways, spillway gates & controls, energy dissipating components; spillway channels to 100 yards downstream; trash racks & debris removal systems; water outlet conduits, gates, valves & control systems; dam foundations & abutments; drainage system galleries, pumps, drain piping; power, lighting, mechanical, & HVAC systems; security & emergency communication systems; access roads & bridges; instrumentation and monitoring systems; SCADA.

Justification: These assets are essential for meeting the Regional Delivery Reliability Levels of Service, Water Supply Level of Service, and HHWP Operational Objectives for Power Generation.

The dam construction was completed in 1930 and serves as a regulating afterbay for the Moccasin Powerhouse and an emergency water supply for Moccasin Camp. The California Division of Safety of Dams accepted the SFPUC's Dam Safety Program requirement for periodic condition assessments. Given the dam's age, major repairs, security enhancements, emergency communication system upgrades are anticipated.

HHWP's Risk Based Decision Model assigned these assets a HIGH operational risk for current conditions.

Operating Impact: Unresolved dam safety deficiencies could influence the California Division of Safety of Dams to issue dam operating restrictions limiting the operating water surface elevation range, reducing the maximum water surface elevation, or increasing dam safety surveillance requirements. Water surface elevation restrictions would impair the regulating benefits of the reservoir.

Reduced reservoir capacity would limit Operations ability to divert water from the Hetch Hetchy Aqueduct due to out-of-specification water quality.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 52,500	\$ 0	\$ 0	\$ 0	\$ 52,500	\$ 0	\$ 0
ER	\$ 60,000	\$ 0	\$ 0	\$ 0	\$ 60,000	\$ 0	\$ 0
DS	\$ 75,000	\$ 0	\$ 0	\$ 0	\$ 75,000	\$ 0	\$ 0
CM	\$ 75,000	\$ 0	\$ 0	\$ 0	\$ 75,000	\$ 0	\$ 0
CN	\$ 487,500	\$ 0	\$ 0	\$ 0	\$ 487,500	\$ 0	\$ 0
Total	\$ 750,000	\$ 0	\$ 0	\$ 0	\$ 750,000	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infrass
Authority Level 2:	15364-UH Hetchy Water - Power Infrass
FSP ID	(N/A)
Project Title:	HHW - Moccasin Switchyard Rehabilitation
Total Budget:	\$ 9,739,000
Project Start:	10/3/2022
Project Finish:	9/28/2028
Current Active Phase:	Hetch Hetchy Water
Organization:	Tim Parkan
Project Manager:	Power Infrastructure
Facility Category:	Capital
Type:	
Description:	The project will rehabilitate Moccasin Switchyard. The project will replace the 115kV disconnect switches, replace the 115kV bus configuration, replace the 230kV disconnect switches, change the 230kV bus configuration, replace the 115kV circuit breakers, add surge arresters, perform a fault study, perform a grounding study, improve switchyard grading, and replace fencing.
Justification:	The project is required to meet HHWP's Operational Objectives for Power, including Power System Reliability. The switchyard is required for the operation of Moccasin Powerhouse which is part of the conveyance system for water supply to SFPUC customers.
Operating Impact:	Water LOS Goal(s) Supported: Regional Delivery Reliability Potential loss of ability to deliver reliable water to SFPUC customers and transmit power produced at Moccasin Powerhouse to the grid. The Moccasin Switchyard is also required to provide power to the Moccasin Compound via PG&E when the Moccasin Powerhouse is out-of-service.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 800,480	\$ 734,575	\$ 65,905	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 211,716	\$ 0	\$ 167,673	\$ 35,066	\$ 8,977	\$ 0	\$ 0
DS	\$ 1,310,880	\$ 0	\$ 810,139	\$ 282,445	\$ 218,306	\$ 0	\$ 0
CM	\$ 1,424,288	\$ 0	\$ 0	\$ 0	\$ 405,113	\$ 523,454	\$ 495,731
CN	\$ 5,991,616	\$ 0	\$ 0	\$ 0	\$ 5,991,616	\$ 0	\$ 0
Total	\$ 9,739,000	\$ 734,575	\$ 1,043,717	\$ 317,511	\$ 6,624,012	\$ 523,454	\$ 495,731


SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infrass
Authority Level 2:	15364-UH Hetchy Water - Power Infrass
FSP ID	(N/A)
Project Title:	HHW - R&R Water Conveyance Life Extension (Power)
Total Budget:	\$ 2,400,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Hetch Hetchy Water
Organization:	Blake Rothfuss
Project Manager:	Power Infrastructure
Facility Category:	Capital
Type:	
Description:	SCOPE: Deliver capital improvement projects to sustain the reliability of the SFPUC's water conveyance assets from the reservoir intake structure/tower or dam's isolation valve to the powerhouse turbine isolation valves. PROJECT DESCRIPTION: The HHWP has developed a program to extend the life of these assets prior to wholesale replacement. The program will include inspections, condition assessments, design, environmental evaluations, and construction when appropriate to sustain the reliability of the water conveyance assets with capital improvements. Water is conveyed from upcountry reservoirs to the hydroelectric powerhouses via a network of tunnels, pipelines, penstocks and canals, through valves, gates, portals, penstocks and reservoir bypasses. NOTE: This project is addresses reliability improvements for all Upcountry water conveyance to Holm Powerhouse. The R&R Water Conveyance Life Extension (Water & Joint) and the SJPL Life Extension Project addresses reliability improvements for other segments of the Regional Water System. ASSETS: Facilities classified as Water conveyance assets include the Kirkwood Penstock; Holm Penstock, Cherry Power Tunnel, Cherry Pump Station; Priest Gate Tower; Priest Canal; Moccasin Power Tunnel and surge tower; West Portal; Moccasin Penstock; surge tanks; sand traps; valves, valvehouses, gates & actuators; power systems; instrumentation & controls; SCADA. These linear water conveyance assets are essential for meeting the Regional Delivery Reliability Levels of Service. Redundant water conveyance capacity does not exist.
Justification:	Most of the SFPUC's water conveyance system was commissioned in 1923 and are operating well beyond the original service life. Proactive evaluation of water conveyance assets and planned capital investments reduces the water delivery curtailments and interruptions in water delivery. HHWP's Risk Based Decision Model assigned these assets a HIGH operational risk for current conditions. Loss or reduced capacity of any one of these facilities would impair the ability of the SFPUC to generate hydroelectric power.
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 168,000	\$ 70,000	\$ 0	\$ 17,500	\$ 0	\$ 0	\$ 80,500
ER	\$ 192,000	\$ 80,000	\$ 0	\$ 20,000	\$ 0	\$ 0	\$ 92,000
DS	\$ 240,000	\$ 100,000	\$ 0	\$ 25,000	\$ 0	\$ 0	\$ 115,000
CM	\$ 240,000	\$ 100,000	\$ 0	\$ 25,000	\$ 0	\$ 0	\$ 115,000
CN	\$ 1,560,000	\$ 650,000	\$ 0	\$ 162,500	\$ 0	\$ 0	\$ 747,500
Total	\$ 2,400,000	\$ 1,000,000	\$ 0	\$ 250,000	\$ 0	\$ 0	\$ 1,150,000

SFPUC Capital Project Plan
 Hetch Hetchy Enterprise
 Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infrast
Authority Level 2:	15364-UH Hetchy Water - Power Infrast
FSP ID	10037352
Project Title:	HHW - R&R Priest Cond Asmt & Monitoring Project
Total Budget:	\$ 2,000,000
Project Start:	1/1/2022
Project Finish:	6/30/2023
Current Active Phase:	Not Started
Organization:	Hetch Hetchy Water
Project Manager:	Blake Rothflus
Facility Category:	Power Infrastructure
Type:	Capital

Description:
 SCOPE: Deliver capital improvement projects to sustain the reliability and safety of the Priest Dam.
PROJECT DESCRIPTION: It is proposed to conduct a condition assessment and perform stability analysis of the dam using current standards and analysis techniques. New instrumentation will be installed to monitor and document the movement of the dam under different storage conditions. The results will be used to determine whether a future capital improvement project is required.
ASSETS: Represented asset families include: Priest Dam and reservoir; spillway; energy dissipating components; spillway channels to 100 yards downstream; trash racks & debris removal systems; water outlet conduits, gates, valves & control systems; dam foundations & abutments; drainage system galleries, pumps, drain piping; power, lighting, mechanical, & HVAC systems; security & emergency communication systems; access roads & bridges; instrumentation & monitoring systems; SCADA.
PLEASE NOTE: This project is ongoing, but does not currently forecast budgetary needs beyond what has already been allocated. Once the condition assessment is complete, it can be determined whether future funding is required.

Justification:
 These assets are essential for meeting the Regional Delivery Reliability Levels of Service, Water Supply Level of Service, and HHWP Operational Objectives for Power Generation.
 Priest Dam is an earth and rock filled dam located just east of Moccasin located on Rattlesnake Creek in Tuolumne County. The dam was built between 1921 and 1923, and is approximately 168 feet tall and 1,000 feet wide with a crest width of 20 ft. Priest Dam has along history of issues related to settlement and deflection.
 Priest Reservoir is a vital component of the HHWP water delivery and power generation systems. The SFPUC is legally and ethically responsible to develop and maintain a mature dam safety management program. This project is to meet the objective. This project was approved in an earlier CIP, and no additional funding is being requested in this plan.
 HHWP's Risk Based Decision Model assigned these assets a HIGH operational risk for current conditions.

Operating Impact:
 Unresolved dam safety deficiencies, e.g. continued settlement, could influence the California Division of Safety of Dams to issue dam operating restrictions limiting the operating water surface elevation range, reducing the maximum water surface elevation, or increasing dam safety surveillance requirements. Water surface elevation restrictions would impair the regulating benefits of the reservoir.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 35,000	\$ 35,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 40,000	\$ 40,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 50,000	\$ 50,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 325,000	\$ 325,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 50,000	\$ 50,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 500,000	\$ 500,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
 Hetch Hetchy Enterprise
 Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infrast
Authority Level 2:	15364-UH Hetchy Water - Power Infrast
FSP ID	10036856
Project Title:	HHW - R&R Priest Reservoir Landslide
Total Budget:	\$ 298,307
Project Start:	10/1/2020
Project Finish:	12/31/2021
Current Active Phase:	Post-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Blake Rothflus
Facility Category:	Power Infrastructure
Type:	Capital

Description:
 The March 2018 storm caused a large land slide above Priest Reservoir. The project stabilized the landslide area to prevent further erosion of the slope and sediment deposition in Priest Reservoir. The project removed unstable soil and rock, installed permanent slope drainage, placed permanent erosion control armoring and stabilizing structures, as well as installed a new culvert with inlet and outlet protection.
NOTE: No additional funding is being requested for this project.

Justification:
 Continued soil and sediment deposition in Priest Reservoir directly affects water quality of the Tuolumne water supply. Under current conditions, the slide material has potential to cross the access road to Priest Gate Tower, the inlet to Moccasin Powerhouse. Preserving access to the gate tower is essential for reliable operation of the dam and reservoir. This project has been funded by reallocation funds from existing CIP projects and no funding is being requested in this plan.
 Stabilizing the slide prevents continued elevated turbidity concerns, preserves access to the gate tower, and reduces road maintenance.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infracs
Authority Level 2:	15364-UH Hetchy Water - Power Infracs
FSP ID	10036810
Project Title:	HHW - Kirkwood Powerhouse Bypass Upgrades
Total Budget:	\$ 16,157,000
Project Start:	7/1/2020
Project Finish:	10/30/2035
Current Active Phase:	Pre-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Power Infrastructure
Type:	Capital
Description:	Provide a reliable hydraulic bypass and energy dissipation system conveying water around the turbines to the Kirkwood Powerhouse Bypass Chamber and Mountain Tunnel. Upgrade/replace high pressure energy dissipating valves, control systems, and associated structures to absorb 1,245 feet of pressure head and 430 cubic feet per second flow without damage.
Justification:	The existing hydraulic bypass and energy dissipation system cannot be operated for more than 2-5 days without incurring significant damage. When operated, the impact from the high pressure- high flow water destroys the energy dissipating structures in the bypass structure. The bypass chamber was repaired in 2017 and 2019 following short operational periods.
Operating Impact:	Water LOS Goal(s) Supported: Regional Delivery Reliability When the Kirkwood Powerhouse separates from the transmission system, flows through the turbine must be bypassed to prevent damaging the generator windings (over-speed) and thrust/guide bearings. When the bypass system is damaged and dysfunctional, water conveyance to the Mountain Tunnel must be curtailed or halted.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,491,709	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,491,709
ER	\$ 750,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 722,149
DS	\$ 1,463,147	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,323,732
CM	\$ 1,931,122	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 47,344
CN	\$ 10,422,048	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 16,058,026	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,584,934

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infracs
Authority Level 2:	15364-UH Hetchy Water - Power Infracs
FSP ID	10036809
Project Title:	HHW - Moccasin Powerhouse Bypass Upgrade
Total Budget:	\$ 15,007,000
Project Start:	9/18/2020
Project Finish:	12/1/2027
Current Active Phase:	Pre-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Power Infrastructure
Type:	Capital
Description:	Provide a reliable hydraulic bypass and energy dissipation system conveying water around the turbines to the Moccasin Reservoir Bypass Pipeline. Upgrade/replace high pressure energy dissipating valves, control systems, and associated structures to absorb 1,147 feet of pressure head and 430 cubic feet per second flow without damage.
Justification:	The existing hydraulic bypass and energy dissipation system cannot be operated for more than 2-5 days without incurring significant damage. When operated, the impact from the high pressure- high flow water destroys the energy dissipating structures in the bypass structure.
Operating Impact:	Water LOS Goal(s) Supported: Regional Delivery Reliability When the Moccasin Powerhouse separates from the transmission system, flows through the turbine must be bypassed to prevent damaging the generator windings (over-speed) and thrust/guide bearings. When the bypass system is damaged and dysfunctional, water conveyance to the Mountain Tunnel must be curtailed or halted.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 266,750	\$ 153,541	\$ 25,856	\$ 25,586	\$ 25,586	\$ 25,586	\$ 10,795
ER	\$ 650,000	\$ 153,042	\$ 428,175	\$ 68,783	\$ 0	\$ 0	\$ 0
DS	\$ 1,375,919	\$ 931,511	\$ 281,463	\$ 162,925	\$ 0	\$ 0	\$ 0
CM	\$ 1,396,159	\$ 0	\$ 0	\$ 350,147	\$ 732,052	\$ 230,762	\$ 83,198
CN	\$ 8,930,928	\$ 0	\$ 0	\$ 8,930,928	\$ 0	\$ 0	\$ 0
Total	\$ 12,619,756	\$ 1,238,094	\$ 735,314	\$ 9,538,369	\$ 757,638	\$ 256,348	\$ 93,993

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infrast
Authority Level 2:	15364-UH Hetchy Water - Power Infrast
FSP ID	10036285
Project Title:	HHW-R&R Power Transmission Life Extension Program
Total Budget:	\$ 49,917,632
Project Start:	7/1/2020
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Blake Rohlfuss
Facility Category:	Power Infrastructure
Type:	Capital

Description: SCOPE: Deliver capital improvement projects to sustain the reliability of the SFPUC's electric transmission assets from the generator step-up transformer across transmission lines to terminal substations and switchyards.

PROJECT DESCRIPTION: HHW has developed a program to extend the life of these assets prior to wholesale replacement. The program will include inspections, condition assessments, design, environmental evaluations, and construction when appropriate to sustain the reliability of the electric transmission system with capital improvements. Electricity flows across conductors, switches, circuit breakers, capacitors, transformers, relays, to electricity customers and to local electric distribution circuits.

ASSETS: Represented asset families include: Electric switchyards, substations, transformer decks; buss structures; circuit breakers; transformers; relays; capacitors; conductors; transmission towers and footings; insulators, dead-ends, connectors, instrumentation, & control systems; SCADA.

Justification: These electric transmission assets are essential for meeting the Regional Water Delivery Reliability Level of Service. The SFPUC maintains 161.7 miles of 115kV and 230kV electric transmission lines between Holm Powerhouses near Yosemite National Park and Newark Substation adjacent to SF Bay. 834 steel lattice towers support the high voltage transmission cables comprised of 3 conductors per line. Most of the towers were erected between 1930 and 1960.

A 2009 condition assessment cataloged the structural condition of the towers, electrical conductors, insulators, switches and relays. The transmission towers and equipment are reaching the end of their planned useful life. Spot checks of structural lattice members and bolts indicate structural deficiencies requiring mitigation to prevent tower failures. HHWP is requesting funds to review the condition assessment, complete an AAR, and prioritize the work to be performed at all towers. This funding would also cover any emergency repairs that cannot wait for systematic and prioritized repair.

Operating Impact: HHWP's Risk Based Decision Model assigned these assets a MEDIUM operational risk for current conditions. Regional Water System delivery is coupled with hydroelectric generation at Kirkwood and Moccasin Powerhouses. The powerhouses reduce the line pressure in the Hetch Hetchy Aqueduct to levels compatible with the pipeline pressure ratings across the San Joaquin valley. Failures within the electric transmission system cause the powerhouses to shutdown, interrupting the flow of water to SFPUC Regional Water System customers.

Localized failure of single transmission tower will interrupt power delivery to certain SFPUC's RWS facilities during the initial failure and throughout repairs. While the power lines are out of service, water at Kirkwood and Moccasin Powerhouses must be routed around the turbines via the proposed new energy dissipating bypass systems. Catastrophic tower failures may also damage 3rd party property.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 3,584,000	\$ 105,000	\$ 175,000	\$ 210,000	\$ 364,000	\$ 336,000	\$ 2,093,000
ER	\$ 4,096,000	\$ 120,000	\$ 200,000	\$ 240,000	\$ 416,000	\$ 384,000	\$ 2,392,000
DS	\$ 5,120,000	\$ 150,000	\$ 250,000	\$ 300,000	\$ 520,000	\$ 480,000	\$ 2,980,000
CM	\$ 33,280,000	\$ 975,000	\$ 1,625,000	\$ 1,950,000	\$ 3,380,000	\$ 3,120,000	\$ 19,435,000
CN							
Total	\$ 51,200,000	\$ 1,500,000	\$ 2,900,000	\$ 3,000,000	\$ 5,200,000	\$ 4,800,000	\$ 29,900,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infrast
Authority Level 2:	15364-UH Hetchy Water - Power Infrast
FSP ID	10035721
Project Title:	HHW - Transmission Lines 7/8 Upgrades
Total Budget:	\$ 37,969,000
Project Start:	1/1/2020
Project Finish:	1/31/2025
Current Active Phase:	Pre-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Tom Walker
Facility Category:	Power Infrastructure
Type:	Capital

Description: BACKGROUND: The San Francisco Public Utilities Commission (SFPUC) electric transmission lines 7/8 conveys power from Warmerville Substation to Modesto Irrigation District's Standford Substation. The SFPUC must accommodate additional power flowing across its transmission system due to grid interconnection requests from independent power generators interconnecting on the California Independent System Operator (CAISO). This is a requirement for SFPUC and HHWP obligations as a neighboring provider of electric transmission service.

Studies performed by the SFPUC indicate the principal impact to its system is an overload of 115kV Lines 7&8 between HHWP Warmerville Substation and MID Standford Substation under contingency conditions if interconnections are made without modification to the system's capacity. Without modifications, the SFPUC and HHWP transmission system could face reliability issues. Reconductoring also resolves multiple locations where the clearance between the existing conductors and the ground or structures does not meet current safe clearance regulations.

DESCRIPTION: This project develops the scope of work, design, and contract documents necessary to bid, award, and manage the reconductoring contract. Reconductoring will include replacement of the existing 115kV conductors on Lines 7/8 from Warmerville to Standford substations, resulting in improved transmission lower stability, and resolved clearance detections.

The project will be partially funded by independent power generators interconnecting on the California Independent System Operator (CAISO) and the Transmission Line Clearance Mitigation Project (10014089). New renewable generation projects are being connected to the California electrical grid which is managed by the California Independent System Operator (CAISO). These new generation projects can have an adverse impact on the existing transmission facilities. HHWP performs reliability assessment studies to determine the impact of certain interconnecting generators on the HHWP system. HHWP has performed an analysis of the new renewable generation projects (CAISO Clusters 7 through 9) and has identified these Clusters that will have an adverse impact on the SFPUC transmission facilities. The affected HHWP facilities are Lines 7/8, 115kV transmission lines beginning at HHWP Warmerville Substation and terminating at Modesto Irrigation District's Standford Substation. HHWP has developed a mitigating project that will be partially funded by the Cluster developers.

Operating Impact: Water LOS Goal(s) supported: potentially Regional Delivery Reliability. Cluster generation projects are expected to cause congestion on the Warmerville-Standford 115 kV lines causing reliability issues for Modesto Irrigation District and requiring HHWP to reduce generation at Holm and Kirkwood Powerhouses.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 54,853	\$ 53,598	\$ 1,255	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 2,950,809	\$ 2,296,081	\$ 654,728	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 13,395,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 16,400,662	\$ 15,744,679	\$ 655,983	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infrs
Authority Level 2:	15364-UH Hetchy Water - Power Infrs
FSP ID	10014075
Project Title:	HHW - Other Powerhouse Projects
Total Budget:	\$ 20,703,580
Project Start:	1/1/2012
Project Finish:	4/1/2020
Current Active Phase:	Post-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Blake Rothfuss
Facility Category:	Power Infrastructure
Type:	Capital

Description: PLEASE NOTE: This project has been replaced by 10036104 and will not be requesting any additional funding in the Capital Plan.

The powerhouses are made up of the following systems: 1) Turbine and governors; 2) Generator and excitation; 3) Electrical - Power train, station service and protection systems; 4) Step-up transformers; and 5) Mechanical systems. Rehabilitation costs for categories 1, 2, and 4 above are estimated at about 85% of total powerhouse rehabilitation costs (excluding building costs) and will be performed by Infrastructure. This project will fund: 1) Project under categories 3 and 5; 2) Unplanned failures for all categories; and 3) Managing replacement of assets with shorter life expectancies. Examples of electrical and mechanical systems covered in this project include inverters, breakers in 480V switchgear, 480V Motor Control Centers, electrical protective relays, cooling water piping/tubing, turbine shut-off valve control water piping/tubing, station air compressor, SCADA/control system, and vibration monitoring.

Justification: This project will rehabilitate the HHWP powerhouses to a higher reliability, consistent with utility best practices and support HHWP's Operational Objectives for Power and our existing Water Enterprise Levels of Service (at Kirkwood and Moccasin powerhouses only).

Operating Impact: Failure to maintain these assets could result in reduced power generation and reduced water deliveries (at Kirkwood and Moccasin powerhouses only).

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infrs
Authority Level 2:	15364-UH Hetchy Water - Power Infrs
FSP ID	10014086
Project Title:	HHW - Moccasin Powerhouse and GSU Rehabilitation
Total Budget:	\$ 66,713,635
Project Start:	7/1/2020
Project Finish:	12/31/2027
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Tim Parkan
Facility Category:	Power Infrastructure
Type:	Capital

Description: Moccasin Powerhouse Generators were completed in 1969 and generate a combined maximum output of 110 Megawatts. Both generator units have exceeded their life expectancy and need repair in order to continue operating reliably. Since their original installation, the generators have not had any major maintenance work done (no rewinds or overhauls). The objective of this project is to replace stator cores and coils. The scope of work also includes entire field pole replacement, replacement of the rotor pole/rim tail connection system with a new T-tail connection system, and supply of a new rotor rim for each generator following inspection and testing. The project will also involve replacement of two generator step-up transformers (GSU's), and power plant systems upgrades including: replacing 480V switchgear, 13.8KV switchgear, motor control centers, main control boards, protective relays, cooling water piping, and improving oil containment systems.

The work is divided into three phases:
 Phase 1 - Generator Rehabilitation
 Phase 2 - GSU Replacement
 Phase 3 - Power Plant Systems Upgrades

Justification: The project is required to meet HHWP's Operational Objectives for Power including Power System Reliability and Sustainability. The Moccasin Powerhouse is a vital component of the HHWP water delivery system. A non-functioning Powerhouse will not allow HHWP to meet the water delivery demands of the SFPUC. The units have become less reliable and have resulted in 35 outages over the last four years, including the last outage in August 2017 that resulted in water deliveries from HHWP being reduced by half.

Operating Impact: Water LOS Goal(s) Supported: Regional Delivery Reliability
 Potential loss of reliable water delivery and of power generation.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 13,354	\$ 13,354	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 1,355	\$ 886	\$ 469	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 70,187	\$ 39,933	\$ 25,215	\$ 5,039	\$ 0	\$ 0	\$ 0
CM	\$ 7,608,486	\$ 3,544,611	\$ 2,273,268	\$ 1,790,607	\$ 0	\$ 0	\$ 0
CN	\$ 21,906,618	\$ 9,472,022	\$ 0	\$ 12,434,596	\$ 0	\$ 0	\$ 0
Total	\$ 29,800,000	\$ 13,070,806	\$ 2,298,952	\$ 14,230,242	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infras
Authority Level 2:	15364-UH Hetchy Water - Power Infras
FSP ID	10014089
Project Title:	HHW - R&R Transmission Lines Clearance Mitigation
Total Budget:	\$ 45,783,760
Project Start:	7/1/2017
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Blake Rofhluss
Facility Category:	Power Infrastructure
Type:	Capital

Description: SCOPE: Mitigate non-compliant clearance distances between high voltage conductors and groundstructures.
PROJECT DESCRIPTION: The NERC Reliability Standard FAC-003-4 requires the SFPUC to conduct a clearance evaluation of the existing 230KV (lines 5and 6) and 115KV (lines 3 and 4, 7 and 8) transmission lines and mitigate non-compliant clearances. Based on the ratings for each circuit, clearance discrepancies in each line segment have been identified (e.g., ground, wire, building, street lights) that endanger the public and property. This project will provide funding to implement mitigation measures to resolve clearance discrepancies. Mitigation options include, but are not limited to, new towers/tubular poles, new intervening poles, tower raises, ground lowering, and other structural improvements to the lattice towers.
ASSETS: Represented asset families include: Electric transmission towers and footings; insulators, dead-ends, connectors; instrumentation & control systems; SCADA; relays, switches; Rights-of-way corridors and access roads; instrumentation & controls
Justification: These linear high voltage electric transmission assets are essential for meeting the Regional Delivery Reliability Levels of Service.

Operating Impact: Unmitigated non-compliant line clearances present a safety hazard to the public and SFPUC employees, increase the SFPUC's wildland fire risk, and contribute to transmission line outages.
 HHWP's Risk Based Decision Model assigned these assets a HIGH operational risk for current conditions.
 Increased electric transmission line outages.
 Increased public safety exposure.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 2,966,210	\$ 405,000	\$ 350,000	\$ 156,310	\$ 161,630	\$ 167,370	\$ 921,900
ER	\$ 2,704,240	\$ 464,000	\$ 400,000	\$ 178,640	\$ 184,720	\$ 191,280	\$ 1,053,600
DS	\$ 3,380,300	\$ 580,000	\$ 500,000	\$ 223,300	\$ 230,900	\$ 239,100	\$ 1,317,000
CM	\$ 3,380,300	\$ 580,000	\$ 500,000	\$ 223,300	\$ 230,900	\$ 239,100	\$ 1,317,000
CN	\$ 21,971,950	\$ 3,770,000	\$ 3,250,000	\$ 1,451,450	\$ 1,500,850	\$ 1,554,150	\$ 8,560,500
Total	\$ 33,803,000	\$ 5,800,000	\$ 5,000,000	\$ 2,233,000	\$ 2,309,000	\$ 2,391,000	\$ 13,170,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infras
Authority Level 2:	15364-UH Hetchy Water - Power Infras
FSP ID	10014091
Project Title:	HHW - EI Switchyard Slope Hazard Mitigation
Total Budget:	\$ 2,219,968
Project Start:	11/1/2014
Project Finish:	9/30/2020
Current Active Phase:	Post-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Power Infrastructure
Type:	Capital

Description: The Hetch Hetchy Water and Power (HHWP) Early Intake Switchyard (ISY) is a 230 kV switchyard located alongside the Tuolumne River, downstream of HHWP's Kirkwood Powerhouse (KPH). The switchyard is a critical HHWP asset that provides the transmission of electrical power generated at Kirkwood and Holm powerhouses to Moccasin, as well as the local distribution of power to HHWP's upcountry facilities. The slope requiring hazard mitigation, located next to ISY, was severely burned in the Rim Fire. The purpose of the project was to reduce the risk of slope failure which may have caused damage to the switchyard and loss of power transmission capability. This project is in closeout.
Justification: This project was approved in an earlier CJP and no funding is being requested in this plan.
Operating Impact: N/A

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
 Hetch Hetchy Enterprise
 Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infrass
Authority Level 2:	15364-UH Hetchy Water - Power Infrass
FSP ID	10014092
Project Title:	HHW- Power Project Development
Total Budget:	\$ 14,501,541
Project Start:	5/23/2012
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Power Infrastructure
Type:	Capital
Description:	The Project Development (PD) Account captures Program level expenditures. There are four types of charges that will be allocated to the PD Account: 1) Task orders for overall program management and project prioritization tasks, where the costs should be distributed over all CIP Projects. 2) Infrastructure and Hetchy staff performing program level tasks including: capital plan development, budget management (including fund management, and cost reallocations); and Quarterly Report generation tasks, where the costs should be distributed over all CIP Projects. 3) Portal support for the existing SharePoint Portal (includes document management and project dashboard reporting) 4) Work Outreach program
Justification:	The Project Development Account (PD Accounts) funds the capital improvement administrative staff, the project management staff and the professional services that could not be defined to one project detail as the charges would span across the overall program.
Operating Impact:	Water LOS Goal(s) Supported: To Be Determined as projects are developed. Programmatic support is an integral part of the capital program.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 11,112,000	\$ 852,000	\$ 913,000	\$ 882,000	\$ 945,000	\$ 978,000	\$ 5,370,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 11,112,000	\$ 852,000	\$ 913,000	\$ 882,000	\$ 945,000	\$ 978,000	\$ 5,370,000

SFPUC Capital Project Plan
 Hetch Hetchy Enterprise
 Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infrass
Authority Level 2:	15364-UH Hetchy Water - Power Infrass
FSP ID	10014087
Project Title:	Warnerville Substation Rehabilitation Project
Total Budget:	\$ 34,246,428
Project Start:	9/1/2015
Project Finish:	11/25/2026
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Tim Parkan
Facility Category:	Power Infrastructure
Type:	Capital
Description:	The additional funding request is to cover the remaining work for Warnerville Substation Rehabilitation project. Under Design Build Contract #DB-127R, installation of some 230kV equipment was deleted from the contract but procured including circuit breakers, switches, insulators, and current voltage transformers. This remaining work includes the replacement of, four oil circuit breakers, bushings, surge arrestors, disconnect switches, current voltage transformer, insulators, relay protection, and other ancillary equipment. The Planning of the remaining work is expected to start in August 2020. Project Estimate is approximately \$6.2 Million.
Justification:	The project is required to meet all HHWP's Operational Objectives for Power System Reliability and Sustainability
Operating Impact:	Potential loss of power generation/transmission as well as water delivery.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 3,175,000	\$ 0	\$ 0	\$ 3,175,000	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infrs
Authority Level 2:	15364-UH Hetchy Water - Power Infrs
FSP ID	10014085
Project Title:	Kirkwood Penstock
Total Budget:	\$ 3,536,410
Project Start:	7/1/2015
Project Finish:	1/31/2022
Current Active Phase:	Post-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Tim Parkan
Facility Category:	Power Infrastructure
Type:	Capital
Description:	Kirkwood Penstock was built in 1964 and conveys the SFPUC water supply from Canyon Tunnel to Kirkwood Powerhouse. Kirkwood Penstock has experienced significant foundation movement, without impact to the service utility. In February 2007, however, there was significant movement on the penstock, and the penstock practically detached from one fixed saddle directly below anchor block 2. The scope of this project included an internal and external inspection, development of an Emergency Action Plan and a Penstock Monitoring Plan, repairs to the damaged saddle, installation of a monitoring system, and procurement of emergency spare equipment. This project is in closeout.
Justification:	This project is needed to meet Water Levels of Service objectives for Regional Delivery Reliability and Water Supply. Kirkwood Powerhouse produces about one-third of the total HHWP power generation.
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infrs
Authority Level 2:	15364-UH Hetchy Water - Power Infrs
FSP ID	10014090
Project Title:	HHW - Kirkwood Powerhouse Bypass Valves
Total Budget:	\$ 1,056,941
Project Start:	1/1/2017
Project Finish:	12/31/2021
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Blake Rothfuss
Facility Category:	Power Infrastructure
Type:	Capital
Description:	SCOPE: Replace the bypass valve diffuser and renew the bypass draft tube and chamber. PROJECT DESCRIPTION: Design, fabricate, and install a reliable hydraulic bypass and energy dissipation system conveying water around the turbines to the Kirkwood Powerhouse Bypass Chamber and Mountain Tunnel.
Justification:	ASSETS: Kirkwood Powerhouse bypass valve and actuator; controls; bypass draft tube and lining; energy dissipators; bulkhead gate and rails; bypass draft tube/tunnel transition; SCADA. This project was approved in an earlier CIP and no funding is being requested in this plan.
Operating Impact:	N/A

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infras
Authority Level 2:	15364-UH Hetchy Water - Power Infras
FSP ID	10036104
Project Title:	HHW - R&R Powerhouses
Total Budget:	\$ 17,542,314
Project Start:	4/1/2020
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Blake Rothflus
Facility Category:	Power Infrastructure
Type:	Capital
Description:	SCOPE: Deliver capital improvement projects to sustain the reliability of the four hydroelectric powerhouses from turbine isolation valves to generator step-up transformer and 100-yards downstream of tailrace gates. PROJECT DESCRIPTION: The HHWP has developed a program to extend the life of these assets prior to wholesale replacement. The program will include inspections, condition assessments, design, environmental evaluations, and construction when appropriate to sustain the reliability of the hydroelectric powerhouses with capital improvements. This project includes investments in the following systems: 1) Turbine and governors; 2) Generator and excitation; 3) Electrical - Powertrain, station service and protection systems; 4) Step-up transformers; 5) Mechanical systems; 6) civil/structural systems; 7) Tailrace channel. ASSETS: Holm Powerhouse, Kirkwood Powerhouse, Moccasin Powerhouse, Moccasin Low Head Powerhouse, generation step-up transformers, draft tubes and tailrace gates; SCADA. These hydroelectric generation assets are essential for meeting the Regional Delivery Reliability Levels of Service at Kirkwood and Moccasin Powerhouses. All of the assets are essential to meeting HHWP Operational Objectives for Power Generation.
Justification:	Proactive evaluation of hydroelectric generation assets and planned capital investments reduces the forced outage rate and interruptions in water delivery. HHWP's Risk Based Decision Model assigned these assets a CRITICAL operational risk for current conditions. Increased water delivery reliability Increased hydroelectric unit availability Increased hydroelectric energy production
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 962,500	\$ 189,000	\$ 154,000	\$ 119,000	\$ 119,000	\$ 42,000	\$ 325,500
ER	\$ 1,100,000	\$ 216,000	\$ 176,000	\$ 136,000	\$ 136,000	\$ 48,000	\$ 372,000
DS	\$ 1,375,000	\$ 270,000	\$ 220,000	\$ 170,000	\$ 170,000	\$ 60,000	\$ 465,000
GM	\$ 1,375,000	\$ 270,000	\$ 220,000	\$ 170,000	\$ 170,000	\$ 60,000	\$ 465,000
CN	\$ 8,937,500	\$ 1,755,000	\$ 1,430,000	\$ 1,105,000	\$ 1,105,000	\$ 390,000	\$ 3,022,500
Total	\$ 13,750,000	\$ 2,700,000	\$ 2,200,000	\$ 1,700,000	\$ 1,700,000	\$ 600,000	\$ 4,650,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infras
Authority Level 2:	15364-UH Hetchy Water - Power Infras
FSP ID	(N/A)
Project Title:	HHW - Cherry-Eleanor Pumps
Total Budget:	\$ 1,400,000
Project Start:	10/2/2023
Project Finish:	11/29/2024
Current Active Phase:	
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Power Infrastructure
Type:	Capital
Description:	Hetch Hetchy Water and Power (HHWP) diverts approximately 110,000 acre-feet of water annually from Lake Eleanor to Cherry Reservoir, resulting in an additional 220GWh annually (about 13% of the HHWP annual generation). The majority of the water must be diverted by pumping. The pumps that are located in Cherry Reservoir have exceeded their life expectancy. Six out of ten pumps are inoperable and the remaining four pumps are at continued risk of failure. All ten pumps have failed in the past and have been repaired or replaced at various times since being installed. The objective of this project is to replace and upgrade the pumps in Cherry Pump Station with units that work with current operating strategies. The scope of work includes: 1) replacement of pumps, transformer, and pump motor starters; 2) installation of Programmable Logic Controller (PLC), SCADA system, and fiber optics; and 3) improvement of the existing Motor Control Center (MCC) building. This current budget request is for planning phase only. It will cover the costs of Alternative Analysis Report (AAR), and Conceptual Engineering Report (CER). The budget for detail design and construction phase will be requested in future budget cycles after the conceptual engineering design and the cost of the selected alternative are developed. The Cherry Reservoir Pump station facilitates conveyance of water from Lake Eleanor to Cherry Reservoir via Cherry Diversion Tunnel. Water from Cherry Reservoir enables cost-effective generation of hydropower for Hetch Hetchy Water and Power (HHWP) at Holm Powerhouse, the largest power generating unit on the system. When all pumps are operational, the additional water from Lake Eleanor allows for increased power generation, resulting in a very profitable water transfer for SFPUC. Reduction in generation at Holm Powerhouse.
Justification:	
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,400,000	\$ 0	\$ 1,400,000	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
GM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 1,400,000	\$ 0	\$ 1,400,000	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infrass
Authority Level 2:	15364-UH Hetchy Water - Power Infrass
FSP ID	(N/A)
Project Title:	HHW - Holm Bridge Rehabilitation
Total Budget:	\$ 11,694,000
Project Start:	9/1/2030
Project Finish:	12/31/2036
Current Active Phase:	
Organization:	Hetch Hetchy Water
Project Manager:	Tim Parkan
Facility Category:	Power Infrastructure
Type:	Capital
Description:	Access to Holm Powerhouse is off of Cherry Oil Road via Holm Bridge. This road is open to the public. The 136-foot bridge is a three-span continuously supported bridge that carries two lanes of two-way traffic over Cherry Creek. The bridge was built in 1957 and requires replacement to address seismic and current Caltrans design standard deficiencies (e.g., T-beam steams, end diaphragms, and lateral struts). (MFRN 420)
Justification:	The bridge provides the only access to the Holm Powerhouse and recreational access to Cherry Creek.
Operating Impact:	Holm Powerhouse can only be accessed through via Holm Bridge. Without the bridge, maintenance of the powerhouse and the associated facilities in the areas will be very difficult.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 769,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 769,000
ER	\$ 769,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 769,000
DS	\$ 7,600,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 7,600,000
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 9,138,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 9,138,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infrass
Authority Level 2:	15364-UH Hetchy Water - Power Infrass
FSP ID	(N/A)
Project Title:	HHW - Wildfire Mitigation (Power)
Total Budget:	\$ 10,000,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	
Organization:	Hetch Hetchy Water
Project Manager:	Margaret Hamanford
Facility Category:	Power Infrastructure
Type:	Capital
Description:	Wildfire Mitigation along the Hetch Hetchy Right of Way.
Justification:	This project will also fund Wildfire Mitigation program management costs – including salaries, project management, environmental review, contract development and contract management costs for tree and vegetation removal. This project will also create defensible space, and fire-breaks along the Hetch Hetchy Right of Way and system of assets.
Operating Impact:	In 2016, California State Senate Bill (SB) 1028 was passed into law, creating a requirement that all public and private utilities and corporations assess the geographical location of their overhead electrical lines and equipment relative to areas determined to have significant risk of catastrophic wildfires resulting from electrical lines and equipment.

The SFPUC owns assets in areas designated by Cal Fire as "High Fire Threat Zones". To mitigate the threats of Wildfire posed by its overhead lines, Hetch Hetchy Water maintains a Wildfire Mitigation plan.

Additionally, PRC 4291 – Stipulates that a person (private individual, organization, partnership, limited liability company, or corporation) that owns, leases, controls, operates or maintains buildings or structures in mountainous areas, forest-covered, brush-covered, grass-covered, or land that is covered with flammable material shall at all times do the following:

- Maintain defensible space of 100 feet from each side and from the front and rear of the structure, but not beyond the property line.
- Remove that portion of a tree that extends within 10 feet of the outlet of a chimney or stovepipe.
- Maintain a tree, shrub, or other plant adjacent to or overhanging a building free of dead or dying wood.
- Maintain the roof of a structure free of leaves, needles, or other vegetative materials.

Similar to how PRC 4291 provides defensible space around buildings, shaded fuel breaks act as a defensible landscape to reduce fire speed and severity and improve suppression by ground and air fire crews. Fuel breaks accomplish this by: controlling fire behavior by reducing ladder fuels (fuels low to the ground that can cause the fire to "ladder" up trees and vegetation and spread across tree tops), opening up the forest canopy, and reducing ground fuels. Fuel breaks are not designed to control a fire, rather to provide points of access to control the flanks of a fire and provide possible backfire action in the face of an advancing fire head.

The project includes fuel breaks and defensible space projects around SFPUC facilities and Right of Way lands.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 2,200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 1,000,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 8,800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 4,000,000
Total	\$ 11,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 5,000,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10037306
Project Title:	HHW- Early Intake Dam Interim Improvement
Total Budget:	\$ 2,802,575
Project Start:	1/1/2021
Project Finish:	6/30/2023
Current Active Phase:	Pre-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Water Infrastructure
Type:	Capital

Description:
 Early Intake Dam is a single-curve concrete arch structure. It was constructed between 1923 and 1924 to divert Hetch Hetchy water from the Tuolumne River into Mountain Tunnel. Within a few years of the dam's completion, significant cracking was observed at several locations, most likely due to the absence of contraction joints in the structure. In addition, widely distributed and progressively worsening distributed cracking has been observed throughout the dam and spillway structure over the years. A 1966 study concluded that the cause was due to Alkali Aggregate Reaction (AAR) and the resultant internal expansion of the concrete (Clair A. Hill, 1966). Following that study, the SFPUC carried out several repair measures in effort to reduce the rate of deterioration of the dam's concrete. A follow-up study in the late 80's and early 90's was undertaken to reevaluate the condition of the dam. Due to the state of deterioration and the difficulty of making lasting repairs, the study recommended replacement of the dam rather than repair. (Woodward Clyde Consultants, 1992). In 2007 a preliminary stability analysis performed by URS also recommended dam removal and replacement rather than repair (URS, 2007). The dam is reaching the end of its design life. Due to budget limitations, this project will design and construct interim repair to Early Intake Dam to extend its life 20-25 years. This project was approved in the FY18-19 capital plan and named Early Intake Dam Rehabilitation and was originally funded starting in FY23-24. In order to meet potential Division of Safety of Dams (DSOD) requirements, the funding request for this project has been accelerated by three years.

Justification:
 The SFPUC is legally and ethically responsible to develop and maintain mature dam safety management program. This project is to meet this objective.

Operating Impact:
 Water LOS Goal(s) Supported: Regional Delivery Reliability
 In the event of drought or failure of the O'Shaughnessy diversion works, Canyon Tunnel, Kirkwood Penstock or Intake Bypass, the Early Intake Dam is required to divert water from the Tuolumne River or from Lower Cherry Aqueduct into Mountain Tunnel for the water delivery system.

Phase	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	N/A
Project Title:	HHW - Early Intake Dam - Long Term
Total Budget:	\$ 94,742,000
Project Start:	1/4/2021
Project Finish:	6/29/2029
Current Active Phase:	
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Water Infrastructure
Type:	Capital

Description:
 The objectives of the project are to provide long term solution to Early Intake Dam which has been experiencing significant cracking and deteriorating from alkali-aggregate reactivity since construction in 1920's. This project will design and construction long term solution (such as installing buttress or replacing it with a new dam).

Justification:
 This project is to ensure long term reliable water delivery. During drought conditions and without the Dam HHWP would not have a way to divert water from the Lower Cherry Aqueduct and Tuolumne River to the Mountain Tunnel. There would be no redundancy for the bypass pipeline from Kirkwood Powerhouse to Mountain Tunnel.

Operating Impact:
 Water LOS Goal(s) Supported: Regional Delivery Reliability
 The Early Intake Dam is serving as the main diversion point for conveying water from Tuolumne River to Mountain Tunnel. Without the dam, HHWP will not be able to divert water during emergency release either from Hetch Hetchy Reservoir or Lower Cherry Aqueduct (Cherry or Eleanor Reservoirs).

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,500,000	\$ 1,500,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 1,574,541	\$ 0	\$ 574,541	\$ 1,000,000	\$ 0	\$ 0	\$ 0
DS	\$ 6,717,834	\$ 0	\$ 3,000,000	\$ 3,530,834	\$ 187,000	\$ 0	\$ 0
CM	\$ 9,022,825	\$ 0	\$ 0	\$ 0	\$ 2,417,204	\$ 3,594,408	\$ 3,891,213
CN	\$ 73,166,375	\$ 0	\$ 0	\$ 0	\$ 42,462,943	\$ 30,703,432	\$ 0
Total	\$ 92,861,575	\$ 1,500,000	\$ 3,574,541	\$ 4,530,834	\$ 45,067,147	\$ 34,297,840	\$ 3,891,213

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10014095
Project Title:	HHW - R&R Hetch Hetchy Facilities Upgrades
Total Budget:	\$ 43,407,371
Project Start:	7/1/2011
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Blake Rothfuss
Facility Category:	Joint Infrastructure
Type:	Capital

Description: SCOPE: Deliver capital improvement projects to sustain the serviceability and extend the asset life of facilities used to meet Regional Water System objectives.

PROJECT DESCRIPTION: The HHWP has developed a program to extend the life of approximately 80 buildings, structures, facilities, and systems prior to replacement. The program will include inspections, condition assessments, design, environmental evaluations, and construction when appropriate. Facilities provide office space; warehousing of materials, supplies, and critical spare equipment; maintenance & vehicle shops; fire suppression systems; HVAC; water treatment, storage, & distribution facilities; waste water collection, treatment & discharge facilities; stormwater collection & discharge facilities; and cottages for essential onsite workers and NPS/USFS. Typical project include: roof and waterproofing replacements; security, fire detections/suppression, & HVAC upgrades; building remodels to meet current business/operational needs; replacement of rotted/deteriorated structures; replacing deteriorated underground pipelines & conduits; upgrade water & wastewater treatment plants to meet current regulatory standards.

