




**2017-2018 CAPITAL BUDGET**

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**2018-2022 CAPITAL  
IMPROVEMENT PROGRAM**



**ENVIRONMENTAL  
AND  
UTILITY SERVICES  
CSA**

# City Service Area Environmental and Utility Services



**Large Trash Capture Device  
Installation**



**Water Pollution Control Plant**

***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.

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## CSA CAPITAL PROGRAMS

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

**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 Proposed CIP: \$191.7 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 Proposed CIP: \$42.8 million

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

**Water Pollution Control Capital Program**

2018-2022 Proposed CIP: \$1.47 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 Proposed CIP: \$32.7 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 <sup>1</sup>	2016-2017 Target	2016-2017 Estimate	2017-2018 Target	5-Year Goal
Environmental and Utility Services CSA delivers quality Capital Improvement Program (CIP) projects on-time and on-budget	1. % of CIP projects delivered within 2 months of approved baseline schedule <sup>2</sup>	64% (18/28)	85%	78% (29/37)	85%	85%
	2. % of CIP projects that are completed within the approved baseline budget <sup>3</sup>	88% (22/25)	90%	95% (20/21)	90%	90%

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> 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.

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.

# Capital Program Summary by City Service Area

## Environmental and Utility Services

	<u>2017-2018 Budget</u>	<u>2018-2022 CIP Budget</u>	<u>Total Budget (All Years)</u>	<u>Start Date</u>	<u>End Date</u>
<b><u>Sanitary Sewer System</u></b>					
30 inch Old Bayshore Supplement	125,410	125,410		Ongoing	Ongoing
60 inch Brick Interceptor, Phase VIA and VIB	675,000	1,275,000		Ongoing	Ongoing
Almaden Supplement Sewer Rehabilitation (North)		3,130,000		Ongoing	Ongoing
Bollinger Road - Moorpark Avenue - Williams Road Sanitary Sewer	153,000	8,731,000		Ongoing	Ongoing
Capital Program and Public Works Department Support Service Costs	1,512,000	6,753,000		Ongoing	Ongoing
Cast Iron Pipe - Remove and Replace	4,500,000	23,500,000		Ongoing	Ongoing
City Hall Debt Service Fund	654,000	3,486,000		Ongoing	Ongoing
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)	760,000	3,870,000		Ongoing	Ongoing
Fourth Major Interceptor, Phase VIIA		5,500,000		Ongoing	Ongoing
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	1,400,000	6,300,000		Ongoing	Ongoing
Montague Sanitary Sewer Pump Station Reserve	2,400,000	2,400,000		Ongoing	Ongoing
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	112,000	480,000		Ongoing	Ongoing
Public Works Engineering Services Equipment (Materials Lab)	40,000	200,000		Ongoing	Ongoing
Rehabilitation of Sanitary Sewer Pump Stations	690,000	709,000		Ongoing	Ongoing
Reinforced Concrete Pipe Rehabilitation Program	500,000	2,500,000		Ongoing	Ongoing
Rincon Avenue - Virginia Avenue Sanitary Sewer Improvements	3,118,000	3,467,000		Ongoing	Ongoing
Spreckles Sanitary Sewer Force Main Supplement, Phase II	5,000	5,000		Ongoing	Ongoing
Trimble Road and Capewood Lane Sanitary Sewer Improvements	621,000	621,000		Ongoing	Ongoing
Urgent Rehabilitation and Repair Projects	8,000,000	33,000,000		Ongoing	Ongoing

