

MEMORANDUM

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TO: UTILITIES ADVISORY COMMISSION

FROM: UTILITIES DEPARTMENT

DATE: MAY 4, 2016

SUBJECT: Staff Recommendation that the Utilities Advisory Commission Recommend that the City Council Adopt the Proposed Operating and Capital Budgets for the Utilities Department for Fiscal Year 2017

Attached are the FY 2017 Proposed Operating and Capital budgets for the Utilities Department. Due to the size of the CIP budget, staff only printed the summary pages of each utility along with the new CIP projects proposed for FY 2017 – FY 2021.

The entire Utilities CIP budget for FY 2017 – FY 2021 with the individual project pages can be downloaded and viewed in full from the link:

[Proposed Utilities Capital Budget for FY 2017 – FY 2021](#)

ATTACHMENTS

- A. FY 2017 Proposed Operating Budget for the Utilities Department
- B. FY 2017 Proposed Capital Budget for the Utilities Department – CIP Summary and New CIPs

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DEPARTMENT HEAD:



ED SHIKADA
Director of Utilities

ENTERPRISE FUNDS OVERVIEW

Enterprise Funds Overview

The City of Palo Alto's utility and public works operations are comprised of the Electric, Fiber Optics, Gas, Water, Wastewater Collection, Refuse, Wastewater Treatment, Storm Drainage, and Airport Funds. A financial summary of the funds follows this overview followed by discussion and pertinent information in each fund section.

REVENUES

The total combined budgeted revenues of the Enterprise Funds for Fiscal Year 2017 is \$347.2 million, which is \$56 million, or 19 percent, higher than the previous fiscal year. The collective increase is partially attributable to: a increase of \$15.2 million in utility fees for electric sales; a \$9.5 million increase in Operating Transfers-In due to capital projects funding adjustments and new projects. The revenue increase is also driven by net sales in several Enterprise funds due to planned rate increases. Water Fund rates are increasing 6.0 percent but revenues are flat due to water usage declining, while the Wastewater Collection and Refuse funds are both planning 9.0 percent increases which will result in net sales revenue increases of \$0.9 million and \$0.5 million, respectively.

EXPENDITURES

Aggregated budgeted expenditures of the Enterprise Funds are \$382.8 million in Fiscal Year 2017, compared to \$351.2 million in Fiscal Year 2016. This represents an increase of \$31.6 million. The increase is partially attributable to a \$16.7 increase in Capital Improvement Program (CIP) costs, including \$13.9 million increase in Wastewater Treatment Fund capital expenditures and a \$5.3 million in Electric Fund projects. Of the net \$16.7 million increase in CIP costs, this reflects \$27.9 million for the continuation of projects previously approved and appropriated by the City Council in prior fiscal years. Commodity purchase costs also increased by \$5.1 million for Enterprise Funds. Electric supply costs increased by \$10.1 million and the Refuse fund by \$0.5 million, while Gas supply costs decreased by \$3.2 million, and Water supply costs by \$1.3 million.

Other significant increases consist of increases in salaries and benefits of \$2.3 million, for medical contributions and other benefits adjustments; and an increase of \$0.8 million for facilities rental and equipment.

UTILITY RATE CHANGES

This Fiscal Year 2017 Budget includes utility rate adjustments for fiber optics, refuse, storm drain, water, and wastewater charges. The average monthly residential Utilities bill is expected to increase by \$22.42 from \$256.28 to \$278.70. The City's fiber optics rate will adjust according to a contractual 3.2 percent Consumer Price Index increase.

In general, the size and timing of rate adjustments takes into account current and future revenue requirements and reserve levels. They may also cushion the impacts on customer bills by spreading rate adjustments during consecutive or alternate years.

- Electric Fund - 11.0 percent rate increase to replenish reserves that were depleted over the past few years to offset the low hydro output and recover operational costs.