ASSETS: Represented asset families include the types of facilities described above which are located at: Cherry Camp, O'Shaughnessy Camp, Early Intake Camp, South Fork Yard, Moccasin Camp, Moccasin Fish Hatchery, Okdale, Rock River Lime Plant, Warmerville Yard

Justification: These assets are essential for meeting the Regional Delivery Reliability Levels of Service, Water Supply Level of Service, and HHWP Operational Objectives for Power Generation.

Operating Impact: Many of these facilities and infrastructure were constructed in the early 1900's to facilitate the construction of the Hetch Hetchy Regional Water System. Capital improvements are needed to provide employees and staff with safe, comfortable, and efficient facilities from which to work.

HHWP's Risk Based Decision Model assigned these assets a LOW operational risk for current conditions.

Deteriorated or absent facilities do not attract skilled workers who can lead to reduced efficiency or unsafe work environments.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,540,000	\$ 161,000	\$ 245,000	\$ 245,000	\$ 371,000	\$ 252,000	\$ 266,000
ER	\$ 1,760,000	\$ 184,000	\$ 280,000	\$ 280,000	\$ 424,000	\$ 288,000	\$ 304,000
DS	\$ 2,200,000	\$ 230,000	\$ 350,000	\$ 350,000	\$ 530,000	\$ 360,000	\$ 380,000
CM	\$ 2,200,000	\$ 230,000	\$ 350,000	\$ 350,000	\$ 530,000	\$ 360,000	\$ 380,000
CN	\$ 14,300,000	\$ 1,495,000	\$ 2,275,000	\$ 2,275,000	\$ 3,445,000	\$ 2,340,000	\$ 2,470,000
Total	\$ 22,000,000	\$ 2,300,000	\$ 3,500,000	\$ 3,500,000	\$ 5,300,000	\$ 3,600,000	\$ 3,800,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10014096
Project Title:	HHW - R&R Dam/Reservoir Cond Assmt & Rehab (Joint)
Total Budget:	\$ 16,528,958
Project Start:	7/1/2012
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Blake Rothfuss
Facility Category:	Joint Infrastructure
Type:	Capital

Description: SCOPE: Deliver capital improvement projects to sustain the reliability and safety of the four upcountry dams: O'Shaughnessy Dam, Cherry Valley Dam, Lake Eleanor Dam, and Early Intake Dam.

PROJECT DESCRIPTION: The HHWP has developed a program to extend the life of this asset prior to replacement. The program will include inspections, condition assessments, design, environmental evaluations, and construction when appropriate.

ASSETS: Represented asset families include: O'Shaughnessy Dam (circa 1923) and Hetch Hetchy Reservoir; Cherry Valley Dam (circa 1956) and reservoir; Lake Eleanor Dam (circa 1918) and reservoir; and Early Intake Dam (circa 1925); spillways, spillway gates & controls; energy dissipating components; spillway channels to 100 yards downstream; trash racks & debris removal systems; water outlet conduits, gates, valves & control systems; dam foundations & abutments; drainage system galleries, pumps, drain piping; power, lighting, mechanical, & HVAC systems; security & emergency communication systems; access roads & bridges; instrumentation and monitoring systems; SCADA.

Justification: These assets are essential for meeting the Regional Delivery Reliability Levels of Service, Water Supply Level of Service, and HHWP Operational Objectives for Power Generation.

Operating Impact: The SFPUC's four upcountry dams were built between 1918 and 1956, and are exhibiting expected wear and tear. The California Division of Safety of Dams accepted the SFPUC's Dam Safety Program requirement for periodic condition assessments. Given the dams' age, major repairs, security enhancements, emergency communication system upgrades are anticipated.

HHWP's Risk Based Decision Model assigned these assets a HIGH operational risk for current conditions.

Unresolved dam safety deficiencies could influence the California Division of Safety of Dams to issue dam operating restrictions limiting the operating water surface elevation range, reducing the maximum water surface elevation, or increasing dam safety surveillance requirements. Water surface elevation restrictions would impair the regulating benefits of the reservoir.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 741,020	\$ 70,000	\$ 140,000	\$ 56,000	\$ 89,670	\$ 35,000	\$ 315,350
ER	\$ 846,880	\$ 80,000	\$ 160,000	\$ 64,000	\$ 102,480	\$ 40,000	\$ 360,400
DS	\$ 1,058,600	\$ 100,000	\$ 200,000	\$ 80,000	\$ 128,100	\$ 50,000	\$ 450,500
CM	\$ 1,058,600	\$ 100,000	\$ 200,000	\$ 80,000	\$ 128,100	\$ 50,000	\$ 450,500
CN	\$ 6,880,900	\$ 650,000	\$ 1,300,000	\$ 520,000	\$ 832,650	\$ 325,000	\$ 2,928,250
Total	\$ 10,586,000	\$ 1,000,000	\$ 2,000,000	\$ 800,000	\$ 1,281,000	\$ 500,000	\$ 4,505,000

SFPUC Capital Project Plan
Hech Hetchy Enterprise
Hech Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10014102
Project Title:	HHW - R&R Road & Bridge Improvements
Total Budget:	\$ 21,487,107
Project Start:	7/1/2013
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hech Hetchy Water
Project Manager:	Blake Rothluis
Facility Category:	Joint Infrastructure
Type:	Capital
Description:	SCOPE: Deliver capital improvement projects to sustain the reliability of the access roads and bridges providing vehicular access to SFPUC dams, reservoirs, water conveyance facilities, hydroelectric powerhouses, switchyards & substations, and communication sites. PROJECT DESCRIPTION: The HHWP has developed a program to extend the lives of these assets. The program will include inspections, condition assessments, design, environmental evaluations, and construction when appropriate. Typical capital projects include: resurfacing; retaining wall construction; drainage improvements; slope stability improvement; guardrail installations and replacements; rockfall hazard mitigation; and bridge rehabilitation. ASSETS: Represented asset families include: improved and unimproved roadways; chip seal and asphaltic-cement pavements; guardrails; retaining walls and road embankments; drainage systems; rock retention/deflection systems; bridges; piers, abutments, and foundations. Justification: Necessary compliance and safety improvements must be performed on paved roads and small bridges that are used by HHWP staff and the general public. The SFPUC is responsible for maintaining access roads to all upcountry facilities, work & residential camps, electric transmission towers, and San Joaquin Pipelines. There are approximately 14 bridges, 40 miles of improved roadways, and hundreds of miles of primitive roadways in the program. Most roads are also used by the public. Periodic bridge inspections are necessary to prevent structural and foundation failures. HHWP's Risk Based Decision Model assigned these assets a LOW operational risk for current conditions. Operating Impact: Deterred guardrails cannot retain vehicles within the roadway. Failure of these bridges restricts access to HHWP facilities. Potholing increases travel time between work sites and vehicle damage.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 715,750	\$ 161,000	\$ 105,000	\$ 140,000	\$ 154,000	\$ 12,250	\$ 131,250
ER	\$ 818,000	\$ 184,000	\$ 120,000	\$ 160,000	\$ 176,000	\$ 14,000	\$ 150,000
DS	\$ 1,022,500	\$ 230,000	\$ 150,000	\$ 200,000	\$ 220,000	\$ 17,500	\$ 187,500
CM	\$ 1,022,500	\$ 230,000	\$ 150,000	\$ 200,000	\$ 220,000	\$ 17,500	\$ 187,500
CN	\$ 6,646,250	\$ 1,495,000	\$ 975,000	\$ 1,300,000	\$ 1,430,000	\$ 113,750	\$ 1,218,750
Total	\$ 10,225,000	\$ 2,300,000	\$ 1,500,000	\$ 2,000,000	\$ 2,200,000	\$ 175,000	\$ 1,875,000

SFPUC Capital Project Plan
Hech Hetchy Enterprise
Hech Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10014104
Project Title:	HHW - R&R Facilities Security Project
Total Budget:	\$ 6,588,529
Project Start:	7/1/2018
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hech Hetchy Water
Project Manager:	Blake Rothluis
Facility Category:	Joint Infrastructure
Type:	Capital
Description:	SCOPE: Deliver capital renewal & replacement projects to implement & sustain physical security at critical assets. PROJECT DESCRIPTION: Funds physical security upgrades at existing HHWP facilities. The security at many HHWP Moccasin and remote facilities lack sufficient security measures to minimize the risk of intrusion. This project will fund security measures including access monitoring and controls, fencing, card access and camera monitoring. ASSETS: Represented asset families include: control rooms; powerhouses; switchyards; substations; chemical dosing facilities; water quality sampling facilities; communication equipment buildings; network operating center; incident command centers; remote and auxiliary control rooms; fences & gates; and SCADA. Maintaining and enhancing facility physical security is required to meet the Water Regional Delivery Reliability Levels of Service and HHWP's Operational Objectives for Power or Sustainability. WEC/NERC requires HHWP to implement and maintain physical security at all facilities associated with supplying and operating the bulk electrical system. In addition, protecting SFPUC water delivery assets from vandalism and terrorism promotes Regional Water Delivery Reliability. HHWP's Risk Based Decision Model assigned these assets a MEDIUM operational risk for current conditions. Operating Impact: Protects SFPUC personnel working at remote sites Promotes water supply and transmission continuity Promotes hydroelectric generation and electric transmission reliability Protects and preserves asset value

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 365,120	\$ 37,870	\$ 17,500	\$ 12,250	\$ 0	\$ 12,250	\$ 215,250
ER	\$ 417,280	\$ 43,280	\$ 20,000	\$ 14,000	\$ 0	\$ 14,000	\$ 246,000
DS	\$ 521,600	\$ 54,100	\$ 25,000	\$ 17,500	\$ 0	\$ 17,500	\$ 307,500
CM	\$ 521,600	\$ 54,100	\$ 25,000	\$ 17,500	\$ 0	\$ 17,500	\$ 307,500
CN	\$ 3,390,400	\$ 351,650	\$ 162,500	\$ 113,750	\$ 0	\$ 113,750	\$ 1,988,750
Total	\$ 5,216,000	\$ 541,000	\$ 250,000	\$ 175,000	\$ 0	\$ 175,000	\$ 3,075,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10014106
Project Title:	HHW - R&R Communications Systems Upgrades
Total Budget:	\$ 14,515,650
Project Start:	7/1/2016
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Blake Rothfuss
Facility Category:	Joint Infrastructure
Type:	Capital

Description:
 SCOPE: Deliver capital renewal & replacement projects to implement & sustain regional communication assets.

PROJECT DESCRIPTION: Voice and Data communication flows over multiple communication systems including: microwave, two-way radio voice, voice over internet protocol (VoIP), plain old telephone system (POTS), 900 MHz radio, fiber-optic communication, and information technology networks (corporate business network, SCADA network, and 3rd Party networks).
 The HHWP has developed a program to extend the life of these assets prior to wholesale replacement. The program will include inspections, condition assessments, design, environmental evaluations, and construction when appropriate. This project will enable HHWP to: extend communications across dead-zones to remote locations; replace obsolete technology in a strategic and planned approach; integrate voice and data services across the SFPUC; and to modernize elements of the communication infrastructure to ensure serviceability, reliability, and where pertinent, regulatory compliance.
ASSETS: Represented asset families include: Warmville Radio Shelter, Warmville Substation, Albers Road Valvehouse, Rosalie Crossover, SJ Valvehouse, Tesla Portal, Oakdale Portal, Rock River, Red Mountain Bar West, Moccasin Peak Communication Site, West Portal, Priest Reservoir, Moccasin Radio Shelter, Moccasin Powerhouse, Moccasin Camp Server Building, Datacenter, Duckwall Communications Site, Inlake Radio Site, Jones Point, Inlake Switchyard, Southfork Tard, Kirkwood Powerhouse, Holm Powerhouse, Cherry Compound, Cherry Pump Station, Eleanor Dam, SPI, OSH Dam, Pole 92/96; power systems, batteries, standby generators, power supplies; servers, network cards; antennas, wave guides; encoders/decoders; and SCADA.

Justification:
 These voice and data communication assets are essential for meeting the Regional Delivery Reliability Levels of Service. HHWP Communication Systems enable essential command and control over the Regional Water System; hydroelectric generation, and high voltage transmission system. The communication system further integrates the HHWP Water Operations with the Water Supply & Treatment (WS&T) Division (for water) and the California Independent System Operator (for power). A modern, redundant, and secure communication system promotes a water and power system meeting the LOS objectives. There are remote locations yet without reliable communications, where networked visibility would improve efficiencies in operations and personnel safety.

Operating Impact:
 HHWP's Risk Based Decision Model assigned these assets a MEDIUM operational risk for current conditions. HHWP utilizes a centralized command and control organization located primarily in Moccasin, California at the Moccasin Control Center. From this location, System Operators monitor reservoir water surface levels, dam safety instrumentation, water flow, hydroelectric generator production, electric transmission & distribution lines, fire and life-safety systems. Operators dispatch personnel responding to routine and emergency conditions, as well as notify Management of unplanned situations, e.g. wildland fires, floods, traffic accidents, and other emergencies. Reliable communications are essential to operate the system from Yosemite National Park to the Sunol Valley near the San Francisco Bay Area.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 872,130	\$ 105,000	\$ 25,130	\$ 105,000	\$ 105,000	\$ 84,000	\$ 413,000
ER	\$ 996,720	\$ 120,000	\$ 28,720	\$ 120,000	\$ 120,000	\$ 96,000	\$ 472,000
DS	\$ 1,245,900	\$ 150,000	\$ 35,900	\$ 150,000	\$ 150,000	\$ 120,000	\$ 590,000
CM	\$ 1,245,900	\$ 150,000	\$ 35,900	\$ 150,000	\$ 150,000	\$ 120,000	\$ 590,000
CN	\$ 6,098,350	\$ 975,000	\$ 233,350	\$ 975,000	\$ 975,000	\$ 780,000	\$ 3,835,000
Total	\$ 12,459,000	\$ 1,500,000	\$ 359,000	\$ 1,500,000	\$ 1,500,000	\$ 1,200,000	\$ 5,900,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10014108
Project Title:	HHW - Canyon Tunnel Rehabilitation
Total Budget:	\$ 8,428,813
Project Start:	2/3/2014
Project Finish:	9/1/2026
Current Active Phase:	Pre-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Ala Radfar
Facility Category:	Joint Infrastructure
Type:	Capital


Description:
 Canyon Tunnel was built over 55 years ago. A condition assessment was performed on the tunnel in 2009 and the tunnel is in generally good condition with the exception of the Hetchy Adit, a tunnel access point. Temporary repairs have been made to the "plug" at this adit twice (1989, 2009), but permanent repairs are needed to reduce leakage and increase reliability of the system. Project scope includes installation of a new reinforced concrete plug downstream of the existing plug. This project is being delayed because of boundary correction issues. (MRN 2)

Justification:
 This adit is a potential failure point to an asser without comparable redundancy. This project was approved in an earlier CJR and no funding is being requested in this plan.

Operating Impact:
 Failure at the Hetchy Adit will impact water deliveries to SFPUC water customers, reducing maximum deliveries from 310 mgd to about 90 mgd (the maximum filtration capacity for Hetch Hetchy water at Sunol Valley, Water Treatment Plant).

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 114,273	\$ 0	\$ 0	\$ 114,273	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 114,273	\$ 0	\$ 0	\$ 114,273	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10014110
Project Title:	HHW - Moccasin Wastewater Treatment Plant
Total Budget:	\$ 8,794,549
Project Start:	1/2/2022
Project Finish:	4/7/2026
Current Active Phase:	Pre-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Joint Infrastructure
Type:	Capital

Description:
 The Moccasin Wastewater Treatment Plant (WWTP) provides primary treatment of wastewater from Moccasin Compound prior to discharging the treated water to a nearby spray field. The WWTP was constructed in the 1970s and has been in continuous operation since its installation. The WWTP has reached the end of its reliable service life, and is becoming increasingly maintenance intensive. The scope of work is to replace the existing plant with a package two-train sequencing batch reactor (SBR) plant with grit removal and screening facilities; upgraded electrical and flow monitoring systems, flow equalization, SCADA instrumentation and automation features, and related site improvements.

Justification:
 The useful life for mechanical and electrical equipment in treatment facilities is typically 15 to 25 years according to EPA and ASCE publications. Given the age and condition of the WWTP as well as its process and operational limitations, investing in improvements to address the individual WWTP systems and component deficiencies is not practical in comparison to installation of a new replacement plant. At more than 40-years old, the Moccasin WWTP is at the end of its useful service life, and is becoming increasingly maintenance intensive. Some of the treatment plant's operational limitations and challenges are as follows: 1) Poor upstream screening facilities, resulting in limitations for the bar screens to retain smaller materials. This has also caused operational issues and mechanical equipment failure within the bioreactor; 2) Inadequate sizing of partial flume, resulting in adverse effects from solids, rocks, grit, rags and debris during low flows; 3) Lack of a grit removal facility; 4) Lack of aeration control within the plant's aeration basin; 5) Lack of an automated monitoring/control system; 6) Settling tank has been subject to continual mechanical failures; 7) Difficulty in controlling sludge return rates; 8) Poor flow distribution from the aeration tank to clarifier; 9) Lift station minimum pump capacity is in excess of maximum effluent channel pumps at the treatment plant, resulting in the pump station overrunning the plant when flows are high and 10) Major corrosion to electrical panels, without a functioning WWTP, HHW would violate its discharge permit and Moccasin staff would be unable to carry out their operational responsibilities.

Operating Impact:
 Water LOS Goal(s) Supported: Regional Delivery Reliability
 The existing WWTP is the only wastewater plant serving the Moccasin Compound. Failure could result in discharge of untreated waste water into Moccasin Creek which flows into Don Pedro Reservoir.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 400,000	\$ 172,021	\$ 227,979	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 1,400,000	\$ 1,042,012	\$ 357,988	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 762,946	\$ 0	\$ 77,009	\$ 0	\$ 0	\$ 638,754	\$ 47,183
CN	\$ 4,710,054	\$ 0	\$ 4,576,029	\$ 0	\$ 0	\$ 134,025	\$ 0
Total	\$ 7,273,000	\$ 1,214,033	\$ 5,239,005	\$ 0	\$ 0	\$ 772,779	\$ 47,183

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10014114
Project Title:	HHW - Mt. Tunnel Imp. Project (Flow Control)
Total Budget:	\$ 118,780,350
Project Start:	10/3/2011
Project Finish:	6/3/2027
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Randy Anderson
Facility Category:	Joint Infrastructure
Type:	Capital

Description:
 Constructed between 1917-25, Mountain Tunnel (MT) is a critical, non-redundant link in the Hetch Hetchy water system, conveying SFPUC water supply from Kirkwood Powerhouse to Priest Reservoir. Due to tunnels 90 years of operation, deferred maintenance, as well as the construction deficiencies in the early 1900s, sections of the tunnel have deteriorated, some more extensively than others. MT improvements to enhance SFPUC's ability to provide reliable, high-quality water to its customers, will be carried out through three projects: 1. MT Adits & Access Improvement 2. MT Inspection and Repair 3. MT Tunnel Improvements. Mountain Tunnel Adits & Access Improvement Project will enlarge Adits 5/6 and 8/9 to accommodate quick entry of construction crews and equipment into the tunnel; and will improve access roads to the said adits. Project will also provide for the implementation of the Emergency Restoration Plan, Mountain Tunnel Inspection & Repairs Project provides for a tunnel inspection in 2017 and 2018 to reduce the risk of failures in the concrete conducted in 2008, as well as short-term repairs in 2017 and 2018 to reduce the risk of failures in the concrete lining prior to the long-term project being implemented. Mountain Tunnel Improvements Project was selected for the design and construction of the preferred engineering alternative that will keep this vital component of the Hetch Hetchy Water and Power System in reliable service for years to come. Budget and schedule is based on the Mountain Tunnel Improvements which has an anticipated construction phase between from 2020 to 2027 (M/N 238-241, 244, 245). - This is the Joint portion of the Mountain Tunnel Project.

Justification:
 A catastrophic failure, although possible, with continued tunnel degradation. The more likely type of anticipated failures are "local collapses", which would not impact power generation but would create water quality events in terms of turbidity in the water supply. The likelihood of localized collapses is moderate to high. Depending on the configuration of the system, this type of event could interrupt the delivery of the Tuolumne diversion to the RWS. Technology Policy: The project provides for reliable, high quality service, but is not specifically technology-related.

Operating Impact:
 Water LOS Goal(s) Supported: Regional Delivery Reliability
 Depending on the configuration of the system, a "local collapse" could interrupt the delivery of the Tuolumne diversion to Water Supply and Treatment. Continual degradation of the asset could lead to a catastrophic failure.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 8,259,728	\$ 0	\$ 5,291,995	\$ 856,613	\$ 1,486,112	\$ 625,008	\$ 0
CN	\$ 13,612,108	\$ 0	\$ 10,367,002	\$ 3,245,106	\$ 0	\$ 0	\$ 0
Total	\$ 21,871,836	\$ 0	\$ 15,658,997	\$ 4,101,719	\$ 1,486,112	\$ 625,008	\$ 0

SFUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10014115
Project Title:	HRW- Cherry Dam Spillway - Short Term Improvements
Total Budget:	\$ 11,860,965
Project Start:	3/1/2021
Project Finish:	7/1/2027
Current Active Phase:	Pre-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Joint Infrastructure
Type:	Capital
Description:	Cherry Spillway is a 334-foot wide ogee-type concrete weir that discharges into an unlined adjacent channel. The spillway capacity is designed for 52,000 cfs. A spill of 1,500 cfs in 2010 resulted in significant erosion damages to the unlined spill channel, large scale erosion along the western segment of Cherry Dam, flooding of the Cherry Power Tunnel Adit and a campground downstream. Engineering studies showed that remedial measures and erosion protection for the spill channel are needed to ensure spill flows from the Cherry Valley Dam spillway can be contained without uncontrolled flows that could cause erosion to the existing embankment dam. This project will address the erosion potential and needed remediation measures for the unlined spill channel to minimize damages and eliminate erosional hazards for the dam.
Justification:	The complete length of channel that passes water from the ogee side spillway to Cherry Creek is entirely unlined, which will result in continued erosion if subjected to even minimal spillway discharges. Continued erosion and wear along the right abutment of Cherry Valley Dam could lead to significant damage to downstream facilities or the eventual failure of Cherry Dam.
Operating Impact:	Water LOS Goal(s) Supported: Regional Delivery Reliability and Water Supply Failure to adequately address this issue could result in an operation restriction from DSOD reducing the maximum storage limits, increasing frequency and level of rationing for the SFUC water customers.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 41,234	\$ 41,234	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 200,000	\$ 145,977	\$ 47,701	\$ 6,322	\$ 0	\$ 0	\$ 0
DS	\$ 747,000	\$ 538,491	\$ 324,076	\$ 84,433	\$ 0	\$ 0	\$ 0
CM	\$ 1,343,250	\$ 0	\$ 0	\$ 469,347	\$ 508,102	\$ 345,073	\$ 728
CN	\$ 6,336,516	\$ 0	\$ 0	\$ 6,336,516	\$ 0	\$ 0	\$ 0
Total	\$ 8,668,000	\$ 625,702	\$ 371,777	\$ 6,916,618	\$ 508,102	\$ 345,073	\$ 728


SFUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10014116
Project Title:	HRW- Joint Project Development
Total Budget:	\$ 32,183,767
Project Start:	6/25/2012
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Joint Infrastructure
Type:	Capital
Description:	The Project Development (PD) Account captures Program level expenditures. There are four types of charges that will be allocated to the PD Account: 1) Task orders for overall program management and project prioritization tasks, where the costs should be distributed over all CIP Projects. 2) Infrastructure and Hetchy staff performing program level tasks including: capital plan development, budget management (including fund management, and cost reallocations); Unifier and Quarterly Report generation tasks, where the costs should be distributed over all CIP Projects. 3) Portal support for the existing SharePoint Portal (includes document management and project dashboard reporting) 4) Work Outreach program
Justification:	The Project Development Account (PD Accounts) funds the capital improvement administrative staff, the project management staff and the professional services that could not be defined to one project detail as the charges would span across the overall program.
Operating Impact:	Water LOS Goal(s) Supported: To be determined as projects are developed. Programmatic support is an integral part of the capital program.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 24,342,000	\$ 2,273,000	\$ 2,352,000	\$ 2,435,000	\$ 2,520,000	\$ 2,608,000	\$ 10,150,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 24,342,000	\$ 2,273,000	\$ 2,352,000	\$ 2,435,000	\$ 2,520,000	\$ 2,608,000	\$ 10,150,000

SFPUC Capital Project Plan
 Hetch Hetchy Enterprise
 Hetch Hetchy Water




Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10030759
Project Title:	HHW - Eleanor Dam Rehabilitation
Total Budget:	\$ 28,606,555
Project Start:	10/2/2023
Project Finish:	8/19/2031
Current Active Phase:	
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Joint Infrastructure
Type:	Capital
Description:	Eleanor Dam is a multiple arch reinforced concrete dam that was constructed in the 1920's. Our 2015-16 Needs Assessment Report(NAR) identified deterioration and aging of the structure, inadequate spillway capacity, and dam safety concerns. Specifically, structural/seismic concerns regarding the Eleanor Bridge, cracking and spalling of concrete, exposed rebar, significant leakage through the arch barrels, cracks and erosion of the spillway concrete, and insufficient spillway capacity to pass the updated design flood. Projects have been prioritized by risk. Existing capital funding is being requested(CUH102 N04, HHW - Bridge Replacement) to immediately address the Eleanor Bridge structural/seismic concerns of the arch dam. This project will address remaining deficiencies. Mitigation alternatives may include solutions such as improvements to increase the spill capacity to safely pass the updated design flood, installation of a liner on the upstream face of the dam, pressure grouting, concrete repairs, valve replacement, and installation of concrete lining and riprap.

Justification:
 The SFPUC is legally and ethically responsible to develop and maintain mature dam safety management program. This project is to meet this objective.

Operating Impact:
 Water LOS Goal(s) Supported: Regional Delivery Reliability and Regional Seismic Reliability
 Loss of operational functionality will likely result in reduction of maximum storage levels. Loss of water storage would impact the frequency and level of rationing for our SFPUC water customers. In addition, generation produced by water stored behind this dam contributes to about 13% of HHWP's annual generation.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 967,387	\$ 0	\$ 851,720	\$ 115,667	\$ 0	\$ 0	\$ 0
ER	\$ 1,465,578	\$ 0	\$ 0	\$ 1,155,573	\$ 310,005	\$ 0	\$ 0
DS	\$ 2,956,095	\$ 0	\$ 34,216	\$ 45,989	\$ 2,506,986	\$ 308,127	\$ 260,777
CM	\$ 3,909,546	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,909,546
CN	\$ 19,279,394	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 19,279,394
Total	\$ 28,578,000	\$ 0	\$ 885,936	\$ 1,61,656	\$ 3,462,559	\$ 618,132	\$ 23,449,717

SFPUC Capital Project Plan
 Hetch Hetchy Enterprise
 Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10034501
Project Title:	HHW - R&R Power Distribution Improvements
Total Budget:	\$ 9,294,588
Project Start:	1/1/2020
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Blake Rothflus
Facility Category:	Joint Infrastructure
Type:	Capital

Description:
 SCOPE: Deliver capital improvement projects to sustain the reliability of the SFPUC's electric distribution assets from the generator stepup transformer across distribution lines to SFPUC facilities.

PROJECT DESCRIPTION: The HHWP has developed a program to extend the life of these electric distribution assets prior to wholesale replacement. The program will include inspections, condition assessments, design, environmental evaluations, and construction when appropriate to sustain the reliability of the electric distribution system with capital improvements. Electricity flows across conductors, switches, circuit breakers, fuses, capacitors, transformers, relays, to SFPUC facilities distributed from Yosemite National Park to the San Joaquin Valley. This project funds: load studies and condition assessments to evaluate current and future needs; replacement of failing systems designed to meet current/future needs; and procure critical spare equipment to ensure reliable 24/7 water and power operations at Moccasin Compound and remote sites.

ASSETS: Represented asset families include: electric switchyards, substations, transformer decks; bus structures; circuit breakers; transformers; relays; capacitors; conductors; poles; cross-arms, tie-backs; anchors, dead-ends; insulators; connectors; instrumentation & control systems; SCADA.


HHWP maintains several power distribution systems (<100 kV) to provide power to Moccasin Compound and remote operation sites(mainly Early Intake, Cherry and O'Shaughnessy). These systems are made up of transformers for service connections. With the exception of about 40% of the poles and conductor up-country which was replaced following the Rim Fire, the remaining system has exceeded its life expectancy, resulting in multiple failures at Moccasin Camp last year. In addition, new loads to support operations at Moccasin Compound and remote sites(e.g., UV systems, Moccasin Fish Hatchery Recirculation System, new buildings/offices) are taxing the current system, requiring mitigation.

Justification:
 These electric distribution assets are essential for meeting the Regional Water Delivery Reliability Level of Service and meeting HHWP Operational Objectives for Power Generation. Many of these facilities and infrastructure were constructed in the early 1900's to facilitate the construction of the Hetch Hetchy Regional Water System. Interruptions in power delivery to facilities interrupts water and power system supervisory and control processes, impedes worker productivity, interrupts computing processes at locations ONLY SERVED by SFPUC. No other electric distribution utility service is available at the remote locations, e.g. SFPUC camps at Cherry, O'Shaughnessy, Early Intake, Moccasin. Capital improvements are needed to power existing facilities, reduce wildland fire risk, resolve non-standard electric distribution conditions, and increase operational flexibility.

Operating Impact:
 HHWP's Risk Based Decision Model assigned these assets a MEDIUM operational risk for current conditions. Not all HHWP offices have emergency generators. Failure to maintain these assets affects staffs ability to perform their job, placing existing Water Enterprise Levels of Service at risk.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 399,000	\$ 52,500	\$ 14,000	\$ 12,250	\$ 98,000	\$ 91,000	\$ 19,000
ER	\$ 456,000	\$ 60,000	\$ 16,000	\$ 14,000	\$ 112,000	\$ 104,000	\$ 56,000
DS	\$ 570,000	\$ 75,000	\$ 20,000	\$ 17,500	\$ 140,000	\$ 130,000	\$ 70,000
CM	\$ 570,000	\$ 75,000	\$ 20,000	\$ 17,500	\$ 140,000	\$ 130,000	\$ 70,000
CN	\$ 3,705,000	\$ 487,500	\$ 130,000	\$ 113,750	\$ 910,000	\$ 845,000	\$ 1,105,000
Total	\$ 5,700,000	\$ 750,000	\$ 200,000	\$ 175,000	\$ 1,400,000	\$ 1,300,000	\$ 1,700,000


SFPU Capital Project Plan
 Hetch Hetchy Enterprise
 Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10035086
Project Title:	HHW - Bridge Replacement (4 Bridges)
Total Budget:	\$ 29,370,881
Project Start:	2/27/2020
Project Finish:	7/1/2027
Current Active Phase:	Pre-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Joint Infrastructure
Type:	Capital
Description:	HHWP is responsible for maintaining 14 bridges located in the Cherry, Eleanor and Hetch Hetchy region. Condition assessment has identified the need for rehabilitation and/or replacement (age and to meet current seismic design criteria). Four of the fourteen bridges require substantial modification or replacement and have been combined into this project. This project includes rehabilitation and/or replacement of Cherry Lake Road Bridge (public access); Early Intake Bridge (public access); O'Shaughnessy Adit Access Bridge; and Lake Eleanor Dam Bridge. Due to limited funding, the current project is funded to include two bridges only: O'Shaughnessy Adit Access Bridge and Lake Eleanor Dam Bridge. Additional funding to address Cherry Lake Road Bridge and Early Intake Bridge is needed, and will be addressed in the next capital plan. The Lake Eleanor Dam Bridge is a structural component of the Lake Eleanor Dam which is integral to the structural/seismic integrity of the arch dam and should be addressed immediately. The O'Shaughnessy Adit Access Bridge was built in 1960. It is approximately 84 feet long and is a four-span simply supported bridge with a timber deck and concrete piers. It is located right at the downstream of O'Shaughnessy Dam and provides one land two-way access to Canyon Tunnel. Necessary compliance and safety improvements must be performed for these bridges that are used by HHWP staff and the general public. Failure of these bridges restricts access to certain HHWP facilities.
Justification:	
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 7,712,208	\$ 0	\$ 9,917,228	\$ 3,794,980	\$ 0	\$ 0	\$ 0
CN	\$ 15,316,673	\$ 0	\$ 7,900,858	\$ 7,515,815	\$ 0	\$ 0	\$ 0
Total	\$ 23,028,881	\$ 0	\$ 11,718,086	\$ 11,310,795	\$ 0	\$ 0	\$ 0

SFPU Capital Project Plan
 Hetch Hetchy Enterprise
 Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	(N/A)
Project Title:	HHW - O'Shaughnessy Dam Outlet Works Phase II
Total Budget:	\$ 112,223,000
Project Start:	10/2/2023
Project Finish:	12/16/2031
Current Active Phase:	
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Joint Infrastructure
Type:	Capital
Description:	O'Shaughnessy Dam (OSD) was completed in 1923 and raised in 1938. A condition assessment of the dam outlet works revealed the need for improvements to the existing outlet works system at OSD, including the gates and valves that have been in service for over 90 years, to ensure safe and reliable operation. Based on the engineering studies and prioritization of the asset condition, needs, and risks, improvements to the existing outlet works will be implemented in two phases (Phase 1 & 2). The O'Shaughnessy Dam Outlet Works Phase 1 Project is described under Project Number 10032903 and is currently in the planning and design phases. The O'Shaughnessy Outlet Works Phase 2 project will begin in 2024 and will include the following: (1) replacement of six 60-inch and one 72-inch discharge needle valves; (2) refurbishment of one 72-inch discharge butterfly valve; (3) rehabilitation of three drum gates; (4) refurbishment of twelve slide gates; (5) installation of a new diversion pipe isolation valve; and (6) improvements for the diversion tunnel. The SFPU is legally and ethically responsible to develop and maintain mature dam safety management program. This project is to meet this objective.
Justification:	
Operating Impact:	Water LOS Goal(s) Supported: Regional Delivery Reliability and Water Supply Loss of operational functionality will likely result in reduction of maximum storage levels. Loss of water storage would impact the frequency and level of rationing for our SFPU water customers.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 2,759,863	\$ 0	\$ 557,267	\$ 1,105,689	\$ 1,096,907	\$ 0	\$ 0
ER	\$ 919,955	\$ 0	\$ 115,914	\$ 229,989	\$ 229,989	\$ 229,989	\$ 114,074
DS	\$ 4,649,772	\$ 0	\$ 581,899	\$ 1,154,561	\$ 1,167,546	\$ 1,173,218	\$ 572,548
CM	\$ 11,897,289	\$ 0	\$ 170,812	\$ 338,913	\$ 640,302	\$ 2,132,895	\$ 6,614,367
CN	\$ 91,996,121	\$ 0	\$ 0	\$ 0	\$ 2,739,901	\$ 1,308,935	\$ 87,947,285
Total	\$ 112,223,000	\$ 0	\$ 1,425,892	\$ 2,829,152	\$ 5,874,645	\$ 4,845,037	\$ 87,248,274

SFPUC Capital Project Plan
Hech Hetchy Enterprise
Hech Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10037077
Project Title:	HHW - Moccasin Old Powerhouse Hazard Mitigation
Total Budget:	\$ 12,167,000
Project Start:	1/1/2021
Project Finish:	1/31/2025
Current Active Phase:	Pre-Construction
Organization:	Hech Hetchy Water
Project Manager:	Tom Walker
Facility Category:	Joint Infrastructure
Type:	Capital
Description:	The Moccasin Old Powerhouse was constructed in 1926 and was abandoned in 1960's. The building has multiple structural and non-structural issues including cracks, scouring and spalling of structural concrete, water intrusion, broken windows, settlement, hazardous materials, seismic deficiencies, etc. The project is to design and install mitigation measures to prevent the building from collapsing and to prevent hazardous materials (such as lead based paint (LBP) and asbestos) from contaminating the water in Moccasin Reservoir. Project is funded through Design through FY2022.
Justification:	This project is to ensure the safety and water quality objectives.
Operating Impact:	If no suitable hazard mitigation actions are taken, the existing building will continue to deteriorate and increase the risks of collapse and water contamination.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 885,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 8,500,000	\$ 1,115,000	\$ 7,385,000	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 9,385,000	\$ 2,000,000	\$ 7,385,000	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hech Hetchy Enterprise
Hech Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	(N/A)
Project Title:	HHW - Cherry Dam Spillway and Intake Tower Rehab
Total Budget:	\$ 0
Project Start:	10/1/2026
Project Finish:	6/29/2035
Current Active Phase:	
Organization:	Hech Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Joint Infrastructure
Type:	Capital
Description:	This project is needed for dam safety. Engineering evaluations by Stantec engineering consultant in February 2019 identified the following deficiencies that require remediation measures: (1) the intake tower structure requires seismic reinforcement and structural concrete repairs; (2) the intake tunnel requires tunnel lining repair, replacing the butterfly valve, and access improvement; and (3) the existing spillway capacity of 52,000 cubic feet per second (cfs) is not sufficient to pass the updated design flood of 85,000 cfs. This project will increase the spillway capacity to safely pass the updated design flood without overtopping the existing embankment dam; improve the intake tower structure to withstand the design seismic loadings; and improve the outlet tunnel deficiencies.
Justification:	This project is to ensure long term dam safety and reliable water delivery.
Operating Impact:	Water LOS Goal(s) Supported: Regional Delivery Reliability and Regional Seismic Reliability The Needs Assessment report has shown that the Cherry Dam Intake tower is unstable and structurally in question. Design models show failure during the Maximum Credible Earthquake and would result in failure of the intake tower, limiting HHWP's ability to lower the reservoir elevation during normal operation and in case of an emergency. The Needs Assessment Report also shows that the Cherry Dam Spillway is not capable of passing the updated design flood and will not meet regulatory requirements. Design models have identified conditions that will lead to overtopping and erosion of the earth fill dam. Increasing the spillway channel capacity is required to eliminate overtopping and to prevent dam failure. If unresolved, DSOC will impose an operating restriction on the dam that will limit power generation and water deliveries.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10014088
Project Title:	HHW - Moccasin Penstock Rehabilitation
Total Budget:	\$ 47,251,363
Project Start:	2/1/2016
Project Finish:	2/28/2028
Current Active Phase:	Pre-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Ala Radfar
Facility Category:	Joint Infrastructure
Type:	Capital

Description: Moccasin Penstock was built in the early 1920's and conveys water from Moccasin Tunnel to Moccasin powerhouse. A Condition Assessment Report, Phase I was submitted in 2011 by CH2MHill. The reports identified numerous deficiencies. The penstocks contain segments of hammer forged welded steel (HFWS) that has experienced failures in the past. This type of HFWS pipe has a history of brittle fracture failure at both Pacific Gas & Electric and Southern California Edison Penstocks. In addition, issues have been identified regarding the anchor/saddle system with respect to Alkali Reactive Silica which degrades the concrete. An Alternative Analysis Report and a Design Criteria report were submitted by MWH/Sintec in 2016. Due to lack of funds in the previous budget cycle, the project scope was reduced to limit the repair to one penstock. The design of the rehabilitation work for one penstock was completed and went out for bid. Because of the 2018 March Storm event and concerns about the isolation point at West Portal, the construction contract was terminated before the contractor started work. In view of long term asset reliability, HHWP decides to revisit the scope to include the rehabilitation work of both penstocks and other upgrade. The proposed new scope of this project includes rehabilitation of anchors blocks, penstock coating, penstock saddle, air valves, large diameter butterfly valves, bifurcation sections and flow meters, and upgrade of electrical system, power transformers, standby generator in the West Portal Valve House, and bulkhead isolation valves in the surge tower. The proposed project budget detailed below does not include the replacement of all HFWS pipes. This project will continue with the planning phase in FY2018-19 and further investigate if the HFWS in its' current condition meets the 100-year life span criteria. The existing allocated funds will be sufficient through Planning and Design Phases. The additional funding request is for additional scope in construction.

Justification: The goal is to provide a reliable redundant conveyance with a 100-year life span. The project is also required to meet HHWP's Operational Objectives for Power including Power System Reliability.

Operating Impact: Water, LOS Goal(s) Supported: Regional Delivery Reliability and Water Supply
 Failure of the Penstock will cause flooding, jeopardizing the safety of HHWP employees in Moccasin as well as damage to Moccasin facilities. There are two penstocks which provide for system redundancy for SFPUC water deliveries and power generation. If one penstock were to fail, this would reduce system redundancy.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 2,550,075	\$ 0	\$ 0	\$ 838,956	\$ 635,635	\$ 635,635	\$ 439,849
CN	\$ 34,040,925	\$ 0	\$ 0	\$ 27,736,724	\$ 6,304,201	\$ 0	\$ 0
Total	\$ 36,591,000	\$ 0	\$ 0	\$ 28,575,680	\$ 6,939,836	\$ 635,635	\$ 439,849

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10037951
Project Title:	HHW - Moccasin Dam & Reservoir Long Term Impv
Total Budget:	\$ 73,176,231
Project Start:	5/3/2021
Project Finish:	6/30/2028
Current Active Phase:	Pre-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Water Infrastructure
Type:	Capital


Description: This project is needed for dam safety. A heavy storm event in 2018 caused significant damages to the auxiliary spillway, upstream trash rack and diversion, and downstream area. Subsequent engineering studies concluded that improvements are needed to increase the spillway capacity to safely pass the updated design flood without overtopping the existing embankment dam. This project will construct a new concrete spillway with adequate flow capacity along the alignment of the existing auxiliary spillway.

Justification: This project is to ensure water quality, reliable water delivery, and dam safety.

Operating Impact: Water, LOS Goal(s) Supported: Water Quality and Regional Delivery Reliability
 The 2018 March Storm caused significant damage to the Moccasin diversion dam, Moccasin auxiliary spillway and the surrounding areas. The storm event almost overtopped the Moccasin Dam and caused emergency evacuation of the downstream areas. Without the Moccasin Reservoir, it will limit HHWP's ability to handle turbidity issues and would increase the likelihood of water delivery interruptions due to short term emergency shutdowns of the Hetch Hetchy Regional Water System (HHRWS).

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 4,656,813	\$ 500,000	\$ 2,922,770	\$ 1,234,043	\$ 0	\$ 0	\$ 0
DS	\$ 2,763,981	\$ 300,000	\$ 1,597,597	\$ 666,384	\$ 0	\$ 0	\$ 0
CM	\$ 11,706,615	\$ 200,000	\$ 5,12,857	\$ 2,445,134	\$ 3,368,944	\$ 668,944	\$ 4,509,736
CN	\$ 45,677,591	\$ 0	\$ 0	\$ 20,677,591	\$ 25,000,000	\$ 0	\$ 0
Total	\$ 64,805,000	\$ 1,000,000	\$ 5,033,224	\$ 25,224,152	\$ 28,368,944	\$ 668,944	\$ 4,509,736

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10037304
Project Title:	HHW - R&R Power Distrib Line High Risk Fire Reduct
Total Budget:	\$ 10,608,000
Project Start:	4/1/2021
Project Finish:	6/30/2033
Current Active Phase:	Pre-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Blake Rothfuss
Facility Category:	Joint Infrastructure
Type:	Capital

Description:
 SCOPE: Deliver electric distribution system capital improvements to reduce wildland fire risk.
 PROJECT DESCRIPTION: HHWP owns and maintains multiple power distribution lines, including nearly 800 power distribution poles that are located upcountry in and around the Stanislaus National Forest and Yosemite National Park. The power distribution lines are necessary to power infrastructure located at Eleanor, Cherry, Early Intake, Hetch Hetchy, and Camp Mather. This project will design and construct projects that will reduce the SFPUC's risk associated with fires in these remote, heavily forested areas. Fire prevention solutions in high-risk fire areas include re-conductoring, increasing safe-clearance distances, undergrounding conductors, and developing alternative power sources to avoid energizing overhead electric distribution lines during high fire danger periods. The program will include inspections, condition assessments, studies, designs, renewals and replacement, construction of new risk reduction assets.

Justification:
 ASSETS: Represented asset families include: Transformers, circuit breakers, capacitors, switches disconnects, poles, cross-arms, guy wires, anchorages, fuses, surge arrestors, insulators, conductors, SCADA. This project is essential for meeting the Environmental Stewardship, Drinking Water Quality, and Regional Delivery Reliability Levels of Service.

Operating Impact:
 Increased electric distribution reliability
 Decreased use of diesel powered portable generators
 Decreased ash and soot deposits on watershed lands
 Decreased wildland fire liability

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 339,500	\$ 0	\$ 210,000	\$ 17,500	\$ 14,000	\$ 14,000	\$ 70,000
ER	\$ 388,000	\$ 0	\$ 240,000	\$ 20,000	\$ 16,000	\$ 16,000	\$ 80,000
DS	\$ 485,000	\$ 0	\$ 300,000	\$ 25,000	\$ 20,000	\$ 20,000	\$ 100,000
CM	\$ 485,000	\$ 0	\$ 300,000	\$ 25,000	\$ 20,000	\$ 20,000	\$ 100,000
CN	\$ 3,152,500	\$ 0	\$ 1,950,000	\$ 162,500	\$ 130,000	\$ 130,000	\$ 650,000
Total	\$ 4,850,000	\$ 0	\$ 3,000,000	\$ 250,000	\$ 200,000	\$ 200,000	\$ 1,000,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10037305
Project Title:	HHW - R&R HH Reservoir Boat Ramp & Access Improve
Total Budget:	\$ 2,069,000
Project Start:	3/1/2021
Project Finish:	2/28/2022
Current Active Phase:	Pre-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Blake Rothfuss
Facility Category:	Joint Infrastructure
Type:	Capital

Description:
 SCOPE: Improve the existing O'Shaughnessy (OSH) boat ramp to provide reliable all-season access to the reservoir for HHWP Operations and Law Enforcement activities.
 PROJECT DESCRIPTION: Assess the condition of the existing access road, boat ramp, and floating dock, develop an alternatives analysis and preferred recommendation, design and permit improvements, and construct the permitted design.

Justification:
 ASSETS: Represented asset families include: Hetch Hetchy Reservoir boat ramp, boat ramp access road, boat dock and anchorage system.
 The all-season O'Shaughnessy (OSH) Boat Ramp is essential for meeting the Water Quality Level of Service. The all-season boat ramp is necessary to access the reservoir to perform water quality monitoring and sampling to meet regulatory requirements. The boat ramp also is required for law enforcement to access the reservoir to enforce National Park security and regulatory requirements to the reservoir and inflow reservoirs and creeks.

