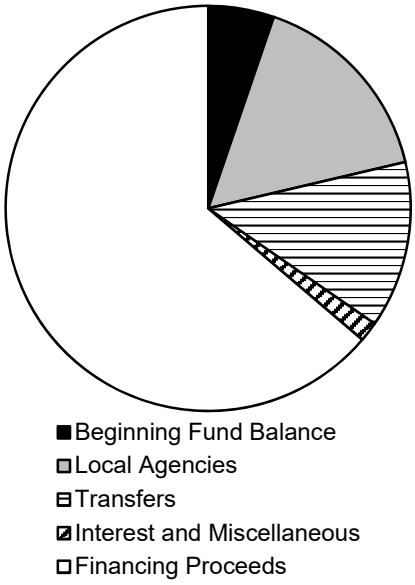
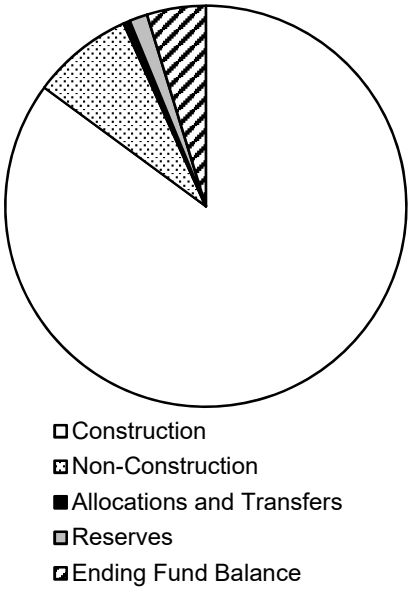
# WATER POLLUTION CONTROL
# 2022-2026 Capital Improvement Program

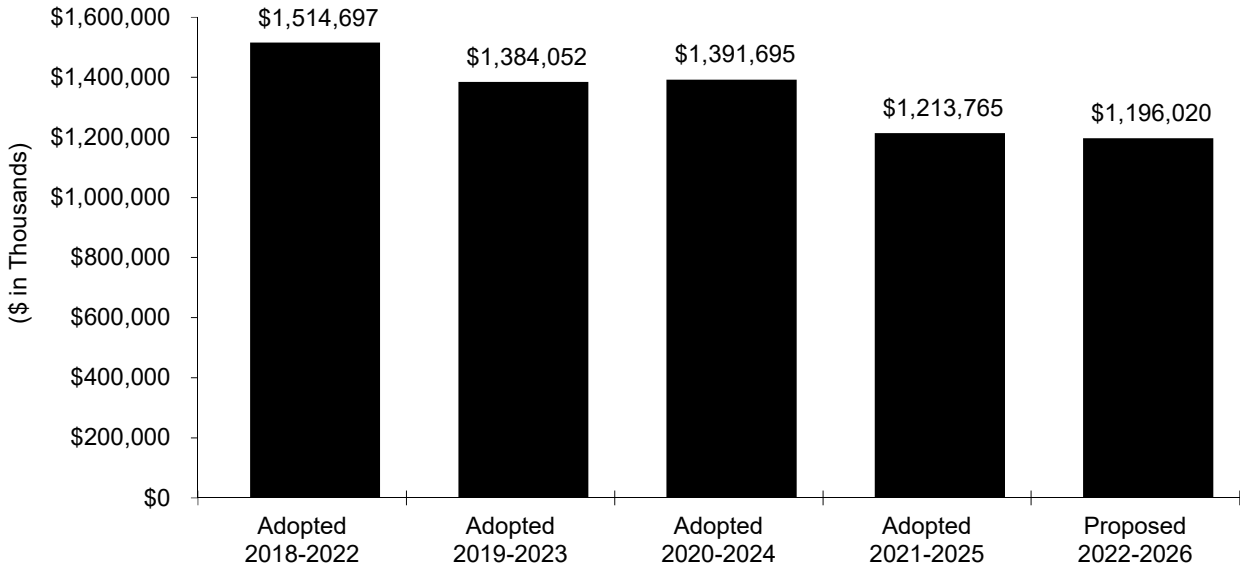
**2021-2022 Proposed Source of Funds**




**2021-2022 Proposed Use of Funds**




**CIP History**

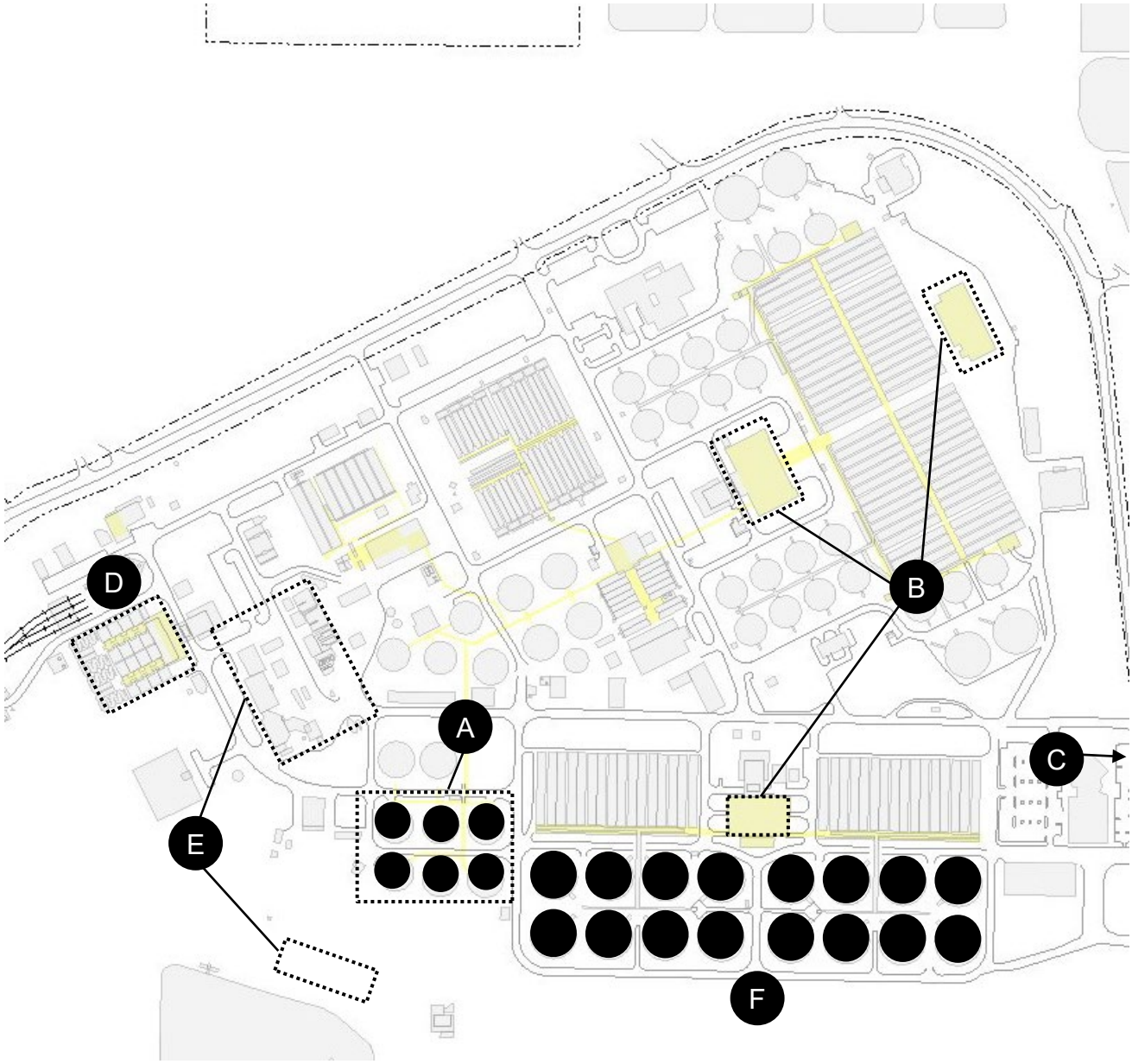


# Water Pollution Control

## 2022-2026 Proposed Capital Improvement Program*

### Major Projects

**A)** Additional Digester Upgrades
**B)** Aeration Tanks and Blower Rehabilitation
**C)** Digested Sludge Dewatering Facility
**D)** Filter Rehabilitation
**E)** Headworks Improvements and New Headworks
**F)** Nitrification Clarifier Rehabilitation




* Includes only the first set of projects to be in construction at the Plant. Please see the Source & Use for a full listing.

# Water Pollution Control

# 2022-2026 Proposed Capital Improvement Program

# Overview

## INTRODUCTION

| RWF INFRASTRUCTURE | |
|---|---|
| ACRES OF LAND | 2,684 |
| AVERAGE DRY WEATHER INFLUENT CAPACITY (MILLIONS OF GALLONS PER DAY) | 167 |
| AVERAGE DRY WEATHER INFLUENT FLOW (MILLIONS OF GALLONS PER DAY) | 109 |
| DRY METRIC TONS OF BIOSOLIDS HAULED EACH YEAR | 39,500 |
| AVERAGE MEGAWATTS PRODUCED | 5.6 |

The San José-Santa Clara Regional Wastewater Facility (RWF) is a regional wastewater treatment facility serving eight South Bay cities and four special districts including: San José, Santa Clara, Milpitas, Cupertino Sanitary District (Cupertino), West Valley Sanitation District (Campbell, Los Gatos, Monte Sereno, and Saratoga), County Sanitation Districts 2-3 (unincorporated), and Burbank Sanitary District (unincorporated). The RWF is jointly owned by the cities of San José and Santa Clara and is administered and operated by the City of San José's Environmental Services Department (ESD). ESD is also responsible for planning, designing, and constructing capital improvements at the RWF, including water reuse facilities. On March 26, 2013, the City Council approved to change the name of the San José-Santa Clara Water Pollution Control Plant to the RWF for use in public communications and outreach.

The 2022-2026 Proposed Capital Improvement Program (CIP) provides funding of $1.2 billion, of which $250.9 million is allocated in 2021-2022. The five-year CIP is developed by City staff, reviewed by the Treatment Plant Advisory Committee (TPAC), and approved by the San José City Council. The budgeted costs are allocated to each agency based on its contracted-for capacity in the RWF. Each agency is responsible for its allocated share of RWF costs, as well as the operation, maintenance, and capital costs of its own sewage collection system; debt service on bonds issued by the agency for sewer purposes; and any other sewer service-related costs. Each agency is also responsible for establishing and collecting its respective sewer service and use charges, connection fees, or other charges for sewer service.

This program is part of the Environmental and Utility Services City Service Area (CSA) and supports the following outcomes: *Reliable Utility Infrastructure* and *Healthy Streams, Rivers, Marsh, and Bay.*

## PROGRAM PRIORITIES AND OBJECTIVES

The 2022-2026 Proposed CIP is consistent with the goals and policies outlined in the City's Envision San José 2040 General Plan. These include maintaining adequate operational capacity for wastewater treatment to accommodate the City's economic and population growth; adopting and implementing new technologies for wastewater to achieve greater safety, energy efficiency, and environmental benefit; and maintaining and operating the RWF in compliance with all applicable local, state, and federal regulatory requirements.

# Water Pollution Control

# 2022-2026 Proposed Capital Improvement Program

# Overview

## PROGRAM PRIORITIES AND OBJECTIVES

The development of the Proposed CIP is guided by the Plant Master Plan (PMP), a 30-year planning-level document focused on long-term rehabilitation and modernization of the RWF. On April 19, 2011, the City Council approved a preferred alternative for the Draft PMP and directed staff to proceed with a program-level environmental review of the preferred alternative. In November 2013, the City Council approved the PMP and certified the final Environmental Impact Report. In December 2013, Santa Clara's City Council took similar actions.

***San José-Santa Clara Regional Wastewater Facility***

The PMP recommends more than 114 capital improvement projects to be implemented over a 30-year planning period at an estimated investment level of approximately $2 billion. The PMP assumed an implementation schedule of 2010 through 2040.

On September 24, 2013, the City Council approved a multi-year master services agreement with MWH Americas, Inc. for program management consultant services to assist with managing and implementing the RWF CIP[1]. By February 2014, the consultant program management team, along with City staff, completed a project validation process that included a review and prioritization of PMP projects, along with gap projects identified through discussions with Operations and Maintenance staff. The projects included with this Proposed CIP are based on the outcome of that project validation and the completion of various programmatic studies. On October 17, 2017, the City Council approved an amendment to extend the consultant program management services through 2023 to align with the implementation of the ten-year capital program.

Program priorities for the near term include: managing long-term financing (for San José only); continuing to focus on program and project delivery; and actively managing project risks and variables to inform timing and amount of major encumbrances.

***Program Funding:*** In early 2014, staff began working with representatives from the City of Santa Clara and the tributary agencies to develop a ten-year funding strategy for the CIP. On May 14, 2015, TPAC recommended approval of, and on June 2, 2015, the City Council approved the Ten-Year Funding Strategy. An update on the Ten-Year Funding Strategy was recommended for approval by TPAC on December 10, 2015 and approved by the City Council on January 12, 2016.

