City Service Area

Environmental and Utility Services



Mission: Delivering world class utility services and programs to improve our health, environment, and economy.

The Sanitary Sewer System Capital Improvement Program (CIP) constructs sewer improvement projects that enhance sewer capacity to meet economic development goals and rehabilitates existing sewers to minimize sanitary sewer overflows.

The Storm Sewer System CIP continues to replace or rehabilitate pump stations to reduce the risk of local flooding during storm events and storm water quality improvements for regulatory compliance. The program addresses the drainage needs in residential neighborhoods, business districts, and walking routes to schools and public facilities.

The Water Pollution Control Plant (Plant) is a regional advanced wastewater treatment facility that serves the cities of San José, Santa Clara, and Milpitas, as well as the Cupertino Sanitary District, West Valley Sanitation District, County Sanitation Districts 2-3, and Burbank Sanitary District. The Plant is one of the largest tertiary wastewater treatment works in the western United States, serving more than 1.4 million residents and approximately 17,000 businesses. A major master planning effort was completed in late 2013, resulting in Environmental Impact Report certification and formal adoption of a 30-year master plan. The master plan provides the framework for over \$1.0 billion in new construction at the Plant over the next 10 to 15 years, and responds to aging infrastructure, future regulations, population growth, and treatment technology improvements.

The Water Utility System CIP ensures reliable utility infrastructure for the San José Municipal Water System and includes the construction of new facilities, maintenance of existing infrastructure, and improvements to existing facilities.

CSA CAPITAL PROGRAMS

- Sanitary Sewer System
- Storm Sewer System
- Water Pollution Control Plant
- Water Utility System

City Service Area

Environmental and Utility Services

Recent Accomplishments

- Capitol Avenue Sanitary Sewer Improvement Replaced approximately 2,600 feet of existing 8-inch with larger 12-inch sanitary sewer pipe along Capitol Avenue (completed in Jan. 2017)
- Fiber Optic Connection at the Water Pollution Control Plant Installed 3,500 feet of fiber optic cable to improve connectivity with City Hall (completed in Feb. 2017)
- Fourth Major Interceptor Rehabilitation Phase IIB − Rehabilitated approximately 3,000 feet of 84-inch reinforced concrete pipe along Zanker Road (completed in Nov. 2016)
- Large Trash Capture Device Installation, Phase 3 – Installed large trash capture devices at multiple locations in the City to reduce trash from the City's storm sewer system (completed in March 2017)
- Stevens Creek Boulevard Sanitary Sewer Improvements – Replaced approximately 7,500 feet of 8- and 10-inch sewer pipe with 18-inch pipes along Stevens Creek Boulevard (completed in July 2016)

Program Highlights

Sanitary Sewer System Capital Program

2018-2022 Adopted CIP: \$228.4 million

Sanitary Sewer Rehabilitation Projects:

- Cast Iron Pipe Remove and Replace
- Condition Assessment Sewer Repairs

Sanitary Sewer Interceptor/Capacity Improvement Projects:

- Immediate Replacement and Diversion Projects
- Bollinger Rd/Moorpark Ave/Williams Rd Sani. Sewer Imp.

Storm Sewer System Capital Program

2018-2022 Adopted CIP: \$46.3 million

- Alviso Storm Pump Station
- Large Trash Capture Devices
- Storm Sewer Master Plan City-wide

Water Pollution Control Capital Program

2018-2022 Adopted CIP: \$1.51 billion

Preliminary Wastewater Treatment:

- Headworks Improvements
- New Headworks

Primary Wastewater Treatment:

 East Primary Rehabilitation, Seismic Retrofit, and Odor Control

Secondary Wastewater Treatment:

Aeration Tanks and Blower Rehabilitation

Biosolids:

Digester and Thickener Facilities Upgrade

Electrical Systems and Power Generation:

Energy Generation Improvements

Water Utility System Capital Program

2018-2022 Adopted CIP: \$33.1 million

- Annual Water Main Replacement
- Fowler Pump Station Replacement
- Gumdrop Drive Main Replacement
- North San José Well #5 Development and Construction

CSA OUTCOMES

(Supported by the Capital Programs)

- ✓ Reliable Utility Infrastructure
- ✓ Healthy Streams, Rivers, Marsh and Bay
- ✓ Safe, Reliable and Sufficient Water Supply

City Service Area Environmental and Utility Services

Performance Measures

A set of consistent and comprehensive performance measurements along with targets and goals has been established for the entire capital program and adopted for each individual CSA. Measures focus on schedule (cycle time) and project delivery cost. Please see the Budget Guide section narrative for additional information on capital performance measurements.

