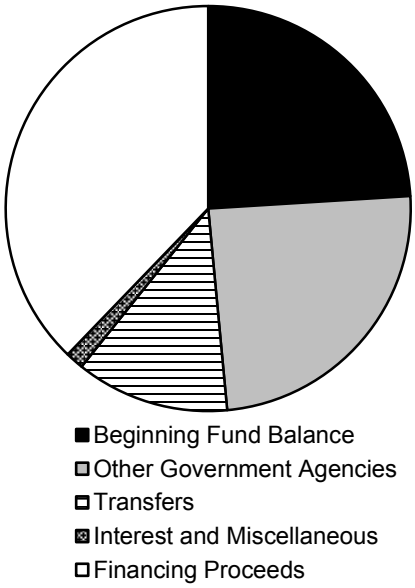
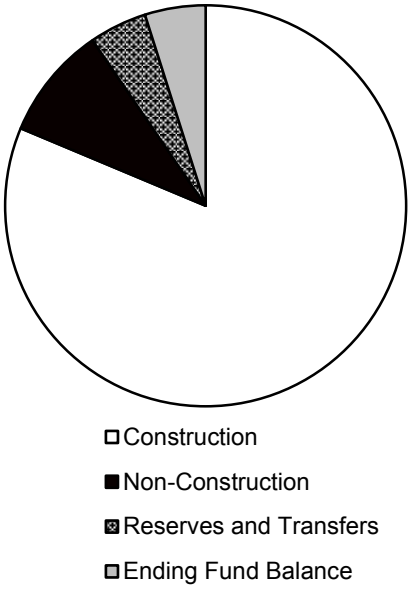
WATER POLLUTION CONTROL
2018-2022 Capital Improvement Program

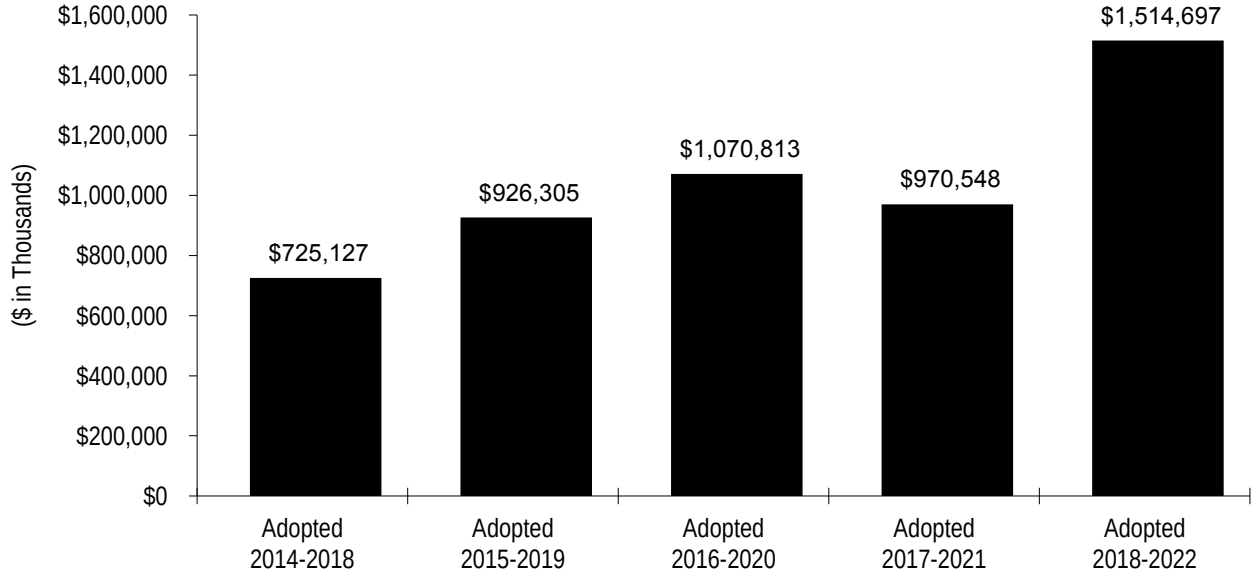
2017-2018 Adopted Source of Funds



2017-2018 Adopted Use of Funds



CIP History



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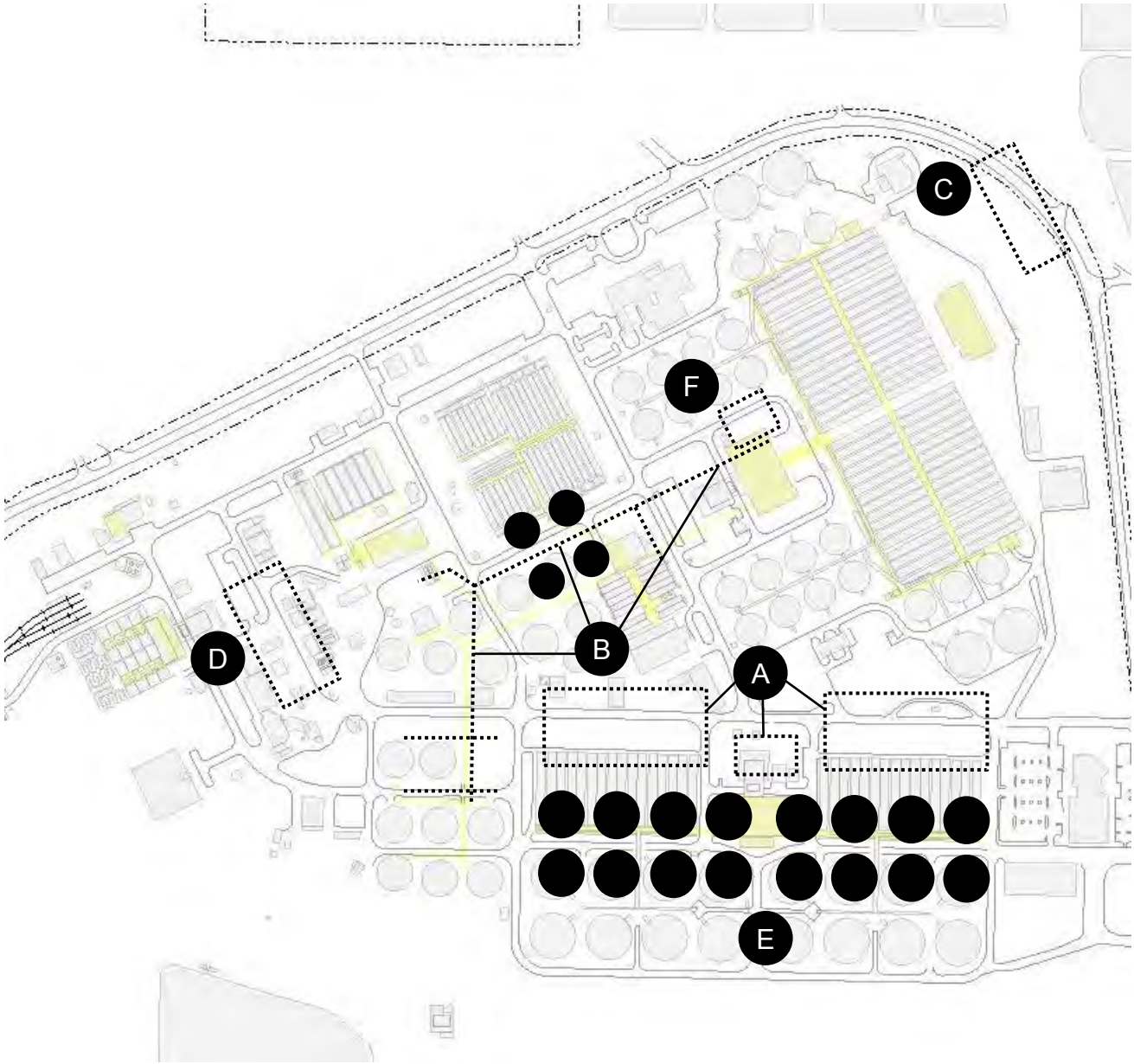
Water Pollution Control

2018-2022 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

2018-2022 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	50,000
AVERAGE MEGAWATTS PRODUCED	9.8

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 2018-2022 Adopted Capital Improvement Program (CIP) provides funding of $1.51 billion, of which $238.1 million is allocated in 2017-2018. 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 2018-2022 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.