ENTERPRISE FUNDS OVERVIEW

- Gas Fund - 8.0 percent rate increase to recover increased local transportation costs and major capital investments by PG&E to increase the safety and reliability of the backbone pipeline and local transmission system.
- Water Fund - 6.0 percent rate increase to match increasing water supply costs, particularly the cost of water supplied by the San Francisco Public Utilities Commission (SFPUC), which is issuing debt to fund major improvements to the Hetch Hetchy transmission system as well as increased local operation costs.
- Wastewater Collection Fund - 9.0 percent rate increase based on capital project cost increases, and continuing increases in treatment and operations costs.
- Fiber Optics Fund - A contractual 3.2 percent Consumer Price Index (CPI) increase.
- Storm Drainage Fund - A rate increase of 3.2 percent, increasing the monthly charge for the fee per Equivalent Residential Unit to adjust for a Consumer Price Index increase, as approved by voters.
- Refuse Fund - A residential and commercial rate increase of 9.0 percent and 5.0 percent respectively, the second year of increases in a three year plan to balance refuse revenues with costs, and the implementation of a new residential food scrap collection program.

RENT

Enterprise Funds pay market-based rental fees for the sites needed to conduct their business operations. The rent paid for City-owned sites was adjusted due to an independent appraisal of all sites, and as appropriate, an annual CPI increase of 2.6 percent. The rent for Fiscal Year 2017 represents a \$0.3 million increase from Fiscal Year 2016.

EQUITY TRANSFERS

In Fiscal Year 2010, the Council adopted a change to the methodology used to calculate the equity transfer from Utilities Funds to General Fund. Under the Utilities Enterprise Methodology, the equity transfers are based on a rate of return on the asset base in the Electric and Gas Funds. This rate of return is based on Pacific Gas and Electric's (PG&E) rate of return on equity as approved by the California Public Utilities Commission (CPUC). The equity transfer from the Electric and Gas Funds is projected to increase by \$891,000 from \$17.9 million in Fiscal Year 2016 to \$18.8 million in Fiscal Year 2017.

RESERVES

The financial revenue and expense forecasts are estimates at a single point in time; some Utilities Reserves serve as "balancing accounts" which mitigate the risk of commodity price swings and insure against default by our wholesale suppliers. Other Reserves are used to provide cash for replacement parts during an emergency infrastructure failure, or serve as temporary "parking" for planned expenditures. Reserve levels that are above guidelines are returned to customers in the form of lower future rates, or used to pay for expenses, which also result in lower future rates.

Continuing a new practice established in Fiscal Year 2016, the reappropriation of Capital project budgets for the continuation of projects previously approved and appropriated by the City Council in prior fiscal years is shown as expenditures in the the operating budget for each

Enterprise Fund. The inclusion of these costs impacts the fund balance of the respective Enterprise funds. To highlight the difference between the use operating reserves and capital reappropriations, the capital reappropriations and their impact on fund reserves are reflected in the Capital Improvement Program Reserve line of the Enterprise Funds Reserve table.

The total Enterprise Fund Reserve Balances decreased by \$35.6 million from Fiscal Year 2016 to Fiscal Year 2017.

UTILITIES ENTERPRISE FUNDS

Utilities' projected rate adjustments included in their Financial Plans will increase rates for Electric (11.0%), Gas (8.0%), Water (6.0%) and Wastewater Collection (9.0%) in Fiscal Year 2017, in addition to a contractual 3.2% Consumer Price Index increase to the City's Fiber Optics customers. The City has drawn down reserves over the past few years to offset rate increases, but the City must raise rates to cover all costs to operate and maintain safe and reliable utility services. Rate increases are projected beyond Fiscal Year 2017 in anticipation of rising commodity costs, replacing aging infrastructure and replenishing depleted reserves.

Electric

Fiscal Year 2017 rates are increasing by 11.0 percent to recover operational costs and replenish reserves that were depleted over the past few years to offset the low hydro-electric output. Rates are projected to increase by 10.0 percent in Fiscal Year 2018 before stabilizing to 1.0 - 2.0 percent annual increases through Fiscal Year 2021. In Fiscal Year 2017, planned CIP expenditures for the Electric Fund total \$21.6 million. CIP projects include Electric Customer Connections, funding for work required to meet the needs of customers who have applied for new or upgraded electric service, need temporary power for construction, or require other services rebuilding; and \$17.7 million in System Improvement projects, including \$5.0 million for electric pole replacements for the Fiber-to-the-Premise (FTTP) program, in addition to the replacement/upgrade of old cables and equipment and bringing designs up to current standards, installation of protective equipment and switches, conversion of the electric system to higher voltage capacity, and installation of capacitors to improve efficiency.