The existing boat ramp is a one-way steep, narrow, gravel, single lane access road and ramp connecting the reservoir with the main service road. The access road and ramp are used to place and retrieve boats, maintain the boats, and use the boats year-round. The boat ramp surface and retaining walls (gabion baskets) have deteriorated producing a difficult access for personnel to safely traverse either in single vehicles or when backing a trailered boat along the road.
 HHWP's Risk Based Decision Model assigned these assets a LOW operational risk for current conditions.

Operating Impact:
 All-season access to the boat dock provides safe and secure water quality sampling and law enforcement services.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 212,000	\$ 212,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 1,315,000	\$ 1,315,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 1,527,000	\$ 1,527,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10032903
Project Title:	HRW - O'Shaughnessy Dam Outlet Works Phase 1
Total Budget:	\$ 47,894,099
Project Start:	2/1/2018
Project Finish:	9/17/2025
Current Active Phase:	Pre-Construction
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Joint Infrastructure
Type:	Capital

Description: O'Shaughnessy Dam (OSD) was completed in 1923 and raised in 1938. A condition assessment of the dam outlet works revealed the need for improvements to the existing outlet works including the gates and valves, that have been in service for over 90 years, to ensure safe and reliable operation. Based on engineering studies and prioritization of the asset condition, needs, and risks, improvements to the existing outlet works will be implemented in two Phases (Phase 1 & 2). Funding for this project will include work under Phase 1 to include: (1) replacement of the existing two instream flow release valves; (2) improvement to access and drainage in the dam gallery and stairs; (3) installation of new bulkheads for the outlet intake; and (4) the planning phase and scoping for the slide gates and drum gates improvements. Phase 2 of the O'Shaughnessy Dam Outlet Improvement Project will begin in 2024 and will include the replacement and/or refurbishment of the eight discharge valves, rehabilitation of three drum gates, and improvements for the diversion tunnel, a new diversion pipe isolation valve, and improvements for the dam safety management program. This project is to meet this objective.

Justification: Loss of operational functionality will likely result in reduction of maximum storage levels. Loss of water storage would impact the frequency and level of rationing for our SFPUC water customers.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 3,545,988	\$ 0	\$ 1,827,344	\$ 1,718,654	\$ 0	\$ 0	\$ 0
CN	\$ 12,172,656	\$ 2,000,000	\$ 10,172,656	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 15,718,654	\$ 2,000,000	\$ 12,000,000	\$ 1,718,654	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10014113
Project Title:	Mountain Tunnel Inspection
Total Budget:	\$ 23,500,000
Project Start:	3/27/2015
Project Finish:	12/2/2019
Current Active Phase:	Post-Construction
Organization:	Hetch Hetchy Water
Project Manager:	David Tszto
Facility Category:	Joint Infrastructure
Type:	Capital

Description: The objective of this project is to assess the current condition of the Mountain Tunnel and complete any urgent interim repairs to reduce the risk of tunnel lining failure until the completion of the long-term Mountain Tunnel Improvements project in 2026. The project consists of:
 • A tunnel inspection in 2017 to update the Condition Assessment conducted in 2008; and
 • Short term repairs in 2017 and 2018-19 to reduce the risk of failures in the concrete lining.

Justification: This project was approved in an earlier CIP and no funding is being requested in this plan.

Operating Impact: N/A

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hech Hetchy Enterprise
Hech Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10014112
Project Title:	Mountain Tunnel Access/Adit Im
Total Budget:	\$ 10,500,000
Project Start:	10/30/2011
Project Finish:	3/30/2018
Current Active Phase:	Post-Construction
Organization:	Hech Hetchy Water
Project Manager:	David Tszoo
Facility Category:	Joint Infrastructure
Type:	Capital
Description:	To meet water delivery goals and address the critical nature of the potential impact on water delivery commitments, the Mountain Tunnel must be capable of return to service within three months in the event of an interruption in water service. In order to accommodate quick entry of construction crews and equipment into Mountain Tunnel, improvements at Adit 576 and 819 access roads and adits will be constructed to minimize the time required to return the tunnel to service. An Emergency Restoration Plan (ERP) will be established for basic restoration plans and procedures. The monitoring system currently assessing changing conditions in the tunnel will be enhanced to complement the existing system. The emergency implementation component will be produced at the completion of the access and adit improvements.
Justification:	This project was approved in an earlier CIP and no funding is being requested in this plan.
Operating Impact:	N/A

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hech Hetchy Enterprise
Hech Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	10030758
Project Title:	UH O'sh Dam Access & Drainage
Total Budget:	\$ 3,952,211
Project Start:	1/4/2021
Project Finish:	2/28/2023
Current Active Phase:	Construction
Organization:	Hech Hetchy Water
Project Manager:	Tim Paikan
Facility Category:	Joint Infrastructure
Type:	Capital
Description:	The key objective of this project is to fall protection safety for Hech Hetchy Water and Power (HHWP) operators inside the O'Shaughnessy Dam by installing fall protection systems that are in conformance with the updated Occupational Safety and Health Administration (OSHA) requirements, including ladders and landings with safety cage and/or fall restraint systems.
Justification:	This project was approved in an earlier CIP and no funding is being requested in this plan.
Operating Impact:	N/A

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15364-UH Hetchy Water - Power Infras
Authority Level 2:	15364-UH Hetchy Water - Power Infras
FSP ID	10039964
Project Title:	Joint Projects - Power Bonds
Total Budget:	\$ 1,179,575
Project Start:	7/1/2021
Project Finish:	6/30/2022
Current Active Phase:	Not Started
Organization:	Hetch Hetchy Water
Project Manager:	
Facility Category:	Power Infrastructure
Type:	Capital
Description:	The project funds financing costs for Commercial Paper and other Debt issuances for the Power Portion of the capital improvements for Joint funded Hetchy Water assets
Justification:	N/A
Operating Impact:	N/A

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Projec
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	(N/A)
Project Title:	HHW - Moccasin Engineering and Records Building
Total Budget:	\$ 1,500,000
Project Start:	10/2/2023
Project Finish:	12/30/2030
Current Active Phase:	
Organization:	Hetch Hetchy Water
Project Manager:	Jimmy Leong
Facility Category:	Joint Infrastructure
Type:	Capital

Description:
 Hetch Hetchy Water and Power (HHWP) is a division of the San Francisco Public Utilities Commission (SFPUC) responsible for operation of the Hetch Hetchy Regional Water System and the generation of energy for the SFPUC. HHWP is headquartered at Moccasin Camp with facilities including buildings, office trailers, warehouses, shops, laboratories, and sheds. Many of the existing facilities are deteriorating, do not meet current building codes, and are incurring increased maintenance costs. HHWP needs to invest in new facilities to meet all applicable codes and standards, reduce maintenance costs, increase employee interconnectivity, properly store all staff, materials, Records, and equipment, and meet energy efficiency standards. HHWP prepared a report titled "The Moccasin Facilities Upgrade Project - Alternatives Analysis and Evaluation Report Update (AECOM WRE JV, July, 2020)". The report identified long-term needs for creating adequate office space for current staff in Moccasin, as well as future staff hires. In addition, the report evaluated the needs for a new, dedicated materials storage space, a new Records and Archives space with offices, new space for servers currently stored in the basement of the existing Administration Building, and increased parking space for staff. The Moccasin Engineering and Records Building project will address these long-term needs, with the exception of materials storage, by constructing a 25,000 square foot, two-story building in the area where the current Engineering, Records, and Energy Services trailers are currently located.

Justification:
 HHWP Maintenance Engineering staff and archiving facility currently reside in trailers which are beyond their design life and need frequent repairs. A permanent building is needed to provide adequate office and achieving spaces to meet the long-term needs.
 Water LOS Goal(s) Supported: Regional Delivery Reliability.
 Insufficient office and archiving spaces will reduce work efficiency and causing difficulties to retain talent in Moccasin.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,500,000	\$ 750,000	\$ 750,000	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 1,500,000	\$ 750,000	\$ 750,000	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	(N/A)
Project Title:	HHW - R&R Water Conveyance Life Extension (Joint)
Total Budget:	\$ 2,600,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Hetch Hetchy Water
Organization:	Blake Rothflus
Project Manager:	
Facility Category:	Joint Infrastructure
Type:	Capital

Description:
SCOPE: Deliver capital improvement projects to sustain the reliability of the SFPUC's water conveyance assets from the reservoir intake structure/lower or dam's isolation valve to the powerhouse turbine isolation valves.

PROJECT DESCRIPTION: The HHWP has developed a program to extend the life of these assets prior to wholesale replacement. The program will include inspections, condition assessments, design, environmental evaluations, and construction when appropriate to sustain the reliability of the water conveyance assets with capital improvements. Water is conveyed from upcountry reservoirs to the hydroelectric powerhouses via a network of tunnels, pipelines, penstocks and canals, through valves, gates, portals, penstocks and reservoir bypasses.

NOTE: This project addresses reliability improvements for water conveyance from Eleanor, Cherry, and O'Shaughnessy reservoirs to Kirkwood and Meccaain Powerhouses. The R&R Water Conveyance Life Extension (Water & Power) and the S&PL Life Extension Project address reliability improvements for other segments of the Regional Water System.

ASSETS: Facilities classified as water conveyance assets include the Lower Cherry Aqueduct, Cherry Pump Station, pipes, and discharges; Canyon Tunnel and adits; Canyon Portal; Mountain Tunnel Headgates; Early Intake Bypass; Mountain Tunnel Diversion Access at Early Intake; Mountain Tunnel shafts and adits; South Fork Crossing and adits; Priest Reservoir Bypass; overflow shafts, surge shafts; sand traps; valves, gates & actuators; power systems; instrumentation & controls; SCADA.

These linear water conveyance assets are essential for meeting the Regional Delivery Reliability Levels of Service. Redundant water conveyance capacity does not exist.

Most of the SFPUC's water conveyance system was commissioned in 1923 and are operating well beyond the original service life. Proactive evaluation of water conveyance assets and planned capital investments reduces the water delivery curtailments and interruptions in water delivery.

Operating Impact:
HHWP's Risk Based Decision Model assigned these assets a HIGH operational risk for current conditions. Loss or reduced capacity of any one of these facilities would impair the ability of the SFPUC to deliver water to the Regional Water System customers.

This project will ensure continued delivery capability of the Hetch Hetchy Aqueduct, and increase the lifespan of components of the aqueduct via identification, evaluation, and remediation of facilities in need of repair.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 182,000	\$ 70,000	\$ 0	\$ 0	\$ 35,000	\$ 0	\$ 77,000
ER	\$ 208,000	\$ 80,000	\$ 0	\$ 0	\$ 40,000	\$ 0	\$ 88,000
DS	\$ 260,000	\$ 100,000	\$ 0	\$ 0	\$ 50,000	\$ 0	\$ 110,000
CM	\$ 260,000	\$ 100,000	\$ 0	\$ 0	\$ 50,000	\$ 0	\$ 110,000
CN	\$ 1,680,000	\$ 650,000	\$ 0	\$ 0	\$ 325,000	\$ 0	\$ 715,000
Total	\$ 2,600,000	\$ 1,100,000	\$ 0	\$ 0	\$ 500,000	\$ 0	\$ 1,100,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15365-UH Hetchy Water - Joint Project
Authority Level 2:	15365-UH Hetchy Water - Joint Project
FSP ID	(N/A)
Project Title:	HHW - Wildfire Mitigation
Total Budget:	\$ 30,948,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Not Started
Organization:	Hetch Hetchy Water
Project Manager:	Margaret Hamatford
Facility Category:	Joint Infrastructure
Type:	Capital

Description:
Wildfire Mitigation along the Hetch Hetchy Right of Way.

Justification:
This project will also fund Wildfire Mitigation program management costs – including salaries, project management, environmental review, contract development and contract management costs for tree and vegetation removal. This project will also create defensible space, and fire-breaks along the Hetch Hetchy Right of Way and system of assets.

Operating Impact:
In 2016, California State Senate Bill (SB) 1028 was passed into law, creating a requirement that all public and private utilities and corporations assess the geographical location of their overhead electrical lines and equipment relative to areas determined to have significant risk of catastrophic wildfires resulting from electrical lines and equipment.

The SFPUC owns assets in areas designated by Cal Fire as "High Fire Threat Zones". To mitigate the threats of Wildfire posed by its overhead lines, Hetch Hetchy Water maintains a Wildfire Mitigation plan.

Additionally, PRC 4291 – Stipulates that a person (private individual, organization, partnership, limited liability company, or corporation) that owns, leases, controls, operates or maintains buildings or structures in mountainous areas, forest-covered, brush-covered, grass-covered, or land that is covered with flammable material shall at all times do the following:

- a. Maintain defensible space of 100 feet from each side and from the front and rear of the structure, but not beyond the property line.
- b. Remove that portion of a tree that extends within 10 feet of the outlet of a chimney or stovepipe.
- c. Maintain a tree, shrub, or other plant adjacent to or overhanging a building free of dead or dying wood.
- d. Maintain the roof of a structure free of leaves, needles, or other vegetative materials.

Similar to how PRC 4291 provides defensible space around buildings, shaded fuel breaks act as a defensible landscape to reduce fire speed and severity and improve suppression by ground and air fire crews. Fuel breaks accomplish this by controlling fire behavior by reducing ladder fuels (fuels low to the ground that can cause the fire to "ladder" up trees and vegetation and spread across tree tops), opening up the forest canopy, and reducing ground fuels. Fuel breaks are not designed to control a fire, rather to provide points of access to control the flanks of a fire and provide possible backfire action in the face of an advancing fire head.

The project includes fuel breaks and defensible space projects around SFPUC facilities and Right of Way lands.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 7,882,126	\$ 554,723	\$ 557,403	\$ 616,000	\$ 649,000	\$ 681,000	\$ 3,924,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 27,556,874	\$ 2,345,277	\$ 2,385,597	\$ 2,472,000	\$ 2,595,000	\$ 2,722,000	\$ 11,444,000
Total	\$ 35,439,000	\$ 2,900,000	\$ 2,943,000	\$ 3,090,000	\$ 3,244,000	\$ 3,403,000	\$ 15,368,000

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

Hetch Hetchy Enterprise

Fiscal Years 2023-2032

Ten Year CIP

Programmatic Projects

January 20, 2022

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15375-UH SI Electrical Reliability-1
Authority Level 2:	
FSP ID	(NA)
Project Title:	SF Electric Reliability-Trans Bay Cable Funding
Total Budget:	\$ 0
Project Start:	
Project Finish:	
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Jamie Seidel
Facility Category:	Program - Project
Type:	Programmatic

Description:
 In its Operating License, TransBay Cable (TBC) is obligated to make annual payments of \$2 million for 10 years, from late 2010 through late 2020, to be paid in 10 separate installments (subject to CPI) commencing 30 days following commercial operation of the cable. In Resolution No 414-07, the Board of Supervisors approved the terms of the (TBC) Operating License, and provided direction on how these funds would be appropriated. Per 414-07, the SFPUC shall consider renewable energy, conservation, and environmental health programs which benefit low income, at-risk and environmentally disadvantaged communities. These funds will fund small solar and energy efficiency projects located on schools, libraries, public health, and other facilities that will benefit low income and environmentally disadvantaged communities. These funds will also support green jobs training and placement programs which benefit low income, at-risk and environmentally disadvantaged communities and maximize community benefits as we develop specific environmental health programs, identify renewable energy, and conservation programs.

Justification:
 Based upon approval from the Board of Supervisors (BOS) and release of the funds, appropriate programs and projects will be identified and implemented that fit the requirements specified in the ordinance.

Operating Impact:
 Renewable projects at SFPUC or client department facilities can generate additional energy used on-site. Excess power above on-site needs can be exported to other municipal loads pursuant to California Public Utilities Code 2828 - HHWP Remote Renewable Generation.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	15812-Hetchy Water - Facilities Main
Authority Level 2:	15812-Hetchy Water - Facilities Main
FSP ID	10016956
Project Title:	HHW - Facilities Maintenance
Total Budget:	\$ 74,593,000
Project Start:	7/1/2013
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Tom Walker
Facility Category:	Program - Project
Type:	Programmatic

Description:
 Hetch Hetchy Water's (HHW) Facilities Maintenance Program (FMP) provides funding for preventative and corrective maintenance to improve, maintain, and operate the \$11 billion HHWP system. Many HH assets are at or beyond their service lives, & maintenance funding is used to ensure continued operation of the system. The FMP includes (1) Corrective and emergency maintenance; (2) Development and implementation of Asset Management Plans (AMPs); and (3) Wildfire Mitigation (WM) salary expenses.

*Corrective and Emergency Maintenance - Annual maintenance work is performed to maintain serviceability, restore damaged or worn out components; preventative maintenance work recurs on a periodic or cyclical schedule. Deferred maintenance, including failure to comply with code or standards, leads to deterioration of performance. Increased repair costs, and decreased facility value. The FMP provides for repair and maintenance of over 150 structures. Maintenance funding needs have been increasing due to aging facilities and the critically low level of capital upgrades due to the lack of funding. A partial list of deferred maintenance components includes: hydro-generator unit spare guide and thrust bearings, air conditioner failures (e.g. facilities in Moccasin, where temperatures can average over 100 degrees for extended periods) non-bond-fundable road maintenance, transmission tower components, San Joaquin Pipeline component repairs, security component failures, communications components, and buildings/facilities safety corrections.

*AMPs & Drawing Revitalization - HHW Engineering has nearly completed the AMPs by asset category, with two plans remaining. These plans inform preventative maintenance tasks for asset reliability. HHW has also undertaken a multi-year Drawing Revitalization project, starting with major system assets that ensures work crews will have the most up-to-date drawing set when working on an asset.

*WM - The FMP includes salary expenses for WM plan development and implementation. Implementation costs include labor for environmental and legal review by the City Attorney's office, contract development, and the development and implementation of Forest Management Plans, tree, and vegetation removal labor costs. (Costs for professional services are included in HHW's Operating budget).

Funding requested for FY22-23 and FY23-24 is \$9M and \$7M. The HHW division is currently working with Finance on a plan to address the budget cuts. The revised budget is insufficient to meet regulatory compliance obligations and corrective maintenance needs.

Justification:
 Routine and cyclical repair of the facilities awaiting capital improvement project funding is a growing concern within the division. The facilities are increasingly prone to failure, for a system that is 85% of the water supply source for 2.7 million people.

Operating Impact:
 Failure to budget for corrective & emergency maintenance impacts & delays capital project completion. As infrastructure fails, capital projects are deferred & address the failed asset, ultimately impacting system service reliability.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 26,062,000	\$ 3,000,000	\$ 3,000,000	\$ 1,918,000	\$ 1,960,000	\$ 2,064,000	\$ 11,537,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 58,590,000	\$ 0	\$ 0	\$ 5,596,000	\$ 5,905,000	\$ 6,022,000	\$ 33,661,000
Total	\$ 84,672,000	\$ 3,000,000	\$ 3,000,000	\$ 7,514,000	\$ 7,795,000	\$ 8,086,000	\$ 45,198,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	17661-Wecc-Nerc Compliance
Authority Level 2:	17661-Wecc-Nerc Compliance
FSP ID	10025172
Project Title:	HHW - WECC/NERC Compliance
Total Budget:	\$ 57,263,000
Project Start:	7/1/2012
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Margaret Hamalford
Facility Category:	Program - Project
Type:	Programmatic

Description:
 The reliability of the Nation's power grid, the Bulk Electric System (BES), is regulated by the Federal Energy Regulatory Commission (FERC) through agreement with the North American Electric Reliability Corporation (NERC). The SFPUC owns generation and transmission facilities and is required by NERC to register as a Generator Owner, Generator Operator, Transmission Owner, Transmission Operator and Transmission Planner, and as such is subject to mandatory and enforceable NERC Reliability Standards. In the western US, NERC delegates primary responsibility for monitoring and enforcement of NERC Reliability Standards to the Western Electricity Coordinating Council (WECC).

The SFPUC Electric Power Reliability Compliance Program (NERC Compliance Program) establishes internal processes and provides funding to assure the SFPUC is in compliance with almost 1,000 NERC Standards requirements that apply to the SFPUC (specifically HHWP). The SFPUC NERC Compliance Officer (HHWP Division Manager) oversees this compliance program that will be expanding their footprint due to Power Enterprise's electrical footprint (Bay Corridor Transmission Distribution Project and increased load at SFHA). Day-to-day compliance with NERC Standards is under the leadership of the SFPUC NERC Compliance Manager at HHWP, and relies upon the extensive participation of HHWP power operations staff, engineering staff, IT staff at HHWP and SFPUC Headquarters, vegetation management staff, Human Resources staff, and soon Power Enterprise staff.

The WECC/NERC Compliance requested funding for FY22-23 and FY23-24 is \$5.6M and \$5.7M, respectively. The HHW division is currently working with Finance on a plan to address budget cuts as the revised budget is insufficient to meet regulatory compliance obligations.

Justification:
 The need to comply with NERC Reliability Standards is recognized by the SFPUC as a permanent part of doing business in the electric power industry. The NERC Compliance Program documents the SFPUC's responsibility and commitment to meet its NERC regulatory obligation. In addition to on-going compliance with existing NERC Standards, HHWP is required to stay on top of new and revised standards. As a result HHWP compliance processes must expand or evolve to address a growing number of NERC Standards, and their increased complexity. This proposal also addresses upcoming regulatory requirements associated with the expansion of the Power Enterprise's footprint in San Francisco.

Operating Impact:
 Water LOS Goal(s) Supported: N/A
 Violations either discovered by WECC or self-reported by HHWP may have significant financial and reputational implications. Along with monetary penalties ranging from \$1,000 to \$1,292,000 per day, violations of Reliability Standards impact the SFPUC by involving expenditures on legal defense, development of costly mitigation plans, SFPUC and City Attorney staff time, and impacts on CCSF's reputation within the industry and with the public.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 67,553,000	\$ 4,449,000	\$ 4,449,000	\$ 5,611,000	\$ 5,818,000	\$ 6,034,000	\$ 33,689,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 3,087,000	\$ 0	\$ 0	\$ 295,000	\$ 306,000	\$ 318,000	\$ 1,773,000
Total	\$ 70,640,000	\$ 4,449,000	\$ 4,449,000	\$ 5,906,000	\$ 6,124,000	\$ 6,352,000	\$ 35,462,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	17662-Wecc-Nerc Transmission Line CI
Authority Level 2:	17662-Wecc-Nerc Transmission Line CI
FSP ID	10025175
Project Title:	HHW - WECC/NERC Transmission Line Clearance
Total Budget:	\$ 2,373,000
Project Start:	7/1/2014
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Water
Project Manager:	Margaret Hamalford
Facility Category:	Program - Project
Type:	Programmatic

Description:
 In October 2010, NERC issued the Facility Ratings Alert (FAC Alert) to identify power transmission line clearances deficiencies. The SFPUC performed a condition assessment of their lines in 2012-2014. The condition assessment identified 195 locations (detections) where federal and State regulations for safety were not being met. The WECC-NERC Transmission Line Mitigation Program will mitigate these detections over the next 20 years. Program activities include: 1) Notification to impacted parties of safety concerns; and 2) Restricting access at detection points and maintaining restrictions. Detections requiring structural improvements will be completed under CUH10117 10014089. HHW- Transmission Lines Clearance Mitigation. Inadequate line clearances are a hazard to both the SFPUC employees and the public.

Justification:
 Water LOS Goal(s) Supported: Regional Delivery Reliability
 Inadequate line clearance is a liability to HHWP.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 2,662,000	\$ 200,000	\$ 208,000	\$ 215,000	\$ 223,000	\$ 232,000	\$ 1,295,000
Total	\$ 2,662,000	\$ 200,000	\$ 208,000	\$ 215,000	\$ 223,000	\$ 232,000	\$ 1,295,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	19459-UW Treasure Island - Maintena
Authority Level 2:	(N/A)
FSP ID	Treasure Island Facilities Maintenance
Project Title:	\$ 49,966,000
Total Budget:	9/30/1997
Project Start:	6/30/2033
Project Finish:	Construction
Current Active Phase:	Hetch Hetchy Power
Organization:	Hieu Doan
Project Manager:	Program - Project
Facility Category:	Programmatic
Type:	
Description:	Since 1997, the SFPUC Power Enterprise has operated and maintained the electric and natural gas distribution system at Treasure Island and Yerba Buena Island (TI/YBI) on behalf of the Treasure Island Development Authority (TIDA). Electricity to TI/YBI is solely supplied from Oakland, California. The electrical utility system consists of the 115-KV PG&E-owned transmission lines, the Davis Substation in Oakland, overhead lines on Port of Oakland and Oakland Base Reuse Authority (OBRA) property, a submarine transmission line between Oakland and TI, the TI Main Substation, and a series of distribution lines on TI/YBI. The SFPUC currently purchases power from the Western Area Power Administration (WAPA). The SFPUC Power Enterprise has two 2,000-kilowatt diesel power generators at TI as backup supply. The natural gas system includes the PG&E owned transmission line from Oakland to TI and the Navy-owned distribution lines on TI/YBI. Natural gas is supplied by PG&E via a 50-year old underwater 10-inch pipeline at 125 psi. The transmission line is connected to a distribution station on TI. Pressure is reduced to 10 psi for distribution to customers on TI/YBI. The system is controlled through a network of valves. The system consists of multi-material piping, including plastic pipes that were used by the Navy to fix the damaged pipes after the Loma Prieta earthquake.
Justification:	This programmatic project funds the routine maintenance required to keep the Power Facilities on Treasure Island functional.
Operating Impact:	Failure at the TI power facilities could result in loss of all electrical supply to the island.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 55,851,000	\$ 4,217,000	\$ 4,428,000	\$ 4,649,000	\$ 4,788,000	\$ 4,930,000	\$ 26,954,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 55,851,000	\$ 4,217,000	\$ 4,428,000	\$ 4,649,000	\$ 4,788,000	\$ 4,930,000	\$ 26,954,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Water



Authority Level 1:	17726-GE Youth Employment & Environm
Authority Level 2:	17726-GE Youth Employment & Environm
FSP ID	(N/A)
Project Title:	Youth Employment Project
Total Budget:	\$ 1,500,000
Project Start:	
Project Finish:	Construction
Current Active Phase:	Hetch Hetchy Water
Organization:	Carol Isen
Project Manager:	Program - Project
Facility Category:	Programmatic
Type:	
Description:	The Earth Stewards is a collaborative effort by the SFPUC, the San Francisco Sheriff's Department and the Garden Project to provide at-risk, young, San Franciscans with horticultural and landscaping work experience on SFPUC properties. The Garden Project is a non-profit corporation founded in 1992 for the purpose of reducing recidivism among ex-offenders and inmates of the San Francisco County Jail. Earth Stewards, the program funded by the SFPUC, was created in response to a 2004-2005 Board of Supervisors add-back appropriation in the amount of \$2.5 million for youth employment. The Earth Stewards Program began on October 19, 2004 with the enrollment of an initial group of 33 at-risk youth referred by the Mayor's Office of Community Development. Since then an additional 42 participants selected by Garden Project staff have enrolled in the program, for a total of 75 enrollees, 12 of which are still enrolled in the program. The program currently has capacity for 12 at-risk youth and develops an individualized 24-month program for each participant. The Earth Stewards are scheduled to perform landscaping and maintenance services for the City Distribution Division, Hetch Hetchy, and Crystal Springs Reservoir during FY 2011-12 and FY 2012-13.
Justification:	The project provides at-risk, young San Franciscans with work experience with the intent of reducing recidivism among ex-offenders and inmates of the San Francisco County Jail.
Operating Impact:	None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 1,650,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 750,000
Total	\$ 1,650,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 750,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	19460-UW 525 Golden Gate - O & M
Authority Level 2:	17682-UW 525 Golden Gate - O & M
FSP ID	(N/A)
Project Title:	525 Golden Gate - Operations & Maintenance
Total Budget:	\$ 8,734,000
Project Start:	
Project Finish:	
Current Active Phase:	Not Started
Organization:	Hetch Hetchy Power
Project Manager:	None
Facility Category:	Program - Project
Type:	Programmatic
Description:	The headquarters for the San Francisco Public Utilities Commission, 525 Golden Gate is a 13-story building plus basement for total building area of 277,500 square feet, which houses over 900 PUC employees. It is a LEED Platinum certified building that includes solar and wind renewable energy sources, an on-site wastewater system called the Living Machine, and Smart Building features with fully integrated systems.
Justification:	The Maintenance Project is required for costs related to the annual operating and maintenance costs of the building as shown below. The cost to operate and maintain the building on an annual basis is estimated to have an average annual increase of 3.0%. These costs include building engineering, property management, janitorial and maintenance service contracts.
Operating Impact:	None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 8,734,000	\$ 802,000	\$ 826,000	\$ 850,000	\$ 850,000	\$ 850,000	\$ 4,556,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 8,734,000	\$ 802,000	\$ 826,000	\$ 850,000	\$ 850,000	\$ 850,000	\$ 4,556,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	19461-UW 525 Golden Gate - Lease Pay
Authority Level 2:	17683-UW 525 Golden Gate - Lease Pay
FSP ID	(N/A)
Project Title:	525 Golden Gate - Lease Payments
Total Budget:	\$ 12,080,769
Project Start:	
Project Finish:	
Current Active Phase:	Not Started
Organization:	Hetch Hetchy Power
Project Manager:	Charles Peil
Facility Category:	Program - Project
Type:	Programmatic
Description:	The headquarters for the San Francisco Public Utilities Commission, 525 Golden Gate is a 13-story building plus basement for total building area of 277,500 square feet, which houses over 900 PUC employees. It is a LEED Platinum certified building that includes solar and wind renewable energy sources, an on-site wastewater system called the Living Machine, and Smart Building features with fully integrated systems.
Justification:	In October of 2009, the City and County of San Francisco issued its \$38,120 Certificates of Participation, Series 2009C (525 Golden Gate Avenue) and its \$129,550 Certificates of Participation, Series 2009D (525 Golden Gate Avenue) (Tax-Exempt) and its \$129,550 Certificates of Participation, Series 2009E (525 Golden Gate Avenue) (Tax-Exempt) to provide financing for the planning and construction of a new office building for the SFPUC. Under the terms of a Memorandum of Understanding between the City and the SFPUC dated October 1, 2009, the SFPUC will make annual Base Rental Payments to the City for the building equal to annual debt service on the Certificates of Participation.
Operating Impact:	None.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 12,080,769	\$ 1,249,541	\$ 1,244,204	\$ 1,233,793	\$ 1,223,148	\$ 1,212,207	\$ 5,917,876
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 12,080,769	\$ 1,249,541	\$ 1,244,204	\$ 1,233,793	\$ 1,223,148	\$ 1,212,207	\$ 5,917,876

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

Hetch Hetchy Enterprise

Fiscal Years 2023-2032

Ten Year CIP

Capital Projects
January 20, 2022

SFUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15372-UH Distribution Services Retail
Authority Level 2:	15372-UH Distribution Services Retail
FSP ID	10038822
Project Title:	SFO Substation Improvements
Total Budget:	\$ 161,292,894
Project Start:	7/1/2022
Project Finish:	6/30/2032
Current Active Phase:	Hetch Hetchy Power
Organization:	Danny Phung
Project Manager:	Power Infrastructure
Facility Category:	Capital
Type:	

Description: The SFUC provides about 50 megawatts (MW) of electricity to the San Francisco International Airport (SFO) at transmission level voltage of 115,000 volts or kilovolts (KV) through two existing 115-kV transmission substations, one located in Millbrae, CA and the other in San Bruno CA. SFO is implementing a new 10-year Master Utility Infrastructure Plan and Capital Program that will result in SFO's electric load increasing to about 60 MW by 2026 and 110 MW by 2031. To provide for the load increase, the existing transmission substations will have to be retrofitted in the short term and potentially a new substation built for the long term.

Justification: The SFO Substation Improvement Project provides for the SFUC to continue to serve SFO and the anticipated load increase at SFO from 55 MW to 110 MW. The project will plan, design, and construct needed electric facilities at SFO and provide for SFO to continue to receive safe, reliable, low cost Hetch Hetchy power that is 100 percent greenhouse gas free from SFUC.

Operating Impact: Funding this project is critical for SFUC Power Enterprise to maintain its ability to provide electric services to SFO today and in the future. The project will design and build the short term facility improvements for the load increase to 60 MW by 2026 and plan for the long term facility improvements. SFUC Power and SFO need to have dedicated staffing and expert resources to effectively and efficiently design, contract, and construct the short term (interim) improvements by 2026 while working on the long term improvements to serve 110 MW by 2031. SFUC Power needs to have the necessary financial resources to fund this project in planning, design and construction to be able to continue to serve the load at SFO.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,200,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 2,900,000	\$ 1,900,000	\$ 0	\$ 0	\$ 0	\$ 1,000,000	\$ 0
CM	\$ 8,192,894	\$ 1,000,000	\$ 922,894	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 3,270,000
CN	\$ 138,980,000	\$ 0	\$ 1,000,000	\$ 19,950,000	\$ 29,875,000	\$ 29,875,000	\$ 57,680,000
Total	\$ 150,672,894	\$ 4,100,000	\$ 1,922,894	\$ 20,950,000	\$ 30,875,000	\$ 31,875,000	\$ 60,950,000

SFUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15372-UH Distribution Services Retail
Authority Level 2:	15372-UH Distribution Services Retail
FSP ID	10014230
Project Title:	HHP-EE Programs for New Retail Customers
Total Budget:	\$ 39,562,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Sam Larano
Facility Category:	Transmission/Distribution
Type:	Capital

Description: The Customer Programs group oversees all SFUC Power activities related to the development, implementation, and operations of Customer Programs for both Hetch Hetchy Power and also supports program development, implementation, and operations for CleanPowerSF customers. Customer Programs are essential in providing effective service and relevant timely response to the needs of our Customers in meeting their efficiency, environmental and sustainability goals. This new budget request would be utilized by Power's Customer Programs group to provide additional incentives to existing programs and offer new programs that promote decarbonization, net zero energy construction, electrification of various modes of transport, renewable energy generation and storage, etc. These new programs would provide offerings that serve the City's rapidly expanding multifamily new construction sector, retrofit electrification programs, electric vehicle charging and storage infrastructure, as well as support for residential energy efficiency and renewable projects in both retrofit and new construction settings. In addition to supporting the City's aggressive environmental goals, these programs can provide substantial value to Power's customers and increase customer satisfaction. Increase and enable Power's Customer Programs to provide additional incentives to existing programs and offer new programs that promote decarbonization, net zero energy construction, electrification of various modes of transport, renewable energy generation and storage, etc. The new programs would provide offerings and serve the City's rapidly expanding multifamily new construction sector, retrofit electrification programs, electric vehicle charging and storage infrastructure, and support for residential energy efficiency and renewable projects in the retrofit of existing and construction or new affordable residential housing developments, as well as market rate existing buildings. In addition to supporting the City's aggressive environmental goals, these programs can provide substantial value to Power's customers and increase customer satisfaction.

Justification: Customer Programs are also an essential element in Power's customer acquisition and engagement strategy to meet Power's Business Plan goal of Customer and load growth. In keeping with our environmental and sustainability goals and maintaining a competitive edge in the utility market, Power has and continues to work on providing its existing and prospective customers a robust portfolio of energy efficiency, decarbonization, renewable energy, and electric vehicle program offerings.

Operating Impact: Limiting or reducing the budget of Customer Programs limits number of programs available to Power Customers and severely impacts the development and implementation of a number of incentive and service programs that have been and are currently offered by other Utilities. It would also slow Power's ability in achieving its growth goals and meeting its environmental and sustainability goals.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 12,000,000	\$ 0	\$ 0	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 7,500,000
Total	\$ 12,000,000	\$ 0	\$ 0	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 7,500,000



SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power

Authority Level 1:	15372-UH Distribution Services Retail
Authority Level 2:	15372-UH Distribution Services Retail
FSP ID	10014228
Project Title:	Distribution Interface - Redevelopment Projects
Total Budget:	\$ 206,674,086
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Manuel Ramirez
Facility Category:	Transmission/Distribution
Type:	Capital
Description:	This project provides for the design and construction of new electric duct bank and 12-kilovolt (kV) underground electric distribution system for the SFPUC to provide electric services to various new developments within San Francisco, including Mission Rock, Pier 70, India Basin, Sumpdale HOPE SF, Potrero HOPE SF, Vistacon Valley, and Balboa Reservoir. The Master Developer will pay for the installation of required infrastructure and structures for the new underground system that includes, but not limited to, the following: utility joint trench, duct banks, conduits and pull wires, utility vaults and pull boxes, transformer pads, etc. The SFPUC, as the electric utility provider, will install the conductors in the conduits, transformers, switches, and metering equipment required for the electric distribution system. The costs include the installation of temporary replacement 12-kV overhead distribution facilities as needed.
Justification:	This project is consistent with the SFPUC's role as the exclusive electric service provider for this project. The project will consider the use and implementation of proven, as well as, new and emerging technologies. Beneficial technologies will be identified, researched, and analyzed, prior to making a proposal for any implementation on the project, where ratepayer benefit is demonstrated along with consistency with Triple Bottom Line principles. The project will also look into the feasibility and implementation of a supervisory control and data acquisition (SCADA) system, automated metering information (AMI) system, and integration of both with other technologies into a possible smart grid electric system.
Operating Impact:	The proposed plan provides for SFPUC to install, own, operate and maintain the required electric circuits and equipment to supply electricity to this project. It avoids paying PG&E the income tax component of construction (ITCO) at 22-34% of the total cost and cost to own and operate the equipment at 0.60% per month or 7.2% per year for the life of the equipment. The alternative is for the City to pay PG&E at two times the cost to install, own, operate and maintain electric circuits and equipment to serve City facilities and buildings. Existing 12-kV electric distribution system that is antiquated will need to be relocated and undergrounded as part of new developments.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 6,452,448	\$ 0	\$ 0	\$ 1,175,306	\$ 925,306	\$ 925,306	\$ 3,426,530
CM	\$ 6,452,448	\$ 0	\$ 0	\$ 1,175,306	\$ 925,306	\$ 925,306	\$ 3,426,530
CN	\$ 116,144,021	\$ 0	\$ 0	\$ 21,155,504	\$ 16,655,503	\$ 16,655,503	\$ 61,677,511
Total	\$ 129,048,917	\$ 0	\$ 0	\$ 23,506,116	\$ 18,506,115	\$ 18,506,115	\$ 68,550,571



SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power

Authority Level 1:	15372-UH Distribution Services Retail
Authority Level 2:	15372-UH Distribution Services Retail
FSP ID	10033821
Project Title:	HHP-Intervening Facilities
Total Budget:	\$ 176,740,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Matthew Ho
Facility Category:	Transmission/Distribution
Type:	Capital
Description:	This is to provide PRIMARY service to customers under the new Wholesale Distribution Tariff (WDT3). The costs to connect customers at PRIMARY include the Intervening Facilities and switchgear to connect the customers at the higher voltage.
Justification:	Intervening facilities are a way to demarcate the change in ownership and maintenance responsibility between two different utilities. Intervening Facilities comprises major equipment such as transformers, fault interrupters and infrastructures to interconnect with PG&E and provide PRIMARY service to the customers. Note - this estimate assumes we are NOT successful in our negotiations with PG&E and have to account for primary interconnection costs. Without intervening facilities, PG&E will refuse to transit Hetchy power over PG&E owned lines. Municipal customers with power needs would be forced to go through PG&E's retail process as Power Enterprise will no longer be the City's power provider.
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 6,000,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 3,000,000
ER	\$ 6,000,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 3,000,000
DS	\$ 12,450,000	\$ 1,245,000	\$ 1,245,000	\$ 1,245,000	\$ 1,245,000	\$ 1,245,000	\$ 6,225,000
CM	\$ 12,450,000	\$ 1,245,000	\$ 1,245,000	\$ 1,245,000	\$ 1,245,000	\$ 1,245,000	\$ 6,225,000
CN	\$ 53,100,000	\$ 5,310,000	\$ 5,310,000	\$ 5,310,000	\$ 5,310,000	\$ 5,310,000	\$ 21,550,000
Total	\$ 120,000,000	\$ 12,000,000	\$ 12,000,000	\$ 12,000,000	\$ 12,000,000	\$ 12,000,000	\$ 60,000,000

SFPUC Capital Project Plan
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Hetch Hetchy Power



Authority Level 1:	15372-UH Distribution Services Retail
Authority Level 2:	15372-UH Distribution Services Retail
FSP ID	10014221
Project Title:	HHP-HP Phase 2 - Alice Griffith/Candlestick Point
Total Budget:	\$ 45,557,004
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Manuel Ramirez
Facility Category:	Redevelopment
Type:	Capital

Description:
 This project provides for the second phase of development at Hunters Point Shipyard, Candlestick Point, and the Alice Griffith Housing Complex. The project will require the installation of new underground 12-kilovolt (kV) electrical distribution system in all three areas. The HFS Phase 2 service will use the underground 12-kV electrical distribution system that was installed as part of Phase 1 and to replace the existing overhead 12-kV system in place. The Development Project Team comprised of the Office of Community Investment and Infrastructure (OCII) and the Master Developer (Lennar) will pay for the installation of the required infrastructure and substuctures required for the new 12-kV underground electric distribution system that includes, but is not limited to, the following: utility joint trench, duct banks, conduits and pull wires, utility vaults and pull boxes, transformer pads, etc. The SFPUC as the electric utility provider will install the conductors in the conduits, transformers, switches, and metering equipment required for the electric distribution system. The costs include the installation of temporary replacement 12-kV overhead distribution facilities as needed and provides for the implementation of an energy efficiency and renewables program incentives.

Justification:
 This project is consistent with the SFPUC's role as the exclusive electric service provider to Hunters Point Shipyard and will utilize existing 12-kV electric service points into each area as well as the existing 12-kV underground electric distribution system. The project will consider the use and implementation of proven as well as new and emerging technologies. Beneficial technologies will be identified, researched, and analyzed, prior to making a proposal for any implementation on the project, where ratepayer benefit is demonstrated along with consistency with Triple Bottom Line principles. The project will also look into the feasibility and implementation of a supervisory control and data acquisition (SCADA) system, automated metering information (AMI) system, and integration of both with other technologies into a possible smart grid electric system.

Operating Impact:
 The existing overhead 12-kV electric distribution system at Hunters Point Shipyard, Candlestick Point and Alice Griffith Housing Complex are not capable of supporting the electrical needs of the new development project and will need to be relocated and undergrounded.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 1,114,242	\$ 0	\$ 0	\$ 278,339	\$ 278,339	\$ 278,339	\$ 279,225
CN	\$ 21,170,597	\$ 0	\$ 0	\$ 5,288,439	\$ 5,288,439	\$ 5,288,439	\$ 5,305,280
Total	\$ 22,284,839	\$ 0	\$ 0	\$ 5,566,778	\$ 5,566,778	\$ 5,566,778	\$ 5,584,505

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15372-UH Distribution Services Retail
Authority Level 2:	15372-UH Distribution Services Retail
FSP ID	10014227
Project Title:	Bay Corridor Transmission Distribution (BCTD)
Total Budget:	\$ 153,000,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Pre-Construction
Organization:	Hetch Hetchy Power
Project Manager:	Ramon Abueg
Facility Category:	Transmission/Distribution
Type:	Capital

Description:
 The Bay Corridor Transmission Distribution Program (BCTD) comprises taking transmission level voltage at 230 kV from PG&E at Potrero substation, and then transforming that voltage to a distribution level voltage at 12.47 kV at a SFPUC substation proposed to be located on Quint Street. The 12.47 kV distribution system will comprise underground ductbanks and cables to provide power to Power Enterprise customers. Scope of work includes underground ductbank work, cable pulls, transformer substation and transmission connections to PG&E Potrero and related customer interface equipment and cables. Work will extend initially from Southeast Plant to the Mission Rock.

Justification:
 The BCTD program will provide significant benefits to Power Enterprise customers including independence from PG&E's control of the distribution grid, ease of customer connections, ability to easily implement green grid options such as local solar, wind and cogeneration, importantly savings in the Low Voltage Transmission Access Charge (LVTAC) and PG&E distribution charge, independence of PG&E Wholesale Distribution Tariff (WDT) problems, potentially limited WDT capacity at Potrero and better ability to market and plan for customer connection and service.

Operating Impact:
 SFPUC and Power Enterprise need to develop the necessary staffing and resources to effectively and efficiently plan, design, contract, construct, operate and maintain a transmission infrastructure, as implemented in the Potrero transmission connection, underground transmission and the SFPUC substation, and for the effective operation and maintenance of the distribution infrastructure. Power Enterprise needs to have the necessary financial resources to fund this program both in construction and operation, and to have the necessary qualified staffing to implement the program, and for effective marketing to customers.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
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Hetch Hetchy Power



Authority Level 1:	15372-UH Distribution Services Retail
Authority Level 2:	15372-UH Distribution Services Retail
FSP ID	TBD
Project Title:	Affordable Housing Transmission and Distributio
Total Budget:	\$ 1,000,000
Project Start:	7/1/2022
Project Finish:	6/28/2024
Current Active Phase:	Hetch Hetchy Power
Organization:	Manuel Ramirez
Project Manager:	Transmission/Distribution
Facility Category:	Capital
Type:	

Description: This project will provide new transmission and distribution level facilities to effectively and efficiently serve affordable housing customers as well as other possible retail, commercial, and municipal customers. This project is critical for San Francisco to provide electric services to its affordable housing and other customers as a direct result of the delays and interconnection issues associated with Pacific Gas and Electric's (PG&E) discretion in its implementation of its wholesale distribution tariff (WDT). PG&E has severely compromised San Francisco's ability to meet redevelopment customer load requirements by providing only about 18 megawatts (MW) of the 60 MW of capacity needed to serve the HOPE SF affordable housing development projects at Alice Griffith, Potrero, and Sunnydale. The India Basin and Candlestick Point sites are also lacking the needed approved capacity to operate at full build out. Deficits in needed capacity are currently projected to start as early as 2024.

Justification: SFPUC is obligated to serve this load in a timely manner so as not to slow project timelines and impede the City's priority to build more affordable housing. Failure to connect this load on schedule would also result in a budget shortfall due to SFPUC's inability to serve these customers as well as possible liquidated damages imposed by developers. Power will continue to seek the needed capacity from PG&E, but recent efforts to obtain such agreements in a timely manner have failed. In the past, SFPUC was able to connect redevelopment load to the BCTD system. Now that BCTD is fully subscribed, however, SFPUC must plan for new distribution infrastructure and not rely on PG&E to grant permission via the WDT process.

Operating Impact: The implementation of this project will provide solutions to proactively manage and mitigate capital and operational impacts to San Francisco's ability to adequately, effectively, and efficiently serve its customers. It also would limit San Francisco's exposure to delays and costs uncertainties associated with PG&E's WDT and reduce, if not eliminate its reliance on PG&E and budget shortfalls with the inability to secure adequate WDT service.