Water Pollution Control Capital Program

2018-2022 Adopted Capital Improvement Program

Overview

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.

Program priorities for the near term include: obtaining short-term and long-term financing (for San José only), including building 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.

In addition, as several large projects have moved from the design phase into construction, a key priority will be to implement the program's construction management plan and an Owner Controlled Insurance Program (OCIP). Another significant priority for this CIP is to obtain Council approval to extend consultant program management services through 2023.

[1] Effective January 1, 2017, MWH Americas, Inc. was acquired and merged with Stantec 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 City Council on January 12, 2016. The staff reports are available online.[2]

Consistent with City Council direction, staff submitted Clean Water State Revolving Fund (SRF) loan applications for the Digester and Thickener Facilities Upgrade and Cogeneration Facility projects. Staff expected to receive a final SRF financing agreement for the Digester and Thickener Facilities Upgrade project by fall 2016; however, in September 2016, the State Water Resources Control Board (SWRCB) issued an Intended Use Plan (IUP) report with a financing forecast that showed significant demand and competition for the low-cost SRF loans[3]. The report also indicated that funding priority would be given to small and/or disadvantaged communities and projects promoting recycled water use, conservation, and low impact development. Staff continued to work closely with SWRCB staff to resolve issues with the terms and conditions of the loan agreement. After several months of discussions, in July 2017, SWRCB staff informed the City that the Digester and Thickener Facilities Upgrade and Cogeneration Facility projects would not be considered for funding at this time, due to higher than expected demand for SRF loans. Staff will continue to monitor the program and evaluate future SRF opportunities, as appropriate.

In order to provide sufficient funding capacity to enter into multi-year construction contracts, staff is proceeding with establishing a short-term, variable-rate financing program (e.g., commercial paper) in addition to planning for long-term bond financing for San José to support ongoing external third party capital costs. The 2018-2022 Adopted CIP assumes the establishment of a commercial paper program by fall 2017 and the issuance of commercial paper notes to finance external third-party capital costs in advance of the periodic issuance of bonds to pay down the commercial paper notes and fix-out the term and interest rate on the debt.

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, Public Works, Planning, Finance, and the City Attorney's Office, as well as staff from program management consultant staff and various other consultant firms.

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[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

[3] Clean Water State Revolving Fund, Small Community Grant, and Water Recycling Funding Programs: Updated Financial Outlook and Financing Forecast – September 2016: http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/docs/fy1617/september_%202016_cwsrf_iup_update.pdf

PROGRAM PRIORITIES AND OBJECTIVES

As several large projects have entered into the construction phase, Public Works is leading the construction management program using both city staff and third-party construction management services. Several significant construction milestones for this CIP include establishing an OCIP (which was approved by the City Council on June 20, 2017), completing the Construction-Enabling Improvements project to provide for a centralized construction staging area, launching the design and construction management document system (EADOC), and fully rolling out the Building Official Program, a Public Works-led initiative to provide consistent and streamlined code review (California Building Code and San José Municipal Code) for all City projects.

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. A significant priority for the program with this CIP is to obtain City Council approval to continue with consultant program management services through 2023. These services are necessary to ensure successful delivery of 21 large projects totaling an estimated one billion dollars over the next five years. The continuation services will include program management, controls, reporting, project management, and subject matter expertise services.

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 risk and interface manager, 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.

SOURCES OF FUNDING

Revenues for the 2018-2022 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.

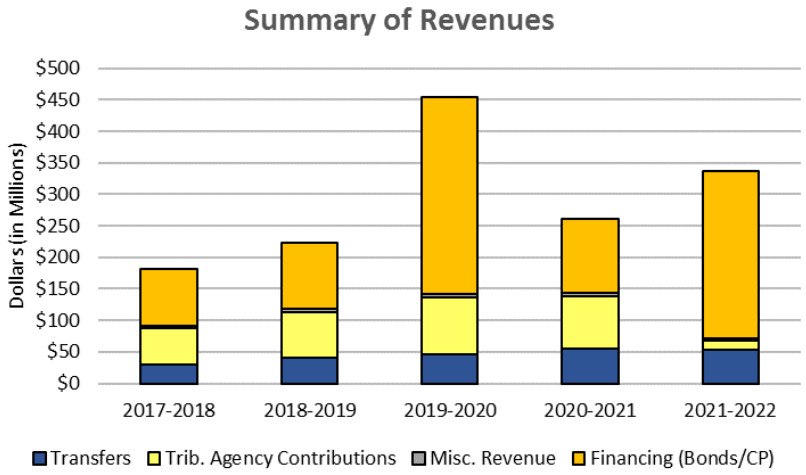
The SSUC Fund derives its revenues from fees imposed on San José users of the residential, commercial, and industrial sanitary sewer system. Transfers from this fund to the Plant CIP over the five years total $220.0 million, with no change as compared to the 2017-2021 Adopted CIP.

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 $318.9 million, which represents a $30.4 million (10.5%) increase compared to the 2017-2021 Adopted CIP, due to a significant increase in the size of the CIP.

To accommodate project costs for San José, commercial paper proceeds and bond proceeds totaling $891.0 million are assumed in the Adopted CIP. The establishment of a commercial paper program ($455.0 million) starting in 2017-2018 will provide short-term funding until bonds are issued. Associated commercial paper repayments are also included in the CIP. Periodic fixed-rate bond issuances ($436.0 million) beginning in 2019-2020 to refinance variable-rate commercial paper notes, provide planned debt financing, and begin amortizing the amounts borrowed are also programmed in this CIP. Approximate debt service on the debt is estimated to be $3.4 million in 2017-2018, $5.2 million in 2018-2019, $12.0 million in 2019-2020, $19.4 million in 2020-2021, and $22.8 million in 2021-2022. The estimated size of the debt financings and the related debt service are scheduled to cover external third-party capital costs programmed in the 2018-2022 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 commercial paper program or long-term debt financing. Additional debt financing will likely be needed to fund project costs beyond the Adopted CIP.

