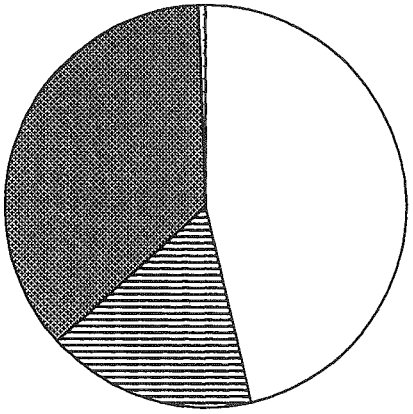
2014-2015 Capital Budget

2015-2019 Capital Improvement Program

Water Pollution Control

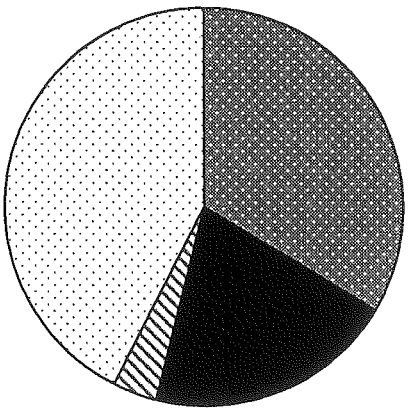
WATER POLLUTION CONTROL
2015-2019 Capital Improvement Program

2014-2015 Proposed Source of Funds



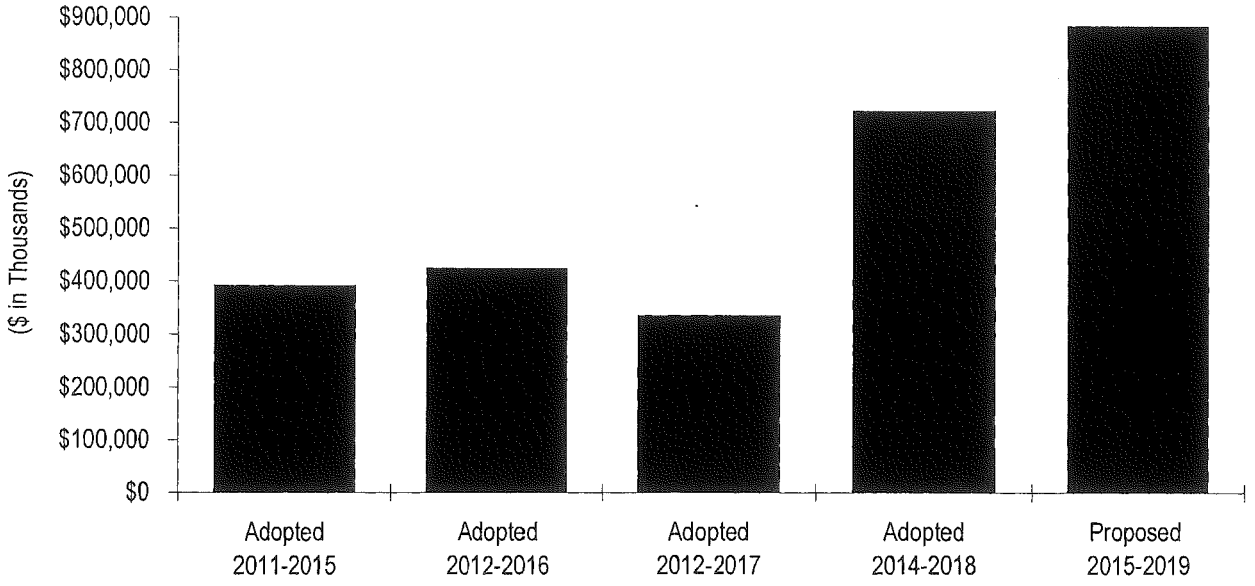
- Beginning Fund Balance
- Other Government Agencies
- Transfers
- Interest and Miscellaneous

2014-2015 Proposed Use of Funds



- Construction
- Non-Construction
- Reserves and Transfers
- Ending Fund Balance

CIP History



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Water Pollution Control

2015-2019 Proposed Capital Improvement Program*

A) Combined Heat & Power Equipment Repair & Rehabilitation
   1. Digester Gas Compressor Upgrade
   2. Digester Gas Storage Replacement

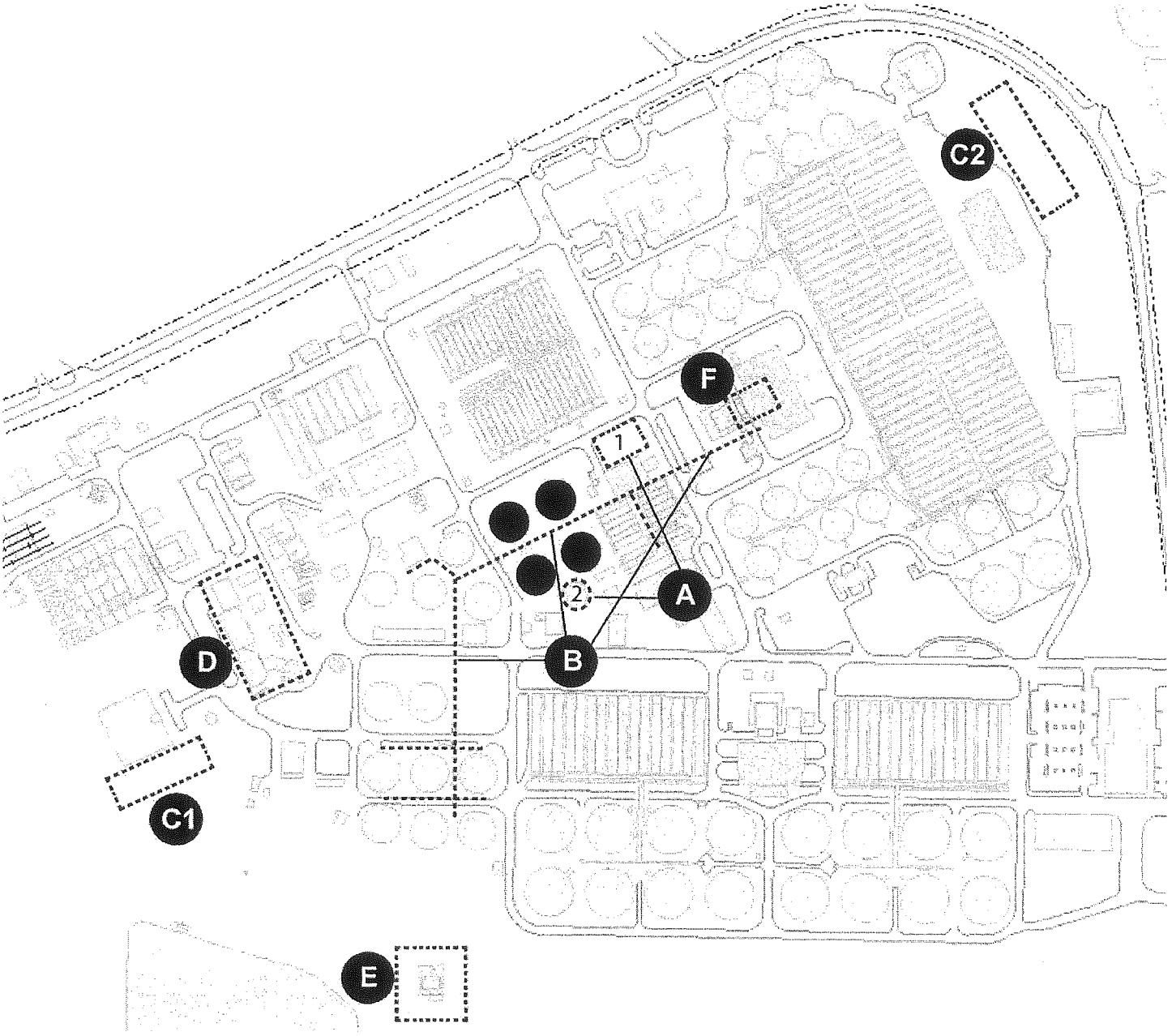
B) Digester and Thickener Facilities Upgrade

C) Energy Generation Improvements
   1. Emergency Diesel Generators
   2. Cogeneration Facility

D) Headworks Improvements & New Headworks

E) Iron Salt Feed Station

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

2015-2019 Proposed 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)	110
DRY METRIC TONS OF BIOSOLIDS HAULED EACH YEAR	56,000
AVERAGE MEGAWATTS PRODUCED	8.35

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 4, 2013, the City Council approved to change the name of the Plant to the San José-Santa Clara Regional Wastewater Facility for use in future communications and public outreach.

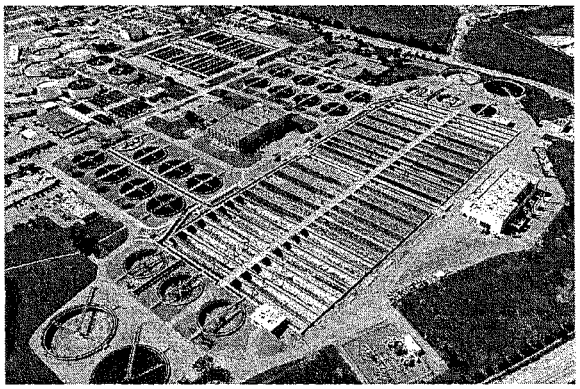
The 2015-2019 Proposed Capital Improvement Program (CIP) provides funding of $887.0 million, of which $142.3 million is allocated in 2014-2015. The five-year CIP is developed by City staff, reviewed by the Treatment Plant Advisory Committee (TPAC), and forwarded to the San José City Council for budget approval. 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, Safe, Reliable, and Sufficient Water Supply,* and *Healthy Streams, Rivers, Marsh, and Bay.*

PROGRAM PRIORITIES AND OBJECTIVES

The 2015-2019 Proposed CIP is consistent with the goals and policies outlined in the City of San José Envision 2040 General Plan. These include maintaining adequate operational capacity for wastewater treatment to accommodate the City's economic and population growth; adopting and implementing new technologies for wastewater to achieve greater safety, energy efficiency, and environmental benefit; and maintaining and operating the Plant in compliance with all applicable local, State, and federal regulatory requirements.

PROGRAM PRIORITIES AND OBJECTIVES



San José-Santa Clara Regional Wastewater Facility

The development of this Proposed CIP is guided by the Plant Master Plan (PMP), a 30-year planning-level document focused on long term rehabilitation and modernization of the 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. 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, with over $1 billion to be invested in the next ten years.

A capital program of this size will require significant resources in order to manage and deliver effective projects on time and on budget. On September 24, 2013, the City Council approved a consultant agreement with MWH Americas, Inc. to assist and support ESD in developing and implementing this capital improvement program. On October 15, 2013, MWH program team members mobilized and are now co-located with City staff to form an integrated Program Management Office and program team. Priorities for the near-term include completing program start-up activities, ensuring the ability to use alternative project delivery methods, securing program financing, and developing program staff.

Program Start-Up Activities: The initial focus of the program start-up activities includes establishing a Program Execution Plan that will guide implementation of the CIP; developing supporting systems, tools, and processes, organization and governance structures, master schedules and budgets, performance reports, and a document management system; and completing a detailed project validation process to critically evaluate project needs and priorities. The projects included with this Proposed CIP are based on the outcome of the validation process.

Alternative Delivery Methods: Early results of the validation process indicate that bundling related projects into large construction packages and using alternative delivery methods (e.g., design-build, progressive design-build, design-build-operate, construction-manager-at-risk) may prove advantageous for the program. The program team has begun to work with the City's legal team and Public Works staff to investigate and pursue the required authority, at the state and federal levels, to use alternative project delivery methods on the program (for the purpose of gaining efficiencies and/or cost savings). For the time being, it is assumed that the majority of projects in the Proposed

Water Pollution Control Capital Program

2015-2019 Proposed Capital Improvement Program

Overview

PROGRAM PRIORITIES AND OBJECTIVES

CIP will be delivered using traditional project delivery (design-bid-build) and/or low-bid design-build project delivery, for which the City already has authority.

