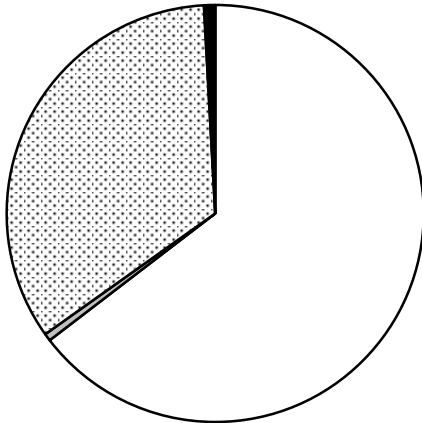


WATER UTILITY SYSTEM

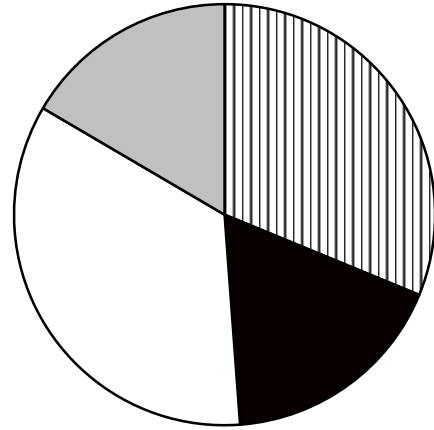
2018-2022 Capital Improvement Program

**2017-2018 Adopted
Source of Funds**



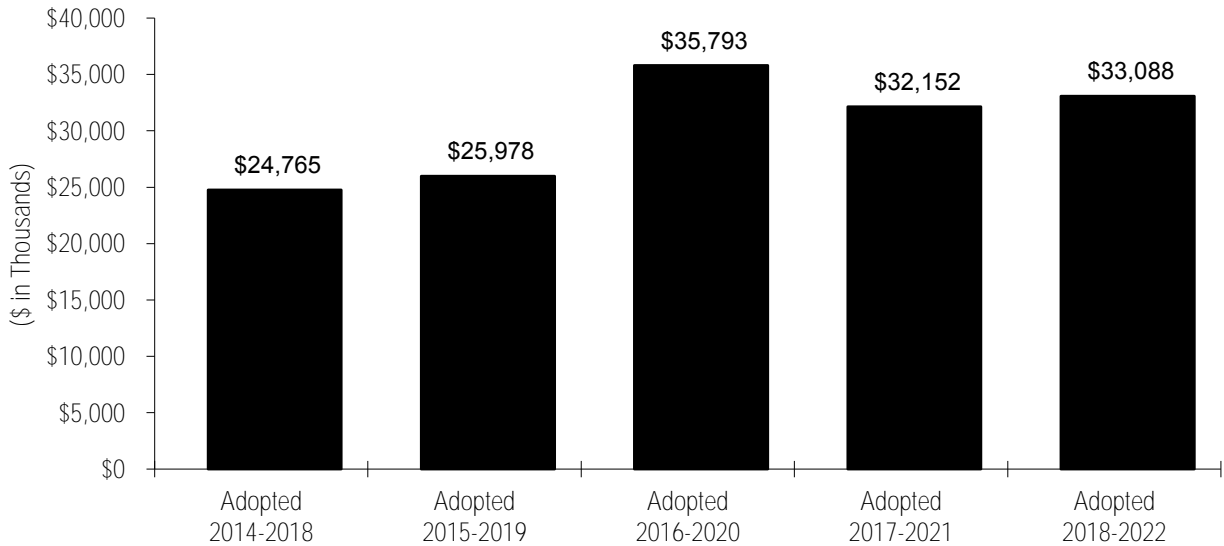
- Beginning Fund Balance
- Taxes, Fees and Charges
- ▨ Loans & Transfers
- Interest

**2017-2018 Adopted
Use of Funds**



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

CIP History



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Water Utility System

2018-2022 Adopted Capital Improvement Program

North

A) North San José Reliability Well #6 Construction

B) North San José Well #5 Development and Construction



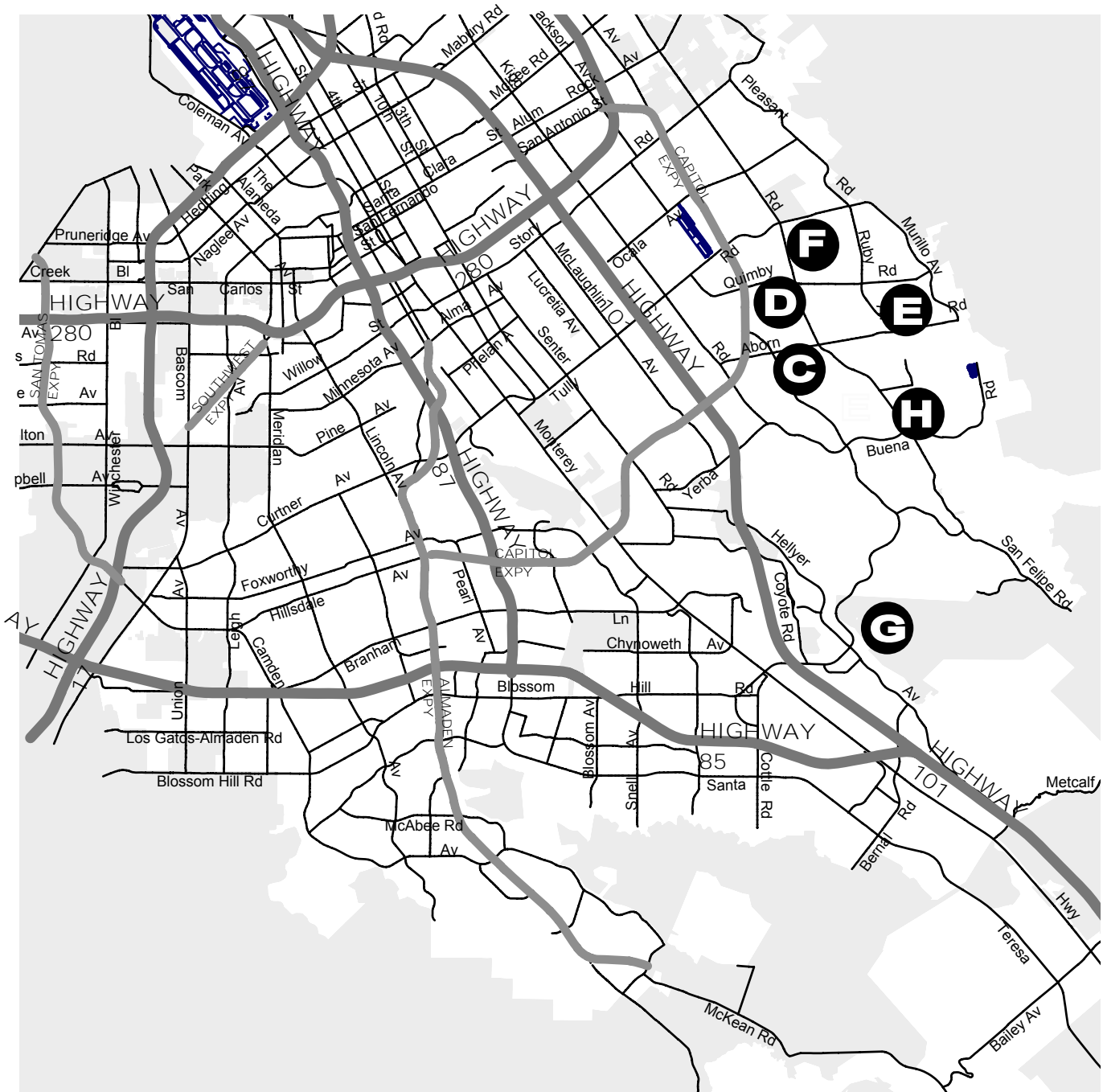
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Water Utility System