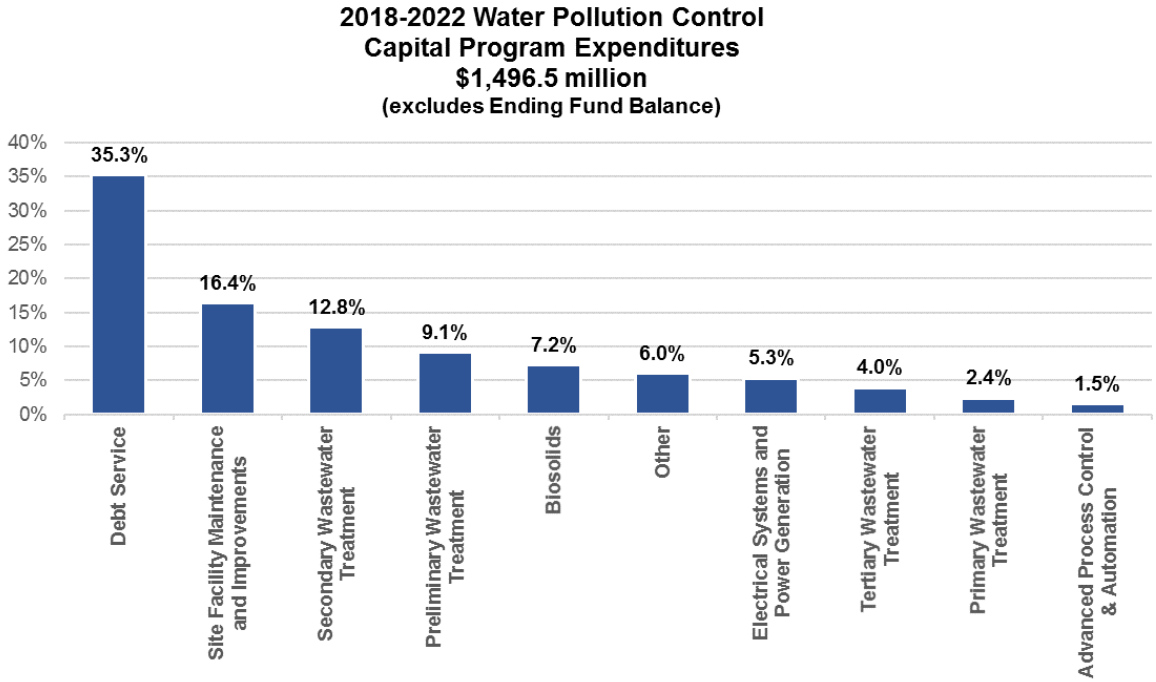
Staff is currently pursuing SRF funding for some projects; however, due to uncertainty of the availability of this funding; it has not been factored into the CIP as a source of funding.

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 $122.8 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

2018-2022 Adopted Capital Improvement Program

Overview

PROGRAM HIGHLIGHTS

The 2018-2022 Adopted CIP allocates $118.3 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.

Blower Improvements

The Plant's secondary treatment process consists of two separate parallel biological nutrient removal (BNR) systems. The systems include aeration tanks and blowers that were built in phases between the 1960s and 1980s. The blowers provide process air to the aeration tanks to enable the biodegradation of organic material from the incoming primary effluent.

Electric Blowers in Building 40

The Plant has three sets of blowers:

- Six engine-driven blowers in the Secondary Blower Building;
- Three electric blowers in Building 40; and
- Five electric blowers in the Tertiary Blower Building.

Key components of the electric blowers have aged beyond their useful lives and require rehabilitation to ensure long-term operability while minimizing maintenance requirements. In addition, the engine-driven blowers operate on a blend of digester and natural gas. Once the Plant's new cogeneration facility is constructed, it will use all of the available digester gas. Due to Title V air permit restrictions on total allowable gas emissions, these blowers will not be able to operate once the cogeneration facility comes online.

Engine-driven Blower in Secondary Blower Building

At an estimated $43.5 million, this project will rehabilitate the existing electric blowers, convert two engine-driven blowers to electric blowers, and decommission the remaining engine-driven blowers.

PROGRAM HIGHLIGHTS

Improvements include installing new motors, variable frequency drives, instrumentation, controls, and electrical equipment. This project will modify the existing blower system to accommodate the Plant's long-term air demands and improve the reliability of the electric blowers.

The 2018-2022 Adopted CIP allocates $39.3 million for design, construction, and post-construction costs. Construction award is expected in summer 2018 and construction completion is anticipated in 2019-2020.

MAJOR CHANGES FROM THE 2017-2021 ADOPTED CIP

The overall size of the Water Pollution Control CIP has increased by $544.1 million from $970.5 million in the 2017-2021 Adopted CIP to $1.51 billion in the 2018-2022 Adopted CIP. The following table outlines the most significant changes to project budgets, including new/augmented allocations and reduced/eliminated allocations.

Project Name	Incr/(Decr)
Debt Service Repayment for Plant Capital Improvement Projects	$445.7 million
New Headworks	$25.2 million
Various Infrastructure Decommissioning	$22.2 million
Program Management	$21.7 million
Tunnel Rehabilitation	$17.3 million
Owner Controlled Insurance Program	$14.8 million
Additional Digester Upgrades	$10.5 million
Stormwater Improvements	$10.2 million
Energy Generation Improvements	($20.5 million)
Lagoons and Drying Beds Retirement	($10.9 million)

Additionally, this Adopted CIP does not include the one-percent Public Art allocation, as the Water Pollution Control CIP was exempted from this policy at the June 6, 2017 City Council meeting.

OPERATING BUDGET IMPACT

Several projects in this Adopted CIP are expected to introduce new operating costs to the Operating Budget. These include: Digester and Thickener Facilities Upgrade, Energy Generation Improvements, and Iron Salt Feed Station. The operation and maintenance impacts are due to chemical costs, labor, and maintenance consumables (e.g. parts, oil).

A new Cogeneration Facility (part of the Energy Generation Improvements project) is expected to come online in summer 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 2017 after completion of preliminary design services (i.e. basis of design, equipment selection, and operating modes). 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 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.

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

	2018-2019	2019-2020	2020-2021	2021-2022
Digester and Thickener Facilities Upgrade		$1,500,000	$1,560,000	$1,622,000
Energy Generation Improvements	$82,000	$84,000	$87,000	$89,000
	$82,000	$1,584,000	$1,647,000	$1,711,000

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

During the June budget hearings, City Council approved changes to the Proposed Capital Improvement Program, which consists of the rebudgeting of unexpended funding for projects totaling $40.1 million due to project delays. For additional information regarding any of these approved actions, please refer to the Manager's Budget Addendum #26, as approved by the City Council on June 13, 2017.

Attachment A - Operating Budget Impact

	2018-2019	2019-2020	2020-2021	2021-2022
Water Pollution Capital Program				
Digester and Thickener Facilities Upgrade		$1,500,000	$1,560,000	$1,622,000
Energy Generation Improvements	$82,000	$84,000	$87,000	$89,000
Total Water Pollution Capital Program	**$82,000**	**$1,584,000**	**$1,647,000**	**$1,711,000**

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2017-2018 Capital Budget

2018-2022 Capital Improvement Program

Water Pollution Control

Source and Use of Funds Statements

Source of Funds (Combined)

	Estimated 2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	5-Year Total
San José-Santa Clara Treatment Plant Capital Fund							
Beginning Balance	66,901,138	57,179,723	11,655,723	11,518,723	14,953,723	9,930,723	57,179,723
Reserve for Encumbrance	151,905,586						
Transfers							
Transfer for 2009 Debt Service from the Sewer Service and Use Charge Fund (541)	5,717,000	5,716,000	5,369,000	5,372,000	5,371,000		21,828,000
Transfer for Plant CIP Debt Service from Sewer Service and Use Charge Fund (541)		3,363,000	5,165,000	12,040,000	19,445,000	22,782,000	62,795,000
Transfer for Capital Projects from Sewer Service and Use Charge Fund (541)	30,000,000	17,000,000	27,000,000	27,000,000	30,000,000	30,000,000	131,000,000
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	3,090,000	1,249,000				4,339,000
TOTAL Transfers	**38,807,000**	**29,169,000**	**39,866,000**	**45,495,000**	**55,899,000**	**53,865,000**	**224,294,000**
Revenue from Use of Money and Property							
Interest Income	1,863,000	3,065,000	3,761,000	4,980,000	4,978,000	3,357,000	20,141,000
TOTAL Revenue from Use of Money and Property	**1,863,000**	**3,065,000**	**3,761,000**	**4,980,000**	**4,978,000**	**3,357,000**	**20,141,000**
Revenue from Local Agencies							
2005 Bond Debt Repayment	1,027,000						
2009 Bond Debt Repayment	43,000	165,000	155,000	155,000	155,000		630,000
State Revolving Fund - Loan Repayment	1,374,000	1,374,000	555,000				1,929,000
WPCP Projects and Equipment Replacement	30,167,000	56,526,000	72,956,000	90,642,000	82,077,000	14,090,000	316,291,000
TOTAL Revenue from Local Agencies	**32,611,000**	**58,065,000**	**73,666,000**	**90,797,000**	**82,232,000**	**14,090,000**	**318,850,000**
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

