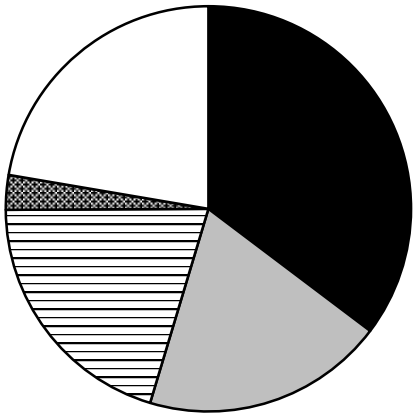
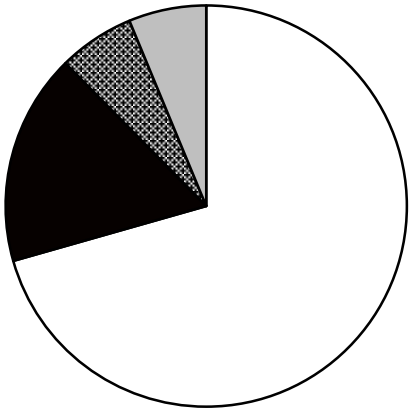
WATER POLLUTION CONTROL
2019-2023 Capital Improvement Program

2018-2019 Adopted Source of Funds

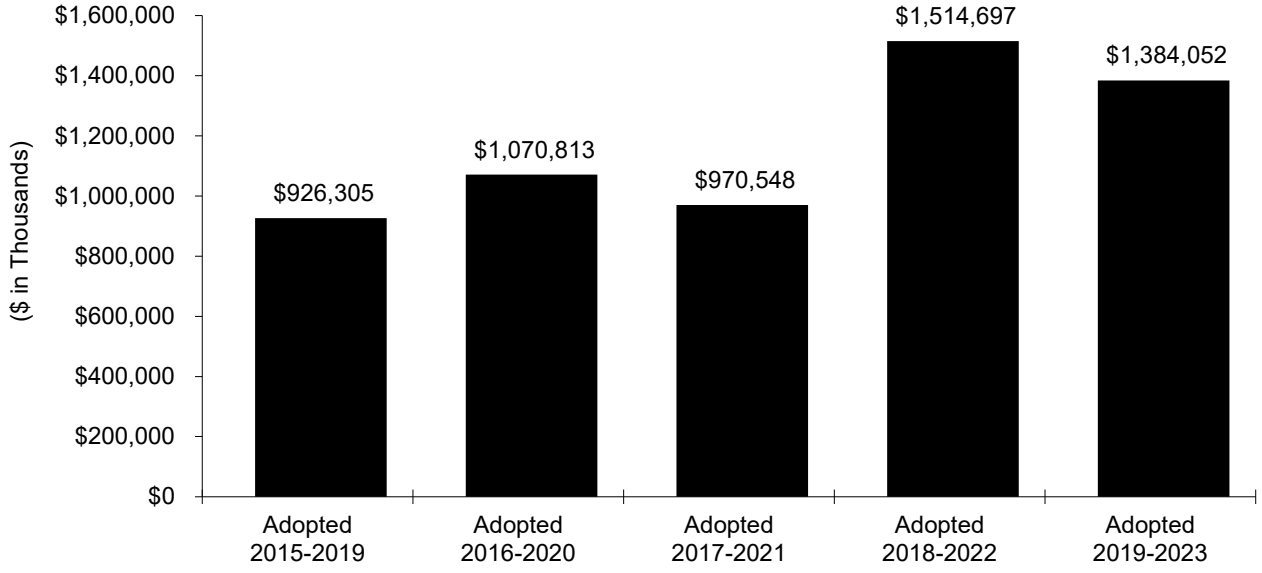


2018-2019 Adopted Use of Funds



Beginning Fund Balance
Other Government Agencies
Construction
Non-Construction
Transfers
Interest and Miscellaneous
Reserves and Transfers
Ending Fund Balance
Financing Proceeds

CIP History



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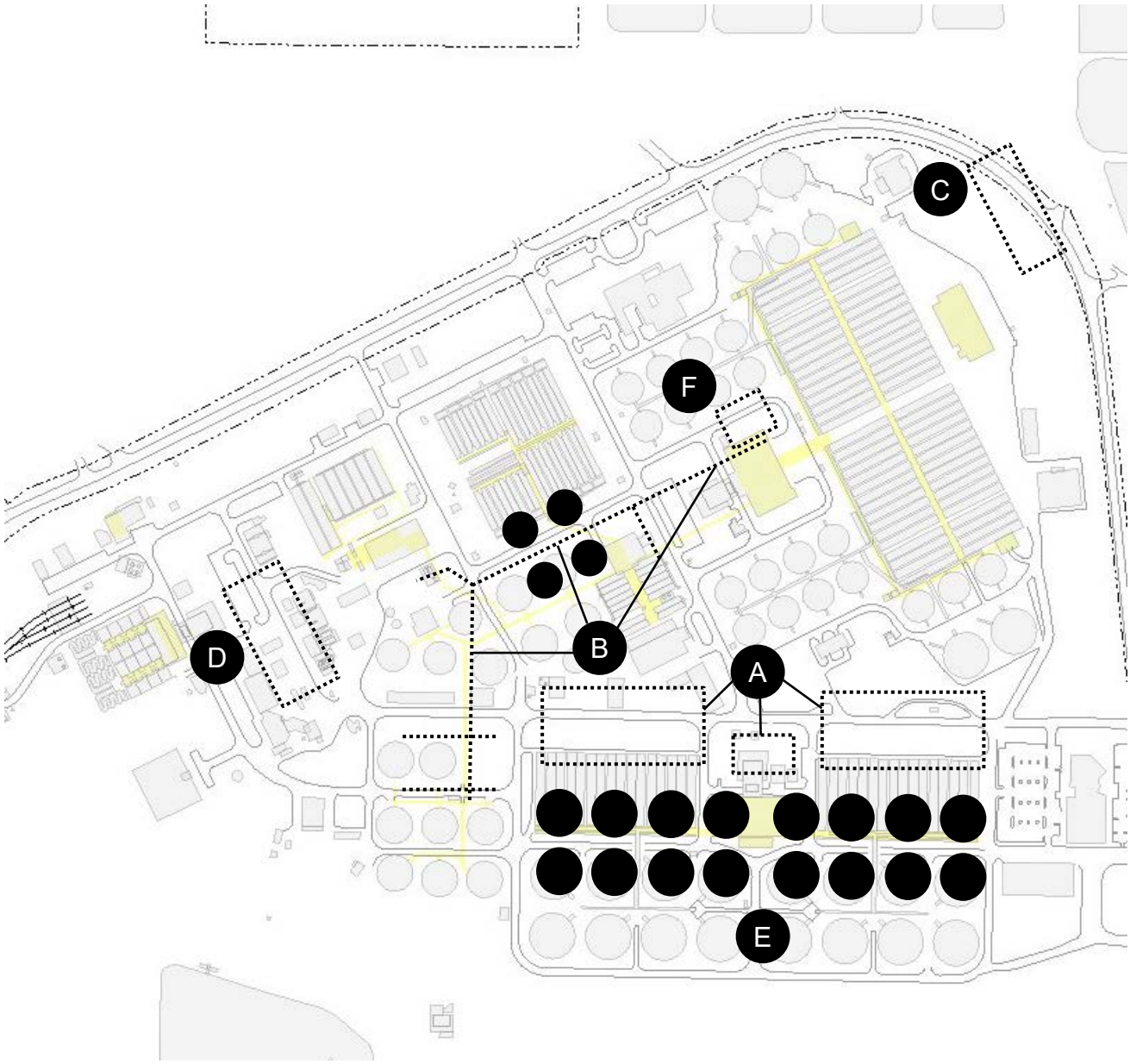
Water Pollution Control

2019-2023 Adopted Capital Improvement Program*

A) Aeration Tanks and Blower Rehabilitation
B) Digester and Thickener Facilities Upgrade
C) Energy Generation Imp.
D) Headworks Imp. and New Headworks
E) Nitrification Clarifier Rehabilitation
F) Plant Instrument Air System Upgrade



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

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Water Pollution Control Capital Program

2019-2023 Adopted Capital Improvement Program

Overview

INTRODUCTION

PLANT 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)	101
DRY METRIC TONS OF BIOSOLIDS HAULED EACH YEAR	37,000
AVERAGE MEGAWATTS PRODUCED	8.2

The San José-Santa Clara Water Pollution Control Plant (Plant) 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 Plant 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 Plant, including water reuse facilities. On March 26, 2013, the City Council approved to change the name of the Plant to the San José-Santa Clara Regional Wastewater Facility (RWF) for use in public communications and outreach.

The 2019-2023 Adopted Capital Improvement Program (CIP) provides funding of $1.38 billion, of which $174.7 million is allocated in 2018-2019. 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 Plant. Each agency is responsible for its allocated share of Plant 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 2019-2023 Adopted 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 Plant in compliance with all applicable local, state, and federal regulatory requirements.

PROGRAM PRIORITIES AND OBJECTIVES

The development of this Adopted CIP is guided by the Plant Master Plan (PMP), a 30-year planning-level document focused on long-term rehabilitation and modernization of the Plant. 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 Adopted 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: obtaining long-term financing (for San José only); continuing to build operating reserves needed for bond issuance; continuing to prioritize projects based on criticality and staffing resources; and actively managing project risks and variables to inform timing and amount of major encumbrances.

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

PROGRAM PRIORITIES AND OBJECTIVES

Program Funding: Since early 2014, staff has been 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. The staff reports are available online.[2]

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 will continue to monitor the issue and evaluate further SRF opportunities as appropriate. However, based on the City's recent 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.

In October 2017, the City Council approved the establishment of a $300 million interim financing facility to finance external third-party capital costs. As the CIP progresses, the City will periodically pay off the interim financing facility with long-term bonds. This strategy provides funding for the CIP at the lowest possible cost with the least amount of risk.