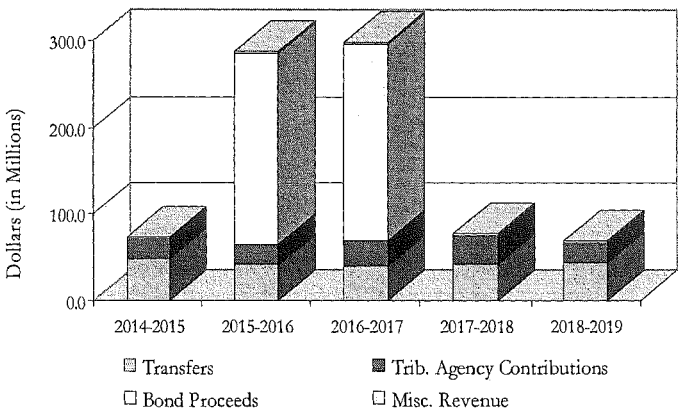
Program Financing: To date, the general concept for funding the CIP has been to pay for critical rehabilitation projects inside the fence line of the Plant's main operational area with existing ratepayer funds, and to finance new technology projects (new biosolids facilities, cogeneration facility, and advanced filter facility). More recently, discussions with the Plant's partner agency and tributary members have focused on the possibility of external financing for large rehabilitation projects that have an asset life of 30 years or greater, to better address generational equity. Finance managers from the Cities of San José and Santa Clara and the tributary agencies have met to discuss financing needs and have agreed to participate in external financing to minimize ratepayer impacts. Follow-up recommendations will be brought to TPAC and the City Council as more information becomes available. For the next five years, San José's portion of the funding for the Proposed CIP is already programmed into the 2015-2019 sewer rate models with moderate rate increases of 3%-5% planned beginning in 2015-2016.

Program Staff Development: Successful delivery of this large, multi-disciplinary CIP will require an integrated team of City staff, outside consultants, and contractors. After the program start-up efforts conclude, the program team will increase its attention on project delivery. An immediate priority will be identifying resource needs and securing a combination of City staff and consultants to deliver the program. The program team is currently supported by City staff from Environmental Services, Public Works, Planning, Finance, and the City Attorney's Office, and staff from MWH Americas, Inc. The program will also continue to draw from the professional consultant and contractor community for subject-matter technical expertise, engineering services, and construction management.

SOURCES OF FUNDING

Revenues for the Five-Year CIP are derived from several sources: transfers from the City of San José Sewer Service and Use Charge 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 US Bureau of Reclamation; and proceeds from a planned bond issuance.

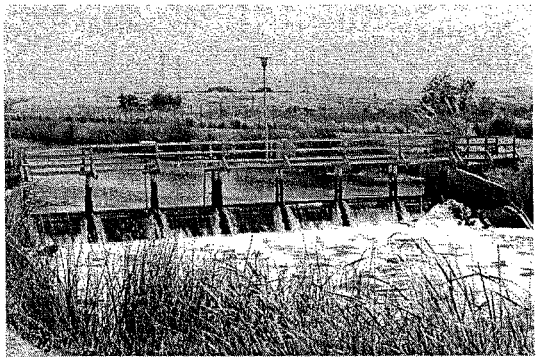
Summary of Revenues



SOURCES OF FUNDING

The Sewer Service and Use Charge 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 $163.8 million, which reflect a $15.0 million (8.4%) increase compared to the 2014-2018 Adopted CIP due to the incorporation of projects recommended from the validation process as described under Program Priorities and Objectives.

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 Treatment Plant. These contributions reimburse the City for actual project expenditures. In this Proposed CIP, contributions from the City of Santa Clara and other agencies total $133.2 million, which represents a $70.4 million (34.6%) decrease compared to the 2014-2018 Adopted CIP due to their participation in the external financing.



Treated Water Flows to the Bay

To accommodate these costs in future years, a bond issuance amounting to $221.1 million is programmed in 2015-2016, followed by another issuance of $227.0 million in 2016-2017. Debt service on the bonds is estimated to be approximately $5.2 million in 2015-2016 rising to approximately $27.7 million in 2017-2018 to reflect the amortization of the interest and principal loan amount. The Proposed CIP assumes that no rate increase will be needed for the Sewer Service and Use Charge Fund for 2014-2015; however, rate increases of 3% to 5% are anticipated in the out years of the CIP and will be reassessed at a later time based on the levels of debt service needed to accomplish the full 30-year PMP. Based on the priorities identified through the validation process, the estimated size of the issuance and the related debt service are scheduled to cover project costs programmed in the Proposed 2015-2019 CIP while avoiding large rate increases that would be required to fund the PMP in a "pay-as-you-go" scenario. The bond issuance does not reflect a more comprehensive financing plan that will be required to accomplish the full 30-year PMP.

Currently, the program team is working to scope the PMP projects fully and sequence them into an overall implementation plan. A more detailed financial plan, an overall program execution plan, updated cost estimates and cash flow curves are also being developed. Staff anticipates that in late 2014, project planning will be much further along, which will facilitate the development of a more refined long-term financial plan.

PROGRAM HIGHLIGHTS

The wastewater that enters the Plant is treated using various physical and biological processes before being discharged into San Francisco Bay. This section provides an overview of each treatment process and identifies some of the major projects to be implemented with this CIP.

Preliminary Wastewater Treatment

The headworks facility, located at the front end of the Plant, is designed to provide preliminary treatment of the incoming wastewater. Large solids such as rags, sticks, floatables, grit, and grease are removed through a screening and grit removal process to protect downstream pumping and other equipment. Projects included with this CIP are focused on constructing a new headworks facility and improving the existing wet weather reliability headworks structures.

Project Name	Description	2015-2019 CIP Cost	Estimated Completion
Headworks Improvements	Modify Headworks No. 2 to accommodate all dry weather flow to allow Headworks No. 1 (HW1) to be taken out of service. Based on condition assessment, rehabilitate HW1 to keep it operational until the New Headworks is completed.	$28.0 million	3rd Quarter 2019
New Headworks	Construct new headworks, expand and line equalization basin as needed and incorporate odor control measures.	$88.4 million	3rd Quarter 2022

Primary Wastewater Treatment

The primary treatment process consists of a series of uncovered concrete holding tanks fitted with mechanisms that work to slow the flow of wastewater and allow heavy solids to settle out while allowing oil, grease, and lighter solids to float to the surface.

Mechanical skimmers remove grease and floatable materials from the water surface and settled solids (i.e., sludge) are collected at the bottom of the tanks while the remaining liquid waste stream is moved onto the next process for further treatment. Rehabilitation of the primary tanks will be conducted in four phases, one quadrant at a time over an estimated ten year period. Funding included with this CIP focuses on the first phase of work which will include replacement of all mechanical, electrical, and controls equipment; refurbishment and coating of concrete; structural modifications to accommodate odor control covers; and odor treatment.

PROGRAM HIGHLIGHTS

Primary Wastewater Treatment (Cont'd.)

Project Name	Description	2015-2019 CIP Cost	Estimated Completion
East Primary Rehabilitation, Seismic Retrofit, and Odor Control	Seismic retrofit primary tanks for odor control covers, coat concrete, convert clarifier mechanisms to stainless steel, and install odor control treatment system.	$42.2 million	3rd Quarter 2024
Iron Salt Feed Station	Construct permanent iron salt and polymer dosing station including a concrete containment structure, pumps, piping, and instrumentation to dose and deliver iron salt solution. Adding iron salts to incoming wastewater will improve Plant operations by enhancing the settling of sludge in the primary clarifiers and reducing corrosion and odor.	$3.3 million	2nd Quarter 2017

Secondary Wastewater Treatment

The secondary treatment process at the Plant consists of a series of aeration basins and clarifiers where biological treatment of the wastewater takes place. Microorganisms and wastewater are mixed and aerated in these tanks for varying lengths of time and intensity, resulting in the settling out of large particulate matter or sludge. A portion of the settled sludge is returned to the secondary treatment process for reuse and the remainder removed as excess waste.

The secondary treatment process removes contaminants as required by the Plant's NPDES discharge permit. Rehabilitation of the secondary and nitrification clarifiers will be conducted in phases over a 30-year period and involves performance modifications, along with mechanical, structural, and electrical rehabilitation. Funding included with this CIP focuses on rehabilitating a number of nitrification clarifiers and modifications to one secondary clarifier followed by performance monitoring before proceeding with rehabilitation of the remaining secondary clarifiers and nitrification clarifiers.

Secondary Aeration Tanks

PROGRAM HIGHLIGHTS

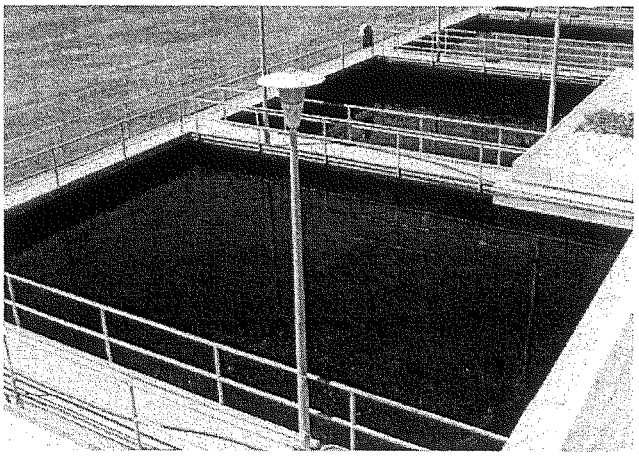
Secondary Wastewater Treatment (Cont'd.)

Project Name	Description	2015-2019 CIP Cost	Estimated Completion
Aeration Tanks and Blower Rehabilitation	Rehabilitate secondary and nitrification aeration tanks. Replace coarse bubble diffusers with fine bubble diffusers and install variable frequency drives (VFDs).	$43.9 million	3rd Quarter 2025
Secondary Clarifier Rehabilitation Demonstration	Retrofit one secondary clarifier to determine optimal process configuration for improving clarifier performance and efficiency.	$2.0 million	2nd Quarter 2020
Secondary and Nitrification Clarifier Rehabilitation	Rehabilitate structural, mechanical, and electrical elements of existing nitrification and secondary clarifiers.	$26.4 million	4th Quarter 2026

Tertiary Wastewater Treatment

The tertiary treatment process is the final treatment stage at the Plant and consists of a gravity filtration process and a disinfection process. The Plant currently filters a portion of the secondary effluent stream to reuse standards, and the remainder to the standards required for discharge to the San Francisco Bay.

Due to the age and condition of the existing tertiary filters, a significant investment would be required to refurbish and retain them for long-term future use. Work included with this CIP focuses on replacing filter media and underdrain systems to ensure continued regulatory compliance and operational reliability. Other work includes improvements to the Plant's outfall bridge and levee and tracking regulatory developments, which may trigger the need for a new disinfection facility in the next two to three NPDES permit cycles.



Existing Filter Complex

PROGRAM HIGHLIGHTS

Tertiary Wastewater Treatment (Cont'd.)

Project Name	Description	2015-2019 CIP Cost	Estimated Completion
Filter Rehabilitation	Replace filter media and, potentially, underdrain systems, replace valves and electrical controls, install air scouring equipment and piping, and repair concrete.	$26.5 million	3rd Quarter 2020
Outfall Bridge and Levee Improvements	Conduct condition assessment, repair or replace bridge and instrumentation supports, repair levee and gate, and refurbish electrical transformer.	$8.1 million	2nd Quarter 2019

Biosolids

The Plant currently processes biosolids material through a combination of anaerobic digestion, lagoon storage, and air drying. The final product is recycled as alternative daily cover (ADC) at the Newby Island landfill. Due to the projected closure of the Newby Island landfill in 2025, potential changes to biosolids regulations, and odor impacts to the surrounding community, the Plant will be transitioning to new biosolids management operations by 2018. The first phase of this transition will include mechanical dewatering and odor control facilities. The new biosolids operation will ultimately consist of mechanical dewatering, thermal drying, side stream treatment, and odor control components. In addition, phased rehabilitation of the digesters, sludge thickening, and gas handling facilities will be implemented over a ten-year period. Funding included with this CIP focuses on the first phase of the digester rehabilitation, construction of a new digested sludge dewatering facility, and retirement of the existing lagoons and drying beds.

Project Name	Description	2015-2019 CIP Cost	Estimated Completion
Digested Sludge Dewatering Facility	Construct new mechanical dewatering facility and support systems to replace existing sludge storage lagoons and open air solar drying beds.	$68.2 million	2nd Quarter 2019
Digester and Thickener Facilities Upgrade	Rehabilitate up to ten anaerobic digesters, including new covers and mixing systems, and heating system upgrades. Modify six dissolved air flotation units for co-thickening and odor control upgrades. Construct new above ground gas manifold, new sludge pipeline, and new waste biogas flare system.	$63.7 million	1st Quarter 2025

PROGRAM HIGHLIGHTS

Biosolids (Cont'd.)