[1] Effective January 1, 2017, MWH Americas, Inc. was acquired and merged with Stantec Consulting Services, Inc.

# Overview

## PROGRAM PRIORITIES AND OBJECTIVES

In August 2017, staff provided an update on Clean Water State Revolving Fund (SRF) funding to the City Council, which included news that the State Water Resources Control Board (SWRCB) would not be funding the Digester and Cogeneration projects. Staff continues to monitor the issue and evaluate further SRF opportunities as appropriate. However, based on the City's experience with this program, unless significant changes are made to the funding level, program priorities, program resources, and loan agreement terms, SRF loans do not appear to be a potential source of funding for the RWF CIP.

***Upgraded Digester Facilities***

In October 2017, the City Council approved the establishment of a $300 million interim financing facility (Wastewater Revenue Notes) to finance San José's portion of the capital costs. In September 2020, the City Council approved a three-year extension to this financing facility. As the CIP progresses, the City will periodically pay off the interim financing facility with long-term bonds (Bond Proceeds). This strategy provides funding for the CIP at the lowest possible cost with the least amount of risk. The 2022-2026 Proposed CIP assumes the issuance of long-term bonds in 2022-2023 and the establishment of a second interim financing facility in 2023-2024. In addition, the City continues to build the operating reserves needed for issuing long-term bonds.

***Program/Project Delivery and Implementation:*** Successful delivery of this large, multi-disciplinary CIP requires an integrated team of City staff, outside consultants, and contractors. The program is being delivered using a mix of City staff from the Environmental Services Department, the Public Works Department, the Planning, Building and Code Enforcement Department, the Finance Department, and the City Attorney's Office, as well as program management consultant staff and various other consultant firms.

# Water Pollution Control

# 2022-2026 Proposed Capital Improvement Program

# Overview

## PROGRAM PRIORITIES AND OBJECTIVES

With roughly two dozen large projects moving through the feasibility/development, design, and construction phases, the program continues to draw from the professional consultant and/or contractor community for program management, project management, subject-matter technical expertise, engineering design, and construction management services. To address the significant large-scale construction activity, City staff has implemented a construction management strategy that has been incorporated into the 2022-2026 Proposed CIP. This includes maintaining a construction management budget to provide the necessary support from Public Works Department and/or third-party construction management and controls consultants required for projects of this magnitude and complexity.

***Program/Project Delivery Variables:*** The program team continues to develop and refine project schedules and budgets and implement regular reporting and centralized document management systems for consistent and efficient program and project delivery. The program team continues to work on developing standardized project delivery tools, design standards and specifications, control system and integration strategies, startup, commissioning, and training.

***New Cogeneration Engine Building***

# Overview

## PROGRAM PRIORITIES AND OBJECTIVES

On the project delivery front, it is important to recognize that several projects in the Proposed CIP are in the feasibility/development or design phases. Staff will continue to develop and refine project scope, schedules, and budgets as the projects progress through scoping, preliminary engineering, detailed design, and bid award. To the extent possible, staff will continue to monitor and implement mitigation measures to minimize impacts to project delivery schedule and cost caused by various factors such as changes in project delivery staffing resources, long lead time items, external permit reviews and approvals, and construction bidding climate.

CIP projects, particularly those in construction, continue to be impacted by the novel coronavirus (COVID-19). At the RWF, CIP staff have been working with contractors to continue construction safely. While many projects have experienced specific and quantifiable effects due to the pandemic, the full impact of COVID-19 on project budgets and schedules is not fully known at this time. Staff are continuing to work diligently with internal stakeholders and external contractors on a project-by-project basis to understand the impacts of the pandemic, and to mitigate its effects in order to ensure efficient project delivery at the RWF.

## SOURCES OF FUNDING

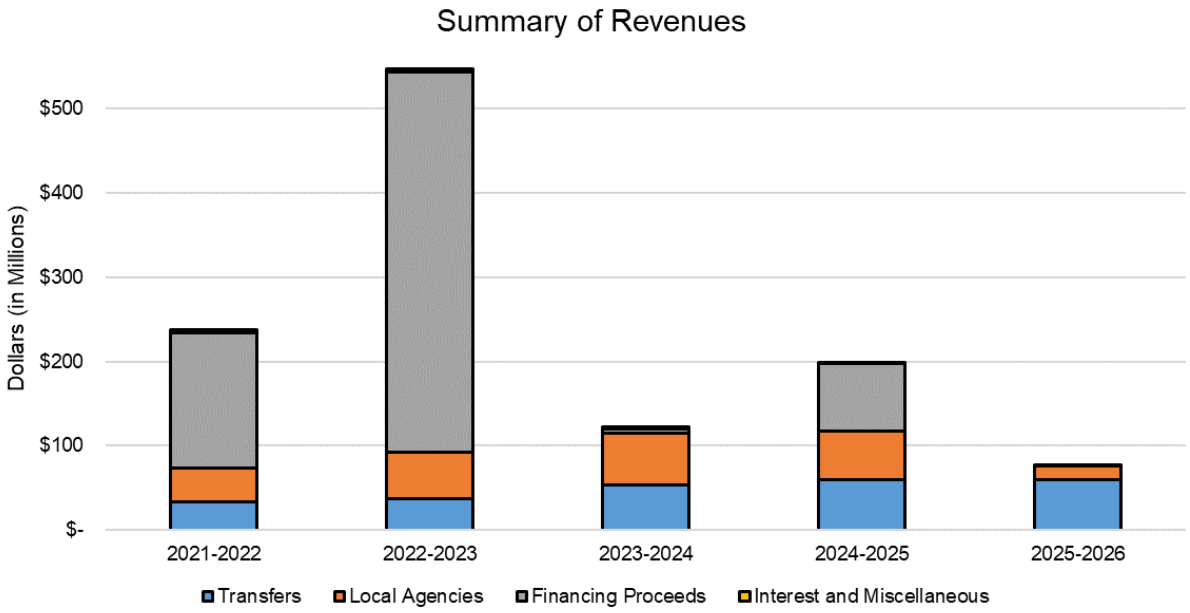
Revenues for the 2022-2026 Proposed CIP are derived from several sources: transfers from the Sewer Service and Use Charge (SSUC) Fund, contributions from the City of Santa Clara and other tributary agencies, interest earnings, Calpine Metcalf Energy Center Facilities repayments, and debt-financing proceeds. Occasional transfers from the Sewage Treatment Plant Connection Fee Fund are programmed as needed per the receipt of connection fee revenue in that fund.

The SSUC Fund derives its revenues from fees imposed on San José users of the residential, commercial, and industrial sanitary sewer system. Transfers from this fund to the RWF CIP over the five years total $243.5 million, which represents a $15.9 million (7%) increase as compared to the 2021-2025 Adopted CIP.

Contributions from the City of Santa Clara and other agencies are determined according to agreements with the participating agencies, based on financing plans, anticipated RWF expenditures, and the amount and characteristics of flows from each agency's connections to the RWF. These contributions reimburse the City for actual project expenditures. In this Proposed CIP, contributions from the City of Santa Clara and other agencies total $230.8 million, which represents a $10.9 million (4.5%) decrease compared to the 2021-2025 Adopted CIP.

## SOURCES OF FUNDING

To accommodate San José's portion of the project costs for the RWF, Financing Proceeds (Wastewater Revenue Notes and Bond Proceeds) are assumed to cover costs of the RWF improvements in the Proposed CIP. The establishment of an interim financing program, in the form of Wastewater Revenue Notes, was approved in October 2017 and renewed in September 2020 to provide up to $300 million in interim financing capacity. The Notes provide periodic, short-term, flexible funding to meet the cash flow needs of the RWF improvement project. Generally, the notes are repaid within a three-year period and offer lower interest costs than fixed rate bonds. In 2022-2023, bonds will be issued in the amount of $450.8 million to both repay the Wastewater Revenue Notes issued since 2017-2018 and to cover other CIP project and financing costs within that fiscal year. Associated debt service for the Wastewater Revenue Notes and debt service for the bonds is estimated to be $3.4 million in 2021-2022, $306.7 million in 2022-2023 ($300.0 million for the repayment of Wastewater Revenue Notes and an additional $6.7 million for debt service), $23.9 million in 2023-2024, $24.4 million in 2024-2025, and $25.0 million in 2025-2026. The estimated size of the debt financings and the related debt service are scheduled to cover external third-party capital costs programmed in the 2022-2026 Proposed CIP while avoiding large rate increases that would be required to fund the PMP in a "pay-as-you-go" scenario. City of San José staff costs will be cash-funded and not included in either the Wastewater Revenue Notes program or long-term debt financing. Additional debt financing, in the form of notes and bonds, will likely be needed to fund project costs beyond the Proposed CIP period.



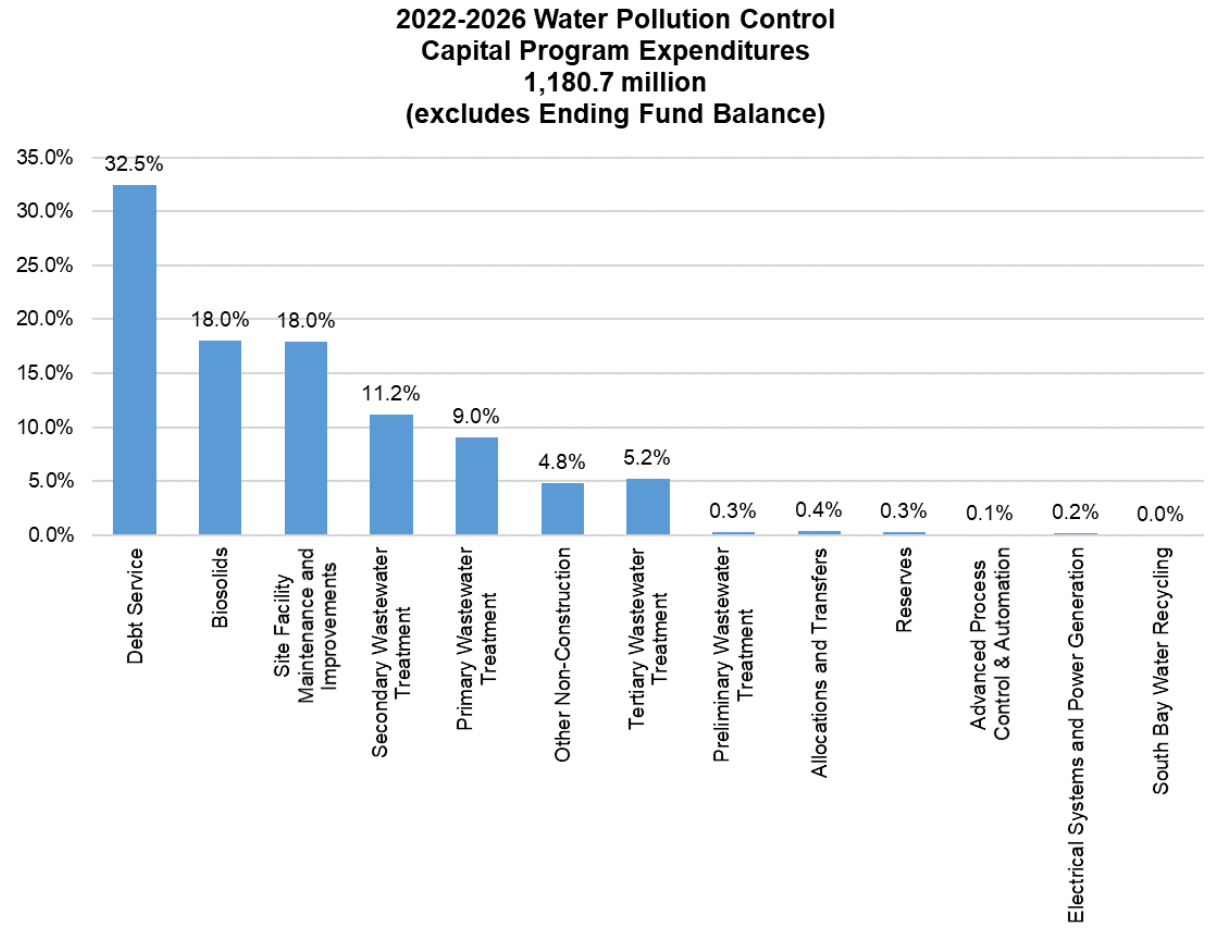
# Water Pollution Control

# 2022-2026 Proposed Capital Improvement Program

# Overview

## PROGRAM HIGHLIGHTS

The Water Pollution Control Capital Program's expenditures are organized to show the use of funds in several categories. The following highlights the major projects in the program. For further information on the program's individual projects, please refer to the Detail Pages.