Outcome: Quality CIP Projects Delivered On-Time and On-Budget

Strategic Goals	CSA Performance Measures	2015-2016 Actual ¹	2016-2017 Target	2016-2017 Estimate	2017-2018 Target	5-Year Goal
CSA delivers quality Capital	% of CIP projects delivered within 2 months of approved baseline schedule ²	64% (18/28)	85%	78% (29/37)	85%	85%
	2. % of CIP projects that are completed within the approved baseline budget ³	88% (22/25)	90%	95% (20/21)	90%	90%

The 2015-2016 Actual number of projects may vary from the 2015-2016 Adopted Budget Estimate as documented in the 2016-2017 Adopted Budget as a result of the date of the estimated beneficial use of the project being revised and the project expected to be delivered in the following fiscal year. Also, the number of projects may change with the inclusion of projects in the 2015-2016 Actual not originally included in the 2015-2016 Adopted Budget Estimate due to incomplete project information at that time.

In 2016-2017, the Environmental and Utility Services CSA is estimated to deliver 29 of 37 (78%) projects within two months of the approved baseline schedule, which is below the performance target of 85%. Significant weather-related construction delays contributed to several projects being delivered beyond two months of the baseline schedule. Some of the notable capital projects delivered in 2016-2017 include sanitary and storm sewer improvements (Steven Creek Blvd-Cronin to Saratoga, Willis Ave, Lincoln-Savaker, Blairburry Way, and Tennant Ave), and the Natural Gas Meters Installation, Process Water Pumps Replacement, and Fiber Optic Connection projects at the Water Pollution Control Plant.

In 2016-2017, an estimated 20 of 21 (95%) of the projects have been, or are expected to be, completed within their baseline budgets, which is above the one-year performance target of 90%. A few of the notable capital projects completed in 2016-2017 include the The Villages Sanitary Sewer Rehabilitation, Coyote Creek and Scarlett Way Sanitary Sewer Replacement, Minnesota Ave Sanitary Sewer Improvements, Husted Ave Sanitary Sewer Improvements Phase II, Monterey-Riverside Sanitary Sewer Relief and the Natural Gas Meters Installation and Fiber Optic Connection projects at the Regional Wastewater Facility (RWF). The CSA continues to work to strengthen the alignment of project scopes, schedules, and budgets, while also accounting for external market conditions that may affect the delivery of capital projects.

Projects are considered to be "delivered" when they are available for their intended use and are considered "on schedule" if delivered within two months of baseline schedule.

Projects are considered "completed" when final cost accounting has occurred and the project has been accepted. Projects are considered "on budget" when the total expenditures do not exceed 101% of the baseline budget.