2018-2022 Adopted Capital Improvement Program

South

- C)** Facility Site Improvements
- D)** Annual Water Main Replacement
- E)** Fowler Pump Station Replacement
- F)** Gumdrop Dr. Main Replacement
- G)** Backup Generator Replacement
- H)** Safety and Security Improvements (Evergreen Service Area)



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Water Utility System

2018-2022 Adopted Capital Improvement Program

Overview

INTRODUCTION

The Water Utility System Capital Program includes the Water Utility Capital Fund and the Major Facilities Fund. The Water Utility System Capital Program is developed to ensure reliable utility infrastructure for the San José Municipal Water System (Muni Water), which provides water utility service, in accordance with State of California State Water Resources Control Board requirements, to areas approved for development by the City Council and within the City's water service area. The program's mission is to provide superior water service at competitive rates. The 2018-2022 Adopted Capital Improvement Program (CIP) provides funding of \$33.1 million, of which \$13.1 million is allocated in 2017-2018.

MUNICIPAL WATER SYSTEM PUBLIC INFRASTRUCTURE	
MILES OF WATER MAINS	345
NUMBER OF RESERVOIRS	18
NUMBER OF PUMP STATIONS	15
NUMBER OF GROUNDWATER WELLS	14

Muni Water provides water service to approximately 24,000 customers in five service areas of the City of San José: Alviso, North San José, Coyote Valley, Edenvale, and Evergreen. The Alviso service area (Council District 4) includes the area within the corporate limits of the former City of Alviso. The North San José service area (Council District 4) is generally north of Trimble Road, between the Guadalupe River and Coyote Creek. The Coyote Valley service area (Council District 2) encompasses the area generally south of Tulare Hill, west of Highway 101, and north of Palm Avenue. The Edenvale service area (Council District 8) is south of Hellyer Avenue and east of Coyote Creek. The Evergreen service area generally coincides with the boundaries of Council District 8, east of Highway 101.

This program is part of the Environmental and Utility Services City Service Area (CSA) and supports the following outcomes: *Reliable Utility Infrastructure* and *Safe, Reliable, Sufficient Water Supply*.

PROGRAM PRIORITIES AND OBJECTIVES

Muni Water's CIP's guiding objective is to provide a safe, reliable water supply. Based on the CSA outcomes supported by this program, the following list of priorities has been developed:

- Maintain the existing water utility system infrastructure;
- Provide facilities necessary for new development as identified in the Envision San José 2040 General Plan; and
- Ensure that the fire flow pressure and volume as recommended by the San José Fire Department is maintained.

Water Utility System

2018-2022 Adopted Capital Improvement Program

Overview

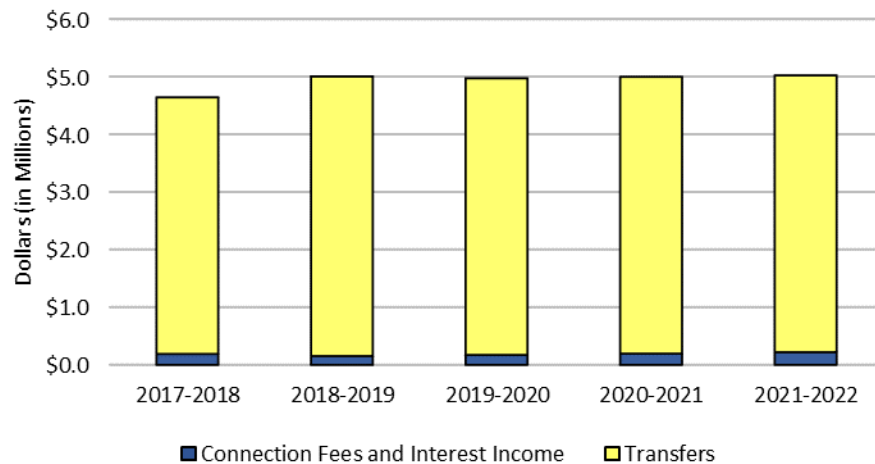
SOURCES OF FUNDING

Revenue for the 2018-2022 Adopted CIP is derived from a combination of funding sources: transfers from the Water Utility Fund to the Water Utility Capital Fund, fee income, and interest income. The Water Utility Fund derives its revenue primarily from water sales in the service areas. Water Utility revenue increased by 9% in 2017-2018 in order to offset rising wholesale water costs and increased operating costs, restore revenue that was down due to declining water sales, and fund capital improvements. The amount of the transfer from the Water Utility Fund is \$4.5 million in 2017-2018. Fee revenue in the Water Utility Capital Fund is generated from Service Connection Fees, Advanced System Design Fees, and Meter Installation Fees.