# Water Pollution Control

# 2022-2026 Proposed Capital Improvement Program

# Overview

## MAJOR CHANGES FROM THE 2021-2025 ADOPTED CIP

The overall size of the Water Pollution Control CIP has decreased by $18 million from $1,214 million in the 2021-2025 Adopted CIP to $1,196 million in the 2022-2026 Proposed CIP. The following table outlines the most significant changes to project budgets, including new/augmented allocations and reduced/eliminated allocations.

| Project Name | Incr/(Decr) |
|---|---|
| Yard Piping and Road Improvements | ($11.8 million) |
| Nitrification Clarifier Rehabilitation | ($10.6 million) |
| Owner Controlled Insurance Program | ($2.3 million) |
| Storm Drain System Improvements | ($1.7 million) |
| Outfall Channel and Instrumentation Improvements | $1.5 million |
| Digested Sludge Dewatering Facility | $13.0 million |
| Facility Wide Water Systems Improvements | $38.6 million |

## OPERATING BUDGET IMPACT

Several projects in this Proposed CIP are expected to introduce new operating costs to the Operating Budget. These include: Digester and Thickener Facilities Upgrade, Digested Sludge Dewatering Facility, and New Headworks. The operation and maintenance impacts are due to chemical, labor, maintenance consumables (e.g. parts, oil), electrical, and hauling & tipping costs. Detail on the individual projects with operating budget impacts beginning in 2022-2023 through 2025-2026 is provided in Attachment A at the conclusion of this overview and in the project detail pages.

Net operating cost impacts will continue to be evaluated and updated based on final design and operation configurations and may result in different costs when the actual budget for the year in question is developed.

# Water Pollution Control

2022-2026 Proposed Capital Improvement Program

## Attachment A - Operating Budget Impact

| | 2022-2023 | 2023-2024 | 2024-2025 | 2025-2026 |
|---|---|---|---|---|
| **Water Pollution Capital Program** | | | | |
| New Headworks | $11,000 | $26,000 | $27,000 | $28,000 |
| Digested Sludge Dewatering Facility | | $8,167,000 | $12,599,000 | $12,958,000 |
| Digester and Thickener Facilities Upgrade | $2,202,000 | $2,285,000 | $2,370,000 | $2,460,000 |
| **Total Water Pollution Capital Program** | **$2,213,000** | **$10,478,000** | **$14,996,000** | **$15,446,000** |

## 2022-2026 Proposed Capital Improvement Program

# Source of Funds (Combined)

| | Estimated 2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 | 2024-2025 | 2025-2026 | 5-Year Total |
|---|---|---|---|---|---|---|---|
| **San José-Santa Clara Treatment Plant Capital Fund (512)** | | | | | | | |
| **Beginning Balance** | -28,442,196 | 9,246,807 | 11,654,807 | 89,184,807 | 9,245,807 | 9,843,807 | 9,246,807* |
| **Reserve for Encumbrance** | 272,305,447 | | | | | | |
| **Transfers and Reimbursements** | | | | | | | |
| Transfer for 2009 Debt Service from the Sewer Service and Use Charge Fund (541) | 5,371,000 | | | | | | |
| Transfer for Plant CIP Debt Service from Sewer Service and Use Charge Fund (541) | 2,926,000 | 3,422,000 | 6,763,000 | 23,890,000 | 24,406,000 | 24,988,000 | 83,469,000 |
| Transfer for Capital Projects from Sewer Service and Use Charge Fund (541) | 30,000,000 | 30,000,000 | 30,000,000 | 30,000,000 | 35,000,000 | 35,000,000 | 160,000,000 |
| **TOTAL Transfers and Reimbursements** | **38,297,000** | **33,422,000** | **36,763,000** | **53,890,000** | **59,406,000** | **59,988,000** | **243,469,000** |
| **Revenue from Use of Money and Property** | | | | | | | |
| Interest Income | 4,438,000 | 3,917,000 | 2,764,000 | 1,638,000 | 1,175,000 | 953,000 | 10,447,000 |
| **TOTAL Revenue from Use of Money and Property** | **4,438,000** | **3,917,000** | **2,764,000** | **1,638,000** | **1,175,000** | **953,000** | **10,447,000** |
| **Revenue from Local Agencies** | | | | | | | |
| 2009 Bond Debt Repayment | 155,000 | | | | | | |
| WPCP Projects and Equipment Replacement | 46,554,000 | 39,908,000 | 55,801,000 | 61,581,000 | 57,587,000 | 15,924,000 | 230,801,000 |
| **TOTAL Revenue from Local Agencies** | **46,709,000** | **39,908,000** | **55,801,000** | **61,581,000** | **57,587,000** | **15,924,000** | **230,801,000** |
| **Other Revenue** | | | | | | | |
| Calpine Metcalf Energy Center Facilities Repayment | 389,000 | 389,000 | 389,000 | 389,000 | 389,000 | 389,000 | 1,945,000 |

## 2022-2026 Proposed Capital Improvement Program

# Source of Funds (Combined)

| | Estimated 2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 | 2024-2025 | 2025-2026 | 5-Year Total |
|---|---|---|---|---|---|---|---|
| **TOTAL Other Revenue** | **389,000** | **389,000** | **389,000** | **389,000** | **389,000** | **389,000** | **1,945,000** |
| **Financing Proceeds** | | | | | | | |
| Wastewater Revenue Notes | 133,000,000 | 160,000,000 | | 5,000,000 | 80,000,000 | | 245,000,000 |
| Bond Proceeds | | | 450,815,000 | | | | 450,815,000 |
| **TOTAL Financing Proceeds** | **133,000,000** | **160,000,000** | **450,815,000** | **5,000,000** | **80,000,000** | | **695,815,000** |
| **Total San José-Santa Clara Treatment Plant Capital Fund (512)** | **466,696,251** | **246,882,807** | **558,186,807** | **211,682,807** | **207,802,807** | **87,097,807** | **1,191,723,807*** |
| **South Bay Water Recycling Capital Fund (571)** | | | | | | | |
| **Beginning Balance** | 3,914,443 | 3,956,443 | 233,443 | 276,443 | 319,443 | 362,443 | 3,956,443* |
| **Revenue from Use of Money and Property** | | | | | | | |
| Interest Income | 67,000 | 68,000 | 68,000 | 68,000 | 68,000 | 68,000 | 340,000 |
| **TOTAL Revenue from Use of Money and Property** | **67,000** | **68,000** | **68,000** | **68,000** | **68,000** | **68,000** | **340,000** |
| **Total South Bay Water Recycling Capital Fund (571)** | **3,981,443** | **4,024,443** | **301,443** | **344,443** | **387,443** | **430,443** | **4,296,443*** |
| **TOTAL SOURCES** | **470,677,694** | **250,907,250** | **558,488,250** | **212,027,250** | **208,190,250** | **87,528,250** | **1,196,020,250*** |

* The 2022-2023 through 2025-2026 Beginning Balances are excluded from the Five-Year Total Source of Funds to avoid multiple counting of the same funds.

# Water Pollution Control

## 2022-2026 Proposed Capital Improvement Program

## Use of Funds (Combined)

| | Estimated 2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 | 2024-2025 | 2025-2026 | 5-Year Total |
|---|---|---|---|---|---|---|---|
| **Water Pollution Control** | | | | | | | |
| Headworks Improvements | 15,475,185 | 186,000 | 196,000 | | | | 382,000 |
| New Headworks | 128,727,775 | 1,399,000 | 1,524,000 | | | | 2,923,000 |
| **Preliminary Wastewater Treatment** | **144,202,959** | **1,585,000** | **1,720,000** | | | | **3,305,000** |
| East Primary Rehabilitation, Seismic Retrofit, and Odor Control | 1,000,000 | | 10,885,000 | 94,530,000 | 686,000 | 684,000 | 106,785,000 |
| **Primary Wastewater Treatment** | **1,000,000** | | **10,885,000** | **94,530,000** | **686,000** | **684,000** | **106,785,000** |
| Aeration Basin Future Modifications | | | | | 846,000 | 3,834,000 | 4,680,000 |
| Aeration Tanks and Blower Rehabilitation | 25,847,152 | 3,838,000 | 8,353,000 | 707,000 | 58,419,000 | 1,065,000 | 72,382,000 |
| Nitrification Clarifier Rehabilitation | 50,804,040 | 2,738,000 | 22,935,000 | 1,183,000 | 1,217,000 | 790,000 | 28,863,000 |
| Secondary Clarifier Rehabilitation | | | | 565,000 | 2,833,000 | 22,379,000 | 25,777,000 |
| **Secondary Wastewater Treatment** | **76,651,191** | **6,576,000** | **31,288,000** | **2,455,000** | **63,315,000** | **28,068,000** | **131,702,000** |
| Filter Rehabilitation | 49,105,780 | 1,506,000 | 1,549,000 | 1,806,000 | | | 4,861,000 |
| Final Effluent Pump Station & Stormwater Channel Improvements | 2,336,710 | | 4,713,000 | 997,000 | 35,648,000 | 1,645,000 | 43,003,000 |
| New Disinfection Facilities | | | | | 952,000 | 6,179,000 | 7,131,000 |
| Outfall Channel and Instrumentation Improvements | 1,983,140 | 6,114,000 | 592,000 | | | | 6,706,000 |
| **Tertiary Wastewater Treatment** | **53,425,630** | **7,620,000** | **6,854,000** | **2,803,000** | **36,600,000** | **7,824,000** | **61,701,000** |
| Additional Digester Upgrades | | 1,191,000 | 8,031,000 | 1,298,000 | 51,576,000 | 1,655,000 | 63,751,000 |
| Digested Sludge Dewatering Facility | 23,429,842 | 131,146,000 | 2,188,000 | 1,356,000 | | | 134,690,000 |
| Digester and Thickener Facilities Upgrade | 32,866,257 | 14,033,000 | | | | | 14,033,000 |
| **Biosolids** | **56,296,099** | **146,370,000** | **10,219,000** | **2,654,000** | **51,576,000** | **1,655,000** | **212,474,000** |
| Energy Generation Improvements | 15,754,829 | | | | | | |

# Water Pollution Control

## 2022-2026 Proposed Capital Improvement Program

## Use of Funds (Combined)

| | Estimated 2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 | 2024-2025 | 2025-2026 | 5-Year Total |
|---|---|---|---|---|---|---|---|
| Plant Electrical Reliability | 7,628,850 | 1,413,000 | 1,085,000 | | | | 2,498,000 |
| **Electrical Systems and Power Generation** | **23,383,679** | **1,413,000** | **1,085,000** | | | | **2,498,000** |
| Advanced Facility Control and Meter Replacement | 18,304,378 | 476,000 | 328,000 | | | | 804,000 |
| Treatment Plant Distributed Control System | 5,018,209 | | | | | | |
| **Advanced Process Control & Automation** | **23,322,588** | **476,000** | **328,000** | | | | **804,000** |
| Facility Wide Water Systems Improvements | 4,221,733 | 2,859,000 | 41,196,000 | 2,036,000 | 1,885,000 | 566,000 | 48,542,000 |
| Flood Protection | 1,497,141 | | 842,000 | 3,007,000 | 246,000 | | 4,095,000 |
| Plant Infrastructure Improvements | 1,835,749 | 5,500,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 9,500,000 |
| Plantwide Security Systems Upgrade | | 6,740,000 | | | | | 6,740,000 |
| Storm Drain System Improvements | 1,218,665 | 9,183,000 | 901,000 | 823,000 | | | 10,907,000 |
| Support Building Improvements | 6,530,700 | 15,244,000 | 873,000 | 194,000 | 150,000 | 667,000 | 17,128,000 |
| Tunnel Rehabilitation | | | | | 2,302,000 | 467,000 | 2,769,000 |
| Urgent and Unscheduled Treatment Plant Rehabilitation | 1,500,000 | 1,500,000 | 1,500,000 | 1,500,000 | 1,500,000 | 1,500,000 | 7,500,000 |
| Various Infrastructure Decommissioning | 469,000 | | 2,590,000 | 18,470,000 | 691,000 | | 21,751,000 |
| Yard Piping and Road Improvements | 20,156,789 | 8,294,000 | 37,325,000 | 35,707,000 | 1,870,000 | | 83,196,000 |
| **Site Facility Maintenance and Improvements** | **37,429,778** | **49,320,000** | **86,227,000** | **62,737,000** | **9,644,000** | **4,200,000** | **212,128,000** |
| Hydraulic Capacity Engineering | 25,000 | 125,000 | 25,000 | 25,000 | 25,000 | 25,000 | 225,000 |
| **South Bay Water Recycling** | **25,000** | **125,000** | **25,000** | **25,000** | **25,000** | **25,000** | **225,000** |
| Legacy Lagoons Biosolids Remediation | 6,894,957 | | | | | | |
| **Legacy Lagoons** | **6,894,957** | | | | | | |
| **Water Pollution Control - Construction** | **422,631,880** | **213,485,000** | **148,631,000** | **165,204,000** | **161,846,000** | **42,456,000** | **731,622,000** |
| Debt Service Repayment for Plant Capital Improvement Projects | 4,426,000 | 3,422,000 | 306,726,000 | 23,890,000 | 24,406,000 | 24,988,000 | 383,432,000 |