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			Total		
	2017-2018	2018-2022	Budget		
	Budget	CIP Budget	(All Years)	Start Date	End Date
Sanitary Sewer System			_	_	
30 inch Old Bayshore Supplement	1,326,410	1,326,410	5,324,987	3rd Qtr. 2008	2nd Qtr. 2018
60 inch Brick Interceptor, Phase VIA and VIB	29,632,000	30,232,000	68,335,478	3rd Qtr. 2009	2nd Qtr. 2019
Almaden Supplement Sewer Rehabilitation (North)		3,130,000	3,130,000	3rd Qtr. 2020	2nd Qtr. 2022
Bollinger Road - Moorpark Avenue - Williams Road Sanitary Sewer	715,000	9,293,000	12,618,896	3rd Qtr. 2012	2nd Qtr. 2021
Capital Program and Public Works Department Support Service Costs	1,512,000	6,753,000	*	Ongoing	Ongoing
Capitol Avenue Sanitary Sewer Improvements	529,000	529,000	2,526,770	3rd Qtr. 2014	2nd Qtr. 2018
Cast Iron Pipe - Remove and Replace	4,500,000	23,500,000	*	Ongoing	Ongoing
City Hall Debt Service Fund	327,000	1,743,000	*	Ongoing	Ongoing
Coleman Road Sanitary Sewer Improvements	412,000	412,000	1,776,920	3rd Qtr. 2013	2nd Qtr. 2018
Condition Assessment Sewer Repairs	5,500,000	28,500,000	*	Ongoing	Ongoing
Fee Administration - Sanitary Sewer	84,000	423,000	*	Ongoing	Ongoing
Flow Monitoring Program (Master Planning)	1,180,000	4,290,000	*	Ongoing	Ongoing
Fourth Major Interceptor, Phase IIB/IIIB	686,000	686,000	3,414,324	3rd Qtr. 2009	2nd Qtr. 2018
Fourth Major Interceptor, Phase VIIA		5,500,000	5,500,000	3rd Qtr. 2018	2nd Qtr. 2020
Immediate Replacement and Diversion Projects	7,700,000	28,500,000	*	Ongoing	Ongoing
Inflow and Infiltration Reduction	200,000	1,000,000	*	Ongoing	Ongoing
Infrastructure - Sanitary Sewer Condition Assessment	3,000,000	15,000,000	*	Ongoing	Ongoing
Infrastructure Management System	66,000	370,000	*	Ongoing	Ongoing
Master Planning Updates	1,600,000	6,500,000	*	Ongoing	Ongoing
Montague Sanitary Sewer Pump Station Reserve	2,400,000	2,400,000	2,400,000	N/A	N/A
Monterey-Riverside Relief Sanitary Sewer Improvements	674,000	674,000	8,408,898	3rd Qtr. 2011	2nd Qtr. 2018
Payments to West Valley Sanitation District	10,000	50,000	*	Ongoing	Ongoing
Permit Review and Inspection for Outside Agencies - Sanitary Sewer	25,000	125,000	*	Ongoing	Ongoing
Preliminary Engineering - Sanitary Sewer	950,000	4,750,000	*	Ongoing	Ongoing
Program Management - Sanitary Sewer	300,000	1,500,000	*	Ongoing	Ongoing
Public Art Allocation	1,169,000	1,537,000	1,872,259	Ongoing	Ongoing
Public Works Engineering Services Equipment (Materials Lab)	40,000	200,000	*	Ongoing	Ongoing
Rehabilitation of Sanitary Sewer Pump Stations	1,690,000	1,709,000	7,948,472	3rd Qtr. 2008	2nd Qtr. 2019
Reinforced Concrete Pipe Rehabilitation Program	500,000	2,500,000	*	Ongoing	Ongoing

			Total		
	2017-2018	2018-2022	Budget		
	Budget	CIP Budget	(All Years)	Start Date	End Date
Rincon Avenue - Virginia Avenue Sanitary Sewer Improvements	3,118,000	3,467,000	3,467,000	3rd Qtr. 2017	2nd Qtr. 2019
Spreckles Sanitary Sewer Force Main Supplement, Phase II	171,000	171,000	3,558,560	3rd Qtr. 2013	2nd Qtr. 2018
Stevens Creek Boulevard Sanitary Sewer Improvements	542,000	542,000	3,479,150	3rd Qtr. 2012	2nd Qtr. 2018
Trimble Road and Capewood Lane Sanitary Sewer Improvements	922,000	922,000	5,987,639	2nd Qtr. 2014	2nd Qtr. 2018
Urgent Rehabilitation and Repair Projects	8,000,000	33,000,000	*	Ongoing	Ongoing
Westmont Avenue and Harriet Avenue Sanitary Sewer Improvements	561,000	4,075,000	4,075,000	3rd Qtr. 2017	2nd Qtr. 2020
Total: Construction/Non-Construction	80,041,410	225,309,410			
Ending Fund Balance	7,004,849	3,128,849 **			
Total: Sanitary Sewer System	87,046,259	228,438,259 **			
Storm Sewer System					
Alviso Storm Pump Station	9,271,000	9,316,000	11,109,511	3rd Qtr. 2013	2nd Qtr. 2019
Alviso Storm Pump Station Reserve	1,200,000	1,200,000	1,200,000	N/A	N/A
Capital Program and Public Works Department Support Service Costs	807,000	1,499,000	*	Ongoing	Ongoing
Charcot Storm Pump Rental	300,000	1,500,000	2,047,598	4th Qtr. 2015	2nd Qtr. 2021
Chynoweth Avenue Green Street	612,000	612,000	2,749,181	3rd Qtr. 2014	2nd Qtr. 2018
City Hall Debt Service Fund	113,000	601,000	*	Ongoing	Ongoing
Condition Assessment Storm Sewer Repairs	250,000	850,000	*	Ongoing	Ongoing
Fee Administration - Storm Sewer	25,000	125,000	*	Ongoing	Ongoing
Flow Monitoring Program	700,000	1,750,000	*	Ongoing	Ongoing
General Fund - Interest Income	6,000	30,000	*	Ongoing	Ongoing
Green Infrastructure Improvements	500,000	2,300,000	*	Ongoing	Ongoing
Infrastructure Management System	7,000	35,000	*	Ongoing	Ongoing
Large Trash Capture Devices	7,210,000	7,483,000	25,052,828	3rd Qtr. 2014	2nd Qtr. 2019
Outfall Rehabilitation - Capital	800,000	1,900,000	*	Ongoing	Ongoing
Park Avenue Green Street Pilot	138,000	138,000	1,451,167	3rd Qtr. 2014	2nd Qtr. 2018
Permit Review and Inspection for Outside Agencies - Storm Sewer	50,000	250,000	*	Ongoing	Ongoing
Preliminary Engineering - Storm Sewer	180,000	900,000	*	Ongoing	Ongoing
Program Management - Storm Sewer	150,000	750,000	*	Ongoing	Ongoing
Public Art Allocation	474,000	525,000	734,720	Ongoing	Ongoing