In accordance with San José Municipal Code Section 4.80.630, the System Rehabilitation/Replacement Reserve is set at 7% of annual operating revenues. This reserve totals \$3.7 million at the end of the 2018-2022 CIP based on current operating revenue projections for 2018-2022. In the event that economic or environmental conditions (e.g. drought, slowing economy, etc.) decrease revenues to the Water Utility System, use of the reserve may be required to maintain infrastructure.

Revenue in the Major Facilities Fund is generated primarily through development fees associated with the connection and operation of major water facilities in the five service areas. Revenues received from Major Water Facilities Fees are not budgeted due to the volatility of this revenue stream. Revenue will be recognized, and programmed as necessary during the year, as it is received. Over the five years of this Adopted CIP, the funds available for capital improvements are estimated to total \$33.1 million, which consists of \$27.7 million in the Water Utility Capital Fund and \$5.3 million in the Major Facilities Fee Fund.

Summary of Revenues



Water Utility System

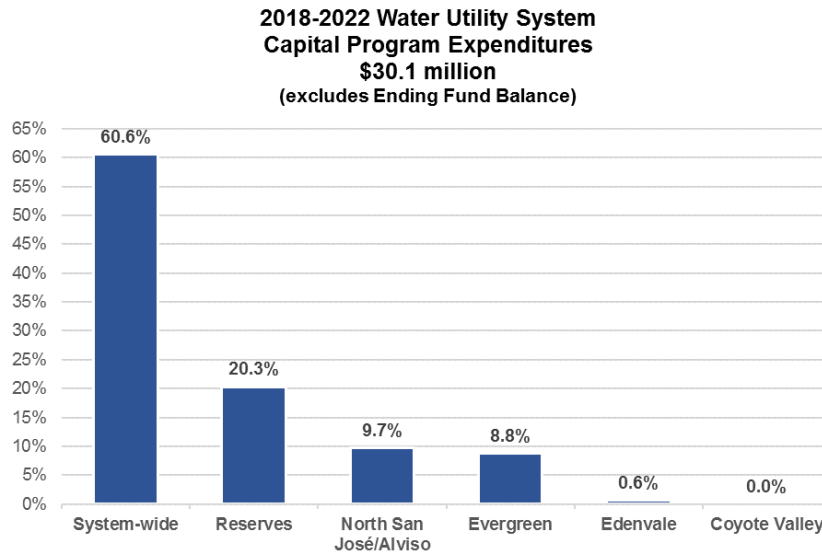
2018-2022 Adopted Capital Improvement Program

Overview

PROGRAM HIGHLIGHTS

The Water Utility System Capital Program’s expenditures are organized to show the use of funds in several categories. The following highlights the major projects in the program by service area. For further information on the program’s individual projects, please refer to the Detail Pages.

To meet the service needs of new developments in the Municipal Water System service area, the program continues its policy of requiring developers to construct distribution system improvements, such as pipelines, service connections, groundwater wells, and fire hydrants. Reservoirs, pump stations, and other large facilities are either constructed by developers or funded from the Major Facilities fees. Construction and reconstruction of projects for existing customers are funded from water sale revenues, which are displayed in the 2017-2018 Adopted Operating Budget in the Water Utility Fund.



System-Wide

The Safety and Security Improvements project (\$500,000) in the Adopted CIP will include the installation of safety and security equipment at various system facilities, in order to maintain reliable utility infrastructure, ensure water supplies remain secured, and provide a safe working environment for staff performing operations and maintenance. Additionally, the Reservoir Seismic Evaluation (\$200,000) project will evaluate seventeen potable water reservoirs and perform seismic analyses in order to comply to current seismic codes. In an effort to maintain and upgrade the City’s Muni Water distribution system, the 2018-2022 CIP includes funding for the Annual Water Main Replacement Project (\$4.9 million), which will prioritize water mains for replacement throughout the service areas of Muni Water System by rating pipe segments based on age, adequacy of size and flow, the number of leaks or failures that have occurred, and the difficulty to repair the pipe if it failed considering location and traffic conditions.

Water Utility System

2018-2022 Adopted Capital Improvement Program

Overview

PROGRAM HIGHLIGHTS

North San José and Alviso Service Areas

The North San José and Alviso service areas use water supplied by the Hetch-Hetchy system under the Water Supply Agreement (WSA) with the City of San Francisco. San José is a party to the agreement with 27 suburban agencies. The new agreement, which will expire June 30, 2034, was approved by the City Council in June 2009.



Detail Work on Trimble Reservoir

The North San José and Alviso service areas have experienced some growth in the last several years, and growth is assumed in this CIP. In order to take advantage of groundwater as the least expensive water supply to meet future demand forecasts, the City continues to work with developers to construct a new groundwater well once viable locations are determined. Increased focus on rehabilitation and construction of groundwater wells will enable the San José Municipal Water System to minimize costs to customers, supply groundwater under emergency situations, and take advantage of

Indirect Potable Reuse of purified water when available.

Evergreen Service Area

The Evergreen service area contains approximately 92% of the total customers served by the water system and accounts for 72% of total water usage. Customers in the Evergreen area receive water supplied by the Santa Clara Valley Water District. The Evergreen service area has experienced minimal growth in the last several years. Included in the Adopted CIP is the Fowler Pump Station Replacement project (\$1.6 million), as well as other miscellaneous improvements to extend the useful life of the system.

Edenvale Service Area

Basic water facilities for domestic supply and fire protection for the Edenvale service area north of Silver Creek Valley Road include three wells and a reservoir. Groundwater from deep-water wells provides 100% of the supply in the Edenvale service area. The quality, supply, and management of this local groundwater basin are monitored by the Santa Clara Valley Water District. Projects scheduled in the 2018-2022 Adopted CIP in the Edenvale service area include minor improvements, such as vault site maintenance, asphalt restoration, pump station maintenance, other distribution system rehabilitation, and back-up generator replacement.