Project Name	Description	2015-2019 CIP Cost	Estimated Completion
Lagoons and Drying Beds Retirement	Decommission use of existing sludge storage lagoons and open air solar drying beds for post-digestion processing through a phased approach.	$12.2 million	2nd Quarter 2025
Thermal Drying Facility	Construct new thermal drying facility and support systems to replace existing sludge storage lagoons and open air solar drying beds. Funding in the Proposed CIP will provide for early planning and development of the estimated $132.0 million facility.	$2.6 million	4th Quarter 2023

Electrical Systems and Power Generation

The day-to-day operation of the Plant depends heavily on having reliable energy sources and reliable, operable systems with built-in redundancy. While past CIP's focused on modifications to the electrical distribution system, this CIP focuses on replacing aging energy generation equipment. The Plant's engine generators, mechanical and electrical process air compressor, and gas compressors are between 17 and 58 years old, and have been breaking down with increasing frequency, well beyond forecast levels. Funding included with this CIP focuses on construction of a new digester gas compressor facility, a new gas holder, new advanced internal combustion engines, and backup diesel generators. Additional switchgear replacements/upgrades and other electrical improvements will also be made to further enhance electrical reliability at the Plant.

Project Name	Description	2015-2019 CIP Cost	Estimated Completion
Energy Generation Improvements	Construct a new cogeneration facility to replace existing engine-generators with new internal combustion engines and construct new emergency diesel generators.	$87.0 million	1st Quarter 2018
Plant Electrical Reliability	Replace switchgears, modify distribution buses and cabling, and provide backup systems in the Plant's electrical systems.	$6.0 million	4th Quarter 2016

PROGRAM HIGHLIGHTS

Advanced Process Control Systems

The Plant is a highly complex, automated facility monitored and controlled by a complex system of instrumentation (meters, gauges, controllers, etc.) and a Distributed Control System (DCS). The DCS allows operators in a control center to remotely monitor and control operations of the treatment processes, such as opening a valve and adjusting flow through a certain process area utilizing information gathered through the meters and gauges. Funding included with this CIP focuses on development of a Plant-wide automation master plan, flow meter replacement, sensor and control upgrades, and DCS system upgrades.

Project Name	Description	2015-2019 CIP Cost	Estimated Completion
Advanced Facility Control and Meter Replacement	Develop an automation master plan, replace existing flow meters and actuators, and upgrade sensors, controls, and monitoring equipment throughout the Plant.	$29.4 million	2nd Quarter 2024
Treatment Plant Distributed Control System	Upgrade and convert system hardware and software components.	$1.5 million	2nd Quarter 2017

Site Facility Improvements

Many of the Plant's buildings and grounds are up to 50 years old. As the Plant expanded, support buildings and infrastructure have become decentralized, resulting in inefficient operations. This CIP includes funding for various site improvement projects, such as building improvements, road and storm drainage improvements, equipment replacement, handrail replacements, yard piping rehabilitation, and water systems improvements.

Fire Main Replacement - Phase 2

PROGRAM HIGHLIGHTS

Site Facility Improvements

Project Name	Description	2015-2019 CIP Cost	Estimated Completion
Equipment Replacement	Replacement of air compressors, tanks, pumps, motors, control systems, valves, heat exchangers, engine auxiliaries, lab instruments, and other capital equipment as required.	$8.3 million	Ongoing
Facility Wide Water Systems Improvements	Rehabilitate, replace, and/or extend the Plant's four water systems, including piping, valves, pumps, controls, and other ancillary equipment.	$13.8 million	1st Quarter 2022
Plant Instrument Air System Upgrade	Construct new above-grade, distributed instrument air supply system.	$9.1 million	1st Quarter 2019
Plant Infrastructure Improvements	Replacement and rehabilitation work includes handrail replacement, concrete repairs, telecommunication systems upgrade, and Plant support systems/building improvements.	$8.9 million	Ongoing
Support Building Improvements	Construct various tenant improvements to administration, operations, engineering, and other support buildings. Construct new warehousing facilities and electronic warehouse management system.	$22.2 million	3rd Quarter 2023
Tunnel Rehabilitation	Structural, mechanical, coating, and piping improvements to the Plant's tunnel system.	$9.9 million	4th Quarter 2024
Urgent and Unscheduled Treatment Plant Rehabilitation	Timely response to unanticipated maintenance and repair needs at the Plant.	$7.5 million	Ongoing
Yard Piping and Road Improvements	Phased rehabilitation or replacement of pipes throughout the Plant. Roadway and drainage improvements to Plant's main operations and residual solids management areas.	$49.3 million	Ongoing

PROGRAM HIGHLIGHTS

South Bay Water Recycling Program

The South Bay Water Recycling (SBWR) System was authorized by the City Council in 1993 as a project to divert up to 15 million gallons per day of treated effluent from the bay during the summer by providing non-potable recycled water to customers in Milpitas, Santa Clara, and San José. Current SBWR projects underway include the SBWR Reservoir Facility, which is constructing an Advanced Water Purification Center as a joint project with the Santa Clara Valley Water District (SCVWD). The Advanced Water Purification Center will provide for additional filtration and treatment of the recycled water. This project is expected to be completed in early 2014, marking a significant milestone in the evolution of SBWR. In addition, a strategic planning effort with the SCVWD is underway to develop a Master Plan to address future expansion, operation, and maintenance of the system.

The SBWR Master Planning process is expected to be completed by December 2014. The process will develop recommendations and options for SBWR's mandates, mission, service level, cost effectiveness, and funding through engagement of key stakeholders from the Plant Tributary Agencies and the SCVWD. The Master Plan will include an assessment of the ability of existing infrastructure to meet current and future recycled water demands and identify future capital improvements to enhance system reliability and water quality. In August 2011, the U.S. Bureau of Reclamation awarded the City approximately $1.2 million to conduct a feasibility study for improvements and expansions to the SBWR system, which will fund about half of this Master Planning effort.

This Proposed Five-Year CIP includes $3.0 million for SBWR System Reliability and Infrastructure Replacement Project, with $1.5 million budgeted for 2014-2015.

Project Name	Description	2014-2018 CIP Cost	Estimated Completion
SBWR System Reliability and Infrastructure Replacement	System reliability improvements including, but not limited to, rehabilitation and/or replacement of pump station components, control and communication systems, pipelines, and other system related infrastructure.	$3.0 million	2nd Quarter 2016

PROGRAM HIGHLIGHTS

Reserves

As in prior years, the 2015-2019 Proposed CIP includes a $5.0 million reserve for equipment replacement. This reserve level was established in accordance with the State Water Resources Control Board (SWRCB) Fund Loan Agreement policy, the Clean Water Financing Authority bond covenants, and requirements in the Master Agreements for Wastewater Treatment between the City of San José, City of Santa Clara, and the Tributary Agencies.

MAJOR CHANGES FROM THE 2014-2018 ADOPTED CIP

Major changes from the 2014-2018 Adopted CIP include:

Process Area	Project Name	Funding Change
Preliminary Treatment	Headworks Improvements	+ $23.7 million
Preliminary Treatment	New Headworks	+ $11.8 million
Primary Treatment	East Primary Rehabilitation, Seismic Retrofit, and Odor Control	+ $27.5 million
Primary Treatment	Iron Salt Feed Station	+ $3.3 million
Secondary Treatment	Aeration Tanks and Blower Rehabilitation	+$43.9 million
Secondary Treatment	Secondary Clarifier Rehabilitation Demonstration	+$26.4 million
Secondary Treatment	Secondary and Nitrification Clarifier Rehabilitation	+ $22.0 million
Tertiary Treatment	Filter Rehabilitation	+ $26.9 million
Tertiary Treatment	New Disinfection Facilities	+$0.4 million
Tertiary Treatment	Outfall Bridge and Levee Improvements	+$8.1 million
Biosolids	Digested Sludge Dewatering Facility	- $256.8 million
Biosolids	Digester and Thickener Facilities Upgrade	+ $18.3 million
Biosolids	Lagoons and Drying Beds Retirement	+$12.2 million
Biosolids	Thermal Drying Facility	+$2.6 million
Electrical Systems and Power Generation	Energy Generation Improvements	+ $24.5 million
Electrical Systems & Power Generation	Plant Electrical Reliability	+ $3.9 million
Advanced Process Control & Automation	Advanced Facility Control and Meter Replacement	+ $30.4 million
Site Facility Improvements	Facility Wide Water Systems Improvements	+$13.8 million
Site Facility Improvements	Plant Instrument Air System Upgrade	+$9.1 million

MAJOR CHANGES FROM THE 2014-2018 ADOPTED CIP

Process Area	Project Name	Funding Change
Site Facility Improvements	Support Building Improvements	+$22.2 million
Site Facility Improvements	Tunnel Rehabilitation	+$9.9 million
Non-Construction	Program Management	+ $5.8 million
Non-Construction	Record Drawings	+$13.2 million

The most significant increases to the program reflect the incorporation of the critical rehabilitation, gap projects, and new technology projects (biosolids transition and energy generation) identified through the project validation process.

OPERATING BUDGET IMPACT

Most projects in this Proposed CIP are expected to minimize operations and maintenance liabilities in the Operating Budget. The table below and Attachment A summarizes the operating and maintenance impact to the Sewer Service and Use Charge Fund for several projects.

Net Operating Budget Impact Summary

	2015-2016	2016-2017	2017-2018	2018-2019
Digested Sludge Dewater Facility				$13,930,000
Digester and Thickener Facilities Upgrade				$420,000
Energy Generation Improvements			($5,190,000)	($5,290,000)
			($5,190,000)	$9,060,000

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.

Of significance, the new biosolids process, which includes the Digested Sludge Dewater Facility project, is expected to have a significant impact on the operating budget in 2018-2019. The digested sludge dewatering and thermal drying facilities are energy intensive, require enclosed odor-controlled buildings, and potentially 24-hour operations. The selected project delivery method for the Biosolids projects (design-build, design-build-operate, or other) and final biosolids disposition alternatives will also impact future operating costs.

A few other projects are expected to introduce new operating costs (primarily chemical costs) particularly those with odor control elements (e.g., Digester and Thickener Facilities Upgrades, New Headworks, Iron Salt Feed Station, and East Primaries Rehabilitation). While there are increased operating costs, these costs are expected to be partially offset by energy savings achieved through better solids settling, less aeration demand, and improved biogas production.

OPERATING BUDGET IMPACT

The Energy Generation Improvements will replace existing engine generators with lower emissions internal combustion engines that will result in lower energy efficiencies and lower operating maintenance costs. The Energy Generation Improvements will start operation in 2016-2017.

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Attachment A - Operating Budget Impact

	2015-2016	2016-2017	2017-2018	2018-2019
Water Pollution Control				
Digested Sludge Dewatering Facility				$13,930,000
Digester and Thickener Facilities Upgrade				$420,000
Energy Generation Improvements			($5,190,000)	($5,290,000)
Total Water Pollution Control			**($5,190,000)**	**$9,060,000**

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2014-2015 Capital Budget

2015-2019 Capital Improvement Program

Water Pollution Control

Source of Funds

Use of Funds

The Source of Funds displays the capital revenues by funding source for each year of the Five-Year Capital Improvement Program. The Use of Funds displays the capital expenditures by line-item for each year of the five-year period.