# Water Pollution Control

## 2022-2026 Proposed Capital Improvement Program

## Use of Funds (Combined)

| | Estimated 2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 | 2024-2025 | 2025-2026 | 5-Year Total |
|---|---|---|---|---|---|---|---|
| Owner Controlled Insurance Program | 4,839,000 | 3,705,000 | 1,399,000 | 1,264,000 | | | 6,368,000 |
| Master Plan Updates | 1,291,900 | | | | | | |
| Preliminary Engineering - Water Pollution Control | 2,533,830 | 2,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 6,000,000 |
| Program Management - Water Pollution Control | 15,307,000 | 11,386,000 | 10,275,000 | 10,014,000 | 9,661,000 | 3,392,000 | 44,728,000 |
| **General Non-Construction - Water Pollution Control** | **28,397,730** | **20,513,000** | **319,400,000** | **36,168,000** | **35,067,000** | **29,380,000** | **440,528,000** |
| **Water Pollution Control - Non Construction** | **28,397,730** | **20,513,000** | **319,400,000** | **36,168,000** | **35,067,000** | **29,380,000** | **440,528,000** |
| Public Art Allocation | 142,834 | | | | | | |
| **Public Art Projects** | **142,834** | | | | | | |
| Capital Program and Public Works Department Support Service Costs | 677,000 | 1,217,000 | 852,000 | 946,000 | 927,000 | 241,000 | 4,183,000 |
| Payment for Clean Water Financing Authority Trustee | 5,000 | | | | | | |
| **Allocations** | **682,000** | **1,217,000** | **852,000** | **946,000** | **927,000** | **241,000** | **4,183,000** |
| City Hall Debt Service Fund | 94,000 | 138,000 | 144,000 | 144,000 | 144,000 | 144,000 | 714,000 |
| Clean Water Financing Authority Debt Service Payment Fund | 5,526,000 | | | | | | |
| **Transfers to Special Funds** | **5,620,000** | **138,000** | **144,000** | **144,000** | **144,000** | **144,000** | **714,000** |
| **Transfers Expense** | **5,620,000** | **138,000** | **144,000** | **144,000** | **144,000** | **144,000** | **714,000** |
| Hydraulic Capacity Enhancements Reserve | | 3,666,000 | | | | | 3,666,000 |
| **Expense Reserves - Non Construction** | | **3,666,000** | | | | | **3,666,000** |
| **Total Expenditures** | **457,474,444** | **239,019,000** | **469,027,000** | **202,462,000** | **197,984,000** | **72,221,000** | **1,180,713,000** |
| Ending Fund Balance | 13,203,250 | 11,888,250 | 89,461,250 | 9,565,250 | 10,206,250 | 15,307,250 | 15,307,250* |
| **TOTAL** | **470,677,694** | **250,907,250** | **558,488,250** | **212,027,250** | **208,190,250** | **87,528,250** | **1,196,020,250*** |

* The 2021-2022 through 2024-2025 Ending Balances are excluded from the Five-Year Total Use of Funds to avoid multiple counting of the same funds.

# Additional Digester Upgrades

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 3rd Qtr. 2021 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 2nd Qtr. 2028 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | |
| **Dept Owner** | Environmental Services | **Revised End Date** | 4th Qtr. 2027 |
| **Council Districts** | 4 | **Initial Project Budget** | $64,475,000 |
| **Appropriation** | TEMP_126 | **FY Initiated** | 2021-2022 |

**Description** This project will rehabilitate up to six existing anaerobic digesters, including installation of new covers and mixers, upgrades the existing sludge distribution piping, and upgrades the digester heat supply system. The project may also include the installation of batch tanks to produce Class A biosolids (if required by future regulations).

**Justification** This project will complete the second phase of work for the Digester and Thickener Facilities Upgrade to ensure safe and reliable operation of the digestion facilities.

**Notes** This project corresponds to Plant Master Plan Project Nos. 50, 51, and 53, and Validation Project PS-02. Prior to 2018-2022, this project was part of "Digester and Thickener Facilities Upgrade".

**Major Cost Changes**

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| Project Feasibility Development | | | 1,191 | 389 | | | | 1,580 | | 1,580 |
| Design | | | | 4,816 | 1,279 | 291 | | 6,386 | | 6,386 |
| Bid & Award | | | | 83 | 19 | 15 | | 117 | | 117 |
| Construction | | | | 2,378 | | 51,270 | 1,655 | 55,303 | 450 | 55,753 |
| Post Construction | | | | 365 | | | | 365 | 274 | 639 |
| **Total** | | | **1,191** | **8,031** | **1,298** | **51,576** | **1,655** | **63,751** | **724** | **64,475** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | | | 1,191 | 8,031 | 1,298 | 51,576 | 1,655 | 63,751 | 724 | 64,475 |
| **Total** | | | **1,191** | **8,031** | **1,298** | **51,576** | **1,655** | **63,751** | **724** | **64,475** |
| **Annual Operating Budget Impact (000s)** | | | | | | | | | | |
| **Total** | | | | | | | | | | |

# Advanced Facility Control and Meter Replacement

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 3rd Qtr. 2010 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 2nd Qtr. 2014 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | |
| **Dept Owner** | Environmental Services | **Revised End Date** | 1st Qtr. 2023 |
| **Council Districts** | 4 | **Initial Project Budget** | $11,000,000 |
| **Appropriation** | A7224 | **FY Initiated** | 2010-2011 |

**Description** This project develops and executes a Plant-wide automation master plan; replaces existing flow meters and actuators; and upgrades sensors, controls, and monitoring equipment throughout the Plant.

**Justification** The Plant currently has hundreds of meters measuring liquid, sludge, and gas streams. Many existing sensors, actuators, and flow meters are inaccurate or unreliable. Due to their age, it is more cost effective to replace them with modern equipment to ensure performance reliability and assure that needed components are available for ongoing maintenance. This project will allow the Plant to move towards improved data capture, resulting in greater operational reliability and flexibility.

**Notes** This project corresponds to Plant Master Plan No. 90 and Validation Project PA-01.

**Major Cost Changes** 2012-2016 CIP through 2017-2021 CIP - increase of $16.9 million due to updated cost estimates, revised scope, addition of meter replacement scope, and project validation cost estimate.
2018-2022 CIP - decrease of $4.1 million due to reduction of scope.
2019-2023 CIP - increase of $17.9 million due to an increase in scope and updated construction cost estimate.
2020-2024 CIP - decrease of $7.4 million due to lower than expected construction bids for Phase I, resulting in a reduced expected cost estimate for Phase II.

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| Project Feasibility Development | 1,847 | 0 | | | | | | | 597 | 2,445 |
| Design | 1,751 | 61 | | | | | | | | 1,812 |
| Bid & Award | 327 | 24 | | | | | | | 76 | 427 |
| Construction | 6,244 | 17,959 | 476 | 220 | | | | 696 | 4,836 | 29,735 |
| Post Construction | 4 | 260 | | 108 | | | | 108 | 25 | 397 |
| **Total** | **10,173** | **18,304** | **476** | **328** | | | | **804** | **5,534** | **34,815** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 10,173 | 18,304 | 476 | 328 | | | | 804 | 5,534 | 34,815 |
| **Total** | **10,173** | **18,304** | **476** | **328** | | | | **804** | **5,534** | **34,815** |
| **Annual Operating Budget Impact (000s)** | | | | | | | | | | |
| **Total** | | | | | | | | | | |

# Aeration Tanks and Blower Rehabilitation

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 1st Qtr. 2015 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 3rd Qtr. 2025 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | 2nd Qtr. 2015 |
| **Dept Owner** | Environmental Services | **Revised End Date** | 2nd Qtr. 2029 |
| **Council Districts** | 4 | **Initial Project Budget** | $114,880,000 |
| **Appropriation** | A7677 | **FY Initiated** | 2014-2015 |

**Description** This project rehabilitates the secondary and nitrification aeration tanks including structural, mechanical, electrical, and instrumentation upgrades. It also replaces the remaining existing coarse bubble diffusers with fine bubble diffusers; installs partition walls and reconfigures air piping to optimize process treatment capabilities; repairs concrete and applies coatings; installs Variable Frequency Drives (VFDs), new motors, new Motor Control Centers (MCC), and new controls to the electric driven blowers in Building 40 and Tertiary Blower Building; decommissions the engine driven blowers in the Secondary Blower Building; and replaces the S11 switchgear.

**Justification** The secondary and nitrification aeration tanks were constructed in phases between the 1960s and 1980s. Due to their age and the aggressive and corrosive environment they operate in, extensive rehabilitation is required. Conversion to fine bubble diffusers will increase the oxygen transfer efficiency and decrease energy requirements. Installing VFDs will minimize the impact of starting current on the blowers when the Plant is run on emergency power. Lastly, the S11 switchgear and MCCs are outdated and need to be upgraded to be compatible with the new VFDs.

**Notes** This project corresponds to Plant Master Plan Project Nos. 20, 24, and 85 and Validation Project PLS-01.

**Major Cost Changes**
2016-2020 CIP - increase of $4.4 million due to escalation of construction costs.
2018-2022 CIP - increase of $4.5 million due to a revised scope and cost estimate.
2019-2023 CIP - increase of $26.5 million due to an updated construction cost estimate.
2020-2024 CIP - decrease of $16.9 million due to updated construction estimate and lower than expected construction bids.

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| Project Feasibility Development | 5,703 | 0 | 2,287 | | | | | 2,287 | | 7,990 |
| Design | 4,329 | | | 7,462 | 707 | | | 8,169 | | 12,498 |
| Bid & Award | 273 | | | 217 | | 327 | | 544 | | 817 |
| Construction | 18,863 | 25,847 | 1,551 | 446 | | 58,092 | 1,065 | 61,154 | 3,182 | 109,046 |
| Post Construction | | | | 228 | | | | 228 | 133 | 361 |
| **Total** | **29,169** | **25,847** | **3,838** | **8,353** | **707** | **58,419** | **1,065** | **72,382** | **3,315** | **130,713** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 29,169 | 25,847 | 3,838 | 8,353 | 707 | 58,419 | 1,065 | 72,382 | 3,315 | 130,713 |
| **Total** | **29,169** | **25,847** | **3,838** | **8,353** | **707** | **58,419** | **1,065** | **72,382** | **3,315** | **130,713** |
| **Annual Operating Budget Impact (000s)** | | | | | | | | | | |
| **Total** | | | | | | | | | | |

# Debt Service Repayment for Plant Capital Improvement Projects

| | |
|---|---|
| **CSA** | Environmental and Utility Services |
| **CSA Outcome** | Reliable Utility Infrastructure |
| **Location** | N/A |
| **Dept Owner** | Environmental Services |
| **Council Districts** | N/A |
| **Appropriation** | A402C |

| | |
|---|---|
| **Initial Start Date** | 4th Qtr. 2017 |
| **Initial End Date** | 4th Qtr. 2020 |
| **Revised Start Date** | |
| **Revised End Date** | 2nd Qtr. 2033 |
| **Initial Project Budget** | $76,890,000 |
| **FY Initiated** | 2017-2018 |

**Description** This allocation provides for the repayment of financing proceeds, including short-term wastewater revenue notes and long-term bonds, drawn for the Plant Capital Improvement Projects.

**Justification** Repayment of previously received financing proceeds is a requirement of continued usage of financial instruments such as Wastewater Revenue Notes and Bond Proceeds.

**Notes** The use of Wastewater Revenue Notes for funding began in October 2017.

**Major Cost Changes**

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| General Administration | 4,143 | 4,426 | 3,422 | 306,726 | 23,890 | 24,406 | 24,988 | 383,432 | 133,375 | 525,376 |
| **Total** | **4,143** | **4,426** | **3,422** | **306,726** | **23,890** | **24,406** | **24,988** | **383,432** | **133,375** | **525,376** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 4,143 | 4,426 | 3,422 | 306,726 | 23,890 | 24,406 | 24,988 | 383,432 | 133,375 | 525,376 |
| **Total** | **4,143** | **4,426** | **3,422** | **306,726** | **23,890** | **24,406** | **24,988** | **383,432** | **133,375** | **525,376** |
| **Annual Operating Budget Impact (000s)** | | | | | | | | | | |
| **Total** | | | | | | | | | | |

# Digested Sludge Dewatering Facility

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 3rd Qtr. 2012 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 2nd Qtr. 2013 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | 3rd Qtr. 2014 |
| **Dept Owner** | Environmental Services | **Revised End Date** | 2nd Qtr. 2024 |
| **Council Districts** | 4 | **Initial Project Budget** | $1,000,000 |
| **Appropriation** | A7452 | **FY Initiated** | 2012-2013 |

**Description** This project will construct a new mechanical dewatering facility and support systems to replace the existing sludge storage lagoons and open air solar drying beds. All new mechanical dewatering units, feed tank, storage, conveyance, and chemical dosing facilities will be housed in an odor-controlled building.