Water Utility System

2018-2022 Adopted Capital Improvement Program

Overview

PROGRAM HIGHLIGHTS

Coyote Valley Service Area

Groundwater from deep-water wells provides 100% of the supply in the Coyote Valley service area. City funding for developer-constructed water facilities in the primarily industrial North Coyote Valley service area was provided in accordance with the Master Development Agreement between the City and the coalition of North Coyote Valley developers. Once development occurs in this service area, developers will pay for the cost of expanding the water system into this area.

MAJOR CHANGES FROM THE 2017-2021 ADOPTED CIP

The overall size of the Water Utility System CIP has increased by approximately \$936,000, from \$32.2 million in the 2017-2021 Adopted CIP to \$33.1 million in the 2018-2022 Adopted CIP. The following table, however, outlines the most significant changes to project budgets, including new/augmented allocations and reduced/eliminated allocations.

Project	Incr/(Decr)
Annual Water Main Replacement	\$4,910,000
Orinda Drive Main Replacement	(\$1,290,000)
Elkins Way Mani Replacement	(\$1,030,000)

OPERATING BUDGET IMPACT

There are no additional maintenance and operating costs associated with the projects in the 2018-2022 Adopted CIP.

COUNCIL-APPROVED REVISIONS TO THE PROPOSED CAPITAL IMPROVEMENT PROGRAM

During the June budget hearings, City Council approved changes to the Proposed Capital Improvement Program, which consists of the rebudgeting of unexpended funding for projects totaling \$400,000 due to project delays. For additional information regarding any of these approved actions, please refer to the Manager's Budget Addendum #26, as approved by the City Council on June 13, 2017.

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2017-2018 CAPITAL BUDGET

**2018-2022 CAPITAL
IMPROVEMENT PROGRAM**



**WATER UTILITY
SYSTEM**

**SOURCE AND USE OF FUNDS
STATEMENTS**

Water Utility System
2018-2022 Adopted Capital Improvement Program
Source of Funds (Combined)

	Estimated						
	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	5-Year Total
Water Utility Capital Fund							
Beginning Balance	4,738,848	3,380,485	227,485	504,485	641,485	596,485	3,380,485
Reserve for Encumbrance	4,486,080						
Transfers							
Transfer from the Water Utility Fund	3,976,000	4,450,000	4,850,000	4,800,000	4,800,000	4,800,000	23,700,000
TOTAL Transfers	3,976,000	4,450,000	4,850,000	4,800,000	4,800,000	4,800,000	23,700,000
Revenue from Use of Money and Property							
Interest Income	89,637	53,000	39,000	51,000	66,000	82,000	291,000
TOTAL Revenue from Use of Money and Property	89,637	53,000	39,000	51,000	66,000	82,000	291,000
Fees, Rates and Charges							
Advance System Design Fees	25,000	25,000	25,000	25,000	25,000	25,000	125,000
Meter Installation Fees	25,000	25,000	25,000	25,000	25,000	25,000	125,000
Service Connection Fees	25,000	25,000	25,000	25,000	25,000	25,000	125,000
TOTAL Fees, Rates and Charges	75,000	75,000	75,000	75,000	75,000	75,000	375,000
Financing Proceeds							
Commercial Paper - Water Meters	1,200,000						
TOTAL Financing Proceeds	1,200,000						
Total Water Utility Capital Fund	14,565,565	7,958,485	5,191,485	5,430,485	5,582,485	5,553,485	27,746,485

Water Utility System
2018-2022 Adopted Capital Improvement Program
Source of Funds (Combined)

	Estimated						
	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	5-Year Total
Major Facilities Fund							
Beginning Balance	5,146,604	5,081,616	1,941,616	1,964,616	1,994,616	2,033,616	5,081,616
Reserve for Encumbrance	43,000						
Revenue from Use of Money and Property							
Interest Income	44,012	60,000	38,000	45,000	54,000	63,000	260,000
TOTAL Revenue from Use of Money and Property	44,012	60,000	38,000	45,000	54,000	63,000	260,000
Fees, Rates and Charges							
Major Water Facilities Fee	31,000						
TOTAL Fees, Rates and Charges	31,000						
Total Major Facilities Fund	5,264,616	5,141,616	1,979,616	2,009,616	2,048,616	2,096,616	5,341,616
 TOTAL SOURCES	 19,830,181	 13,100,101	 7,171,101	 7,440,101	 7,631,101	 7,650,101	 33,088,101

Water Utility System

2018-2022 Adopted Capital Improvement Program

Use of Funds (Combined)

	Estimated 2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	5-Year Total
<u>Water Utility System</u>							
Annual Water Main Replacement			50,000	1,060,000	2,000,000	1,800,000	4,910,000
Backup Generator Replacement		30,000	150,000				180,000
Cadwallader Reservoir Rehabilitation	1,547,270	80,000					80,000
Edenvale Reservoir Rehabilitation	1,145,000						
Facility Sites Improvement		20,000	300,000				320,000
Fowler Pump Station Replacement		60,000	1,500,000				1,560,000
Gumdrop Drive Main Replacement	60,000	1,000,000					1,000,000
Infrastructure Improvements	1,922,735	790,000	800,000	810,000	820,000	830,000	4,050,000
Meter Installations	95,713	50,000	50,000	50,000	50,000	50,000	250,000
Meter Replacements	2,057,016						
North San José Reliability Well #6 Construction			60,000	950,000	150,000		1,160,000
North San José Water Well Evaluation and Rehabilitation	710,166	200,000					200,000
North San José Well #5 Development and Construction		1,560,000					1,560,000
Safety and Security Improvements	514,627	100,000	100,000	100,000	100,000	100,000	500,000
Service Installations	494,389	200,000	200,000	200,000	200,000	200,000	1,000,000
Other Water - Construction	8,546,917	4,090,000	3,210,000	3,170,000	3,320,000	2,980,000	16,770,000
Water - Construction	8,546,917	4,090,000	3,210,000	3,170,000	3,320,000	2,980,000	16,770,000
Advance System Design	200,000	200,000	200,000	200,000	200,000	200,000	1,000,000
Major Facilities Fee Administration	15,000	15,000	15,000	15,000	15,000	15,000	75,000
Major Water Facility Fee Update	43,000	25,000					25,000
Master Plan Engineering	194,164	150,000	155,000	160,000	165,000	170,000	800,000
Network System Flow Improvements	6,000	6,000	6,000	6,000	6,000	6,000	30,000