Water Pollution Control

2015-2019 Proposed Capital Improvement Program

Source of Funds (Combined)

SOURCE OF FUNDS	Estimated 2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	5-Year Total
San José-Santa Clara Treatment Plant Capital Fund (512)							
Beginning Fund Balance	127,906,013	66,060,697	60,483,697	58,210,697	200,855,697	110,880,697	66,060,697 *
Sale of Bonds			221,139,000	227,032,000			448,171,000
Revenue from Other Agencies:							
Federal Government							
- SBWR Master Plan Grant	900,000						
- U.S. Bureau of Reclamation Grant	250,000	250,000	250,000	250,000	250,000	250,000	1,250,000
Water Pollution Control Plant User Agencies							
- 2005 Bond Debt Repayment	1,223,000	1,216,000	1,221,000	1,070,000	165,000	155,000	3,827,000
- 2015-2017 Bond Debt Service Repayment			1,742,000	6,410,000	9,481,000	9,481,000	27,114,000
- Equipment Replacement			588,000	588,000	588,000	588,000	2,352,000
- State Revolving Fund Loan Repayment	1,374,000	1,374,000	1,374,000	1,374,000	1,374,000	555,000	6,051,000
- WPCP Projects	23,001,000	21,341,000	18,317,000	18,973,000	21,776,000	13,442,000	93,849,000
Santa Clara Valley Water District							
- SCVWD - Advanced Water Treatment Contribution	1,000,000						
Contributions, Loans and Transfers from:							
Special Funds							
- Transfer for 2015-2017 Debt Service from the Sewer Service and Use Charge Fund (541)			3,489,000	12,552,000	18,247,000	18,247,000	52,535,000
- Transfer from the Sewage Treatment Plant Connection Fee Fund (539)	3,090,000	3,090,000	3,090,000	3,090,000	3,090,000	1,249,000	13,609,000
- Transfer from the Sewer Service and Use Charge Fund (541)	34,576,000	48,000,000	37,788,000	27,772,000	24,544,000	25,723,000	163,827,000

Water Pollution Control

2015-2019 Proposed Capital Improvement Program

Source of Funds (Combined)

SOURCE OF FUNDS (CONT'D.)	Estimated 2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	5-Year Total
San José-Santa Clara Treatment Plant Capital Fund (512)							
Interest Income	450,000	569,000	1,055,000	1,890,000	1,589,000	1,285,000	6,388,000
Miscellaneous Revenue							
- Calpine Metcalf Energy Center Facilities Repayment	389,000	389,000	389,000	389,000	389,000	389,000	1,945,000
Reserve for Encumbrances	17,291,684						
Total San José-Santa Clara Treatment Plant Capital Fund	**211,450,697**	**142,289,697**	**350,925,697**	**359,600,697**	**282,348,697**	**182,244,697**	**886,978,697** *
TOTAL SOURCE OF FUNDS	**211,450,697**	**142,289,697**	**350,925,697**	**359,600,697**	**282,348,697**	**182,244,697**	**886,978,697** *

* The 2015-2016 through 2018-2019 Beginning Balances are excluded from the FIVE-YEAR TOTAL SOURCE OF FUNDS to avoid multiple counting of the same funds.

Water Pollution Control

2015-2019 Proposed Capital Improvement Program

Use of Funds (Combined)

USE OF FUNDS	Estimated 2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	5-Year Total
Construction Projects							
Public Art							
Public Art	565,000	287,000	1,512,000	36,000	37,000	694,000	2,566,000
Total Public Art	**565,000**	**287,000**	**1,512,000**	**36,000**	**37,000**	**694,000**	**2,566,000**
Preliminary Wastewater Treatment							
Headworks No. 2 Enhancement	7,914,000						
1. Headworks Improvements	1,515,000	1,240,000	4,780,000	21,260,000	370,000	370,000	28,020,000
2. New Headworks	353,000	2,880,000	14,620,000	780,000	1,610,000	68,480,000	88,370,000
Total Preliminary Wastewater Treatment	**9,782,000**	**4,120,000**	**19,400,000**	**22,040,000**	**1,980,000**	**68,850,000**	**116,390,000**
Primary Wastewater Treatment							
3. East Primary Rehabilitation, Seismic Retrofit, and Odor Control	715,000		1,860,000	18,320,000	1,350,000	20,650,000	42,180,000
4. Iron Salt Feed Station	1,900,000	3,010,000	150,000	140,000			3,300,000
Total Primary Wastewater Treatment	**2,615,000**	**3,010,000**	**2,010,000**	**18,460,000**	**1,350,000**	**20,650,000**	**45,480,000**
Secondary Wastewater Treatment							
Biological Nutrients Removal 1 and Biological Nutrients Removal 2 Connection	876,000						
Secondary Clarifier Rehabilitation Demonstration				410,000	1,560,000	60,000	2,030,000
5. Aeration Tanks and Blower Rehabilitation		1,580,000	3,210,000	16,310,000	1,520,000	21,320,000	43,940,000
6. Secondary and Nitrification Clarifier Rehabilitation	3,159,000	160,000	5,070,000	590,000	20,270,000	330,000	26,420,000
Total Secondary Wastewater Treatment	**4,035,000**	**1,740,000**	**8,280,000**	**17,310,000**	**23,350,000**	**21,710,000**	**72,390,000**

Water Pollution Control

2015-2019 Proposed Capital Improvement Program

Use of Funds (Combined)

USE OF FUNDS (CONT'D.)	Estimated 2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	5-Year Total
Construction Projects							
Tertiary Wastewater Treatment							
Alternative Disinfection	980,000						
New Disinfection Facilities						370,000	370,000
New Filter Complex	896,000						
7. Filter Rehabilitation	800,000	490,000	4,680,000	460,000	20,580,000	310,000	26,520,000
8. Outfall Bridge and Levee Improvements		300,000	1,480,000	6,050,000	160,000	130,000	8,120,000
Total Tertiary Wastewater Treatment	**2,676,000**	**790,000**	**6,160,000**	**6,510,000**	**20,740,000**	**810,000**	**35,010,000**
Biosolids							
Dissolved Air Flotation Rehabilitation and Odor Control	773,000						
Lagoons and Drying Beds Retirement			570,000	5,380,000	5,930,000	340,000	12,220,000
Thermal Drying Facility						2,590,000	2,590,000
9. Digested Sludge Dewatering Facility	1,000,000	2,940,000	62,500,000	990,000	980,000	820,000	68,230,000
10. Digester and Thickener Facilities Upgrade	12,496,000	1,440,000	59,680,000	1,120,000	1,110,000	330,000	63,680,000
Total Biosolids	**14,269,000**	**4,380,000**	**122,750,000**	**7,490,000**	**8,020,000**	**4,080,000**	**146,720,000**
Electrical Systems and Power Generation							
11. Combined Heat and Power Equipment Repair and Rehabilitation	10,616,000	420,000	370,000	30,000			820,000
12. Energy Generation Improvements	38,425,000	11,070,000	73,470,000	1,470,000	980,000		86,990,000
13. Plant Electrical Reliability	3,122,000	5,600,000	300,000	100,000			6,000,000
Total Electrical Systems and Power Generation	**52,163,000**	**17,090,000**	**74,140,000**	**1,600,000**	**980,000**		**93,810,000**

Water Pollution Control

2015-2019 Proposed Capital Improvement Program

Use of Funds (Combined)

USE OF FUNDS (CONT'D.)	Estimated 2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	5-Year Total
Construction Projects							
Advanced Process Control & Automation							
Plant-wide Flowmeter Replacement Program	1,000,000						
14. Advanced Facility Control and Meter Replacement	3,242,000	340,000	910,000	4,790,000	23,130,000	220,000	29,390,000
15. Treatment Plant Distributed Control System	2,496,000	500,000	500,000	500,000			1,500,000
Total Advanced Process Control & Automation	**6,738,000**	**840,000**	**1,410,000**	**5,290,000**	**23,130,000**	**220,000**	**30,890,000**
Site Facility Maintenance and Improvements							
Treatment Plant Engine Rebuild	1,453,000						
16. Equipment Replacement	2,819,000	1,663,000	1,663,000	1,663,000	1,663,000	1,663,000	8,315,000
17. Facility Wide Water Systems Improvements		460,000	2,290,000	130,000	10,790,000	130,000	13,800,000
18. Plant Infrastructure Improvements	5,410,000	1,000,000	2,840,000	1,000,000	1,000,000	3,050,000	8,890,000
19. Plant Instrument Air System Upgrade		8,540,000	160,000	160,000	150,000	90,000	9,100,000
20. Support Building Improvements		490,000	1,700,000	8,640,000	620,000	10,770,000	22,220,000
21. Treatment Plant Fire Main Replacement	1,563,000	250,000					250,000
22. Tunnel Rehabilitation		60,000	930,000	3,810,000	4,920,000	190,000	9,910,000
23. Urgent and Unscheduled Treatment Plant Rehabilitation	2,385,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000
24. Yard Piping and Road Improvements	1,118,000	270,000	3,910,000	19,730,000	24,450,000	960,000	49,320,000
Total Site Facility Maintenance and Improvements	**14,748,000**	**14,233,000**	**14,993,000**	**36,633,000**	**45,093,000**	**18,353,000**	**129,305,000**

Water Pollution Control

2015-2019 Proposed Capital Improvement Program

Use of Funds (Combined)

USE OF FUNDS (CONT'D.)	Estimated 2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	5-Year Total
Construction Projects							
South Bay Water Recycling							
Plant Backup Water Supply	1,313,000						
SBWR Extension	8,224,000						
SBWR Reservoir Facility	300,000						
25. SBWR System Reliability and Infrastructure Replacement	2,300,000	1,500,000	1,500,000				3,000,000
Total South Bay Water Recycling	**12,137,000**	**1,500,000**	**1,500,000**				**3,000,000**
Total Construction Projects	**119,728,000**	**47,990,000**	**252,155,000**	**115,369,000**	**124,680,000**	**135,367,000**	**675,561,000**
Non-Construction							
General Non-Construction							
2015-2017 Transfer to Clean Water Financing Authority Debt Service			5,231,000	18,962,000	27,728,000	27,728,000	79,649,000
Capital Program and Public Works Department Support Service Costs	653,000	692,000	699,000	706,000	713,000	720,000	3,530,000
Master Plan Updates				3,000,000			3,000,000
Plant Master Plan	861,000						
SBWR Master Plan	1,846,000						
SBWR Recycling Master Plan Reimbursement	561,000						
Transfer to Clean Water Financing Authority Debt Service Payment Fund	6,953,000	6,915,000	6,943,000	6,787,000	5,882,000	5,524,000	32,051,000
26. Payment for Clean Water Financing Authority Trustee	5,000	5,000	5,000	5,000	5,000	5,000	25,000
27. Preliminary Engineering	1,002,000	5,000,000	1,000,000	1,000,000	1,000,000	1,000,000	9,000,000

Water Pollution Control

2015-2019 Proposed Capital Improvement Program

Use of Funds (Combined)

USE OF FUNDS (CONT'D.)	Estimated 2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	5-Year Total
Non-Construction							
General Non-Construction							
28. Program Management	9,284,000	11,390,000	9,420,000	8,260,000	6,800,000	5,000,000	40,870,000
29. Record Drawings		250,000	12,700,000	90,000	90,000	90,000	13,220,000
30. State Revolving Fund Loan Repayment	4,464,000	4,464,000	4,464,000	4,464,000	4,464,000	1,804,000	19,660,000
Total General Non-Construction	**25,629,000**	**28,716,000**	**40,462,000**	**43,274,000**	**46,682,000**	**41,871,000**	**201,005,000**
Contributions, Loans and Transfers to General Fund							
Transfer to General Fund: Human Resources/Payroll System Upgrade		4,000					4,000
Total Contributions, Loans and Transfers to General Fund		**4,000**					**4,000**
Contributions, Loans and Transfers to Special Funds							
Transfer to the City Hall Debt Service Fund	33,000	96,000	98,000	102,000	106,000	115,000	517,000
Total Contributions, Loans and Transfers to Special Funds	**33,000**	**96,000**	**98,000**	**102,000**	**106,000**	**115,000**	**517,000**
Reserves							
Equipment Replacement Reserve		5,000,000					5,000,000
Total Reserves		**5,000,000**					**5,000,000**
Total Non-Construction	**25,662,000**	**33,816,000**	**40,560,000**	**43,376,000**	**46,788,000**	**41,986,000**	**206,526,000**
Ending Fund Balance	66,060,697	60,483,697	58,210,697	200,855,697	110,880,697	4,891,697	4,891,697*

Water Pollution Control

2015-2019 Proposed Capital Improvement Program

Use of Funds (Combined)

USE OF FUNDS (CONT'D.)	Estimated 2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	5-Year Total
TOTAL USE OF FUNDS	211,450,697	142,289,697	350,925,697	359,600,697	282,348,697	182,244,697	886,978,697*

* The 2014-2015 through 2017-2018 Ending Balances are excluded from the FIVE-YEAR TOTAL USE OF FUNDS to avoid multiple counting of the same funds.

2014-2015 Capital Budget

2015-2019 Capital Improvement Program

Water Pollution Control

Detail of Construction Projects

Detail of Non-Construction Projects

The Detail of Construction Projects section provides information on the individual construction projects with funding in 2014-2015. The Detail of Non-Construction Projects section is abbreviated and provides information on the individual non-construction project, with funding in 2014-2015. On the Use of Funds statement, these projects are numbered.

1. Headworks Improvements

CSA:	Environmental and Utility Services	**Initial Start Date:**	3rd Qtr. 2012
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	2nd Qtr. 2015
Council District:	4	**Revised Completion Date:**	3rd Qtr. 2019
Location:	Water Pollution Control Plant		

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. In addition, this project will complete a condition assessment of Headworks No. 1 (HW1) to identify equipment that may require rehabilitation. Improvements may include refurbishment of bar screens, grit classifiers, discharge valves, channel gate valves, and/or concrete.