Phase	2023	2024	2025	2026	2027	2028-2032
PL	\$ 500,000	\$ 500,000	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 1,000,000	\$ 500,000	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
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Hetch Hetchy Power



Authority Level 1:	15372-UH Distribution Services Retail
Authority Level 2:	15372-UH Distribution Services Retail
FSP ID	(N/A)
Project Title:	Oakland Port 25kV
Total Budget:	\$ 112,338,000
Project Start:	7/1/2022
Project Finish:	6/28/2030
Current Active Phase:	Hetch Hetchy Power
Organization:	Matthew Ho
Project Manager:	Power Distribution
Facility Category:	Capital
Type:	

Description: Treasure Island and Yerba Buena Island is a new development site served from a substation maintained by the Port of Oakland, through some underwater submarine cables. The submarine cable is rated for 25kV, but we are pushing 12kV through the cables at this time. The full build out on Treasure Island is expected to exceed the capacity the submarine cable can service at 12kV, so a 25kV substation is requested.

Justification: As SFPUC is the power provider for Treasure Island and Yerba Buena Island, we have an obligation to provide reliable power to our customers. A 25kV substation is to future proof the needs of the Island, especially as the Port of Oakland is currently redesigning their substations and interconnection to the grid.

Operating Impact: This is a cost for capital improvements.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
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Authority Level 1:	15372-UH Distribution Services Retail
Authority Level 2:	15372-UH Distribution Services Retail
FSP ID	(N/A)
Project Title:	SF Port Substation
Total Budget:	\$ 146,700,000
Project Start:	7/1/2022
Project Finish:	6/28/2030
Current Active Phase:	
Organization:	Hetch Hetchy Power
Project Manager:	Matthew Ho
Facility Category:	Transmission/Distribution
Type:	Capital
Description:	The Port of San Francisco is expected to substantially develop the Northern waterfront. This development includes the electrification of the ferries, new private hotels and residential offices, and miscellaneous buildings. This project is to build a substation to serve Port and other loads nearby.
Justification:	As the Port of SF is working on redoing the seawall, and adding load, instead of paying PG&E for individual line extensions, the City has an opportunity to create our own microgrid. Similar to BCTD, there can be a Northern Waterfront substation. Instead of applying to PG&E for all the individual WDTs and paying PG&E Cost of ownership of the asset the City paid to install, we can own and build it ourselves. This is a hit on the capital budget. But regardless - someone would have to pay PG&E for the various line extensions to the Port site
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
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Authority Level 1:	15372-UH Distribution Services Retail
Authority Level 2:	15372-UH Distribution Services Retail
FSP ID	(N/A)
Project Title:	Mobile Substations and Emergency Response
Total Budget:	\$ 4,720,000
Project Start:	7/1/2022
Project Finish:	6/30/2026
Current Active Phase:	
Organization:	Hetch Hetchy Power
Project Manager:	Matthew Ho
Facility Category:	Transmission/Distribution
Type:	Capital
Description:	As SFPUC take on more system assets, we need to be able to restore power to our customers within a set time frame. Being without power for several days is unacceptable. This project is to fund the purchase of two mobile substations, some emergency generators, and extra long lead time electrical equipment
Justification:	In order for SFPUC to provide reliable service to our customers, we need material on hand to effect repairs quickly.
Operating Impact:	This is a new capital project

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
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Hetch Hetchy Power



Authority Level 1:	15372-UH Distribution Services Retail
Authority Level 2:	15372-UH Distribution Services Retail
FSP ID:	(N/A)
Project Title:	Grid Connections
Total Budget:	\$ 205,481,200
Project Start:	7/1/2022
Project Finish:	6/1/2033
Current Active Phase:	
Organization:	Hetch Hetchy Power
Project Manager:	Matthew Ho
Facility Category:	Transmission/Distribution
Type:	Capital
Description:	SFPUC has started the build out of our own distribution system. This is a capital project to connect customers to SFPUC owned and operated distribution and transmission infrastructure.
Justification:	So far, SFPUC has identified some BCTD + SFPUC grid customers to be connected to our system. This includes The Shipyard, 2000 Marin, 1900 Newcomb UC-SP block 34, Wastewater interconnections and other Misc customers throughout the City
Operating Impact:	This is a new capital project

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 2,736,000	\$ 2,016,000	\$ 360,000	\$ 360,000	\$ 0	\$ 0	\$ 0
ER	\$ 2,736,000	\$ 2,016,000	\$ 360,000	\$ 360,000	\$ 0	\$ 0	\$ 0
DS	\$ 5,700,000	\$ 4,200,000	\$ 750,000	\$ 750,000	\$ 0	\$ 0	\$ 0
CM	\$ 5,700,000	\$ 4,200,000	\$ 750,000	\$ 750,000	\$ 0	\$ 0	\$ 0
CN	\$ 38,000,000	\$ 28,000,000	\$ 5,000,000	\$ 5,000,000	\$ 0	\$ 0	\$ 0
Total	\$ 54,872,000	\$ 40,432,000	\$ 7,220,000	\$ 7,220,000	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15372-UH Distribution Services Retail
Authority Level 2:	15372-UH Distribution Services Retail
FSP ID:	(N/A)
Project Title:	Electrification Program
Total Budget:	\$ 7,220,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	
Organization:	Hetch Hetchy Power
Project Manager:	Matthew Ho
Facility Category:	Transmission/Distribution
Type:	Capital
Description:	In November 2020, in order to lower greenhouse gas emissions, the City and County of San Francisco has banned natural gas in all new buildings. Similarly, in June 2019, SFMTA published an electric vehicle roadmap for San Francisco through the Mayor's Electric Vehicle Working Group (EVWG). This project is for the SFPUC to provide support to help our customers convert away from emission generating infrastructure
Justification:	SFPUC in combination with SF Real Estate and SF Environment had identified some larger projects that would like to convert their fuel source away from natural gas - such as the Downtown Steam loop project. This project is to help those (potential) customers change their fuel source to clean greenhouse gas free Hetchy power. Similarly, SFMTA roadmap for electrification calls for 100% emission-free transportation by 2040, and is in the process of working with SFPUC on pilot electrification projects. However, this leaves a gap of other City departments buildings and vehicles still using gas. This project is to help those City agencies utilize other sources of power
Operating Impact:	This is a new capital project to support projects such as electrification of the steam loop and plan/install EV chargers when SFPUC's customers are retrofitting buildings. There is a cost for these capital improvements

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15372-UH Distribution Services Retail
Authority Level 2:	15372-UH Distribution Services Retail
FSP ID	(N/A)
Project Title:	UFS New Building
Total Budget:	\$ 21,000,000
Project Start:	7/1/2022
Project Finish:	6/30/2027
Current Active Phase:	Hetch Hetchy Power
Organization:	Ramon Abueg
Project Manager:	Transmission/Distribution
Facility Category:	Capital
Type:	
Description:	A new facility will be required to be constructed to serve as Utility Field Service's new office and warehouse space. The current lease arrangements with Port of San Francisco for 10 Lombard and Pier 23 serve as a temporary location for the next few years as we plan and build the new facility.
Justification:	Utility Field Services (UFS) responds to outages, maintains and improves City-owned streetlights, pedestrian lights and distribution facilities; provides outage response, repair, and maintenance for electric assets serving Hetch Hetchy customers including The Shipyard at Hunter's Point and Treasure and Yerba Buena Islands. An adequate facility is required for UFS staff to respond to these service requirements and large enough to store materials and work vehicles.
Operating Impact:	The lack of a facility will severely limit Power Enterprise and Utility Field Service's ability to provide reliable electrical services to our customers -- new and existing. Without adequate storage for electrical equipment, vehicles, and streetlights, UFS will not be able to timely, efficiently and effectively provide outage response, perform preventive maintenance, install new service connections or construct system improvements. Levels of services will be degraded.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,540,000	\$ 0	\$ 0	\$ 450,000	\$ 1,030,000	\$ 30,000	\$ 30,000
ER	\$ 140,000	\$ 0	\$ 0	\$ 50,000	\$ 30,000	\$ 30,000	\$ 30,000
DS	\$ 1,590,000	\$ 0	\$ 0	\$ 1,500,000	\$ 30,000	\$ 30,000	\$ 30,000
CM	\$ 585,000	\$ 0	\$ 0	\$ 0	\$ 180,000	\$ 160,000	\$ 225,000
CN	\$ 17,145,000	\$ 0	\$ 0	\$ 2,000,000	\$ 5,700,000	\$ 5,700,000	\$ 5,745,000
Total	\$ 21,000,000	\$ 0	\$ 0	\$ 2,000,000	\$ 6,970,000	\$ 5,970,000	\$ 6,060,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15377-UH Streetlight Replacement
Authority Level 2:	15377-UH Streetlight Replacement
FSP ID	10014304
Project Title:	LED Conversion Project
Total Budget:	\$ 7,550,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Rich Stephens
Facility Category:	Streetlights
Type:	Capital
Description:	This project provides for the San Francisco Public Utilities Commission's (SFPUC) replacement of inefficient High Pressure Sodium (HPS) fixtures on its streetlights with Light Emitting Diodes (LED). The majority of standard cobrahead fixtures within the City have been converted in prior years, with decorative fixtures remaining to be replaced.
Justification:	The Electric Resource Plan approved by SFPUC and the SF Board of Supervisors, along with the Mayor's Solar and Energy Efficiency Executive Directives, establishes goals to maximize energy efficiency, develop renewable power, reduce greenhouse gas emissions, and assure reliable power in San Francisco. The LED conversion project aims to replace inefficient HPS lights with LEDs. LEDs have better color rendering, higher efficiency in electricity, to light transformations, and lower maintenance requirements compared to HPS lights. SFPUC has already converted 18,500 cobrahead fixtures from HPS to LEDs. This has resulted in energy savings as well as reduced maintenance costs.
Operating Impact:	

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15377-UH Streetlight Replacement
Authority Level 2:	15377-UH Streetlight Replacement
FSP ID	10014308
Project Title:	Van Ness Bus Rapid Transit Project
Total Budget:	\$ 14,421,000
Project Start:	9/16/2010
Project Finish:	12/31/2022
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Rich Stephens
Facility Category:	Streetlights
Type:	Capital

Description:
 The San Francisco Public Utilities Commission (SFPUC) previously owned four series loop lighting circuits along Van Ness Avenue. The SFPUC has partnered with the San Francisco Municipal Transportation Agency (SFMTA) to replace the incandescent lights with light emitting diodes (LED) and convert the High Voltage 4-kilovolt (kV) series circuit to secondary 120/240 volt (V) & 120/208V services.

Justification:
 The Electric Resource Plan approved by SFPUC and the SF Board of Supervisors, along with the Mayor's Solar and Energy Efficiency Executive Directives, establishes goals to maximize energy efficiency, develop renewable power, reduce greenhouse gas emissions, and assure reliable power in San Francisco. High voltage incandescent lights are an obsolete technology; these lights need to be specially made and the SFPUC has previously run out of replacement parts. This project allows for the replacement of the obsolete incandescent lights with energy efficient LEDs.

Because SFMTA was working on their transit improvement project throughout the entire corridor and SFPUC had a planned project, the SFPUC partnered with SFMTA on a combined project.

Operating Impact:
 This project will reduce maintenance costs by eliminating the need to purchase custom parts, and reduce energy costs by using energy efficient LEDs. Additionally, this project will make it safer for SFPUC electricians to operate and repair the lights.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 495,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 495,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 3,661,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 4,950,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15377-UH Streetlight Replacement
Authority Level 2:	15377-UH Streetlight Replacement
FSP ID	10014306
Project Title:	Various Streetworking Replacement & Repairs
Total Budget:	\$ 6,180,875
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Rich Stephens
Facility Category:	Streetlights
Type:	Capital

Description:
 The SFPUC owns and maintains 25,500 streetlights in the City of San Francisco. The reports received through the SF311 system have escalated tremendously for streetlights that need repair and replacement work. SFPUC's Utility Services Division receives the complaints, schedules and performs the appropriate actions to fix them. This project only covers simple outages and minor repairs and replacement of street lights in problematic areas.

Justification:
 This project is consistent with SFPUC's Technology Policy by utilizing current lighting codes to improve street lights' system reliability and economic value. The budget request would cover the cost of buying more materials and getting more resources to repair and replace streetlights in problematic areas.

Operating Impact:
 The SFPUC will be able to provide a higher level of public service through reduced wait time for repairs and replacement to 2 days or less for the City-owned streetlights.

Operating Impact:
 The SFPUC will be able to provide a higher level of public service through reduced wait time for repairs and replacement to 2 days or less for the City-owned streetlights.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 99,000	\$ 0	\$ 11,000	\$ 11,000	\$ 11,000	\$ 11,000	\$ 55,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 495,000	\$ 0	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 275,000
CM	\$ 495,000	\$ 0	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 275,000
CN	\$ 3,661,000	\$ 0	\$ 429,000	\$ 429,000	\$ 429,000	\$ 429,000	\$ 2,145,000
Total	\$ 4,950,000	\$ 0	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 2,750,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15377-UH Streetlight Replacement
Authority Level 2:	15377-UH Streetlight Replacement
FSP ID	10014307
Project Title:	Various Streetlighting Area Improvements
Total Budget:	\$ 10,714,272
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Rich Stephens
Facility Category:	Streetlights
Type:	Capital
Description:	This project aims to correct inadequate lighting and provide a safer street and pedestrian-friendly environment. It covers the improvements requested by constituents that are more expensive than simple bulb replacements or street light repairs. SFPUC evaluates the list of open cases based on a set of criteria that prioritizes the poorly lighted areas with high crime rates, night time accidents, and locations of general public safety concerns. Areas of higher priority level are entered into the Capital Improvement Project (CIP). The number of projects that are implemented per year primarily depends on corresponding fiscal year's approved funds. With the CIP wait list stretching out 10 years for locations that needs streetlight improvements, the Power Enterprise's Utility Services Division seeks the requested funding approved so that the CIP list can be taken care of.
Justification:	This project is consistent with SFPUC's Technology Policy by utilizing current lighting codes to improve street lights' system reliability and economic value. The needs identified under the CIP waitlist for Street Light Area Improvements exceeded historical funding. The budget request for FY21 and FY22 would cover the cost of street light improvements for 20 locations.
Operating Impact:	Reduces turnaround time to enforce upgrades and the necessary street light area improvements.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 160,000	\$ 0	\$ 0	\$ 20,000	\$ 20,000	\$ 20,000	\$ 100,000
ER	\$ 40,000	\$ 0	\$ 0	\$ 5,000	\$ 5,000	\$ 5,000	\$ 25,000
DS	\$ 400,000	\$ 0	\$ 0	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000
CM	\$ 400,000	\$ 0	\$ 0	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000
CN	\$ 7,000,000	\$ 0	\$ 0	\$ 875,000	\$ 875,000	\$ 875,000	\$ 4,375,000
Total	\$ 8,000,000	\$ 0	\$ 0	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 5,000,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15377-UH Streetlight Replacement
Authority Level 2:	15377-UH Streetlight Replacement
FSP ID	10014316
Project Title:	High Voltage 5 kV Series Loop Conversion
Total Budget:	\$ 1,301,598
Project Start:	7/1/2022
Project Finish:	6/30/2023
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Rich Stephens
Facility Category:	Streetlights
Type:	Capital
Description:	SFPUC-owned incandescent and mercury vapor street lights are currently operated through high voltage series loop systems that are energy inefficient and no longer supported by manufacturers. In a series loop, the entire system fails when the loop breaks. The fixture type varies by location and ranges from Tear Drop to Post Top and Cobra Head type fixtures. This project aims to replace an inefficient lighting systems through the conversion of high voltage series loop circuits into multiple standard voltage services and replace fixtures with LEDs.
Justification:	This project is consistent with SFPUC's Technology Policy by utilizing current lighting codes to improve street lights' system reliability and economic value. The age and deteriorated condition of the systems posed serious reliability issues and caused prolonged downtime due to difficulty to repair a component or part of the system. The budget request would allow the conversion of approximately 54,000 circuit feet of high voltage series loop systems to multiple standard voltage services of all locations in San Francisco.
Operating Impact:	Regular maintenance is costly because the series loop circuit conduits and cables are old and will continue to fail over time. The conversion would also reduce operation, maintenance and energy costs.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15377-UH Streetlight Replacement
Authority Level 2:	15377-UH Streetlight Replacement
FSP ID	10014325
Project Title:	HHP-Pedestrian Lighting Project
Total Budget:	\$ 5,650,200
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Rich Stephens
Facility Category:	Streetlights
Type:	Capital
Description:	Insufficient pedestrian lighting on the streets invite more crime, fuel a lack of security, and reduce livability for the general public at night. With improved pedestrian lighting, walking can become a more attractive option for people of all ages to utilize because of improved community safety. The addition of pedestrian lighting does not require complete re-design of current area lighting infrastructure. Two options recommended by SFPUC Power Enterprise are: (1) mounting of pedestrian lights on existing street light poles; (2) addition of pedestrian-scale lights between existing street lights. This project aims to foster citywide pedestrian-friendly environment by installing lights 16 to 18 feet above the sidewalk.
Justification:	This project is consistent with SFPUC's Technology Policy by utilizing current lighting codes to improve street lights' system reliability and economic value. The budget request would cover the cost to install citywide pedestrian-scale lights in San Francisco.
Operating Impact:	Increase the quality of service to the public.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 150,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 75,000
ER	\$ 50,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 25,000
DS	\$ 250,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000
CM	\$ 500,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000
CN	\$ 4,050,000	\$ 405,000	\$ 405,000	\$ 405,000	\$ 405,000	\$ 405,000	\$ 2,025,000
Total	\$ 5,000,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 2,500,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15377-UH Streetlight Replacement
Authority Level 2:	15377-UH Streetlight Replacement
FSP ID	10014324
Project Title:	HHP-Holiday and Festivity Pole Use
Total Budget:	\$ 3,650,001
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Rich Stephens
Facility Category:	Streetlights
Type:	Capital
Description:	One of the goals of the Street Light Pole Use Policy is to allow the use of street light poles by other City agencies for municipal use and non-profit organizations such as neighborhood and community groups for festivity, decorative and holiday lighting purposes. SFPUC's Power Enterprise handles request through an application process under the Street Light Pole Use Policy. This project would cover the cost to process the special pole use requests, technical evaluation of engineering options, City staff's labor cost and purchase of necessary materials.
Justification:	This project is consistent with SFPUC's Technology Policy by utilizing current lighting codes to improve street lights' system reliability and economic value. There has been a tremendous increase of requests in the use of our poles since the policy was adopted. This will fund the cost of materials and additional resources to retrofit or modify our street poles and brackets for this type of request.
Operating Impact:	Improve the quality of service to the public particularly in commercial and merchant district areas.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 150,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 75,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 150,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 75,000
CM	\$ 300,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 150,000
CN	\$ 2,400,000	\$ 240,000	\$ 240,000	\$ 240,000	\$ 240,000	\$ 240,000	\$ 1,200,000
Total	\$ 3,000,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 1,500,000

SFPUC Capital Project Plan
 Hetch Hetchy Enterprise
 Hetch Hetchy Power



Authority Level 1:	15377-UH Streetlight Replacement
Authority Level 2:	15377-UH Streetlight Replacement
FSP ID	10014326
Project Title:	HHP-Street and Pedestrian Light Pole Assessment
Total Budget:	\$ 5,955,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Rich Stephens
Facility Category:	Streetlights
Type:	Capital
Description:	This project covers a Citywide Street and Pedestrian Light Pole Assessment Program of SFPUC pole assets. It aims to conduct an extensive field assessment, establish a criteria to determine the severity of deterioration of pole conditions, and develop a plan for implementation as part of the Street Lights Pole Rehabilitation in the CIP for the next 10 years.
Justification:	This project is consistent with SFPUC's Technology Policy by utilizing current lighting codes to improve street lights' system reliability and economic value. Majority of streetlights installed in old San Francisco neighborhoods were installed more than 40 years ago. Poor and deteriorated conditions of street and pedestrian light poles and bases have been visually observed in various streets. The outcome of the assessment will be used to prioritize and schedule the replacement of poles. The information will be used to proactively identify poles that are in need of immediate repair.
Operating Impact:	Minimize public liability and reduce operation, maintenance and energy costs.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 100,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 50,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 150,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 75,000
CN	\$ 4,750,000	\$ 475,000	\$ 475,000	\$ 475,000	\$ 475,000	\$ 475,000	\$ 2,375,000
Total	\$ 5,000,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 2,500,000

SFPUC Capital Project Plan
 Hetch Hetchy Enterprise
 Hetch Hetchy Power



Authority Level 1:	15377-UH Streetlight Replacement
Authority Level 2:	15377-UH Streetlight Replacement
FSP ID	10014327
Project Title:	HHP-Streetlights Pole Rehabilitation
Total Budget:	\$ 10,201,788
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Rich Stephens
Facility Category:	Streetlights
Type:	Capital
Description:	Many of the streetlights installed in old San Francisco neighborhoods were installed more than 40 years ago. Prominent streetlight pole base deterioration were visually observed in Guerrero between Market Street and San Jose Avenue), Geneva (between Mission and Santos Streets), and North Beach (between Columbus and Greenwich Streets). This project would cover the rehabilitation of transformer-based poles as well as poles that are due for replacement as determined in the Citywide Street and Pedestrian Light Pole Assessment Program and the replacement of luminaires to LEDs.
Justification:	This project is consistent with SFPUC's Technology Policy by utilizing current lighting codes to improve street lights' system reliability and economic value. Budget request for FY 18 and FY 19 would allow the streetlight poles' urgent rehabilitation in Guerrero, Geneva, and North Beach areas. Replacement of deteriorated poles, bases and wiring would provide public safety from pole knockdowns, improve efficient streetlight system and ensure reduction in future repairs.
Operating Impact:	Minimize public liability and reduce operation, maintenance and energy costs.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 50,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 25,000
ER	\$ 25,000	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 12,500
DS	\$ 250,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000
CM	\$ 250,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000
CN	\$ 4,425,000	\$ 442,500	\$ 442,500	\$ 442,500	\$ 442,500	\$ 442,500	\$ 2,212,500
Total	\$ 5,000,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 2,500,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15377-UH Streetlight Replacement
Authority Level 2:	15377-UH Streetlight Replacement
FSP ID	10014328
Project Title:	Distributed Antenna Services
Total Budget:	\$ 6,960,000
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Mark Torres
Facility Category:	Streetlights
Type:	Capital
Description:	The SFPUC owns and maintains 25,500 streetlights in the City and County of San Francisco. Wireless carriers expressed a desire to access SFPUC-owned streetlight poles for the installation of Distributed Antenna Systems (DAS) thereby providing better enhanced wireless services to customers in San Francisco. DAS helps boost mobile broadband coverage, improve reliability in heavily trafficked areas and enhance network capacity. The DAS Program provides an opportunity to maximize the revenue-generating potential of its streetlight pole assets and provide better wireless services for the City.
Justification:	Power Enterprise - Utility Services supports DAS connections through engineering review, planning, design, construction management, construction and maintenance. The budget request would cover the cost of engineering, construction management, construction and maintenance costs for these sites.
Operating Impact:	Power Enterprise - Utility Services will be able to maximize the revenue-generating potential of its streetlight pole assets through DAS service connections. Wireless carriers pay a \$900 pole license administrative fee which covers the entire DAS approval process, a \$4,000 per site (streetlight pole) license fee, and a \$440 power connection fee.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 232,500	\$ 23,250	\$ 23,250	\$ 23,250	\$ 23,250	\$ 23,250	\$ 116,250
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 930,000	\$ 93,000	\$ 93,000	\$ 93,000	\$ 93,000	\$ 93,000	\$ 465,000
CM	\$ 930,000	\$ 93,000	\$ 93,000	\$ 93,000	\$ 93,000	\$ 93,000	\$ 465,000
CN	\$ 2,557,500	\$ 255,750	\$ 255,750	\$ 255,750	\$ 255,750	\$ 255,750	\$ 1,278,750
Total	\$ 4,650,000	\$ 465,000	\$ 465,000	\$ 465,000	\$ 465,000	\$ 465,000	\$ 2,325,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15391-UH Treasure Island Capital Imp
Authority Level 2:	15391-UH Treasure Island Capital Imp
FSP ID	(N/A)
Project Title:	New Underground 12 kV Distribution System - TI&YBI
Total Budget:	\$ 36,871,371
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Manuel Ramirez
Facility Category:	Redevelopment
Type:	Capital
Description:	The future development of Treasure Island (TI) will have a brand new underground 12-kV electrical distribution system on-island replacing the existing overhead 12-kV system. The master developer will pay for the installation of the new underground 12-kV electric distribution system that includes the installation of the utility trench, the duct banks, conduits and pull wires, utility vaults, transformer pads, etc. The SFPUC as the electric utility provider will be responsible for installing the wires in the conduits, transformers, switches, and metering equipment and connecting the existing electrical distribution system with the new system. The cost to relocate the existing overhead 12-kV electric distribution system, interconnect and transition facilities between the new and existing system, and installation of temporary facilities needed for construction will be the responsibility of the applicant or customer requesting the service from the utility.
Justification:	This project is consistent with the SFPUC continuing as the electric service provider at TI/YBI under a public power scenario. The project will consider proven as well as new and emerging technologies. Beneficial technologies will be identified, researched, and analyzed, prior to proposal for full-scale implementation of the project, where ratepayer benefit is demonstrated, along with consistency with Triple Bottom Line principles. The project will look into the feasibility and implementation of a supervisory control and data acquisition (SCADA) system, automated metering information (AMI) system, and integration of both with other technologies into a smart grid electric system.

Operating Impact:	The existing overhead 12-kV electric distribution system at TI is antiquated and will not support the new development.
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Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 13,154,376	\$ 1,482,543	\$ 1,482,543	\$ 1,482,543	\$ 1,482,543	\$ 1,204,034	\$ 6,020,170
Total	\$ 13,154,376	\$ 1,482,543	\$ 1,482,543	\$ 1,482,543	\$ 1,482,543	\$ 1,204,034	\$ 6,020,170

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15391-UH Treasure Island Capital Imp
Authority Level 2:	15391-UH Treasure Island Capital Imp
FSP ID	10014576
Project Title:	Treasure Island Utility Cost Setup
Total Budget:	\$ 0
Project Start:	
Project Finish:	
Current Active Phase:	
Organization:	Hetch Hetchy Power
Project Manager:	Manuel Ramirez
Facility Category:	Redevelopment
Type:	Capital
Description:	This project reflects the capital cost associated with creating a public power utility at Treasure Island (TI) in support of the future development. The cost accounts for the purchase of office and service equipment, hardware monitoring and measuring devices, software for power forecasting and purchasing, billing, and customer service, metering, operation and maintenance equipment.
Justification:	This project is consistent with the SFPUC continuing as the TI electric service provider under a public power scenario. The project will consider proven as well as new and emerging technologies. Beneficial technologies will be identified, researched, and analyzed, prior to proposal for full-scale implementation of the project, where ratepayer benefit is demonstrated, along with consistency with Triple Bottom Line principles. The project will look into the feasibility and implementation of a supervisory control and data acquisition (SCADA) system, automated metering information (AMI) system, and integration of both with other technologies into a smart grid electric system.
Operating Impact:	The TI Development will require the SFPUC to provide services to 8,000 new residential accounts and a number of commercial accounts that includes hotels, restaurants, retail shops, and offices.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15391-UH Treasure Island Capital Imp
Authority Level 2:	15391-UH Treasure Island Capital Imp
FSP ID	(N/A)
Project Title:	New Underground 12 kV Distribution System -Oakland
Total Budget:	\$ 5,950,000
Project Start:	1/2/2023
Project Finish:	12/29/2028
Current Active Phase:	Not Started
Organization:	Hetch Hetchy Power
Project Manager:	Manuel Ramirez
Facility Category:	Redevelopment
Type:	Capital
Description:	This project provides for the shared cost to install approx. 22,000 linear feet or about 4.2 miles of new underground 12-kV electric distribution circuits from the Davis Substation located on 7th Street and Maritime Street in Oakland, California to land's end by the San Francisco-Oakland Bay Bridge. The 12-kV line traverses several properties that are owned by the Port of Oakland, the City of Oakland, and CalTrans. The development plans by the Port of Oakland and the City of Oakland require that the existing overhead lines on their property be relocated and installed underground in a new alignment. Electricity to Treasure Island (TI) is served primarily through a 115-kV transmission line and substation in Oakland, California. The U.S. Navy has capacity rights to the transmission line and to the Port of Oakland-owned Davis Substation. After electricity is transformed at the Davis Substation from 115-kV to 12-kV, it is conveyed through Navy-owned overhead poles and lines to land's end by the Bay Bridge.
Justification:	This project is consistent with the SFPUC continuing as the TI electric service provider under a public power scenario and that the electric service to TI continues through the 115-kV transmission line and substation. It also provides for extending existing agreements and arrangements for the delivery of electricity to TI and maintains the value of the existing capacity rights and assets associated with the 115-kV transmission line and 12-kV distribution lines that will be included as part of the property transfer of TI from the U.S. Navy to the City and County of San Francisco. The project will consider proven as well as new and emerging technologies. Beneficial technologies will be identified, researched, and analyzed, prior to proposal for full-scale implementation of the project, where ratepayer benefit is demonstrated, along with consistency with Triple Bottom Line principles. The project will look into the feasibility and implementation of a supervisory control and data acquisition (SCADA) system, automated metering information (AMI) system, and integration of both with other technologies into a smart grid electric system.
Operating Impact:	This project provides for keeping the existing agreements and arrangements for the delivery of electricity to TI. The consequences of not funding this project will result in eliminating the distribution system, cutting off the delivery of electricity to TI, and stranding the capacity rights associated with the 115-kV transmission line and substation. The alternative would be for the SFPUC sell the stranded capacity rights, pay to remove 12-kV distribution lines, lease or purchase property in Oakland to install a new substation, and enter into a wholesale distribution tariff service connection with Pacific Gas and Electric and pay additional distribution costs.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15400-UH Renewable-generation - Smal
Authority Level 2:	15400-UH Renewable-generation - Smal
FSP ID	10014652
Project Title:	Marina Middle School Solar
Total Budget:	\$ 1,920,050
Project Start:	2/8/2016
Project Finish:	3/30/2023
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Jamie Seidel
Facility Category:	Renewable and Generation
Type:	Capital
Description:	Through this project, the San Francisco Public Utilities Commission (SFPUC) will design and install a 61.5 kilowatt (kW) rooftop solar electric system at Marina Middle School. The design phase includes DC/AC electrical and structural design for a photovoltaic (PV) rack mounted array and related electrical equipment. The Construction Phase will include the installation of a grid connected PV system. Once completed, the PV system will be interconnected to the Pacific Gas & Electric Company (PG&E) electrical distribution system.
Justification:	The Electricity Resource Plan approved by the SFPUC and the San Francisco Board of Supervisors, along with the Mayor's solar directive, established goals to develop renewable power, reduce greenhouse gas emissions, and assure reliable power in San Francisco. This project location will provide additional solar and renewable power for new load growth and diversify our portfolio.
Operating Impact:	Renewable projects at SFPUC or client department facilities can generate additional energy that can be used on-site. This project will be 61.5kW, generate on average 77,300 kilowatt hours per year, and provide approximately 35% of the annual electrical load for Marina Middle School.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15400-UH Renewable-generation - Smal
Authority Level 2:	15400-UH Renewable-generation - Smal
FSP ID	10014653
Project Title:	Moscone West
Total Budget:	\$ 3,051,312
Project Start:	2/8/2016
Project Finish:	12/31/2023
Current Active Phase:	Hetch Hetchy Power
Organization:	Hetch Hetchy Power
Project Manager:	Jamie Seidel
Facility Category:	Renewable and Generation
Type:	Capital
Description:	Through this project, the San Francisco Public Utilities Commission (SFPUC) will design and install a 875 kilowatt (kW) rooftop solar electric system at the Moscone West Convention Center. The design phase includes DC/AC electrical and structural design for a photovoltaic (PV) rack mounted array and related electrical equipment. The Construction Phase will include the installation of a grid connected PV system. Once completed, the PV system will be interconnected to the Pacific Gas & Electric Company (PG&E) electrical distribution system.
Justification:	The Electricity Resource Plan approved by the SFPUC and the San Francisco Board of Supervisors, along with the Mayor's solar directive, established goals to develop renewable power, reduce greenhouse gas emissions, and assure reliable power in San Francisco. This project location will provide additional solar and renewable power for new load growth and diversify our portfolio.
Operating Impact:	Renewable projects at SFPUC or client department facilities can generate additional energy that can be used on-site. This project will be 875kW, generate on average 1.30 gigawatt hours per year, and provide approximately 10% of the annual electrical load for Moscone West Convention Center.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0


SFPUC Capital Project Plan
 Hetch Hetchy Enterprise
 Hetch Hetchy Power



Authority Level 1:	15400-UH Renewable-generation - Small
Authority Level 2:	15400-UH Renewable-generation - Small
FSP ID	10014646
Project Title:	Renewable/Generation - Small Renewables
Total Budget:	\$ 12,802,147
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Jamie Seidel
Facility Category:	Renewable and Generation
Type:	Capital
Description:	Funds are requested in the amount of \$1 Million a year to fund municipal renewable energy projects, this includes: site identification, site development, RFQ qualification process, RFP preparation, bidding process, contract negotiation, award of contracts, and management of construction and commissioning. These renewable energy projects can include solar, PV, wind projects, and other renewable projects.
Justification:	The Electricity Resource Plan approved by the SFPUC and the SF Board of Supervisors along with the Mayor's solar and energy efficiency directives established goals to maximize energy efficiency, develop renewable power, reduce greenhouse gas emissions, and assure reliable power in San Francisco. The program will provide additional solar and renewable power for new load growth, diversify our portfolio, and help meet renewable portfolio requirements. This program funds renewable technologies such as Solar PV. Renewable projects inherently mitigate the impacts of climate change as they generate energy from renewable resources such as the sun and wind. Solar PV is a proven technology that the SFPUC has installed reliably for the last 14 years. The Power Enterprise continues to research and install the most cost effective, efficient, and reliable renewable technologies on the market.
Operating Impact:	Renewable projects at SFPUC or client department facilities can generate additional energy used on-site. Excess power above on-site needs can be exported to other municipal loads pursuant to California Public Utilities Code 2828 - HHWP Remote Renewable Generation.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,400,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 700,000
ER	\$ 100,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 50,000
DS	\$ 1,000,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 500,000
CM	\$ 6,500,000	\$ 650,000	\$ 650,000	\$ 650,000	\$ 650,000	\$ 650,000	\$ 3,250,000
CN	\$ 1,000,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 500,000
Total	\$ 10,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 5,000,000

SFPUC Capital Project Plan
 Hetch Hetchy Enterprise
 Hetch Hetchy Power



Authority Level 1:	15404-UH Hetchy Cap And Trade Allowa
Authority Level 2:	15404-UH Hetchy Cap And Trade Allowa
FSP ID	10014665
Project Title:	Energy Efficiency General Fund
Total Budget:	\$ 19,081,675
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	Hetch Hetchy Power
Project Manager:	Jamie Seidel
Facility Category:	Advanced Energy
Type:	Capital
Description:	This budget funds advanced energy projects in facilities of Power Enterprise's General Fund-rate customers. Funds cover the planning, design and construction of advanced energy projects for "direct install", as well as technical assistance and project assistance for departments with their own capital funds. Advanced energy projects include lighting, heating and ventilation, retro-commissioning, energy management systems, renewable battery storage, fuel switching projects, and others. The budget funds projects in municipal facilities for general fund departments such as SFPD, SFFD, SFUSD, SFUSD, Real Estate, Rec. & Parks, Public Health, and Fine Arts Departments, and others, as well as staff time to implement and assist with projects.
Justification:	SFPUC-Power Enterprise receives project funding through the Cap & Trade Program which is administered by the California Air Resources Board and has been implemented as part of AB 32. All funds expended through the Cap & Trade Program are required to achieve greenhouse gas emissions reductions. These planned expenditures also align with SFPUC's advanced energy investments and numerous other local Clean Energy policies approved by the State, the SFPUC and the SF Board of Supervisors along with the Mayor's Energy Efficiency & Renewable Energy Directives. Providing advanced energy services also helps meet customer expectations of services and/or incentives provided by their electric utility which is a goal of the Power Enterprise Business Plan.
Operating Impact:	Advanced energy projects will provide carbon reduction projects to the client department, enabling the department to redirect cost savings to other mission critical services. Also, electricity saved will be available to offset power purchases and for resale to Power Enterprise retail and wholesale customers.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 1,400,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 700,000
ER	\$ 100,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 50,000
DS	\$ 1,000,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 500,000
CM	\$ 6,500,000	\$ 650,000	\$ 650,000	\$ 650,000	\$ 650,000	\$ 650,000	\$ 3,250,000
CN	\$ 1,000,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 500,000
Total	\$ 10,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 5,000,000

SFPUC Capital Project Plan
Hetch Hetchy Enterprise
Hetch Hetchy Power



Authority Level 1:	15383-UH Alternative Transmission
Authority Level 2:	15383-UH Alternative Transmission
FSP ID	10034512
Project Title:	Power Asset Acquisition Analysis
Total Budget:	\$ 44,101,348
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Pre-Construction
Organization:	Hetch Hetchy Power
Project Manager:	Pamela Husing
Facility Category:	Transmission/Distribution
Type:	Capital

Description: The Public Power Expansion Project (formerly Power Asset Acquisition Analysis) funds financial, technical, regulatory, and legal analysis and City staff time toward assessment of acquiring PG&E's electrical assets, preparing to execute the possible transaction, and readying the SFPUC for operation of the acquired system. The existing funding for this project was approved in a prior CIP (under Power Asset Acquisition Analysis) and the project is requesting additional funds to support the on-going work of the project.

Justification: In January 2019, Mayor Breed requested that the San Francisco Public Utilities Commission (SFPUC) study the possibility of acquiring Pacific Gas & Electric's (PG&E) electric distribution assets servicing San Francisco. In April 2019, the San Francisco Board of Supervisors (BOS) approved Resolution No. 174-19 determining the public interest and necessity of changing electric service provided to San Francisco, including potential purchase of PG&E assets, and directing the SFPUC to further study the potential acquisition. In September 2019, San Francisco issued a non-binding indication of interest (IOI) to PG&E to purchase PG&E's San Francisco electrical assets at a cost of \$2.5 billion. The BOS unanimously approved Resolution 403-19 in support of the IOI.

On July 27th, 2021 San Francisco filed a Petition for Valuation of PG&E electric assets in San Francisco. The petition was filed with the California Public Utilities Commission and is the next step in establishing the value of assets the City seeks to acquire from PG&E. The duration of this proceeding is expected to run concurrent with the on-going analysis and planning work over the next two years.

Funding this project furthers the City's effort to purchase the electric grid within San Francisco and achieve independence from PG&E. Expansion of the city's public power utility establishes local accountability for electric ratepayers in San Francisco and facilitates investment in infrastructure to further decarbonization and grid resiliency efforts.

Also, acquisition of the electric distribution grid in San Francisco is necessary to ensure that the City can continue to provide electric service as envisioned in the Raker Act. PG&E has failed to provide adequate service under the Wholesale Distribution Tariff and continues to delay, obstruct, and deny the City's ability to interconnect customer load and distributed generation further necessitating the acquisition in order to ensure San Francisco's progress towards its climate goals.

The analysis funded by this request is essential to further the expansion of public power within San Francisco by continuing work on the feasibility of purchasing and operating the grid; planning for separation of physical assets; preparing to transact with PG&E; and implementing transition to the expanded public power entity. This project is necessary to ensure the affordability of electric power in San Francisco and viability of San Francisco's climate goals.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 34,605,969	\$ 3,406,000	\$ 4,747,000	\$ 3,053,000	\$ 2,888,000	\$ 2,888,000	\$ 14,440,000
ER	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
DS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CM	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
CN	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total	\$ 34,605,969	\$ 3,406,000	\$ 4,747,000	\$ 3,053,000	\$ 2,888,000	\$ 2,888,000	\$ 14,440,000


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

CleanPowerSF
Fiscal Years 2023-2032
Ten Year CIP
Capital Projects
January 20, 2022

SFPUC Capital Project Plan
CleanPowerSF
CleanPowerSF



Authority Level 1:	TBD - CleanPowerSF
Authority Level 2:	TBD
FSP ID	(N/A)
Project Title:	Local Renewable Energy Program
Total Budget:	\$ 49,141,400
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Pre-Construction
Organization:	CleanPowerSF
Project Manager:	Michael Hyams
Facility Category:	Power Generation
Type:	Capital
Description:	This project will fund the development of new renewable energy (solar photovoltaic) and battery storage projects on select SFPUC sites. The project is structured around six major phases, including: Planning, Request for Proposals, Construction and Commissioning, Power Purchase Agreement, Asset Management, and Project Buyout. The initial renewable energy facilities developed under this program would be structured as power purchase agreements (PPA) with third parties that would develop and operate the projects for an initial period of time. The PPAs would include a buy-out option for the City and the proposed project includes budget for the estimated acquisition cost of the projects. The Planning Phase of the project will finalize the sites for bidding during the RFP Phase. The Planning Phase will also include a Capital Master Plan for renewable energy projects component, which will identify/propose the best path forward for structuring the ownership/financing and operation of the facilities.
Justification:	Investment in local clean energy and the related jobs is a goal of the CleanPowerSF program articulated by the SFPUC, Board of Supervisors and Mayor when the program was authorized.
Operating Impact:	The PPA Phase of the project is projected to result in a total of approximately \$1.5 million in power purchasing expenditures in FY 2023-2024 and a total of approximately \$4.7 million in power purchasing expenditures starting in FY 2024-2025. The timing of the impact of these expenses will depend on project development schedules and on-line dates to be finalized during the RFP Phase. The timeline here represents the earliest possible on-line dates and cost impacts.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
PL	\$ 2,025,000	\$ 250,000	\$ 250,000	\$ 125,000	\$ 175,000	\$ 175,000	\$ 875,000
ER	\$ 200,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 0	\$ 0
DS	\$ 1,100,000	\$ 275,000	\$ 225,000	\$ 225,000	\$ 225,000	\$ 0	\$ 150,000
CM	\$ 906,000	\$ 80,000	\$ 144,000	\$ 164,000	\$ 49,000	\$ 59,000	\$ 325,000
CN	\$ 45,185,400	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 45,185,400
Total	\$ 49,416,400	\$ 665,000	\$ 669,000	\$ 564,000	\$ 499,000	\$ 234,000	\$ 46,535,400

SFPUC Capital Project Plan
CleanPowerSF
CleanPowerSF



Authority Level 1:	TBD - CleanPowerSF
Authority Level 2:	(N/A)
FSP ID	(N/A)
Project Title:	CleanPowerSF Customer Programs
Total Budget:	\$ 14,531,046
Project Start:	7/1/2022
Project Finish:	6/30/2033
Current Active Phase:	Construction
Organization:	CleanPowerSF
Project Manager:	Julia Alman
Facility Category:	Customer Energy Programs
Type:	Capital
Description:	This project will fund the development and implementation of new customer programs for CleanPowerSF, including programs supporting demand response, electric mobility, local renewable energy generation, and building decarbonization technologies. The project will fund the planning, development and operations of a select set of programs including Peak Day Pricing (demand response), the Regional Heat Pump Water Heater Incent Program (building decarbonization), the Low Income Inverter Replacement program (local renewable energy generation), as well as strategic planning for future program offerings such as Electric Mobility. Funds are requested to support additional program planning to scale and expand customer programs over the 10-year capital planning period.
Justification:	One of the four goals adopted by the Commission for the CleanPowerSF program is investment in local clean energy technology and jobs. Programs that incentivize customer investment in new clean energy technologies are an important and powerful way to help customers reduce their energy bills, transform the way energy is produced and used, and develop local jobs in the clean energy sector. Furthermore, CleanPowerSF has been identified as a key strategy to help the City achieve its Net Zero Emissions by 2045 goal. This budget supports investments, beyond power supply, that drive down greenhouse gas emissions from the electric grid, buildings, and transportation.
Operating Impact:	Some customer programs may have an operating impact. For example, the Peak Day Pricing program may reduce CleanPowerSF's energy procurement costs on days when energy market prices are particularly high. Additionally, a a feed-in tariff will procure local renewable power through long-term power purchase agreements, which will be an operating expense in CleanPowerSF's power purchasing budget. Other programs, like incentives for electric mobility and building decarbonization, may generate new revenue as electricity supplied by CleanPowerSF replaces gasoline and natural gas. As the aforementioned programs are implemented and reach scale, they are not expected to make a significant impact on CleanPowerSF's operating budget in the next two years.

Phase	2023-2032	2023	2024	2025	2026	2027	2028-2032
CN	\$ 14,531,046	\$ 921,046	\$ 1,519,000	\$ 1,319,000	\$ 1,444,000	\$ 1,369,000	\$ 6,650,000
Total	\$ 14,531,046	\$ 921,046	\$ 1,519,000	\$ 1,319,000	\$ 1,444,000	\$ 1,369,000	\$ 6,650,000



Appendix A

Commission Staff Reports and Resolutions



AGENDA ITEM

Public Utilities Commission

City and County of San Francisco



DEPARTMENT Business Services

AGENDA NO. 15

MEETING DATE February 8, 2022

**Adopt the FY 2022-23 SFPUC Capital Budget (San Francisco Administrative Code Section 3.3(c)) and Authorize Associated Bond Financing: Regular Calendar
Manager: Charles Perl**

<p>Summary of Proposed Commission Action:</p>	<p>Public Hearing to consider and possible action to adopt the FY 2022-23 Capital Budget of the San Francisco Public Utilities Commission consisting of \$1,117,521,515; authorize the General Manager to seek Board of Supervisors approval for (1) de-appropriation and re-appropriation of \$38,331,660 in Water Capital Projects and (2) de-appropriation and re-appropriation \$41,158,347 in Wastewater Capital Projects; and authorize the General Manager to seek Board of Supervisors approval for the issuance of (1) \$129,653,767 aggregate principal amount of Water Revenue Bonds and other forms of indebtedness, including commercial paper and State Revolving Fund (SRF) loans, (2) \$704,198,901 aggregate principal amount of Wastewater Revenue Bonds and other forms of indebtedness, including commercial paper and SRF loans, and (3) \$140,889,875 aggregate principal amount of Power Revenue Bonds and other forms of indebtedness, including commercial paper and loans, subject to the terms of Charter Sections 9.107(6) and 9.107(8).</p>
<p>Background & Description:</p>	<p>Under San Francisco Administrative Code Section 3.3, the SFPUC must hold two budget meetings, the first regarding budget priorities, and the second to adopt a proposed budget. The second meeting must occur at least 15 days after the first meeting and before February 14.</p> <p>Accordingly, on January 7, 2022 the SFPUC held a duly noticed public meeting to consider budget priorities at which members of the public provided input. Additionally, on January 7, January 14, and January 20, 2022 the SFPUC General Manager and staff presented in duly noticed public hearings the preliminary proposed FY 2022-23 Capital Budget to the Commission for the Water Enterprise, Wastewater Enterprise, and Hetch Hetchy Water and Power including the Power Enterprise and CleanPowerSF. Copies of the Capital Budget materials from those hearings are on file with the Commission Secretary and available online at: https://sfpuc.org/about-us/boards-commissions-committees/sfpuc-commission/agendas-minutes-resolutions-log</p>

APPROVAL: _____
 COMMISSION
 SECRETARY Donna Hood

FY 2022-23 Capital Budget Development

The development of the attached FY 2022-23 Capital Budget occurred from June through December 2021 and was directed by the Budget Steering Committee, comprised of the SFPUC executive team supported by the Capital Planning Subcommittee. The FY 2022-23 Capital Budget is consistent with the first year of the 10-Year Capital Plan that the Commission is also considering on February 8, 2022. The Budget Steering Committee decided to move forward with a only a single year capital budget supplemental for FY 2022-23 and postpone action on the FY 2023-24 capital budget until next year as additional work is needed to develop that budget.