Water Utility System

2018-2022 Adopted Capital Improvement Program


Use of Funds (Combined)

	Estimated						
	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	5-Year Total
Preliminary Engineering - Water	130,000	135,000	140,000	145,000	150,000	155,000	725,000
Public Works GIS Support	295,000	65,000	65,000	65,000	65,000	130,000	390,000
Repayment of Commercial Paper	627,000	627,000					627,000
Reservoir Seismic Evaluation		200,000					200,000
System Maintenance/Repairs	1,215,000	740,000	740,000	740,000	760,000	760,000	3,740,000
Water Management System Enhancements	67,000						
General Non-Construction - Water	2,792,163	2,163,000	1,321,000	1,331,000	1,361,000	1,436,000	7,612,000
Water - Non Construction	2,792,163	2,163,000	1,321,000	1,331,000	1,361,000	1,436,000	7,612,000
Public Art Funding		124,000	7,000	13,000	4,000		148,000
Public Art Projects		124,000	7,000	13,000	4,000		148,000
Capital Program and Public Works Department Support Service Costs	15,000	8,000	12,000	11,000	12,000	10,000	53,000
Allocations	15,000	8,000	12,000	11,000	12,000	10,000	53,000
City Hall Debt Service Fund	13,000	11,000	12,000	12,000	12,000	12,000	59,000
Transfers to Special Funds	13,000	11,000	12,000	12,000	12,000	12,000	59,000
General Fund - Human Resources/Payroll/ Budget Systems Upgrade	1,000						
Transfers to the General Fund	1,000						
Transfers Expense	14,000	11,000	12,000	12,000	12,000	12,000	59,000
North Coyote Valley Water System Reserve		168,000					168,000
System Growth Related Projects Reserve		1,600,000					1,600,000
System Rehabilitation/Replacement Reserve		2,767,000	140,000	267,000	292,000	277,000	3,743,000
Expense Reserves - Non Construction		4,535,000	140,000	267,000	292,000	277,000	5,511,000
Total Expenditures	11,368,080	10,931,000	4,702,000	4,804,000	5,001,000	4,715,000	30,153,000
Ending Fund Balance	8,462,101	2,169,101	2,469,101	2,636,101	2,630,101	2,935,101	2,935,101
TOTAL	19,830,181	13,100,101	7,171,101	7,440,101	7,631,101	7,650,101	33,088,101



2017-2018 CAPITAL BUDGET

**2018-2022 CAPITAL
IMPROVEMENT PROGRAM**



**WATER UTILITY
SYSTEM**

DETAIL OF PROJECTS

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of One-Time Construction Projects

Backup Generator Replacement

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2017
CSA Outcome	Safe, Reliable, and Sufficient Water Supply; Reliable Utility System	Initial End Date	1st Qtr. 2019
Department	Environmental Services	Revised Start Date	
Location	102 Silver Creek Valley Road	Revised End Date	
Council Districts	2	Initial Project Budget	\$180,000
Appropriation	A401M	FY Initiated	2017-2018

Description The existing backup generator at Edenvale Wells installed in 1984 is outdated and has reached the end of its useful life. The replacement of an existing 415 kiloWatt diesel standby generator is required for meeting the current air quality permitting requirements.

Justification This project will ensure the efficient operation of the water system and maintain reliable utility infrastructure.

Notes

Major Cost Changes

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Design			30					30		30
Construction				150				150		150
Total			30	150				180		180

Funding Source Schedule (000s)										
Water Utility Capital Fund			30	150				180		180
Total			30	150				180		180

Annual Operating Budget Impact (000s)										
Total										

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of One-Time Construction Projects

Cadwallader Reservoir Rehabilitation

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2014
CSA Outcome	Safe, Reliable, and Sufficient Water Supply	Initial End Date	2nd Qtr. 2017
Department	Environmental Services	Revised Start Date	
Location	South end of Cadwallader Avenue	Revised End Date	2nd Qtr. 2018
Council Districts	8	Initial Project Budget	\$1,820,000
Appropriation	A7671	FY Initiated	2014-2015

Description This project includes the rehabilitation of two steel reservoirs that provide fire protection and system storage capacity for the Evergreen service area.

Justification The coatings on the reservoirs have deteriorated and require rehabilitation to prevent premature replacement.

Notes

Major Cost Changes 2017-2021 CIP - increase of \$413,000 due to higher than projected costs of recent bids for similar work.

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration		125								125
Design	247	137								384
Construction	358	1,285	80					80		1,723
Total	605	1,547	80					80		2,233

Funding Source Schedule (000s)										
Water Utility Capital Fund	605	1,547	80					80		2,233
Total	605	1,547	80					80		2,233

Annual Operating Budget Impact (000s)										
Total										

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of One-Time Construction Projects

Facility Sites Improvement

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2017
CSA Outcome	Safe and Reliable Utility System	Initial End Date	2nd Qtr. 2019
Department	Environmental Services	Revised Start Date	
Location	Various Facility Sites	Revised End Date	
Council Districts	City-wide	Initial Project Budget	\$320,000
Appropriation	A402K	FY Initiated	2017-2018

Description This project will repair and replace the deteriorated access road and storm water drainage systems at various facility sites, such as the Cadwallader Reservoir site and Maintenance Yard.

Justification This project will ensure the efficient operation of the water system and maintain reliable utility infrastructure.