Justification: HW1 was built in the mid-1950s and early 1960s and is the Plant's duty headworks. HW2 was built in 2008 and was designed to operate in parallel with HW1 to handle peak hour wet weather flow. This project will improve the functional reliability of HW2 so HW1 can be taken out of service for repair, which will allow it to remain in operation until a new headworks is constructed to serve as the Plant's new duty headworks.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development	64	1,515	1,515	1,240	260				1,500		3,079
Design					4,430				4,430		4,430
Bid & Award					90	60			150		150
Construction						21,200	370	90	21,660		21,660
Post Construction								280	280	80	360
TOTAL	**64**	**1,515**	**1,515**	**1,240**	**4,780**	**21,260**	**370**	**370**	**28,020**	**80**	**29,679**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund	64	1,515	1,515	1,240	4,780	21,260	370	370	28,020	80	29,679
TOTAL	**64**	**1,515**	**1,515**	**1,240**	**4,780**	**21,260**	**370**	**370**	**28,020**	**80**	**29,679**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

2015-2019 CIP - increase of $23.7 million due to incorporation of a portion of Headworks No. 2 Enhancement project.

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.

FY Initiated:	2012-2013	**Appn. #:**	7448
Initial Project Budget:	$5,975,000	**USGBC LEED:**	N/A

2. New Headworks

CSA:	Environmental and Utility Services	**Initial Start Date:**	3rd Qtr. 2012
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	2nd Qtr. 2013
Council District:	4	**Revised Completion Date:**	3rd Qtr. 2022
Location:	Water Pollution Control Plant		

Description: This project will construct a new headworks to serve as the Plant's duty headworks. It also involves increasing the equalization basin volume and installing lining and spraydown systems to facilitate cleaning. The project will also install new covers over select areas, such as junction boxes and grit collection, for odor control. New conduits will be installed for the collected foul air, and a new odor treatment facility that could combine biological and/or chemical treatment technology will be provided.

Justification: The original headworks, 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 would provide greater operational reliability and enhanced treatment, addressing some of the operational issues currently experienced at the Plant, such as the deposition of grit in downstream processes.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development	144	353	353	2,880	1,520				4,400		4,897
Design					13,100	780	1,010		14,890		14,890
Bid & Award							600	40	640		640
Construction								68,440	68,440	1,570	70,010
Post Construction										780	780
TOTAL	**144**	**353**	**353**	**2,880**	**14,620**	**780**	**1,610**	**68,480**	**88,370**	**2,350**	**91,217**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund	144	353	353	2,880	14,620	780	1,610	68,480	88,370	2,350	91,217
TOTAL	**144**	**353**	**353**	**2,880**	**14,620**	**780**	**1,610**	**68,480**	**88,370**	**2,350**	**91,217**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

2015-2019 CIP - increase of $11.8 million due to incorporation of a portion of Headworks No. 2 Enhancement project.

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". Schedule revised during the 2015-2019 project validation process.

FY Initiated:	2012-2013	**Appn. #:**	7449
Initial Project Budget:	$79,400,000	**USGBC LEED:**	N/A

3. East Primary Rehabilitation, Seismic Retrofit, and Odor Control

CSA:	Environmental and Utility Services	**Initial Start Date:**	3rd Qtr. 2009
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	3rd Qtr. 2010
Department:	Environmental Services	**Initial Completion Date:**	4th Qtr. 2012
Council District:	4	**Revised Completion Date:**	3rd Qtr. 2024
Location:	Water Pollution Control Plant		

Description: This project rehabilitates the existing primary clarifiers, including 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.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development	30	715	715		1,860	3,080			4,940		5,685
Design						15,240	1,240		16,480		16,480
Bid & Award							110	140	250		250
Construction								20,510	20,510	65,590	86,100
Post Construction										1,050	1,050
TOTAL	**30**	**715**	**715**		**1,860**	**18,320**	**1,350**	**20,650**	**42,180**	**66,640**	**109,565**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund	30	715	715		1,860	18,320	1,350	20,650	42,180	66,640	109,565
TOTAL	**30**	**715**	**715**		**1,860**	**18,320**	**1,350**	**20,650**	**42,180**	**66,640**	**109,565**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

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.

Notes:

This project corresponds to Plant Master Plan Project Nos. 9, 10, and 11 and Validation Project PLP-02. Schedule revised during the 2015-2019 project validation process.

FY Initiated:	2010-2011	**Appn. #:**	7226
Initial Project Budget:	$3,605,000	**USGBC LEED:**	N/A

4. Iron Salt Feed Station

CSA:	Environmental and Utility Services	**Initial Start Date:**	3rd Qtr. 2010
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	1st Qtr. 2012
Department:	Environmental Services	**Initial Completion Date:**	2nd Qtr. 2012
Council District:	4	**Revised Completion Date:**	2nd Qtr. 2017
Location:	Water Pollution Control Plant		

Description: This project constructs a permanent iron salt and polymer dosing station including a concrete containment structure and ancillary pumping, piping, and instrumentation to deliver chemical solution to incoming wastewater.

Justification: The addition of iron salts and polymer to incoming wastewater will improve Plant operation by enhancing the sludge settling in the primary clarifiers, reducing corrosion and odor, reducing energy usage in the secondary treatment system, and increasing feedstock to digesters, which will increase biogas production.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development	80										80
Design	10	1,095	1,095								1,105
Bid & Award		30	30								30
Construction		775	775	3,010	150				3,160		3,935
Post Construction						140			140		140
TOTAL	**90**	**1,900**	**1,900**	**3,010**	**150**	**140**			**3,300**		**5,290**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund	90	1,900	1,900	3,010	150	140			3,300		5,290
TOTAL	**90**	**1,900**	**1,900**	**3,010**	**150**	**140**			**3,300**		**5,290**

ANNUAL OPERATING BUDGET IMPACT (000'S)

Cost Offset						1,450	1,460	1,480			
Operating						(1,450)	(1,460)	(1,480)			
TOTAL											

Major Changes in Project Cost:

2014-2018 CIP - decrease of $0.347 million due to scope revision.
2015-2019 CIP - increase of $3.3 million due to revised project validation cost estimate.

Notes:

This project corresponds to Plant Master Plan Project No. 14 and Validation Project PLP-01. Schedule revised during the 2015-2019 project validation process.

FY Initiated:	2010-2011	**Appn. #:**	7230
Initial Project Budget:	$2,340,000	**USGBC LEED:**	N/A

5. Aeration Tanks and Blower Rehabilitation

CSA:	Environmental and Utility Services	**Initial Start Date:**	1st Qtr. 2015
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	3rd Qtr. 2025
Council District:	4	**Revised Completion Date:**	
Location:	Water Pollution Control Plant		

Description: This project rehabilitates the secondary and nitrification aeration tanks including structural, mechanical, electrical, and instrumentation upgrades. It also replaces the existing coarse bubble diffusers with fine bubble diffusers, installs partition walls and reconfigures air piping to optimize process treatment capabilities. The project will also install variable frequency drives (VFDs) to the electric driven blowers in Building 40 and decommission the engine drive blowers in the Secondary Blower Building. It will also replace the S11 switchgear and install VFDs on the nitrification blowers. A condition assessment study, aeration assessment, and process modeling 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 lower energy requirements. Installing VFDs will minimize the impact of the starting on the blowers when the Plant is run on emergency power.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development				1,580	3,210	90			4,880		4,880
Design						16,220	1,300		17,520		17,520
Bid & Award							220	30	250		250
Construction								21,290	21,290	70,360	91,650
Post Construction										580	580
TOTAL				**1,580**	**3,210**	**16,310**	**1,520**	**21,320**	**43,940**	**70,940**	**114,880**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund				1,580	3,210	16,310	1,520	21,320	43,940	70,940	114,880
TOTAL				**1,580**	**3,210**	**16,310**	**1,520**	**21,320**	**43,940**	**70,940**	**114,880**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:
None

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

FY Initiated:	2014-2015	**Appn. #:**	
Initial Project Budget:	$114,880,000	**USGBC LEED:**	N/A

6. Secondary and Nitrification Clarifier Rehabilitation

CSA: Environmental and Utility Services
CSA Outcome: Reliable Utility Infrastructure
Department: Environmental Services
Council District: 4
Location: Water Pollution Control Plant

Initial Start Date: 3rd Qtr. 2009
Revised Start Date:
Initial Completion Date: 2nd Qtr. 2024
Revised Completion Date: 4th Qtr. 2026

Description: This project includes phased rehabilitation of the 26 secondary and 16 nitrification clarifiers. Structural improvements may include, but are not limited to, concrete repairs and coating, replacement of central effluent launders with new peripheral launders (in older clarifiers), new clarifier mechanisms and baffle installations, pipe support and meter vault replacements, and railing, stairway, and walkway improvements. Mechanical improvements may include, but are not limited to, 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, but are not limited to, 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 26 secondary clarifiers and 16 nitrification clarifiers have been in service for 30 to 50 years depending on the year of construction. Two condition assessments, completed in 2011 and 2012, recommended phased rehabilitation of the secondary and nitrification clarifiers, respectively. 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.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development	1,146	50	50	160	860				1,020		2,216
Design	18	330	330		4,210	460			4,670	4,240	9,258
Bid & Award		24	24			130	100		230		254
Construction		2,730	2,730				20,170	330	20,500	26,210	49,440
Post Construction		25	25							500	525
TOTAL	**1,164**	**3,159**	**3,159**	**160**	**5,070**	**590**	**20,270**	**330**	**26,420**	**30,950**	**61,693**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund	1,164	3,159	3,159	160	5,070	590	20,270	330	26,420	30,950	61,693
TOTAL	**1,164**	**3,159**	**3,159**	**160**	**5,070**	**590**	**20,270**	**330**	**26,420**	**30,950**	**61,693**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

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.

Notes:

This project corresponds to Plant Master Plan Project Nos. 21 and 23 and Validation Project PLS-02. This project is planned to be completed in two phases.

FY Initiated: 2009-2010
Initial Project Budget: $26,701,000
Appn. #: 7074
USGBC LEED: N/A

7. Filter Rehabilitation

CSA:	Environmental and Utility Services	**Initial Start Date:**	3rd Qtr. 2011
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	3rd Qtr. 2013
Department:	Environmental Services	**Initial Completion Date:**	2nd Qtr. 2013
Council District:	4	**Revised Completion Date:**	3rd Qtr. 2020
Location:	Water Pollution Control Plant		

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 to be completed in summer 2016 to determine whether to fully refurbish the filter facility or keep it operational until a new filter complex is built. This CIP programs funding for preliminary engineering.

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 interim improvements are needed to ensure continued regulatory compliance and operational reliability.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development		3	3	490	680				1,170		1,173
Design		147	147		4,000	370			4,370		4,517
Bid & Award		25	25			90	60		150		175
Construction		600	600				20,520	310	20,830	60	21,490
Post Construction		25	25							320	345
TOTAL		**800**	**800**	**490**	**4,680**	**460**	**20,580**	**310**	**26,520**	**380**	**27,700**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund		800	800	490	4,680	460	20,580	310	26,520	380	27,700
TOTAL		**800**	**800**	**490**	**4,680**	**460**	**20,580**	**310**	**26,520**	**380**	**27,700**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

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.

Notes:

This project corresponds to Plant Master Plan Project Nos. 31 and 32 and Validation Project PLF-01. Prior to 2015-2019, this project was titled "Filter Improvements". Schedule revised during the 2015-2019 project validation process.

FY Initiated:	2010-2011	**Appn. #:**	7227
Initial Project Budget:	$3,506,000	**USGBC LEED:**	N/A

8. Outfall Bridge and Levee Improvements

CSA: Environmental and Utility Services
CSA Outcome: Reliable Utility Infrastructure
Department: Environmental Services
Council District: 4
Location: Water Pollution Control Plant

Initial Start Date: 3rd Qtr. 2014
Revised Start Date:
Initial Completion Date: 2nd Qtr. 2019
Revised Completion Date:

Description: The 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.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development				300	240				540		540
Design					1,240	70			1,310		1,310
Bid & Award						160			160		160
Construction						5,820	160		5,980		5,980
Post Construction								130	130		130
TOTAL				**300**	**1,480**	**6,050**	**160**	**130**	**8,120**		**8,120**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund				300	1,480	6,050	160	130	8,120		8,120
TOTAL				**300**	**1,480**	**6,050**	**160**	**130**	**8,120**		**8,120**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:
None

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

FY Initiated: 2014-2015
Initial Project Budget: $8,120,000
Appn. #:
USGBC LEED: N/A

9. Digested Sludge Dewatering Facility

CSA:	Environmental and Utility Services	**Initial Start Date:**	3rd Qtr. 2012
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	2nd Qtr. 2014
Department:	Environmental Services	**Initial Completion Date:**	2nd Qtr. 2013
Council District:	4	**Revised Completion Date:**	2nd Qtr. 2019
Location:	Water Pollution Control Plant		

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. The size, type, design, and technology selected for the new biosolids dewatering facility will depend on an engineering study currently underway that looks at siting, available technologies, and an evaluation of capital and operational costs for various alternatives. All new mechanical dewatering units, feed tank, storage, conveyance, and chemical dosing facilities will be housed in an odor-controlled building.