Baseline Review

As a preliminary step to the capital budget development, a baseline review of all existing project appropriations was completed for potential closeout or repurposing to new capital budget needs. This important step focused on capital project delivery and reduced to the amount of new funding requested in FY 2022-23 and more efficiently use existing project appropriations and financing resources.

The budget development and baseline review resulted in project budget re-appropriations and closeouts including \$41.2M for the Wastewater Enterprise and \$38.3M for the Water Enterprise. These amounts are included in the attached FY 2022-23 Capital Budget Summary and included in the Supplemental Appropriation Ordinances.

Capital Plan Quality Review

The SFPUC Infrastructure Bureau reviewed and validated the Capital Plan project submissions for a consistent and comprehensive capital planning approach across the agency comprised of individual project datasheets describing the project budget, schedule, and scope. The capital budget requests went through a separate project quality review process involving (1) validation of costs and schedule of all proposed projects, (2) assessment of the ability to deliver projects as scheduled including looking at historic versus planned spending and available resources, and (3) the assessment by each Enterprise of its ability to onboard new assets as planned. This new capital planning effort helps assure the budget requests meets each Enterprise's long-range capital needs, reflects a sound project prioritization process, and supports affordability by promoting efficient use of ratepayer funds.

Budgetary Control

Attached is an overview of the FY 2022-23 Capital Budget for each enterprise. The budget summary includes an "Authority," column which contains a 5-digit code (the "Authority Code"). If this budget is adopted by the Commission, the General Manager would have authority to re-allocate project appropriations within the same Authority Code, subject to the procedures set forth in the Infrastructure Division's Procedures Manual on Project Change Management. This procedure establishes a formal process for all SFPUC capital projects or programs to identify, track, and approve or deny Change Authorization Requests to project scope, schedule and/or budgets. However, the reallocation of project appropriations from one Authority Code to a different one would

require both Commission and Board of Supervisors approval. This level of capital project budgetary control is consistent with the Board of Supervisors level of control, as determined by the FY 2022-23 Capital budget appropriation ordinances.

Committee on Information Technology (COIT)

The Customer Service system project has been submitted to the COIT Budget and Performance System for review and approval. This project will transform the Customer Service experience at the SFPUC. It will modernize technology and enable the SFPUC to optimize business processes to align with current and future Customer Service needs and bring increased operational effectiveness.

FY 2022-23 Capital Budget Approval

This Resolution approves the proposed SFPUC Capital Budget of \$1,117,521,515 for FY 2022-23 as presented at the budget hearings on January 7, January 14, and January 20, 2022, and as shown on Attachment A.

It also authorizes the General Manager to submit capital project supplemental appropriation ordinances and associated bond authorization ordinances to the Mayor and Board of Supervisors. These ordinances are also scheduled to be presented to the City’s Capital Planning Committee in March 2022 and the Board of Supervisors in May 2022.

Result of Inaction	Delay the SFPUC Capital Budget submittal to the Controller and Mayor’s Office.																												
Budget & Financing Costs:	<p>The SFPUC FY 2022-23 capital budget and associated financing costs are as follows:</p> <table border="1"> <thead> <tr> <th>FY 2022-23 Capital Budget</th> <th>Amount</th> <th>Financing Costs</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Wastewater Enterprise</td> <td>\$ 687,374,066</td> <td>\$ 105,629,835</td> <td>\$ 793,003,901</td> </tr> <tr> <td>Water Enterprise</td> <td>101,319,297</td> <td>9,387,595</td> <td>110,706,892</td> </tr> <tr> <td>Hetchy Water</td> <td>114,943,889</td> <td>20,228,083</td> <td>135,171,972</td> </tr> <tr> <td>Hetchy Power</td> <td>66,185,543</td> <td>10,867,161</td> <td>77,052,704</td> </tr> <tr> <td>CleanPowerSF</td> <td><u>1,586,046</u></td> <td><u>0</u></td> <td><u>1,586,046</u></td> </tr> <tr> <td>Total</td> <td>\$ 971,408,841</td> <td>\$ 146,112,674</td> <td>\$ 1,117,521,515</td> </tr> </tbody> </table>	FY 2022-23 Capital Budget	Amount	Financing Costs	Total	Wastewater Enterprise	\$ 687,374,066	\$ 105,629,835	\$ 793,003,901	Water Enterprise	101,319,297	9,387,595	110,706,892	Hetchy Water	114,943,889	20,228,083	135,171,972	Hetchy Power	66,185,543	10,867,161	77,052,704	CleanPowerSF	<u>1,586,046</u>	<u>0</u>	<u>1,586,046</u>	Total	\$ 971,408,841	\$ 146,112,674	\$ 1,117,521,515
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Bond Authorization:	<p>Bond authorization amounts associated with the FY 2022-23 capital budget are as follows:</p> <table border="1"> <thead> <tr> <th>FY 2022-23</th> <th>Bonds</th> <th>Financing Costs</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Wastewater Bonds</td> <td>\$ 598,569,066</td> <td>\$ 105,629,835</td> <td>\$ 704,198,901</td> </tr> <tr> <td>Water Bonds</td> <td>\$ 53,196,371</td> <td>\$ 9,387,595</td> <td>\$ 62,583,966</td> </tr> <tr> <td>Hetchy Water Bonds</td> <td><u>57,009,331</u></td> <td><u>10,060,470</u></td> <td><u>67,069,801</u></td> </tr> <tr> <td>Total</td> <td>\$ 110,205,702</td> <td>\$ 19,448,065</td> <td>\$ 129,653,767</td> </tr> <tr> <td>Hetchy Power Bonds</td> <td>\$ 119,855,101</td> <td>\$ 21,034,774</td> <td>\$ 140,889,875</td> </tr> </tbody> </table>	FY 2022-23	Bonds	Financing Costs	Total	Wastewater Bonds	\$ 598,569,066	\$ 105,629,835	\$ 704,198,901	Water Bonds	\$ 53,196,371	\$ 9,387,595	\$ 62,583,966	Hetchy Water Bonds	<u>57,009,331</u>	<u>10,060,470</u>	<u>67,069,801</u>	Total	\$ 110,205,702	\$ 19,448,065	\$ 129,653,767	Hetchy Power Bonds	\$ 119,855,101	\$ 21,034,774	\$ 140,889,875				
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Environmental Review:	Approval of funding mechanisms do not constitute a project under the California Environmental Quality Act (CEQA) Guidelines Section 15378(b)(4) related to the creation of government funding mechanisms which do not involve any commitment to any specific project which may result in a potentially significant impact on the environment. Subsequent approvals of projects to be funded through this Capital Plan would be considered only after the necessary environmental review process in conformance with CEQA, Administrative Code Chapter 31, and Proposition E (approved by the voters in 2002 for Water and Wastewater projects) by this Commission.																												
Recommendation	SFPUC staff recommends that the Commission adopt the attached resolution.																												
Attachments	Attachment A: FY 2022-23 SFPUC Capital Budget																												

PUBLIC UTILITIES COMMISSION

City and County of San Francisco

RESOLUTION NO. 22-0030

WHEREAS, On January 7, 2022, this Commission heard and considered budget priorities for the department. Additionally, on January 7, January 14, and January 20, 2022, the San Francisco Public Utilities Commission (SFPUC) General Manager and staff additionally presented the preliminary proposed FY 2022-23 Capital Budget for the Water Enterprise, Wastewater Enterprise, and Hetch Hetchy Water & Power, including the Power Enterprise and CleanPowerSF ("Capital Budget") including the list of projects, cost estimates, and schedules to the Commission; and

WHEREAS, An overview of the proposed FY 2022-23 Capital Budget for each SFPUC Enterprise is set forth as Attachment A and is on file with the Commission Secretary; and

WHEREAS, the Capital Budget Steering Committee recommended proceeding with only a single year capital budget supplemental for FY 2022-23; and

WHEREAS, As a preliminary step to development of the FY 2022-23 Capital Budget, a baseline review of all existing project appropriations was completed for potential closeout or repurposing to new capital budget needs; and

WHEREAS, The FY 2022-23 Capital Budget submittals went through a quality review to assure the budget addresses the immediate capital improvement needs of each Enterprise and reflects a sound project prioritization process which included a validation of costs and schedule of all proposed projects and an assessment of the ability to deliver the projects within FY 2022-23; and

WHEREAS, The proposed FY 2022-23 Capital Budget must be submitted to, and approved by the Mayor and the Board of Supervisors; and

WHEREAS, The SFPUC General Manager recommends that the Commission request a supplemental appropriation ordinance for the capital expenditures for each of the three Enterprises presented in the proposed FY 2022- 23 Capital Budget to timely implement public improvement projects; and

WHEREAS, Approval of funding mechanisms do not constitute a project under the California Environmental Quality Act (CEQA) Guidelines Section 15378(b)(4) related to the creation of government funding mechanisms which do not involve any commitment to any specific project which may result in a potentially significant impact on the environment; and

WHEREAS, The subsequent approvals of projects to be funded through this Capital Plan would be considered only after the necessary environmental review process in conformance with CEQA, Administrative Code Chapter 31, and Proposition E (approved by the voters in 2002 for Water and Wastewater projects) by this Commission; and

WHEREAS, The Water Enterprise is de-appropriating and re-appropriating \$38,331,660 in Water Capital Projects to fund project spending in FY 2022-23; and

WHEREAS, The Wastewater Enterprise is de-appropriating and re-appropriating \$41,158,347 in Wastewater Capital Projects to fund project spending in FY 2022-23; and

WHEREAS, This Commission has considered the proposed FY 2022-23 Capital Budget for the Water Enterprise, Wastewater Enterprise, and Hetch Hetchy Water and Power, including the Power Enterprise and CleanPowerSF, which totals \$1,117,521,515, as set forth in Attachment A to the February 8, 2022 staff report; now, therefore, be it

RESOLVED, That this Commission hereby adopts the FY 2022-23 SFPUC Capital Budget in the amount of \$1,117,521,515 for the Water Enterprise, the Wastewater Enterprise, and Hetch Hetchy Water and Power, including the Power Enterprise and CleanPowerSF as presented at the public hearings on January 7, January 14, and January 20, 2022 and as set forth in the attached Attachment A, as follows:

FY 2022-23 Capital Budget	Amount	Financing Costs	Total
Wastewater Enterprise	\$ 687,374,066	\$ 105,629,835	\$ 793,003,901
Water Enterprise	101,319,297	9,387,595	110,706,892
Hetchy Water	114,943,889	20,228,083	135,171,972
Hetchy Power	66,185,543	10,867,161	77,052,704
CleanPowerSF	<u>1,586,046</u>	<u>0</u>	<u>1,586,046</u>
Total	\$ 971,408,841	\$ 146,112,674	\$ 1,117,521,515

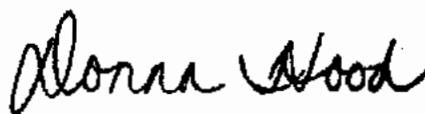
and be it;

FURTHER RESOLVED, That this Commission authorizes the General Manager to seek Board of Supervisors approval for the de-appropriation and re-appropriation of \$38,331,660 in Water Capital Projects and de-appropriation and re-appropriation of \$41,158,347 in Wastewater Capital Project funding; and, be it

FURTHER RESOLVED, That the SFPUC General Manager is authorized to reallocate funds within an Authority Code as provided in the staff report and Attachment A appended to this Resolution and to make further technical adjustments to these approved amounts as may be necessary, or upon further direction from the Commission, the Mayor, or the Board of Supervisors; and, be it

FURTHER RESOLVED, The General Manager is hereby authorized and directed to submit to the Board of Supervisors proposed ordinances authorizing the issuance of (1) not to exceed \$129,653,767 aggregate principal amount of Water Revenue Bonds and other forms of indebtedness, including commercial paper and State Revolving Fund (SRF) loans, (2) \$704,198,901 aggregate principal amount of Wastewater Revenue Bonds and other forms of indebtedness, including commercial paper and SRF loans, under the terms of Proposition E (approved by the voters November 2002), and (3) \$140,889,875 aggregate principal amount of Power Revenue Bonds and other forms of indebtedness, including commercial paper and loans, subject to the terms of Charter Sections 9.107(6) and 9.107(8). The General Manager shall return to this Commission for a subsequent discretionary approval of any disclosure and transaction related documents prepared in connection with the issuance of such Bonds and other forms of indebtedness.

I hereby certify that the foregoing resolution was adopted by the Public Utilities Commission at its meeting of February 8, 2022.



Secretary, Public Utilities Commission

Attachment A

FY 2022-23 SFPUC Capital Budget

Attachment A - Wastewater Enterprise

Funding Source		
Authority	Description of Appropriation or Fund	FY 2022-23
19471	Proceeds Sale of Bonds	704,198,901
19141	Wastewater Revenue	83,005,000
19141	Wastewater Capacity Fee	<u>5,800,000</u>
	TOTAL - Funding Source	793,003,901

Use of Funds		
Authority	Description of Appropriation or Fund	FY 2022-23
SSIP		
19142	Program Management	14,000,000
19142	Biosolids/Digester Project	375,532,448
19142	Treatment Plant Improvements - Southeast	31,555,408
19142	Treatment Plant Improvements - North Point	11,314,730
19142	Treatment Plant Improvements - Oceanside	<u>29,201,164</u>
	SSIP - Treatment Facilities Program	447,603,750
19142	Collection System Improvements	57,948,296
19142	Pump Stations/Force Mains	<u>307,000</u>
	SSIP - Sewer/Collection System Program	58,255,296
19142	Stormwater Management/Green Infrastructure	15,209,899
19142	Flood Resilience/Hydraulic Improvements	<u>48,055,523</u>
	SSIP - Storm Water/Flood Control Program	63,265,422
	TOTAL - SSIP	583,124,468
Non-SSIP		
19141	Renewal & Replacement-Collection System	77,355,890
19141	Renewal & Replacement-Treatment Facilities	25,680,135
19139	Customer Service System	998,325
19134	Treasure Island	<u>215,248</u>
	TOTAL - Non SSIP	104,249,598
19471	Financing Cost	105,629,835
	TOTAL - Use of Funds	793,003,901

Wastewater Uses De-Appropriation		
Authority	Description of Appropriation or Fund	FY 2022-23
19142	Program Management	(13,666,744)
19142	Stormwater Management/Green Infrastructure	(1,844,368)
19142	Flood Resilience/Hydraulic Improvements	<u>(25,647,235)</u>
	Uses- Total	(41,158,347)

Wastewater Uses Re-Appropriation		
19142	Treatment Plant Improvements - Southeast	41,158,347

Attachment A - Water Enterprise

Authority	Funding Source Description of Appropriation or Fund	FY 2022-23
17731	Proceeds Sale of Bonds	62,583,966
19133	Water Enterprise Revenue	46,602,926
19063	Water Capacity Fee	<u>1,520,000</u>
	TOTAL - Funding Source	110,706,892

Authority	Use Of Funds Description of Appropriation or Fund	FY 2022-23
19056	Regional Water Treatment Program	17,165,884
19057	Water Transmission Program	14,232,044
19061	Buildings & Ground Regional	<u>16,180,543</u>
	Total Regional Water	47,578,471

Local Water		
19063	Local Water Conveyance/Distribution	50,205,893
19065	System Monitoring and Control	998,326
19114	Buildings & Ground Improvements	<u>2,536,607</u>
	TOTAL - Local Water	53,740,826

17731	Financing Costs	9,387,595
	TOTAL - Use of Funds	110,706,892

Authority	Regional Water De-Appropriation Description of Appropriation or Fund	FY 2022-23
19058	Water Supply and Storage	(8,919,150)
19059	Watershed and land Management	(4,276,110)
19069	Long Term Monitoring & Permit Program	<u>(2,315,740)</u>
	Uses- Total	(15,511,000)

Authority	Regional Water Re-Appropriation	
19056	Regional Water Treatment Program	11,091,065
19060	Communication & Monitoring	2,969,645
19061	Buildings & Grounds	<u>1,450,290</u>
	Uses- Total	15,511,000

Authority	Local Water De-Appropriation	
19054	Treasure Island	(6,451,819)
19062	Local Water Supply Projects	(835,847)
19115	Pacifica Recycled Water Project	(1,100,994)
80119	Water Supply Projects	<u>(14,432,000)</u>
	Uses- Total	(22,820,660)

Authority	Local Water Re-Appropriation	
19063	Local Water Conveyance	21,604,697
19067	Pump Station Improvements	468,742
19112	Automated Meter Reading System	<u>747,221</u>
	Uses- Total	22,820,660

Attachment A - Hetch Hetchy Enterprise

Authority	Funding Source Description of Appropriation or Fund	FY 2022-23
15366	Proceeds Sale Power Bonds	140,889,875
15366	Proceeds Sale Water Bonds	67,069,801
15405	Distributed Antenna System Revenue	2,265,000
21284	Low Carbon Fuel Standard	1,114,452
15404	Cap and Trade Revenue	<u>885,548</u>
	TOTAL - Funding Source	212,224,676

Authority	Use of Funds Description of Appropriation or Fund	FY 2022-23
15372	Distribution Services Retail - SFO Substation	4,100,000
15372	Distribution Services Retail - Intervening Facilities	12,000,000
15372	Distribution Services Retail - Affordable Housing	500,000
15372	Distribution Services Retail - Grid Connections	40,432,000
15377	Streetlights	2,265,000
15391	Treasure Island	1,482,543
15400	Small Renewables	1,000,000
15404	Energy Efficiency - General Fund	1,000,000
15383	Power Asset Acquisition	<u>3,406,000</u>
	TOTAL - Power	66,185,543
15363	Water Infrastructure Projects	45,723,000
15364	Power Infrastructure Projects	44,140,154
15365	Joint Water/Power Projects	<u>25,080,735</u>
	TOTAL - Water	114,943,889
15366	Financing Cost Water	10,060,470
15366	Financing Cost Power	21,034,774
	TOTAL - Use of Funds	212,224,676

Attachment A - CleanPowerSF Enterprise

Authority	Funding Source Description of Appropriation or Fund	FY 2022-23
80233	ITI from CleanPowerSF Funds	<u>1,586,046</u>
	TOTAL-Source of Fund	1,586,046

Authority	Use of Funds Description of Appropriation or Fund	FY 2022-23
80233	Local Renewable Energy Program	665,000
80233	CleanPowerSF Customer Program	<u>921,046</u>
	Total-Uses of Fund	1,586,046



AGENDA ITEM

Public Utilities Commission

City and County of San Francisco



DEPARTMENT Business Services AGENDA NO. 16
 MEETING DATE February 8, 2022

Adopt the SFPUC 10-Year Capital Plan for FY 2022-23 to FY 2031-32: Regular Calendar

Manager: Charles Perl

Summary of Proposed Commission Action:	Public Hearing to consider and possible action to adopt the San Francisco Public Utilities Commission 10-Year Capital Plan for FY 2022-23 through FY 2031-32 totaling \$9,893,091,608.
Background & Description:	<p>Background</p> <p>Under Charter Section 8B.123, this Commission must hold public hearings on an annual basis to review, update, and adopt a Long-Term Capital Improvement Program (referred to herein as the “10-Year Capital Plan” or “Capital Plan”) and a Long- Range Financial Plan (“10-Year Financial Plan” or “Financial Plan”). The Capital Plan is to contain a list of projects to be executed during the 10-year planning horizon, including cost estimates and schedules. The Financial Plan is to contain estimates of operations and maintenance expenses, repair and replacement costs, debt costs, and projected rate increases. Together, the two plans provide visibility into the capital investment required to meet service levels and the rate impacts of these investments. In addition, they serve as a basis and supporting documentation for the Commission’s capital budget and the issuance of revenue bonds and other indebtedness to support the SFPUC capital program.</p> <p>The SFPUC General Manager and staff presented the preliminary proposed SFPUC 10-Year Capital Plan for FY 2022-23 through FY 2031-32 to the Commission at duly noticed public meetings held on January 7, January 14, and January 20, 2022, for the Water Enterprise, Wastewater Enterprise, and Hetch Hetchy Water and Power (including CleanPowerSF). The project details presented at those public meetings, including a list of projects, cost estimates, and schedules are attached.</p> <p>A Capital Plan document describing the SFPUC’s final adopted 10-year Capital Plans and FY 2022-23 Capital Budget will be published during the summer of 2022. The document will describe the capital planning process, identify high priority elements of the plan and present project-level details. Specifically, it will provide project descriptions and justifications, details on asset classification plans, project implementation schedules by phases, and budget information at a project level.</p>

APPROVAL: _____

COMMISSION SECRETARY Donna Hood

Capital Plan Development

The SFPUC 10-Year Capital Plan provides an assessment of the agency's capital needs aligned with the Commission's Strategic Plan goals and the required investments to meet those needs. The development of the plans occurred from June through December 2021. This effort was guided by a project charter, was directed by the Budget Steering Committee comprised of the SFPUC executive team, and further supported by the Capital Planning Subcommittee. As a preliminary step to Capital Plan development, a baseline review of all existing project appropriations was completed for potential closeout or repurposing to new capital budget needs. This important step focused on capital project delivery and reduced the FY 2022-23 capital budget request resulting in a more efficient use of ratepayer resources.

Capital Plan Quality Review

The SFPUC Infrastructure Bureau reviewed and validated the proposed Capital Plan project submissions, to assure a consistent and comprehensive capital planning approach across the agency comprised of individual project datasheets describing the project budget, schedule, and scope. The three Enterprises' Capital Plan submissions also went through a separate project quality review process involving (1) validation of costs and schedule of all proposed projects, (2) assessment of the ability to deliver projects as scheduled including looking at historic versus planned spending and available resources, and (3) the Enterprises' assessment of their ability to onboard new assets as planned. This new capital planning effort helps assure the 10-Year Capital Plan meets the Enterprises' long-range capital needs, reflects a sound project prioritization process, and supports affordability by promoting efficient use of ratepayer funds.

Project Deliverability

The Capital Plan development process addressed the issue of project deliverability, by associating project scope, schedule, and costs to available Infrastructure Bureau staffing and contracted resources to execute the projects. Progress has been made this year to better align capital plans to a more realistic deliverable level. However, a full-scale effort is needed to better identify current and future project management and contracting capacity and assess whether the capital plans are deliverable.

Therefore, SFPUC staff will undertake a capital planning review process during 2022 to look at project delivery capacity and tie this to a revised capital plan that will be brought to the Commission next year as part of the mid-cycle budget update. The focus of this effort will be on deliverability, prudent prioritization, realistic phasing of projects, and understanding the resources available to implement capital plans. This effort will include the FY 2023-24 Capital Budget for the agency.

Overview of Proposed Capital Plan

The attached proposed 10-Year Capital Plan for FY 2022-23 through FY 2031-32 (Attachment A), contains project summaries for each

Enterprise, as well as the individual project data sheets describing each project’s projected scope, schedule, and cost over the 10-year period.

The costs included in this proposed Capital Plan update have grown almost 10% as compared to last year’s plan due to cost and scope increases and newly identified investment needs. With Capital spending continuing to be the single largest cost driver at the agency, responsible management means efficient use of capital resources and effective project execution are key components for successful capital plan execution. Capital plan funding was tied to budget targets and lower rate projection goals for the agency. The result of increased project costs over the planning period resulted in a portion of the capital plan being unfunded as shown in the below table.

10-Year Capital Plan	FYE 2023-2032 Uses	FYE 2023-2032 Sources	Unfunded amount	Unfunded %
Wastewater	6,127,170,930	5,152,295,522	(974,875,408)	15.9
Water	2,118,034,995	1,907,753,178	(210,281,817)	9.9
Hetch Hetchy Water	974,442,211	974,442,211	-	-
Hetch Hetchy Power	611,055,026	506,657,646	(104,397,380)	17.1
CleanPowerSF	62,388,446	62,388,446	-	-
Total	\$9,893,091,608	\$8,603,537,003	\$1,289,554,605	13.0

Given this approach, the capital plan includes only a single year capital budget proposal for FY 2022-23 as the agency works on the capital reimagining process to better tie the capital plan with the resources to execute it. Staff intends to propose the FY 2023-24 capital budget with the next capital plan update as a part of the mid-cycle budget update in early 2023.

Wastewater Enterprise: \$704 million increase, driven by a \$399 million increase of the Sewer System Improvement program (SSIP) (Biosolids Project increase of \$660 million offset with \$261 million in other project decreases) and \$335 million in Renewal and Replacement cost increases primarily for the Collection System Projects.

Water Enterprise: \$110 million increase primarily from a \$66 million increase for the Regional Water Treatment and Water Transmission Programs, and \$44 million to fund continuing work on the Water Conveyance/Distribution System and the new Customer Service System Project.

Hetch Hetchy Water & Power: \$18.5 million increase with a \$77.7 million increase from Power projects for new distribution services mostly offset by reductions of \$59.2 million in Water projects.

CleanPowerSF: \$13.4 million decrease due to a reduction in the funding for buyout options in the later years of the Local Renewable Energy Program.

Capital Plan Approval

If approved by the Commission, the SFPUC 10-Year Capital Plan will be submitted to the Mayor and presented to the Citywide Capital Planning

	Committee in the Spring for review.				
	The first year of the 10-Year Capital Plan forms the SFPUC's FY 2022-23 capital budget and is covered under a separate action item scheduled for February 8, 2022.				
Result of Inaction:	SFPUC would not be in compliance with Charter Section 8B.123.				
Budget & Costs:					
	10-Year Capital Plan	FYE 2023-2032 Uses	FYE 2023-2032 Sources	Unfunded Amount	Unfunded %
	Wastewater	6,127,170,930	5,152,295,522	(974,875,408)	15.9
	Water	2,118,034,995	1,907,753,178	(210,281,817)	9.9
	Hetch Hetchy Water	974,442,211	974,442,211	0	
	Hetch Hetchy Power	611,055,026	506,657,646	(104,397,380)	17.1
	CleanPowerSF	62,388,446	62,388,446	0	
	Total	\$9,893,091,608	\$8,603,537,003	\$1,289,554,605	13.0
Environmental Review:	Approval of funding mechanisms do not constitute a project under the California Environmental Quality Act (CEQA) Guidelines Section 15378(b)(4) related to the creation of government funding mechanisms which do not involve any commitment to any specific project which may result in a potentially significant impact on the environment. Subsequent approvals of projects to be funded through this Capital Plan would be considered only after the necessary environmental review process in conformance with CEQA, Administrative Code Chapter 31, and Proposition E (approved by the voters in 2002 for Water and Wastewater projects) by this Commission.				
Recommendation:	SFPUC staff recommends that the Commission adopt the attached resolution.				
Attachments:	Attachment A: SFPUC 10-Year Capital Plan FYE 2023-2032 and Project Datasheets				

PUBLIC UTILITIES COMMISSION

City and County of San Francisco

RESOLUTION NO. 22-0031

WHEREAS, Under San Francisco Charter Section 8B.123, the San Francisco Public Utilities Commission must annually hold public hearings to review, update, and adopt a long-term Capital Plan covering projects during the next 10-year period, including cost estimates and schedules; and

WHEREAS, The SFPUC General Manager and staff presented the proposed SFPUC 10-Year Capital Plan for FY 2022-23 through FY 2031-32 for the Water Enterprise, Wastewater Enterprise, and Hetch Hetchy Water and Power, including the Power Enterprise and CleanPowerSF, to the Commission at public hearings held on January 7, January 14, and January 20, 2022, and such presentations included a list of projects, cost estimates, and schedules, together comprising the SFPUC 10-Year Capital Plan; and

WHEREAS, On February 8, 2022, staff presented as Attachment A to the staff report the proposed SFPUC 10-Year Capital Plan Summaries FYE 2023-2032 and Project Datasheets, a copy of which is on file with the Commission Secretary; and

WHEREAS, The SFPUC 10-Year Capital Plan provides an assessment of the agency's capital needs aligned with the Commission's Strategic Plan goals and the investments to meet those needs; and

WHEREAS, As a preliminary step to 10-Year Capital Plan development, a baseline review of all existing project appropriations was completed for potential close-out or repurposing to new capital budget needs; and

WHEREAS, The SFPUC Infrastructure Bureau reviewed and validated all 10-Year Capital Plan project submittals for a consistent and comprehensive capital planning approach across the agency comprised of individual project datasheets describing the project budget, schedule, and scope; and

WHEREAS, Capital Plan project quality review process assured the Capital Plan meets the Enterprise's infrastructure needs, reflects a sound project prioritization process, and supports affordability by promoting efficient use of ratepayer funds; and

WHEREAS, The SFPUC Capital Plan development process included an assessment of SFPUC's ability to deliver projects looking at historic versus planned spending and aligning project plans with available delivery resources; and

WHEREAS, Capital Project cost and scope increases and additional infrastructure needs resulted in a 9% increase in plan costs over the 10-year period, and an associated unfunded portion of the capital plan that has not been included in long range financial planning cost projections; and

WHEREAS, SFPUC staff will undertake a capital planning review process over the coming year with a focus on project deliverability, prudent prioritization, realistic phasing of projects, and understanding the resources available to implement our plans resulting in a revised capital plan that will be brought to the Commission in early 2023; and

WHEREAS, Approval of funding mechanisms do not constitute a project under the California Environmental Quality Act (CEQA) Guidelines Section 15378(b)(4) related to the creation of government funding mechanisms which do not involve any commitment to any specific project which may result in a potentially significant impact on the environment; and

WHEREAS, The subsequent approvals of projects to be funded through this Capital Plan would be considered only after the necessary environmental review process in conformance with CEQA, Administrative Code Chapter 31, and Proposition E (approved by the voters in 2002 for Water and Wastewater projects) by this Commission; and

WHEREAS, The Commission-approved 10-Year Capital Plan for FY 2022-23 to FY 2031-32 will be submitted to the Mayor and presented to the City’s Capital Planning Committee, for review; and

WHEREAS, The SFPUC’s 10-Year Capital Plan is used to develop the agency’s capital budget, 10-Year Financial Plan, projected debt issuances, and estimated rate changes; now, therefore, be it

RESOLVED, That the Commission hereby adopts the SFPUC 10-Year Capital Plan for FYE 2023-2032 comprised of the project summaries and project datasheets included in Attachment A presented to the Commission on February 8, 2022, which describes project costs, scope, and schedule over the 10-year period with total costs as follows:

10-Year Capital Plan	FYE 2023-2032 Uses	FYE 2023-2032 Sources	Unfunded amount	Unfunded %
Wastewater	\$6,127,170,930	\$5,152,295,522	(974,875,408)	15.9
Water	2,118,034,995	1,907,753,178	(210,281,817)	9.9
Hetch Hetchy Water	974,442,211	974,442,211	-	-
Hetch Hetchy Power	611,055,026	506,657,646	(104,397,380)	17.1
CleanPowerSF	62,388,446	62,388,446	-	-
Total	\$9,893,091,608	\$8,603,537,003	\$1,289,554,605	13.0

I hereby certify that the foregoing resolution was adopted by the Public Utilities Commission at its meeting of February 8, 2022.



Secretary, Public Utilities Commission



Appendix B

Board Staff Report and Ordinances

CITY AND COUNTY OF SAN FRANCISCO

BOARD OF SUPERVISORS

BUDGET AND LEGISLATIVE ANALYST

1390 Market Street, Suite 1150, San Francisco, CA 94102 (415) 552-9292
FAX (415) 252-0461

May 20, 2022

TO: Budget and Appropriations Committee

FROM: Budget and Legislative Analyst



SUBJECT: May 25, 2022 Budget and Appropriations Committee Meeting

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<p>Item 8 File 22-0497</p>	<p>Department: Public Utilities Commission</p>
<p>EXECUTIVE SUMMARY</p>	
<p style="text-align: center;">Legislative Objectives</p> <ul style="list-style-type: none"> File 22-0497 is an ordinance appropriating \$1,586,046 in CleanPowerSF revenues to fund capital projects and \$2,141,546 in California Public Utilities Commission grant funds to fund the Disadvantaged Communities Green Tariff and Community Solar Green Tariff programs in FY 2022-23. The total appropriation is \$3,727,592. <p style="text-align: center;">Key Points</p> <ul style="list-style-type: none"> According to the SFPUC’s 10-Year Financial Plan (adopted in February 2022), the CleanPowerSF Capital Improvement Plan includes funding of approximately \$62 million from FY 2022-23 to FY 2031-32, all of which is funded by customer revenues from power sales. Of the \$62 million, \$49 million (79 percent) will fund the Local Renewable Energy Program and the remaining \$13 million (21 percent) will fund the CleanPowerSF Customer Program. The Local Renewable Energy Program funds the development of new renewable energy (solar) and battery storage facilities to help CleanPowerSF meet its renewable energy mix targets. The CleanPowerSF Customer Program funds the development and implementation of programs that incentivize customers to invest in clean energy technology and decarbonization tools, including peak day pricing (demand response), electric mobility, building decarbonization through a Regional Heat Pump Water Heater Incentive Program, and local renewable energy generation through the Low-Income Inverter Replacement program. As directed by Assembly Bill 327, the California Public Utilities Commission (CPUC) created the Disadvantaged Communities Green Tariff and Community Solar Green Tariff Programs to increase the use of renewable energy in disadvantaged communities. Funding in FY 2022-23 would primarily go towards providing discounts to participating customers and program management for the Green Tariff program, and program management and procurement to prepare for the launch of the Community Solar Green Tariff program. <p style="text-align: center;">Fiscal Impact</p> <ul style="list-style-type: none"> The Local Renewable Energy Program would receive \$665,000 and the Customer Program would receive \$917,874 in FY 2022-23. As required by the Charter, the Controller’s Office would receive \$3,172 for its audit fund for the two programs. These programs will be paid for by CleanPowerSF’s customer revenues from power sales. In addition, the Disadvantaged Communities Green Tariff and Community Solar Green Tariff Programs would receive \$2,137,263, and the Controller’s Office would receive \$4,283 for its audit fund for the programs. These programs will be funded by a \$2,141,546 grant from CPUC. <p style="text-align: center;">Recommendation</p> <ul style="list-style-type: none"> Approve the proposed ordinance. 	

MANDATE STATEMENT

Charter Section 9.105 states that the Board of Supervisors shall approve by ordinance all amendments to the Annual Appropriation Ordinance after the Controller certifies the availability of funds.

Charter Section F1.113 states that 0.2 percent of the City’s budget, excluding bond debt, must be set-aside for the Controller’s audit fund.

BACKGROUND

CleanPowerSF

CleanPowerSF, operated by the San Francisco Public Utilities Commission (SFPUC) Power Enterprise, provides electricity generated from renewable sources to approximately 380,000 San Francisco customers. In 2016, CleanPowerSF began serving customers after the enactment of California Public Utilities Code Section 331.1(c) and 366.2 in 2002 authorizing local governments to create community choice aggregators to provide electricity to customers using the existing investor-owned utility’s billing, transmission, and distribution infrastructure. Between 2004 and 2015, the Board of Supervisors approved a series of legislation supporting implementation of CleanPowerSF as the City’s community choice aggregator.¹ In February 2021, the Board of Supervisors authorized CleanPowerSF to join a nine-member Joint Powers Agreement (JPA) with other community choice aggregators in Northern California (Ordinance 25-21).² The JPA, called California Community Power or “CC Power,” was formed in April 2021.

DETAILS OF PROPOSED LEGISLATION

File 22-0497 is an ordinance appropriating \$1,586,046 in CleanPowerSF revenues to fund capital projects and \$2,141,46 in California Public Utilities Commission grant funds to fund the Disadvantaged Communities Green Tariff and Community Solar Green Tariff programs in FY 2022-23. The total appropriation is \$3,727,592.

¹ See Ordinance Nos. 86-04, 147-07, 232-09, 45-10, 200-12, and 78-14; and Resolution Nos. 348-12, 331-13, and 75-15.

² According to the Budget and Legislative Analyst’s report to the January 27, 2021 Budget and Finance Committee, the JPA was to be made up of Clean Power SF; Central Coast Community Power (serving parts of Monterey, San Benito, Santa Cruz, San Luis Obispo and Santa Barbara counties); East Bay Community Energy Authority (Alameda County); Marin Clean Energy Authority (serving Contra Costa, Marin, Napa and Solano counties as well as towns and cities within those counties); San Jose Clean Energy (City of San Jose); Redwood Coast Energy Authority (Humboldt County); Peninsula Clean Energy (San Mateo County and incorporated cities); Silicon Valley Clean Energy Authority (parts of Santa Clara County); and Sonoma Clean Power Authority (Sonoma and Mendocino Counties).

CleanPowerSF Capital Plan

According to the SFPUC's 10-Year Financial Plan (adopted in February 2022), the CleanPowerSF Capital Improvement Plan includes funding of approximately \$62 million from FY 2022-23 to FY 2031-32, all of which is funded by customer revenues from power sales. Of the \$62 million, \$49 million (79 percent) will fund the Local Renewable Energy Program, and the remaining \$13 million (21 percent) will fund the CleanPowerSF Customer Program. The SFPUC's 2017 fund balance requires that enterprises maintain fund balances equal to a minimum of 90 days or 25 percent of operating and maintenance expenses and provides for the Commission to consider lowering rates if fund balances exceed 68 percent of those costs. According to the FY 2022-23 to FY 2031-32 Financial Plan, the CleanPowerSF fund balance ranges from 37 to 47 percent of operating expenses.

According to the SFPUC, a pending 2022 Power Rate Study³ informed a one-year CleanPowerSF rate proposal for FY 2022-23 for rates that will be in effect July 1, 2022. SFPUC states that the one-year CleanPowerSF rate proposal is a rate decrease from current rates. Rate changes have not been finalized yet. According to the SFPUC, the following factors have changed since the adoption of the financial plan in February 2022 that will impact projected future rate changes:

- An updated SFPUC Fund Balance Reserve Policy (approved in 2022), which now includes a higher CleanPowerSF fund balance minimum and target
- Extreme volatility in the power supply markets which are contributing to significantly higher than budgeted power purchase costs this fiscal year and expected next fiscal year (and potentially thereafter)

According to SFPUC staff, future CleanPowerSF rates will be set to ensure the Department meets financial covenants and commitments, as well as meet minimum fund balance requirements.

Local Renewable Energy Program

The Local Renewable Energy Program funds the development of new renewable energy (solar) and battery storage facilities to help CleanPowerSF meet its renewable energy mix targets. Funding in FY 2022-23 would go towards planning, design, construction management and environmental review. The facilities will be initially operated by third-parties (through power purchase agreements) but may be purchased by CleanPowerSF in the future through a buy-out option for the City.

Customer Program

The CleanPowerSF Customer Program funds the development and implementation of programs that incentivize customers to invest in clean energy technology and decarbonization tools, including peak day pricing (demand response), electric mobility, building decarbonization through a Regional Heat Pump Water Heater Incentive Program, and local renewable energy generation through the Low-Income Inverter Replacement program. Incentives are available for

³ According to SFPUC, the study began in 2021 and will be finalized in 2022.

residences and businesses investing in solar installations, solar water heating, and electric vehicles. The program includes a feed-in tariff⁴ to procure local renewable energy through long-term power purchase agreements. Funding in FY 2022-23 would go towards staffing, incentives, and consultants for each of these programs.

California Public Utilities Commission Disadvantaged Communities Green Tariff and Community Solar Green Tariff Programs

As directed by Assembly Bill 327, the California Public Utilities Commission (CPUC) created the Disadvantaged Communities Green Tariff and Community Solar Green Tariff Programs to increase the use of renewable energy in disadvantaged communities. SFPUC received approval of a grant from the CPUC in April 2021 to implement the programs in FY 2022-23.

Eligible customers participating in the Disadvantaged Communities Green Tariff and Community Solar Green Tariff programs will receive 100 percent renewable energy at a 20 percent discount off their monthly electricity bill. The SFPUC must procure energy from renewable resources located in disadvantaged communities to serve the customers participating in these programs. According to the SFPUC, the renewable energy project developers selected to provide energy for the Community Solar Green Tariff program must partner with a local community-based sponsor to support site selection of the renewable energy project and program enrollment.

Funding in FY 2022-23 would primarily go towards providing discounts to participating customers and program management for the Green Tariff program, and program management and procurement to prepare for the launch of the Community Solar Green Tariff program. According to the SFPUC, these programs are not included in CleanPowerSF's Capital Improvement Plan because they are grant-funded.

FISCAL IMPACT

Exhibit 1 below shows the sources and uses of the proposed appropriation in FY 2022-23.

⁴ A feed-in tariff is a policy tool designed to support the development of renewable energy sources through the provision of a guaranteed, above-market price for producers

Exhibit 1: Sources and Uses of Proposed Appropriation

	FY 2022-23
Sources	
Interfund Transfers in from CleanPowerSF funds ⁵ (Capital Revenues)	\$1,586,046
CPUC State Grant	2,141,546
Total Sources	\$3,727,592
Uses	
Local Renewable Energy Program	\$665,000
Customer Program	917,874
CPUC Disadvantaged Communities Green Tariff and Community Solar Green Tariff Programs	2,137,263
Controller's Audit Fund (Local Renewable Energy Program and Customer Program)	3,172
Controller's Audit Fund (CPUC Disadvantaged Communities Programs)	4,283
Total Uses	\$3,727,592

Source: File 22-0497

As shown in Exhibit 1, the Local Renewable Energy Program would receive \$665,000 and the Customer Program would receive \$917,874 in FY 2022-23. As required by the Charter, the Controller's Office would receive \$3,172 for its audit fund for the two programs. These programs will be paid for by CleanPowerSF's customer revenues from power sales. In addition, the Disadvantaged Communities Green Tariff and Community Solar Green Tariff Programs would receive \$2,137,263, and the Controller's Office would receive \$4,283 for its audit fund for the programs. These programs will be funded by a \$2,141,546 grant from CPUC. Funding for the grant comes from PG&E's sale of carbon dioxide allowances under California's Cap and Trade program, and the Public Purpose Program Surcharge,⁶ which is collected from all PG&E retail customers.

RECOMMENDATION

Approve the proposed ordinance.

⁵ According to SFPUC, an interfund transfer is a transfer between two funds in PeopleSoft. In this instance, the funds will be transferred from the CleanPower operating budget to the CleanPower Capital Fund. The source of funds is CleanPowerSF customer revenues from power sales.

⁶ This surcharge is used to fund state-mandated gas assistance programs for low-income customers, energy efficiency programs, and public-interest research and development.

<p>Items 9 & 10 Files 22-0498 & 22-0499</p>	<p>Department: Public Utilities Commission</p>
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EXECUTIVE SUMMARY

Legislative Objectives

- **File 22-0499** is an ordinance authorizing the San Francisco Public Utilities Commission (SFPUC) to issue \$140,889,875 in Power Revenue Bonds to fund Hetch Hetchy Water and Power Enterprise capital projects.
- **File 22-0498** is an ordinance appropriating \$211,004,676 of Water Revenue Bond, Power Revenue Bonds, Cap and Trade revenues, and Hetch Hetchy Water and Power Revenues.

Key Points

- Of the \$211 million appropriation, \$65 million are allocated to Power projects, \$115 million are allocated to Water projects, and \$31 million are financing costs, including capitalized interest and debt service reserve.
- Between 2014 and 2020, the Board of Supervisors authorized \$535.7 million in Power Revenue Bonds, of which \$163.6 million were issued and \$372.1 million were authorized but not issued. Approval of new Power Revenue Bonds would increase total authorization to \$676.6 million and authorized but not issued bonds to \$513.0 million. According to the SFPUC 10-Year Financial Plan, SFPUC plans to issue \$110 million in Power Revenue Bonds in FY 2022-23; total bond issuance over the 10 years through FY 2031-32 is \$605 million. If the SFPUC issues \$110 million in Power Revenue Bonds in FY 2022-23, SFPUC will continue to have \$403 million in authorized and unissued Power Revenue Bonds. According to SFPUC this authorization is projected to be fully utilized to meet the approved capital spending requirements of the Power Enterprise.

Fiscal Impact

- Annual Hetch Hetchy Enterprise debt service for outstanding debt is \$3.9 million in FY 2022-23, increasing to \$47.2 million in FY 2031-32.
- SFPUC is currently undergoing a rate study, evaluating rates for Hetch Hetchy and CleanPowerSF customers. According to the 10-Year Financial Plan, SFPUC expects to increase Hetch Hetchy customer rates, which includes rates charged to City agencies, by 9.8 percent in FY 2022-23 and 8.4 percent in FY 2023-24. Given that the 10-Year Financial Plan projects annual Hetch Hetchy Fund balances and debt service coverage ratios that exceed SFPUC policy and bond covenants, the Board of Supervisors should request a report from SFPUC on proposed Hetch Hetchy and CleanPowerSF customer rate increases in FY 2022-23 and FY 2023-24. According to SFPUC staff, SFPUC will submit a memorandum to the Clerk of the Board following the Commission’s actions on Hetch Hetchy and CleanPowerSF rates in accordance with Charter Section 8B.125

Recommendations

- Amend the proposed ordinance (File 22-0499) to state that the required report detailing issuance of Power Revenue bonds will be included in the legislative file.

- Request a report from SFPUC on proposed Hetch Hetchy and CleanPowerSF customer rate increases in FY 2022-23 and FY 2023-24 prior to the Budget and Appropriation Committee’s recommendations in June 2022.
- Approve File 22-0499 as amended and File 22-0498.