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 continues to operate under an integrated project delivery model using a combination of City staff and consultants. The program is being delivered using a mix of City staff from Environmental Services Department, Public Works Department, Planning, Building and Code Enforcement Department, Finance Department, and the City Attorney's Office, as well as program management consultant staff and various other consultant firms.

With more than two dozen large projects moving through the feasibility/development and design development phases, the program will need to continue 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. Over the last year, staff has put several tools or initiatives into place in anticipation of this large construction ramp up, including an owner-controlled insurance program (OCIP), a design and construction management document system (EADOC), and a Building Official Program.

Developing a construction management resourcing model and plan is a top priority for the 2019-2023 Adopted CIP, with a ramp up in construction expected in 2019-2020 and 2020-2021 that would result in additional construction management support being needed in Public Works for the program.

[2] June 2, 2015 Memo: http://sanjose.granicus.com/MetaViewer.php?view_id=&event_id=732&meta_id=516433
January 12, 2016 Memo: http://sanjose.granicus.com/MetaViewer.php?view_id=&event_id=2118&meta_id=550326

PROGRAM PRIORITIES AND OBJECTIVES

Another significant priority for this CIP is to perform a minor update to the Plant Master Plan to incorporate changes in operational, regulatory, and technological conditions, since the original PMP was completed in 2011. In addition, the update will incorporate changes to the PMP capital project list that were a result of the 2014 project validation process, as well as include gap projects identified since that effort.

Program/Project Delivery Variables: Building on the program start-up activities, which concluded in June 2014, the program team will continue 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.

On the project delivery front, it is important to recognize that many projects in the Adopted CIP are in the feasibility/development phase. 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.

A number of program tools and resources will be used to counter potential impacts to the overall program delivery; these include employing a program interface manager and construction coordinator to address project interface issues during design and construction, obtaining local professional cost estimating services, scheduling regular meetings with regulatory and permitting entities, and continuing to implement the CIP Program Delivery Model (PDM) stage gate approvals.

In addition, staff will continue to apply the lessons learned from large construction projects, like the Digester and Thickener Facilities Upgrade project, to future projects. This includes proactively performing subsurface utility investigations, condition assessments, process shutdown verifications, and hazardous materials investigations.

SOURCES OF FUNDING

Revenues for the 2019-2023 Adopted CIP are derived from several sources: transfers from the City of San José Sewer Service and Use Charge (SSUC) Fund and Sewage Treatment Plant Connection Fee Fund; contributions from the City of Santa Clara and other tributary agencies; interest earnings; Calpine Metcalf Energy Center Facilities repayments; a federal grant from the U.S. Bureau of Reclamation; and debt-financing proceeds.

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 Plant CIP over the five years total $214.9 million, which represents a $5.1 million (2.3%) decrease as compared to the 2018-2022 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 Plant expenditures, and the amount and characteristics of flows from each agency's connections to the Plant. These contributions reimburse the City for actual project expenditures. In this Adopted CIP, contributions from the City of Santa Clara and other agencies total $317.3 million, which represents a $1.6 million (0.5%) decrease compared to the 2018-2022 Adopted CIP.

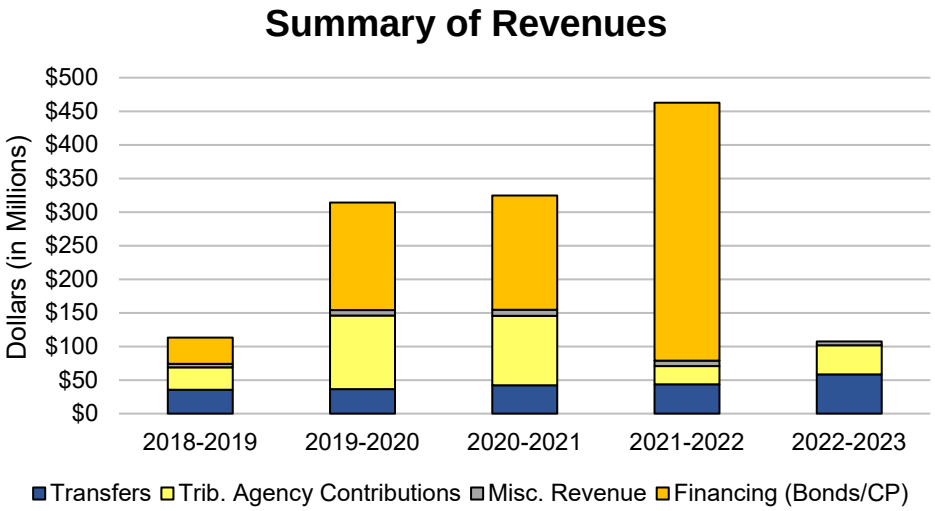
To accommodate project costs for the San José-Santa Clara Regional Wastewater Facility (RWF), wastewater revenue notes (notes) ($369.0 million) and bond proceeds ($384.3) million are assumed to cover costs of the RWF improvements in the Adopted CIP for the 2018-2019 through 2022-2023 period. The establishment of an interim financing program, in the form of wastewater revenue notes, ($300 million) was approved and issued in 2017-2018. The notes will provide periodic short-term, flexible funding to meet the cash flow needs of the RWF improvement project. Generally, the notes are repaid within a 3-year period and offer a lower interest costs than fixed rate bonds. During this CIP period, bonds will also be issued in the amount of $384.3 million to both repay the notes issued in 2017-2018 and provide $84.3 million in additional funding for the RWF project. Associated debt service for the wastewater revenue notes and debt service for the bonds is estimated to be $1.8 million in 2018-2019, $3.2 million in 2019-2020, $5.8 million in 2020-2021, $307.2 million in 2021-2022, and $27.2 million in 2022-2023. The estimated size of the debt financings and the related debt service are scheduled to cover external third-party capital costs programmed in the 2019-2023 Adopted 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 Adopted CIP period.

Water Pollution Control Capital Program

2019-2023 Adopted Capital Improvement Program

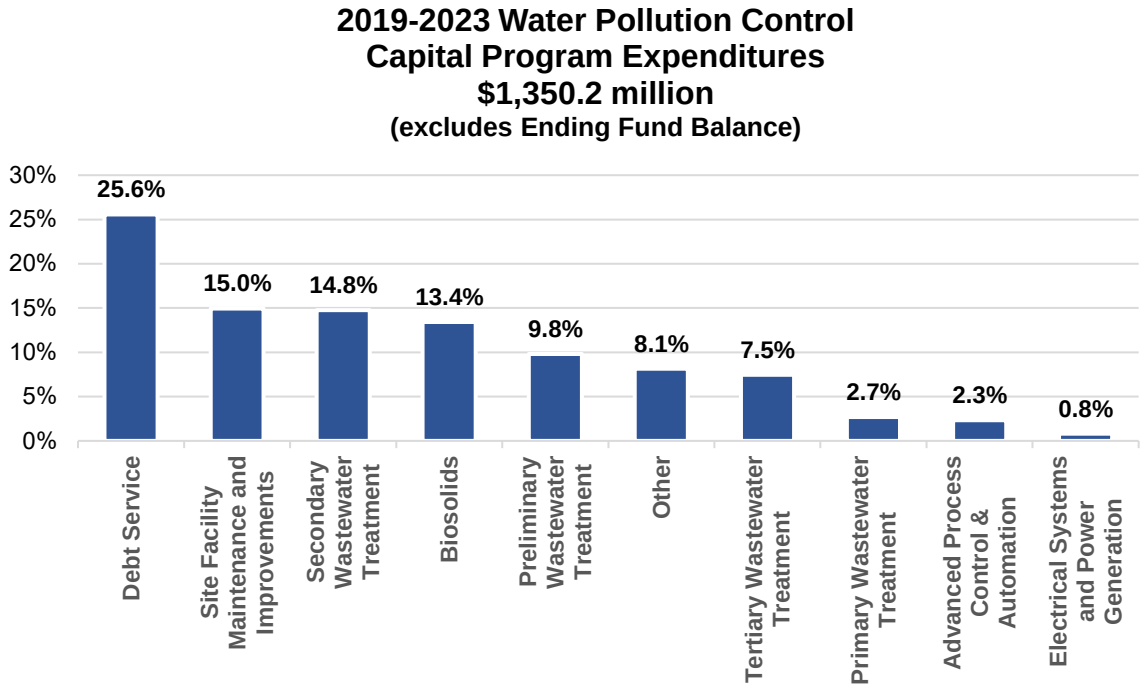
Overview

SOURCES OF FUNDING



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.



PROGRAM HIGHLIGHTS

New Headworks

The headworks facilities at the Plant provide the first step of treatment, also known as preliminary treatment, by removing large inorganic material, such as sticks, stones, grit, and sand, from the influent wastewater stream before it impacts downstream treatment units. This initial treatment protects and reduces wear on the downstream process equipment, minimizes plugging and clogging of pipes, and enhances overall process performance.

The Plant has two headworks facilities. The original headworks facility, known as Headworks 1, was built in the mid-1950s and expanded in the 1960s, and serves as the Plant's duty headworks. It includes mechanical bar screens, aerated grit tanks, detritors, screenings and grit handling facilities, and a pump station.

Headworks 1 Bar Screens

A second headworks facility, known as Headworks 2, was commissioned in 2008 to operate in parallel with Headworks 1 and handle peak wet weather flows. Headworks 2 includes mechanical bar screens, vortex grit removal units, screenings and grit handling facilities, and a pump station.

Due to extensive rehabilitation work required to maintain Headworks 1, the PMP recommended decommissioning it and constructing a new headworks facility to meet current and future flows. At an estimated total cost of $127.3 million, the New Headworks project will replace the aging Headworks 1. This project includes new mechanical bar screens, grit removal equipment, screenings and grit handling facilities, pump station, odor control, and miscellaneous piping enhancements. The project also rehabilitates and expands the existing emergency overflow basin, and consolidates influent piping.