# Capital Program Summary by City Service Area

## Environmental and Utility Services

	<u>2017-2018</u> <u>Budget</u>	<u>2018-2022</u> <u>CIP Budget</u>	<u>Total</u> <u>Budget</u> <u>(All Years)</u>	<u>Start Date</u>	<u>End Date</u>
Westmont Avenue and Harriet Avenue Sanitary Sewer Improvements	561,000	4,075,000		Ongoing	Ongoing
<b>Total: Construction/Non-Construction</b>	<b>43,661,410</b>	<b>190,345,410</b>			
Ending Fund Balance	6,677,848	1,385,848	**		
<b>Total: Sanitary Sewer System</b>	<b>50,339,258</b>	<b>191,731,258</b>	**		
 <b><u>Storm Sewer System</u></b>					
Alviso Storm Pump Station	9,021,000	9,066,000		Ongoing	Ongoing
Alviso Storm Pump Station Reserve	1,200,000	1,200,000		Ongoing	Ongoing
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		Ongoing	Ongoing
Chynoweth Avenue Green Street	112,000	112,000		Ongoing	Ongoing
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	350,000	1,400,000		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	6,210,000	6,483,000		Ongoing	Ongoing
Outfall Rehabilitation - Capital	800,000	1,900,000		Ongoing	Ongoing
Park Avenue Green Street Pilot	38,000	38,000		Ongoing	Ongoing
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	85,000	136,000		Ongoing	Ongoing
Stockton Avenue - Julian Street Storm Sewer Improvements	350,000	350,000		Ongoing	Ongoing
Storm Pump Station Rehabilitation and Replacement	1,000,000	2,100,000		Ongoing	Ongoing
Storm Sewer Improvements	500,000	2,500,000		Ongoing	Ongoing
Storm Sewer Master Plan - City-wide	1,100,000	5,500,000		Ongoing	Ongoing
Urgent Flood Prevention and Repair Projects	600,000	2,050,000		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
<b>Total: Construction/Non-Construction</b>	<b>23,754,000</b>	<b>41,675,000</b>			
Ending Fund Balance	1,544,828	1,167,828	**		
<b>Total: Storm Sewer System</b>	<b>25,298,828</b>	<b>42,842,828</b>	**		
<b><u>Water Pollution Control</u></b>					
Additional Digester Upgrades		10,520,000		Ongoing	Ongoing
Advanced Facility Control and Meter Replacement	12,192,000	19,031,000		Ongoing	Ongoing
Aeration Basin Future Modifications		5,890,000		Ongoing	Ongoing
Aeration Tanks and Blower Rehabilitation	31,542,000	102,696,000		Ongoing	Ongoing
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
Debt Service Repayment for Plant Capital Improvement Projects	3,363,000	498,832,000		Ongoing	Ongoing
Digested Sludge Dewatering Facility	2,275,000	93,281,000		Ongoing	Ongoing
Digester and Thickener Facilities Upgrade	1,348,000	3,554,000		Ongoing	Ongoing
East Primary Rehabilitation, Seismic Retrofit, and Odor Control		35,704,000		Ongoing	Ongoing
Energy Generation Improvements	63,161,000	64,639,000		Ongoing	Ongoing
Equipment Replacement	1,663,000	8,315,000		Ongoing	Ongoing
Equipment Replacement Reserve	5,000,000	5,000,000		Ongoing	Ongoing
Facility Wide Water Systems Improvements	1,117,000	14,539,000		Ongoing	Ongoing
Filter Rehabilitation	3,255,000	33,359,000		Ongoing	Ongoing
Final Effluent Pump Station & Stormwater Channel Improvements		8,005,000		Ongoing	Ongoing
Flood Protection	2,223,000	9,136,000		Ongoing	Ongoing
Headworks Improvements	1,217,000	16,401,000		Ongoing	Ongoing
Iron Salt Feed Station	79,000	79,000		Ongoing	Ongoing
Master Plan Updates		3,000,000		Ongoing	Ongoing
New Disinfection Facilities		7,853,000		Ongoing	Ongoing
New Headworks	5,924,000	116,986,000		Ongoing	Ongoing
Nitrification Clarifier Rehabilitation	715,000	45,083,000		Ongoing	Ongoing
Outfall Bridge and Levee Improvements	974,000	7,327,000		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
Owner Controlled Insurance Program	2,731,000	14,821,000		Ongoing	Ongoing
Payment for Clean Water Financing Authority Trustee	5,000	25,000		Ongoing	Ongoing
Plant Electrical Reliability	565,000	5,182,000		Ongoing	Ongoing
Plant Infrastructure Improvements	1,000,000	5,000,000		Ongoing	Ongoing
Plant Instrument Air System Upgrade	290,000	290,000		Ongoing	Ongoing
Preliminary Engineering - Water Pollution Control	1,000,000	5,000,000		Ongoing	Ongoing
Program Management - Water Pollution Control	7,967,000	37,680,000		Ongoing	Ongoing
Record Drawings	71,000	13,490,000		Ongoing	Ongoing
Secondary Clarifier Rehabilitation		25,936,000		Ongoing	Ongoing
State Revolving Fund Loan Repayment	4,464,000	6,268,000		Ongoing	Ongoing
Stormwater Improvements	1,600,000	10,195,000		Ongoing	Ongoing
Support Building Improvements	4,935,000	53,676,000		Ongoing	Ongoing
Treatment Plant Distributed Control System	1,025,000	2,625,000		Ongoing	Ongoing
Tunnel Rehabilitation	1,120,000	26,385,000		Ongoing	Ongoing
Urgent and Unscheduled Treatment Plant Rehabilitation	5,500,000	7,500,000		Ongoing	Ongoing
Various Infrastructure Decommissioning		22,220,000		Ongoing	Ongoing
Yard Piping and Road Improvements	11,057,000	82,585,000		Ongoing	Ongoing
<b>Total: Construction/Non-Construction</b>	<b>186,326,000</b>	<b>1,456,399,000</b>			
Ending Fund Balance	11,655,723	18,161,723	**		
<b>Total: Water Pollution Control</b>	<b>197,981,723</b>	<b>1,474,560,723</b>	**		

### Water Utility System

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
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		Ongoing	Ongoing
Gumdrop Drive Main Replacement	1,000,000	1,000,000		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
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		Ongoing	Ongoing
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		Ongoing	Ongoing
North San José Reliability Well #6 Construction		1,160,000		Ongoing	Ongoing
North San José Well #5 Development and Construction	1,560,000	1,560,000		Ongoing	Ongoing
Preliminary Engineering - Water	135,000	725,000		Ongoing	Ongoing
Public Art Funding	4,000	28,000		Ongoing	Ongoing
Public Works GIS Support	65,000	325,000		Ongoing	Ongoing
Repayment of Commercial Paper	627,000	627,000		Ongoing	Ongoing
Reservoir Seismic Evaluation	200,000	200,000		Ongoing	Ongoing
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		Ongoing	Ongoing
System Maintenance/Repairs	740,000	3,740,000		Ongoing	Ongoing
System Rehabilitation/Replacement Reserve	<u>2,767,000</u>	<u>3,743,000</u>		Ongoing	Ongoing
<b>Total: Construction/Non-Construction</b>	<b>10,531,000</b>	<b>29,688,000</b>	*	347,708	297,082
Ending Fund Balance	<u>2,169,101</u>	<u>3,000,101</u>	**		
<b>Total: Water Utility System</b>	<b>12,700,101</b>	<b>32,688,101</b>	**	*	347,708
<b>CSA Total: Construction/Non-Construction</b>	264,272,410	1,718,107,410	**		
Ending Fund Balance	<u>22,047,500</u>	<u>23,715,500</u>	**		
<b>CSA Total:</b>	<u><u>286,319,910</u></u>	<u><u>1,741,822,910</u></u>	**		

\* 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