MANDATE STATEMENT

Charter Section 9.107(6, 8) states that the Board of Supervisors is authorized to provide for the issuance of revenue bonds for the purpose of the reconstruction or replacement of existing water facilities or electric power facilities or combinations of water and electric power facilities under the jurisdiction of the Public Utilities Commission, when authorized by resolution adopted by a three-fourths affirmative vote of all members of the Board of Supervisors; and issued to finance or refinance the acquisition, construction, installation, equipping, improvement or rehabilitation of equipment or facilities for renewable energy and energy conservation.

Charter Section 8B.124 states that the Public Utilities Commission is authorized to issue revenue bonds and other forms of indebtedness, when authorized by two-thirds vote of the Board of Supervisors, for Water Enterprise and Wastewater Enterprise capital projects

Charter Section F1.113 states that 0.2 percent of the City’s budget, excluding bond debt, must be set-aside for the Controller’s audit fund.

Charter Section 5A.31(d) states that one-twentieth of one percent (0.05%) from the proceeds of each issuance or sale of public utility revenue bonds must be set aside for use by the Public Utilities Commission Revenue Bond Oversight Committee to cover the costs of Committee activities.

Charter Section 9.105 states that the Board of Supervisors shall approve by ordinance all amendments to the Annual Appropriation Ordinance after the Controller certifies the availability of funds.

BACKGROUND

The Hetch Hetchy Enterprise is composed of Hetch Hetchy Water, which manages the water system in and around the Hetch Hetchy Reservoir, and Hetch Hetchy Power, which is responsible for power generation.¹ Because power is generated hydroelectrically, some capital projects benefit both Hetch Hetchy Water and Hetch Hetchy Power operations. Hetch Hetchy Power primarily provides electricity to City agencies and other government entities.

DETAILS OF PROPOSED LEGISLATION

File 22-0499 is an ordinance authorizing (a) the issuance and sale of tax-exempt or taxable Power Revenue Bonds and other forms of indebtedness (as described below) by the San Francisco Public Utilities Commission (SFPUC) in an aggregate principal amount not to exceed \$140,889,875 to finance the costs of various Hetch Hetchy Power Enterprise capital projects; (b) the issuance of Power Revenue Refunding Bonds; (c) declaring the intent of SFPUC to reimburse itself with one

¹ CleanPowerSF, which provides renewable electricity to residential and commercial customers in San Francisco, is also part of the Hetch Hetchy Enterprise, and the subject of File 22-0497.

or more issues of tax-exempt or taxable bonds or other forms of indebtedness; and (d) ratifying previous actions taken for purpose of issuing the bonds.

File 22-0498 is an ordinance appropriating \$211,004,676, consisting of Power Revenue Bonds, Water Revenue Bonds, Hetch Hetchy revenues, and Cap and Trade revenues. \$140,889,875 of Power Bond proceeds and \$67,069,801 of Water Bond proceeds are placed on Controller's Reserve pending Controller certification of the availability of funds. Sources and uses of the appropriated funds are shown in Table 1 below. Projects funded by the appropriated funds are subject to final approval by the SFPUC and the Board of Supervisors of the California Environmental Quality Act (CEQA) findings.

Power Revenue Bond Issuance

At the February 8, 2022 Commission meeting, the SFPUC approved the issuance of new Power Revenue Bonds to finance Power capital projects in FY 2022-23. The proposed ordinance allows the issuance of commercial paper or other interim debt to finance the projects prior to the issuance of the revenue bonds and provides for SFPUC to access California Water Resources Control Board revolving loan funds or grant funds.

The SFPUC may issue taxable or tax-exempt bonds in one or more series through either a negotiated or competitive sale. The SFPUC is to report to the Board of Supervisors within 30 days of the bond issuance: (i) the principal amount sold and method of sale, (ii) true interest cost, (iii) final maturity, (iv) the facilities constructed and/or improved, and (v) a statement about the remaining bonding authorization.

In addition, the SFPUC may issue refunding bonds to repay outstanding Power Revenue Bond debt if the issuance of the refunding bonds results in net present value debt service savings of 3 percent and does not extend the maturity date. If the SFPUC issues refunding bonds, then the SFPUC needs to submit to the Board of Supervisors the final official statement for the refunding bonds and a statement from the financial advisor on the 3 percent net present value debt service savings. SFPUC may request authorization to issue refunding bonds for other reasons than debt service savings if other benefits accrue, such as removal of bond covenants deemed to be onerous to the SFPUC. The authorization to issue refunding bonds extends through June 2027.

FY 2022-23 Capital Budget

The proposed ordinance appropriates \$211.0 million in new bonds to fund Water Enterprise projects in the 10-Year Capital Plan for FY 2022-23 through FY 2031-32, shown in Table 1 below.

Table 1: Sources and Uses of Funds

	Power Bond Proceeds	Water Bond Proceeds (File 22-0503)	Hetch Hetchy Revenue	Cap & Trade	Total
Sources	\$140,889,875	\$67,069,801	\$2,265,000	\$780,000	\$211,004,676
Uses					
Retail Power Distribution Projects	\$57,032,000				\$57,032,000
Streetlight Replacement			2,258,910		2,258,910
Treasure Island Projects	1,482,543				1,482,543
General Fund Energy Efficiency				780,000	780,000
Power Asset Acquisition	3,406,000				3,406,000
Hetch Hetchy Water Infrastructure		45,723,000			45,723,000
Hetch Hetchy Water - Power Projects	44,140,154				44,140,154
Hetch Hetchy Joint Projects - Water		11,286,331			11,286,331
Hetch Hetchy Joint Project - Power	13,794,404				13,794,404
Bond Financing Costs	20,724,619	9,912,917			30,637,536
City Services Auditor	239,710	114,018	6,090		359,818
Revenue Bond Oversight Committee	70,445	33,535			103,980
Total Uses	\$140,889,875	\$67,069,801	\$2,265,000	\$780,000	\$211,004,676

Source: Appropriation Ordinance

^a Bond financing costs include the costs of interim, short-term funding for projects by the Commercial Paper Program, such as accrued interest and credit bank and dealer fees associated with outstanding commercial notes as well as capitalized interest and other issuance costs.

Projects funded by the proposed appropriation are summarized in the Attachment.

Power Revenue Bonds

Between 2014 and 2020, the Board of Supervisors authorized \$535,698,530 in Power Revenue Bonds, of which \$163,555,000 were issued and \$372,143,530 were authorized but not issued. Approval of new Power Revenue Bonds would increase total authorization to \$676,588,405 and authorized but not issued bonds to \$513,033,405. According to the SFPUC 10-Year Financial Plan, SFPUC plans to issue \$110 million in Power Revenue Bonds in FY 2022-23; total bond issuance over the 10 years through FY 2031-32 is \$605 million. If the SFPUC issues \$110 million in Power Revenue Bonds in FY 2022-23, SFPUC will continue to have \$403 million in authorized and unissued Power Revenue Bonds. According to SFPUC this authorization is projected to be fully utilized to meet the approved capital spending requirements of the Power Enterprise.

FISCAL IMPACT

Debt Issuance

SFPUC anticipates issuing \$140.9 million in Power Revenue Bonds at 5 percent interest and for a 30-year term. Capitalized interest costs over 30 months are \$17.6 million² and issuance costs are \$2.8 million³ for net bond proceeds of approximately \$120.5 million. Average annual debt service over 30 years is approximately \$9.5 million.

The 10-Year Financial Plan provides for issuing \$110 million in Power Revenue Bonds in 2023 and future Power Revenue Bond issuances totaling \$605 million over 10 years. Annual Hetch Hetchy Enterprise debt service for outstanding debt is \$3.9 million in FY 2022-23, increasing to \$47.2 million in FY 2031-32.

The year-end Hetch Hetchy Enterprise fund balance is estimated to increase from \$71.1 million in FY 2022-23 to \$119.4 million in FY 2031-32. The SFPUC fund balance reserve policy is for fund balance to equal at least 25 percent of annual operating and maintenance expenses. According to the 10-Year Financial Plan, the Hetch Hetchy Enterprise fund balance is estimated to equal at 37 percent in FY 2022-23, increasing to 56 percent in FY 2027-28, before decreasing to 39 percent in FY 2031-32.

The annual debt service coverage ratio is estimated to be 30.9 in FY 2022-23, decreasing to 4.0 in FY 2031-32. According to covenants with bond holders, the annual debt service coverage ratio – the ratio of annual debt service to unrestricted fund balance and net revenues – should equal 1.25, and according to SFPUC financial policies, the annual debt service coverage ratio should equal 1.5. The SFPUC 10-Year Financial Plan assumes that the Hetch Hetchy Enterprise will have sufficient net revenues and unrestricted fund balance to achieve a debt service coverage ratio of at least 1.5.

Power Rates

SFPUC is currently undergoing a rate study, evaluating rates for Hetch Hetchy and CleanPowerSF customers. According to the 10-Year Financial Plan, SFPUC expects to increase Hetch Hetchy customer rates, which includes rates charged to City agencies, by 9.8 percent in FY 2022-23 and 8.4 percent in FY 2023-24. Given that the 10-Year Financial Plan projects annual Hetch Hetchy Fund balances and debt service coverage ratios that exceed SFPUC policy and bond covenants, the Board of Supervisors should request a report from SFPUC on proposed Hetch Hetchy and CleanPowerSF customer rate increases in FY 2022-23 and FY 2023-24 prior to the Budget and Appropriation Committee's recommendations in June 2022. According to SFPUC staff, SFPUC will submit a memorandum to the Clerk of the Board following the Commission's actions on Hetch Hetchy and CleanPowerSF rates in accordance with Charter Section 8B.125.

² Capitalized interest is the amount of interest that accrues on the bonds during the construction period prior to placement of the asset into service.

³ Issuance costs include underwriting fees, legal fees, financial advisory fees, credit enhancement fees, and other miscellaneous fees typically associated with a bond financing.

POLICY CONSIDERATION

File 22-0499 states that SFPUC should submit a report to the Clerk of the Board of Supervisors following sale of the Power Revenue bonds showing the results of the transaction, including (i) principal amount sold and method of sale, (ii) true interest cost, (iii) final maturity, (iv) the facilities constructed and/or improved, and (v) a statement about the remaining bonding authorization. The proposed ordinance should be amended to state that the required report detailing issuance of Power Revenue bonds approved by File 22-0499 will be included in the legislative files for the respective ordinances.

RECOMMENDATIONS

1. Amend the proposed ordinance (File 22-0499) to state that the required report detailing issuance of Power Revenue bonds will be included in the legislative file.
2. Request a report from SFPUC on proposed Hetch Hetchy and CleanPowerSF customer rate increases in FY 2022-23 and FY 2023-24 prior to the Budget and Appropriation Committee's recommendations in June 2022.
3. Approve File 22-0499 as amended and File 22-0498.

Attachment: Hetch Hetchy Water and Power Projects

Of the \$211 million appropriation, \$65 million are allocated to Power projects, \$115 million are allocated to Water projects, and \$31 million are financing costs, including capitalized interest and debt service reserve.

Power Projects: \$65 million*Retail Power Distribution: \$57 million*

The largest retail power distribution project is connecting new Hetch Hetchy electricity users to the grid, including The Shipyard development at India Basin, 2000 Marin and 1990 Newcomb (the proposed new and existing City Distribution Development administrative buildings), University of California at San Francisco (UCSF) building, and other locations.

Other power distribution projects include (a) intervening facilities, which consists of transformers, fault interrupters, and infrastructure to connect PG&E facilities to customers;⁴ (b) substation improvements; and (c) connections to affordable housing improvements.

Other Power Projects: \$8 million

The FY 2022-23 budget allocates \$3.4 million for a valuation of PG&E assets. This project is in response to the Board of Supervisors 2019 resolution to evaluate the purchase of PG&E assets, and in July 2021 the SFPUC filed with the California Public Utilities Commission a Petition of Valuation of PG&E electricity assets in San Francisco.

The other power projects funded in FY 2022-23 include (a) installation of streetlighting at 16 feet – 18 feet above the sidewalk to improve lighting for pedestrians; (b) undergrounding of electrical service on Treasure Island; and (c) municipal renewable energy projects consisting of solar, wind, and other renewable sources.

Water and Joint Water-Power Projects: \$114.9 million*Water Infrastructure: \$45.7 million*

Hetch Hetchy water infrastructure project includes installation of valves in the three San Joaquin Pipeline transmission lines between Oakdale and Tracy to upgrade/install valves, allowing shutoff of water flow and entry of maintenance staff to inspect, maintain, and repair the pipelines.

Power Infrastructure: \$44.1 million

Power infrastructure projects consist of a series of projects to improve power transmission, including rehabilitation of the switchyard at Moccasin, inspection and maintenance of the existing conveyance of water from Hetch Hetchy Reservoir to Moccasin, monitoring of Priest Dam, upgrades to the Moccasin Powerhouse bypass, repair and replacement of power transmission facilities to extend the life of the facilities, upgrades to the transmission line

⁴ The Federal Energy Regulatory Commission (FERC) requires that all new or reconfigured connections to Hetch Hetchy customers be to the primary voltage and not to PG&E's downtown network.

between the Warnerville Substation to Modesto Irrigation District's Standiford Substation, rehabilitation of the Moccasin Powerhouse generators and upgrades to the Powerhouse, and other projects.

Water-Power Joint Projects: \$25.1 million

Joint Hetch Hetchy water and power projects consist of several infrastructure projects, including wildfire mitigation; planning and design for upgrades to the Early Intake Dam on the Tuolumne River; assessment and repair and replacement of facilities, including campgrounds, fish hatcheries, and maintenance yards; and other condition assessment and repair and replacement of dams, and roads and bridges; security and communications upgrades; and other projects.

<p>Items 11 & 12 Files 22-0500 & 22-0501</p>	<p>Department: Public Utilities Commission</p>
<p>EXECUTIVE SUMMARY</p>	
<p style="text-align: center;">Legislative Objectives</p> <ul style="list-style-type: none"> • File 22-0500 is an ordinance authorizing the San Francisco Public Utilities Commission (SFPUC) to issue \$704,198,901 in Wastewater Revenue Bonds to fund Wastewater Enterprise capital projects. • File 22-0501 is an ordinance appropriating \$793,003,901 of Wastewater Revenue Bond proceeds or State Loan or Grant Funds, wastewater revenues, and wastewater capacity fees for the Wastewater Enterprise’s Capital Improvement Program for FY 2022-23 and placing \$704,198,901 on Controller’s Reserve. <p style="text-align: center;">Key Points</p> <ul style="list-style-type: none"> • Proposition E, approved by voters in 2002, provides for the Board of Supervisors to authorize SFPUC to issue revenue bonds. To date, the Board of Supervisors has authorized \$4.4 billion and SFPUC has issued \$3.4 billion in Wastewater Revenue Bonds authorized by Proposition E. • The appropriation of \$793 million funds projects approved in the SFPUC 10-Year Capital Plan. <p style="text-align: center;">Fiscal Impact</p> <ul style="list-style-type: none"> • Annual Wastewater Enterprise debt service for outstanding debt is \$113.5 million in FY 2022-23, increasing to \$311.2 million in FY 2031-32. • The 10-Year Financial Plan assumes no sewer rate increase in FY 2022-23 and a 6 percent sewer rate increase in FY 2023-24. <p style="text-align: center;">Policy Consideration</p> <ul style="list-style-type: none"> • According to the SFPPUC 10-Year Financial Plan, Wastewater Enterprise net revenues (sewer rate revenues less operating, capital, and debt service expenses) are sufficient to maintain Wastewater Enterprise fund balance in an amount that exceeds the SFPUC policy for minimum fund balance and debt service coverage ratios that exceed bond covenants. Because the 10-Year Financial Plan anticipates annual sewer rate increases of 6 percent between FY 2023-24 and FY 2029-30, decreasing to 5 percent in FY 2030-31 and FY 2031-32, the Board of Supervisors should request an annual report on Wastewater Enterprise expenditures, fund balance, and debt service coverage ratio, and the impact on sewer rates. <p style="text-align: center;">Recommendations</p> <ul style="list-style-type: none"> • Amend the proposed ordinance (File 22-0500) to state that the required report detailing issuance of Wastewater Revenue Bonds approved by Files 20-0837, and 22-0500 will be included in the legislative files for the respective ordinances. • Request an annual report from the SFPUC General Manager on Wastewater Enterprise expenditures, fund balance, and debt service coverage ratio, and the impact on sewer rates. • Approve File 22-0500 as amended and File 22-0501. 	

MANDATE STATEMENT

Charter Section 9.107(6, 8) states that the Board of Supervisors is authorized to provide for the issuance of revenue bonds for the purpose of the reconstruction or replacement of existing water facilities or electric power facilities or combinations of water and electric power facilities under the jurisdiction of the Public Utilities Commission, when authorized by resolution adopted by a three-fourths affirmative vote of all members of the Board of Supervisors; and issued to finance or refinance the acquisition, construction, installation, equipping, improvement or rehabilitation of equipment or facilities for renewable energy and energy conservation.

Charter Section 8B.124 states that the Public Utilities Commission is authorized to issue revenue bonds and other forms of indebtedness, when authorized by two-thirds vote of the Board of Supervisors, for Water Enterprise and Wastewater Enterprise capital projects.

Charter Section F1.113 states that 0.2 percent of the City’s budget, excluding bond debt, must be set-aside for the Controller’s audit fund.

Charter Section 5A.31(d) states that one-twentieth of one percent (0.05%) from the proceeds of each issuance or sale of public utility revenue bonds must be set aside for use by the Public Utilities Commission Revenue Bond Oversight Committee to cover the costs of Committee activities.

Charter Section 9.105 states that the Board of Supervisors shall approve by ordinance all amendments to the Annual Appropriation Ordinance after the Controller certifies the availability of funds.

BACKGROUND

The Wastewater Enterprise has three capital and repair and replacement programs.

1. The Sewer System Improvement Program (SSIP) is a phased program to improve the City’s existing sewer collection and wastewater treatment facilities. Phase 1 is \$3.4 billion and is scheduled to be completed in 2025.
2. The Wastewater Facilities and Infrastructure Program encompasses capital improvements not part of the SSIP, including stormwater management, seismic upgrades, energy efficiency, and other improvements to modernize existing facilities.
3. The Renewal and Replacement Program is an ongoing program for periodic repair and replacement of the collection and treatment systems.

DETAILS OF PROPOSED LEGISLATION

File 22-0500 is an ordinance (a) authorizing the issuance and sale of tax-exempt or taxable Wastewater Revenue Bonds and other forms of indebtedness (as described below) by the San Francisco Public Utilities Commission (SFPUC) in an aggregate principal amount not to exceed \$704,198,901 to finance the costs of Water Enterprise capital projects; (b) authorizing the

issuance of Wastewater Revenue Refunding Bonds and the retirement of outstanding Wastewater Enterprise Commercial Paper; (c) declaring the intent of SFPUC to reimburse itself with one or more issues of tax-exempt bonds or other forms of indebtedness; and (d) ratifying previous actions taken in connection with the issuance of the bonds.

File 22-0501 is an ordinance (a) appropriating \$793,003,901 of proceeds from Revenue Bonds, State of California Water Resources Control Board's revolving loan funds (State Loan Funds) or grant funds (State Grant Funds), wastewater revenues, and wastewater capacity fees for the San Francisco Public Utilities Commission (SFPUC) Wastewater Enterprise's Capital Improvement Program for FY 2022-23 in FY 2022-23. \$704,198,901 of Revenue Bond and State Loan Funds or State Grant Funds proceeds are placed on Controller's Reserve pending Controller certification of the availability of funds. Sources and uses of the appropriated funds are shown in Table 1 below. Projects funded by the appropriated funds are subject to final approval of the California Environmental Quality Act (CEQA) findings by the SFPUC and the Board of Supervisors.

Wastewater Revenue Bond Issuance

At the February 8, 2022 Commission meeting, the SFPUC approved the issuance of new Wastewater Revenue Bonds to finance wastewater capital projects in FY 2022-23. The proposed ordinance allows the issuance of commercial paper or other interim debt to finance the projects prior to the issuance of the revenue bonds and provides for SFPUC to access California Water Resources Control Board revolving loan funds or grant funds.

The SFPUC may issue taxable or tax-exempt bonds in one or more series through either a negotiated or competitive sale. The SFPUC is to report to the Board of Supervisors within 30 days of the bond issuance: (i) the principal amount sold and method of sale, (ii) true interest cost, (iii) final maturity, (iv) the facilities constructed and/or improved, and (v) a statement about the remaining bonding authorization.

In addition, the SFPUC may issue refunding bonds to repay outstanding Wastewater Revenue Bond debt if the issuance of the refunding bonds results in net present value debt service savings of 3 percent and does not extend the maturity date. If the SFPUC issues refunding bonds, then the SFPUC needs to submit to the Board of Supervisors the final official statement for the refunding bonds and a statement from the financial advisor on the 3 percent net present value debt service savings. SFPUC may request authorization to issue refunding bonds for other reasons that debt service savings if other benefits accrue, such as removal of bond covenants deemed to be onerous to the SFPUC. The authorization to issue refunding bonds extends through June 2027.

FY 2022-23 Capital Budget

The proposed ordinance appropriates \$793.0 million of bond proceeds, wastewater revenues, and capacity fees to various SSIP and wastewater projects in FY 2022-23, as shown in Table 1 below.

Table 1: Sources and Uses of Funds

	2023 Bond Proceeds (SSIP) ^a	2021 Bond Proceeds	Wastewater Revenues	Capacity Fees	Total
Sources	\$686,028,786	\$18,170,115	\$82,628,000	\$6,177,000	\$793,003,901
Uses					
SSIP Program Management	\$14,000,000				\$14,000,000
Biosolids Digester Project	375,532,448				375,532,448
Southeast Treatment Plant	31,555,408				31,555,408
Northpoint Treatment Plant	11,314,730				11,314,730
Oceanside Treatment Plant	29,201,164				29,201,164
Treatment Plants (repair & replacement)			25,680,135		25,680,135
Collection System	57,948,296	15,229,350	55,784,284	6,164,646	135,126,576
Pump Station/ Force Mains	307,000				307,000
Green Infrastructure	15,209,899				15,209,899
Flood Resilience	48,055,523				48,055,523
Customer Service System			998,325		998,325
Treasure Island Improvements		215,248			215,248
Financing Costs ^b	101,395,055	2,685,543			104,080,598
City Services Auditor	1,166,249	30,889	165,256	12,354	1,374,748
Revenue Bond Oversight Committee	343,014	9,085			352,099
Total Uses	\$686,028,786	\$18,170,115	\$82,628,000	\$6,177,000	\$793,003,901

Source: Appropriation Ordinance

^a Sewer System Improvement Program

^b Financing costs include the costs of interim, short-term funding for projects by the Commercial Paper Program, such as accrued interest and credit bank and dealer fees associated with outstanding commercial notes as well as capitalized interest and other issuance costs

Project descriptions are included in the Attachment.

Proposition E Bond Funds

San Francisco voters approved Proposition E in 2002, providing for the Board of Supervisors to authorize issuance of Wastewater Revenue Bonds with three-fourths approval of the Board members. To date, the Board has authorized \$4,371,937,202, of which \$3,385,190,107 has been issued and \$986,747,095 is authorized but not issued.

Approval of the \$704,198,901 in new Wastewater Revenue Bond authority would increase the amount of bonds authorized in accordance with Proposition E to \$5,076,136,103. The authorized and unissued bonds would be \$1,690,945,996. According to the SFPUC's 10-Year Financial Plan, the Commission will issue Wastewater Revenue Bonds each year in FY 2022-23 through FY 2025-26, totaling \$2.145 billion, which includes bonds previously authorized, bonds authorized in accordance with File 22-0500, and future authorizations.

10-Year Capital Plan

The projects shown in Table 1 above are included in the SFPUC's 10-year Capital Plan for FY 2022-23 through FY 2031-32. According to SFPUC staff, the Commission is requesting one year of

appropriation approval, pending further evaluation of project spending and delays for ongoing Wastewater Enterprise projects.

FISCAL IMPACT

Debt Issuance

SFPUC anticipates issuing \$704.2 million in Wastewater Revenue Bonds at 5 percent interest and for a 30-year term. Capitalized interest costs over 30 months are \$88.0 million¹ and issuance costs are \$14.1 million² for net bond proceeds of approximately \$602.1 million. Average annual debt service over 30 years is approximately \$47 million.

The 10-Year Financial Plan provides for issuing \$546 million in Wastewater Revenue Bonds in 2023 and future Wastewater Revenue Bond issuances totaling \$3.5 billion over 10 years. Total annual Wastewater Enterprise debt service for outstanding debt is \$113.5 million in FY 2022-23, increasing to \$311.2 million in FY 2031-32.

The year-end Wastewater Enterprise fund balance is estimated to decrease from \$140 million in FY 2022-23 to \$79.4 million in FY 2031-32. The SFPUC fund balance reserve policy is for fund balance to equal at least 25 percent of annual operating and maintenance expenses. According to the 10-Year Financial Plan, the Wastewater Enterprise fund balance is estimated to equal 70 percent of annual operating and maintenance expenses in FY 2022-23, decreasing to 31 percent in FY 2031-32.

The annual debt service coverage ratio is estimated to be 3.35 in FY 2022-23, decreasing to 1.8 in FY 2031-32. According to covenants with bond holders, the annual debt service coverage ratio – the ratio of annual debt service to unrestricted fund balance and net revenues – should equal 1.25, and according to SFPUC financial policies, the annual debt service coverage ratio should equal 1.5. The SFPUC 10-Year Financial Plan assumes that the Wastewater Enterprise will have sufficient net revenues and unrestricted fund balance to achieve a debt service coverage ratio of at least 1.5.

Wastewater Customer Rates

The 10-Year Financial Plan assumes no sewer rate increase in FY 2022-23 and a 6 percent rate increase for sewer rates in FY 2023-24.

¹ Capitalized interest is the amount of interest that accrues on the bonds during the construction period prior to placement of the asset into service.

² Issuance costs include underwriting fees, legal fees, financial advisory fees, credit enhancement fees, and other miscellaneous fees typically associated with a bond financing.

POLICY CONSIDERATION

Reporting on Proposition E Bonds

File 20-0837 stated SFPUC should submit a report to the Clerk of the Board of Supervisors following sale of the Wastewater Revenue bonds showing the results of the transaction, including (i) principal amount sold and method of sale, (ii) true interest cost, (iii) final maturity, (iv) the facilities constructed and/or improved, and (v) a statement about the remaining bonding authorization. SFPUC provided information to the Budget and Legislative Analyst on total Wastewater Revenue Bond authorization under Proposition E, amount sold, and remaining authorized but not yet sold bonds, noted above. According to SFPUC staff, the Commission has issued commercial paper as interim financing for Wastewater Enterprise projects to be financed by the revenue bond proceeds.

File 22-0500 has the same reporting requirement for \$704.2 million in Wastewater Revenue Bonds authorized under the ordinance. The SFPUC is planning to issue bonds approved in Files 18,0452, 20-0837, and 22-0500 in FY 2022-23 through FY 2025-26, and therefore, will need to submit the report to the Clerk of the Board of Supervisors after sale of the bonds. The proposed ordinance should be amended to state that the required report detailing issuance of Wastewater Revenue bonds approved by Files 20-0837 and 22-0500 will be included in the legislative files for the respective ordinances.

Fund Balance and Rate Increases

According to the 10-Year Financial Plan for FY 2022-23 through FY 2031-32, the SFPUC does not plan to increase sewer rates for San Francisco rate payers in FY 2022-23 and plans to increase sewer rates by 6 percent in FY 2023-24. Sewer rates cover SFPUC overhead charges, Wastewater operating and capital expenditures, and debt service. According to the 10-Year Financial Plan, Wastewater Enterprise net revenues (sewer rate revenues less operating, capital, and debt service expenses) are sufficient to maintain Wastewater Enterprise fund balance in an amount that exceeds minimum fund balance requirements and debt service coverage ratios that exceed bond covenants over the 10-year term. Because the 10-Year Financial Plan anticipates annual sewer rate increases of 6 percent between FY 2023-24 and FY 2029-30, decreasing to 5 percent in FY 2030-31 and FY 2031-32, the Board of Supervisors should request an annual report on Wastewater Enterprise expenditures, fund balance, and debt service coverage ratio and the impact on sewer rates.

RECOMMENDATIONS

1. Amend the proposed ordinance (File 22-0500) to state that the required report detailing issuance of Wastewater Revenue bonds approved by Files 20-0837, and 22-0500 will be included in the legislative files for the respective ordinances.
2. Request an annual report on Wastewater Enterprise expenditures, fund balance, and debt service coverage ratio, and the impact on sewer rates.
3. Approve File 22-0500 as amended and File 22-0501.

Attachment: Wastewater Enterprise Capital Projects**Program Management: \$14 million**

The 10-year capital plan provides for annual program management expenditures for the Sewer System Improvement Program, totaling \$195 million, of which \$140 million was previously appropriated and \$55 million is budgeted for FY 2022-23 through FY 2031-32. Program management includes condition assessment/ facility inspections, technical support and evaluations, water quality studies, project definition and prioritization, public outreach and education, and other SSIP program management activities.

Biosolids/Digester Project: \$375.5 million

The Biosolids/Digester project is the largest component of the SSIP, totaling \$2.4 billion over the term of the SSIP, with nearly \$1 billion previously appropriated and \$1.4 billion budgeted for FY 2022-23 through FY 2031-32. The Biosolids/Digester project provides for a new digester and solids handling facility at the Southeast Plant. The project, which requires relocation of utilities, demolition of existing infrastructure, and construction of a new digester and solids handling facility, began construction in 2019 after a one-year delay. Construction is scheduled for completion in 2025 and final project completion is scheduled for 2029.

Southeast Treatment Plant Improvements: \$31.5 million

Improvements to the Southeast Treatment Plant include replacement of the headworks facility and repairs, replacement, and upgrades to the treatment plant facility.

Headworks Facility

The FY 2022-23 budget includes \$18.4 million for the headworks facility; the total budget is \$679 million, of which \$652.2 million was previously appropriated. The SSIP provides for replacement of the headworks facilities, which provide the first step in the wastewater treatment process. The new headworks facility project consolidates two existing headworks facilities, modifies the pump station, and constructs a new odor control structure. Construction began in 2020 and is scheduled for completion in 2023 and final project completion is scheduled for 2024.

Other Southeast Treatment Plant Improvements

The FY 2022-23 budget includes \$13.1 million for security enhancements, new trades and maintenance buildings, and other facilities improvements at the Southeast Treatment Plant. Total Plant improvements, not including the Headworks Facility, are budgeted at \$769.9 million, of which \$314.5 million has previously been appropriated.

North Point Treatment Plant Improvements: \$11.3 million

Improvements to the North Point Treatment Plant include wet weather pump station improvements, outfall system rehabilitation, and other improvements. The total project budget is \$247.2 million, of which \$69.3 million was previously appropriated. The FY 2022-23 budget of \$11.3 million is for improvements to the wet weather pump station and upgrades to the distributed control system.

Oceanside Treatment Plant Improvements: \$29.2 million

Improvements to the Oceanside Treatment Plant include upgrades to various treatment processes, health and safety improvements to the administrative building, and upgrades to the distributed control system. The total project budget is \$742.0 million, of which \$89.1 million was previously appropriated.

Other SSIP Projects: \$121.5 million*Stormwater and Flood Control: \$63.3 million*

The total SSIP budget for stormwater management is \$421.5 million, of which \$81.8 million was previously appropriated, and for flood control is \$805.6 million, of which \$117.4 million was previously appropriated. FY 2022-23 projects include daylighting of Yosemite Creek, green infrastructure projects at Balboa High School, Giannini Middle School, and Buchanan Street Mall, and green infrastructure grants to public and private properties.

Sewer and Collection System: \$58.2 million

The total SSIP budget for sewer and collection system projects is \$862.7 million, of which \$296.2 million was previously appropriated. Projects budgeted in FY 2022-23 include sewer improvements at Kansas and Main Streets, Taraval sewer improvements, large diameter sewer projects and channel force main, systemwide monitoring equipment assessments, and Geary underpass access enhancements.

Other Wastewater Capital Projects: \$104.1 million

Wastewater projects that are not part of the Sewer System Improvement Program include (1) repair and replacement of the collection system to replace small and large diameter pipes and sewer laterals; (2) annual repair and replacement projects to maintain treatment plant capacity and reliability; and (3) improvements to the Treasure Island resource recovery facility to provide tertiary treatment and wetlands.

<p>Items 13 & 14 Files 22-0502 & 22-0503</p>	<p>Department: Public Utilities Commission</p>
<p>EXECUTIVE SUMMARY</p>	
<p style="text-align: center;">Legislative Objectives</p>	
<ul style="list-style-type: none"> • File 22-0503 is an ordinance authorizing the San Francisco Public Utilities Commission (SFPUC) to issue \$141,418,472 in Water Revenue Bonds to fund Water Enterprise capital projects. • File 22-0502 is an ordinance appropriating \$122,471,597 of Water Revenue Bond proceeds or State Loan or Grant Funds, water revenues, and water capacity fees for the Water Enterprise’s Capital Improvement Program for FY 2022-23; de-appropriating and re-appropriating Water capital project appropriations of \$38,331,661 in FY 2022-23; and placing \$96,899,821 of Water Revenue Bond and State Loan or Grant Fund proceeds on Controller’s Reserve. 	
<p style="text-align: center;">Key Points</p>	
<ul style="list-style-type: none"> • Proposition E, approved by voters in 2002, provides for the Board of Supervisors to authorize SFPUC to issue revenue bonds. To date, the Board of Supervisors has authorized \$4.6 billion and SFPUC has issued \$3.8 billion in Water Revenue Bonds authorized by Proposition E. Of the authorized and unissued bonds of approximately \$800 million, \$130 million were approved in 2010 and 2014 for Water System Improvement Program projects. • The appropriation of \$122.4 million funds projects approved in the SFPUC 10-Year Capital Plan and other projects not in the Capital Plan, such as customer service system, emergency communications, and automated meter reading improvements. 	
<p style="text-align: center;">Fiscal Impact</p>	
<ul style="list-style-type: none"> • Annual Water Enterprise debt service for outstanding debt is \$335 million in FY 2022-23, increasing to \$409 million in FY 2031-32. Retail water rates are not increased in FY 2022-23 and would be increased by 5 percent in FY 2023-24. 	
<p style="text-align: center;">Policy Consideration</p>	
<ul style="list-style-type: none"> • The 10-Year Capital Plan provides for predevelopment funding for the Millbrae Yard and City Distribution Division administrative building, which include relocation of staff from existing space. 	
<p style="text-align: center;">Recommendations</p>	
<ul style="list-style-type: none"> • Amend the proposed ordinance (File 20-0503) to state that the required report detailing issuance of Wastewater Revenue bonds approved by File 20-0830 and File 22-0503 will be included in the legislative files for the respective ordinances. • Request the SFPUC General Manager to report on the proposed disposition of the Rollins Road facility during the review of the SFPUC two-year operating and capital budget in May 2024. • Amend File 20-0502 to place \$2,536,607 in the FY 2022-23 appropriation for predevelopment costs for the City Distribution Division administrative building on Budget and Finance Committee Reserve, pending a report to the Board of Supervisors on facility design, space needs, total project costs, and disposition of 1990 Newcomb Avenue. • Approve Files 20-0503 and 20-0502 as amended. 	

MANDATE STATEMENT

Charter Section 9.107(6, 8) states that the Board of Supervisors is authorized to provide for the issuance of revenue bonds for the purpose of the reconstruction or replacement of existing water facilities or electric power facilities or combinations of water and electric power facilities under the jurisdiction of the Public Utilities Commission, when authorized by resolution adopted by a three-fourths affirmative vote of all members of the Board of Supervisors; and issued to finance or refinance the acquisition, construction, installation, equipping, improvement or rehabilitation of equipment or facilities for renewable energy and energy conservation.

Charter Section 8B.124 states that the Public Utilities Commission is authorized to issue revenue bonds and other forms of indebtedness, when authorized by two-thirds vote of the Board of Supervisors, for Water Enterprise and Wastewater Enterprise capital projects.

Charter Section F1.113 states that 0.2 percent of the City’s budget, excluding bond debt, must be set-aside for the Controller’s audit fund.

Charter Section 5A.31(d) states that one-twentieth of one percent (0.05%) from the proceeds of each issuance or sale of public utility revenue bonds must be set aside for use by the Public Utilities Commission Revenue Bond Oversight Committee to cover the costs of Committee activities.

Charter Section 9.105 states that the Board of Supervisors shall approve by ordinance all amendments to the Annual Appropriation Ordinance after the Controller certifies the availability of funds.

BACKGROUND

The San Francisco Public Utilities Commission (SFPUC) Water Enterprise provides both regional water conveyance and local (in-city) water distribution. The regional water conveyance system includes the Hetch Hetchy Reservoir, the Irvington Tunnel conveying water from the Hetch Hetchy Reservoir, the San Antonio and Calaveras Reservoirs in Alameda County, and the San Andreas and Crystal Springs Reservoirs on the Peninsula. The in-city distribution system is a series of pipelines that distributes water from the regional water conveyance system to residences and retail businesses in the city.

In 2003, SFPUC implemented the \$4.8 billion Water System Improvement Program (WSIP) to upgrade the regional and local water system. According to SFPUC, all local WSIP projects have been completed, and 47 of 52 regional WSIP projects are in the construction close-out or completion phase. The SFPUC forecasts that WSIP projects will be completed by May 2023.

The SFPUC approved the 10-year financial plan for FY 2022-23 through FY 2031-32 in February 2022 in accordance with Charter Section 8B.123. According to the 10-year financial plan, the Water Enterprise 10-year capital plan through June 2031 is \$1.9 billion, of which one-third is funded through Water Enterprise revenues and one-third is funded through debt. The Board of

Supervisors is being asked to approve the Water Enterprise capital improvement budget for FY 2022-23 and the issuance of Water Revenues Bonds, as detailed below.

DETAILS OF PROPOSED LEGISLATION

File 22-0503 is an ordinance (a) authorizing the issuance and sale of tax-exempt or taxable Water Revenue Bonds by the San Francisco Public Utilities Commission (SFPUC) in an aggregate principal amount not to exceed \$141,418,472 to finance the costs of Water Enterprise capital projects; (b) authorizing the issuance of Water Revenue Refunding Bonds and the retirement of outstanding Water Enterprise Commercial Paper; (c) declaring the intent of SFPUC to reimburse itself with one or more issues of tax-exempt bonds or other forms of indebtedness; and (d) ratifying previous actions taken in connection with the issuance of the bonds.

File 22-0502 is an ordinance (a) appropriating \$122,471,597 of proceeds from Revenue Bonds, State of California Water Resources Control Board's revolving loan funds (State Loan Funds) or grant funds (State Grant Funds), water revenues, and water capacity fees for the San Francisco Public Utilities Commission (SFPUC) Water Enterprise's Capital Improvement Program for FY 2022-23; and (b) de-appropriating and re-appropriating Water Capital Project appropriations of \$38,331,661 in FY 2022-23. \$96,899,821 of Revenue Bond and State Loan Funds or State Grant Funds proceeds are placed on Controller's Reserve pending Controller certification of the availability of funds. Sources and uses of the appropriated funds are shown in Table 1 below and de-appropriation and re-appropriation of Water Capital Project funds are shown in Tables 2 and 3 below. Projects funded by the appropriated funds are subject to final approval by the SFPUC and the Board of Supervisors of the California Environmental Quality Act (CEQA) findings.

Water Revenue Bond Issuance

At the February 8, 2022 Commission meeting, the SFPUC approved the issuance of new Water Revenue Bonds to finance Water capital projects in FY 2022-23. The proposed ordinance allows the issuance of commercial paper or other interim debt to finance the projects prior to the issuance of the revenue bonds and provides for SFPUC to access California Water Resources Control Board revolving loan funds or grant funds.

The SFPUC may issue taxable or tax-exempt bonds in one or more series through either a negotiated or competitive sale. The SFPUC is to report to the Board of Supervisors within 30 days of the bond issuance: (i) the principal amount sold and method of sale, (ii) true interest cost, (iii) final maturity, (iv) the facilities constructed and/or improved, and (v) a statement about the remaining bonding authorization.

In addition, the SFPUC may issue refunding bonds to repay outstanding Water Revenue Bond debt if the issuance of the refunding bonds results in net present value debt service savings of 3 percent and does not extend the maturity date. If the SFPUC issues refunding bonds, then the SFPUC needs to submit to the Board of Supervisors the final official statement for the refunding bonds and a statement from the financial advisor on the 3 percent net present value debt service savings. SFPUC may request authorization to issue refunding bonds for other reasons that debt

service savings if other benefits accrue, such as removal of bond covenants deemed to be onerous to the SFPUC. The authorization to issue refunding bonds extends through June 2027.

FY 2022-23 Capital Budget

The proposed ordinance appropriates \$122.5 million in new funds to Water Enterprise projects in the 10-Year Capital Plan for FY 2022-23 through FY 2031-22 and \$38.3 million in reappropriated funds to various Water Enterprise projects, shown in Tables 1 – 3 below.

Table 1: Sources and Uses of Funds

	Regional Programs		Local Programs			Total
	Water Revenue Bonds (Regional)	Water Enterprise Revenues (Wholesale Customer)	Water Revenue Bonds (Local)	Water Enterprise Revenues	Water Capacity Fees	
Sources	\$26,562,907	\$16,250,000	\$47,785,764	\$29,715,926	\$2,157,000	\$122,471,597
Uses						
Water Treatment	\$9,771,729	\$4,806,200		\$2,587,955		\$17,165,884
Water Transmission		9,218,329		4,963,715		\$14,182,044
Buildings & Grounds	12,806,742	2,192,971	2,536,607	1,180,830		\$18,717,150
Local Conveyance/ Distribution			38,081,293	19,925,669	2,152,686	\$60,159,648
Customer Service				998,326		\$998,326
Financing ^a	3,925,998		7,062,736			\$10,988,734
Controller's Audit	45,157	32,500	81,235	41,931	4,314	\$205,137
RBOC ^b	13,281		23,893	17,500		\$54,674
Total Uses	\$26,562,907	\$16,250,000	\$47,785,764	\$29,715,926	\$2,157,000	\$122,471,597

Source: File 22-0502

^a Financing costs include the costs of interim, short-term funding for projects by the Commercial Paper Program, such as accrued interest and credit bank and dealer fees associated with outstanding commercial notes as well as capitalized interest and other issuance costs.

^b Revenue Bond Oversight Committee

Proposition E Bond Funds

San Francisco voters approved Proposition E in 2002, providing for the Board of Supervisors to authorize issuance of Water Revenue Bonds with three-fourths approval of the Board members. To date, the Board of Supervisors has authorized \$4,617,099,036 and SFPUC has issued \$3,769,973,951 in bonds authorized by Proposition E.

Water System Improvement Program

The Board authorized \$3,070,808,317 in Water Revenue Bonds for Water System Improvement Program (WSIP) projects, of which \$2,940,525,000 have been issued and \$130,283,217 is authorized but not issued. According to the WSIP Quarterly Report, local WSIP projects are complete and regional projects are forecasted for completion in 2027.¹ According to SFPUC staff,

¹ The major regional WSIP projects to be completed are groundwater storage and recovery.

the WSIP has approximately \$77 million in outstanding Water Enterprise commercial paper, and current and future commercial paper issuances will be used to finance WSIP project construction. SFPUD will issue Water Revenue Bonds at a future date to retire the outstanding commercial paper.

Other Water Enterprise Capital Projects

The Board authorized \$1,546,290,719 in Water Revenue Bonds for other Water Enterprise capital projects, of which \$829,448,951 have been issued and \$716,841,768 is authorized but not issued.^{2,3} According to SFPUC, the Commission has used commercial paper as interim financing for the Water Enterprise capital projects.

If the Board authorizes \$141,418,472 in new Water Revenue Bonds for Water Enterprise capital projects, total authorization increases to \$1,687,709,191 and the amount of authorized and unissued bonds increases to \$858,260,240. The SFPUC 10-Year Financial Plan provides for issuing \$406 million in Water Revenue Bonds in FY 2022-23; total Water Revenue Bond issuances over 10 years through FY 2031-32 are \$1.6 billion.

Of the requested Water Revenue Bond authorization of \$141,418,472:

- \$74,384,671 are allocated to Water Enterprise projects shown in Table 1 above: \$26,562,907 to regional projects and \$47,785,764 to local projects
- \$67,069,801 are allocated to Hetch Hetchy Water and Power Enterprise projects (File 22-0498).

10-Year Capital Plan

The projects shown in Table 1 above are included in the SFPUC's 10-Year Capital Plan for FY 2022-23 through FY 2031-32. According to SFPUC staff, the Commission is requesting one year of appropriation approval, pending further evaluation of project spending and delays for ongoing Water Enterprise projects.

Re-appropriation of Funds

The proposed ordinance re-appropriates funds to regional and local water projects, shown in Tables 2 and 3 below.

² The legislation authorizing the bonds provides for the use of State loans and other funds. Of the \$1.5 billion in bond authorization for Water Enterprise capital projects, the SFPUC used \$265.5 million in State loans in lieu of issuing bonds.

³ Authorized and unissued Water Revenue Bonds were approved by the Board in 2018 (\$478.4 million authorized and \$143.8 million issued, with authorized and unissued bonds of \$334.6 million), 2019 (\$34.1 million authorized and not issued), and 2020 (\$341.1 million authorized and not issued).

Table 2: De-appropriation and Re-appropriation of Regional Water Project Funds

	Water Capital Improvement Program	Water Enterprise Revenues	Water Enterprise Revenues (Wholesale Customer)	Total
De-appropriation				
Water Supply & Storage	(\$8,919,150)			(\$8,919,150)
Watershed & Land Management		(1,496,639)	(2,779,472)	(4,276,111)
Long-term Monitoring & Permit		(810,509)	(1,505,231)	(2,315,740)
Total De-appropriation	(\$8,919,150)	(\$2,307,148)	(\$4,284,703)	(\$15,511,001)
Re-appropriation				
Regional Water Treatment Program	\$8,919,150	\$760,170	\$1,411,745	\$11,091,065
Communications & Monitoring		1,039,376	1,930,269	2,969,645
Buildings & Grounds		507,602	942,689	1,450,291
Total Re-appropriation	\$8,919,150	\$2,307,148	\$4,284,703	\$15,511,001

Source: File 22-0502

Table 3: De-appropriation and Re-appropriation of Local Water Project Funds

	2002 Proposition E	Water Continuing Projects	2017 and 2021 Water Revenue Bonds	Water Enterprise Capital Funds	Total
De-appropriation					
Treasure Island Improvements	(\$6,159,918)	(\$291,901)			(\$6,451,819)
Local Water Supply		(835,847)	(11,250,000)	(3,182,000)	(15,267,847)
Pacifica Recycled Water		(1,100,994)			(1,100,994)
Total De-appropriation	(\$6,159,918)	(\$2,228,742)	(\$11,250,000)	(\$3,182,000)	(\$22,820,660)
Re-appropriation					
Local Conveyance/Distribution	\$6,159,918	\$1,012,779	\$11,250,000	\$3,182,000	\$21,604,697
Pump Station Improvements		468,742			468,742
Automated Meter Reading		747,221			747,221
Total Re-appropriation	\$6,159,918	\$2,228,742	\$11,250,000	\$3,182,000	\$22,820,660

Source: File 22-0502

According to SFPUC staff, as a preliminary step to FY 2022-23 Capital Budget development, a baseline review of all existing project appropriations was completed for potential closeout or repurposing to new capital budget needs. This review focused on capital project delivery and reduced the 2-year capital budget request to more efficiently use existing project appropriations.