Water Pollution Control

2018-2022 Adopted Capital Improvement Program

Source of Funds (Combined)

	Estimated 2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	5-Year Total
TOTAL Revenue from the Federal Government	**250,000**	**250,000**	**250,000**	**250,000**	**250,000**	**250,000**	**1,250,000**
Other Revenue							
South Bay Water System Capacity Improvement Fee	496,000						
Calpine Metcalf Energy Center Facilities Repayment	389,000	389,000	389,000	389,000	389,000	389,000	1,945,000
TOTAL Other Revenue	**885,000**	**389,000**	**389,000**	**389,000**	**389,000**	**389,000**	**1,945,000**
Financing Proceeds							
Commercial Paper - RWF Capital Program		90,000,000	106,000,000	141,000,000	118,000,000		455,000,000
Bond Proceeds				171,104,000		264,933,000	436,037,000
TOTAL Financing Proceeds		**90,000,000**	**106,000,000**	**312,104,000**	**118,000,000**	**264,933,000**	**891,037,000**
Total San José-Santa Clara Treatment Plant Capital Fund	**293,222,724**	**238,117,723**	**235,587,723**	**465,533,723**	**276,701,723**	**346,814,723**	**1,514,696,723**
TOTAL SOURCES	**293,222,724**	**238,117,723**	**235,587,723**	**465,533,723**	**276,701,723**	**346,814,723**	**1,514,696,723**

2018-2022 Adopted Capital Improvement Program

Use of Funds (Combined)

	Estimated 2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	5-Year Total
Water Pollution Control							
Headworks Improvements	3,000,000	2,334,000	14,403,000	387,000	342,000	52,000	17,518,000
New Headworks	2,704,000	7,260,000	25,122,000	84,058,000	938,000	944,000	118,322,000
Preliminary Wastewater Treatment	**5,703,999**	**9,594,000**	**39,525,000**	**84,445,000**	**1,280,000**	**996,000**	**135,840,000**
East Primary Rehabilitation, Seismic Retrofit, and Odor Control	280,000		2,296,000	10,546,000	22,176,000	686,000	35,704,000
Iron Salt Feed Station	6,981,000	333,000					333,000
Primary Wastewater Treatment	**7,261,000**	**333,000**	**2,296,000**	**10,546,000**	**22,176,000**	**686,000**	**36,037,000**
Aeration Basin Future Modifications				846,000	4,274,000	770,000	5,890,000
Aeration Tanks and Blower Rehabilitation	7,932,000	40,222,000	8,952,000	1,085,000	60,007,000	1,110,000	111,376,000
Nitrification Clarifier Rehabilitation	1,393,000	4,236,000	43,167,000	421,000	388,000	392,000	48,604,000
Secondary Clarifier Rehabilitation	104,000		565,000	4,003,000	21,209,000	159,000	25,936,000
Secondary Wastewater Treatment	**9,429,000**	**44,458,000**	**52,684,000**	**6,355,000**	**85,878,000**	**2,431,000**	**191,806,000**
Filter Rehabilitation	1,138,000	4,594,000	28,899,000	396,000	405,000	404,000	34,698,000
Final Effluent Pump Station & Stormwater Channel Improvements				902,000	5,999,000	1,104,000	8,005,000
New Disinfection Facilities			63,000	889,000	6,179,000	722,000	7,853,000
Outfall Bridge and Levee Improvements	153,000	2,214,000	786,000	155,000	4,495,000	917,000	8,567,000
Tertiary Wastewater Treatment	**1,291,000**	**6,808,000**	**29,748,000**	**2,342,000**	**17,078,000**	**3,147,000**	**59,123,000**
Additional Digester Upgrades				1,191,000	8,031,000	1,298,000	10,520,000
Digested Sludge Dewatering Facility	2,793,000	2,823,000	9,081,000	80,205,000	1,064,000	656,000	93,829,000
Digester and Thickener Facilities Upgrade	131,897,000	1,861,000	1,432,000	774,000			4,067,000
Lagoons and Drying Beds Retirement	96,000						
Biosolids	**134,786,000**	**4,684,000**	**10,513,000**	**82,170,000**	**9,095,000**	**1,954,000**	**108,416,000**
Combined Heat and Power Equipment Repair and Rehabilitation	3,128,000	32,000					32,000

Water Pollution Control

2018-2022 Adopted Capital Improvement Program

Use of Funds (Combined)

	Estimated 2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	5-Year Total
Energy Generation Improvements	36,305,000	71,369,000	1,478,000				72,847,000
Plant Electrical Reliability	86,000	2,464,000	4,229,000	357,000	31,000		7,081,000
Electrical Systems and Power Generation	**39,519,000**	**73,865,000**	**5,707,000**	**357,000**	**31,000**		**79,960,000**
Advanced Facility Control and Meter Replacement	2,063,000	13,201,000	821,000	5,017,000	758,000	243,000	20,040,000
Treatment Plant Distributed Control System	616,000	1,495,000	1,025,000	575,000			3,095,000
Advanced Process Control & Automation	**2,679,000**	**14,696,000**	**1,846,000**	**5,592,000**	**758,000**	**243,000**	**23,135,000**
Construction-Enabling Improvements	3,794,000	391,000					391,000
Equipment Replacement	1,694,000	1,663,000	1,663,000	1,663,000	1,663,000	1,663,000	8,315,000
Facility Wide Water Systems Improvements	1,162,000	2,118,000	480,000	11,949,000	490,000	503,000	15,540,000
Flood Protection		2,223,000	130,000	6,393,000	390,000		9,136,000
Plant Infrastructure Improvements	1,115,000	1,723,000	1,000,000	1,000,000	1,000,000	1,000,000	5,723,000
Plant Instrument Air System Upgrade	3,802,000	596,000					596,000
Stormwater Improvements		1,600,000	170,000	8,125,000	300,000		10,195,000
Support Building Improvements	1,607,000	5,839,000	14,326,000	2,917,000	30,202,000	1,296,000	54,580,000
Treatment Plant Engine Rebuild	14,000						
Tunnel Rehabilitation	100,000	1,120,000	3,160,000	238,000	21,607,000	260,000	26,385,000
Urgent and Unscheduled Treatment Plant Rehabilitation	500,000	6,500,000	500,000	500,000	500,000	500,000	8,500,000
Various Infrastructure Decommissioning			469,000	2,590,000	18,470,000	691,000	22,220,000
Yard Piping and Road Improvements	446,000	11,716,000	16,088,000	22,004,000	18,111,000	15,325,000	83,244,000
Site Facility Maintenance and Improvements	**14,234,000**	**35,489,000**	**37,986,000**	**57,379,000**	**92,733,000**	**21,238,000**	**244,825,000**
SBWR Extension	89,000	3,691,000					3,691,000
SBWR Reservoir Facility	90,000						
South Bay Water Recycling	**179,000**	**3,691,000**					**3,691,000**
Water Pollution Control - Construction	**215,082,000**	**193,618,000**	**180,305,000**	**249,186,000**	**229,029,000**	**30,695,000**	**882,833,000**
Debt Service Repayment for Plant Capital Improvement Projects		3,363,000	5,165,000	183,144,000	19,445,000	287,715,000	498,832,000

Water Pollution Control

2018-2022 Adopted Capital Improvement Program

Use of Funds (Combined)