Proposed Site for New Headworks

This project will be designed in conjunction with the Headworks Improvements project, which will improve the reliability of Headworks 2 and relocate pipelines to reroute flows from Headworks 1 to Headworks 2 and the new headworks in preparation for the decommissioning of Headworks 1.

Water Pollution Control Capital Program

2019-2023 Adopted Capital Improvement Program

Overview

PROGRAM HIGHLIGHTS

The 2019-2023 Adopted CIP allocates $116.7 million for design, construction, contingency, and project management costs. Award of the design-build contract is expected in summer 2018, though costs for contract actions are anticipated across multiple fiscal years, and construction completion is anticipated in 2022-2023.

Digester and Thickener Facilities Upgrade

The Plant currently processes biosolids material through a combination of anaerobic digestion, lagoon storage, and air drying. The Plant has 16 anaerobic digesters of varying ages constructed between 1956 and 1983. Of the 16 digesters installed, six are currently out of service due to structural damage or other mechanical failures. The remaining ten digesters are operational but are near the end of their useful life. The digesters receive primary sludge (i.e. solids) from the primary clarifiers and thickened waste activated sludge from the Dissolved Air Flotation Tanks (DAFTs). Sludge is retained in the digester tanks for up to 30 days to allow the digestion process to reduce volatile solids and destroy pathogens.

The digested sludge is then pumped and stored in open air storage lagoons (a three-year process) and drying beds (a six-month process) for further stabilization and conversion to high-quality Class A biosolids. The dried biosolids are eventually trucked to the nearby Newby Island landfill for use as alternate daily cover.

Existing digesters

The original anaerobic digestion process was designed to operate under mesophilic conditions to produce Class B biosolids in accordance with U.S. Environmental Protection Agency (USEPA) Title 40 Part 503. During a Biosolids Study Session, held in April 2014, TPAC requested that staff explore the possibility of producing Class A biosolids instead of Class B biosolids, including impacts on operation and maintenance costs. The study was completed and determined that Class A biosolids could be achieved through modification of the current mesophilic digestion process to a two-stage thermophilic phased anaerobic digestion (TPAD) process. In comparing the various alternatives, it was determined that TPAD was a cost-effective way to provide a superior overall sludge digestion process as well as position the Plant to economically produce Class A biosolids at a future date. In November 2014, TPAC accepted staff's recommendation to proceed with TPAD configuration. In December 2014, Council approved and directed staff to proceed with the TPAD configuration.

PROGRAM HIGHLIGHTS

Digester and Thickener Facilities Upgrade (Cont'd.)

At an estimated total cost of $169.7 million, the Digester and Thickener Facilities Upgrade project will completely rehabilitate four digesters. This project includes: new covers and mixing systems; modifications to operate as a two-phase TPAD system; structural repairs and seismic retrofits; heating system, gas collection conveyance system, and tunnel system upgrades; electrical, instrumentation, and control systems upgrades; and the retrofit of six DAFT units to allow for the co-thickening of primary and secondary sludge, including new odor control treatment. The project will also construct a new primary sludge screening facility, heat exchangers, waste biogas flare, and polymer dosing facility.

3-D rendering of rehabilitated digesters

Construction began in July 2016 and is approximately 50% complete. The Project has experienced significant challenges and delays since the beginning of construction, including unforeseen conditions, underground utility conflicts, unexpected regulatory requirements, deteriorated pipe conditions, seismic design issues, and hazardous materials mitigation. Many of these issues are typical of large, complex construction projects. An evaluation of the costs and delays associated with the seismic design issues and hazardous materials mitigation was completed and an appropriation increase to resolve these issues was brought forward and approved by the City Council on June 19, 2018. While the project is currently behind schedule, it is anticipated to be completed in 2021-2022.

The funding of $8.4 million programmed in the 2019-2023 Adopted CIP covers construction management, construction contingency, and post-construction costs for the project.

MAJOR CHANGES FROM THE 2018-2022 ADOPTED CIP

The overall size of the Water Pollution Control CIP has decreased by $130.6 million from $1.51 billion in the 2018-2022 Adopted CIP to $1.38 billion in the 2019-2023 Adopted CIP. The following table outlines the most significant changes from the 2018-2022 Adopted CIP to the 2019-2023 Adopted CIP.

Project Name	Incr/(Decr)
Additional Digester Upgrades	$51.6 million
Final Effluent Pump Station & Stormwater Channel Improvements	$37.2 million
Debt Service Repayment for Plant Capital Improvement Projects	($153.5 million)
Energy Generation Improvements	($67.8 million)

OPERATING BUDGET IMPACT

Several projects in this Adopted CIP are expected to introduce new operating costs to the Operating Budget. These include: New Headworks, Digested Sludge Dewatering Facility, Digester and Thickener Facilities Upgrade, and Energy Generation Improvements. The operation and maintenance impacts are due to chemical, labor, maintenance consumables (e.g. parts, oil), electrical, and hauling & tipping costs.

The estimated net operating impact of the Digester and Thickener Facilities Upgrade project may be adjusted in the future after additional analysis is performed to determine required staffing levels to operate and maintain the facilities. The estimate also assumes that all power and heating needs will be provided by the Cogeneration Facility.

A new Digested Sludge Dewatering Facility is anticipated to be in operation by late 2022, which will include new mechanical dewatering units, feed tank, sludge storage, conveyance, and chemical dosing facilities to be housed in a new building. This facility will allow for the eventual retirement of the current lagoons and sludge drying beds expected to be completed in 2027.

A new Cogeneration Facility (part of the Energy Generation Improvements project) is expected to come online in late 2019 that will introduce a new generator building, new engine generators, a gas treatment system, boilers, chillers, and other ancillary equipment. In addition, a new chilled water system pump station may be incorporated as part of the project. A more detailed analysis of current and future operating and maintenance costs will be available in fall 2018 after completion of preliminary and detailed design by the project's design-builder. Additionally, depending on the timing of when new facilities come online and existing facilities are decommissioned, there may be a temporary increase in operating costs due to the dual operations.

The table below summarizes the operating and maintenance impact to the Sewer Service and Use Charge Fund for several projects.

Net Operating Budget Impact Summary

	2019-2020	2020-2021	2021-2022	2022-2023
Digester and Thickener Facilities Upgrade		$1,300,000	$1,622,000	$1,687,000
Digested Sludge Dewatering Facility				8,788,000
New Headworks				21,000
Energy Generation Improvements	$84,000	87,000	89,000	92,000
	$84,000	$1,387,000	$1,711,000	$10,588,000

Note: The estimated operating costs have been provided by the Environmental Services Department and have not yet been fully analyzed by the City Manager's Budget Office. That analysis may result in different costs when the actual budget for the year in question is developed.

COUNCIL-APPROVED REVISIONS TO THE PROPOSED CAPITAL IMPROVEMENT PROGRAM

Changes to the Proposed Capital Improvement Program were brought forward in the Mayor's June Budget Message for Fiscal Year 2018-2019 and approved by the City Council on June 12, 2018. This included the rebudgeting of unexpended funding for projects totaling $48.9 million due to project delays. For additional information regarding these rebudgets, please refer to the Manager's Budget Addendum #29 that was incorporated into the Mayor's June Budget Message.

Attachment A - Operating Budget Impact

	2019-2020	2020-2021	2021-2022	2022-2023
Water Pollution Capital Program				
New Headworks				$21,000
Digested Sludge Dewatering Facility				$8,788,000
Digester and Thickener Facilities Upgrade		$1,300,000	$1,622,000	$1,687,000
Energy Generation Improvements	$84,000	$87,000	$89,000	$92,000
Total Water Pollution Capital Program	**$84,000**	**$1,387,000**	**$1,711,000**	**$10,588,000**

2018-2019 Capital Budget

2019-2023 Capital Improvement Program

Water Pollution Control

Source and Use of Funds Statements

Source of Funds (Combined)

	Estimated 2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	5-Year Total	
San José-Santa Clara Treatment Plant Capital Fund (512)								
Beginning Balance	60,388,200	61,667,816	10,926,816	5,823,816	5,694,816	82,549,816	61,667,816	*
Reserve for Encumbrance	155,970,229							
Transfers								
Transfer for 2009 Debt Service from the Sewer Service and Use Charge Fund (541)	5,716,000	5,369,000	5,372,000	5,371,000			16,112,000	
Transfer for Plant CIP Debt Service from Sewer Service and Use Charge Fund (541)	721,000	1,815,000	3,192,000	5,834,000	12,373,000	27,238,000	50,452,000	
Transfer for Capital Projects from Sewer Service and Use Charge Fund (541)	17,000,000	27,000,000	27,000,000	30,000,000	30,000,000	30,000,000	144,000,000	
Transfer for Equipment Replacement from Sewer Service and Use Charge Fund (541)			1,083,000	1,083,000	1,083,000	1,083,000	4,332,000	
Transfer from the Sewage Treatment Plant Connection Fee Fund (539)	3,090,000	1,249,000					1,249,000	
TOTAL Transfers	**26,527,000**	**35,433,000**	**36,647,000**	**42,288,000**	**43,456,000**	**58,321,000**	**216,145,000**	
Revenue from Use of Money and Property								
Interest Income	3,241,000	4,431,000	7,166,000	8,545,000	7,099,000	5,223,000	32,464,000	
TOTAL Revenue from Use of Money and Property	**3,241,000**	**4,431,000**	**7,166,000**	**8,545,000**	**7,099,000**	**5,223,000**	**32,464,000**	
Revenue from Local Agencies								
2009 Bond Debt Repayment	165,000	155,000	155,000	155,000			465,000	
State Revolving Fund - Loan Repayment	1,374,000	555,000					555,000	
WPCP Projects and Equipment Replacement	49,157,000	32,862,000	109,322,000	103,130,000	27,441,000	43,495,000	316,250,000	

Water Pollution Control

2019-2023 Adopted Capital Improvement Program

Source of Funds (Combined)