Descriptions of the projects shown in Tables 1, 2, and 3 are provided in the attachment.

FISCAL IMPACT

Debt Issuance

SFPUC anticipates issuing \$141.4 million in Water Revenue Bonds at 5 percent interest and for a 30-year term. Capitalized interest costs over 30 months are \$17.7 million⁴ and issuance costs are \$2.8 million⁵ for net bond proceeds of approximately \$120 million.⁶ Average annual debt service over 30 years is approximately \$9.5 million.

The 10-Year Financial Plan provides for issuing \$406 million in Water Revenue Bonds in 2023 and future Water Revenue Bond issuances totaling \$1.6 billion over 10 years. Annual Water Enterprise debt service for outstanding debt is \$335 million in FY 2022-23, increasing to \$409 million in FY 2031-32.

The year-end Water Enterprise fund balance is estimated to increase from \$178 million in FY 2022-23 to \$210.8 million in FY 2031-32. The SFPUC fund balance reserve policy is for fund balance to equal at least 25 percent of annual operating and maintenance expenses. According to the 10-Year Financial Plan, the Water Enterprise fund balance is estimated to equal at least 50 percent of annual operating and maintenance expenses through FY 2031-32.

The annual debt service coverage ratio is estimated to be 1.5 in FY 2022-23, increasing to 1.6 in FY 2031-32. According to covenants with bond holders, the annual debt service coverage ratio – the ratio of annual debt service to unrestricted fund balance and net revenues – should equal 1.25, and according to SFPUC financial policies, the annual debt service coverage ratio should equal 1.5. The SFPUC 10-Year Financial Plan assumes that the Water Enterprise will have sufficient net revenues and unrestricted fund balance to achieve a debt service coverage ratio of at least 1.5.

Water Customer Rates

The 10-Year Financial Plan assumes no rate increase for retail customers in FY 2022-23 and a 5 percent rate increase for retail customers in FY 2023-24. The 10-Year Financial Plan assumes a 15.9 percent rate increase for wholesale customers in FY 2022-23 and an 11.2 percent rate increase for wholesale customers in FY 2023-24. According to the 10-Year Financial Plan, wholesale water rates are set on an annual basis and are adopted by the Commission. The annual rate setting process for wholesale water customers is established by contract under the long-term Water Supply Agreement with wholesale customers.

The wholesale water rate increase of 15.9 percent for FY 2022-23 was adopted by the Commission on May 10, 2022. According to SFPUC staff, the rate increase was needed to cover

⁴ Capitalized interest is the amount of interest that accrues on the bonds during the construction period prior to placement of the asset into service.

⁵ Issuance costs include underwriting fees, legal fees, financial advisory fees, credit enhancement fees, and other miscellaneous fees typically associated with a bond financing.

⁶ As noted above, a portion of the Water Revenue Bond proceeds are allocated to Hetch Hetchy Water and Power Enterprise projects.

growing wholesale customers' share of expenditures in the Water enterprise. The need for a rate increase resulted from decreased water sales given in response to the systemwide call for water conservation and an increase in annual debt service payments for Water Enterprise bonds issued in prior years. According to SFPUC staff, the 15.9 percent rate increase in FY 2022-23 is the first rate increase for wholesale customers in five years where rates were held flat.

POLICY CONSIDERATION

Reporting on Proposition E Bonds

File 20-0830 stated SFPUC should submit a report to the Clerk of the Board of Supervisors following sale of the Water Revenue bonds showing the results of the transaction, including (i) principal amount sold and method of sale, (ii) true interest cost, (iii) final maturity, (iv) the facilities constructed and/or improved, and (v) a statement about the remaining bonding authorization. As noted above, SFPUC has not yet sold bonds authorized in File 20-0830, issuing commercial paper as interim debt instead. SFPUC provided information to the Budget and Legislative Analyst on total Water Revenue Bond authorization under Proposition E, amount sold, and remaining authorized but not yet sold bonds, noted above.

File 22-0503 has the same reporting requirement for \$141 million in Water Revenue Bonds authorized under the ordinance. The SFPUC is planning to issue bonds approved in Files 20-0830 and 22-0503 in FY 2022-23 and therefore, will need to submit the report to the Clerk of the Board of Supervisors after sale of the bonds. The proposed ordinance should be amended to state that the required report detailing issuance of Wastewater Revenue bonds approved by File 20-0830 and File 22-0503 will be included in the legislative files for the respective ordinances.

Fund Balance and Rate Increases

According to the 10-Year Financial Plan for FY 2022-23 through FY 2031-32, the SFPUC does not plan to increase retail water rates for San Francisco rate payers in FY 2022-23 and plans to increase retail water rates by 5 percent in FY 2023-24. SFPUC plans to increase wholesale water rates by 15.9 percent in FY 2022-23 and 11.2 percent in FY 2023-24. Planned wholesale water rate increase in FY 2024-25 through FY 2031-32 range from 0 percent to 2.9 percent.

Project Costs

Millbrae Yard

The FY 2022-23 capital budget includes \$2,178,702 for predevelopment costs Millbrae Yard laboratory and shop improvements, which includes expanding the existing Millbrae Administration Building to merge and house Water Enterprise staff and equipment currently located at Rollins Road. The project includes new laboratory and shop space and construction of two floors on top of the laboratory. Construction of the project is planned to begin in 2025 and complete in approximately 2028. According to SFPUC staff, the Commission does not have a plan for the disposition of the Rollins Road facility at this time. The Board of Supervisors should request the SFPUC General Manager report on the proposed disposition of the Rollins Road facility during the review of the SFPUC two-year operating and capital budget in May 2024.

City Distribution Division Administrative Building

The FY 2022-23 capital budget includes \$2,536,607 for predevelopment costs to construct a new administrative building for the City Distribution Division to replace the existing facility at 1990 Newcomb Avenue. According to the SFPUC's 10-Year Capital Plan, the Board has previously appropriated \$45.5 million for the new administrative building, of which \$4.3 million has been spent to date. The Budget and Legislative Analyst recommends placing \$2,536,607 on Budget and Finance Committee reserve, pending a report to the Board of Supervisors on facility design, space needs, total project costs, and disposition of 1990 Newcomb Avenue.

RECOMMENDATIONS

1. Amend the proposed ordinance (File 20-0503) to state that the required report detailing issuance of Water Revenue bonds approved by File 20-0830 and File 22-0503 will be included in the legislative files for the respective ordinances.
2. Request the SFPUC General Manager to report on the proposed disposition of the Rollins Road facility during the review of the SFPUC two-year operating and capital budget in May 2024.
3. Amend File 20-0502 to place \$2,536,607 in the FY 2022-23 appropriation for predevelopment costs for the City Distribution Division administrative building on Budget and Finance Committee Reserve, pending a report to the Board of Supervisors on facility design, space needs, total project costs, and disposition of 1990 Newcomb Avenue.
4. Approve Files 20-0503 and 20-0502 as amended.

Attachment: Capital Project Summary

File 22-0502 appropriates \$160,803,258 in new and reappropriated funds for regional and local water projects, including associated financing, auditing, and oversight costs, shown in Table 4 below.

Table 4: Summary of Water Project Appropriation

	Appropriation New Funds	Re- appropriation	Total Appropriation
Regional Projects			
Regional Water Treatment	\$17,165,884	\$11,091,065	\$28,256,949
Water Transmission	14,182,044		14,182,044
Communications & Monitoring	0	2,969,645	2,969,645
Buildings & Grounds	16,180,543	1,450,291	16,630,834
Local Projects			
Local Conveyance/ Distribution	60,159,648	21,604,697	81,764,345
Customer Service & System Monitoring	998,326		998,326
Pump Station Improvements		468,742	468,742
Automated Meter Reading		747,221	747,221
Buildings & Grounds	2,536,607		2,536,607
Financing & Oversight			
Financing	10,988,734		10,988,734
Controller's Audit	205,137		205,137
Revenue Bond Oversight Committee	54,674		54,674
Total	\$122,471,597	\$38,331,661	\$160,803,258

Regional Water Treatment Projects: \$28.3 million*Sunol Valley Water Treatment: \$13.1 million*

This is a multi-year project to (i) construct an ozone treatment facility to mitigate taste and odor problems stemming from algae blooms and improve water quality, and (ii) improve reliability of regional water delivery. Total estimated project costs are \$248 million through 2028.

Water Quality Monitoring and Ground Water Treatment: \$15.2 million

These projects include improvements to (i) prevent untreated water entering the drinking water supply and (ii) regional groundwater wells on the Peninsula. Improvements to regional water treatment facilities for water quality monitoring, and electrical, valve, and other upgrades total \$19.9 million through 2029; and improvements to ground water treatment total \$4 million through 2028.

Water Transmission: \$14.2 million

Water transmission projects include (i) pipeline and tunnel inspection and repair, as part of a 20-year inspection plan; and (ii) repairs to the Bay Division Pipelines in Alameda and San Mateo counties. Regional water transmission projects total \$202.1 million through 2032.

Communications & Monitoring: \$2.9 million

This project will provide redundant emergency communications capability and increased bandwidth for security data transfer. Specifically, it will build a microwave backbone to link the entire SFPUC regional water system from the Hetch Hetchy Dam site in Yosemite to the rest of the SFPUC sites (San Francisco, San Mateo, Santa Clara, and Alameda counties).

Regional Building & Grounds Projects: \$16.2 million*Millbrae Yard Upgrades: \$12.8 million*

Millbrae Yard upgrades include (i) reconstruction of the slab between the warehouse loading dock and offices to offset soil settlement and upgrades to the heating, ventilation, and air conditioning (HVAC) system in the administration building, and (ii) renovation and expansion of the Millbrae administrative building.

Of the \$12.8 million, \$2.2 million is allocated to initial costs of the administrative building renovation and expansion, which is estimated to cost \$169.6 million through 2029. Administrative building improvements consist of three phases, including (1) construction of two additional floors in the Millbrae laboratory building and consolidation staff from the Rollins Road facility; (2) demolition and reconstruction of a new administration building adjacent to the laboratory; and (3) construction of new materials and equipment space. According to the SFPUC 10-year capital plan, only the reconstruction of the Millbrae laboratory building (phase one) is included in the 10-year plan.

Sunol Yard Upgrades: \$3.4 million

The Sunol Yard long term improvements, which began in 2009 and are scheduled to be completed in 2023, include redevelopment of the existing Sunol Yard and construction of a Watershed Center near the Sunol Water Temple. The total project costs are \$104.9 million, of which \$3.4 million remains. These funds will be used for addition Water Temple work that was not part of the original project, including a backup generator, 100 space parking lot, a history exhibit on the terrace and revisions to the interior exhibits, picnic area restoration and fixtures, and conversion of temporary construction areas to permanent areas for Water Supply and Treatment Division and Natural Resource Division use. According to SFPUC staff, the backup power generator system was requested to address increases in PG&E rolling and extended power outages, allow daily operation of the facility, and provide backup power to aquarium and quarantine systems. The changes to the exhibits were approved by the SFPUC Commission and added to the contract as a change order. The temporary construction areas are to be restored to pre-existing conditions after construction. The areas would be used to store Water Enterprise operations equipment and for an overflow parking lot at the Watershed Center

Other Projects

According to SFPUC staff, for the FY 2022-23 Capital Budget development, a baseline review of all existing project appropriations was completed for potential closeout or repurposing to new capital budget needs SFPUC proposes. Re-appropriation of \$1.4 million to regional building and

grounds projects provides funding for improvements to the Sunol and Millbrae Yards facilities maintenance shops and equipment storage.

Local Building & Grounds Projects: \$4.0 million

City Distribution Division Headquarters: \$2.5 million

The SFPUC proposes to construct a new headquarters building for the City Distribution Division to replace the existing building, which was constructed in 1962 and does not meet current seismic, Americans with Disabilities Act (ADA), or building system requirements. The total project cost is estimated to be \$393.8 million through 2028. The \$2.5 million appropriation is for initial pre-construction costs.

Local Conveyance and Distribution: \$81.8 million

New Services: \$8 million

These funds provide for new service installation requested by water customers and funded from Water Enterprise revenues. The SFPUC 10 Year Capital Plan provides for annual costs of new service installation of \$8 million.

Renew Services: \$12.6 million

These funds provide for repair and replacement of meters, valves, service connections and other components of the water distribution system between the water main and the customer's service connection. This project also supports development of the information technology infrastructure necessary to the asset management of the linear system, development of a master plan for water loss reduction and compliance with State regulations and planning to improve water quality. The 10 Year Capital Plan provides for total costs over 10 years of \$89.8 million, including annual costs of \$4 million for repair and replacement of components of the water distribution system between the water main and customer's service connection.

Pipeline Replacement: \$61.2 million

Pipeline replacement consists of long-term management of linear assets in the potable water distribution system between transmission or storage and final customer service connection, including replacement of 1,230 miles in the City's pipeline and water distribution system. The pipeline replacement program is projected to cost \$470.4 million over the term of the 10 Year Capital Plan.

Other Local Projects

Other projects include improvements to the systems supporting customer service, and pump station and automated meter reading improvements.

- \$998,326 is budgeted in FY 2022-23 for improvements to the customer service system, including a cloud-based contact center, new digital self-service customer platform, and a new customer care and billing service. Total project costs are estimated to be \$8.1 million.
- \$468,742 for pump station improvements. The SFPUC's 12 major water pump stations and seven hydropneumatic tanks that boost pressure within the San Francisco distribution system need ongoing renewal and rehabilitation. This program provides long term

1 [Appropriation - Proceeds from CleanPowerSF Revenue and California Public Utilities
2 Commission Grant Funds - Disadvantaged Communities Green Tariff and Community Solar
3 Green Tariff Programs - \$3,727,592 - FY2022-2023]

4 **Ordinance appropriating \$1,586,046 CleanPowerSF revenue for CleanPowerSF Capital**
5 **Improvements and \$2,141,546 in California Public Utilities Commission grant funds, for**
6 **a total amount of \$3,727,592 to implement the Disadvantaged Communities Green Tariff**
7 **and Community Solar Green Tariff Programs for Fiscal Year (FY) 2022-2023.**

8
9 Note: **Unchanged Code text and uncodified text** are in plain Arial font.
10 **Additions to Codes** are in *single underline italics Times New Roman font*.
11 **Deletions to Codes** are in *strikethrough italics Times New Roman font*.
12 **Board amendment additions** are in double-underlined Arial font.
13 **Board amendment deletions** are in ~~strikethrough Arial font~~.
14 **Asterisks (* * *)** indicate the omission of unchanged Code
15 Subsections or parts of tables.

16 Be it ordained by the People of the City and County of San Francisco:

17 Section 1. The sources of funding outlined below are herein appropriated to reflect the
18 funding available for Fiscal Year 2022-2023.

19 **SOURCES Appropriation**

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	24761	10036106-0001	584030	Local Renewable	\$665,000
4	CleanPowerSF Cap	Local Renewable	Capital Renewal	Energy Program	
5	Revenue Fund /	Energy Program /	Projects		
6	198644 HHP	21785			
7	CleanPowerSF	Local Renewable			
8		Energy Program			
9					
10	24761	10036107-0001	584030	CleanPowerSF	\$917,874
11	CleanPowerSF Cap	CleanPowerSF	Capital Renewal	Customer Program	
12	Revenue Fund /	Customer Program /	Projects		
13	198644 HHP	21766			
14	CleanPowerSF	CleanPowerSF			
15		Customer Program			
16					
17	25160 CLPSF Public	10038863-0001 DAC	584030	DAC Solar Program	\$2,137,263
18	Purpose Prog /	Solar Program /	Capital Renewal		
19	198644 HHP	22235 DAC Solar	Projects		
20	CleanPowerSF	Program			
21					
22					
23					
24					
25					

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	24761	10036187-0001	581130	CSA 0.2%	\$3,172
4	CleanPowerSF Cap	CleanPowerSF	GF-CON-Internal	Controller's Audit	
5	Revenue Fund /	Capital Budget /	Audits	Fund	
6	198644 HHP	21297 Capital			
7	CleanPowerSF	Program			
8		CleanPowerSF			
9					
10	25160 CLPSF Public	10038863-0001 DAC	581130	CSA 0.2%	\$4,283
11	Purpose Prog /	Solar Program /	GF-CON-Internal	Controller's Audit	
12	198644 HHP	22235 DAC Solar	Audits	Fund	
13	CleanPowerSF	Program			
14					
15	Total USES Appropriation				\$3,727,592

17 Section 3. Of the above appropriated amount, \$7,455 representing 0.2% of the
18 expenditure budget net of audit costs, shall be allocated to support the Controller's Audit Fund,
19 pursuant to Charter Appendix F1.113. These appropriations may be increased or decreased by
20 the Controller based on changes to expenditure appropriations to conform to the applicable
21 Charter formula.

1 Section 4. The Controller is authorized to record transfers between funds and adjust the
2 accounting treatment of sources and uses appropriated in this ordinance as necessary to
3 conform to Generally Accepted Accounting Principles and other laws.
4

5 APPROVED AS TO FORM:
6 DENNIS J. HERRERA, City Attorney

FUNDS AVAILABLE
BEN ROSENFELD, Controller

7 By: /s/
8 JON GIVNER
9 Deputy City Attorney

By: /s/
BEN ROSENFELD
Controller



City and County of San Francisco
Tails
Ordinance

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 220497

Date Passed: June 14, 2022

Ordinance appropriating \$1,586,046 CleanPowerSF revenue for CleanPowerSF Capital Improvements and \$2,141,546 in California Public Utilities Commission grant funds, for a total amount of \$3,727,592 to implement the Disadvantaged Communities Green Tariff and Community Solar Green Tariff Programs for Fiscal Year (FY) 2022-2023.

May 25, 2022 Budget and Appropriations Committee - RECOMMENDED

June 07, 2022 Board of Supervisors - PASSED ON FIRST READING

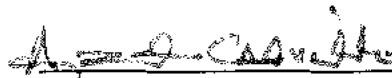
Ayes: 11 - Chan, Dorsey, Mandelman, Mar, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton

June 14, 2022 Board of Supervisors - FINALLY PASSED

Ayes: 10 - Chan, Dorsey, Mandelman, Mar, Melgar, Peskin, Preston, Ronen, Safai and Walton
Excused: 1 - Stefani

File No. 220497

I hereby certify that the foregoing Ordinance was FINALLY PASSED on 6/14/2022 by the Board of Supervisors of the City and County of San Francisco.


Angela Calvillo
Clerk of the Board



London N. Breed
Mayor

6/24/22

Date Approved

1 [Appropriation - \$211,004,676 in Proceeds from Revenue Bonds, Hetch Hetchy Revenue,
2 Cap and Trade Allowance - Hetch Hetchy Water and Power Capital Improvements - FY2022-
3 2023]

4 **Ordinance appropriating a total of \$211,004,676 of Hetch Hetchy revenue, Cap and**
5 **Trade Revenue and Power and Water Revenue Bonds for the San Francisco Public**
6 **Utilities Commission (SFPUC) Hetch Hetchy Capital Improvement Program for Fiscal**
7 **Year (FY) 2022-2023; and placing \$140,889,875 of Power Bonds and \$67,069,801 of**
8 **Water Bonds by project on Controller's Reserve subject to the Controller's certification**
9 **of funds availability, including proceeds of indebtedness, and for construction related**
10 **expenditures (excluding program management, planning and design) for these**
11 **projects, as applicable, is also subject to the prior occurrence of the SFPUC's and the**
12 **Board of Supervisors' discretionary adoption of California Environmental Quality Act**
13 **Findings for projects, following review and consideration of completed project related**
14 **environmental analysis, where required.**

15
16 Note: **Unchanged Code text and uncodified text** are in plain Arial font.
17 **Additions to Codes** are in *single-underline italics Times New Roman font*.
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21 **Asterisks (* * *)** indicate the omission of unchanged Code
22 Subsections or parts of tables.

23 Be it ordained by the People of the City and County of San Francisco:

24 Section 1. The sources of funding outlined below are herein appropriated to reflect the
25 funding available for Fiscal Year 2022-2023.

1 **SOURCES Appropriation**

2	Fund /	Project & Activity /	Account	Description	Amount
3	Department ID	Authority			
4	25337 HHP 2021	10014121-0001	480111	Proceeds from Sale	\$140,889,875
5	Bond Fund/	Hetchy Water-Power	Proceeds from Sale	of Bonds	
6	231621 HHP01	Bonds /	of Bonds- Face		
7	General	15366 UH Hetchy	Amount		
8	Administration	Water-Power Bonds			
9					
10	26602 WTR CPF	10014121-0001	480111	Proceeds from Sale	\$67,069,801
11	HHW 2021 Bond	Hetchy Water-Power	Proceeds from Sale	of Bonds	
12	Fund/	Bonds /	of Bonds- Face		
13	231621 HHP01	15366 UH Hetchy	Amount		
14	General	Water-Power Bonds			
15	Administration				
16					
17	24990 HHWP	10014672-0001	495029	Hetch Hetchy	\$2,265,000
18	Continuing Authority /	Hhp: Revenue	ITI Fr 5T-Hetch	Revenue	
19	231621 HHP01	Transfer-Sub Fund /	Hetchy W&P Fds		
20	General	15405 UH HHP			
21	Administration	Revenue Transfer			

Fund /	Project & Activity /	Account	Description	Amount
Department ID	Authority			
24990 HHWP	10014665-0001	479988	Cap and Trade	\$780,000
Continuing Authority /	Hetchy Cap and	Hetchy Cap & Trade	Revenue	
298648 HHP0903	Trade Allowance /	Revenue		
Energy Services	15404 UH Hetchy			
	Cap and Trade			
	Allowance			
Total SOURCES Appropriation				\$211,004,676

Section 2. The uses of funding outlined below are herein appropriated in Accounts 567000 (Buildings, Structures, and Improvements), 584030 (Capital Renewal Project), 581130 (CON-Internal Audits), 573110 (Bond Issuance Cost-Unamortized), and 567000 (Revenue Bond Oversight Committee), reflecting projected uses of funding to support the Hetch Hetchy Capital Improvement Program at the San Francisco Public Utilities Commission for Fiscal Year 2022-2023.

USES Appropriation

Fund /	Project & Activity /	Account	Description	Amount
Department ID	Authority			
25337 HHP 2021	10014226-0001	567000	Distribution	\$57,032,000
Bond Fund/	Distribution Services	Blds; Structures &	Services Retail	
298648 HHP0903	Retail C/	Improvements		
Energy Services	22141 Distribution			
	Services Retail			

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
1	24990 HHWP	10014281-0001	584030	Streetlight	\$2,258,910
2	Continuing Authority /	Streetlight	Capital Renewal	Replacement	
3	298648 HHP0903	Replacement	Projects		
4	Energy Services	15377			
5		UH Streetlight			
6		Replacement			
7					
8	25337 HHP 2021	10014576-0001	567000	Treasure Island	\$1,482,543
9	Bond Fund/	Treasure Island	Blds; Structures &	Capital	
10	298648 HHP0903	Capital	Improvements	Improvements	
11	Energy Services	Improvements /			
12		22142 Treasure			
13		Island			
14					
15	24990 HHWP	10014665-0001	584030	General Fund	\$780,000
16	Continuing Authority /	Hetchy Cap and	Capital Renewal	Energy Efficiency	
17	298648 HHP0903	Trade Allowance /	Projects		
18	Energy Services	15404 UH Hetchy			
19		Cap and Trade			
20		Allowance			
21					
22					
23					
24					
25					

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
3	25337 HHP 2021	10034512-0001	567000	Power Asset	\$3,406,000
4	Bond Fund/	Power Asset	Blds; Structures &	Acquisition	
5	298648 HHP0903	Acquisition	Improvements		
6	Energy Services	15383 UH Alternative			
7		Transmission Pr			
8					
9	26602 WTR CPF	10014065-0001	567000	Hetchy Water –	\$45,723,000
10	HHW 2021 Bond	Hetchy Water - Water	Blds; Structures &	Water Infrastructure	
11	Fund/	Only /	Improvements		
12	298646 HHP10	15363 UH Hetchy			
13	Hetchy Water	Water - Water Only			
14					
15	25337 HHP 2021	10014073-0001	567000	Hetchy Water -	\$44,140,154
16	Bond Fund/	Hetchy Water -	Blds; Structures &	Power	
17	298646 HHP10	Power /	Improvements	Infrastructure	
18	Hetchy Water	15364 UH Hetchy			
19		Water - Power			
20		Infrastructure			
21					
22					
23					
24					
25					

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
3	26602 WTR CPF	10014093-0001	567000	Hetchy Joint	\$11,286,331
4	HHW 2021 Bond	Hetchy Water - Joint	Bids; Structures &	Projects – Water	
5	Fund/	Projects /	Improvements		
6	298646 HHP10	15365 UH Hetchy			
7	Hetchy Water	Water - Joint Projects			
8					
9	25337 HHP 2021	10014093-0001	567000	Hetchy Joint	\$13,794,404
10	Bond Fund/	Hetchy Water - Joint	Bids; Structures &	Projects – Power	
11	298646 HHP10	Projects /	Improvements		
12	Hetchy Water	15365 UH Hetchy			
13		Water - Joint Projects			
14					
15	26602 WTR CPF	10014121-0001	573110	Hetchy Water	\$9,912,917
16	HHW 2021 Bond	Hetchy Water-Power	Bond Issuance	Financing Costs	
17	Fund/	Bonds /	Cost- Unamortized		
18	298646 HHP10	15366 UH Hetchy			
19	Hetchy Water	Water-power Bonds			
20					
21	26602 WTR CPF	10014121-0001	581130	CSA 0.2%	\$114,018
22	HHW 2021 Bond	Hetchy Water-Power	GF-CON-Internal	Controller's Audit	
23	Fund/	Bonds /	Audits	Fund	
24	298646 HHP10	15366 UH Hetchy			
25	Hetchy Water	Water-power Bonds			

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	26602 WTR CPF	10014121-0001	567000	Revenue Bond	\$33,535
4	HHW 2021 Bond	Hetchy Water-Power	Blds; Structures &	Oversight	
5	Fund/	Bonds /	Improvements	Committee 0.05%	
6	298646 HHP10	15366 UH Hetchy			
7	Hetchy Water	Water-power Bonds			
8					
9	25337 HHP 2021	10014121-0001	573110	Hetchy Power	\$20,724,619
10	Bond Fund/	Hetchy Water-Power	Bond Issuance	Financing Costs	
11	298647 HHP0901	Bonds /	Cost- Unamortized		
12	Power Administration	15366 UH Hetchy			
13		Water-power Bonds			
14					
15	25337 HHP 2021	10014121-0001	581130	CSA 0.2%	\$239,710
16	Bond Fund/	Hetchy Water-Power	GF-CON-Internal	Controller's Audit	
17	298647 HHP0901	Bonds /	Audits	Fund	
18	Power Administration	15366 UH Hetchy			
19		Water-power Bonds			
20					
21	25337 HHP 2021	10014121-0001	567000	Revenue Bond	\$70,445
22	Bond Fund/	Hetchy Water-Power	Blds; Structures &	Oversight	
23	298647 HHP0901	Bonds /	Improvements	Committee 0.05%	
24	Power Administration	15366 UH Hetchy			
25		Water-power Bonds			

Fund /	Project & Activity /	Account	Description	Amount
Department ID	Authority			
24990 HHWP	10014121-0001	581130	CSA 0.2%	6,090
Continuing Authority /	Hetchy Water-Power	GF-CON-Internal	Controller's Audit	
298647 HHP0901	Bonds /	Audits	Fund	
Power Administration	15366 UH Hetchy			
	Water-power Bonds			
Total USES Appropriation				\$211,004,676

Section 3. Of the above appropriated amount, \$359,818, representing 0.2% of the expenditure budget net of bond financing and audit costs, shall be allocated to support the Controller's Audit Fund, pursuant to Charter Appendix F1.113; and \$103,980, representing 0.05% of gross bond proceeds, shall be allocated to support the Public Utilities Commission Revenue Bond Oversight Committee, pursuant to Administrative Code Section 5A.31. These appropriations may be decreased by the Controller based on changes to expenditure appropriations or actual gross bond proceeds to conform to the applicable Charter and Administrative Code formulas.

Section 4. \$207,959,676 of the total appropriation is hereby placed on Controller's Appropriation Reserve, as set forth below. Release of appropriation reserves by the Controller is subject to the Controller's certification of funds availability, including proceeds of indebtedness, and for construction related expenditures (excluding program management, planning and design) for these projects, as applicable, is also subject to the prior occurrence of the SFPUC's and the Board of Supervisors' discretionary adoption of California Environmental

1 Quality Act (CEQA) Findings for projects, following review and consideration of completed
 2 project related environmental analysis, where required.

3
 4 **Appropriation on Reserve**

5	Fund /	Project & Activity /	Account	Description	Amount
6	Department ID	Authority			
7	25337 HHP 2021	10014226-0001	567000	Distribution	\$57,032,000
8	Bond Fund/	Distribution Services	Blds; Structures &	Services Retail	
9	298648 HHP0903	Retail C /	Improvements		
10	Energy Services	22141 Distribution			
11		Services Retail			
12					
13	25337 HHP 2021	10014576-0001	567000	Treasure Island	\$1,482,543
14	Bond Fund/	Treasure Island	Blds; Structures &	Capital	
15	298648 HHP0903	Capital	Improvements	Improvements	
16	Energy Services	Improvements /			
17		22142 Treasure			
18		Island			
19					
20	25337 HHP 2021	10034512-0001	567000	Power Asset	\$3,406,000
21	Bond Fund/	Power Asset	Blds; Structures &	Acquisition	
22	298648 HHP0903	Acquisition	Improvements		
23	Energy Services	15383 UH Alternative			
24		Transmission Pr			
25					

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
3	26602 WTR CPF	10014065-0001	567000	Hetchy Water –	\$45,723,000
4	HHW 2021 Bond	Hetchy Water - Water	Blds; Structures &	Water Infrastructure	
5	Fund/	Only /	Improvements		
6	298646 HHP10	15363 UH Hetchy			
7	Hetchy Water	Water - Water Only			
8					
9	25337 HHP 2021	10014073-0001	567000	Hetchy Water -	\$44,140,154
10	Bond Fund/	Hetchy Water -	Blds; Structures &	Power	
11	298646 HHP10	Power /	Improvements	Infrastructure	
12	Hetchy Water	15364 UH Hetchy			
13		Water - Power			
14		Infrastructure			
15					
16	26602 WTR CPF	10014093-0001	567000	Hetchy Joint	\$11,286,331
17	HHW 2021 Bond	Hetchy Water - Joint	Blds; Structures &	Projects – Water	
18	Fund/	Projects /	Improvements		
19	298646 HHP10	15365 UH Hetchy			
20	Hetchy Water	Water - Joint Projects			
21					
22					
23					
24					
25					

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	25337 HHP 2021	10014093-0001	567000	Hetchy Joint	\$13,794,404
4	Bond Fund/	Hetchy Water - Joint	Blds; Structures &	Projects – Power	
5	298646 HHP10	Projects /	Improvements		
6	Hetchy Water	15365 UH Hetchy			
7		Water - Joint Projects			
8					
9	26602 WTR CPF	10014121-0001	573110	Hetchy Water	\$9,912,917
10	HHW 2021 Bond	Hetchy Water-Power	Bond Issuance	Financing Costs	
11	Fund/	Bonds /	Cost- Unamortized		
12	298646 HHP10	15366 UH Hetchy			
13	Hetchy Water	Water-power Bonds			
14					
15	26602 WTR CPF	10014121-0001	581130	CSA 0.2%	\$114,018
16	HHW 2021 Bond	Hetchy Water-Power	GF-CON-Internal	Controller's Audit	
17	Fund/	Bonds /	Audits	Fund	
18	298646 HHP10	15366 UH Hetchy			
19	Hetchy Water	Water-power Bonds			
20					
21	26602 WTR CPF	10014121-0001	567000	Revenue Bond	\$33,535
22	HHW 2021 Bond	Hetchy Water-Power	Blds; Structures &	Oversight	
23	Fund/	Bonds /	Improvements	Committee 0.05%	
24	298646 HHP10	15366 UH Hetchy			
25	Hetchy Water	Water-power Bonds			

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	25337 HHP 2021	10014121-0001	573110	Hetchy Power	\$20,724,619
4	Bond Fund/	Hetchy Water-Power	Bond Issuance	Financing Costs	
5	298647 HHP0901	Bonds /	Cost- Unamortized		
6	Power Administration	15366 UH Hetchy			
7		Water-power Bonds			
8					
9	25337 HHP 2021	10014121-0001	581130	CSA 0.2%	\$239,710
10	Bond Fund/	Hetchy Water-Power	GF-CON-Internal	Controller's Audit	
11	298647 HHP0901	Bonds /	Audits	Fund	
12	Power Administration	15366 UH Hetchy			
13		Water-power Bonds			
14					
15	25337 HHP 2021	10014121-0001	567000	Revenue Bond	\$70,445
16	Bond Fund/	Hetchy Water-Power	Bids; Structures &	Oversight	
17	298647 HHP0901	Bonds /	Improvements	Committee 0.05%	
18	Power Administration	15366 UH Hetchy			
19		Water-power Bonds			
20	Total Appropriation on Reserve				\$207,959,676

22 Section 5. Associated bond financing costs up to \$30,637,536 are also hereby
23 appropriated, including but not limited to, issuance costs, debt service reserve, capitalized
24 interest, rating agency, and disclosure costs, all on Controller's Reserve pending receipt of bond
25 proceeds. To the extent that net available bond proceeds after financing costs are more than

1 budgeted, the SFPUC may use such surplus bond proceeds as a substitute for other sources
2 budgeted in this ordinance.

3
4 Section 6. The Controller is authorized to record transfers between funds and adjust the
5 accounting treatment of sources and uses appropriated in this ordinance as necessary to
6 conform to Generally Accepted Accounting Principles and other laws.

7
8 APPROVED AS TO FORM:
9 DENNIS J. HERRERA, City Attorney

FUNDS AVAILABLE
BEN ROSENFELD, Controller

10 By: /s/
11 JON GIVNER
Deputy City Attorney

By: /s/
BEN ROSENFELD
Controller

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City and County of San Francisco
Tails
Ordinance

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 220498

Date Passed: June 14, 2022

Ordinance appropriating a total of \$211,004,676 of Hetch Hetchy Revenue, Cap and Trade Revenue and Power and Water Revenue Bonds for the San Francisco Public Utilities Commission (SFPUC) Hetch Hetchy Capital Improvement Program for Fiscal Year (FY) 2022-2023; and placing \$140,889,875 of Power Bonds and \$67,069,801 of Water Bonds by project on Controller's Reserve subject to the Controller's certification of funds availability, including proceeds of indebtedness, and for construction related expenditures (excluding program management, planning and design) for these projects, as applicable, is also subject to the prior occurrence of the SFPUC's and the Board of Supervisors' discretionary adoption of California Environmental Quality Act Findings for projects, following review and consideration of completed project related environmental analysis, where required.

May 25, 2022 Budget and Appropriations Committee - RECOMMENDED

June 07, 2022 Board of Supervisors - PASSED ON FIRST READING


Ayes: 11 - Chan, Dorsey, Mandelman, Mar, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton

June 14, 2022 Board of Supervisors - FINALLY PASSED


Ayes: 10 - Chan, Dorsey, Mandelman, Mar, Melgar, Peskin, Preston, Ronen, Safai and Walton
Excused: 1 - Stefani

File No. 220498

I hereby certify that the foregoing
Ordinance was FINALLY PASSED on
6/14/2022 by the Board of Supervisors of
the City and County of San Francisco.



Angela Calvillo
Clerk of the Board



London N. Breed
Mayor

6/14/22

Date Approved

[Appropriation - Proceeds from Revenue Bonds, State Loan or Grant Funds, Water Revenues, and Water Capacity Fees - \$122,471,597; De-Appropriation and Re-Appropriation - Water Capital Improvement Projects - \$38,331,661 - FY2022-2023]

Ordinance appropriating a total of \$122,471,597 of proceeds from Revenue Bonds, State of California Water Resources Control Board’s revolving loan funds (State Loan Funds) or grant funds (State Grant Funds), water revenues, and water capacity fees for the San Francisco Public Utilities Commission (SFPUC) Water Enterprise’s Capital Improvement Program for Fiscal Year (FY) 2022-2023; and de-appropriating and re-appropriating Water Capital Project appropriations of \$38,331,661 in FY2022-2023; and placing \$2,536,607 on Budget and Finance Committee Reserve pending a report to the Board of Supervisors on facility design, space needs, total project costs, and disposition of 1990 Newcomb Avenue; and placing \$96,899,821 of Revenue Bond and State Loan Funds or State Grant Funds proceeds by project on Controller’s Reserve subject to the Controller’s certification of funds availability, including proceeds of indebtedness, and for construction related expenditures (excluding program management, planning and design) for these projects, as applicable, is also subject to the prior occurrence of the SFPUC’s and the Board of Supervisors’ discretionary adoption of California Environmental Quality Act findings for projects, following review and consideration of completed project related environmental analysis, where required.

Note: **Unchanged Code text and uncodified text** are in plain Arial font.
Additions to Codes are in *single-underline italics Times New Roman font*.
Deletions to Codes are in *strikethrough italics Times New Roman font*.
Board amendment additions are in double-underlined Arial font.
Board amendment deletions are in ~~strikethrough Arial font~~.
Asterisks (* * *) indicate the omission of unchanged Code subsections or parts of tables.

1
2 Be it ordained by the People of the City and County of San Francisco:

3
4 Section 1. The sources of funding outlined below are herein appropriated to reflect the
5 funding available for Fiscal Year 2022-2023.
6

7 **SOURCES Appropriation**

8	Fund /	Project & Activity /	Account	Description	Amount
9	Department ID	Authority			
10	26418 Water	10026501-0001	480111	Proceeds from Sale	\$26,562,907
11	Regional 2021 Bond	Water	Proceeds from Sale	of Bonds	
12	Fund /	Bond/Commercial	of Bonds- Face		
13	232396 WTR01	Paper Ex /	Amount		
14	Administration	17731 UB Non-WSIP			
15		Water Bond-CP Exp			
16					
17	26419 Water Local	10026501-0001	480111	Proceeds from Sale	\$47,785,764
18	2021 Bond Fund /	Water	Proceeds from Sale	of Bonds	
19	232396 WTR01	Bond/Commercial	of Bonds- Face		
20	Administration	Paper Ex /	Amount		
21		17731 UB Non-WSIP			
22		Water Bond-CP Exp			
23					
24					
25					

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
1	26570 WTR CPF	10015493-0001	495030	Water Enterprise	\$8,750,000
2	Other Fund /	Wtr: Revenue	ITI Fr 5W-Water	Revenue	
3	232396 WTR01	Transfer-Sub Fund /	Department Fd		
4	Administration	15680 UW WTR			
5		Revenue Transfer			
6	26600 WTR CPF	10015493-0001	495030	Water Enterprise	\$ 16,250,000
7	Wholesale Customer	Wtr:Revenue	ITI Fr 5W-Water	Revenue	
8	/ 232396 WTR01	Transfer-Sub Fun /	Department Fd		
9	Administration	15680 UW WTR			
10		Revenue Transfer			
11					
12	25960 WTR	10015493-0001	495030	Water Enterprise	\$20,965,926
13	ContinuingAuthority/	Wtr:Revenue	ITI Fr 5W-Water	Revenue	
14	232396 WTR01	Transfer-Sub Fun /	Department Fd		
15	Administration	15680 UW WTR			
16		Revenue Transfer			
17					
18					
19					
20					
21					
22					
23					
24					
25					

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	26510 WTR CPF	10015134_0001	479993	Water Capacity	\$2,157,000
4	Capacity Fee Prog /	Local Water	Capacity Fees	Fees	
5	232396 WTR01	Conveyance			
6	Administration	Distribution/			
7		15526 UW Local			
8		Water Conveyance-			
9		distribution			
10					
11	Total SOURCES Appropriation				\$122,471,597

Section 2. The uses of funding outlined below are herein appropriated in Accounts 567000 (Buildings, Structures, and Improvements), 584030 (Capital Renewal Projects), 581130 (CON-Internal Audits), 573110 (Bond Issuance Cost-Unamortized), and 567000 (Revenue Bond Oversight Committee), reflecting projected uses of funding to support the Water Capital Improvement Program at the San Francisco Public Utilities Commission for Fiscal Year 2022-2023.

USES Appropriation

21	Fund /	Project & Activity /	Account	Description	Amount
22	Department ID	Authority			
23	26418 Water	10015056-0001	567000	Regional Water	\$9,771,729
24	Regional 2021 Bond	Regional Water	Blds; Structures &	Treatment Program	
25	Fund /	Treatment Program /	Improvements		

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
3	232421 WTR0501	15479 UW Regional			
4	WST Admin	Water Treatment			
5		Program			
6					
7	26570	10015056-0001	584030	Regional Water	2,587,955
8	WTR CPF Other	Regional Water	Capital Renewal	Treatment Program	
9	Fund /	Treatment Program /	Projects		
10	232421 WTR0501	15479 UW Regional			
11	WST Admin	Water Treatment			
12		Program			
13					
14					
15	26600	10015056-0001	584030	Regional Water	4,806,200
16	WTR CPF Wholesale	Regional Water	Capital Renewal	Treatment Program	
17	Customer /	Treatment Program /	Projects		
18	232421 WTR0501	15479 UW Regional			
19	WST Admin	Water Treatment			
20		Program			
21					
22	26570	10015070-0001	584030	Regional Water	\$4,963,715
23	WTR CPF Other	Water Transmission	Capital Renewal	Transmission	
24	Fund /	Program	Projects	Program	
25					

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
3	232421 WTR0501	15483 UW Regional			
4	WST Admin	Water Transmission			
5					
6	26600	10015070-0001	584030	Regional Water	\$9,218,329
7	WTR CPF Wholesale	Water Transmission	Capital Renewal	Transmission	
8	Customer /	Program	Projects	Program	
9	232421 WTR0501	15483 UW Regional			
10	WST Admin	Water Transmission			
11					
12					
13					
14					
15					
16	26418 Water	10015123-0001	567000	Buildings &	\$12,806,742
17	Regional 2021 Bond	Buildings & Grounds	Blds; Structures &	Grounds Regional	
18	Fund /	Regional /	Improvements		
19	232421 WTR0501	15516 UW Buildings			
20	WST Admin	& Grounds - Regional			
21					
22	26570	10015123-0001	584030	Buildings &	\$1,180,830
23	WTR CPF Other	Buildings & Grounds	Capital Renewal	Grounds Regional	
24	Fund /	Regional /	Projects		
25					

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	232421 WTR0501	15516 UW Buildings			
4	WST Admin	& Grounds - Regional			
5					
6	26600	10015123-0001	584030	Buildings &	\$2,192,971
7	WTR CPF Wholesale	Buildings & Grounds	Capital Renewal	Grounds Regional	
8	Customer /	Regional /	Projects		
9	232421 WTR0501	15516 UW Buildings			
10	WST Admin	& Grounds - Regional			
11					
12					
13					
14					
15					
16					
17	26510 WTR CPF	10015134-0001	584030	Local Water	\$2,152,686
18	Capacity Fee Prog /	Local Water	Capital Renewal	Conveyance/	
19	232406 WTR0304	Conveyance	Projects	Distribution	
20	CDD Engineering	Distribution/			
21		15531 UW Pipeline			
22		Replacement			
23					
24					
25					

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	25960 WTR	10015134-0001	584030	Local Water	\$19,925,669
4	Continuing Authority /	Local Water	Capital Renewal	Conveyance/	
5	232406 WTR0304	Conveyance	Projects	Distribution	
6	CDD Engineering	Distribution/			
7		15531 UW Pipeline			
8		Replacement			
9					
10	26419 Water Local	10015134-0001	567000	Local Water	\$38,081,293
11	2021 Bond Fund /	Local Water	Blds; Structures &	Conveyance/	
12	232406 WTR0304	Conveyance	Improvements	Distribution	
13	CDD Engineering	Distribution/			
14		15531 UW Pipeline			
15		Replacement			
16					
17					
18					
19	25960 WTR	10038792-0001	584030	System Monitoring	\$998,326
20	Continuing Authority /	WTR Customer	Capital Renewal	and Control	
21	232406 WTR0304	Service System	Projects		
22	CDD Engineering	22139 Customer			
23		Service System			
24					
25					

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	26419 Water Local	10015427-0001	567000	Buildings & Ground	\$2,536,607
4	2021 Bond Fund /	Buildings & Ground	Blds; Structures &	Improvements	
5	232406 WTR0304	Improvements /	Improvements		
6	CDD Engineering	15617 UW Building &			
7		Grounds			
8		Improvement			
9					
10	26418 Water	10026501-0001	573110	Financing Cost	\$3,925,998
11	Regional 2021 Bond	Water	Bond Issuance Cost-		
12	Fund /	Bond/Commercial	Unamortized		
13	232396 WTR01	Paper Expense /			
14	Administration	17731 UB Non-WSIP			
15		Water Bond-CP Exp			
16					
17					
18					
19	26418 Water	10026501-0001	581130	CSA 0.2%	\$45,157
20	Regional 2021 Bond	Water	GF-CON-Internal	Controller's Audit	
21	Fund /	Bond/Commercial	Audits	Fund	
22	232396 WTR01	Paper Expense /			
23	Administration	17731 UB Non-WSIP			
24		Water Bond-CP Exp			
25					

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	26418 Water	10026501-0001	567000	Revenue Bond	\$13,281
4	Regional 2021 Bond	Water	Blds; Structures &	Oversight	
5	Fund /	Bond/Commercial	Improvements	Committee 0.05%	
6	232396 WTR01	Paper Expense /			
7	Administration	17731 UB Non-WSIP			
8		Water Bond-CP Exp			
9					
10	26419 Water Local	10026501-0001	573110	Financing Cost	\$7,062,736
11	2021 Bond Fund /	Water	Bond Issuance Cost-		
12	232396 WTR01	Bond/Commercial	Unamortized		
13	Administration	Paper Expense /			
14		17731 UB Non-WSIP			
15		Water Bond-CP Exp			
16					
17					
18					
19	26419 Water Local	10026501-0001	581130	CSA 0.2%	\$81,235
20	2021 Bond Fund /	Water	GF-CON-Internal	Controller's Audit	
21	232396 WTR01	Bond/Commercial	Audits	Fund	
22	Administration	Paper Expense /			
23		17731 UB Non-WSIP			
24		Water Bond-CP Exp			
25					

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	26419 Water Local	10026501-0001	567000	Revenue Bond	\$23,893
4	2021 Bond Fund /	Water	Blds; Structures &	Oversight	
5	232396 WTR01	Bond/Commercial	Improvements	Committee 0.05%	
6	Administration	Paper Expense /			
7		17731 UB Non-WSIP			
8		Water Bond-CP Exp			
9					
10	25960 WTR	10026501-0001	581130	CSA 0.2%	\$41,931
11	Continuing Authority /	Water	GF-CON-Internal	Controller's Audit	
12	232396 WTR01	Bond/Commercial	Audits	Fund	
13	Administration	Paper Expense /			
14		17731 UB Non-WSIP			
15		Water Bond-CP Exp/			
16					
17					
18					
19	26510 WTR CPF	10026501-0001	581130	CSA 0.2%	\$4,314
20	Capacity Fee Prog /	Water	GF-CON-Internal	Controller's Audit	
21	232396 WTR01	Bond/Commercial	Audits	Fund	
22	Administration	Paper Expense /			
23		17731 UB Non-WSIP			
24		Water Bond-CP Exp/			
25					

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	26570	10026501-0001	581130	CSA 0.2%	\$17,500
4	WTR CPF Other	Water	GF-CON-Internal	Controller's Audit	
5	Fund /	Bond/Commercial	Audits	Fund	
6	232396 WTR01	Paper Expense /			
7	Administration	17731 UB Non-WSIP			
8		Water Bond-CP Exp/			
9					
10	26600	10026501-0001	581130	CSA 0.2%	\$32,500
11	WTR CPF Wholesale	Water	GF-CON-Internal	Controller's Audit	
12	Customer /	Bond/Commercial	Audits	Fund	
13	232396 WTR01	Paper Expense /			
14	Administration	17731 UB Non-WSIP			
15		Water Bond-CP Exp/			
16	Total USES Appropriation				\$122,471,597

18 Section 3. Of the above appropriated amount, \$222,637, representing 0.2% of the
19 expenditure budget net of bond financing and audit costs, shall be allocated to support the
20 Controller's Audit Fund, pursuant to Charter Appendix F1.113; and \$37,174 representing 0.05%
21 of gross bond proceeds, shall be allocated to support the Public Utilities Commission Revenue
22 Bond Oversight Committee, pursuant to Administrative Code Section 5A.31. These
23 appropriations may be increased or decreased by the Controller based on changes to
24 expenditure appropriations or actual gross bond proceeds to conform to the applicable Charter
25 and Administrative Code formulas.