Notes

Major Cost Changes

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Design			20					20		20
Construction				300				300		300
Total			20	300				320		320

Funding Source Schedule (000s)										
Water Utility Capital Fund			20	300				320		320
Total			20	300				320		320

Annual Operating Budget Impact (000s)										
Total										

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of One-Time Construction Projects

Fowler Pump Station Replacement

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2017
CSA Outcome	Safe, Reliable, and Sufficient Water Supply; Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2019
Department	Environmental Services	Revised Start Date	
Location	Fowler Road	Revised End Date	
Council Districts	8	Initial Project Budget	\$1,560,000
Appropriation	A402N	FY Initiated	2017-2018

Description This project consists of the replacement and upgrade of the Fowler Pump Station, which will have reached the end of its useful life.

Justification To ensure the efficient operation of the water system and to maintain reliable utility infrastructure, pump stations must be replaced at the end of their useful life. In addition, the redesign of the pump station will increase the operating efficiency and improve system operations.

Notes

Major Cost Changes

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Design			60					60		60
Construction				1,500				1,500		1,500
Total			60	1,500				1,560		1,560

Funding Source Schedule (000s)										
Water Utility Capital Fund			60	1,500				1,560		1,560
Total			60	1,500				1,560		1,560

Annual Operating Budget Impact (000s)										
Total										

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of One-Time Construction Projects

Gumdrop Drive Main Replacement

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2016
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	2nd Qtr. 2019
Department	Environmental Services	Revised Start Date	
Location	Gumdrop Drive, from Almond Drive to 480 feet south of Coconut Drive	Revised End Date	2nd Qtr. 2018
Council Districts	8	Initial Project Budget	\$1,140,000
Appropriation	A7804	FY Initiated	2016-2017

Description This project includes the replacement and relocation of approximately 2,050 feet of an 8-inch steel water main on Gumdrop Drive, Almond Drive, and Coconut Drive.

Justification The water line is reaching the end of its useful life. Due to the high frequency of water leaks on this main, the pipeline is being relocated out of the parkstrip area to preserve older street trees.

Notes

Major Cost Changes

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Design		60								60
Construction			1,000					1,000		1,000
Total		60	1,000					1,000		1,060

Funding Source Schedule (000s)										
Water Utility Capital Fund		60	1,000					1,000		1,060
Total		60	1,000					1,000		1,060

Annual Operating Budget Impact (000s)										
Total										

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of One-Time Construction Projects

North San José Water Well Evaluation and Rehabilitation

CSA	Environmental and Utility Services	Initial Start Date	3rd Qtr. 2014
CSA Outcome	Safe, Reliable, and Sufficient Water Supply	Initial End Date	2nd Qtr. 2015
Department	Environmental Services	Revised Start Date	3rd Qtr. 2016
Location	Various well locations in the North San José service area	Revised End Date	2nd Qtr. 2018
Council Districts	4	Initial Project Budget	\$625,000
Appropriation	A7672	FY Initiated	2014-2015

Description This project rehabilitates existing wells to improve capacity and water quality. Funding will also include an evaluative pilot program to drill various areas to determine if they are viable locations to build water wells. The best location identified in the pilot program will be used in North San José Well #5 Development and Construction.

Justification Improvements to existing wells and new wells are required to maintain reliable utility infrastructure, improve water supply capacity, and ensure water quality standards are met.

Notes

Major Cost Changes 2016-2020 CIP - increase of \$350,000 to include evaluation of additional locations for placement of wells.

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration										
Design		54								54
Construction		656	200					200		856
Total		710	200					200		910

Funding Source Schedule (000s)										
Water Utility Capital Fund		585	200					200		785
Major Facilities Fund		125								125
Total		710	200					200		910

Annual Operating Budget Impact (000s)										
Total										

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of One-Time Construction Projects

North San José Well #5 Development and Construction

CSA	Environmental and Utility Services	Initial Start Date	2nd Qtr. 2016
CSA Outcome	Safe, Reliable, and Sufficient Water Supply	Initial End Date	2nd Qtr. 2017
Department	Environmental Services	Revised Start Date	3rd Qtr. 2017
Location	North San José service area	Revised End Date	4th Qtr. 2019
Council Districts	4	Initial Project Budget	\$1,560,000
Appropriation	A6274	FY Initiated	2015-2016

Description This allocation provides funding for the development and construction of a groundwater production well in the North San José service area. The potential locations for this well have been identified from a preliminary hydrogeologic study and environmental data review. The next phase of this project is to determine the potential yield and water quality, followed by a well design concept, bid, and construction. This is anticipated to be completed by December 2019.

Justification Construction and development of a new well will be needed to supply groundwater to allow for operational flexibility by supplementing the existing treated water supplies, and to ensure a reliable potable water supply in order to meet increasing demands as growth and development continue in the North San José and Alviso service areas.

Notes

Major Cost Changes

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration										
Design	0									0
Bid & Award			60					60		60
Construction			1,500					1,500		1,500
Total	0		1,560					1,560		1,560

Funding Source Schedule (000s)										
Major Facilities Fund		0	1,560					1,560		1,560
Total		0	1,560					1,560		1,560

Annual Operating Budget Impact (000s)										
Total										

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of Ongoing Construction Projects

Infrastructure Improvements

CSA	Environmental and Utility Services	Initial Start Date	Ongoing
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	Ongoing
Department	Environmental Services	Revised Start Date	
Location	System-wide	Revised End Date	
Council Districts	2, 4, 7, 8	Initial Project Budget	
Appropriation	A5366		

Description This allocation provides funding to replace and/or refurbish pumps, motors, valves, electrical control mechanisms, generators, and water mains that are nearing the end of their useful lives. The selection and scope of the projects selected in any particular year will be based on the previous year's maintenance needs.

Justification Mechanical and electrical equipment requires replacement at the end of its service life to ensure ongoing operation.

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

Major Cost Changes

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
Design	1,143						
Construction	780	790	800	810	820	830	4,050
Total	1,923	790	800	810	820	830	4,050

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Funding Source Schedule (000s)							
Water Utility Capital Fund	1,923	790	800	810	820	830	4,050
Total	1,923	790	800	810	820	830	4,050

Annual Operating Budget Impact (000s)							
Total							

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of Ongoing Construction Projects

Meter Installations

CSA	Environmental and Utility Services	Initial Start Date	Ongoing
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	Ongoing
Department	Environmental Services	Revised Start Date	
Location	System-wide	Revised End Date	
Council Districts	2, 4, 7, 8	Initial Project Budget	
Appropriation	A4347		

Description This allocation provides funding to purchase, test, and install water meters for new developments and customers, the cost of which is offset by the meter installation fees paid by developers and property owners.