Gas

Fiscal Year 2017 gas distribution rates are increasing by 8.0 percent. Gas utility sales and revenues declined as customers consumed less gas overall. Expenses are decreasing by \$1.6 million, mostly due to \$3.2 million in lowered commodity costs. In Fiscal Year 2017, Gas Fund planned CIP expenditures total \$6.3 million, an \$828,000 decrease from prior year levels. A significant amount of capital expenditures are appropriated for infrastructure to provide gas service connections to new customers, meet changes in existing customer service demands, and respond to changes in gas service requirements due to new development or redevelopment. These projects include \$4.2 million in Gas Main Replacements projects to replace inadequately-sized and structurally deficient gas mains, \$1.4 million in Gas Customer Connections projects to fund connection work for customers who have applied for new or upgraded gas service, and other gas infrastructure replacements.

ENTERPRISE FUNDS OVERVIEW

Water

Fiscal Year 2017 water utility rates are increasing 6.0 percent due to an increase in wholesale water supply rates. The water utility financial forecasts flat revenues for Fiscal Year 2017 due to decreased water sales during last year's drought conditions, mandatory usage reductions imposed by the state, which offset the rate increases. Wholesale water costs are projected to rise to 7.5 percent per year, on average, through Fiscal Year 2020, and then will stabilize to 2.0 - 3.0 percent increases through Fiscal Year 2024. Water financial forecasts are seven years long due to the length of the SFPUC Water System Improvement Program (WSIP) which is expected to be completed within this forecast period. In Fiscal Year 2017, \$9.6 million is budgeted in the Water Fund for CIP expenditures. The Water Fund CIP primarily involves the water main replacements and other projects focused on reliability. Included proposals are \$6.3 million to fund water main replacement projects, and \$2.6 million to fund water system improvements, such as water meters water service hydrant replacement.

Wastewater Collection

Wastewater Collection Fiscal Year 2017 are increasing by 9.0 percent, due to capital projects costs for main replacement projects. The utility has accumulated reserves due to a temporary reduction in CIP spending in Fiscal Year 2014 (related to staff vacancies), and is drawing these reserves down over the course of a five-year forecast period to smooth the transition to higher rates. Rates are projected to increase 6.0-10.0 percent annually through 2021, with a projected tapering in the out years. The Wastewater Collection Fund has budgeted \$4.8 million for Fiscal Year 2017 CIP expenditures. Included are infrastructure projects to rehabilitate collection systems and manholes, and to reduce groundwater and rainfall seepage into the pipelines.

Fiber Optics

Utilities provides commercial dark fiber optic services within the boundaries of the City of Palo Alto. In September 2006, Council approved the Dark Fiber Licensing Agreement allowing the commercial fiber optic fees charged under the EDF-1 and EDF-2 rate schedules to be adjusted annually in accordance with the Consumer Price Index (CPI). EDF-1 was a promotional rate and was closed to new Dark Fiber licenses in 2006. Customer expenses for engineering, construction and connection to the fiber optic backbone are charged under EDF-2 rates. New fiber customers are enrolled under Dark Fiber Licensing Services Rate Schedule EDF-3. As CPI increases are implemented for the EDF-1 rate, some customers may voluntarily choose to move from the EDF-1 rate to the EDF-3 rate for cost saving purposes. The Fiber Optics rate will have a contractual 3.2 percent CPI increase to the City's Fiber Optics customers. \$1.7 million of Capital Projects are proposed in the Fiber Optics Fund for Fiscal Year 2017, including \$1.25 million to rebuild portions of the dark fiber optics network.