1 Section 4. \$74,348,671 is hereby placed on Controller's Appropriation Reserve, as set
2 forth below. Release of appropriation reserves by the Controller is subject to the Controller's
3 certification of funds availability, including proceeds of indebtedness, and for construction
4 related expenditures (excluding program management, planning and design) for these projects,
5 as applicable, is also subject to the prior occurrence of the SFPUC's and the Board of
6 Supervisors' discretionary adoption of California Environmental Quality Act (CEQA) findings for
7 projects, following review and consideration of completed project related environmental
8 analysis, where required.

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18 **Appropriation on Reserve**
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	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
3	26418 Water	10015056-0001	567000	Regional Water	\$9,771,729
4	Regional 2021 Bond	Regional Water	Blds; Structures &	Treatment Program	
5	Fund /	Treatment Program /	Improvements		
6	232421 WTR0501	15479 UW Regional			
7	WST Admin	Water Treatment			
8		Program			
9					
10	26418 Water	10015123-0001	567000	Buildings &	\$12,806,742
11	Regional 2021 Bond	Buildings & Grounds	Blds; Structures &	Grounds Regional	
12	Fund /	Regional /	Improvements		
13	232421 WTR0501	15516 UW Buildings			
14	WST Admin	& Grounds - Regional			
15					
16	26419 Water Local	10015134-0001	567000	Local Water	\$38,081,293
17	2021 Bond Fund /	Local Water	Blds; Structures &	Conveyance/	
18	232406 WTR0304	Conveyance	Improvements	Distribution	
19	CDD Engineering	Distribution/			
20		15531 UW Pipeline			
21		Replacement			
22					
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1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	26419 Water Local	10015427-0001	567000	Buildings & Ground	\$2,536,607
4	2021 Bond Fund /	Buildings & Ground	Blds; Structures &	Improvements	
5	232406 WTR0304	Improvements /	Improvements		
6	CDD Engineering	15617 UW Building &			
7		Grounds			
8		Improvement			
9					
10	26418 Water	10026501-0001	573110	Financing Cost	\$3,925,998
11	Regional 2021 Bond	Water	Bond Issuance Cost-		
12	Fund /	Bond/Commercial	Unamortized		
13	232396 WTR01	Paper Expense /			
14	Administration	17731 UB Non-WSIP			
15		Water Bond-CP Exp			
16					
17	26418 Water	10026501-0001	581130	CSA 0.2%	\$45,157
18	Regional 2021 Bond	Water	GF-CON-Internal	Controller's Audit	
19	Fund /	Bond/Commercial	Audits	Fund	
20	232396 WTR01	Paper Expense /			
21	Administration	17731 UB Non-WSIP			
22		Water Bond-CP Exp			
23					
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1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	26418 Water	10026501-0001	567000	Revenue Bond	\$13,281
4	Regional 2021 Bond	Water	Blds; Structures &	Oversight	
5	Fund /	Bond/Commercial	Improvements	Committee 0.05%	
6	232396 WTR01	Paper Expense /			
7	Administration	17731 UB Non-WSIP			
8		Water Bond-CP Exp			
9					
10	26419 Water Local	10026501-0001	573110	Financing Cost	\$7,062,736
11	2021 Bond Fund /	Water	Bond Issuance Cost-		
12	232396 WTR01	Bond/Commercial	Unamortized		
13	Administration	Paper Expense /			
14		17731 UB Non-WSIP			
15		Water Bond-CP Exp			
16					
17	26419 Water Local	10026501-0001	581130	CSA 0.2%	\$81,235
18	2021 Bond Fund /	Water	GF-CON-Internal	Controller's Audit	
19	232396 WTR01	Bond/Commercial	Audits	Fund	
20	Administration	Paper Expense /			
21		17731 UB Non-WSIP			
22		Water Bond-CP Exp			
23					
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25					

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	26419 Water Local	10026501-0001	567000	Revenue Bond	\$23,893
4	2021 Bond Fund /	Water	Bids; Structures &	Oversight	
5	232396 WTR01	Bond/Commercial	Improvements	Committee 0.05%	
6	Administration	Paper Expense /			
7		17731 UB Non-WSiP			
8		Water Bond-CP Exp			
9	Total Appropriation on Reserve				\$74,348,671

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11 Section 5. \$2,536,607 appropriated for predevelopment costs for the City Distribution
12 Division administrative building is placed on Budget and Finance Committee Reserve, pending
13 a report to the Board of Supervisors on facility design, space needs, total project costs, and
14 disposition of 1990 Newcomb Avenue.

15

16 Section 56. Associated bond financing costs up to \$10,988,734 are also hereby
17 appropriated, including but not limited to, issuance costs, debt service reserve, capitalized
18 interest, rating agency, and disclosure costs, all on Controller's Reserve pending receipt of bond
19 proceeds. To the extent that net available bond proceeds after financing costs are more than
20 budgeted, the SFPUC may use such surplus bond proceeds as a substitute for other sources
21 budgeted in this ordinance.

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1 Section 67: The Controller is authorized to record transfers between funds and adjust
 2 the accounting treatment of sources and uses appropriated in this ordinance as necessary to
 3 conform to Generally Accepted Accounting Principles and other laws.

4
 5 Section 78. De-appropriating and Re-appropriating of \$15,511,001 in the Regional Water
 6 Enterprise Capital Improvement Program for FY 2022-2023 and placing \$8,919,150 on
 7 Controller's reserve by project. The uses of funding outlined below are herein de-appropriated
 8 and re-appropriated in account 567000 (Buildings, Structures, and Improvements) and account
 9 584030 reflect the projected uses to fund the Water Enterprise Capital Budget for Fiscal Year
 10 2022-2023.

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 12 **USES – De-Appropriation**

Fund /	Project & Activity /	Account	Description	Amount
Department ID	Authority			
26601 Water	10015089-0001	567000	Water Supply &	\$8,919,150
Enterprises Capital	Water Supply &	Buildings,	Storage	
Fund/	Storage /	Structures, and		
232421 WTR0501	15492 Water Supply	Improvements		
WST Admin	& Storage			

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	26570	10015102-0001	584030	Watershed & Land	\$1,496,639
4	WTR CPF Other	Watershed & Land	Capital Renewal	Management	
5	Fund /	Management	Projects		
6	232421 WTR0501	15499 UW			
7	WST Admin	Watershed & Land			
8		Management			
9					
10	26600	10015102-0001	584030	Watershed & Land	\$2,779,472
11	WTR CPF Wholesale	Watershed & Land	Capital Renewal	Management	
12	Customer /	Management	Projects		
13	232421 WTR0501	15499 UW			
14	WST Admin	Watershed & Land			
15		Management			
16					
17	26570	10015233-0001	584030	Long Term	\$810,509
18	WTR CPF Other	Long Term	Capital Renewal	Monitoring & Permit	
19	Fund /	Monitoring & Permit	Projects		
20	232421 WTR0501	Program			
21	WST Admin	15549 – UW Long			
22		Term Monitoring &			
23		Permit Program			
24					
25					

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	26600	10015233-0001	584030	Long Term	\$1,505,231
4	WTR CPF Wholesale	Long Term	Capital Renewal	Monitoring & Permit	
5	Customer /	Monitoring & Permit	Projects		
6	232421 WTR0501	Program			
7	WST Admin	15549 – UW Long			
8		Term Monitoring &			
9		Permit Program			
10	Total USES De-Appropriation				\$15,511,001

USES – Re-Appropriation

12	Fund /	Project & Activity /	Account	Description	Amount
13	Department ID	Authority			
14	26601 Water	10015056-0001	567000	Regional Water	\$8,919,150
15	Enterprises Capital	Regional Water	Buildings,	Treatment Program	
16	Fund/	Treatment Program	Structures, and		
17	232421 WTR0501	15479 – UW	Improvements		
18	WST Admin	Regional Water			
19		Treatment Program			

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
1	26570	10015056-0001	584030	Regional Water	\$760,170
2	WTR CPF Other	Regional Water	Capital Renewal	Treatment Program	
3	Fund /	Treatment Program	Projects		
4	232421 WTR0501	15479 – UW			
5	WST Admin	Regional Water			
6		Treatment Program			
7					
8	26600	10015056-0001	584030	Regional Water	\$1,411,745
9	WTR CPF Wholesale	Regional Water	Capital Renewal	Treatment Program	
10	Customer /	Treatment Program	Projects		
11	232421 WTR0501	15479 – UW			
12	WST Admin	Regional Water			
13		Treatment Program			
14					
15	26570	10015117-0001	584030	Communications &	\$1,039,376
16	WTR CPF Other	Communications &	Capital Renewal	Monitoring	
17	Fund /	Monitoring	Projects		
18	232421 WTR0501	15513 UW			
19	WST Admin	Communications &			
20		Monitoring			
21					
22					
23					
24					
25					

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	26600	10015117-0001	584030	Communications &	\$1,930,269
4	WTR CPF Wholesale	Communications &	Capital Renewal	Monitoring	
5	Customer /	Monitoring	Projects		
6	232421 WTR0501	15513 UW			
7	WST Admin	Communications &			
8		Monitoring			
9					
10	26570	10015123-0001	584030	Building & Grounds	\$507,602
11	WTR CPF Other	Buildings & Grounds	Capital Renewal	Regional	
12	Fund /	- Regional	Projects		
13	232421 WTR0501	15516 UW Building &			
14	WST Admin	Grounds - Regional			
15					
16	26600	10015123-0001	584030	Building & Grounds	\$942,689
17	WTR CPF Wholesale	Buildings & Grounds	Capital Renewal	Regional	
18	Customer /	- Regional	Projects		
19	232421 WTR0501	15516 UW Building &			
20	WST Admin	Grounds - Regional			
21	Total USES Re-Appropriation				\$15,511,001

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23 **Appropriation on Reserve**

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Fund / Department ID	Project & Activity / Authority	Account	Description	Amount
26601 Water	10015056-0001 –	567000	Regional Water	\$8,919,150
Enterprises Capital	Regional Water	Buildings,	Treatment Program	
Fund/	Treatment Program	Structures, and		
232421 WTR0501	15479 – UW	Improvements		
WST Admin	Regional Water			
	Treatment Program			
Total Appropriation on Reserve				\$8,919,150

Section 89. De-appropriating and Re-appropriating of \$22,820,660 in the Local Water Enterprise Capital Improvement Program for FY 2022-2023 and placing \$13,632,000 on Controller's reserve by project. The uses of funding outlined below are herein de-appropriated and re-appropriated in account 567000 (Buildings, Structures, and Improvements) and account 584030 reflect the projected uses to fund the Water Enterprise Capital Budget for Fiscal Year 2022-2023.

USES – De-Appropriation

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	26230 WTR CPF	10015042-0001	567000	Treasure Island	\$6,159,918
4	2002 Prop E Fund/	Treasure Island	Buildings,	Capital Improv	
5	232396 WTR01	Capital Improv	Structures, and		
6	Administration	/15465 UW Treasure	Improvements		
7		Island			
8					
9	25960 WTR	10015042-0001	584030	Treasure Island	\$291,901
10	Continuing Authority /	Treasure Island	Capital Renewal	Capital Improv	
11	232396 WTR01	Capital Improv	Projects		
12	Administration	/15465 UW Treasure			
13		Island			
14					
15	25960	10015131-0001 Local	584030	UW Local Supply	\$835,847
16	WTR Continuing	Water Supply/Other	Capital Renewal		
17	Authority / 232396	Recycle Water	Projects		
18	WTR01	15522 UW Local			
19	Administration	Water Supply-other			
20		Recycle			
21					
22					
23					
24					
25					

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
1	25960	10015443-0001	584030	Pacifica Recycled	\$1,100,994
2	WTR Continuing	Pacifica Recycle	Capital Renewal	Water	
3	Authority / 232396	Water	Projects		
4	WTR01	15629 UW Pacifica			
5	Administration	Recycled Water			
6					
7	26405	10034505-0001	567000	Water Supply	\$4,550,000
8	WTR CPF 2017A	Water Supply	Buildings,	Projects	
9	Bond Fund/ 232396	Projects/ 20711	Structures, and		
10	WTR01	Water Diversification	Improvements		
11	Administration	Projects			
12					
13	26419 WTR Local	10034505-0001	567000	Water Supply	\$6,700,000
14	2021 Bond Fund	Water Supply	Buildings,	Projects	
15	/ 232406 WTR0304	Projects/ 20711	Structures, and		
16	CDD Engineering	Water Diversification	Improvements		
17		Projects			
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1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	26601 Water	10034505-0001	567000	Water Supply	\$3,182,000
4	Enterprise Capital	Water Supply	Buildings,	Projects	
5	Fund /232406	Projects/ 20711	Structures, and		
6	WTR0304 CDD	Water Diversification	Improvements		
7	Engineering	Projects			
8	Total USES De-Appropriation				\$22,820,660

USES – Re-Appropriation

11	Fund /	Project & Activity /	Account	Description	Amount
12	Department ID	Authority			
13	26230 WTR CPF	10015134-0001	567000	Local Water	\$6,159,918
14	2002 Prop E Fund/	Local Water	Buildings,	Conveyance/	
15	232396 WTR01	Conveyance	Structures, and	Distribution	
16	Administration	Distribution	Improvements		
17		15531 UW Pipeline			
18		Replacement			
19					
20	26405	10015134-0001	567000	Local Water	\$4,550,000
21	WTR CPF 2017A	Local Water	Buildings,	Conveyance/	
22	Bond Fund/ 232396	Conveyance	Structures, and	Distribution	
23	WTR01	Distribution	Improvements		
24	Administration	15531 UW Pipeline			
25		Replacement			

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
1	26419 WTR Local	10015134-0001 Local	567000	Local Water	\$6,700,000
2	2021 Bond Fund /	Water Conveyance	Buildings,	Conveyance/	
3	232406 WTR0304	Distribution	Structures, and	Distribution	
4	CDD Engineering	15531 UW Pipeline	Improvements		
5		Replacement			
6	26601 Water	10015134-0001 Local	567000	Local Water	\$3,182,000
7	Enterprise Capital	Water Conveyance/	Buildings,	Conveyance/	
8	Fund /232406	Distribution	Structures, and	Distribution	
9	WTR0304 CDD	15531 UW Pipeline	Improvements		
10	Engineering	Replacement			
11	25960	10015134-0001 Local	584030	Local Water	\$1,012,779
12	WTR Continuing	Water Conveyance/	Capital Renewal	Conveyance/	
13	Authority / 232396	Distribution	Projects	Distribution	
14	WTR01	15531 UW Pipeline			
15	Administration	Replacement			
16					
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1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	25960	10015227-0001	584030	UW Pump Station	\$468,742
4	WTR Continuing	Pump Station	Capital Renewal	Improvements	
5	Authority / 232396	Improvements	Projects		
6	WTR01	15543 UW Pump			
7	Administration	Station			
8		Improvements			
9					
10	25960	10015425-0001	584030	Automated Meter	\$747,221
11	WTR Continuing	Automated Meter	Capital Renewal	Reading System	
12	Authority / 232396	Reading System	Projects		
13	WTR01	15612 UW			
14	Administration	Automated Meter			
15		Reading System			
16	Total USES Re-Appropriation				\$22,820,660

Appropriation on Reserve

19	Fund /	Project & Activity /	Account	Description	Amount
20	Department ID	Authority			
21	26405 WTR CPF	10015134-0001 Local	567000	Local Water	3,750,000
22	2017A Bond Fund /	Water Conveyance	Buildings,	Conveyance/	
23	232396 WTR01	Distribution	Structures, and	Distribution	
24	Administration	15531 UW Pipeline	Improvements		
25		Replacement			

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	26419 WTR Local	10015134-0001 Local	567000	Local Water	\$6,700,000
4	2021 Bond Fund /	Water Conveyance	Buildings,	Conveyance/	
5	232406 WTR0304	Distribution	Structures, and	Distribution	
6	CDD Engineering	15531 UW Pipeline	Improvements		
7		Replacement			
8					
9	26601 Water	10015134-0001 Local	567000	Local Water	\$3,182,000
10	Enterprise Capital	Water Conveyance/	Buildings,	Conveyance/	
11	Fund/232406	Distribution	Structures, and	Distribution	
12	WTR0304 CDD	15531 UW Pipeline	Improvements		
13	Engineering	Replacement			
14	Total Appropriation on Reserve				\$13,632,000

16 Section 910. This Board, by Ordinance No. 03-16, authorized the SFPUC to enter into
17 one or more State of California State Water Resources Control Board Installment Sale
18 Agreements under the Clean Water State Revolving Fund (State Loan Funds), and amended
19 and supplemented Ordinance No. 89-10 to authorize, in addition to the issuance of Water
20 revenue bonds, the execution and delivery of State Loan Funds to finance projects, provided
21 that any such indebtedness shall not exceed in an aggregate principal amount \$1,737,724,038.
22 Ordinance No. 03-16 also authorized the SFPUC to accept State Water Resources Control
23 Board Grant funds (State Grant Funds) to be applied to pay for the costs of the San Francisco
24 Westside Recycled Water Project, as approved by SFPUC Commission Resolution No. 15-
25 0196, adopted September 22, 2015. The Board is concurrently considering with this Ordinance

1 a SFPUC Water Revenue Bond issuance, including authorization to obtain State Loan Funds
2 and State Grant Funds, not to exceed \$478,440,136. The Sources of Funds herein
3 appropriated in Section 1 of this Ordinance, or previously appropriated by Ordinance 103-14,
4 may include State Loan Funds, State Grant Funds, Federal Grant Funds, or Federal Loan
5 Funds when available, subject to compliance with the terms of the authorizing legislation for
6 such Funds. The Controller is authorized to record substitution of the source of funds
7 appropriated with State Loan Funds, State Grant Funds, Federal Grant Funds, or Federal Loan
8 Funds as necessary to conform to Generally Accepted Accounting Principles and other laws.
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11 APPROVED AS TO FORM:
12 , City Attorney

FUNDS AVAILABLE
BEN ROSENFELD, Controller

13 By: /s/
14 JON GIVNER
Deputy City Attorney

By: /s/
BEN ROSENFELD
Controller



City and County of San Francisco

Tails Ordinance

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 220503

Date Passed: June 14, 2022

Ordinance appropriating a total of \$122,471,597 of proceeds from Revenue Bonds, State of California Water Resources Control Board's revolving loan funds (State Loan Funds) or grant funds (State Grant Funds), water revenues, and water capacity fees for the San Francisco Public Utilities Commission (SFPUC) Water Enterprise's Capital Improvement Program for Fiscal Year (FY) 2022-2023; and de-appropriating and re-appropriating Water Capital Project appropriations of \$38,331,661 in FY2022-2023; and placing \$2,536,607 on Budget and Finance Committee Reserve pending a report to the Board of Supervisors on facility design, space needs, total project costs, and disposition of 1990 Newcomb Avenue; and placing \$96,899,821 of Revenue Bond and State Loan Funds or State Grant Funds proceeds by project on Controller's Reserve subject to the Controller's certification of funds availability, including proceeds of indebtedness, and for construction related expenditures (excluding program management, planning and design) for these projects, as applicable. is also subject to the prior occurrence of the SFPUC's and the Board of Supervisors' discretionary adoption of California Environmental Quality Act findings for projects, following review and consideration of completed project related environmental analysis, where required.

May 25, 2022 Budget and Appropriations Committee - AMENDED, AN AMENDMENT OF THE WHOLE BEARING NEW TITLE

May 25, 2022 Budget and Appropriations Committee - RECOMMENDED AS AMENDED

June 07, 2022 Board of Supervisors - PASSED ON FIRST READING

Ayes: 11 - Chan, Dorsey, Mandelman, Mar, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton


June 14, 2022 Board of Supervisors - FINALLY PASSED

Ayes: 10 - Chan, Dorsey, Mandelman, Mar, Melgar, Peskin, Preston, Ronen, Safai and Walton


Excused: 1 - Stefani

File No. 220503

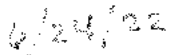
I hereby certify that the foregoing Ordinance was FINALLY PASSED on 6/14/2022 by the Board of Supervisors of the City and County of San Francisco.



Angela Calvillo
Clerk of the Board



London N. Breed
Mayor



Date Approved

1 [Appropriation - Proceeds from Revenue Bonds, State Loans or Grant Funds, Wastewater
2 Revenues, and Wastewater Capacity Fees - Wastewater Capital Improvements -
3 \$793,003,901 - FY2022-2023]

4 **Ordinance appropriating a total of \$793,003,901 of proceeds from revenue bonds, State**
5 **of California Water Resources Control Board’s revolving loan funds (State Loan Funds)**
6 **or grant funds (State Grant Funds), wastewater revenue and capacity fees for the San**
7 **Francisco Public Utilities Commission (SFPUC) Wastewater Enterprise’s Capital**
8 **Improvement Program for Fiscal Year (FY) 2022-2023, and placing \$704,198,901 in**
9 **Revenue Bonds or State Loan or Grant Funds by project on Controller’s Reserve**
10 **subject to the Controller’s certification of funds availability, including proceeds of**
11 **indebtedness, and for construction related expenditures (excluding program**
12 **management, planning and design) for these projects, as applicable, is also subject to**
13 **the prior occurrence of the SFPUC’s and the Board of Supervisors’ discretionary**
14 **adoption of California Environmental Quality Act Findings for projects, following**
15 **review and consideration of completed project related environmental analysis, where**
16 **required.**

17
18 Note: **Unchanged Code text and uncodified text** are in plain Arial font.
19 **Additions to Codes** are in *single-underline italics Times New Roman font.*
20 **Deletions to Codes** are in *strikethrough italics Times New Roman font.*
21 **Board amendment additions** are in double-underlined Arial font.
22 **Board amendment deletions** are in ~~strikethrough-Arial font.~~
23 **Asterisks (* * *)** indicate the omission of unchanged Code
24 subsections or parts of tables.
25

Be it ordained by the People of the City and County of San Francisco:

1 Section 1. The sources of funding outlined below are herein appropriated to reflect the
 2 funding available for Fiscal Year 2022-2023.

3 **SOURCES Appropriation**

Fund /	Project & Activity /	Account	Description	Amount
Department ID	Authority			
20720	10026508-0001	480111	Proceeds from Sale of Bonds	\$686,028,786
WWE SSIP 2023	Bond-Commercial	Proceeds from Sale	of Bonds	
Bond Fund/	Paper Expense,	of Bonds- Face		
229267 WWE0101	Budget Control /	Amount		
Administration	17732 WW Bond- commercial Paper Exp			
20707 Wastewater	10026508-0001	480111	Proceeds from Sale of Bonds	\$18,170,115
2021 Capital Bond	Bond-Commercial	Proceeds from Sale	of Bonds	
Fund /	Paper Expense,	of Bonds- Face		
229267 WWE0101	Budget Control /	Amount		
Administration	17732 WW Bond- commercial Paper Exp			

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	20550 WWE CPF	10031235-0001	495022	Wastewater	\$82,628,000
4	Repair & Replace /	WW Wwe Rnr	ITI Fr 5C-	Enterprise Revenue	
5	229267 WWE0101	Collection System/	Cleanwater		
6	Administration	15722 WW Wwe Rnr	ProgramFd		
7		Collection System			
8					
9	20530 WWE CPF	10031235-0001	479993	Wastewater	\$6,177,000
10	Capacity Fee Prog /	WW Wwe Rnr	Capacity Fees	Capacity Fee	
11	229267 WWE0101	Collection System/			
12	Administration	15722 WW Wwe Rnr			
13		Collection System			
14	Total SOURCES Appropriation				\$793,003,901

Section 2. The uses of funding outlined below are herein appropriated in Accounts 567000 (Buildings, Structures, and Improvements), 584030 (Capital Renewal Projects), 581130 (CON-Internal Audits), 573110 (Bond Issuance Cost-Unamortized), and 567000 (Revenue Bond Oversight Committee), reflecting the projected uses of funding to support the Wastewater Capital Improvement Program at the San Francisco Public Utilities Commission for Fiscal Year 2022-2023.

USES Appropriation

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	20720	10029731-0002	567000	SSIP Program-	14,000,000
4	WWE SSIP 2023	Planning	Blds; Structures &	Wide Management	
5	Bond Fund/	Budget/15733	Improvements		
6	229267 WWE0101	WW SSIP Program-			
7	Administration	Wide Management			
8	20720	10015795-0001	567000	Biosolids Digester	375,532,448
9	WWE SSIP 2023	Biosolids Digester	Blds; Structures &	Project	
10	Bond Fund/	Project/15728	Improvements		
11	229267 WWE0101	WW SSIP Biosolids			
12	Administration	Digester Project			
13					
14	20720	10026823-0001	567000	Treatment Plants -	\$31,555,408
15	WWE SSIP 2023	Treatment Plant	Blds; Structures &	Southeast	
16	Bond Fund/	Improvements-S /	Improvements		
17	229267 WWE0101	15735 WW			
18	Administration	Treatment Plant			
19		Improvement			
20					
21	20720	10015813-0001	567000	Treatment Plants -	\$11,314,730
22	WWE SSIP 2023	Treatment Plant	Blds; Structures &	North Point	
23	Bond Fund/	Improvement /	Improvements		
24	229267 WWE0101				
25	Administration				

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3		15736 WW			
4		Treatment Plant			
5		Improvement			
6					
7					
8					
9	20720	10015813-0001	567000	Treatment Plants --	\$29,201,164
10	WWE SSIP 2023	Treatment Plant	Bids; Structures &	Oceanside	
11	Bond Fund/	Improvement /15736	Improvements		
12	229267 WWE0101	WW Treatment Plant			
13	Administration	Improvement			
14					
15	20720	10015791-0001	567000	Collection System	\$57,948,296
16	WWE SSIP 2023	Collection System	Bids; Structures &	Improvements	
17	Bond Fund/	Improvements /	Improvements		
18	229267 WWE0101	15726 WW Collection			
19	Administration	System Improvement			
20					
21	20720	10026827-0001	567000	Pump Station/	\$307,000
22	WWE SSIP 2023	Collection	Bids; Structures &	Force Mains	
23	Bond Fund/	System/Pump	Improvements		
24	229267 WWE0101	Station/			
25	Administration				

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3		15726 WW Collection			
4		System Improvement			
5					
6					
7					
8					
9	20720	10002780-0001	567000	Green	\$15,209,899
10	WWE SSIP 2023	Drainage Basin-	Bids; Structures &	Infrastructure	
11	Bond Fund/	Early Implement /	Improvements	Projects	
12	229267 WWE0101	15729 WW			
13	Administration	Stormwater			
14		Management			
15					
16	20720	10015801 -0001	567000	Flood Resilience-	\$48,055,523
17	WWE SSIP 2023	Flood	Bids; Structures &	Hydraulic	
18	Bond Fund/	Resilience/Hydraulic	Improvements		
19	229267 WWE0101	Improvement/			
20	Administration	15730 WW Flood			
21		Resilience-hydraulic			
22					
23	20550 WWE CPF	10031235-0001	584030	R & R Collection	\$55,784,284
24	Repair & Replace /	WW Wwe Rnr	Capital Renewal	System	
25		Collection System /	Projects		

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
3	229267 WWE0101	15722 WW Wwe Rnr			
4	Administration	Collection System			
5					
6					
7					
8	20530 WWE CPF	10031235-0001	584030	R & R Collection	\$6,164,646
9	Capacity Fee Prog /	WW Wwe Rnr	Capital Renewal	System	
10	229267 WWE0101	Collection System /	Projects		
11	Administration	15722 WW Wwe Rnr			
12		Collection System			
13					
14	20707 Wastewater	10031235-0001	567000	R & R Collection	\$15,229,350
15	2021 Capital Bond	WW Wwe Rnr	Blds; Structures &	System	
16	Fund /	Collection System /	Improvements		
17	229267 WWE0101	15722 WW Wwe Rnr			
18	Administration	Collection System			
19					
20	20550 WWE CPF	10031247-0001	584030	R & R Treatment	\$25,680,135
21	Repair & Replace /	WW Wwe Rnr	Capital Renewal	Facilities	
22	229267 WWE0101	Treatment Facilities /	Projects		
23	Administration	15724 WW Wwe Rnr			
24		Treatment Facilities			
25					

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	20550 WWE CPF	10038793-0001	584030	Customer Service	\$998,325
4	Repair & Replace /	WWE Customer	Capital Renewal	System	
5	229267 WWE0101	Service System	Projects		
6	Administration	22140 Customer			
7		Service System			
8	20707 Wastewater	10015546-0001	567000	WW Treasure	\$215,248
9	2021 Capital Bond	Treasure Island	Blds; Structures &	Island Capital	
10	Fund /	Capital	Improvements	Improvements	
11	229267 WWE0101	Improvement/15707			
12	Administration	WW Treasure Island			
13		Capital Imp			
14					
15	20720	10026508-0001	573110	Financing Costs	\$101,395,055
16	WWE SSIP 2023	Bond-Commercial	Bond Issuance		
17	Bond Fund/	Paper Expense,	Cost- Unamortized		
18	229267 WWE0101	Budget Control /			
19	Administration	17732 WW Bond-			
20		commercial Paper			
21		Exp			
22					
23	20720	10026508-0001	581130	CSA 0.2%	\$1,166,249
24	WWE SSIP 2023		GF-CON-Internal	Controller's Audit	
25	Bond Fund/		Audits	Fund	

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
3	229267 WWE0101	Bond-Commercial			
4	Administration	Paper Expense,			
5		Budget Control /			
6		17732 WW Bond-			
7		commercial Paper			
8		Exp			
9					
10	20720	10026508-0001	567000	Revenue Bond	\$343,014
11	WWE SSIP 2023	Bond-Commercial	Blds; Structures &	Oversight	
12	Bond Fund/	Paper Expense,	Improvements	Committee 0.05%	
13	229267 WWE0101	Budget Control /			
14	Administration	17732 WW Bond-			
15		commercial Paper			
16		Exp			
17					
18	20707 Wastewater	10026508-0001	573110	Financing Costs	\$2,685,543
19	2021 Capital Bond	Bond-Commercial	Bond Issuance		
20	Fund /	Paper Expense,	Cost- Unamortized		
21	229267 WWE0101	Budget Control /			
22	Administration	17732 WW Bond-			
23		commercial Paper			
24		Exp			
25					

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
1	20707 Wastewater	10026508-0001	581130	CSA 0.2%	\$30,889
2	2021 Capital Bond	Bond-Commercial	GF-CON-Internal	Controller's Audit	
3	Fund /	Paper Expense,	Audits	Fund	
4	229267 WWE0101	Budget Control /			
5	Administration	17732 WW Bond-			
6		commercial Paper			
7		Exp			
8	20707 Wastewater	10026508-0001	567000	Revenue Bond	\$9,085
9	2021 Capital Bond	Bond-Commercial	Blds; Structures &	Oversight	
10	Fund /	Paper Expense,	Improvements	Committee 0.05%	
11	229267 WWE0101	Budget Control /			
12	Administration	17732 WW Bond-			
13		commercial Paper			
14		Exp			
15	20550 WWE CPF	10026508-0001	581130	CSA 0.2%	\$165,256
16	Repair & Replace /	Bond-Commercial	GF-CON-Internal	Controller's Audit	
17	229267 WWE0101	Paper Expense,	Audits	Fund	
18	Administration	Budget Control /			
19		17732 WW Bond-			
20		commercial Paper			
21		Exp			
22					
23					
24					
25					

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	20530 WWE CPF	10026508-0001	581130	CSA 0.2%	\$12,354
4	Capacity Fee Prog /	Bond-Commercial	GF-CON-Internal	Controller's Audit	
5	229267 WWE0101	Paper Expense,	Audits	Fund	
6	Administration	Budget Control /			
7		17732 WW Bond-			
8		commercial Paper			
9		Exp			
10	Total USES Appropriation				\$793,003,901

11

12 Section 3. Of the above appropriated amount, \$1,374,748, representing 0.2% of the

13 expenditure budget net of bond financing and audit costs, shall be allocated to support the

14 Controller's Audit Fund, pursuant to Charter Appendix F1.113; and \$352,099, representing

15 0.05% of gross bond proceeds, shall be allocated to support the Public Utilities Commission

16 Revenue Bond Oversight Committee, pursuant to Administrative Code Section 5A.31. These

17 appropriations may be decreased by the Controller based on changes to expenditure

18 appropriations or actual gross bond proceeds to conform to the applicable Charter and

19 Administrative Code formulas.

20 Section 4. \$704,198,901 of the total appropriation is hereby placed on Controller's

21 Appropriation Reserve, as set forth below. Release of appropriation reserves by the Controller

22 is subject to the Controller's certification of funds availability, including proceeds of

23 indebtedness, and for construction related expenditures (excluding program management,

24 planning and design) for these projects, as applicable, is also subject to the prior occurrence of

25 the SFPUC's and the Board of Supervisors' discretionary adoption of California Environmental

1 Quality Act (CEQA) Findings for projects, following review and consideration of completed
 2 project related environmental analysis, where required.

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 5
 6
 7 **Appropriation on Reserve**

Fund /	Project & Activity /	Account	Description	Amount
Department ID	Authority			
20720	10029731-0001	567000	SSIP Program-	\$14,000,000
WWE SSIP 2023	Planning/Budget	Blds; Structures &	Wide Management	
Bond Fund/	/15733	Improvements		
229267 WWE0101	WW SSIP Program-			
Administration	Wide Management			
20720	10015795-0001	567000	Biosolids Digester	\$375,532,448
WWE SSIP 2023	Biosolids Digester	Blds; Structures &	Project	
Bond Fund/	Project/15728	Improvements		
229267 WWE0101	WW SSIP Biosolids			
Administration	Digester Project			

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
1	20720	10026823-0001	567000	Treatment Plants -	\$31,555,408
2	WWE SSIP 2023	Treatment Plant	Blds; Structures &	Southeast	
3	Bond Fund/	Improvements-S /	Improvements		
4	229267 WWE0101	15735 WW			
5	Administration	Treatment Plant			
6		Improvement			
7					
8	20720	10015813-0001	567000	Treatment Plants --	\$11,314,730
9	WWE SSIP 2023	Treatment Plant	Blds; Structures &	North Point	
10	Bond Fund/	Improvement /	Improvements		
11	229267 WWE0101	15736 WW			
12	Administration	Treatment Plant			
13		Improvement			
14					
15	20720	10015813-0001	567000	Treatment Plants --	\$29,201,164
16	WWE SSIP 2023	Treatment Plant	Blds; Structures &	Oceanside	
17	Bond Fund/	Improvement /	Improvements		
18	229267 WWE0101	15736 WW			
19	Administration	Treatment Plant			
20		Improvement			
21					
22					
23					
24					
25					

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
1	20720	10015791-0001	567000	Collection System	\$57,948,296
2	WWE SSIP 2023	Collection System	Blds; Structures &	Improvements	
3	Bond Fund/	Improvements /	Improvements		
4	229267 WWE0101	15726 WW Collection			
5	Administration	System Improvement			
6					
7	20720	10026827-0001	567000	Pump Station/	\$307,000
8	WWE SSIP 2023	Collection	Blds; Structures &	Force Mains	
9	Bond Fund/	System/Pump Station	Improvements		
10	229267 WWE0101	/15726 WW			
11	Administration	Collection System			
12		Improvement			
13					
14	20720	10002780-0001	567000	Green	\$15,209,899
15	WWE SSIP 2023	Drainage Basin/Early	Blds; Structures &	Infrastructure	
16	Bond Fund/	Implement /15729	Improvements	Projects	
17	229267 WWE0101	WW Stormwater			
18	Administration	Management			
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23					
24					
25					

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
1	20720	10015801 -0001	567000	Flood Resilience-	\$48,055,523
2	WWE SSIP 2023	Flood	Blds; Structures &	Hydraulic	
3	Bond Fund/	Resilience/Hydraulic	Improvements		
4	229267 WWE0101	Imp/15730 WW Flood			
5	Administration	Resilience-hydraulic			
6					
7	20707 Wastewater	10031235-0001	567000	R & R Collection	\$15,229,350
8	2021 Capital Bond	R&R Collection	Blds; Structures &	System	
9	Fund /	System /	Improvements		
10	229267 WWE0101	15722 WWE R & R			
11	Administration	Collection System			
12					
13	20707 Wastewater	10015546-0001	567000	WW Treasure	\$215,248
14	2021 Capital Bond	Treasure Island	Blds; Structures &	Island Capital	
15	Fund /	Capital Improvement	Improvements	Improvements	
16	229267 WWE0101	/15707			
17	Administration	WW Treasure Island			
18		Capital Imp			
19					
20					
21					
22					
23					
24					
25					

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
1	20720	10026508-0001	573110	Financing Costs	\$101,395,055
2	WWE SSIP 2023	Bond-Commercial	Bond Issuance		
3	Bond Fund/	Paper Expense ,	Cost- Unamortized		
4	229267 WWE0101	Budget Control /			
5	Administration	17732 WW Bond-			
6		commercial Paper			
7		Exp			
8					
9	20720	10026508-0001	581130	CSA 0.2%	\$1,166,249
10	WWE SSIP 2023	Bond-Commercial	GF-CON-Internal	Controller's Audit	
11	Bond Fund/	Paper Expense ,	Audits	Fund	
12	229267 WWE0101	Budget Control /			
13	Administration	17732 WW Bond-			
14		commercial Paper			
15		Exp			
16					
17	20720	10026508-0001	567000	Revenue Bond	\$343,014
18	WWE SSIP 2023	Bond-Commercial	Bids; Structures &	Oversight	
19	Bond Fund/	Paper Expense ,	Improvements	Committee 0.05%	
20	229267 WWE0101	Budget Control /			
21	Administration	17732 WW Bond-			
22		commercial Paper			
23		Exp			
24					
25					

	Fund /	Project & Activity /	Account	Description	Amount
	Department ID	Authority			
1					
2					
3					
4	20707 Wastewater	10026508-0001	573110	Financing Costs	\$2,685,543
5	2021 Capital Bond	Bond-Commercial	Bond Issuance		
6	Fund /	Paper Expense ,	Cost- Unamortized		
7	229267 WWE0101	Budget Control /			
8	Administration	17732 WW Bond-			
9		commercial Paper			
10		Exp			
11	20707 Wastewater	10026508-0001	581130	CSA 0.2%	\$30,889
12	2021 Capital Bond	Bond-Commercial	GF-CON-Internal	Controller's Audit	
13	Fund /	Paper Expense ,	Audits	Fund	
14	229267 WWE0101	Budget Control /			
15	Administration	17732 WW Bond-			
16		commercial Paper			
17		Exp			
18					
19	20707 Wastewater	10026508-0001	567000	Revenue Bond	\$9,085
20	2021 Capital Bond	Bond-Commercial	Blds; Structures &	Oversight	
21	Fund /	Paper Expense ,	improvements	Committee 0.05%	
22	229267 WWE0101	Budget Control /			
23	Administration	17732 WW Bond-			
24		commercial Paper			
25		Exp			

1	Fund /	Project & Activity /	Account	Description	Amount
2	Department ID	Authority			
3	Total Appropriation on Reserve				<u>\$704,198,901</u>

5 Section 5. Associated bond financing costs up to \$104,080,598 are also hereby
 6 appropriated, including but not limited to, issuance costs, debt service reserve, capitalized
 7 interest, rating agency, and disclosure costs, all on Controller's reserve pending receipt of bond
 8 proceeds. To the extent that net available bond proceeds after financing costs are more than
 9 budgeted, the SFPUC may use such surplus bond proceeds as a substitute for other sources
 10 budgeted in this ordinance.

11 Section 6. The Controller is authorized to record transfers between funds and adjust the
 12 accounting treatment of sources and uses appropriated in this ordinance as necessary to
 13 conform to Generally Accepted Accounting Principles and other laws.

15 Section 7. This Board, by Ordinance No. 89-15, authorized the SFPUC to enter into one
 16 or more State of California State Water Resources Control Board Installment Sale Agreements
 17 under the Clean Water State Revolving Fund (State Loan Funds); by Ordinance No. 144-18,
 18 authorized the SFPUC to enter into one or more federal Water Infrastructure Financing
 19 Innovation Act loans (Federal Loan Funds); and amended and supplemented Ordinance No.
 20 107-14 to authorize, in addition to the issuance of Wastewater revenue bonds, the execution
 21 and delivery of State Loan Funds to finance projects, provided that any such indebtedness shall
 22 not exceed in an aggregate principal amount \$819,035,941. The Board is concurrently
 23 considering with this Ordinance a SFPUC Wastewater Revenue Bond issuance, including
 24 authorization to obtain one or more State Revolving Fund (SRF) and Water Infrastructure
 25 Finance and Innovation Act (WIFIA) loans, not to exceed \$987,414,494. The Sources of Funds

1 herein appropriated in Section 1 of this Ordinance, or previously appropriated by Ordinance
2 105-14, may include State Loan Funds, State Grant Funds, Federal Grant Funds, or Federal
3 Loan Funds when available, subject to compliance with the terms of the authorizing legislation
4 for such Funds. The Controller is authorized to record substitution of the source of funds
5 appropriated with State Loan Funds, State Grant Funds, Federal Grant Funds, or Federal Loan
6 Funds as necessary to conform to Generally Accepted Accounting Principles and other laws.
7
8
9
10

11 APPROVED AS TO FORM:
12 DENNIS J. HERRERA, City Attorney

FUNDS AVAILABLE
BEN ROSENFELD, Controller

13 By: /s/
14 JON GIVNER
15 Deputy City Attorney

By: /s/
BEN ROSENFELD
Controller



City and County of San Francisco
Tails
Ordinance

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 220501

Date Passed: June 14, 2022

Ordinance appropriating a total of \$793,003,901 of proceeds from revenue bonds, State of California Water Resources Control Board's revolving loan funds (State Loan Funds) or grant funds (State Grant Funds), wastewater revenue and capacity fees for the San Francisco Public Utilities Commission (SFPUC) Wastewater Enterprise's Capital Improvement Program for Fiscal Year (FY) 2022-2023, and placing \$704,198,901 in Revenue Bonds or State Loan or Grant Funds by project on Controller's Reserve subject to the Controller's certification of funds availability, including proceeds of indebtedness, and for construction related expenditures (excluding program management, planning and design) for these projects. as applicable, is also subject to the prior occurrence of the SFPUC's and the Board of Supervisors' discretionary adoption of California Environmental Quality Act findings for projects, following review and consideration of completed project related environmental analysis, where required.

May 25, 2022 Budget and Appropriations Committee - RECOMMENDED

June 07, 2022 Board of Supervisors - PASSED ON FIRST READING

Ayes: 11 - Chan, Dorsey, Mandelman, Mar, Melgar, Peskin, Preston, Ronen, Safai, Stefani and Walton


June 14, 2022 Board of Supervisors - FINALLY PASSED

Ayes: 10 - Chan, Dorsey, Mandelman, Mar, Melgar, Peskin, Preston, Ronen, Safai and Walton

Excused: 1 - Stefani

File No. 220501

I hereby certify that the foregoing Ordinance was FINALLY PASSED on 6/14/2022 by the Board of Supervisors of the City and County of San Francisco.



Angela Calvillo
Clerk of the Board



London N. Breed
Mayor

6/24/22

Date Approved



San Francisco Water Power Sewer

Services of the San Francisco Public Utilities Commission

SFPUC BUSINESS SERVICES

525 Golden Gate Avenue, 4th Floor

San Francisco, CA 94102

For more information visit: sfwater.org

Date of Publication: December 2020



SAN FRANCISCO PUBLIC UTILITIES COMMISSION
AN ENTERPRISE DEPARTMENT OF
THE CITY AND COUNTY OF SAN FRANCISCO, CALIFORNIA