	Estimated 2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	5-Year Total	
TOTAL Revenue from Local Agencies	**50,696,000**	**33,572,000**	**109,477,000**	**103,285,000**	**27,441,000**	**43,495,000**	**317,270,000**	
Revenue from the Federal Government								
U.S. Bureau of Reclamation Grant	250,000	250,000	250,000	250,000	250,000	250,000	1,250,000	
TOTAL Revenue from the Federal Government	**250,000**	**250,000**	**250,000**	**250,000**	**250,000**	**250,000**	**1,250,000**	
Other Revenue								
Calpine Metcalf Energy Center Facilities Repayment	389,000	389,000	389,000	389,000	389,000	389,000	1,945,000	
TOTAL Other Revenue	**389,000**	**389,000**	**389,000**	**389,000**	**389,000**	**389,000**	**1,945,000**	
Financing Proceeds								
Wastewater Revenue Notes	90,000,000	39,000,000	160,000,000	170,000,000			369,000,000	
Bond Proceeds					384,310,000		384,310,000	
TOTAL Financing Proceeds	**90,000,000**	**39,000,000**	**160,000,000**	**170,000,000**	**384,310,000**		**753,310,000**	
Total San José-Santa Clara Treatment Plant Capital Fund (512)	**387,461,429**	**174,742,816**	**324,855,816**	**330,580,816**	**468,639,816**	**190,227,816**	**1,384,051,816**	*
TOTAL SOURCES	**387,461,429**	**174,742,816**	**324,855,816**	**330,580,816**	**468,639,816**	**190,227,816**	**1,384,051,816**	*

* The 2019-2020 through 2022-2023 Beginning Balances are excluded from the FIVE-YEAR TOTAL SOURCE OF FUNDS to avoid multiple counting of the same funds.

2019-2023 Adopted Capital Improvement Program

Use of Funds (Combined)

	Estimated 2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	5-Year Total
Water Pollution Control							
Headworks Improvements	3,409,873	1,316,000	13,501,000	366,000	312,000	104,000	15,599,000
New Headworks	7,378,825	2,146,000	110,036,000	2,024,000	1,902,000	633,000	116,741,000
Preliminary Wastewater Treatment	**10,788,698**	**3,462,000**	**123,537,000**	**2,390,000**	**2,214,000**	**737,000**	**132,340,000**
East Primary Rehabilitation, Seismic Retrofit, and Odor Control	39,882	1,000,000	11,842,000	22,176,000	686,000	684,000	36,388,000
Iron Salt Feed Station	3,403,623	135,000					135,000
Primary Wastewater Treatment	**3,443,504**	**1,135,000**	**11,842,000**	**22,176,000**	**686,000**	**684,000**	**36,523,000**
Aeration Basin Future Modifications			846,000	4,274,000	770,000	440,000	6,330,000
Aeration Tanks and Blower Rehabilitation	25,276,808	54,112,000	2,069,000	61,463,000	1,228,000	955,000	119,827,000
Nitrification Clarifier Rehabilitation	3,141,907	1,941,000	41,530,000	1,290,000	1,275,000	1,240,000	47,276,000
Secondary Clarifier Rehabilitation		565,000	4,003,000	21,209,000	159,000	164,000	26,100,000
Secondary Wastewater Treatment	**28,418,715**	**56,618,000**	**48,448,000**	**88,236,000**	**3,432,000**	**2,799,000**	**199,533,000**
Filter Rehabilitation	1,422,534	4,198,000	33,324,000	1,166,000	1,090,000	454,000	40,232,000
Final Effluent Pump Station & Stormwater Channel Improvements			902,000	5,999,000	1,104,000	37,234,000	45,239,000
New Disinfection Facilities				952,000	6,179,000	722,000	7,853,000
Outfall Bridge and Levee Improvements	868,622	1,732,000	4,929,000	619,000			7,280,000
Tertiary Wastewater Treatment	**2,291,156**	**5,930,000**	**39,155,000**	**8,736,000**	**8,373,000**	**38,410,000**	**100,604,000**
Additional Digester Upgrades			1,191,000	8,031,000	1,298,000	51,576,000	62,096,000
Digested Sludge Dewatering Facility	3,465,291	11,103,000	1,708,000	95,819,000	1,563,000	212,000	110,405,000
Digester and Thickener Facilities Upgrade	119,798,072	5,108,000	1,910,000	1,113,000	220,000		8,351,000
FOG Receiving						313,000	313,000
Lagoons and Drying Beds Retirement	3,128						
Biosolids	**123,266,491**	**16,211,000**	**4,809,000**	**104,963,000**	**3,081,000**	**52,101,000**	**181,165,000**

2019-2023 Adopted Capital Improvement Program

Use of Funds (Combined)

	Estimated 2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	5-Year Total
Combined Heat and Power Equipment Repair and Rehabilitation	287,243						
Energy Generation Improvements	98,139,917	3,441,000	1,644,000				5,085,000
Plant Electrical Reliability	844,122	5,959,000	408,000	47,000	65,000		6,479,000
Electrical Systems and Power Generation	**99,271,282**	**9,400,000**	**2,052,000**	**47,000**	**65,000**		**11,564,000**
Advanced Facility Control and Meter Replacement	13,237,292	2,560,000	21,067,000	1,141,000	773,000	313,000	25,854,000
Treatment Plant Distributed Control System	603,719	1,937,000	2,000,000	1,000,000	500,000		5,437,000
Advanced Process Control & Automation	**13,841,010**	**4,497,000**	**23,067,000**	**2,141,000**	**1,273,000**	**313,000**	**31,291,000**
Construction-Enabling Improvements	1,417,138	68,000					68,000
Equipment Replacement	1,661,194	1,663,000	1,663,000	1,663,000	1,663,000	1,663,000	8,315,000
Facility Wide Water Systems Improvements	628,914	2,276,000	447,000	11,217,000	608,000	621,000	15,169,000
Flood Protection	62,000	2,434,000	329,000	6,427,000	192,000		9,382,000
Plant Infrastructure Improvements	3,836,314	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
Plant Instrument Air System Upgrade	3,218,623	365,000					365,000
Storm Drain System Improvements	806,000	794,000	354,000	11,079,000	379,000	322,000	12,928,000
Support Building Improvements	1,935,175	6,610,000	11,391,000	1,614,000	3,795,000	2,139,000	25,549,000
Tunnel Rehabilitation	92,902	2,301,000	467,000	530,000	22,439,000	376,000	26,113,000
Urgent and Unscheduled Treatment Plant Rehabilitation	4,500,000	2,500,000	500,000	500,000	500,000	500,000	4,500,000
Various Infrastructure Decommissioning		469,000	2,590,000	18,470,000	691,000		22,220,000
Yard Piping and Road Improvements	362,253	5,619,000	14,822,000	17,873,000	17,595,000	16,345,000	72,254,000
Site Facility Maintenance and Improvements	**18,520,513**	**26,099,000**	**33,563,000**	**70,373,000**	**48,862,000**	**22,966,000**	**201,863,000**
SBWR Extension	3,691,000						
South Bay Water Recycling	**3,691,000**						
Water Pollution Control - Construction	**303,532,371**	**123,352,000**	**286,473,000**	**299,062,000**	**67,986,000**	**118,010,000**	**894,883,000**
Debt Service Repayment for Plant Capital Improvement Projects	721,000	1,815,000	3,192,000	5,834,000	307,209,000	27,238,000	345,288,000

Water Pollution Control

2019-2023 Adopted Capital Improvement Program

Use of Funds (Combined)

	Estimated 2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	5-Year Total	
Owner Controlled Insurance Program	273,000	7,771,000	3,705,000	3,705,000	1,399,000	1,264,000	17,844,000	
Master Plan Updates		3,000,000					3,000,000	
Preliminary Engineering - Water Pollution Control	1,036,893	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000	
Program Management - Water Pollution Control	8,367,578	9,984,000	7,307,000	7,505,000	7,507,000	7,569,000	39,872,000	
Record Drawings		3,675,000	9,738,000	164,000	163,000	163,000	13,903,000	
SBWR Master Plan	5,771							
General Non-Construction - Water Pollution Control	**10,404,242**	**27,245,000**	**24,942,000**	**18,208,000**	**317,278,000**	**37,234,000**	**424,907,000**	
Water Pollution Control - Non Construction	**10,404,242**	**27,245,000**	**24,942,000**	**18,208,000**	**317,278,000**	**37,234,000**	**424,907,000**	
Public Art Allocation	440,000	61,000					61,000	
Public Art Projects	**440,000**	**61,000**					**61,000**	
Capital Program and Public Works Department Support Service Costs	877,000	629,000	1,887,000	1,887,000	628,000	943,000	5,974,000	
State Revolving Fund Loan Repayment	4,464,000	1,804,000					1,804,000	
Payment for Clean Water Financing Authority Trustee	5,000	5,000	5,000	5,000			15,000	
Allocations	**5,346,000**	**2,438,000**	**1,892,000**	**1,892,000**	**628,000**	**943,000**	**7,793,000**	
City Hall Debt Service Fund	190,000	196,000	198,000	198,000	198,000	198,000	988,000	
Clean Water Financing Authority Debt Service Payment Fund	5,881,000	5,524,000	5,527,000	5,526,000			16,577,000	
Transfers to Special Funds	**6,071,000**	**5,720,000**	**5,725,000**	**5,724,000**	**198,000**	**198,000**	**17,565,000**	
Transfers Expense	**6,071,000**	**5,720,000**	**5,725,000**	**5,724,000**	**198,000**	**198,000**	**17,565,000**	
Equipment Replacement Reserve		5,000,000					5,000,000	
Expense Reserves - Non Construction		**5,000,000**					**5,000,000**	
Total Expenditures	**325,793,613**	**163,816,000**	**319,032,000**	**324,886,000**	**386,090,000**	**156,385,000**	**1,350,209,000**	
Ending Fund Balance	61,667,816	10,926,816	5,823,816	5,694,816	82,549,816	33,842,816	33,842,816	*
TOTAL	**387,461,429**	**174,742,816**	**324,855,816**	**330,580,816**	**468,639,816**	**190,227,816**	**1,384,051,816**	*

* The 2018-2019 through 2021-2022 Ending Balances are excluded from the FIVE-YEAR TOTAL USE OF FUNDS to avoid multiple counting of the same funds.