Justification New meters are needed to provide water to new utility customers.

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

Major Cost Changes

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
General Administration	29						
Construction	67	50	50	50	50	50	250
Public Art							
Total	96	50	50	50	50	50	250

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Funding Source Schedule (000s)							
Water Utility Capital Fund	96	50	50	50	50	50	250
Total	96	50	50	50	50	50	250

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Annual Operating Budget Impact (000s)							
Total							

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of Ongoing Construction Projects

Safety and Security Improvements

CSA	Environmental and Utility Services	Initial Start Date	Ongoing
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	Ongoing
Department	Environmental Services	Revised Start Date	
Location	System-wide	Revised End Date	
Council Districts	2, 4, 7, 8	Initial Project Budget	
Appropriation	A4095		

Description This project includes the repair and installation of additional safety and security equipment at various system facilities. Examples of improvements include new and repaired fencing at reservoirs, construction of concrete block walls around wells, and the installation of safety railing at various sites.

Justification This project will maintain reliable utility infrastructure, ensure water supplies remain secured, and provide a safe working environment for staff performing operations and maintenance.

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

Major Cost Changes

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
General Administration	406						
Construction	109	100	100	100	100	100	500
Total	515	100	100	100	100	100	500

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Funding Source Schedule (000s)							
Water Utility Capital Fund	515	100	100	100	100	100	500
Total	515	100	100	100	100	100	500

Annual Operating Budget Impact (000s)							
Total							

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of Ongoing Construction Projects

Service Installations

CSA	Environmental and Utility Services	Initial Start Date	Ongoing
CSA Outcome	Reliable Utility Infrastructure	Initial End Date	Ongoing
Department	Environmental Services	Revised Start Date	
Location	System-wide	Revised End Date	
Council Districts	2, 4, 7, 8	Initial Project Budget	
Appropriation	A4348		

Description This allocation provides funding for the installation of connections between water mains and meters and the extension of existing water mains. A portion of this work related to new development is paid for by developer fees. The remainder of the work, which is not tied to developer fees, entails connections to water, service laterals, sampling stations, meter boxes, air release valves, and main extensions in existing service areas to increase the operability of the system.

Justification As development proceeds in the City, connections between water mains and meters are required to service new customers. Additional minor connections and appurtenances are periodically needed to reliably operate the system and ensure a safe drinking water supply.

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

Major Cost Changes

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
Construction	200	200	200	200	200	200	1,000
Public Art	294						
Total	494	200	200	200	200	200	1,000

Funding Source Schedule (000s)							
Water Utility Capital Fund	494	200	200	200	200	200	1,000
Total	494	200	200	200	200	200	1,000

Annual Operating Budget Impact (000s)							
Total							

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of One-Time Non-Construction Projects

Major Water Facility Fee Update

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 2, 4, 7, 8
Appropriation A4955

Description This project provides funding to evaluate the Major Water Facility Fees currently being assessed to ensure that fees are set at an appropriate level.

Notes

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration		43	25					25		68
Construction										
Total		43	25					25		68

Funding Source Schedule (000s)										
Major Facilities Fund		43	25					25		68
Total		43	25					25		68

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of One-Time Non-Construction Projects

Repayment of Commercial Paper

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts City-wide
Appropriation A6247

Description This allocation funds the repayment of commercial paper proceeds of \$1.2 million used to fund a portion of the Meter Replacements project that was completed in 2016-2017.

Notes

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration		627	627					627		1,254
Total		627	627					627		1,254

Funding Source Schedule (000s)										
Water Utility Capital Fund		627	627					627		1,254
Total		627	627					627		1,254

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of One-Time Non-Construction Projects

Reservoir Seismic Evaluation

CSA Environmental and Utility Services
CSA Outcome Safe, Reliable, and Sufficient Water Supply; Reliable Water System
Department Environmental Services
Council Districts City-wide
Appropriation A403X

Description The City's 17 reservoirs are constructed of concrete or steel. The reservoirs vary in age from 10 to 50 years old and may not be at current seismic code standards. A comprehensive seismic analysis is needed to determine whether the existing water storage reservoirs comply to current seismic code, and if not, what mitigation measures are needed to minimize the impacts during a seismic event.

Notes

	PRIOR YEARS	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Design			200					200		200
Total			200					200		200

Funding Source Schedule (000s)										
Water Utility Capital Fund			200					200		200
Total			200					200		200

Water Capital Program
 2018-2022 Adopted Capital Improvement Program
Detail of Ongoing Non-Construction Projects

Advance System Design

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 2, 4, 7, 8
Appropriation A4346

Description This allocation funds the design, engineering, and inspection for the connection of new developments to the Water Utility System. Project costs are offset by developer fees.

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

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
Design	200	200	200	200	200	200	1,000
Total	200	200	200	200	200	200	1,000

Funding Source Schedule (000s)							
Water Utility Capital Fund	200	200	200	200	200	200	1,000
Total	200	200	200	200	200	200	1,000

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of Ongoing Non-Construction Projects

Major Facilities Fee Administration

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 2, 4, 7, 8
Appropriation A5369

Description This allocation provides funding to administer the Major Facilities Fees. The Major Facilities Fund receives fees associated with the connection and operation of major water facilities constructed in the North San José, Evergreen, Alviso, Edenvale, and Coyote Valley areas.

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

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
General Administration	15	15	15	15	15	15	75
Total	15	15	15	15	15	15	75

Funding Source Schedule (000s)							
Major Facilities Fund	15	15	15	15	15	15	75
Total	15	15	15	15	15	15	75

Water Capital Program
 2018-2022 Adopted Capital Improvement Program
Detail of Ongoing Non-Construction Projects

Master Plan Engineering

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 2, 4, 7, 8
Appropriation A4349

Description This allocation is used to update the Water System Master Plan based on anticipated development and customer consumption.