Capital Program Summary by City Service Area Environmental and Utility Services

	2017-2018 Budget	2018-2022 CIP Budget	Total Budget (All Years)	Start Date	End Date
Stockton Avenue - Julian Street Storm Sewer Improvements	350,000	350,000	350,000	3rd Qtr. 2017	2nd Qtr. 2018
Storm Pump Station Rehabilitation and Replacement	1,500,000	2,600,000	*	Ongoing	Ongoing
Storm Sewer Improvements	500,000	2,500,000	*	Ongoing	Ongoing
Storm Sewer Master Plan - City-wide	1,450,000	5,850,000	*	Ongoing	Ongoing
Urgent Flood Prevention and Repair Projects	600,000	2,050,000	*	Ongoing	Ongoing
Total: Construction/Non-Construction	27,193,000	45,114,000			
Ending Fund Balance	1,544,828	1,167,828 **			
Total: Storm Sewer System	28,737,828	46,281,828 **			
Water Pollution Control					
Additional Digester Upgrades		10,520,000	10,520,000	3rd Qtr. 2019	3rd Qtr. 2025
Advanced Facility Control and Meter Replacement	13,201,000	20,040,000	23,802,699	3rd Qtr. 2010	2nd Qtr. 2022
Aeration Basin Future Modifications		5,890,000	5,890,000	3rd Qtr. 2019	4th Qtr. 2030
Aeration Tanks and Blower Rehabilitation	40,222,000	111,376,000	120,175,459	1st Qtr. 2015	2nd Qtr. 2026
Capital Program and Public Works Department Support Service Costs	877,000	4,819,000	*	Ongoing	Ongoing
City Hall Debt Service Fund	190,000	1,014,000	*	Ongoing	Ongoing
Clean Water Financing Authority Debt Service Payment Fund	5,881,000	22,458,000	*	Ongoing	Ongoing
Combined Heat and Power Equipment Repair and Rehabilitation	32,000	32,000	17,720,334	3rd Qtr. 2012	3rd Qtr. 2017
Construction-Enabling Improvements	391,000	391,000	4,715,502	3rd Qtr. 2015	3rd Qtr. 2017
Debt Service Repayment for Plant Capital Improvement Projects	3,363,000	498,832,000	*	Ongoing	Ongoing
Digested Sludge Dewatering Facility	2,823,000	93,829,000	99,025,530	3rd Qtr. 2014	1st Qtr. 2022
Digester and Thickener Facilities Upgrade	1,861,000	4,067,000	148,596,057	3rd Qtr. 2006	4th Qtr. 2019
East Primary Rehabilitation, Seismic Retrofit, and Odor Control		35,704,000	36,094,091	3rd Qtr. 2010	4th Qtr. 2027
Energy Generation Improvements	71,369,000	72,847,000	127,813,268	3rd Qtr. 2012	2nd Qtr. 2019
Equipment Replacement	1,663,000	8,315,000	*	Ongoing	Ongoing
Equipment Replacement Reserve	5,000,000	5,000,000	5,000,000	N/A	N/A
Facility Wide Water Systems Improvements	2,118,000	15,540,000	17,241,739	3rd Qtr. 2014	3rd Qtr. 2022
Filter Rehabilitation	4,594,000	34,698,000	36,606,310	3rd Qtr. 2013	3rd Qtr. 2022
Final Effluent Pump Station & Stormwater Channel Improvements		8,005,000	8,005,000	3rd Qtr. 2019	3rd Qtr. 2025
Flood Protection	2,223,000	9,136,000	9,136,000	3rd Qtr. 2017	2nd Qtr. 2021