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2018-2019 Capital Budget

2019-2023 Capital Improvement Program

Water Pollution Control

Detail of Projects

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
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	1st Qtr. 2023
Council Districts	4	**Initial Project Budget**	$11,000,000
Appropriation	A7224	**FY Initiated**	2010-2011

Description This project will develop a Plant-wide automation master plan, replace existing flow meters and actuators, and upgrade 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 - decrease of $5.9 million due to decreased scope. 2013-2017 CIP - decrease of $2.1 million due to the establishment of the Treatment Plant Distributed Control System project as part of the approval of the 2011-2012 Mid-Year Budget Review. 2014-2018 CIP - increase of $500,000 due to updated cost estimate. 2015-2019 CIP - increase of $30.4 million due to revised scope, addition of meter replacement scope, and project validation cost estimate. 2016-2020 CIP - decrease of $823,000 due to reduction of project scope. 2017-2021 CIP - decrease of $5.2 million due to decreased project scope. 2018-2022 CIP - decrease of $3.8 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.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	1,831	174	597					597		2,602
Design	487	1,051	330					330		1,868
Bid & Award	7	178		273				273		458
Construction	200	11,831	1,560	20,668	1,050	715	223	24,216		36,247
Post Construction	2	3	73	126	91	58	90	438	48	491
Total	**2,528**	**13,237**	**2,560**	**21,067**	**1,141**	**773**	**313**	**25,854**	**48**	**41,667**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	2,528	13,237	2,560	21,067	1,141	773	313	25,854	48	41,667
Total	**2,528**	**13,237**	**2,560**	**21,067**	**1,141**	**773**	**313**	**25,854**	**48**	**41,667**
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
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	3rd Qtr. 2026
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.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	1,597	4,045	2,053					2,053		7,695
Design	1,448	2,999	7,269	1,231	226			8,726		13,173
Bid & Award		232	448		387			835		1,067
Construction		18,000	44,210	838	60,600	894	955	107,497	1,884	127,381
Post Construction			132		250	334		716	224	940
Total	**3,045**	**25,277**	**54,112**	**2,069**	**61,463**	**1,228**	**955**	**119,827**	**2,108**	**150,257**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	3,045	25,277	54,112	2,069	61,463	1,228	955	119,827	2,108	150,257
Total	**3,045**	**25,277**	**54,112**	**2,069**	**61,463**	**1,228**	**955**	**119,827**	**2,108**	**150,257**

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
Department	Environmental Services	**Revised Start Date**	3rd Qtr. 2014
Location	Water Pollution Control Plant	**Revised End Date**	4th Qtr. 2022
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.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	3,444	2,222	1,085					1,085		6,750
Design	10		9,563	1,708	198			11,469		11,479
Bid & Award		1,244	455					455		1,699
Construction					95,621	1,563	72	97,256		97,256
Post Construction							140	140		140
Total	**3,454**	**3,465**	**11,103**	**1,708**	**95,819**	**1,563**	**212**	**110,405**		**117,324**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	3,454	3,465	11,103	1,708	95,819	1,563	212	110,405		117,324
Total	**3,454**	**3,465**	**11,103**	**1,708**	**95,819**	**1,563**	**212**	**110,405**		**117,324**

Annual Operating Budget Impact (000s)	
Operating	769
Maintenance	8,019
Total	**8,788**

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
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	3rd Qtr. 2021
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 2018-2022 CIP - increase of $147.2 million due to increased scope, realignment of project, higher than projected construction costs, and inclusion of scope from other projects.
2019-2023 CIP - increase of $21.1 million due to unforeseen conditions during construction, including air board regulatory requirements related to digester gas venting, major utility relocations, and a 78" SES line.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	707	16								723
Design	13,769	2,204	2,000					2,000		17,973
Bid & Award	115									115
Construction	26,992	117,579	3,108	1,910	423			5,441		150,012
Post Construction					690	220		910		910
Total	**41,583**	**119,798**	**5,108**	**1,910**	**1,113**	**220**		**8,351**		**169,732**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	41,583	119,798	5,108	1,910	1,113	220		8,351		169,732
Total	**41,583**	**119,798**	**5,108**	**1,910**	**1,113**	**220**		**8,351**		**169,732**

Annual Operating Budget Impact (000s)			
Maintenance	1,300	1,622	1,687
Total	**1,300**	**1,622**	**1,687**

East Primary Rehabilitation, Seismic Retrofit, and Odor Control

CSA	Environmental and Utility Services
CSA Outcome	Reliable Utility Infrastructure
Department	Environmental Services
Location	Water Pollution Control Plant
Council Districts	4
Appropriation	A7226

Initial Start Date	3rd Qtr. 2009
Initial End Date	4th Qtr. 2012
Revised Start Date	3rd Qtr. 2010
Revised End Date	4th Qtr. 2027
Initial Project Budget	$3,605,000
FY Initiated	2010-2011

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.

Justification This project restores the mechanical and structural integrity of the aging clarifiers and provides odor control measures.

Notes This project corresponds to Plant Master Plan Project Nos. 9, 10, and 11 and Validation Project PLP-02.

Major Cost Changes 2012-2016 CIP - increase of $80.1 million; $16.6 million due to increase of scope to incorporate master planning recommendations for seismic upgrades and odor control measures; $63.5 million reflects the addition of the Beyond 5-Year expense not previously programmed.
2013-2017 CIP - decrease of $1.7 million due to revised cost estimate.
2015-2019 CIP - increase of $27.5 million due to revised project validation cost estimate.
2016-2020 CIP - increase of $3.6 million due to escalation of construction costs.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	56	40	1,000	1,321				2,321		2,417
Design	30			9,386	1,211			10,597		10,627
Bid & Award				138	70			208		208
Construction				997	20,895	686	684	23,262	75,293	98,555
Post Construction									1,167	1,167
Total	**86**	**40**	**1,000**	**11,842**	**22,176**	**686**	**684**	**36,388**	**76,460**	**112,974**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	86	40	1,000	11,842	22,176	686	684	36,388	76,460	112,974
Total	**86**	**40**	**1,000**	**11,842**	**22,176**	**686**	**684**	**36,388**	**76,460**	**112,974**

Annual Operating Budget Impact (000s)

Total

Energy Generation Improvements

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2012
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2013
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Pant	**Revised End Date**	2nd Qtr. 2020
Council Districts	4	**Initial Project Budget**	$1,300,000
Appropriation	A7454	**FY Initiated**	2012-2013

Description This project will install new, lower-emission engine-generators to replace the aged existing engine-generators and allow the aged engine-driven blowers to be retired. It includes a new generator building, gas cleaning and blending systems, piping, control system, and motor control centers. This project will also install emergency diesel generators and storage tanks to provide backup power in the event of an extended PG&E power outage.

Justification Energy generation capacity and operational reliability are significant issues at the Plant. The outdated engine-generators are increasingly difficult to maintain. Moreover, while the existing systems meet current air regulations, they will not meet the stricter regulations anticipated in the future. Replacing these facilities with new lower-emission engine-generators will reduce the risk of operational failure and permit violations while providing reliable energy generating facilities to power the Plant for decades.

Notes This project corresponds to Plant Master Plan Nos. 74, 75, and 76 and Validation Projects PE-01 and PE-02. Prior to 2014-2018, this project was titled "Combined Heat and Power Technology Evaluation".

Major Cost Changes 2014-2018 CIP - increase of $100.0 million due to acceleration of the implementation schedule. 2015-2019 CIP - increase of $24.5 million due to revised program validation cost estimate. 2016-2020 CIP - decrease of $10.4 million due to reduction of project scope and revised cost estimate. 2017-2021 CIP - increase of $4.9 million due to revised cost estimate. 2018-2022 increase of $7.5 million due to revised construction cost estimate.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	2,219	65								2,284
Design	6,988	3,352	262					262		10,602
Bid & Award	1,132	136								1,268
Construction	16,399	94,356	3,179	1,602				4,781		115,536
Post Construction	20	231		42				42		293
Total	**26,757**	**98,140**	**3,441**	**1,644**				**5,085**		**129,982**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	26,757	98,140	3,441	1,644				5,085		129,982
Total	**26,757**	**98,140**	**3,441**	**1,644**				**5,085**		**129,982**

Annual Operating Budget Impact (000s)						
Maintenance	82	84	87	89	92	
Total	**82**	**84**	**87**	**89**	**92**	

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
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	3rd Qtr. 2024
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. This project will have close-out costs only in 2023-2024.

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.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	1,001	629	417					417		2,047
Design	7		1,834	347				2,181		2,188
Bid & Award	6		25		124			149		155
Construction				100	10,993	608	621	12,322	475	12,797
Post Construction					100			100	124	224
Total	**1,014**	**629**	**2,276**	**447**	**11,217**	**608**	**621**	**15,169**	**599**	**17,411**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	1,014	629	2,276	447	11,217	608	621	15,169	599	17,411
Total	**1,014**	**629**	**2,276**	**447**	**11,217**	**608**	**621**	**15,169**	**599**	**17,411**

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
Department	Environmental Services	**Revised Start Date**	3rd Qtr. 2013
Location	Water Pollution Control Plant	**Revised End Date**	4th Qtr. 2022
Council Districts	4	**Initial Project Budget**	$3,506,000
Appropriation	A7227	**FY Initiated**	2010-2011

Description This project will replace filter media and potentially underdrain systems for all filters. It will also include valve replacements, electrical control replacements, air scouring equipment and piping additions, and concrete repairs. The extent of rehabilitation will depend on the results of a detailed condition assessment, which will determine whether to fully refurbish the filter facility or keep it operational until a new filter complex is built. If an evaluation of different filtration technologies from what the Plant currently uses is triggered, pilot testing and verification of an alternative filtration technology will be included in the project.