**Justification** This project responds to a recommendation in the adopted Plant Master Plan to consolidate the Plant's operational area by reducing the biosolids process footprint. It also provides greater flexibility in biosolids disposal options in anticipation of the potential Newby Island landfill closure in 2025, responds to stricter regulations for landfilling and alternative daily cover, and addresses odor, noise, and aesthetics concerns from the operations of the lagoons and sludge drying beds.

**Notes** This project corresponds to Plant Master Plan Project Nos. 44, 54, 57-60 and Validation Project PS-03.

**Major Cost Changes** 2014-2018 CIP - increase of $325.0 million due to accelerated project start and compressed implementation schedule. 2015-2019 CIP - decrease of $256.8 million due to creation of separate biosolids projects through project validation. 2016-2020 CIP - increase of $1.6 million due to escalation of construction costs. 2017-2021 CIP - increase of $28.1 milion due to increased scope and revised cost estimate. 2019-2023 CIP - increase of $18.3 million due to an updated construction cost estimate. 2020-2024 CIP - increase of $11.8 million due to an increase in scope and updated construction cost estimate. 2021-2025 CIP - increase of $26.4 million due to an updated scope and construction cost estimate. 2022-2026 CIP - Increase of $13.0 million due to an updated scope and construction cost estimate.

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| Project Feasibility Development | 5,488 | 289 | | | | | | | | 5,777 |
| Design | 3,824 | 11,321 | 447 | | | | | 447 | | 15,592 |
| Bid & Award | 1,166 | 465 | | | | | | | | 1,631 |
| Construction | 0 | 11,355 | 130,699 | 2,188 | 1,234 | | | 134,121 | | 145,476 |
| Post Construction | | | | | 122 | | | 122 | | 122 |
| **Total** | **10,478** | **23,430** | **131,146** | **2,188** | **1,356** | | | **134,690** | | **168,598** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 10,478 | 23,430 | 131,146 | 2,188 | 1,356 | | | 134,690 | | 168,598 |
| **Total** | **10,478** | **23,430** | **131,146** | **2,188** | **1,356** | | | **134,690** | | **168,598** |

| | | | | |
|---|---|---|---|---|
| **Annual Operating Budget Impact (000s)** | | | | |
| Operating | 8,012 | 12,360 | 12,712 | |
| Maintenance | 155 | 239 | 246 | |
| **Total** | **8,167** | **12,599** | **12,958** | |

# Digester and Thickener Facilities Upgrade

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 3rd Qtr. 2006 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 2nd Qtr. 2008 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | |
| **Dept Owner** | Environmental Services | **Revised End Date** | 2nd Qtr. 2022 |
| **Council Districts** | 4 | **Initial Project Budget** | $1,000,000 |
| **Appropriation** | A4127 | **FY Initiated** | 2006-2007 |

**Description** This project rehabilitates four digesters and modifies the system to operate as a two-phase Temperature Phased Anaerobic Digestion (TPAD) system. The project also rehabilitates and modifies six dissolved air flotation units for sludge co-thickening, pressure saturation tanks, pipes, pumps, and ancillary equipment. A new odor control system, primary sludge screening facility, heat exchangers, biogas flare, and polymer dosing facility will be constructed. A new rack mounted digester gas conveyance system will also be constructed above grade to replace existing piping in the digester tunnels.

**Justification** The Plant has 16 anaerobic digesters constructed between 1956 and 1983, of which six are permanently out of service. This project is needed to ensure safe and reliable operation of the digester facilities including the gas conveyance system. The upgrade to TPAD provides the facility with the ability to increase biogas production and produce Class A biosolids (if required by future regulations).

**Notes** This project corresponds to Plant Master Plan Project Nos. 45 - 53 and Validation Project PS-01. Prior to 2015-2019, this project was titled "Digester Rehabilitation".

**Major Cost Changes** 2008-2012 CIP through 2019-2023 CIP - increase of $168.3 million due to increased scope, realignment of project, higher than projected construction costs, inclusion of scope from other projects, and unforeseen conditions during construction, including air board regulatory requirements, major utility relocations, and a 78" SES line.
2020-2024 CIP - increase of $31.5 million due to unforeseen conditions and increased construction management costs.

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| Project Feasibility Development | 707 | | | | | | | | | 707 |
| Design | 14,518 | 1,703 | | | | | | | | 16,221 |
| Bid & Award | 115 | | | | | | | | | 115 |
| Construction | 151,933 | 30,728 | 13,622 | | | | | 13,622 | | 196,283 |
| Post Construction | | 435 | 411 | | | | | 411 | | 846 |
| **Total** | **167,273** | **32,866** | **14,033** | | | | | **14,033** | | **214,172** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 167,273 | 32,866 | 14,033 | | | | | 14,033 | | 214,172 |
| **Total** | **167,273** | **32,866** | **14,033** | | | | | **14,033** | | **214,172** |

| | | | | | |
|---|---|---|---|---|---|
| **Annual Operating Budget Impact (000s)** | | | | | |
| Operating | 1,865 | 1,934 | 2,005 | 2,080 | |
| Maintenance | 337 | 351 | 365 | 380 | |
| **Total** | **2,202** | **2,285** | **2,370** | **2,460** | |

# Facility Wide Water Systems Improvements

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 3rd Qtr. 2014 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 1st Qtr. 2022 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | |
| **Dept Owner** | Environmental Services | **Revised End Date** | 4th Qtr. 2025 |
| **Council Districts** | 4 | **Initial Project Budget** | $14,130,000 |
| **Appropriation** | A7679 | **FY Initiated** | 2014-2015 |

**Description** This project rehabilitates, replaces, and/or extends the Plant's four water systems including piping, valves, pumps, controls, and other ancillary equipment. The scope of work will be based on hydraulic modeling and study of existing and future water demands at the Plant. The project may be constructed in phases based on the outcome of the study and priority of needs.

**Justification** The Plant's four water systems include potable water, groundwater, process/fire protection water, and recycled water. These were constructed over time with various Plant expansions and are in need of rehabilitation and upgrade due to age, condition, worker safety, plant reliability, and code compliance requirements. In addition, changes to water uses and demands have not all been addressed over time. An updated hydraulic model and assessment of current and future water demands will allow for the proper sizing of these systems to improve current and future performance and reduce risk of damage to pumping equipment.

**Notes** This project corresponds to Plant Master Plan Project No. 105 and Validation Project PF-06.

**Major Cost Changes**
2016-2020 CIP - Increase of $1.6 million due to escalation of construction costs.
2018-2022 CIP - Increase of $2.1 million due to revised project delivery cost estimate.
2022-2026 CIP - Increase of $38.6 million due to revised scope and delivery cost estimate.

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| Project Feasibility Development | 2,854 | 775 | | | | | | | | 3,629 |
| Design | 7 | 2,660 | 2,829 | 118 | | | | 2,947 | | 5,614 |
| Bid & Award | 6 | 109 | 30 | 254 | | | | 284 | | 399 |
| Construction | | 678 | | 40,724 | 2,036 | 1,885 | 498 | 45,143 | | 45,821 |
| Post Construction | | | | 100 | | | 68 | 168 | | 168 |
| **Total** | **2,868** | **4,222** | **2,859** | **41,196** | **2,036** | **1,885** | **566** | **48,542** | | **55,631** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 2,868 | 4,222 | 2,859 | 41,196 | 2,036 | 1,885 | 566 | 48,542 | | 55,631 |
| **Total** | **2,868** | **4,222** | **2,859** | **41,196** | **2,036** | **1,885** | **566** | **48,542** | | **55,631** |
| **Annual Operating Budget Impact (000s)** | | | | | | | | | | |
| **Total** | | | | | | | | | | |

# Filter Rehabilitation

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 3rd Qtr. 2011 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 2nd Qtr. 2013 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | 3rd Qtr. 2014 |
| **Dept Owner** | Environmental Services | **Revised End Date** | 3rd Qtr. 2024 |
| **Council Districts** | 4 | **Initial Project Budget** | $3,506,000 |
| **Appropriation** | A7227 | **FY Initiated** | 2010-2011 |

**Description** This project will replace filter media, valves, actuators, and electrical controls for all filters. It will also replace the existing surface wash system with a new air scour system, rehabilitate electrical switchgears and related motor control consoles, upgrade pipes, and make concrete repairs.

**Justification** The existing filter complex was constructed in the 1970s and requires significant refurbishment. The filter media, consisting of anthracite and sand, needs to be replaced and some of the mechanical and electrical components need to be upgraded. These critical improvements are needed to ensure continued regulatory compliance and operational reliability until a new filter complex is constructed.

**Notes** This project corresponds to Plant Master Plan Project Nos. 31, 32, and 33 as well as Validation Project PLF-01 and PLF-02.

**Major Cost Changes**
2014-2018 CIP - decrease of $2.7 million due to the removal of scope that is dependent on the evaluation of the demonstration project.
2015-2019 CIP - increase of $26.9 million due to revised scope and project validation cost estimate.
2016-2020 CIP - increase of $6.5 million due to revised cost estimate and escalation of construction costs.
2017-2021 CIP - increase of $2.5 million due to increased project scope.
2019-2023 CIP - increase of $6.9 million due to a revised construction cost estimate.
2020-2024 CIP - increase of $2.5 million due to a revised construction cost estimate.
2021-2025 CIP - increase of $12.6 million due to a revised construction estimate.

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| Project Feasibility Development | 2,047 | | | | | | | | | 2,047 |
| Design | 4,474 | 706 | | | | | | | | 5,180 |
| Bid & Award | 316 | | | | | | | | | 316 |
| Construction | 228 | 48,300 | 1,506 | 1,549 | 1,507 | | | 4,562 | | 53,090 |
| Post Construction | | 100 | | | 299 | | | 299 | | 399 |
| **Total** | **7,065** | **49,106** | **1,506** | **1,549** | **1,806** | | | **4,861** | | **61,032** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 7,065 | 49,106 | 1,506 | 1,549 | 1,806 | | | 4,861 | | 61,032 |
| **Total** | **7,065** | **49,106** | **1,506** | **1,549** | **1,806** | | | **4,861** | | **61,032** |
| **Annual Operating Budget Impact (000s)** | | | | | | | | | | |
| **Total** | | | | | | | | | | |

# Headworks Improvements

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 3rd Qtr. 2012 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 2nd Qtr. 2015 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | 1st Qtr. 2013 |
| **Dept Owner** | Environmental Services | **Revised End Date** | 2nd Qtr. 2023 |
| **Council Districts** | 4 | **Initial Project Budget** | $5,975,000 |
| **Appropriation** | A7448 | **FY Initiated** | 2012-2013 |

**Description** This project will modify Headworks No. 2 (HW2) to accommodate all dry weather flow. Improvements include re-routing some inlet and recycle flow piping, new storm water pump stations, and other mechanical enhancements to improve reliability and operation performance.

**Justification** HW1 was built in the mid-1950s and early 1960s and is the Plant's duty headworks. HW2 was built in 2008 and designed to operate in parallel with HW1 to handle peak hour wet weather flow. This project will improve the functional reliability of HW2.

**Notes** This project corresponds to Plant Master Plan Project Nos. 1, 2, and 7 and Validation Project PLH-01.

**Major Cost Changes**
2015-2019 CIP - increase of $23.7 million due to incorporation of a portion of Headworks No. 2 Enhancement project.
2016-2020 CIP - increase of $863,000 due to revised cost estimate.
2018-2022 CIP - decrease of $9.0 million due to reduction of scope to eliminate a condition assessment of HW1.
2020-2024 CIP - increase of $1.3 million due to revised construction cost estimate.

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| Project Feasibility Development | 1,445 | | | | | | | | | 1,445 |
| Design | 1,659 | 3 | | | | | | | | 1,663 |
| Bid & Award | 520 | 40 | | | | | | | | 560 |
| Construction | 2,913 | 15,357 | 186 | 181 | | | | 367 | | 18,637 |
| Post Construction | 22 | 75 | | 15 | | | | 15 | | 112 |
| **Total** | **6,559** | **15,475** | **186** | **196** | | | | **382** | | **22,416** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 6,559 | 15,475 | 186 | 196 | | | | 382 | | 22,416 |
| **Total** | **6,559** | **15,475** | **186** | **196** | | | | **382** | | **22,416** |
| **Annual Operating Budget Impact (000s)** | | | | | | | | | | |
| **Total** | | | | | | | | | | |

# New Headworks

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 3rd Qtr. 2012 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 2nd Qtr. 2013 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | |
| **Dept Owner** | Environmental Services | **Revised End Date** | 2nd Qtr. 2023 |
| **Council Districts** | 4 | **Initial Project Budget** | $79,400,000 |
| **Appropriation** | A7449 | **FY Initiated** | 2012-2013 |

**Description** This project will construct a new headworks to serve as the Plant's duty headworks. It also involves lining the emergency overflow basin and installing spraydown systems to facilitate cleaning. The project will also be tasked with odor control over select areas, such as junction boxes and grit collection. This project will need to be coordinated with the modifications made to the Headworks 2 hydraulics and the eventual decommissioning of Headworks 1.