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			Total		
	2017-2018	2018-2022	Budget		
	Budget	CIP Budget	(All Years)	Start Date	End Date
Headworks Improvements	2,334,000	17,518,000	21,408,546	3rd Qtr. 2012	3rd Qtr. 2021
Iron Salt Feed Station	333,000	333,000	8,855,850	1st Qtr. 2012	4th Qtr. 2017
Master Plan Updates		3,000,000	3,000,000	3rd Qtr. 2018	4th Qtr. 2020
New Disinfection Facilities		7,853,000	7,853,000	2nd Qtr. 2019	4th Qtr. 2027
New Headworks	7,260,000	118,322,000	122,501,847	3rd Qtr. 2012	1st Qtr. 2023
Nitrification Clarifier Rehabilitation	4,236,000	48,604,000	51,480,689	3rd Qtr. 2009	1st Qtr. 2023
Outfall Bridge and Levee Improvements	2,214,000	8,567,000	8,797,578	3rd Qtr. 2014	3rd Qtr. 2022
Owner Controlled Insurance Program	2,731,000	14,821,000	14,821,000	2nd Qtr. 2017	2nd Qtr. 2023
Payment for Clean Water Financing Authority Trustee	5,000	25,000	*	Ongoing	Ongoing
Plant Electrical Reliability	2,464,000	7,081,000	29,450,661	3rd Qtr. 2003	2nd Qtr. 2021
Plant Infrastructure Improvements	1,723,000	5,723,000	*	Ongoing	Ongoing
Plant Instrument Air System Upgrade	596,000	596,000	5,004,662	3rd Qtr. 2014	1st Qtr. 2018
Preliminary Engineering - Water Pollution Control	1,000,000	5,000,000	*	Ongoing	Ongoing
Program Management - Water Pollution Control	8,610,000	38,323,000	*	Ongoing	Ongoing
Public Art Allocation	402,000	402,000	996,597	Ongoing	Ongoing
Record Drawings	321,000	13,740,000	13,740,000	3rd Qtr. 2014	2nd Qtr. 2026
SBWR Extension	3,691,000	3,691,000	*	Ongoing	Ongoing
Secondary Clarifier Rehabilitation		25,936,000	26,040,000	1st Qtr. 2017	4th Qtr. 2024
State Revolving Fund Loan Repayment	4,464,000	6,268,000	87,228,763	Ongoing	Ongoing
Stormwater Improvements	1,600,000	10,195,000	10,195,000	3rd Qtr. 2017	2nd Qtr. 2021
Support Building Improvements	5,839,000	54,580,000	56,865,685	3rd Qtr. 2015	2nd Qtr. 2023
Treatment Plant Distributed Control System	1,495,000	3,095,000	6,918,682	1st Qtr. 2012	3rd Qtr. 2019
Tunnel Rehabilitation	1,120,000	26,385,000	26,485,000	3rd Qtr. 2016	1st Qtr. 2026
Urgent and Unscheduled Treatment Plant Rehabilitation	6,500,000	8,500,000	*	Ongoing	Ongoing
Various Infrastructure Decommissioning		22,220,000	22,220,000	3rd Qtr. 2018	2nd Qtr. 2022
Yard Piping and Road Improvements	11,716,000	83,244,000	85,203,641	3rd Qtr. 2011	4th Qtr. 2026
Total: Construction/Non-Construction	226,462,000	1,496,535,000			
Ending Fund Balance	11,655,723	18,161,723 **			
Total: Water Pollution Control	238,117,723	1,514,696,723 **			