PUBLIC WORKS ENTERPRISE FUNDS

Refuse

The City's Refuse Fund continues to work with Palo Alto's residential and commercial communities to achieve the City's Zero Waste goals to reduce the amount of waste disposed in landfills by 90 percent or more by 2021, exceeding the State of California's solid waste diversion requirements of 50 percent now and 75 percent by 2020. The City's Zero Waste programs have

increased the City's current waste diversion rate to 80 percent. In addition, the City will complete the capping of the landfill during 2016 and will adjust some staffing requirements in Fiscal Year 2017 to provide adequate resources to ensure all post-closure safety and regulatory requirements are met. This includes increasing an hourly position to full-time (0.52 FTE change) to monitor methane gas related to the 109 gas wells at the landfill, service the 23 leachate pumps, 17 condensate submersible pumps and the newly prepared pump cleaning station at the landfill's post-closure maintenance facility. As a result of the landfill closure, the Refuse Fund CIP is winding down as well. A programmed expense of (\$0.2 million) for the Household Hazardous Waste Station Collection Facility is proposed for Fiscal Year 2017 and is the only remaining capital expenditures in the fund.

Storm Drain

The Storm Drainage Fee increase approved by property owners in April 2005 continues to provide funding for high priority storm drain capital improvements. In Fiscal Year 2017, projects include an update to the Matadero Creek Storm Water Pump Station Improvements (\$5.8 million), Channing Avenue/Lincoln Avenue Storm Drain Improvements (\$0.1 million), and other Storm Drain System Replacement and Rehabilitation projects (\$1.8 million). In the absence of another ballot measure approved by property owners, the storm drainage fee increase will expire after Fiscal Year 2017. Future funding for storm drainage capital improvements will require the reauthorization of the storm drainage fee by property owners. Staff is currently working with a city manager-appointed blue ribbon committee to generate a recommendation for storm drain funding beyond Fiscal Year 2017, including a potential ballot measure in fall 2016. If the funding measure is not successful, the Storm Drainage Fund will not have the funding to address its ongoing infrastructure needs. It is anticipated that without reauthorization of the enhanced fee, fund revenues will decrease from \$6.6 million in proposed Fiscal Year 2017 Operating Budget to \$2.2 million. It is expected that all seven projects identified in the original ballot measure will be completed in Fiscal Year 2017. In accordance with the 2005 approved ballot measure, the storm drain fee will increase by 3.2% or the current Consumer Price Index for Fiscal Year 2017.

Wastewater Treatment

Fiscal Year 2017 revenues in the Wastewater Treatment Fund are expected to increase by \$24.9 million or 106 percent from Fiscal Year 2016 adopted levels. The majority of the increase, \$21.3 million, is the result of expected State Revolving Fund Loans for programmed 2017-2021 capital improvement expenditures for the New Dewatering and Loadout Facility (\$14.6 million), reimbursement for the Plant Master Plan (\$3.2 million) and the Fixed Film Reactor Rehabilitation Project (\$1.9 million). As the Wastewater Treatment Plant upgrade—as outlined in the Long Range Facilities Plan—begins to ramp-up, additional State Revolving Fund Loans will be pursued. In addition, partner revenue increases are also included in the revenue forecast for the Wastewater Fund in Fiscal Year 2017. The increase in partner revenue includes adjustments for ongoing activities as well as the budget proposals outlined in the Wastewater Treatment Fund section of the Public Works Department. Major adjustments included the replacement of a Flat-bed Crane Truck (\$320,000) as well as the addition of two full-time Senior Engineer positions (\$446,000) to support the City's nascent Recycled Water Program as well as providing increased project management support for the delivery of capital improvements.

ENTERPRISE FUNDS OVERVIEW

Airport

The City of Palo Alto assumed responsibility from Santa Clara County for operations of the airport in August of 2014. Preparations for the transition began in Fiscal Year 2012, and have been funded by loans from the General Fund. In Fiscal Year 2017 the loan from the General Fund to the Airport Fund will total \$704,150, up \$400,000 from Fiscal Year 2016. Since 2011, including the 2017 amount, the General Fund has loaned a cumulative total of \$2.7 million to the Airport Fund. Under the terms of the ground lease with the County, which is due to expire in 2017, operational management and control of the Airport was granted to the County, including the right to sublease to the Fixed Base Operators (FBOs) and other interested parties. While the City assumed operations of the Palo Alto Airport in Fiscal Year 2015, two years before the lease with the County would otherwise expire, the Airport does not have the ability to increase revenues from current levels to cover operating and non-grant funded capital expenses. Once the subleases with the Fixed Base Operators expire and revenues can be increased, it is anticipated that the Airport Fund will begin to pay back the General Fund for loans issued in prior years, and the reserve levels in the fund can be increased. The 2017-2021 CIP includes \$2.6 million in capital expenditures, offset by \$2.2 million in Federal Aviation Grants. Major projects include construction on the Airport Perimeter Fence (\$1.8 million) and the Airport Apron Reconstruction (\$0.8 million).