Justification: The adopted Plant Master Plan recommends consolidating the Plant's operational area including reducing the biosolids process footprint. This project responds to this recommendation. It also provides for more flexibility in biosolids disposal options in anticipation of the Newby Island landfill closure in 2025, responds to more stringent regulations for landfilling and alternative daily cover, and addresses odor, noise, and aesthetic concerns from the operations of the lagoons and sludge drying beds.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development		1,000	1,000	2,940	890				3,830		4,830
Design					11,060				11,060		11,060
Bid & Award					200				200		200
Construction					50,350	990	980		52,320		52,320
Post Construction								820	820		820
TOTAL		**1,000**	**1,000**	**2,940**	**62,500**	**990**	**980**	**820**	**68,230**		**69,230**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund		1,000	1,000	2,940	62,500	990	980	820	68,230		69,230
TOTAL		**1,000**	**1,000**	**2,940**	**62,500**	**990**	**980**	**820**	**68,230**		**69,230**

ANNUAL OPERATING BUDGET IMPACT (000'S)

Operating								13,930			
TOTAL								**13,930**			

Major Changes in Project Cost:

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.

Notes:

This project corresponds to Plant Master Plan Project Nos. 44, 54, and 57-60, 64 and Validation Project PS-03. The Expenditure Schedule is based on the design/build estimate. Prior to 2015-2019, this project was titled "New Biosolids Facility". Schedule revised during the 2015-2019 project validation process.

FY Initiated:	2012-2013	**Appn. #:**	7452
Initial Project Budget:	$1,000,000	**USGBC LEED:**	N/A

10. Digester and Thickener Facilities Upgrade

CSA: Environmental and Utility Services
CSA Outcome: Reliable Utility Infrastructure
Department: Environmental Services
Council District: 4
Location: Water Pollution Control Plant

Initial Start Date: 3rd Qtr. 2006
Revised Start Date:
Initial Completion Date: 2nd Qtr. 2008
Revised Completion Date: 1st Qtr. 2025

Description: This project will rehabilitate up to ten anaerobic digesters through a phased approach. This first phase of the project rehabilitates four digesters. The project also rehabilitates and modifies six dissolved air flotation units, pressure saturation tanks, pipes, pumps, and ancillary equipment. The digester gas conveyance and tunnel systems will also be upgraded to include new pipe support racks, new piping, valves, controls, and safety improvements.

Justification: The Plant has 16 anaerobic digesters constructed between 1956 and 1983. This project will restore digester capacity and improve reliability and safety of the gas conveyance system to ensure reliable operation of the digestion process.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development	511	12,496	12,496							3,280	16,287
Design	647			1,350					1,350	9,600	11,597
Bid & Award	1			90	110				200	250	451
Construction	1				59,570	1,120	370		61,060	49,640	110,701
Post Construction							740	330	1,070	580	1,650
TOTAL	**1,160**	**12,496**	**12,496**	**1,440**	**59,680**	**1,120**	**1,110**	**330**	**63,680**	**63,350**	**140,686**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund	1,160	12,496	12,496	1,440	59,680	1,120	1,110	330	63,680	63,350	140,686
TOTAL	**1,160**	**12,496**	**12,496**	**1,440**	**59,680**	**1,120**	**1,110**	**330**	**63,680**	**63,350**	**140,686**

ANNUAL OPERATING BUDGET IMPACT (000'S)

Operating								420			
TOTAL								**420**			

Major Changes in Project Cost:

2008-2012 CIP - increase of $1.6 million based on revised estimates during initial study.
2009-2013 CIP - increase of $84.0 million to fund construction/rehabilitation costs due to increased project scope.
2010-2014 CIP - increase of $11.5 million due to incorporation of digester gas line replacement.
2011-2015 CIP - decrease of $34.0 million due to decrease in the number of digesters from eleven to four.
2012-2016 CIP - decrease of $23.2 million due to realignment of project to the Plant Master Plan estimate.
2013-2017 CIP - increase of $24.2 million due to revisions in the cost estimation methodology.
2014-2018 CIP - increase of $57.3 million to align with the Master Plan recommendation to rehabilitate up to ten digesters.
2015-2019 CIP - increase of $18.3 million due to revised project validation cost estimate.

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 ".

FY Initiated: 2006-2007
Initial Project Budget: $1,000,000
Appn. #: 4127
USGBC LEED: N/A

11. Combined Heat and Power Equipment Repair and Rehabilitation

CSA:	Environmental and Utility Services	**Initial Start Date:**	3rd Qtr. 2012
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	2nd Qtr. 2013
Council District:	4	**Revised Completion Date:**	3rd Qtr. 2016
Location:	Water Pollution Control Plant		

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.

Justification: A reliable supply of digester gas will be a key input to the Plant's new cogeneration facility. The existing gas compressors are more than 30 years old and increasingly unreliable and difficult to maintain. The existing digester gas holder was built in 1984 and is currently out of service. Rehabilitating these systems is critical to safely and efficiently managing the Plant's valuable digester gas.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development	4										4
Design	469	575	575								1,044
Bid & Award	3	41	41								44
Construction	2	9,954	9,954	420					420		10,376
Post Construction		46	46		370	30			400		446
TOTAL	**478**	**10,616**	**10,616**	**420**	**370**	**30**			**820**		**11,914**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund	478	10,616	10,616	420	370	30			820		11,914
TOTAL	**478**	**10,616**	**10,616**	**420**	**370**	**30**			**820**		**11,914**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

2014-2018 CIP - increase of $8.2 million due to addition of new projects (Digester Gas Compressor Upgrade and Digester Gas Holding Tank Upgrade).
2015-2019 CIP - increase of $0.5 million due to increased engineer's estimate for Digester Gas Compressor Upgrade project.

Notes:

This project corresponds to Validation Projects PE-03 and PE-04. Schedule revised during the 2015-2019 project validation process.

FY Initiated:	2012-2013	**Appn. #:**	7453
Initial Project Budget:	$3,200,000	**USGBC LEED:**	N/A

12. Energy Generation Improvements

CSA:	Environmental and Utility Services	**Initial Start Date:**	3rd Qtr. 2012
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	2nd Qtr. 2013
Council District:	4	**Revised Completion Date:**	1st Qtr. 2018
Location:	Water Pollution Control Pant		

Description: This project will install new, lower-emission engine-generators to replace the aged existing engine-generators and allow for the retirement of the aged engine-driven blowers. It includes a new generator building, gas cleaning/condition system, gas blending system, piping, dedicated control system, and motor control centers. Additionally, this project will install emergency diesel generators and storage tanks to provide backup power in the event of an extended power outage from PG&E.

Justification: Energy generation capacity and operational reliability have become significant issues at the Plant in recent years. The outdated engine-generators are increasingly difficult to maintain due to a lack of available parts and repairs require significant downtime. Additionally, while the existing systems meet current air regulations, they will not meet the more stringent 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 robust and reliable energy generating facilities to power the Plant for decades.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development	377	678	678	130					130		1,185
Design	14	8,079	8,079								8,093
Bid & Award		184	184	400					400		584
Construction		29,484	29,484	10,540	73,000	1,000			84,540		114,024
Post Construction					470	470	980		1,920		1,920
TOTAL	**391**	**38,425**	**38,425**	**11,070**	**73,470**	**1,470**	**980**		**86,990**		**125,806**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund	391	38,425	38,425	11,070	73,470	1,470	980		86,990		125,806
TOTAL	**391**	**38,425**	**38,425**	**11,070**	**73,470**	**1,470**	**980**		**86,990**		**125,806**

ANNUAL OPERATING BUDGET IMPACT (000'S)

Cost Offset	(9,430)	(9,613)
Operating	4,240	4,323
TOTAL	**(5,190)**	**(5,290)**

Major Changes in Project Cost:

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.

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." Schedule revised during the 2015-2019 project validation process.

FY Initiated:	2012-2013	**Appn. #:**	7454
Initial Project Budget:	$1,300,000	**USGBC LEED:**	N/A

13. Plant Electrical Reliability

CSA:	Environmental and Utility Services	**Initial Start Date:**	3rd Qtr. 2003
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	2nd Qtr. 2014
Council District:	4	**Revised Completion Date:**	4th Qtr. 2016
Location:	Water Pollution Control Plant		

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.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development	458										458
Design	6,366			1,320					1,320		7,686
Bid & Award	50			100					100		150
Construction	14,899	3,052	3,052	4,180	300				4,480		22,431
Post Construction	20	70	70			100			100		190
TOTAL	**21,793**	**3,122**	**3,122**	**5,600**	**300**	**100**			**6,000**		**30,915**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund	21,793	3,122	3,122	5,600	300	100			6,000		30,915
TOTAL	**21,793**	**3,122**	**3,122**	**5,600**	**300**	**100**			**6,000**		**30,915**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

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 described in the Overview of this CIP.
2015-2019 CIP - increase of $3.9 million due to revised project validation cost estimate.

Notes:

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

FY Initiated:	2003-2004	**Appn. #:**	4341
Initial Project Budget:	$7,671,000	**USGBC LEED:**	N/A

14. Advanced Facility Control and Meter Replacement

CSA:	Environmental and Utility Services	**Initial Start Date:**	3rd Qtr. 2010
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	2nd Qtr. 2014
Council District:	4	**Revised Completion Date:**	2nd Qtr. 2024
Location:	Water Pollution Control Plant		

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.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development	45				870	490			1,360		1,405
Design	15	567	567			4,300			4,300		4,882
Bid & Award		75	75				420		420		495
Construction	36	2,050	2,050	340			22,710	220	23,270	810	26,166
Post Construction	129	550	550		40				40	280	999
TOTAL	**225**	**3,242**	**3,242**	**340**	**910**	**4,790**	**23,130**	**220**	**29,390**	**1,090**	**33,947**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund	225	3,242	3,242	340	910	4,790	23,130	220	29,390	1,090	33,947
TOTAL	**225**	**3,242**	**3,242**	**340**	**910**	**4,790**	**23,130**	**220**	**29,390**	**1,090**	**33,947**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

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 $0.5 million 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.

Notes:

This project corresponds with Plant Master Plan No. 90 and Validation Project PA-01. Prior to 2015-2019, this project was titled "Advanced Process Control and Automation". This project is planned to be completed in two phases. Schedule revised during the 2015-2019 project validation process.

FY Initiated:	2010-2011	**Appn. #:**	7224
Initial Project Budget:	$11,000,000	**USGBC LEED:**	N/A

15. Treatment Plant Distributed Control System

CSA:	Environmental and Utility Services	**Initial Start Date:**	1st Qtr. 2012
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	2nd Qtr. 2016
Council District:	4	**Revised Completion Date:**	2nd Qtr. 2017
Location:	Water Pollution Control Plant		

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.

Justification: The current control system is outdated and will no longer be supported by the vendor beginning in 2015. Upgrading the system is vital to maintaining efficient operations and improving monitoring capabilities.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Design	109	96	96	500	500	500			1,500		1,705
Construction	296	2,400	2,400								2,696
TOTAL	**405**	**2,496**	**2,496**	**500**	**500**	**500**			**1,500**		**4,401**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund	405	2,496	2,496	500	500	500			1,500		4,401
TOTAL	**405**	**2,496**	**2,496**	**500**	**500**	**500**			**1,500**		**4,401**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

2014-2018 CIP - increase of $0.5 million due to higher than expected consultant costs.
2015-2019 CIP - decrease of $0.2 million due to lower than expected construction costs.

Notes:

This project was established as part of the approval of the 2011-2012 Mid-Year Budget Review. Prior to this action, this project was part of the Equipment Replacement and Advanced Process Control and Automation projects.