	Estimated 2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	5-Year Total
Owner Controlled Insurance Program		2,731,000	5,023,000	2,834,000	2,834,000	1,399,000	14,821,000
Master Plan Updates			3,000,000				3,000,000
Preliminary Engineering - Water Pollution Control	1,537,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
Program Management - Water Pollution Control	10,942,000	8,610,000	8,055,000	7,096,000	7,284,000	7,278,000	38,323,000
Record Drawings		321,000	12,930,000	162,000	164,000	163,000	13,740,000
SBWR Master Plan	6,000						
SBWR Recycling Master Plan Reimbursement							
General Non-Construction - Water Pollution Control	**12,485,000**	**16,025,000**	**35,173,000**	**194,236,000**	**30,727,000**	**297,555,000**	**573,716,000**
Water Pollution Control - Non Construction	**12,485,000**	**16,025,000**	**35,173,000**	**194,236,000**	**30,727,000**	**297,555,000**	**573,716,000**
Public Art Allocation	119,000	402,000					402,000
Public Art Projects	**119,000**	**402,000**					**402,000**
Capital Program and Public Works Department Support Service Costs	856,000	877,000	1,052,000	1,420,000	1,278,000	192,000	4,819,000
Payment for Clean Water Financing Authority Trustee	5,000	5,000	5,000	5,000	5,000	5,000	25,000
State Revolving Fund Loan Repayment	4,464,000	4,464,000	1,804,000				6,268,000
Allocations	**5,325,000**	**5,346,000**	**2,861,000**	**1,425,000**	**1,283,000**	**197,000**	**11,112,000**
City Hall Debt Service Fund	172,000	190,000	206,000	206,000	206,000	206,000	1,014,000
Clean Water Financing Authority Debt Service Payment Fund	1,562,000	5,881,000	5,524,000	5,527,000	5,526,000		22,458,000
Transfers to Special Funds	**1,734,000**	**6,071,000**	**5,730,000**	**5,733,000**	**5,732,000**	**206,000**	**23,472,000**
General Fund - Human Resources/Payroll/ Budget Systems Upgrade	6,000						
Transfers to the General Fund	**6,000**						
Transfers Expense	**1,740,000**	**6,071,000**	**5,730,000**	**5,733,000**	**5,732,000**	**206,000**	**23,472,000**
Equipment Replacement Reserve		5,000,000					5,000,000
2009A Bonds Reserve Fund - Trustee	1,292,000						
Expense Reserves - Non Construction	**1,292,000**	**5,000,000**					**5,000,000**
Total Expenditures	**236,043,001**	**226,462,000**	**224,069,000**	**450,580,000**	**266,771,000**	**328,653,000**	**1,496,535,000**
Ending Fund Balance	57,179,723	11,655,723	11,518,723	14,953,723	9,930,723	18,161,723	18,161,723
TOTAL	**293,222,724**	**238,117,723**	**235,587,723**	**465,533,723**	**276,701,723**	**346,814,723**	**1,514,696,723**

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2017-2018 Capital Budget

2018-2022 Capital Improvement Program

Water Pollution Control

Detail of Projects

Advanced Facility Control and Meter Replacement

CSA	Environmental and Utility Services
CSA Outcome	Reliable Utility Infrastructure
Department	Environmental Services
Location	Water Pollution Control Plant
Council Districts	4
Appropriation	A7224

Initial Start Date	3rd Qtr. 2010
Initial End Date	2nd Qtr. 2014
Revised Start Date	
Revised End Date	2nd Qtr. 2022
Initial Project Budget	$11,000,000
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. Prior to the 2015-2019 CIP, this project was titled "Advanced Process Control and Automation". The schedule was revised during the 2015-2019 project validation process.

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.

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	1,471	453	352	245				597		2,521
Design	46	1,276	385					385		1,707
Bid & Award		39	11	13	76			100		139
Construction	183	232	12,453	563	4,941	691	190	18,838		19,253
Post Construction		63				67	53	120		183
Total	**1,700**	**2,063**	**13,201**	**821**	**5,017**	**758**	**243**	**20,040**		**23,803**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	1,700	2,063	13,201	821	5,017	758	243	20,040		23,803
Total	**1,700**	**2,063**	**13,201**	**821**	**5,017**	**758**	**243**	**20,040**		**23,803**
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**	2nd 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. A condition assessment study and process conversion analysis will be completed to inform the ultimate project scope.

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.

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	867	4,146	2,254					2,254		7,267
Design	1	3,611	891	7,885				8,776		12,388
Bid & Award		138	129	217	319			665		803
Construction		37	36,816	850	725	59,553	1,110	99,054	3,338	102,429
Post Construction			132		41	454		627	256	883
Total	**867**	**7,932**	**40,222**	**8,952**	**1,085**	**60,007**	**1,110**	**111,376**	**3,594**	**123,769**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	867	7,932	40,222	8,952	1,085	60,007	1,110	111,376	3,594	123,769
Total	**867**	**7,932**	**40,222**	**8,952**	**1,085**	**60,007**	**1,110**	**111,376**	**3,594**	**123,769**

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**	1st 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 64 and Validation Project PS-03. Prior to 2015-2019, this project was titled "New Biosolids Facility". The schedule was revised during the 2015-2019 project validation process.

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.

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	2,394	2,666	1,530					1,530		6,590
Design	10			9,081	212			9,293		9,303
Bid & Award		127	1,293					1,293		1,420
Construction					79,993	1,064	548	81,605		81,605
Post Construction							108	108		108
Total	**2,404**	**2,793**	**2,823**	**9,081**	**80,205**	**1,064**	**656**	**93,829**		**99,026**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	2,404	2,793	2,823	9,081	80,205	1,064	656	93,829		99,026
Total	**2,404**	**2,793**	**2,823**	**9,081**	**80,205**	**1,064**	**656**	**93,829**		**99,026**
Annual Operating Budget Impact (000s)										
Total										

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**	4th Qtr. 2019
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. This project is planned to be completed in two phases. Prior to 2015-2019, this project was titled "Digester Rehabilitation".

Major Cost Changes 2008-2012 CIP through 2014-2018 CIP - increase of $121.5M due to increased scope and realignment of project. 2015-2019 CIP - increase of $18.3M due to revised project validation cost estimate. 2016-2020 CIP - increase of $31.4M due to conversion to thermophilic digestion and inclusion of scope from other projects. 2017-2021 CIP - increase of $41.0M: $19.0M due to revised cost estimates and $22.0M due to bids that came in higher than projected construction costs. 2018-2022 CIP - decrease of $65M due to Phase 2 scope moved into separate project (Additional Digester Upgrades).

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	706	17								723
Design	11,767	4,312								16,079
Bid & Award	124									124
Construction	35	127,568	1,861	1,338	96			3,295		130,898
Post Construction				94	678			772		772
Total	**12,632**	**131,897**	**1,861**	**1,432**	**774**			**4,067**		**148,596**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	12,632	131,897	1,861	1,432	774			4,067		148,596
Total	**12,632**	**131,897**	**1,861**	**1,432**	**774**			**4,067**		**148,596**

Annual Operating Budget Impact (000s)			
Operating	1,200	1,248	1,298
Maintenance	300	312	324
Total	**1,500**	**1,560**	**1,622**

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. The schedule was revised during the 2015-2019 project validation process.