**Justification** Headworks No. 1 was built in the mid-1950s and further expanded in the 1960s. Due to its age and condition, extensive structural rehabilitation and mechanical rehabilitation would be needed to operate it as the Plant's long-term duty headworks. Based on previous studies, building a new duty headworks facility would be more cost effective and provide greater operational reliability and enhanced treatment, potentially piping and hydraulic simplification, addressing some of the operational issues currently experienced at the Plant, such as the deposition of grit in downstream processes.

**Notes** This project corresponds to Plant Master Plan Project Nos. 1, 3, 4, 5, and 8 and Validation Project PLH-02.

**Major Cost Changes**
2015-2019 CIP - increase of $11.8 million due to incorporation of a portion of Headworks No. 2 Enhancement project.
2016-2020 CIP - increase of $4.8 million due to revised cost.
2018-2022 CIP - increase of $27.0 million due to revised project cost estimate.
2020-2024 CIP - increase of $19.4 million due to an updated construction cost estimate.

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| Project Feasibility Development | 3,468 | | | | | | | | | 3,468 |
| Design | 8,641 | 30 | | | | | | | | 8,671 |
| Bid & Award | 1,332 | 99 | | | | | | | | 1,431 |
| Construction | 8,361 | 128,173 | 1,399 | 1,392 | | | | 2,791 | | 139,325 |
| Post Construction | | 425 | | 132 | | | | 132 | | 557 |
| **Total** | **21,801** | **128,728** | **1,399** | **1,524** | | | | **2,923** | | **153,451** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 21,801 | 128,728 | 1,399 | 1,524 | | | | 2,923 | | 153,451 |
| **Total** | **21,801** | **128,728** | **1,399** | **1,524** | | | | **2,923** | | **153,451** |

| | | | | | |
|---|---|---|---|---|---|
| **Annual Operating Budget Impact (000s)** | | | | | |
| Operating | 11 | 26 | 27 | 28 | |
| **Total** | **11** | **26** | **27** | **28** | |

# Nitrification Clarifier Rehabilitation

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 3rd Qtr. 2009 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 2nd Qtr. 2024 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | |
| **Dept Owner** | Environmental Services | **Revised End Date** | 2nd Qtr. 2026 |
| **Council Districts** | 4 | **Initial Project Budget** | $26,701,000 |
| **Appropriation** | A7074 | **FY Initiated** | 2009-2010 |

**Description** This project includes phased rehabilitation of the 16 nitrification clarifiers. Structural improvements may include concrete repairs and coating, new clarifier mechanisms and baffle installations, pipe support and meter vault replacements, and walkway improvements. Mechanical improvements may include piping, valve and actuator replacements, spray water system replacements, scum skimmer system upgrades, and return activated sludge piping lining. Electrical and instrumentation improvements may include motor control center replacements, new wiring, and other electrical equipment upgrades. Other incidental work may include grouting, painting, coating, and other surface treatments.

**Justification** The Plant's 16 nitrification clarifiers have been in service for 30 to 40 years depending on the year of construction. A condition assessment study, completed in 2011, recommended phased rehabilitation of the nitrification clarifiers. The improvements are needed to address structural, mechanical, electrical, and instrumentation deficiencies and will extend the useful life of the clarifier assets for an additional 30 years.

**Notes** This project corresponds to Plant Master Plan Project No. 21 and Validation Project PLS-02. This project is planned to be completed in multiple phases.

**Major Cost Changes**
2014-2018 CIP - increase of $13.0 million due to revised estimate.
2015-2019 CIP - Increase of $22.0 million due to revised project validation cost estimate.
2016-2020 CIP - Decrease of $8.5 million due to revised scope and cost estimate.
2017-2021 CIP - Decrease of $1.6 million due to revised cost estimate.
2020-2024 CIP - Increase of $46.4 million due to an increase in the amount of rehabilitation required and updated construction cost estimate.
2022-2026 CIP - Decrease of $10.6 million due to revised scope and cost estimate.

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| Project Feasibility Development | 3,832 | 0 | | | | | | | | 3,832 |
| Design | 2,276 | 323 | 1,372 | 137 | | | | 1,509 | | 4,108 |
| Bid & Award | 228 | 94 | 50 | 280 | | | | 330 | | 652 |
| Construction | 3,397 | 50,137 | 1,316 | 22,221 | 1,183 | 1,217 | 600 | 26,537 | | 80,071 |
| Post Construction | | 250 | | 297 | | | 190 | 487 | | 737 |
| **Total** | **9,732** | **50,804** | **2,738** | **22,935** | **1,183** | **1,217** | **790** | **28,863** | | **89,399** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 9,732 | 50,804 | 2,738 | 22,935 | 1,183 | 1,217 | 790 | 28,863 | | 89,399 |
| **Total** | **9,732** | **50,804** | **2,738** | **22,935** | **1,183** | **1,217** | **790** | **28,863** | | **89,399** |
| **Annual Operating Budget Impact (000s)** | | | | | | | | | | |
| **Total** | | | | | | | | | | |

# Outfall Channel and Instrumentation Improvements

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 3rd Qtr. 2014 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 2nd Qtr. 2019 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | |
| **Dept Owner** | Environmental Services | **Revised End Date** | 1st Qtr. 2023 |
| **Council Districts** | 4 | **Initial Project Budget** | $8,120,000 |
| **Appropriation** | A7678 | **FY Initiated** | 2014-2015 |

**Description** This project will repair erosion scour along the outfall channel weir structure, replace the weir board system, replace an electrical transformer, improve staff access around the sulfur dioxide building, install a new fiber optic system, and replace water quality instrumentation and flow meters.

**Justification** Discharging effluent has resulted in significant erosion of the outfall channel bed material adjacent to the weir structure, requiring replacement of the rock rip rap materials originally installed to protect the structure. In addition, several original materials, water quality instrumentation, and communications system used to ensure reliable outfall compliance have reached the end of their service life and need replacement.

**Notes** This project corresponds to Validation Project PLD-02.

**Major Cost Changes**
2016-2020 CIP - Increase of $1.7 million due to escalation of construction costs.
2018-2022 CIP - Decrease of $776,000 due to reduction of project scope.
2019-2023 CIP - Decrease of $764,000 due to revised cost estimates.
2022-2026 CIP - Increase of $1.5 million due to revised scope and cost estimate.

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| Project Feasibility Development | 867 | 38 | | | | | | | | 905 |
| Design | 481 | 786 | | | | | | | | 1,267 |
| Bid & Award | 2 | 131 | | | | | | | | 133 |
| Construction | 11 | 1,028 | 6,094 | 464 | | | | 6,558 | | 7,597 |
| Post Construction | | | 20 | 128 | | | | 148 | | 148 |
| **Total** | **1,361** | **1,983** | **6,114** | **592** | | | | **6,706** | | **10,050** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 1,361 | 1,983 | 6,114 | 592 | | | | 6,706 | | 10,050 |
| **Total** | **1,361** | **1,983** | **6,114** | **592** | | | | **6,706** | | **10,050** |
| **Annual Operating Budget Impact (000s)** | | | | | | | | | | |
| **Total** | | | | | | | | | | |

# Owner Controlled Insurance Program

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 2nd Qtr. 2017 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 2nd Qtr. 2023 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | |
| **Dept Owner** | Environmental Services | **Revised End Date** | 2nd Qtr. 2024 |
| **Council Districts** | N/A | **Initial Project Budget** | $16,085,000 |
| **Appropriation** | A401B | **FY Initiated** | 2017-2018 |

**Description** This allocation provides funding for a centrally managed insurance and risk control program for construction projects in the Water Pollution Control CIP.

**Justification** This allocation is required to centrally manage insurance and risk control programs for construction projects in this capital program.

**Notes**

**Major Cost Changes** 2019-2023 CIP - Increase of $4.9 million due to revised insurance cost estimates.
2022-2026 CIP - Decrease of $2.3 million do to revised insurance cost estimates.

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| General Administration | 7,466 | 4,839 | 3,705 | 1,399 | 1,264 | | | 6,368 | | 18,673 |
| **Total** | **7,466** | **4,839** | **3,705** | **1,399** | **1,264** | | | **6,368** | | **18,673** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 7,466 | 4,839 | 3,705 | 1,399 | 1,264 | | | 6,368 | | 18,673 |
| **Total** | **7,466** | **4,839** | **3,705** | **1,399** | **1,264** | | | **6,368** | | **18,673** |
| **Annual Operating Budget Impact (000s)** | | | | | | | | | | |
| **Total** | | | | | | | | | | |

# Plant Electrical Reliability

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 3rd Qtr. 2003 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 2nd Qtr. 2014 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | |
| **Dept Owner** | Environmental Services | **Revised End Date** | 1st Qtr. 2023 |
| **Council Districts** | 4 | **Initial Project Budget** | $7,671,000 |
| **Appropriation** | A4341 | **FY Initiated** | 2003-2004 |

**Description** This project replaces substations and switches, modifies power distribution buses and cabling, and provides backup systems to enhance the overall safety and reliability of the Plant electrical systems. The project includes a multi-phase construction schedule based upon a study completed in 2004.

**Justification** The current power distribution network has grown in a patched manner over the years, and many electrical system components have reached the end of their service life. This project addresses immediate safety needs and provides for future reliability needs.

**Notes** This project replaces a formerly ongoing allocation titled "Electrical System Improvements".

**Major Cost Changes**
2005-2009 CIP - increase of $33.5 million to fund construction/rehabilitation costs due to increased project scope.
2007-2011 CIP - increase of $15.6 million to fund construction/rehabilitation costs due to increased project scope.
2008-2012 CIP - increase of $26.5 million to fund construction/rehabilitation costs due to increased project scope.
2009-2013 CIP - decrease of $3.0 million to reflect a project scope change.
2011-2015 CIP - increase of $11.4 million due to increased project scope.
2013-2017 CIP - decrease of $64.7 million due to removal of the Gas Turbine/Internal Combustion Engine project scope, which is being refined and will be included as part of the Energy Generation Improvements project.
2014-2018 CIP - decrease of $1.4 million due to decreased project scope.
2015-2019 CIP - increase of $6.0 million due to revised project validation cost estimate.
2017-2021 CIP - decrease of $1.2 million due to revised project scope.
2020-2024 CIP - increase of $2.2 million due to revised construction cost estimate.

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| Project Feasibility Development | 669 | | | | | | | | | 669 |
| Design | 1,939 | | | | | | | | | 1,939 |
| Bid & Award | 151 | | | | | | | | | 151 |
| Construction | 20,578 | 7,570 | 1,413 | 822 | | | | 2,235 | | 30,383 |
| Post Construction | 23 | 59 | | 263 | | | | 263 | | 345 |
| **Total** | **23,361** | **7,629** | **1,413** | **1,085** | | | | **2,498** | | **33,488** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 23,361 | 7,629 | 1,413 | 1,085 | | | | 2,498 | | 33,488 |
| **Total** | **23,361** | **7,629** | **1,413** | **1,085** | | | | **2,498** | | **33,488** |
| **Annual Operating Budget Impact (000s)** | | | | | | | | | | |
| **Total** | | | | | | | | | | |

# Plantwide Security Systems Upgrade

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 3rd Qtr. 2021 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 2nd Qtr. 2022 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | |
| **Dept Owner** | Environmental Services | **Revised End Date** | |
| **Council Districts** | 4 | **Initial Project Budget** | $6,740,000 |
| **Appropriation** | TEMP_693 | **FY Initiated** | 2021-2022 |

**Description** This project will upgrade three critical security components at the Plant: 1. Construct a new main guard shack with monitoring, lighting, traffic circulation, and pavement improvements; 2. Install closed-circuit television cameras throughout the Plant and upgrade software, hardware, and equipment in the main server room; and 3. Install access card readers throughout the Plant and install new proximity card badging stations.

**Justification** The existing guard shack is antiquated and undersized. Existing entrance and exit lanes are inadequate for larger delivery trucks, which impedes traffic flow and causes delays. Installing wired and wireless cameras, along with an upgraded server room and new monitoring station will enhance security throughout the Plant, which is needed due to increased operational and construction activity. Installing access card readers will provide will improve security by replacing a mix of entry systems (e.g., cyberkey, traditional locks, card readers) with a single system.

**Notes**

**Major Cost Changes**

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| Project Feasibility Development | | | 115 | | | | | 115 | | 115 |
| Design | | | 306 | | | | | 306 | | 306 |
| Bid & Award | | | 57 | | | | | 57 | | 57 |
| Construction | | | 6,218 | | | | | 6,218 | | 6,218 |
| Post Construction | | | 44 | | | | | 44 | | 44 |
| **Total** | | | **6,740** | | | | | **6,740** | | **6,740** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | | | 6,740 | | | | | 6,740 | | 6,740 |
| **Total** | | | **6,740** | | | | | **6,740** | | **6,740** |
| **Annual Operating Budget Impact (000s)** | | | | | | | | | | |
| **Total** | | | | | | | | | | |

# Storm Drain System Improvements

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 3rd Qtr. 2017 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 2nd Qtr. 2021 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | 4th Qtr. 2017 |
| **Dept Owner** | Environmental Services | **Revised End Date** | 1st Qtr. 2024 |
| **Council Districts** | 4 | **Initial Project Budget** | $10,195,000 |
| **Appropriation** | A404V | **FY Initiated** | 2017-2018 |

**Description** This project upgrades the existing Plant stormwater drainage system to meet current City standards. The project includes modifying existing drainage facilities and constructing new storm system facilities to meet the City's 10-year design standard. This project may also include improvements to the existing combined sanitary sewer system.