FY Initiated:	2012-2013	**Appn. #:**	7394
Initial Project Budget:	$4,065,000	**USGBC LEED:**	N/A

16. Equipment Replacement

CSA:	Environmental and Utility Services	**Initial Start Date:**	Ongoing
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	Ongoing
Council District:	4	**Revised Completion Date:**	
Location:	Water Pollution Control Plant		

Description: This allocation provides for ongoing replacement and rehabilitation of equipment at the Plant. Equipment anticipated to be replaced or rehabilitated includes air compressors, tanks, pumps, motors, control systems, valves, heat exchangers, engine auxiliaries, lab instruments, and other equipment as required.

Justification: Replacement and rehabilitation of Plant equipment is necessary as a result of wear, obsolescence, or regulatory requirements and will ensure continued efficient operation of the Plant facilities.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development		30	30								
Design		673	673								
Bid & Award											
Construction		357	357								
Post Construction		17	17								
Equipment		1,742	1,742	1,663	1,663	1,663	1,663	1,663	8,315		
TOTAL		**2,819**	**2,819**	**1,663**	**1,663**	**1,663**	**1,663**	**1,663**	**8,315**		

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund		2,819	2,819	1,663	1,663	1,663	1,663	1,663	8,315		
TOTAL		**2,819**	**2,819**	**1,663**	**1,663**	**1,663**	**1,663**	**1,663**	**8,315**		

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

N/A

Notes:

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

FY Initiated:	Ongoing	**Appn. #:**	4332
Initial Project Budget:		**USGBC LEED:**	N/A

17. Facility Wide Water Systems Improvements

CSA:	Environmental and Utility Services	**Initial Start Date:**	3rd Qtr. 2014
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	1st Qtr. 2022
Council District:	4	**Revised Completion Date:**	
Location:	Water Pollution Control Plant		

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 the various Plant expansions and are in need of rehabilitation and upgrade due to age, condition, worker safety, and code compliance requirements. In addition, changes to water uses and demands have not 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 damage to pumping equipment.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development				460	240				700		700
Design					2,050	130			2,180		2,180
Bid & Award							200		200		200
Construction							10,590	130	10,720	110	10,830
Post Construction										220	220
TOTAL				**460**	**2,290**	**130**	**10,790**	**130**	**13,800**	**330**	**14,130**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund				460	2,290	130	10,790	130	13,800	330	14,130
TOTAL				**460**	**2,290**	**130**	**10,790**	**130**	**13,800**	**330**	**14,130**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

None

Notes:

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

FY Initiated:	2014-2015	**Appn. #:**	
Initial Project Budget:	$14,130,000	**USGBC LEED:**	N/A

18. Plant Infrastructure Improvements

CSA:	Environmental and Utility Services	**Initial Start Date:**	Ongoing
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	Ongoing
Council District:	4	**Revised Completion Date:**	
Location:	Water Pollution Control Plant		

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.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development		840	840	500		920	920		2,340		
Design											
Bid & Award					70				70		
Construction		4,034	4,034	420	2,770	80	80	2,980	6,330		
Post Construction		536	536	80				70	150		
Program Management											
TOTAL		**5,410**	**5,410**	**1,000**	**2,840**	**1,000**	**1,000**	**3,050**	**8,890**		

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund		5,410	5,410	1,000	2,840	1,000	1,000	3,050	8,890		
TOTAL		**5,410**	**5,410**	**1,000**	**2,840**	**1,000**	**1,000**	**3,050**	**8,890**		

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

N/A

Notes:

This project corresponds to Plant Master Plan Project No. 97 and corresponds to Validation Project PF-03. Project schedule dates and selected budget information are not provided due to the ongoing nature of this project.

FY Initiated:	Ongoing	**Appn. #:**	5690
Initial Project Budget:		**USGBC LEED:**	N/A

19. Plant Instrument Air System Upgrade

CSA:	Environmental and Utility Services	**Initial Start Date:**	3rd Qtr. 2014
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	1st Qtr. 2019
Council District:	4	**Revised Completion Date:**	
Location:	Water Pollution Control Plant		

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.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Design				60					60		60
Bid & Award				190					190		190
Construction				8,290	160	160	80		8,690		8,690
Post Construction							70	90	160		160
TOTAL				**8,540**	**160**	**160**	**150**	**90**	**9,100**		**9,100**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund				8,540	160	160	150	90	9,100		9,100
TOTAL				**8,540**	**160**	**160**	**150**	**90**	**9,100**		**9,100**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:
None

Notes:
This project corresponds to Validation Project PF-07.

FY Initiated:	2014-2015	**Appn. #:**	
Initial Project Budget:	$9,100,000	**USGBC LEED:**	N/A

20. Support Building Improvements

CSA:	Environmental and Utility Services	**Initial Start Date:**	1st Qtr. 2015
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	3rd Qtr. 2023
Council District:	4	**Revised Completion Date:**	
Location:	Water Pollution Control Plant		

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 improvement 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 to 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 warehousing management system will improve operational efficiency through better control of the movement and storage of materials including shipping, receiving, material stocking, use, and distribution.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development				490	1,700	510			2,700		2,700
Design						8,130	580		8,710		8,710
Bid & Award							40	160	200		200
Construction								10,610	10,610	32,790	43,400
Post Construction										580	580
TOTAL				**490**	**1,700**	**8,640**	**620**	**10,770**	**22,220**	**33,370**	**55,590**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund				490	1,700	8,640	620	10,770	22,220	33,370	55,590
TOTAL				**490**	**1,700**	**8,640**	**620**	**10,770**	**22,220**	**33,370**	**55,590**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

None

Notes:

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

FY Initiated:	2014-2015	**Appn. #:**	
Initial Project Budget:	$55,590,000	**USGBC LEED:**	N/A

21. Treatment Plant Fire Main Replacement

CSA:	Environmental and Utility Services	**Initial Start Date:**	1st Qtr. 2012
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	2nd Qtr. 2013
Council District:	4	**Revised Completion Date:**	2nd Qtr. 2015
Location:	Water Pollution Control Plant		

Description: The fire main piping system, which is part of the Fire Protection System for the Plant, consists of approximately 15,000 linear feet of pipes ranging from 6, 8, 10, and 12 inches; two 100-HP electric pumps; fire hydrants; and associated valves. The fire main piping was installed as the Plant expanded over the past 50 years. A condition assessment was conducted in 2007 and revealed that most of the existing pipe is corroded. This funding rehabilitates the system.

Justification: This project will ensure the reliability of the fire protection system at the Plant.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Design	111										111
Construction	1,208	1,543	1,543	230					230		2,981
Post Construction	9	20	20	20					20		49
TOTAL	**1,328**	**1,563**	**1,563**	**250**					**250**		**3,141**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund	1,328	1,563	1,563	250					250		3,141
TOTAL	**1,328**	**1,563**	**1,563**	**250**					**250**		**3,141**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

2014-2018 CIP - increase of $0.5 million due to higher than expected construction costs.
2015-2019 CIP - increase of $0.2 million due to higher than expected construction costs.

Notes:

This project was previously included as part of the Plant Infrastructure Improvements project and was established as part of the approval of the 2011-2012 Mid-Year Budget Review.

FY Initiated:	2012-2013	**Appn. #:**	7397
Initial Project Budget:	$2,400,000	**USGBC LEED:**	N/A

22. Tunnel Rehabilitation

CSA:	Environmental and Utility Services	**Initial Start Date:**	2nd Qtr. 2015
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	4th Qtr. 2024
Council District:	4	**Revised Completion Date:**	
Location:	Water Pollution Control Plant		

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 should also be removed to improve maintenance access and make room for new process piping.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development				60	930	130			1,120		1,120
Design						3,680			3,680		3,680
Bid & Award							150		150		150
Construction							4,770	190	4,960	15,420	20,380
Post Construction										220	220
TOTAL				**60**	**930**	**3,810**	**4,920**	**190**	**9,910**	**15,640**	**25,550**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund				60	930	3,810	4,920	190	9,910	15,640	25,550
TOTAL				**60**	**930**	**3,810**	**4,920**	**190**	**9,910**	**15,640**	**25,550**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

None

Notes:

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

FY Initiated:	2014-2015	**Appn. #:**	
Initial Project Budget:	$25,550,000	**USGBC LEED:**	N/A

23. Urgent and Unscheduled Treatment Plant Rehabilitation

CSA:	Environmental and Utility Services	**Initial Start Date:**	Ongoing
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	Ongoing
Council District:	4	**Revised Completion Date:**	
Location:	Water Pollution Control Plant		

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.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development		1,500	1,500	1,500	1,500	1,500	1,500	1,500	7,500		
Design											
Construction		885	885								
TOTAL		**2,385**	**2,385**	**1,500**	**1,500**	**1,500**	**1,500**	**1,500**	**7,500**		

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund		2,385	2,385	1,500	1,500	1,500	1,500	1,500	7,500		
TOTAL		**2,385**	**2,385**	**1,500**	**1,500**	**1,500**	**1,500**	**1,500**	**7,500**		

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:
N/A

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

FY Initiated:	Ongoing	**Appn. #:**	7395
Initial Project Budget:		**USGBC LEED:**	N/A

24. Yard Piping and Road Improvements

CSA:	Environmental and Utility Services	**Initial Start Date:**	Ongoing
CSA Outcome:	Reliable Utility Infrastructure	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	Ongoing
Council District:	4	**Revised Completion Date:**	
Location:	Water Pollution Control Plant		

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.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development		500	500	270	3,910	1,750			5,930		
Design						17,980			17,980		
Bid & Award							250		250		
Construction		608	608				24,200	960	25,160		
Post Construction		10	10								
TOTAL		**1,118**	**1,118**	**270**	**3,910**	**19,730**	**24,450**	**960**	**49,320**		

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund		1,118	1,118	270	3,910	19,730	24,450	960	49,320		
TOTAL		**1,118**	**1,118**	**270**	**3,910**	**19,730**	**24,450**	**960**	**49,320**		

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

N/A

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".

FY Initiated:	Ongoing	**Appn. #:**	7396
Initial Project Budget:		**USGBC LEED:**	N/A

25. SBWR System Reliability and Infrastructure Replacement

CSA:	Environmental and Utility Services	**Initial Start Date:**	3rd Qtr. 2012
CSA Outcome:	Safe, Reliable, and Sufficient Water Supply	**Revised Start Date:**	
Department:	Environmental Services	**Initial Completion Date:**	2nd Qtr. 2016
Council District:	4	**Revised Completion Date:**	
Location:	Water Pollution Control Plant		

Description: This allocation will be used for system reliability improvements including, but not limited to, rehabilitation and/or replacement of pump station components (pumps, motors, and ancillary equipment), control and communication systems, pipelines, and other system-related infrastructure.

Justification: This project improves system reliability, addresses critical infrastructure needs, and ensures the integrity and reliability of the distribution system.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Design	18										18
Construction	70	2,300	2,300	1,500	1,500				3,000		5,370
TOTAL	**88**	**2,300**	**2,300**	**1,500**	**1,500**				**3,000**		**5,388**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund	88	2,300	2,300	1,500	1,500				3,000		5,388
TOTAL	**88**	**2,300**	**2,300**	**1,500**	**1,500**				**3,000**		**5,388**

ANNUAL OPERATING BUDGET IMPACT (000'S)

None

Major Changes in Project Cost:

2015-2019 CIP - decrease of $1.1 million due to reduction of scope.

Notes:

Prior to 2012-2013, this funding was included as part of the SBWR Master Plan project, but has been converted into a distinct project to more accurately reflect the purpose of these funds.