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 potentially interim improvements are needed to ensure continued regulatory compliance and operational reliability. In addition, pilot testing may be needed to determine the most suitable technology for the Plant's long-term tertiary treatment needs.

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.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	1,535	556								2,090
Design	134	867	4,123					4,123		5,124
Bid & Award	2		75	249				324		326
Construction	227			32,975	1,166	1,090		35,231		35,458
Post Construction				100			454	554		554
Total	**1,897**	**1,423**	**4,198**	**33,324**	**1,166**	**1,090**	**454**	**40,232**		**43,552**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	1,897	1,423	4,198	33,324	1,166	1,090	454	40,232		43,552
Total	**1,897**	**1,423**	**4,198**	**33,324**	**1,166**	**1,090**	**454**	**40,232**		**43,552**
Annual Operating Budget Impact (000s)										
Total										

Flood Protection

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2017
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2021
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	1st Qtr. 2022
Council Districts	4	**Initial Project Budget**	$9,136,000
Appropriation	A402M	**FY Initiated**	2017-2018

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.

Justification The Plant is a critical facility located within a Federal Emergency Management Agency (FEMA) defined flood zone and will experience significant flooding during a 100-year flood event. Until the South Bay Shoreline Project is completed by the US Army Corps of Engineers, the Plant remains at risk of flooding. This project will provide immediate protection from a 100-year flood event.

Notes

Major Cost Changes

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development		62	32					32		94
Design			2,402	260				2,662		2,662
Bid & Award				69	7			76		76
Construction					6,420	92		6,512		6,512
Post Construction						100		100		100
Total		**62**	**2,434**	**329**	**6,427**	**192**		**9,382**		**9,444**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)		62	2,434	329	6,427	192		9,382		9,444
Total		**62**	**2,434**	**329**	**6,427**	**192**		**9,382**		**9,444**

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
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	4th Qtr. 2022
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.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	1,211	330								1,541
Design	297	535	986	541				1,527		2,359
Bid & Award	214	424	114					114		752
Construction	29	2,121	5	12,960	366	312	72	13,715		15,865
Post Construction			211				32	243		243
Total	**1,751**	**3,410**	**1,316**	**13,501**	**366**	**312**	**104**	**15,599**		**20,760**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	1,751	3,410	1,316	13,501	366	312	104	15,599		20,760
Total	**1,751**	**3,410**	**1,316**	**13,501**	**366**	**312**	**104**	**15,599**		**20,760**
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
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	4th Qtr. 2022
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 potentially increasing the equalization basin volume and installing lining and 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. This project will have close-out costs only in 2022-2023.

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 estimate.
2018-2022 CIP - increase of $27.0 million due to revised project cost estimate.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	2,800	981								3,781
Design		5,102	1,835	3,871				5,706		10,808
Bid & Award	413	1,295	311					311		2,020
Construction				106,165	2,024	1,902	451	110,542		110,542
Post Construction							182	182		182
Total	**3,213**	**7,379**	**2,146**	**110,036**	**2,024**	**1,902**	**633**	**116,741**		**127,333**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	3,213	7,379	2,146	110,036	2,024	1,902	633	116,741		127,333
Total	**3,213**	**7,379**	**2,146**	**110,036**	**2,024**	**1,902**	**633**	**116,741**		**127,333**

Annual Operating Budget Impact (000s)	
Maintenance	21
Total	**21**

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
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	3rd Qtr. 2024
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.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	2,842	1,029								3,871
Design	18	2,028	1,907					1,907		3,953
Bid & Award		85	34	130				164		249
Construction				41,300	1,290	1,275	1,240	45,105	680	45,785
Post Construction				100				100	633	733
Total	**2,860**	**3,142**	**1,941**	**41,530**	**1,290**	**1,275**	**1,240**	**47,276**	**1,313**	**54,591**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	2,860	3,142	1,941	41,530	1,290	1,275	1,240	47,276	1,313	54,591
Total	**2,860**	**3,142**	**1,941**	**41,530**	**1,290**	**1,275**	**1,240**	**47,276**	**1,313**	**54,591**
Annual Operating Budget Impact (000s)										
Total										

Outfall Bridge and Levee Improvements

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2014
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2019
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	2nd Qtr. 2021
Council Districts	4	**Initial Project Budget**	$8,120,000
Appropriation	A7678	**FY Initiated**	2014-2015

Description This project includes a condition assessment, bridge repairs or replacement, levee and levee gate repairs, and electrical transformer refurbishment.

Justification The existing outfall bridge and instrumentation supports are in poor condition. In addition, the west-side levee of Pond A-18 is experiencing significant erosion. This project will improve the aging facilities to ensure reliability at the outfall compliance point.

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.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	141	391	741					741		1,273
Design	2	252	266	174				440		694
Bid & Award		41	10	50				60		101
Construction		185	715	4,705	494			5,914		6,099
Post Construction					125			125		125
Total	**143**	**869**	**1,732**	**4,929**	**619**			**7,280**		**8,292**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	143	869	1,732	4,929	619			7,280		8,292
Total	**143**	**869**	**1,732**	**4,929**	**619**			**7,280**		**8,292**
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
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	2nd Qtr. 2022
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.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	584	77	25					25		686
Design	1,146	767	1,223					1,223		3,136
Bid & Award	49		25					25		74
Construction	20,512		4,686	408	31			5,125		25,637
Post Construction	23				16	65		81		104
Total	**22,315**	**844**	**5,959**	**408**	**47**	**65**		**6,479**		**29,638**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	22,315	844	5,959	408	47	65		6,479		29,638
Total	**22,315**	**844**	**5,959**	**408**	**47**	**65**		**6,479**		**29,638**
Annual Operating Budget Impact (000s)										
Total										

Secondary Clarifier Rehabilitation

CSA	Environmental and Utility Services	**Initial Start Date**	1st Qtr. 2017
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2024
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	4th Qtr. 2024
Council Districts	4	**Initial Project Budget**	$26,559,000
Appropriation	A7803	**FY Initiated**	2016-2017

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.

Justification The Plant's 26 secondary clarifiers have been in service for 30 to 50 years depending on the year of construction. A condition assessment study, completed in 2012, recommended phased rehabilitation of the secondary 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. The study also recommended the replacement of central effluent launders with a new peripheral launders to improve clarifier performance and efficiency. The pilot is needed to confirm modeling results before converting the remaining 25 clarifiers to new peripheral launders.

Notes This project corresponds to Plant Master Plan Project No. 22 and 23 and Validation Project PLS-04. This project is planned to be completed in multiple phases.

Major Cost Changes

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development			565	19				584		584
Design				2,773				2,773		2,773
Bid & Award				41	14			55		55
Construction				1,017	21,195	159	164	22,535	240	22,775
Post Construction				153				153	115	268
Total			**565**	**4,003**	**21,209**	**159**	**164**	**26,100**	**355**	**26,455**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)			565	4,003	21,209	159	164	26,100	355	26,455
Total			**565**	**4,003**	**21,209**	**159**	**164**	**26,100**	**355**	**26,455**

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
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	3rd Qtr. 2023
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.

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.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development		456	94					94		550
Design		350	300	354	146			800		1,150
Bid & Award			100		119			219		219
Construction			250		10,814	379	322	11,765		11,765
Post Construction			50					50	202	252
Total		**806**	**794**	**354**	**11,079**	**379**	**322**	**12,928**	**202**	**13,936**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)		806	794	354	11,079	379	322	12,928	202	13,936
Total		**806**	**794**	**354**	**11,079**	**379**	**322**	**12,928**	**202**	**13,936**
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
Department	Environmental Services	**Revised Start Date**	3rd Qtr. 2015
Location	Water Pollution Control Plant	**Revised End Date**	3rd Qtr. 2028
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	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration	0									0
Project Feasibility Development	669	1,823	3,045	667	686	495		4,893		7,385
Design		0	1,080	262		2,669	985	4,996	539	5,535
Bid & Award		112	137	105			244	486	249	847
Construction			2,348	10,357	928	631	576	14,840	26,390	41,230
Post Construction							334	334	1,413	1,747
Equipment, Materials and Supplies	346									346
Total	**1,015**	**1,935**	**6,610**	**11,391**	**1,614**	**3,795**	**2,139**	**25,549**	**28,591**	**57,090**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	1,015	1,935	6,610	11,391	1,614	3,795	2,139	25,549	28,591	57,090
Total	**1,015**	**1,935**	**6,610**	**11,391**	**1,614**	**3,795**	**2,139**	**25,549**	**28,591**	**57,090**
Annual Operating Budget Impact (000s)										
Total										

Treatment Plant Distributed Control System

CSA	Environmental and Utility Services	**Initial Start Date**	1st Qtr. 2012
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2016
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	2nd Qtr. 2022
Council Districts	4	**Initial Project Budget**	$4,065,000
Appropriation	A7394	**FY Initiated**	2012-2013

Description This project will upgrade and convert the existing Distributed Control System (DCS) at the Plant. The system is composed of a network of field controllers, workstations, and servers that control most aspects of Plant operations. This project consists of three phases. Phase I is completed and ensured that the system was upgraded and will be supported by the vendor. The wiring and replacement of field communication hardware will be done in Phase II, and a new controller and programming will be added in Phase III.

Justification Upgrading this system is vital to maintaining efficient operations and improving monitoring capabilities.