Major Cost Changes 2012-2016 CIP - increase of $80.1 million; $16.626 million due to increase of scope to incorporate master planning recommendations for seismic upgrades and odor control measures; $63.52 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	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	80	280		2,296	25			2,321		2,681
Design	30				9,386	1,211		10,597		10,627
Bid & Award					138	70		208		208
Construction					997	20,895	686	22,578	75,977	98,555
Post Construction									1,167	1,167
Total	**110**	**280**		**2,296**	**10,546**	**22,176**	**686**	**35,704**	**77,144**	**113,238**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	110	280		2,296	10,546	22,176	686	35,704	77,144	113,238
Total	**110**	**280**		**2,296**	**10,546**	**22,176**	**686**	**35,704**	**77,144**	**113,238**
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. 2019
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	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	2,161	113								2,274
Design	1,683	7,473	1,791					1,791		10,947
Bid & Award	917	351								1,268
Construction	13,900	28,312	69,344	1,269				70,613		112,825
Post Construction		56	234	209				443		499
Total	**18,661**	**36,305**	**71,369**	**1,478**				**72,847**		**127,813**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	18,661	36,305	71,369	1,478				72,847		127,813
Total	**18,661**	**36,305**	**71,369**	**1,478**				**72,847**		**127,813**
Annual Operating Budget Impact (000s)										
Operating				82	84	87	89			
Total				**82**	**84**	**87**	**89**			

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. 2022
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 2022-2023.

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	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	534	1,158	608					608		2,300
Design		4	1,485	480				1,965		1,969
Bid & Award	6		25		139			164		170
Construction					11,810	490	503	12,803	366	13,169
Post Construction									70	70
Total	**540**	**1,162**	**2,118**	**480**	**11,949**	**490**	**503**	**15,540**	**436**	**17,678**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	540	1,162	2,118	480	11,949	490	503	15,540	436	17,678
Total	**540**	**1,162**	**2,118**	**480**	**11,949**	**490**	**503**	**15,540**	**436**	**17,678**
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**	3rd 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. Prior to 2015-2019, this project was titled "Filter Improvements". The schedule was revised during the 2015-2019 project validation process.

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.

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	408	1,138	1,339					1,339		2,885
Design	133		3,180	198				3,378		3,511
Bid & Award	2		75	184				259		261
Construction	227			28,417	396	405	404	29,622		29,849
Post Construction				100				100	96	196
Total	**770**	**1,138**	**4,594**	**28,899**	**396**	**405**	**404**	**34,698**	**96**	**36,702**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	770	1,138	4,594	28,899	396	405	404	34,698	96	36,702
Total	**770**	**1,138**	**4,594**	**28,899**	**396**	**405**	**404**	**34,698**	**96**	**36,702**
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**	
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	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Design			2,223	100				2,323		2,323
Bid & Award				30				30		30
Construction					6,393	300		6,693		6,693
Post Construction						90		90		90
Total			**2,223**	**130**	**6,393**	**390**		**9,136**		**9,136**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund			2,223	130	6,393	390		9,136		9,136
Total			**2,223**	**130**	**6,393**	**390**		**9,136**		**9,136**
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**	3rd Qtr. 2021
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. Prior to 2015-2019, this project was titled "Headworks No. 1 Repair and Rehabilitation". The schedule was revised during the 2015-2019 project validation process.

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	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	694	670	497					497		1,861
Design	185	261	1,019	490				1,509		1,955
Bid & Award	3	87	466	29				495		585
Construction	10	1,982	288	13,773	387	342		14,790		16,782
Post Construction			64	111			52	227		227
Total	**891**	**3,000**	**2,334**	**14,403**	**387**	**342**	**52**	**17,518**		**21,409**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	891	3,000	2,334	14,403	387	342	52	17,518		21,409
Total	**891**	**3,000**	**2,334**	**14,403**	**387**	**342**	**52**	**17,518**		**21,409**
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**	1st Qtr. 2023
Council Districts	4	**Initial Project Budget**	$79,400,000
Appropriation	A7449	**FY Initiated**	2012-2013

Description This project will construct a new headworks to serve as the Plant's duty headworks. It also involves 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. Prior to 2015-2019, this project was titled "Headworks No. 2 Expansion". The schedule was revised during the 2015-2019 project validation process. 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	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	1,476	1,794	1,290					1,290		4,560
Design		585	4,780	720	320			5,820		6,405
Bid & Award		325	1,190		57			1,247		1,572
Construction				24,402	83,681	938	944	109,965	281	110,246
Post Construction									65	65
Total	**1,476**	**2,704**	**7,260**	**25,122**	**84,058**	**938**	**944**	**118,322**	**346**	**122,848**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	1,476	2,704	7,260	25,122	84,058	938	944	118,322	346	122,848
Total	**1,476**	**2,704**	**7,260**	**25,122**	**84,058**	**938**	**944**	**118,322**	**346**	**122,848**
Annual Operating Budget Impact (000s)										
Total										

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**	1st Qtr. 2023
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 Nos. 21 and Validation Project PLS-02. This project is planned to be completed in multiple phases. Prior to 2016-2020, this project was titled "Secondary and Nitrification Clarifier Rehabilitation".

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	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	1,466	1,393	721					721		3,580
Design	18		3,465	182				3,647		3,665
Bid & Award			50	85				135		135
Construction				42,800	421	388	392	44,001	57	44,058
Post Construction				100				100	96	196
Total	**1,484**	**1,393**	**4,236**	**43,167**	**421**	**388**	**392**	**48,604**	**153**	**51,634**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	1,484	1,393	4,236	43,167	421	388	392	48,604	153	51,634
Total	**1,484**	**1,393**	**4,236**	**43,167**	**421**	**388**	**392**	**48,604**	**153**	**51,634**
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**	3rd Qtr. 2022
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.

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	76	153	1,514					1,514		1,743
Design	2			786	155	63		1,004		1,006
Bid & Award						100		100		100
Construction			700			4,332	917	5,949	192	6,141
Post Construction									66	66
Total	**78**	**153**	**2,214**	**786**	**155**	**4,495**	**917**	**8,567**	**258**	**9,056**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	78	153	2,214	786	155	4,495	917	8,567	258	9,056
Total	**78**	**153**	**2,214**	**786**	**155**	**4,495**	**917**	**8,567**	**258**	**9,056**
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. 2021
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	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	553	33	57					57		643
Design	1,146	53	1,864	4	4			1,872		3,071
Bid & Award	49		25					25		74
Construction	20,512		518	4,225	304			5,047		25,559
Post Construction	23				49	31		80		103
Total	**22,284**	**86**	**2,464**	**4,229**	**357**	**31**		**7,081**		**29,451**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	22,284	86	2,464	4,229	357	31		7,081		29,451
Total	**22,284**	**86**	**2,464**	**4,229**	**357**	**31**		**7,081**		**29,451**
Annual Operating Budget Impact (000s)										
Total										

Plant Instrument Air System Upgrade

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2014
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	1st Qtr. 2019
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	1st Qtr. 2018
Council Districts	4	**Initial Project Budget**	$9,100,000
Appropriation	A7680	**FY Initiated**	2014-2015

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.

Justification The instrument air supply system plays a critical role by providing high pressure air for pneumatic operations and controls of valves and instruments located throughout the Plant process areas. The existing system is outdated and its location in the basement of the Secondary Blower Building makes it vulnerable to flooding. The existing system also lacks an independent power source and sufficient reservoirs for maintaining operations during an extended power failure. Replacement of the system will improve operational reliability and minimize interruptions to critical operations.

Notes This project corresponds to Validation Project PF-07.

Major Cost Changes 2017-2021 CIP - decrease of $4.2 million due to a refined scope and revised cost estimate.