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

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
Project Feasibility Development	145	150	155	160	165	170	800
Design	49						
Construction							
Total	194	150	155	160	165	170	800

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Funding Source Schedule (000s)							
Water Utility Capital Fund	194	150	155	160	165	170	800
Total	194	150	155	160	165	170	800

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of Ongoing Non-Construction Projects

Network System Flow Improvements

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 2, 4, 7, 8
Appropriation A4350

Description This allocation is used to perform computer analysis of the water distribution system, including modeling of the system's reservoirs, pump stations, and distribution facilities, in order to prioritize replacement of existing facilities and development of new facilities.

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

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
Design	6	6	6	6	6	6	30
Total	6	6	6	6	6	6	30

Funding Source Schedule (000s)							
Water Utility Capital Fund	6	6	6	6	6	6	30
Total	6	6	6	6	6	6	30

Water Capital Program
 2018-2022 Adopted Capital Improvement Program
Detail of Ongoing Non-Construction Projects

Preliminary Engineering - Water

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 2, 4, 7, 8
Appropriation A4952

Description This allocation provides funding for project development in the early stages of planning.

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

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
Design	130	135	140	145	150	155	725
Maintenance, Repairs, Other							
Total	130	135	140	145	150	155	725

Funding Source Schedule (000s)							
Water Utility Capital Fund	130	135	140	145	150	155	725
Total	130	135	140	145	150	155	725

Water Capital Program

2018-2022 Adopted Capital Improvement Program

Detail of Ongoing Non-Construction Projects

Public Works GIS Support

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts City-wide
Appropriation A7365

Description This allocation funds Public Works Geographic Information System (GIS) support services on an as-needed basis.

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

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
General Administration	119						
Design		65	65	65	65	130	390
Maintenance, Repairs, Other	176						
Total	295	65	65	65	65	130	390

Funding Source Schedule (000s)							
Water Utility Capital Fund	295	65	65	65	65	130	390
Total	295	65	65	65	65	130	390

Water Capital Program
 2018-2022 Adopted Capital Improvement Program
Detail of Ongoing Non-Construction Projects

System Maintenance/Repairs

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 2, 4, 7, 8
Appropriation A5876

Description This allocation funds emergency and miscellaneous repairs in the distribution system.

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

	FY17 EST	FY18	FY19	FY20	FY21	FY22	5 YEAR TOTAL
Expenditure Schedule (000s)							
Design	475						
Equipment, Materials and Supplies	740	740	740	740	760	760	3,740
Maintenance, Repairs, Other							
Total	1,215	740	740	740	760	760	3,740

Funding Source Schedule (000s)							
Water Utility Capital Fund	1,215	740	740	740	760	760	3,740
Total	1,215	740	740	740	760	760	3,740

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2017-2018 CAPITAL BUDGET

**2018-2022 CAPITAL
IMPROVEMENT PROGRAM**



**WATER UTILITY
SYSTEM**

**SUMMARY OF PROJECTS THAT
START AFTER 2017-2018**

SUMMARY OF RESERVES

Water Capital Program
 2018-2022 Adopted Capital Improvement Program

Summary of Projects that Start After 2017-2018

Project Name	Annual Water Main Replacement	Initial Start Date	3rd Qtr. 2018
5-Yr CIP Budget	\$ 4,910,000	Initial End Date	2nd Qtr. 2022
Total Budget	\$ 4,910,000	Revised Start Date	
Council Districts	City-wide	Revised End Date	
Description	This project is part of a continuing program to maintain and upgrade the City's Municipal Water distribution system. Most water pipes have a design life of roughly 50 years, depending upon when it was manufactured and the soil conditions where it is installed. The program has prioritized water mains for replacement throughout the service areas of Muni Water System by rating pipe segments based on age, adequacy of size and flow, the number of leaks or failures that have occurred, and the difficulty to repair the pipe if it failed considering location and traffic conditions.		

Project Name	North San José Reliability Well #6 Construction	Initial Start Date	3rd Qtr. 2018
5-Yr CIP Budget	\$ 1,160,000	Initial End Date	2nd Qtr. 2021
Total Budget	\$ 1,160,000	Revised Start Date	
Council Districts	4	Revised End Date	
Description	This project constructs a groundwater well in the North San José service area to provide water supply reliability to existing customers.		

Water Capital Program
 2018-2022 Adopted Capital Improvement Program

Summary of Reserves

Project Name	North Coyote Valley Water System Reserve	Initial Start Date	N/A
5-Yr CIP Budget	\$ 168,000	Initial End Date	N/A
Total Budget	\$ 168,000	Revised Start Date	
Council Districts	2	Revised End Date	
Description	This reserve sets aside funds in the Water Utility Capital Fund for outstanding North Coyote Valley Water System project close-out activities, to be completed by the contractor relating to final project documentation. There are outstanding project close-out issues that continue to remain unresolved. The Department periodically attempts to coordinate with the land owner and their attorney to obtain the last necessary project documentation.		

Project Name	System Growth Related Projects Reserve	Initial Start Date	N/A
5-Yr CIP Budget	\$ 1,600,000	Initial End Date	N/A
Total Budget	\$ 1,600,000	Revised Start Date	
Council Districts	2	Revised End Date	
Description	This reserve sets aside funds in the Major Facilities Fund for acquisition of property and the construction of facilities to accommodate future system growth and development.		

Project Name	System Rehabilitation/Replacement Reserve	Initial Start Date	N/A
5-Yr CIP Budget	\$ 3,743,000	Initial End Date	N/A
Total Budget	\$ 3,743,000	Revised Start Date	
Council Districts	2	Revised End Date	
Description	This reserve sets aside funds in the Water Utility Capital Fund for rehabilitation and/or replacement of existing facilities. Ordinance No. 26903, which was approved by the City Council on May 27, 2003, requires that this reserve total 7% of annual operating revenues. This reserve is estimated to total \$3.7 million by the end of the 2018-2022 CIP based on current operating revenue projections through 2021-2022.		