Enterprise Funds Summary

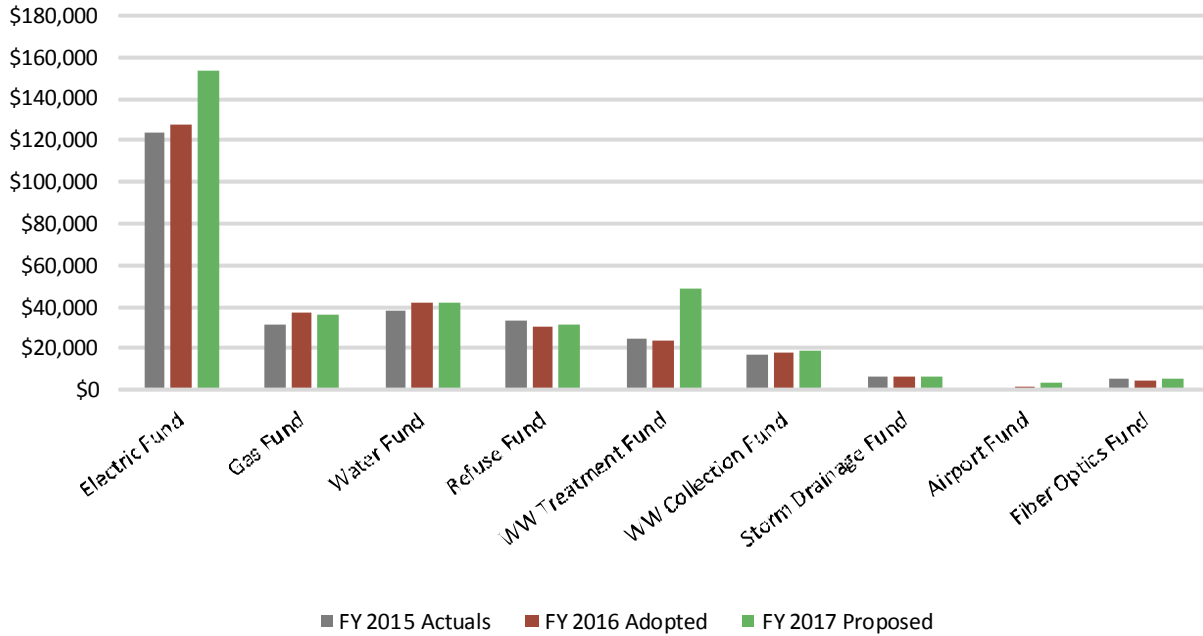
Fund Summary (\$000)	Electric Fund	Gas Fund	Water Fund	Refuse Fund	Waste-water Treatment Fund	Waste-water Collection Fund	Storm Drainage Fund	Airport Fund	Fiber Optics Fund	Total
Revenues										
Charges for Services	230	20	10	38	0	10	90	0	0	398
Net Sales	131,990	34,606	39,346	28,107	26,848	17,947	6,606	533	4,887	290,869
Other Revenue	15,518	1,030	878	2,576	0	1,046	0	295	0	21,343
Return on Investments	2,508	526	775	179	199	267	129	2	366	4,951
Charges to Other Funds	289	208	155	276	52	30	0	0	0	1,010
From Other Agencies	0	0	577	0	21,341	0	0	2,178	0	24,096
Operating Transfers-In	2,679	0	244	13	0	0	0	704	0	3,640
Other Taxes and Fines	0	0	0	0	4	0	3	0	0	7
Total	153,214	36,390	41,985	31,189	48,444	19,300	6,827	3,712	5,253	346,314
Expenses										
Allocated Charges	9,137	4,318	4,161	1,774	5,221	2,814	1,176	299	578	29,478