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	57	71								128
Design	535	299								834
Bid & Award	8	10								18
Construction	6	3,422	557					557		3,985
Post Construction	0		39					39		39
Total	**607**	**3,802**	**596**					**596**		**5,005**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	607	3,802	596					596		5,005
Total	**607**	**3,802**	**596**					**596**		**5,005**
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	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development		104		565	19			584		688
Design					2,773			2,773		2,773
Bid & Award					41	14		55		55
Construction					1,017	21,195	159	22,371	404	22,775
Post Construction					153			153	115	268
Total		**104**		**565**	**4,003**	**21,209**	**159**	**25,936**	**519**	**26,559**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund		104		565	4,003	21,209	159	25,936	519	26,559
Total		**104**		**565**	**4,003**	**21,209**	**159**	**25,936**	**519**	**26,559**
Annual Operating Budget Impact (000s)										
Total										

Stormwater 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**	
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

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Design			1,600	140				1,740		1,740
Bid & Award				30				30		30
Construction					8,125	220		8,345		8,345
Post Construction						80		80		80
Total			**1,600**	**170**	**8,125**	**300**		**10,195**		**10,195**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund		1,600	170	8,125	300			10,195		10,195
Total		**1,600**	**170**	**8,125**	**300**			**10,195**		**10,195**

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**	2nd Qtr. 2023
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	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	333	1,607	1,275	903	113			2,291		4,231
Design			1,997	2,622	767	223	58	5,667		5,667
Bid & Award			129	161	157	23	30	500		500
Construction			2,438	10,580	1,834	29,876	907	45,635	346	45,981
Post Construction				60	46	80	301	487	145	632
Equipment, Materials and Supplies	345									345
Total	**679**	**1,607**	**5,839**	**14,326**	**2,917**	**30,202**	**1,296**	**54,580**	**491**	**57,357**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	679	1,607	5,839	14,326	2,917	30,202	1,296	54,580	491	57,357
Total	**679**	**1,607**	**5,839**	**14,326**	**2,917**	**30,202**	**1,296**	**54,580**	**491**	**57,357**
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**	3rd Qtr. 2019
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.

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Design	320									320
Construction	2,888	616	1,495	1,025	575			3,095		6,599
Total	**3,208**	**616**	**1,495**	**1,025**	**575**			**3,095**		**6,919**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	3,208	616	1,495	1,025	575			3,095		6,919
Total	**3,208**	**616**	**1,495**	**1,025**	**575**			**3,095**		**6,919**
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**	1st 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	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development		100	1,051	103				1,154		1,254
Design			69	2,026	193			2,288		2,288
Bid & Award				50				50		50
Construction				981	45	21,607	260	22,893	1,080	23,973
Post Construction									144	144
Total		**100**	**1,120**	**3,160**	**238**	**21,607**	**260**	**26,385**	**1,224**	**27,709**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund		100	1,120	3,160	238	21,607	260	26,385	1,224	27,709
Total		**100**	**1,120**	**3,160**	**238**	**21,607**	**260**	**26,385**	**1,224**	**27,709**
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**	
Council Districts	4	**Initial Project Budget**	
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 2015-2019, this project was titled "Treatment Plant Street Rehabilitation". Prior to 2018-2022, this project was ongoing in nature; it has since become a finite project.

Major Cost Changes

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	390	446	1,496					1,496		2,332
Design	154		1,600	2,999	2,995	2,501	2,416	12,511	5,395	18,060
Bid & Award	35		620	500				1,120		1,155
Construction	935		8,000	12,589	19,009	15,610	12,909	68,117	44,415	113,467
Post Construction									618	618
Total	**1,514**	**446**	**11,716**	**16,088**	**22,004**	**18,111**	**15,325**	**83,244**	**50,428**	**135,632**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	1,514	446	11,716	16,088	22,004	18,111	15,325	83,244	50,428	135,632
Total	**1,514**	**446**	**11,716**	**16,088**	**22,004**	**18,111**	**15,325**	**83,244**	**50,428**	**135,632**
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

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
Project Feasibility Development							
Design							
Construction	400						
Post Construction							
Equipment, Materials and Supplies	1,271	1,663	1,663	1,663	1,663	1,663	8,315
Maintenance, Repairs, Other	23						
Total	**1,694**	**1,663**	**1,663**	**1,663**	**1,663**	**1,663**	**8,315**
Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund	1,694	1,663	1,663	1,663	1,663	1,663	8,315
Total	**1,694**	**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

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
General Administration							
Project Feasibility Development	17						
Design	12						
Bid & Award							
Construction	1,086	1,723	1,000	1,000	1,000	1,000	5,723
Post Construction							
Total	**1,115**	**1,723**	**1,000**	**1,000**	**1,000**	**1,000**	**5,723**

Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund	1,115	1,723	1,000	1,000	1,000	1,000	5,723
Total	**1,115**	**1,723**	**1,000**	**1,000**	**1,000**	**1,000**	**5,723**

Annual Operating Budget Impact (000s)
Total

SBWR Extension

CSA	Environmental and Utility Services	**Initial Start Date**	Ongoing
CSA Outcome	Healthy Streams, Rivers, Marsh and Bay	**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	A6589		

Description This project expands the South Bay Water Recycling (SBWR) system through the construction of pipeline and ancillary distribution system projects. The SBWR system expansion is limited to extensions that are justified by projected water revenues, grant funding, or funds from developers or other government agencies (i.e. Santa Clara Valley Water District). No revenue from Plant Tributary Agencies or City Sanitary Sewer rate payers will be used to fund this project.

Justification The SBWR Extension project includes construction of extensions to the existing recycled water distribution system that will provide additional capacity and result in increased water sales and system revenue with the goal of bringing the SBWR system to full cost recovery.

Notes Project schedule dates and selected budget information are not provided due to the ongoing nature of this project. Per the contract with the Santa Clara Valley Water District (SCVWD), which began on July 1, 2010, the City and the SCVWD will review the net costs of operating the SBWR and the Advanced Water Treatment Facility (AWTF) beginning in 2012. This is a cost-sharing project with City costs not to exceed $2 million annually. Annual Operating Budget impacts are evaluated on an ongoing basis. Prior to the 2013-2017 CIP this project was titled "Revised South Bay Action Plan - SBWR Extension".

Major Cost Changes

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
General Administration		432					432
Project Feasibility Development		3,259					3,259
Design							
Bid & Award							
Construction	89						
Post Construction	0						
Total	**89**	**3,691**					**3,691**
Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund	89	3,691					3,691
Total	**89**	**3,691**					**3,691**
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

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
Project Feasibility Development							
Design							
Bid & Award							
Construction	500	6,500	500	500	500	500	8,500
Post Construction							
Total	**500**	**6,500**	**500**	**500**	**500**	**500**	**8,500**
Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund	500	6,500	500	500	500	500	8,500
Total	**500**	**6,500**	**500**	**500**	**500**	**500**	**8,500**
Annual Operating Budget Impact (000s)							
Total							

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 is for consultant services and some staff costs; the remaining years fund staff costs necessary to complete the project.

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development			321					321		321
Design				12,930	162	164	163	13,419	462	13,881
Construction									62	62
Total			**321**	**12,930**	**162**	**164**	**163**	**13,740**	**524**	**14,264**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund			321	12,930	162	164	163	13,740	524	14,264
Total			**321**	**12,930**	**162**	**164**	**163**	**13,740**	**524**	**14,264**

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	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration			2,731	5,023	2,834	2,834	1,399	14,821	1,264	16,085
Total			**2,731**	**5,023**	**2,834**	**2,834**	**1,399**	**14,821**	**1,264**	**16,085**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund			2,731	5,023	2,834	2,834	1,399	14,821	1,264	16,085
Total			**2,731**	**5,023**	**2,834**	**2,834**	**1,399**	**14,821**	**1,264**	**16,085**

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 commercial paper loans and long-term bonds, drawn for the Plant Capital Improvement Projects.

Notes The first draw for which repayment is scheduled is planned to be a commercial paper loan in 2017-2018.