**Justification** The Plant's stormwater drainage facilities do not meet the City's 10-year storm event standard. Upgrades to the existing systems are needed to prevent stormwater flooding in and around the Plant's operational area.

**Notes**

**Major Cost Changes**
2019-2023 CIP - Increase of $3.7 million due to an escalation of construction costs.
2020-2024 CIP - Increase of $1.2 million due to revised condition assessment and construction management estimates.
2022-2026 CIP - Decrease of $1.7 million due to revised scope and cost estimate.

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| Project Feasibility Development | 1,308 | 240 | | | | | | | | 1,547 |
| Design | | 979 | 77 | | | | | 77 | | 1,056 |
| Bid & Award | | | 219 | | | | | 219 | | 219 |
| Construction | | | 8,887 | 901 | 448 | | | 10,236 | | 10,236 |
| Post Construction | | | | | 375 | | | 375 | | 375 |
| **Total** | **1,308** | **1,219** | **9,183** | **901** | **823** | | | **10,907** | | **13,433** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 1,308 | 1,219 | 9,183 | 901 | 823 | | | 10,907 | | 13,433 |
| **Total** | **1,308** | **1,219** | **9,183** | **901** | **823** | | | **10,907** | | **13,433** |
| **Annual Operating Budget Impact (000s)** | | | | | | | | | | |
| **Total** | | | | | | | | | | |

# Support Building Improvements

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 1st Qtr. 2015 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 3rd Qtr. 2023 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | 2nd Qtr. 2015 |
| **Dept Owner** | Environmental Services | **Revised End Date** | 2nd Qtr. 2034 |
| **Council Districts** | 4 | **Initial Project Budget** | $55,590,000 |
| **Appropriation** | A7681 | **FY Initiated** | 2014-2015 |

**Description** This project constructs various tenant improvements to the administration, operations, engineering, and other support buildings located throughout the Plant. It may include floor, ceiling, wall, partition, plumbing, heating, ventilation and air conditioning upgrades, fire protection, and security improvements, as well as ancillary landscaping improvements. It also constructs new warehousing facilities and an electronic warehouse management system which may include new computers, a central database, barcode scanners, mobile tablets, and other technology improvements. This project will be constructed in phases based on a detailed tenant improvement study, warehouse design study, and priority of needs.

**Justification** Most of the buildings at the Plant are between 30 and 50 years old and are in need of refurbishment to improve worker health, safety, and environment. The tenant improvements are also needed to bring the buildings into compliance with current building and safety codes. The new warehousing facility and warehouse management system will improve operational efficiency through better control of the movement and storage of materials, including shipping, receiving, material stocking, use, and distribution.

**Notes** This project corresponds to Plant Master Plan Project Nos. 94, 95, 96, 98, 106, and 107 and Validation Project PF-02.

**Major Cost Changes** 2016-2020 CIP - decrease of $856,000 due to revised cost estimate.
2018-2022 CIP - increase of $2.2 million due to revised project delivery cost estimate.

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| General Administration | 0 | | | | | | | | | 0 |
| Project Feasibility Development | 2,096 | 197 | | | | | 667 | 667 | 1,181 | 4,141 |
| Design | 993 | 3,308 | 148 | | | | | 148 | 4,193 | 8,643 |
| Bid & Award | 89 | 285 | 128 | | | | | 128 | 493 | 995 |
| Construction | | 2,740 | 14,808 | 766 | 194 | | | 15,768 | 23,032 | 41,540 |
| Post Construction | | | 160 | 107 | | 150 | | 417 | 1,141 | 1,558 |
| Equipment, Materials and Supplies | 346 | | | | | | | | | 346 |
| **Total** | **3,524** | **6,531** | **15,244** | **873** | **194** | **150** | **667** | **17,128** | **30,040** | **57,223** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 3,524 | 6,531 | 15,244 | 873 | 194 | 150 | 667 | 17,128 | 30,040 | 57,223 |
| **Total** | **3,524** | **6,531** | **15,244** | **873** | **194** | **150** | **667** | **17,128** | **30,040** | **57,223** |
| **Annual Operating Budget Impact (000s)** | | | | | | | | | | |
| **Total** | | | | | | | | | | |

# Yard Piping and Road Improvements

| | | | |
|---|---|---|---|
| **CSA** | Environmental and Utility Services | **Initial Start Date** | 3rd Qtr. 2011 |
| **CSA Outcome** | Reliable Utility Infrastructure | **Initial End Date** | 4th Qtr. 2026 |
| **Location** | Water Pollution Control Plant | **Revised Start Date** | |
| **Dept Owner** | Environmental Services | **Revised End Date** | 2nd Qtr. 2025 |
| **Council Districts** | 4 | **Initial Project Budget** | N/A |
| **Appropriation** | A7396 | **FY Initiated** | 2011-2012 |

**Description** This project rehabilitates and/or replaces process piping systems, valves, and related appurtenances throughout the Plant. The work will be completed in phases based on the outcome of a detailed condition assessment, physical testing, and prioritization of needs. This project will also make roadway and drainage-related improvements throughout the Plant's main operations and residual management areas.

**Justification** The Plant has approximately 300,000 linear feet of piping along with associated valves and related appurtenances. The pipes range in diameter from 8 inches to 144 inches and carry gas, liquids, sludge, air, steam, and other process streams to and from the various treatment areas. The pipes vary in age, material, condition, reliability, and redundancy. Over 70 percent of the piping was installed more than 25 years ago and is in need of rehabilitation or replacement due to age, failure, and/or excessive maintenance. The Plant also has an extensive roadway network, nearly 40,000 linear feet of paved surfaces, that needs rehabilitation and/or replacement due to excessive wear, heavy vehicle traffic, and drainage issues.

**Notes** This project corresponds to Plant Master Plan Project Nos. 98 and 100 and Validation Project PF-04. Prior to 2018-2022, this project was ongoing in nature; it has since become a finite project.

**Major Cost Changes** 2019-2023 CIP - Decrease of $14.3 million due to a decrease in project scope and a 78" SES pipe that will be replaced in the Digester and Thickener Facilities Upgrade project.
2022-2026 CIP - Decrease of $11.8 million due to a decrease in project scope and construction cost estimates.

| | PRIOR YEARS | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 YEAR TOTAL | BEYOND 5 YEARS | PROJECT TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | | | |
| Project Feasibility Development | 3,339 | 1,987 | 3,710 | 2,974 | 357 | | | 7,041 | | 12,368 |
| Design | 987 | 1,203 | | 3,437 | 3,404 | | | 6,841 | | 9,031 |
| Bid & Award | 379 | 426 | | 365 | 362 | | | 727 | | 1,532 |
| Construction | 1,459 | 16,287 | 4,529 | 30,503 | 31,243 | 1,532 | | 67,807 | | 85,553 |
| Post Construction | 3 | 254 | 55 | 46 | 341 | 338 | | 780 | | 1,037 |
| **Total** | **6,167** | **20,157** | **8,294** | **37,325** | **35,707** | **1,870** | | **83,196** | | **109,520** |
| **Funding Source Schedule (000s)** | | | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 6,167 | 20,157 | 8,294 | 37,325 | 35,707 | 1,870 | | 83,196 | | 109,520 |
| **Total** | **6,167** | **20,157** | **8,294** | **37,325** | **35,707** | **1,870** | | **83,196** | | **109,520** |
| **Annual Operating Budget Impact (000s)** | | | | | | | | | | |
| **Total** | | | | | | | | | | |

### Hydraulic Capacity Engineering

**CSA Outcome** Safe, Reliable, and Sufficient Water Supply; Reliable Utility Infrastructure
**Council Districts** 4
**Department Owner** Environmental Services
**Appropriation** A411B

**Description** This allocation funds the expansion of the South Bay Water Recycling (SBWR) system through the construction of pipeline and ancillary distribution system projects. Use of these funds will be dedicated towards the design, engineering, and inspection for the connection of new developments to the recycled water utility system. SBWR's hydraulic capacity engineering is limited to extensions that are justified by projected water revenues, grant funding, or funds from developers or other government agencies (e.g. Santa Clara Valley Water District). No revenue from Plant Tributary Agencies or City Sanitary Sewer rate payers will be used to fund this project.

| | FY21 Budget | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 Year Total |
|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | |
| Construction | 25 | 25 | 125 | 25 | 25 | 25 | 25 | 225 |
| **Total** | **25** | **25** | **125** | **25** | **25** | **25** | **25** | **225** |
| **Funding Source Schedule (000s)** | | | | | | | | |
| South Bay Water Recycling Capital Fund (571) | 25 | 25 | 125 | 25 | 25 | 25 | 25 | 225 |
| **Total** | **25** | **25** | **125** | **25** | **25** | **25** | **25** | **225** |

### Plant Infrastructure Improvements

**CSA Outcome** Reliable Utility Infrastructure
**Council Districts** 4
**Department Owner** Environmental Services
**Appropriation** A5690

**Description** This allocation provides for improvements, rehabilitation, or replacement of existing Plant infrastructure. Examples of the ongoing replacement and rehabilitation work include handrail replacement, concrete repairs, telecommunication systems upgrade, and Plant support system improvements. 2021-2022 includes an increase of $4.5 million, for a total allocation of $5.5 million, for improvements to the RWF's construction-enabling area to provide sufficient infrastructure to support increased contractor activity at the Facility.

| | FY21 Budget | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 Year Total |
|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | |
| Construction | 1,836 | 1,836 | 5,500 | 1,000 | 1,000 | 1,000 | 1,000 | 9,500 |
| **Total** | **1,836** | **1,836** | **5,500** | **1,000** | **1,000** | **1,000** | **1,000** | **9,500** |
| **Funding Source Schedule (000s)** | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 1,836 | 1,836 | 5,500 | 1,000 | 1,000 | 1,000 | 1,000 | 9,500 |
| **Total** | **1,836** | **1,836** | **5,500** | **1,000** | **1,000** | **1,000** | **1,000** | **9,500** |

## Preliminary Engineering - Water Pollution Control

| | | | |
|---|---|---|---|
| **CSA Outcome** | Reliable Utility Infrastructure | **Council Districts** | 4 |
| **Department Owner** | Environmental Services | **Appropriation** | A7456 |

**Description** This allocation provides funding to support preliminary engineering for Plant-related projects, including studies, pilots, and field verifications to evaluate impacts on operations.

| | FY21 Budget | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 Year Total |
|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | |
| Project Feasibility Development | 2,534 | 2,534 | 2,000 | 1,000 | 1,000 | 1,000 | 1,000 | 6,000 |
| **Total** | **2,534** | **2,534** | **2,000** | **1,000** | **1,000** | **1,000** | **1,000** | **6,000** |
| **Funding Source Schedule (000s)** | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 2,534 | 2,534 | 2,000 | 1,000 | 1,000 | 1,000 | 1,000 | 6,000 |
| **Total** | **2,534** | **2,534** | **2,000** | **1,000** | **1,000** | **1,000** | **1,000** | **6,000** |

## Program Management - Water Pollution Control

| | | | |
|---|---|---|---|
| **CSA Outcome** | Reliable Utility Infrastructure | **Council Districts** | 4 |
| **Department Owner** | Environmental Services | **Appropriation** | A7481 |

**Description** This allocation funds the administration and management of the Water Pollution Control CIP.

| | FY21 Budget | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 Year Total |
|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | |
| General Administration | 15,307 | 15,307 | 11,386 | 10,275 | 10,014 | 9,661 | 3,392 | 44,728 |
| **Total** | **15,307** | **15,307** | **11,386** | **10,275** | **10,014** | **9,661** | **3,392** | **44,728** |
| **Funding Source Schedule (000s)** | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 15,307 | 15,307 | 11,386 | 10,275 | 10,014 | 9,661 | 3,392 | 44,728 |
| **Total** | **15,307** | **15,307** | **11,386** | **10,275** | **10,014** | **9,661** | **3,392** | **44,728** |

## Urgent and Unscheduled Treatment Plant Rehabilitation

| | | | |
|---|---|---|---|
| **CSA Outcome** | Reliable Utility Infrastructure | **Council Districts** | 4 |
| **Department Owner** | Environmental Services | **Appropriation** | A7395 |

**Description** This ongoing allocation is used to investigate, prioritize, and rehabilitate structures and systems at the Water Pollution Control Plant. This funding will be used to respond to the Plant's urgent maintenance and rehabilitation needs that cannot be programmed during the annual CIP budget process.