Enterprise Funds Summary

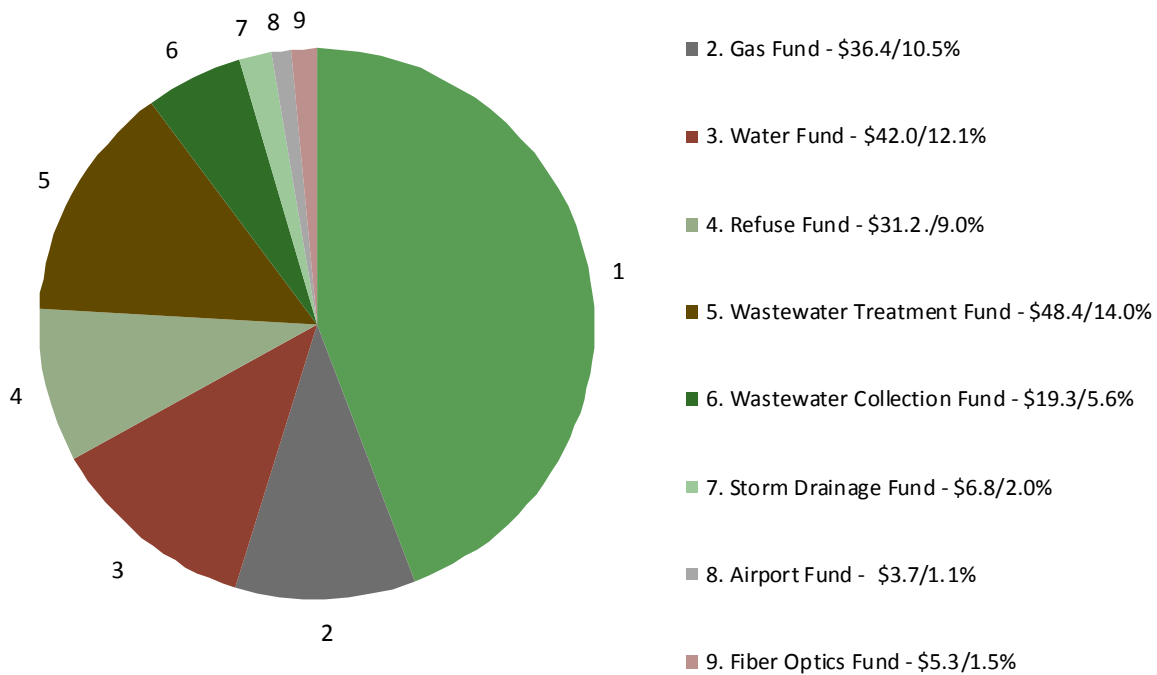
Fund Summary (\$000)	Electric Fund	Gas Fund	Water Fund	Refuse Fund	Waste-water Treatment Fund	Waste-water Collection Fund	Storm Drainage Fund	Airport Fund	Fiber Optics Fund	Total
Contract Services	7,018	1,446	828	6,432	1,878	248	531	8	458	18,847
Debt Service	8,957	803	3,223	565	1,469	129	949	0	0	16,095
Supplies & Material	873	498	610	144	1,993	386	95	57	9	4,665
General Expense	3,931	780	568	113	479	122	179	30	14	6,216
Utility Purchase	86,441	12,337	18,900	16,253	0	9,855	0	0	0	143,786
Salary & Benefits	14,732	5,860	6,460	2,587	11,853	2,613	1,348	625	1,055	47,133
Operating Transfers-Out	255	484	324	57	320	286	12	0	104	1,842
Rents & Leases	5,440	710	2,877	2,547	0	390	46	12	75	12,097
Facilities & Equipment	44	20	2	3	8	3	8	15	0	103
Capital Improvement Program	21,631	6,306	9,597	241	29,171	4,827	7,705	2,570	1,700	83,748
Equity Transfer	12,035	6,726	0	0	0	0	0	0	0	18,761
Transfer to Infrastructure	0	0	0	19	0	0	0	0	0	19
Total	170,494	40,288	47,550	30,735	52,392	21,673	12,049	3,616	3,993	382,789