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	2017-2018 Budget	2018-2022 CIP Budget	Total Budget (All Years)	Start Date	End Date
Water Utility System			(r iii r care)		
Advance System Design	200,000	1,000,000	*	Ongoing	Ongoing
Annual Water Main Replacement	,	4,910,000	*	Ongoing	Ongoing
Backup Generator Replacement	30,000	180,000	*	Ongoing	Ongoing
Cadwallader Reservoir Rehabilitation	80,000	80,000	2,232,547	3rd Qtr. 2014	2nd Qtr. 2018
Capital Program and Public Works Department Support Service Costs	8,000	53,000	*	Ongoing	Ongoing
City Hall Debt Service Fund	11,000	59,000	*	Ongoing	Ongoing
Facility Sites Improvement	20,000	320,000	*	Ongoing	Ongoing
Fowler Pump Station Replacement	60,000	1,560,000	1,560,000	3rd Qtr. 2017	2nd Qtr. 2019
Gumdrop Drive Main Replacement	1,000,000	1,000,000	1,060,000	3rd Qtr. 2016	2nd Qtr. 2018
Infrastructure Improvements	790,000	4,050,000	*	Ongoing	Ongoing
Major Facilities Fee Administration	15,000	75,000	*	Ongoing	Ongoing
Major Water Facility Fee Update	25,000	25,000	68,000	3rd Qtr. 2015	2nd Qtr. 2016
Master Plan Engineering	150,000	800,000	*	Ongoing	Ongoing
Meter Installations	50,000	250,000	*	Ongoing	Ongoing
Network System Flow Improvements	6,000	30,000	*	Ongoing	Ongoing
North Coyote Valley Water System Reserve	168,000	168,000	168,000	N/A	N/A
North San José Reliability Well #6 Construction		1,160,000	1,160,000	3rd Qtr. 2018	2nd Qtr. 2021
North San José Water Well Evaluation and Rehabilitation	200,000	200,000	910,166	3rd Qtr. 2016	2nd Qtr. 2018
North San José Well #5 Development and Construction	1,560,000	1,560,000	1,560,398	3rd Qtr. 2017	4th Qtr. 2019
Preliminary Engineering - Water	135,000	725,000	*	Ongoing	Ongoing
Public Art Funding	124,000	148,000	148,000	Ongoing	Ongoing
Public Works GIS Support	65,000	390,000	*	Ongoing	Ongoing
Repayment of Commercial Paper	627,000	627,000	1,254,000	3rd Qtr. 2016	2nd Qtr. 2018
Reservoir Seismic Evaluation	200,000	200,000	200,000	3rd Qtr. 2017	2nd Qtr. 2018
Safety and Security Improvements	100,000	500,000	*	Ongoing	Ongoing
Service Installations	200,000	1,000,000	*	Ongoing	Ongoing
System Growth Related Projects Reserve	1,600,000	1,600,000	1,600,000	N/A	N/A
System Maintenance/Repairs	740,000	3,740,000	*	Ongoing	Ongoing
System Rehabilitation/Replacement Reserve	2,767,000	3,743,000	3,743,000	N/A	N/A
Total: Construction/Non-Construction	10,931,000	30,153,000			

	2017-2018 Budget	2018-2022 CIP Budget	Total Budget (All Years)	Start Date	End Date
Ending Fund Balance	2,169,101	2,935,101 **	k .		
Total: Water Utility System	13,100,101	33,088,101 **	k		
CSA Total: Construction/Non-Construction	344,627,410	1,797,111,410 **	•		
Ending Fund Balance	22,374,501	25,393,501 **	k		
CSA Total:	367,001,911	1,822,504,911 **	k		

^{*} Total Budget information is not provided due to the ongoing nature of this project.

^{**} The 2017-2018 through 2020-2021 Ending Balance are excluded from the FIVE-YEAR TOTAL USE OF FUNDS to avoid multiple counting of the same funds.