| | FY21 Budget | FY21 EST | FY22 | FY23 | FY24 | FY25 | FY26 | 5 Year Total |
|---|---|---|---|---|---|---|---|---|
| **Expenditure Schedule (000s)** | | | | | | | | |
| Construction | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 7,500 |
| **Total** | **1,500** | **1,500** | **1,500** | **1,500** | **1,500** | **1,500** | **1,500** | **7,500** |
| **Funding Source Schedule (000s)** | | | | | | | | |
| San José-Santa Clara Treatment Plant Capital Fund (512) | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 7,500 |
| **Total** | **1,500** | **1,500** | **1,500** | **1,500** | **1,500** | **1,500** | **1,500** | **7,500** |

## Summary of Projects that Start After 2021-2022

| | | | |
|---|---|---|---|
| **Project Name** | Aeration Basin Future Modifications | **Initial Start Date** | 3rd Qtr. 2019 |
| **5-Yr CIP Budget** | $ 4,680,000 | **Initial End Date** | 4th Qtr. 2030 |
| **Total Budget** | $ 50,277,000 | **Revised Start Date** | 3rd Qtr. 2024 |
| **Council Districts** | 4 | **Revised End Date** | |
| **Description** | This project modifies the existing step-feed aeration basins to a Modified Ludzack-Ettinger (MLE) process, which would involve structural modifications to existing tanks and new mixers, pumps, fine bubble diffusers, and methanol feed systems. | | |

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| | | | |
|---|---|---|---|
| **Project Name** | East Primary Rehabilitation, Seismic Retrofit, and Odor Control | **Initial Start Date** | 3rd Qtr. 2009 |
| **5-Yr CIP Budget** | $ 106,785,000 | **Initial End Date** | 4th Qtr. 2012 |
| **Total Budget** | $ 112,974,114 | **Revised Start Date** | 3rd Qtr. 2010 |
| **Council Districts** | 4 | **Revised End Date** | 2nd Qtr. 2031 |
| **Description** | This project rehabilitates the existing primary clarifiers, including the coating of concrete and replacement of clarifier mechanisms with corrosion resistant materials. It also includes structural retrofits to allow new covers to be installed over a portion or all of the primary treatment area to contain odors. A new odor extraction and treatment system will also be constructed. | | |

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| | | | |
|---|---|---|---|
| **Project Name** | Final Effluent Pump Station & Stormwater Channel Improvements | **Initial Start Date** | 3rd Qtr. 2019 |
| **5-Yr CIP Budget** | $ 43,003,000 | **Initial End Date** | 3rd Qtr. 2025 |
| **Total Budget** | $ 47,358,316 | **Revised Start Date** | |
| **Council Districts** | 4 | **Revised End Date** | 2nd Qtr. 2027 |
| **Description** | This project designs and constructs a new pump station to hydraulically push the Plant's final treated effluent to Coyote Creek. Additionally, it will improve the existing stormwater channel by rehabilitating the flapper gates and embankments. | | |

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| | | | |
|---|---|---|---|
| **Project Name** | Flood Protection | **Initial Start Date** | 3rd Qtr. 2017 |
| **5-Yr CIP Budget** | $ 4,095,000 | **Initial End Date** | 2nd Qtr. 2021 |
| **Total Budget** | $ 5,867,013 | **Revised Start Date** | |
| **Council Districts** | 4 | **Revised End Date** | 2nd Qtr. 2025 |
| **Description** | This project provides 100-year flood protection for the Plant by constructing engineered earthen berms on the northern and eastern sides of the Plant. | | |

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| | | | |
|---|---|---|---|
| **Project Name** | New Disinfection Facilities | **Initial Start Date** | 3rd Qtr. 2020 |
| **5-Yr CIP Budget** | $ 7,131,000 | **Initial End Date** | 2nd Qtr. 2029 |
| **Total Budget** | $ 56,977,000 | **Revised Start Date** | 3rd Qtr. 2024 |
| **Council Districts** | 4 | **Revised End Date** | |
| **Description** | This project constructs a new disinfection facility (currently assumed to be based on ultraviolet (UV) technology) to replace the existing sodium hypochlorite disinfection facility. It may also expand the existing chlorine contact basins to accommodate future peak hour wet weather flows and construct a new on-site hypochlorite generation facility. This project would only be triggered if new regulations concerning emerging contaminants are issued by the Regional Water Board within the next two to three NPDES permit cycles, and additional studies confirm future flow projections. | | |

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## Summary of Projects that Start After 2021-2022

| | | | |
|---|---|---|---|
| **Project Name** | Secondary Clarifier Rehabilitation | **Initial Start Date** | 1st Qtr. 2017 |
| **5-Yr CIP Budget** | $ 25,777,000 | **Initial End Date** | 2nd Qtr. 2024 |
| **Total Budget** | $ 26,455,000 | **Revised Start Date** | 3rd Qtr. 2023 |
| **Council Districts** | 4 | **Revised End Date** | 4th Qtr. 2031 |

**Description** The Plant has 26 secondary clarifiers configured with peripheral mix liquor feed channel, and either central or peripheral launders. The first phase of this project rehabilitates one secondary (BNR1) clarifier and retrofits it to receive a new baffle configuration based on computational fluid dynamic (CFD) modeling results. The new configuration is expected to improve clarifier performance and efficiency. The subsequent phases of the project will rehabilitate and convert the remaining 25 clarifiers based on the results of the first phase. Rehabilitation will include structural, mechanical, electrical, and instrumentation improvements.

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| | | | |
|---|---|---|---|
| **Project Name** | Tunnel Rehabilitation | **Initial Start Date** | 2nd Qtr. 2015 |
| **5-Yr CIP Budget** | $ 2,769,000 | **Initial End Date** | 4th Qtr. 2024 |
| **Total Budget** | $ 27,638,292 | **Revised Start Date** | 3rd Qtr. 2024 |
| **Council Districts** | 4 | **Revised End Date** | 2nd Qtr. 2028 |

**Description** This project will rehabilitate and make safety improvements to the tunnel system throughout the Plant. The work may include structural, mechanical, electrical, ventilation, fire safety, and coating improvements and will be completed in phases based on a detailed condition assessment, physical testing, and prioritization of needs.

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| | | | |
|---|---|---|---|
| **Project Name** | Various Infrastructure Decommissioning | **Initial Start Date** | 3rd Qtr. 2018 |
| **5-Yr CIP Budget** | $ 21,751,000 | **Initial End Date** | 2nd Qtr. 2022 |
| **Total Budget** | $ 22,220,000 | **Revised Start Date** | 3rd Qtr. 2020 |
| **Council Districts** | 4 | **Revised End Date** | 2nd Qtr. 2025 |

**Description** This project will decommission and remove equipment, structures, and piping located in Building 40, Pump and Engine Building, Sludge Control Building, digester campus, and tunnels.

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## Summary of Reserves

| | |
|---|---|
| **Project Name** | Hydraulic Capacity Enhancements Reserve |
| **5-Yr CIP Budget** | $ 3,666,000 |
| **Total Budget** | $ 3,666,000 |
| **Council Districts** | 4 |
| **Description** | This reserve sets aside funding for future design, engineering, and inspection for the connection of new developments to the recycled water utility system. This reserve is fully funded by the South Bay Water Recycling Capital Fund; no revenue from Plant Tributary Agencies or City Sanitary Sewer rate payers has been used for the allocation of this reserve. |

## Explanation of Funds

Revenues and expenditures for the operation and maintenance of the San José-Santa Clara Water Pollution Control Plant (Plant) are accounted for by the City of San José, as the administering agency, through the San José-Santa Clara Treatment Plant Operating Fund (Operating Fund) and the San José-Santa Clara Treatment Plant Capital Fund (Capital Fund).

Revenues from tributary agencies of the San José-Santa Clara Water Pollution Control Plant are recorded directly into the Operating and Capital Funds. The tributary agencies include the City of Milpitas, City of Cupertino, Burbank Sanitary District, County Sanitation District No. 2-3, and West Valley Sanitation District.

Tributary agencies are assessed for their share of annual operation, maintenance, equipment, and facilities replacement and capital costs, based on their respective flow and strength of sewage conveyed to the Plant.

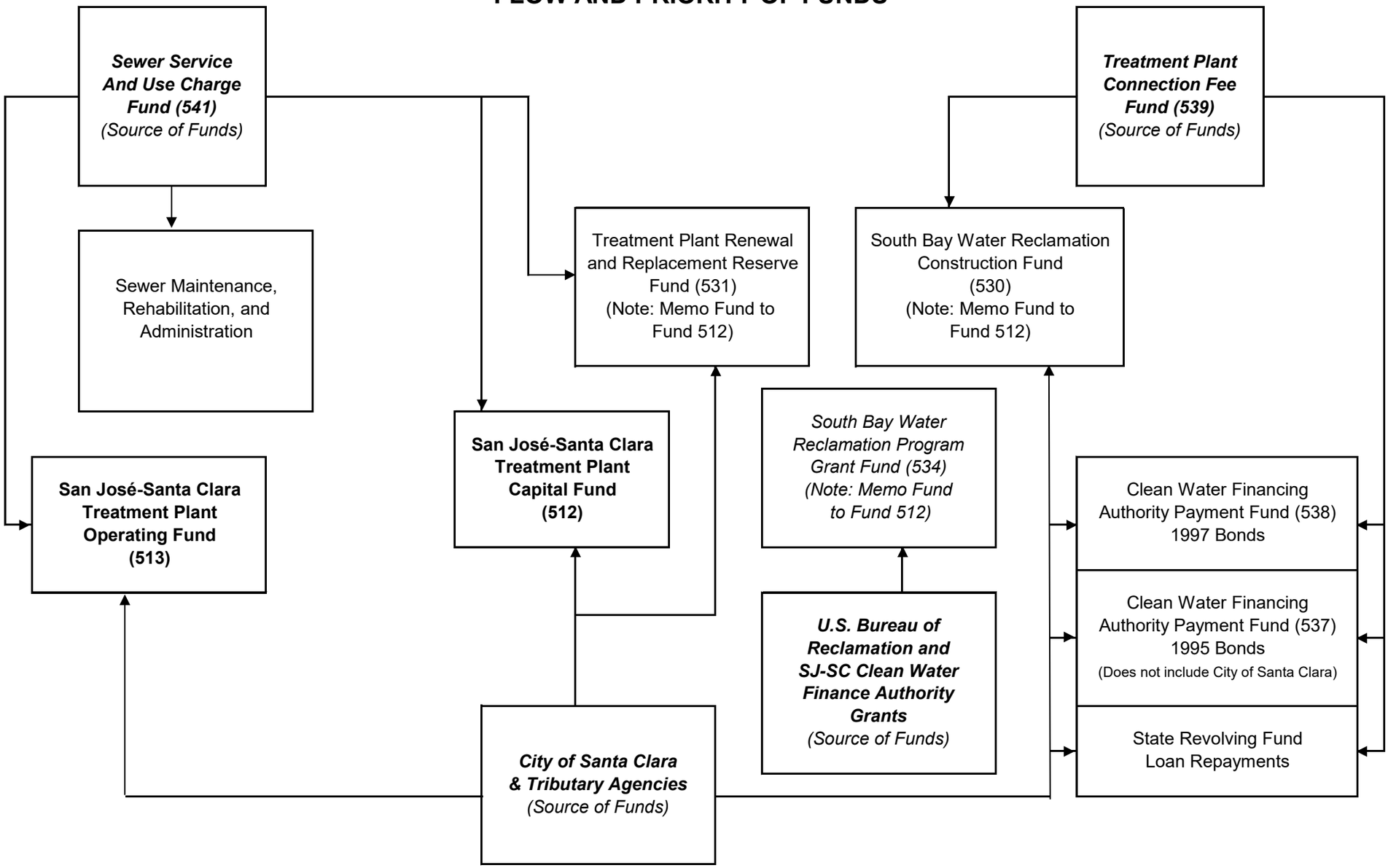
The San José Sewer Service and Use Charge Fund was established in the San José Municipal Code Section 15.12.640 in August 1959. This fund is the depository of revenues from Sewer Service and Use Charges received from residential, commercial, and industrial users of the sanitary sewer system. A portion of these monies is transferred to the Operating and Capital Funds to pay for the City of San José's share of operating and capital costs of the Plant.

The Santa Clara Sewer Revenue Fund was established by Resolution Number 916 of the City Council of Santa Clara in October 1960. Like the City of San José, revenues from this fund are transferred directly to the Operating and Capital Funds.

The Capital Fund provides all monies used for capital projects. Included in this fund is the Treatment Plant Renewal and Replacement Fund. This fund was established to satisfy the Plant's federal and State grant agreements as well as to comply with bond covenants.

The South Bay Water Recycling (SBWR) Capital Fund provides monies for capital improvement projects in support of SBWR system infrastructure.

# WATER POLLUTION CONTROL PLANT
# FLOW AND PRIORITY OF FUNDS




The arrows indicate the flow of funds from each of the various sources to the fund in which the revenues are expended.