ENTERPRISE FUNDS OVERVIEW

3 Year Trend - Enterprise Funds Revenues by Fund (\$Millions)

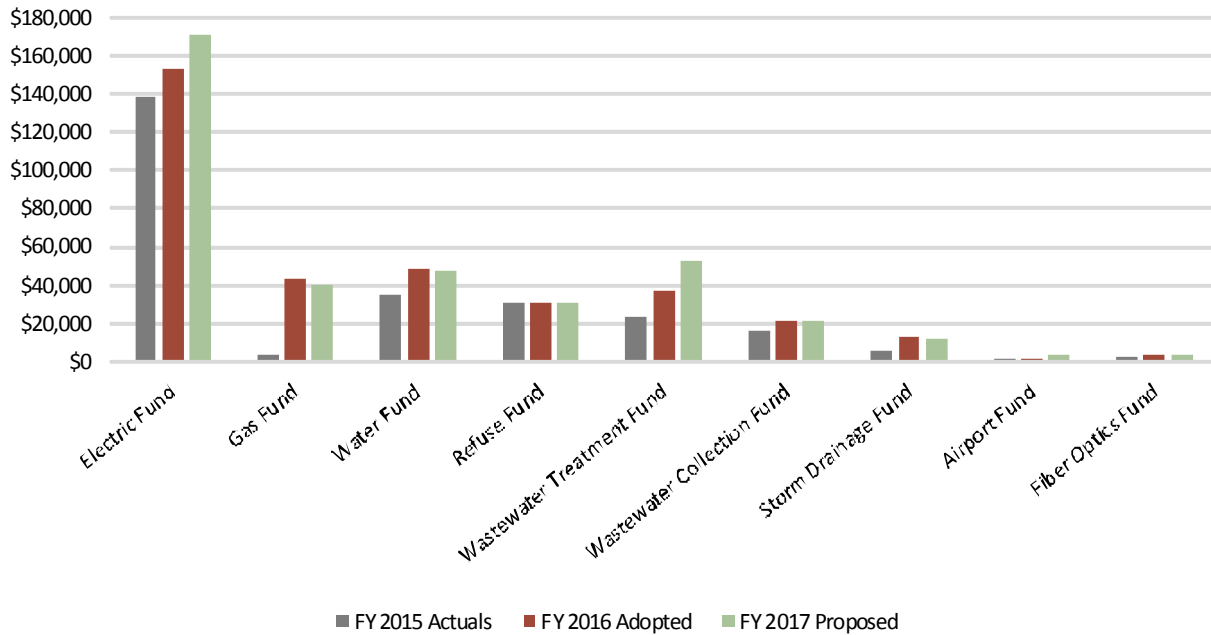


\$346.3 Million/FY 2017 Proposed

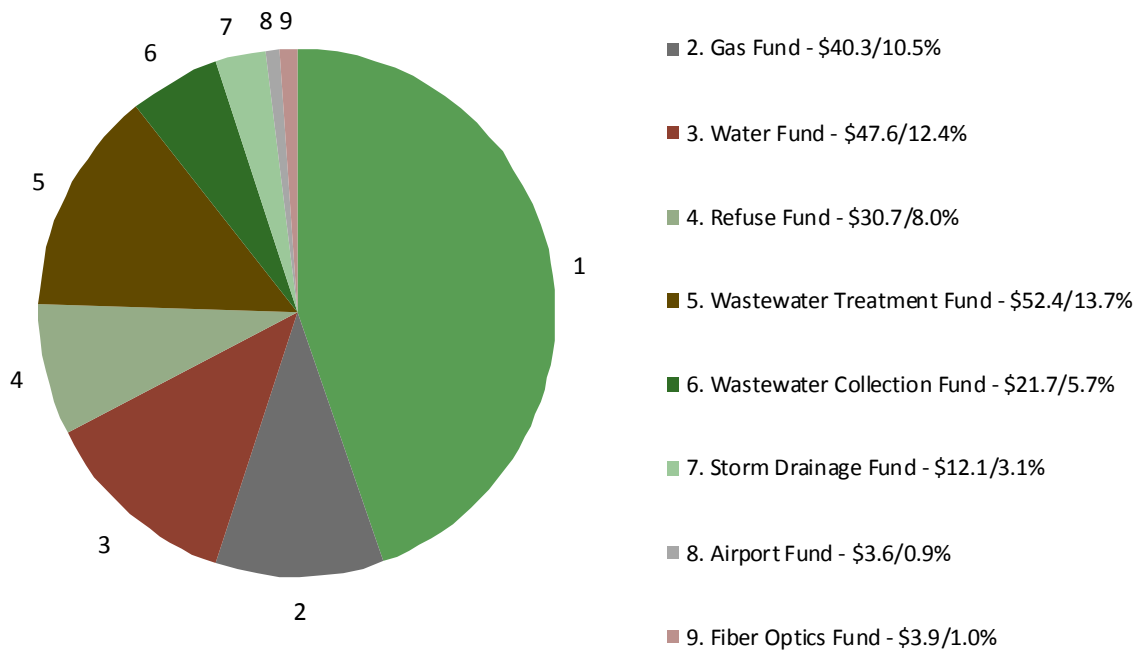


ENTERPRISE FUNDS OVERVIEW

3 Year Trend - Enterprise Funds Expense by Fund (\$Millions)



\$382.8 Million/FY 2017 Proposed



ENTERPRISE FUNDS OVERVIEW

Enterprise Fund Reserves

Reserves (\$000)	FY 2016 Projected Ending Balance	FY 2017 Changes	FY 2017 Projected Ending Balance	FY 2017 Reserve Guideline Range
Electric Fund				
Supply Rate Stabilization	14,441	0	14,441	
Supply Operations	39,900	(15,393)	24,507	25,185 - 44,801
Hydro Stabilization	11,400	0	11,400	
Electric Special Projects	51,838	0	51,838	
Public Benefit	2,574	0	2,574	
Central Valley O&M	0	0	0	
Underground Loan	730	0	730	
Capital Improvement Projects	4,043	(1,891)	2,152	
GASB 68 Pension Reserve	(27,912)	0	(27,912)	
Subtotal	97,014	(17,284)	79,730	

Gas Fund				
Rate Stabilization	6,805	(879)	5,926	
Operations	16,632	(2,478)	14,154	5,982 - 11,964
Debt Service Reserve	0	0	0	
Capital Improvement Projects	751	(541)	210	
GASB 68 Pension Reserve	(12,643)	0	(12,643)	
Subtotal	11,545	(3,898)	7,647	

Wastewater Collection Fund				
Rate Stabilization	4,292	(387)	3,905	
Operations	9,660	(1,986)	7,674	4,027 - 8,055
Capital Improvement Projects	0	0	0	