FY Initiated:	2012-2013	**Appn. #:**	7455
Initial Project Budget:	$6,500,000	**USGBC LEED:**	N/A

26. Payment for Clean Water Financing Authority Trustee

CSA: Environmental and Utility Services
CSA Outcome: Reliable Utility Infrastructure
Department: Environmental Services
Description: This allocation provides for administrative costs of the San José/Santa Clara Clean Water Financing Authority related to bond issuances.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Program Management		5	5	5	5	5	5	5	25		
TOTAL		**5**	**5**	**5**	**5**	**5**	**5**	**5**	**25**		

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund		5	5	5	5	5	5	5	25		
TOTAL		**5**	**5**	**5**	**5**	**5**	**5**	**5**	**25**		

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

Appn. #: 6584

27. Preliminary Engineering

CSA: Environmental and Utility Services
CSA Outcome: Reliable Utility Infrastructure
Department: Environmental Services
Description: This allocation provides funding to support preliminary engineering for Plant-related projects, including studies, pilots, and field verifications to evaluate impacts on operations.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Development		1,002	1,002	5,000	1,000	1,000	1,000	1,000	9,000		
TOTAL		**1,002**	**1,002**	**5,000**	**1,000**	**1,000**	**1,000**	**1,000**	**9,000**		

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund		1,002	1,002	5,000	1,000	1,000	1,000	1,000	9,000		
TOTAL		**1,002**	**1,002**	**5,000**	**1,000**	**1,000**	**1,000**	**1,000**	**9,000**		

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

Appn. #: 7456

28. Program Management

CSA: Environmental and Utility Services
CSA Outcome: Reliable Utility Infrastructure
Department: Environmental Services
Description: This allocation funds the administration and management of the Water Pollution Control Capital Improvement Program.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Program Management		9,284	9,284	11,390	9,420	8,260	6,800	5,000	40,870		
TOTAL		**9,284**	**9,284**	**11,390**	**9,420**	**8,260**	**6,800**	**5,000**	**40,870**		

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund		9,284	9,284	11,390	9,420	8,260	6,800	5,000	40,870		
TOTAL		**9,284**	**9,284**	**11,390**	**9,420**	**8,260**	**6,800**	**5,000**	**40,870**		

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

Appn. #: 7481

29. Record Drawings

CSA: Environmental and Utility Services
CSA Outcome: Reliable Utility Infrastructure
Department: Environmental Services
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.

EXPENDITURE SCHEDULE (000'S)

Cost Elements	Prior Years	2013-14 Appn.	2013-14 Estimate	2014-15	2015-16	2016-17	2017-18	2018-19	5-Year Total	Beyond 5-Year	Project Total
Post Construction				250	12,700	90	90	90	13,220	350	13,570
TOTAL				**250**	**12,700**	**90**	**90**	**90**	**13,220**	**350**	**13,570**

FUNDING SOURCE SCHEDULE (000'S)

San José-Santa Clara Treatment Plant Capital Fund				250	12,700	90	90	90	13,220	350	13,570
TOTAL				**250**	**12,700**	**90**	**90**	**90**	**13,220**	**350**	**13,570**

Notes:
This project corresponds to Plant Master Plan Project No. 114 and Validation Project PF-05.

Appn. #:

30. State Revolving Fund Loan Repayment

CSA: Environmental and Utility Services

CSA Outcome: Healthy Streams, Rivers, Marsh and Bay

Department: Environmental Services

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

EXPENDITURE SCHEDULE (000'S)											
Cost Elements	**Prior Years**	**2013-14 Appn.**	**2013-14 Estimate**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**5-Year Total**	**Beyond 5-Year**	**Project Total**
Debt Service	63,231	4,464	4,464	4,464	4,464	4,464	4,464	1,804	19,660		87,355
TOTAL	**63,231**	**4,464**	**4,464**	**4,464**	**4,464**	**4,464**	**4,464**	**1,804**	**19,660**		**87,355**
FUNDING SOURCE SCHEDULE (000'S)											
San José-Santa Clara Treatment Plant Capital Fund	63,231	4,464	4,464	4,464	4,464	4,464	4,464	1,804	19,660		87,355
TOTAL	**63,231**	**4,464**	**4,464**	**4,464**	**4,464**	**4,464**	**4,464**	**1,804**	**19,660**		**87,355**

Appn. #: 6590

2014-2015 Capital Budget

2015-2019 Capital Improvement Program

Water Pollution Control

Summary of Projects that Start after 2014-2015

Summary of Reserves

Explanation of Funds

Flow and Priority of Funds

The Summary of Projects that Start after 2014-2015 includes those projects that have funding budgeted starting after 2014-2015. The Summary of Reserves includes all reserves budgeted within the Five-Year Capital Improvement Program. On the Use of Funds statement, the projects in these summaries are not numbered.

Summary of Projects that Start after 2014-2015

Project Name:	**2015-2017 Transfer to Clean Water Financing Authority Debt Service**	**Initial Start Date:**	3rd Qtr. 2015
		Revised Start Date:	
5-Year CIP Budget:	$79,649,000	**Initial End Date:**	2nd Qtr 2045
Total Budget:	$79,649,000	**Revised End Date:**	
Council District:	4		
USGBC LEED:	N/A		

Description: This funding provides for the payment of the 2015-2017 Revenue Bonds. The moneys are transferred to the Clean Water Financing Authority Debt Service Payment Fund. Funding beyond the 2015-2019 CIP will be included in the future CIP after the projects have been identified.

Project Name:	**Lagoons and Drying Beds Retirement**	**Initial Start Date:**	1st Qtr. 2016
5-Year CIP Budget:	$12,220,000	**Revised Start Date:**	
Total Budget:	$31,660,000	**Initial End Date:**	2nd Qtr. 2025
Council District:	4	**Revised End Date:**	
USGBC LEED:	N/A		

Description: This project will decommission the use of the existing sludge storage lagoons and open air solar drying beds for post digestion processing through a phased approach. It involves successively turning over and emptying the existing lagoons of their biosolids contents in coordination with commissioning of the new biosolids dewatering facility. The project does not address follow up earthwork or rehabilitation needs to prepare the site for future development.

Project Name:	**Master Plan Updates**	**Initial Start Date:**	4th Qtr. 2016
5-Year CIP Budget:	$3,000,000	**Revised Start Date:**	
Total Budget:	$3,000,000	**Initial End Date:**	4th Qtr. 2018
Council District:	4	**Revised End Date:**	
USGBC LEED:	N/A		

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

Summary of Projects that Start after 2014-2015

Project Name:	**New Disinfection Facilities**	**Initial Start Date:**	2nd Qtr. 2019
5-Year CIP Budget:	$370,000	**Revised Start Date:**	
Total Budget:	$55,620,000	**Initial End Date:**	1st Qtr. 2027
Council District:	4	**Revised End Date:**	
USGBC LEED:	N/A		

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 2-3 NPDES permit cycles, and additional studies confirm future flow projections.

Project Name:	**Secondary Clarifier Rehabilitation Demonstration**	**Initial Start Date:**	1st Qtr. 2017
		Revised Start Date:	
5-Year CIP Budget:	$2,030,000	**Initial End Date:**	2nd Qtr. 2020
Total Budget:	$2,080,000	**Revised End Date:**	
Council District:	4		
USGBC LEED:	N/A		

Description: The Plant has 26 secondary clarifiers and 16 nitrification clarifiers configured with peripheral mix liquor feed channel, and either central or peripheral launders. 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.

Project Name:	**Thermal Drying Facility**	**Initial Start Date:**	1st Qtr. 2019
5-Year CIP Budget:	$2,590,000	**Revised Start Date:**	
Total Budget:	$132,010,000	**Initial End Date:**	4th Qtr. 2023
Council District:	4	**Revised End Date:**	
USGBC LEED:	N/A		

Description: This project will construct a new thermal drying facility and support systems to replace the existing sludge storage lagoons and open air solar drying beds. The size, type, design, and technology selected for the new drying facility will depend on an engineering study currently underway that includes updated research on the market for biosolids, available disposal alternatives, and a business case evaluation of capital and operational costs for various alternatives. All new thermal drying units and ancillary equipment will be housed in an odor-controlled building.

Water Pollution Control

2015-2019 Proposed Capital Improvement Program

Summary of Reserves

Project Name:	**Equipment Replacement Reserve**	**Initial Start Date:**	N/A
5-Year CIP Budget:	$5,000,000	**Revised Start Date:**	
Total Budget:	$5,000,000	**Initial End Date:**	N/A
Council District:	4	**Revised End Date:**	
USGBC LEED:	N/A		

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

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Explanation of Funds

Revenues and expenditures for the operation and maintenance of the San José-Santa Clara Water Pollution Control Plant are accounted for by the City of San José, as administering agency, through the San José-Santa Clara Water Pollution Control 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 Treatment Plant Operating and Capital Funds, respectively. The Tributary Agencies include the City of Milpitas, City of Cupertino, Burbank and Sunol Sanitary Districts, County Sanitation District No. 2-3, and West Valley Sanitation District.

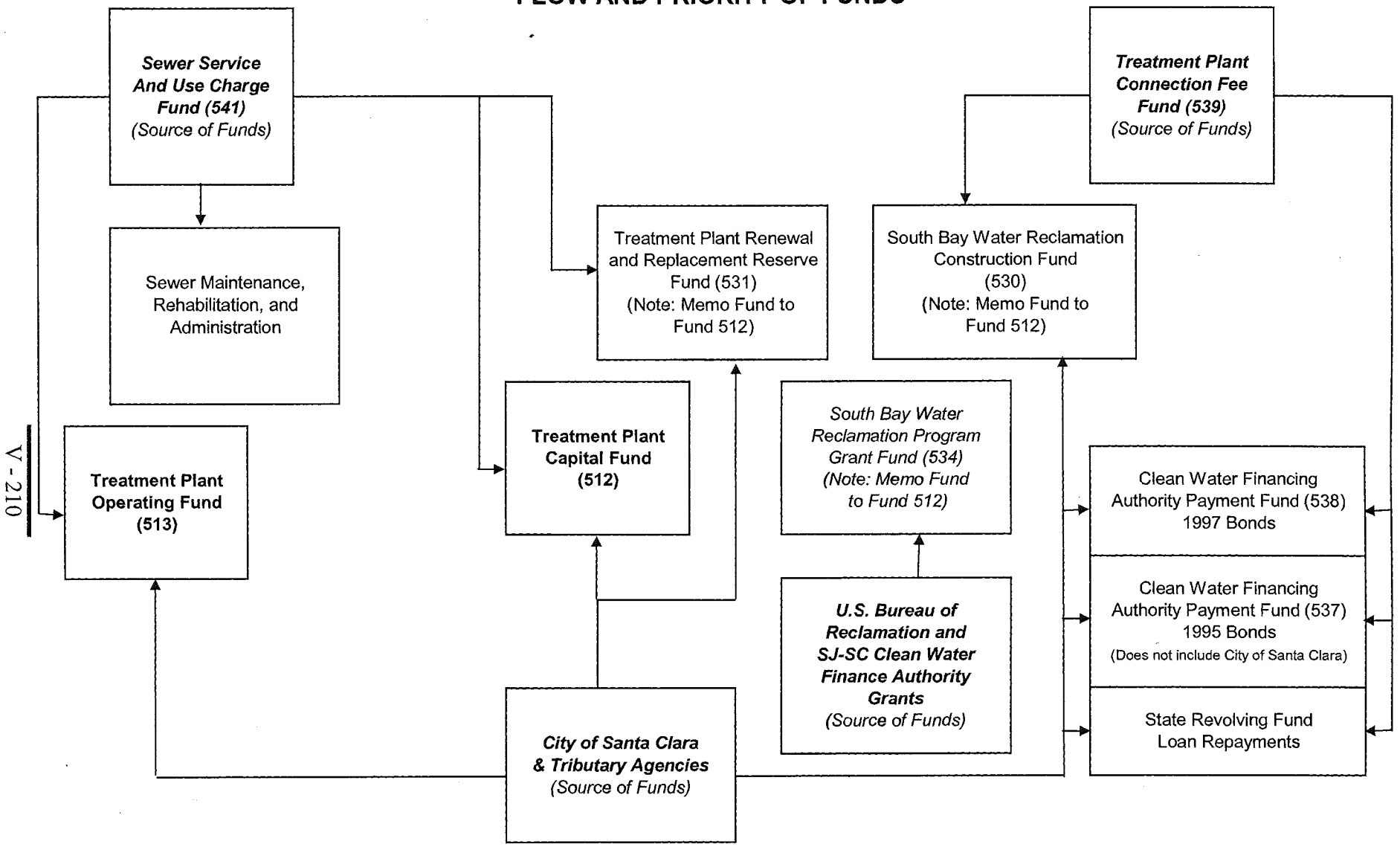
Tributary Agencies are assessed for their share of annual operation, maintenance, equipment, and facilities replacement and capital costs, based on their respective flow and strength of sewage conveyed to the Plant.

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 moneys are transferred to the Treatment Plant Operating and Capital Funds to pay for the City of San José's share of operating and capital costs of the Water Pollution Control 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 Treatment Plant Operating and Capital Funds.

The Treatment Plant Capital Fund provides all moneys used for capital projects. Included in this fund is the Treatment Plant Renewal and Replacement Fund. This fund was established to satisfy the Water Pollution Control Plant's federal and State grant agreements as well as to comply with bond covenants. Also included in the Treatment Plant Capital Fund is the American Recovery and Reinvestment Act (ARRA) Water Program/SJ Area Water Reclamation and Reuse Memo Fund, which accounts for ARRA 2009 money for activities related to South Bay Water Recycling projects.

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.