Notes

Major Cost Changes
2014-2018 CIP - increase of $499,000 due to higher than expected consultant costs.
2015-2019 CIP - decrease of $163,000 due to lower than expected construction costs.
2016-2020 CIP - increase of $894,000 due to inclusion of an additional project phase that will convert and configure the hardware for 18 distributed control unit controllers.
2017-2021 CIP - increase of $1.6 million due to revised cost estimate.
2019-2023 CIP - increase of $2.8 million due to revised cost estimate.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Design	320									320
Construction	3,324	604	1,937	2,000	1,000	500		5,437		9,365
Total	**3,644**	**604**	**1,937**	**2,000**	**1,000**	**500**		**5,437**		**9,685**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	3,644	604	1,937	2,000	1,000	500		5,437		9,685
Total	**3,644**	**604**	**1,937**	**2,000**	**1,000**	**500**		**5,437**		**9,685**

Annual Operating Budget Impact (000s)

Total

Tunnel Rehabilitation

CSA	Environmental and Utility Services	**Initial Start Date**	2nt Qtr. 2015
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	4th Qtr. 2024
Department	Environmental Services	**Revised Start Date**	3rd Qtr. 2016
Location	Water Pollution Control Plant	**Revised End Date**	4th Qtr. 2026
Council Districts	4	**Initial Project Budget**	$25,550,000
Appropriation	A7698	**FY Initiated**	2014-2015

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.

Justification The Plant has an extensive tunnel system that houses piping, valves, pumps, controls, and other equipment. Many of these tunnels were built more than 50 years ago and need to be rehabilitated and upgraded to ensure compliance with safety requirements. To the extent practical, obsolete piping in the tunnels will also be removed to improve maintenance access and make room for new process piping.

Notes This project corresponds to Plant Master Plan Project Nos. 12, 13, 46, 103, and 104 and Validation Project PF-01.

Major Cost Changes 2016-2020 CIP - increase of $2.2 million due to escalation of construction costs.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	45	93	1,275	129				1,404		1,542
Design			1,026	338	430	153		1,947		1,947
Bid & Award					100	126		226		226
Construction						22,160	376	22,536	1,117	23,653
Post Construction									281	281
Total	**45**	**93**	**2,301**	**467**	**530**	**22,439**	**376**	**26,113**	**1,398**	**27,649**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	45	93	2,301	467	530	22,439	376	26,113	1,398	27,649
Total	**45**	**93**	**2,301**	**467**	**530**	**22,439**	**376**	**26,113**	**1,398**	**27,649**

Annual Operating Budget Impact (000s)
Total

Various Infrastructure Decommissioning

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2018
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2022
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	
Council Districts	4	**Initial Project Budget**	$22,220,000
Appropriation	A410S	**FY Initiated**	2018-2019

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.

Justification The decommissioning and removal of obsolete and abandoned equipment, structures, and piping will free up valuable space for future equipment or systems and improves operational and maintenance efficiencies of existing systems. The majority of the infrastructure and equipment at the Plant is more than 60 years old. It is best practice to remove obsolete facilities and equipment to avoid ongoing maintenance, comply with permit requirements, and to free up space for new equipment.

Notes

Major Cost Changes

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Design			469	2,590				3,059		3,059
Construction					18,470	628		19,098		19,098
Post Construction						63		63		63
Total			**469**	**2,590**	**18,470**	**691**		**22,220**		**22,220**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)			469	2,590	18,470	691		22,220		22,220
Total			**469**	**2,590**	**18,470**	**691**		**22,220**		**22,220**
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
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	3rd Qtr 2026
Council Districts	4	**Initial Project Budget**	N/A
Appropriation	A7396	**FY Initiated**	2011-2012

Description This project will rehabilitate and/or replace 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.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	704	262	1,481	279				1,760		2,726
Design	154		1,789	1,869	2,842	2,207	2,140	10,847	4,619	15,620
Bid & Award	35	100	624	573				1,197		1,332
Construction	935		1,725	12,101	15,031	15,388	14,205	58,450	41,764	101,149
Post Construction									525	525
Total	**1,828**	**362**	**5,619**	**14,822**	**17,873**	**17,595**	**16,345**	**72,254**	**46,908**	**121,352**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	1,828	362	5,619	14,822	17,873	17,595	16,345	72,254	46,908	121,352
Total	**1,828**	**362**	**5,619**	**14,822**	**17,873**	**17,595**	**16,345**	**72,254**	**46,908**	**121,352**

Annual Operating Budget Impact (000s)

Total

Equipment Replacement

CSA	Environmental and Utility Services	**Initial Start Date**	Ongoing
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	Ongoing
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	
Council Districts	4	**Initial Project Budget**	
Appropriation	A4332		

Description This allocation provides for the urgent replacement of equipment at the Plant that is not identified in any other project.

Justification The replacement and rehabilitation of Plant equipment are necessary as a result of wear or obsolescence and will ensure continued efficient operation of the Plant facilities.

Notes Project schedule dates and selected budget information are not provided due to the ongoing nature of this project.

Major Cost Changes

	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL
Expenditure Schedule (000s)							
Equipment, Materials and Supplies	1,661	1,663	1,663	1,663	1,663	1,663	8,315
Total	**1,661**	**1,663**	**1,663**	**1,663**	**1,663**	**1,663**	**8,315**

Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund (512)	1,661	1,663	1,663	1,663	1,663	1,663	8,315
Total	**1,661**	**1,663**	**1,663**	**1,663**	**1,663**	**1,663**	**8,315**

Annual Operating Budget Impact (000s)
Total

Plant Infrastructure Improvements

CSA	Environmental and Utility Services	**Initial Start Date**	Ongoing
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	Ongoing
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	
Council Districts	4	**Initial Project Budget**	
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.

Justification Many mechanical, electrical, and structural assets at the Plant are in poor condition due to age and wear. Rehabilitation, improvements, and replacement of capital infrastructure are necessary to maintain process viability and to ensure regulatory compliance, structural integrity, reliability, functionality, and safety of Plant buildings and process facilities.

Notes Project schedule dates and selected budget information are not provided due to the ongoing nature of this project.

Major Cost Changes

	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL
Expenditure Schedule (000s)							
Construction	3,836	1,000	1,000	1,000	1,000	1,000	5,000
Total	**3,836**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**5,000**

Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund (512)	3,836	1,000	1,000	1,000	1,000	1,000	5,000
Total	**3,836**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**5,000**

Annual Operating Budget Impact (000s)	
Total	

Urgent and Unscheduled Treatment Plant Rehabilitation

CSA	Environmental and Utility Services	**Initial Start Date**	Ongoing
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	Ongoing
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	
Council Districts	4	**Initial Project Budget**	
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.

Justification This allocation is required due to the deterioration of structures and systems at the Plant.

Notes Project schedule dates and selected budget information are not provided due to the ongoing nature of this project.

Major Cost Changes

	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL
Expenditure Schedule (000s)							
Construction	4,500	2,500	500	500	500	500	4,500
Total	**4,500**	**2,500**	**500**	**500**	**500**	**500**	**4,500**

Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund (512)	4,500	2,500	500	500	500	500	4,500
Total	**4,500**	**2,500**	**500**	**500**	**500**	**500**	**4,500**

Annual Operating Budget Impact (000s)
Total

Debt Service Repayment for Plant Capital Improvement Projects

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts N/A
Appropriation A402C

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.

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

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration	721	1,815	3,192	5,834	307,209	27,238		345,288	725,015	1,071,024
Total	**721**	**1,815**	**3,192**	**5,834**	**307,209**	**27,238**		**345,288**	**725,015**	**1,071,024**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	721	1,815	3,192	5,834	307,209	27,238		345,288	725,015	1,071,024
Total	**721**	**1,815**	**3,192**	**5,834**	**307,209**	**27,238**		**345,288**	**725,015**	**1,071,024**

Master Plan Updates

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 4
Appropriation A410T

Description This project will periodically review and update the Plant Master Plan to ensure program goals and objectives are being met and incorporate any major changes that may be triggered by operational, regulatory, technological, and economic conditions.

Notes

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development			3,000					3,000		3,000
Total			**3,000**					**3,000**		**3,000**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)			3,000					3,000		3,000
Total			**3,000**					**3,000**		**3,000**

Owner Controlled Insurance Program

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts N/A
Appropriation A401B

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

Notes

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration	2,831		4,944	3,705	3,705	1,399	1,264	15,017		17,848
Construction		273	2,827					2,827		3,100
Total	**2,831**	**273**	**7,771**	**3,705**	**3,705**	**1,399**	**1,264**	**17,844**		**20,948**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	2,831	273	7,771	3,705	3,705	1,399	1,264	17,844		20,948
Total	**2,831**	**273**	**7,771**	**3,705**	**3,705**	**1,399**	**1,264**	**17,844**		**20,948**

Payment for Clean Water Financing Authority Trustee

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 4
Appropriation A6584

Description This allocation provides for administrative costs of the San José/Santa Clara Clean Water Financing Authority related to bond issuances.

Notes Selected budget information is not provided due to the ongoing nature of this project.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration	437	5	5	5	5			15		457
Bid & Award	10									10
Total	**447**	**5**	**5**	**5**	**5**			**15**		**467**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	447	5	5	5	5			15		467
Total	**447**	**5**	**5**	**5**	**5**			**15**		**467**

Record Drawings

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 4
Appropriation A7683

Description This project develops a document management system and standards for electronically capturing, indexing, storing, retrieving, distributing, and versioning master drawings, specifications, and other final design documents. It also involves inventorying, developing, updating, and integrating existing records and field drawings.

Notes This project corresponds to Plant Master Plan Project No. 114 and Validation Project PF-05. Funding in 2017-2018 was for consultant services and some staff costs; the remaining years fund staff costs necessary to complete the project.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development			321					321		321
Design			3,354	9,738	164	163	163	13,582	299	13,881
Post Construction									62	62
Total			**3,675**	**9,738**	**164**	**163**	**163**	**13,903**	**361**	**14,264**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)			3,675	9,738	164	163	163	13,903	361	14,264
Total			**3,675**	**9,738**	**164**	**163**	**163**	**13,903**	**361**	**14,264**

State Revolving Fund Loan Repayment

CSA Environmental and Utility Services
CSA Outcome Healthy Streams, Rivers, Marsh and Bay
Department Environmental Services
Council Districts N/A
Appropriation A6590

Description This allocation provides for the repayment of low interest State loans awarded for South Bay Water Recycling projects.