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration			3,363	5,165	183,144	19,445	287,715	498,832		498,832
Total			**3,363**	**5,165**	**183,144**	**19,445**	**287,715**	**498,832**		**498,832**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund			3,363	5,165	183,144	19,445	287,715	498,832		498,832
Total			**3,363**	**5,165**	**183,144**	**19,445**	**287,715**	**498,832**		**498,832**

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	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration	76,497	4,464	4,464	1,804				6,268		87,229
Total	**76,497**	**4,464**	**4,464**	**1,804**				**6,268**		**87,229**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	76,497	4,464	4,464	1,804				6,268		87,229
Total	**76,497**	**4,464**	**4,464**	**1,804**				**6,268**		**87,229**

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.

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
General Administration	5	5	5	5	5	5	25
Bid & Award							
Total	**5**	**5**	**5**	**5**	**5**	**5**	**25**
Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund	5	5	5	5	5	5	25
Total	**5**	**5**	**5**	**5**	**5**	**5**	**25**

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.

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
Project Feasibility Development	1,537	1,000	1,000	1,000	1,000	1,000	5,000
Total	**1,537**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**5,000**

Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund	1,537	1,000	1,000	1,000	1,000	1,000	5,000
Total	**1,537**	**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.

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
General Administration	10,913	8,610	8,055	7,096	7,284	7,278	38,323
Project Feasibility Development	29						
Total	**10,942**	**8,610**	**8,055**	**7,096**	**7,284**	**7,278**	**38,323**
Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund	10,942	8,610	8,055	7,096	7,284	7,278	38,323
Total	**10,942**	**8,610**	**8,055**	**7,096**	**7,284**	**7,278**	**38,323**

2017-2018 Capital Budget

2018-2022 Capital Improvement Program

Water Pollution Control

Summary of Projects that Start After 2017-2018

Summary of Projects with Close-Out Costs Only in 2017-2018

Summary of Reserves

Explanation of Funds

Summary of Projects that Start After 2017-2018

Project Name	Additional Digester Upgrades	**Initial Start Date**	3rd Qtr. 2019
5-Yr CIP Budget	$ 10,520,000	**Initial End Date**	3rd 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	$ 5,890,000	**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	$ 8,005,000	**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	Master Plan Updates	**Initial Start Date**	3rd Qtr. 2018
5-Yr CIP Budget	$ 3,000,000	**Initial End Date**	4th Qtr. 2020
Total Budget	$ 3,000,000	**Revised Start Date**	
Council Districts	4	**Revised End Date**	

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.

Project Name	New Disinfection Facilities	**Initial Start Date**	2nd Qtr. 2019
5-Yr CIP Budget	$ 7,853,000	**Initial End Date**	4th Qtr. 2027
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 that Start After 2017-2018

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

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.

Summary of Projects with Close-Out Costs Only in 2017-2018

Project Name	Combined Heat and Power Equipment Repair and Rehabilitation	**Initial Start Date**	3rd Qtr. 2012
5-Yr CIP Budget	$ 32,000	**Initial End Date**	2nd Qtr. 2013
Total Budget	$ 17,720,334	**Revised Start Date**	
Council Districts	4	**Revised End Date**	3rd Qtr. 2017
Description	This project will install new digester gas compressors housed in a new building, along with new digester gas pre-coolers, cooling towers, gas piping, and associated utility tie-ins. In addition, this project will replace an existing digester gas holder. The funds remaining will complete a punch list of items for the project.		

Project Name	Construction-Enabling Improvements	**Initial Start Date**	3rd Qtr. 2015
5-Yr CIP Budget	$ 391,000	**Initial End Date**	4th Qtr. 2016
Total Budget	$ 4,715,502	**Revised Start Date**	
Council Districts	4	**Revised End Date**	3rd Qtr. 2017
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	$ 333,000	**Initial End Date**	2nd Qtr. 2012
Total Budget	$ 8,855,850	**Revised Start Date**	1st Qtr. 2012
Council Districts	4	**Revised End Date**	4th Qtr. 2017
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.		

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

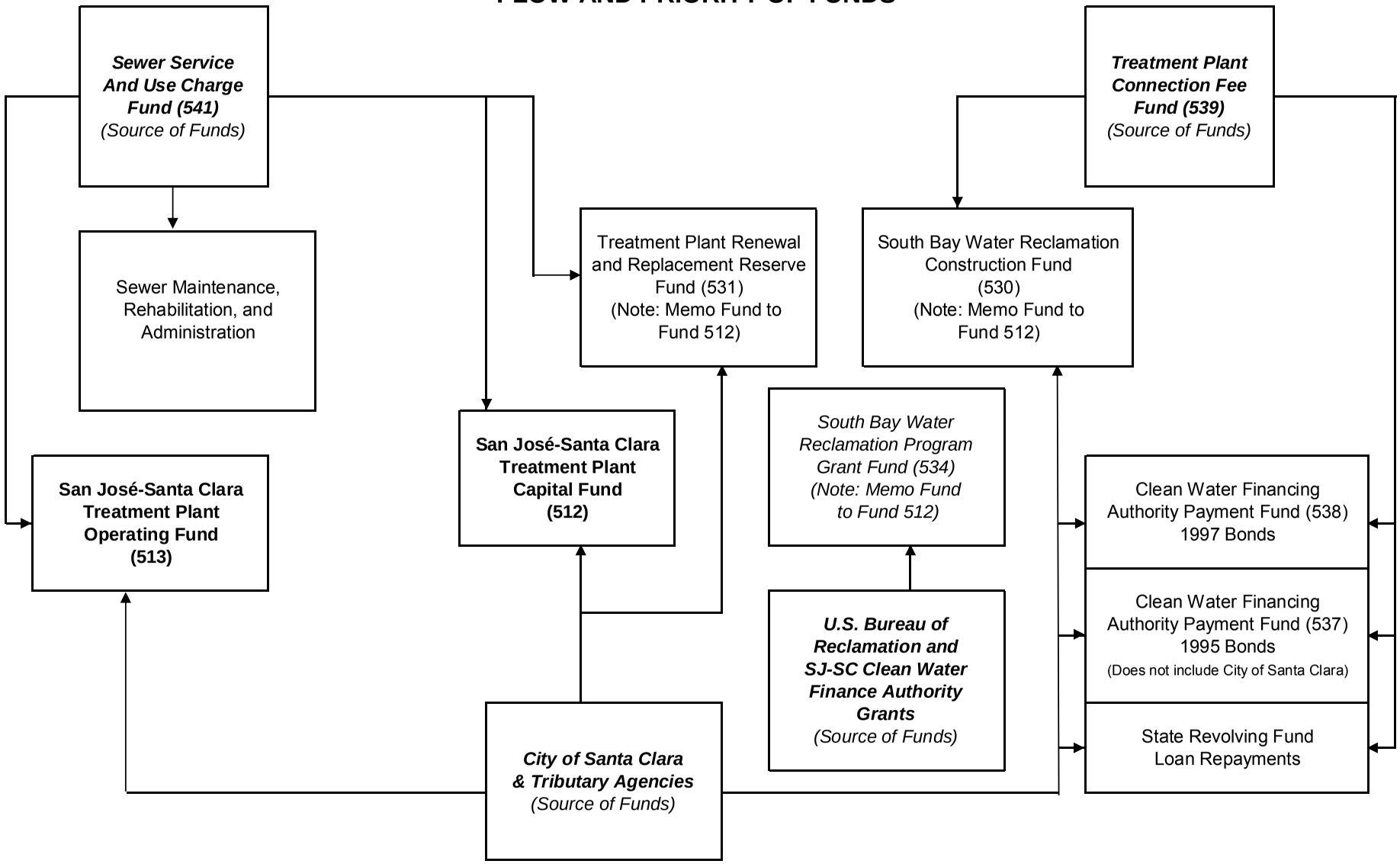
Tributary agencies are assessed for their share of annual operation, maintenance, equipment, and facilities replacement and capital costs, based on their respective flow and strength of sewage conveyed to the Plant.

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

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

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

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.