Notes

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration	76,497	4,464	1,804					1,804		82,765
Project Feasibility Development	4,421									4,421
Total	**80,917**	**4,464**	**1,804**					**1,804**		**87,185**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund (512)	80,917	4,464	1,804					1,804		87,185
Total	**80,917**	**4,464**	**1,804**					**1,804**		**87,185**

Preliminary Engineering - Water Pollution Control

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 4
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.

Notes Selected budget information is not provided due to the ongoing nature of this project.

	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL
Expenditure Schedule (000s)							
Project Feasibility Development	1,037	1,000	1,000	1,000	1,000	1,000	5,000
Total	**1,037**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**5,000**
Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund (512)	1,037	1,000	1,000	1,000	1,000	1,000	5,000
Total	**1,037**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**5,000**

Detail of Ongoing Non-Construction Projects

Program Management - Water Pollution Control

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 4
Appropriation A7481

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

Notes Selected budget information is not provided due to the ongoing nature of this project.

	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL
Expenditure Schedule (000s)							
General Administration	8,368	9,984	7,307	7,505	7,507	7,569	39,872
Project Feasibility Development	0						
Construction	0						
Total	**8,368**	**9,984**	**7,307**	**7,505**	**7,507**	**7,569**	**39,872**
Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund (512)	8,368	9,984	7,307	7,505	7,507	7,569	39,872
Total	**8,368**	**9,984**	**7,307**	**7,505**	**7,507**	**7,569**	**39,872**

2018-2019 Capital Budget

2019-2023 Capital Improvement Program

Water Pollution Control

Summary of Projects that Start After 2018-2019

Summary of Projects with Close-Out Costs only in 2018-2019

Summary of Reserves

Explanation of Funds

Summary of Projects that Start After 2018-2019

Project Name	Additional Digester Upgrades	**Initial Start Date**	3rd Qtr. 2019
5-Yr CIP Budget	$ 62,096,000	**Initial End Date**	4th Qtr. 2025
Total Budget	$ 64,475,000	**Revised Start Date**	
Council Districts	4	**Revised End Date**	

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).

Project Name	Aeration Basin Future Modifications	**Initial Start Date**	3rd Qtr. 2019
5-Yr CIP Budget	$ 6,330,000	**Initial End Date**	4th Qtr. 2030
Total Budget	$ 50,277,000	**Revised Start Date**	
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.

Project Name	Final Effluent Pump Station & Stormwater Channel Improvements	**Initial Start Date**	3rd Qtr. 2019
5-Yr CIP Budget	$ 45,239,000	**Initial End Date**	3rd Qtr. 2025
Total Budget	$ 47,358,000	**Revised Start Date**	
Council Districts	4	**Revised End Date**	

Description This project constructs a new pump station to hydraulically push the Plant's final treated effluent to the Coyote Creek. Additionally, it will improve the existing stormwater channel by rehabilitating the flapper gates and embankments.

Project Name	FOG Receiving	**Initial Start Date**	1st Qtr. 2023
5-Yr CIP Budget	$ 313,000	**Initial End Date**	3rd Qtr. 2029
Total Budget	$ 12,850,000	**Revised Start Date**	
Council Districts	4	**Revised End Date**	

Description This project constructs a new FOG (Fats, Oils, Grease) receiving station, including storage tanks, access control, feed piping from the receiving station to the first phase anaerobic digesters, odor control and a 1/4-mile of access road improvements.

Project Name	New Disinfection Facilities	**Initial Start Date**	3rd Qtr. 2020
5-Yr CIP Budget	$ 7,853,000	**Initial End Date**	2nd Qtr. 2029
Total Budget	$ 56,977,000	**Revised Start Date**	
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.

Summary of Projects with Close-Out Costs Only in 2018-2019

Project Name	Construction-Enabling Improvements	**Initial Start Date**	3rd Qtr. 2015
5-Yr CIP Budget	$ 68,000	**Initial End Date**	4th Qtr. 2016
Total Budget	$ 4,715,654	**Revised Start Date**	
Council Districts	4	**Revised End Date**	4th Qtr. 2018
Description	This project provides funding for construction management trailers, utility connections, fencing, and security facilities. In addition, it includes road and parking improvements and access improvements from Zanker Road to the Plant.		

Project Name	Iron Salt Feed Station	**Initial Start Date**	3rd Qtr. 2010
5-Yr CIP Budget	$ 135,000	**Initial End Date**	2nd Qtr. 2012
Total Budget	$ 8,729,172	**Revised Start Date**	1st Qtr. 2012
Council Districts	4	**Revised End Date**	4th Qtr. 2018
Description	This project constructs a permanent ferric chloride feed station and a polymer feed station, including chemical storage tanks, pumps, concrete containment structures, ancillary equipment, piping, electrical, instrumentation and control to deliver chemical solution to incoming wastewater.		

Project Name	Plant Instrument Air System Upgrade	**Initial Start Date**	3rd Qtr. 2014
5-Yr CIP Budget	$ 365,000	**Initial End Date**	1st Qtr. 2019
Total Budget	$ 4,986,665	**Revised Start Date**	
Council Districts	4	**Revised End Date**	4th Qtr. 2018
Description	This project replaces the existing high-pressure Plant instrument air supply system with a new above-grade distributed system. This project also makes electrical upgrades to provide for power and redundancy improvements to the Plant air supply system.		

Summary of Reserves

Project Name	Equipment Replacement Reserve	**Initial Start Date**	N/A
5-Yr CIP Budget	$ 5,000,000	**Initial End Date**	N/A
Total Budget	$ 5,000,000	**Revised Start Date**	
Council Districts	4	**Revised End Date**	

Description This reserve provides for unforeseen replacement and rehabilitation of equipment that, due to age, wear, or obsolescence, must be replaced for the efficient operation of the Plant.

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 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.

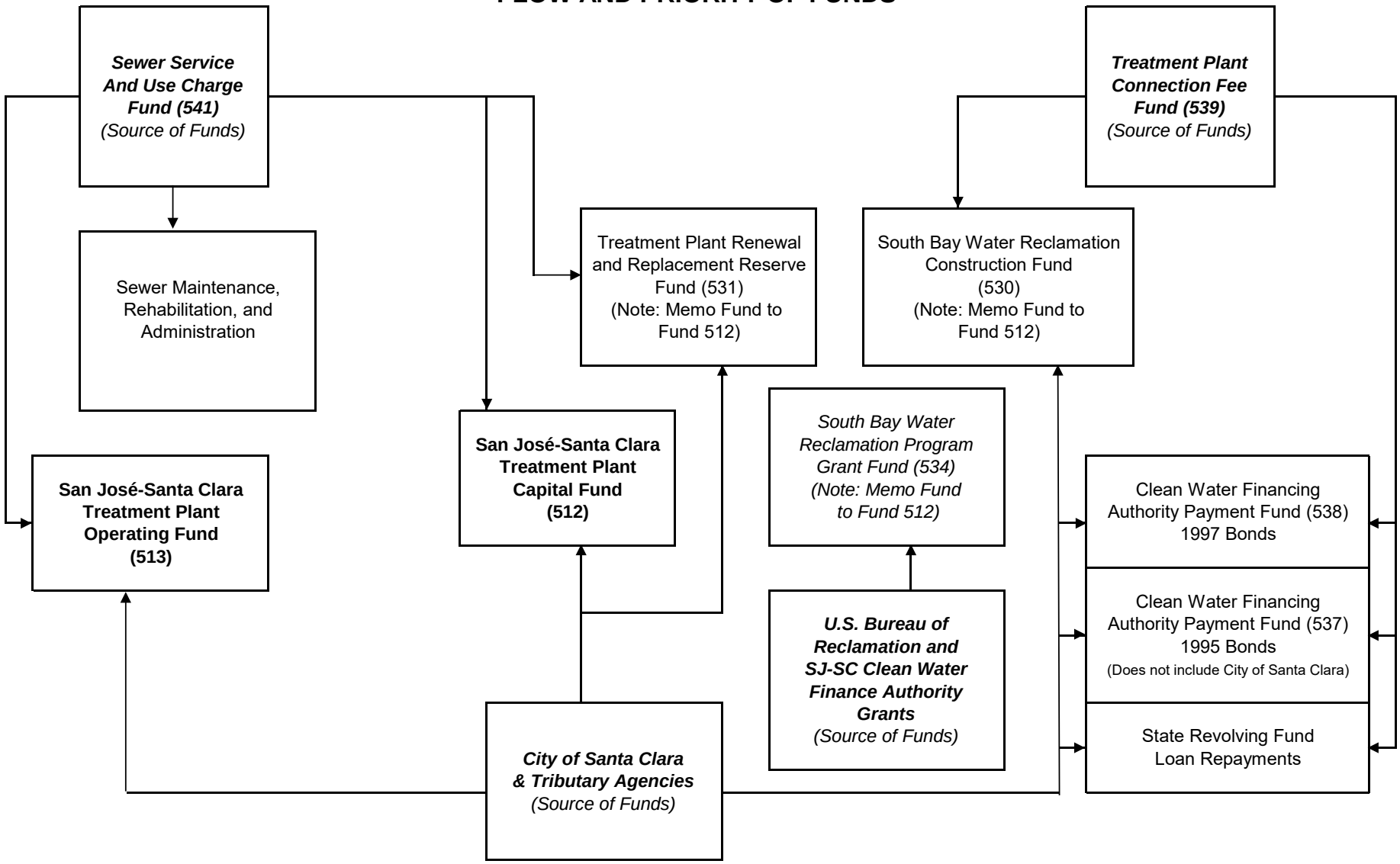
The San José Sewer Service and Use Charge Fund was established in the San José Municipal Code Section 15.12.640 in August 1959. This fund is the depository of revenues from Sewer Service and Use Charges received from residential, commercial, and industrial users of the sanitary sewer system. A portion 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.