GASB 68 Pension Reserve	(7,078)	0	(7,078)	
Subtotal	6,874	(2,373)	4,501	

Water Fund				
Rate Stabilization	6,579	(1,067)	5,512	
Operations	28,826	(416)	28,410	6,902 - 13,803
Capital Improvement Projects	4,417	(4,082)	335	

Enterprise Fund Reserves

Reserves (\$000)	FY 2016 Projected Ending Balance	FY 2017 Changes	FY 2017 Projected Ending Balance	FY 2017 Reserve Guideline Range
GASB 68 Pension Reserve	(11,887)	0	(11,887)	
Subtotal	27,935	(5,565)	22,370	

Refuse Fund

Rate Stabilization	4,323	590	4,913	2,811 - 5,621
Landfill Corrective Action Reserve	721	0	721	
Capital Improvement Projects	403	(135)	268	
GASB 68 Pension Reserve	(4,993)	0	(4,993)	
Subtotal	454	455	909	

Storm Drainage Fund

Rate Stabilization	8,633	(4,173)	4,460	
Capital Improvement Projects	5,729	(1,050)	4,679	
GASB 68 Pension Reserve	(2,992)	0	(2,992)	
Subtotal	11,370	(5,223)	6,147	

Wastewater Treatment Fund

Emergency Plant Replacement	1,980	0	1,980	1,936 (max.)
Rate Stabilization	12,887	12,045	24,932	3,481 - 6,962
Capital Improvement Projects	15,993	(15,993)	0	
GASB 68 Pension Reserve	(17,529)	0	(17,529)	
Subtotal	13,331	(3,948)	9,383	

Fiber Optics Fund

Emergency Plant Replacement	1,000	0	1,000	1,000 (min.)
Rate Stabilization	21,678	1,260	22,938	896 - 1,793
Capital Improvements Projects	0	0	0	
GASB 68 Pension Reserve	(1,687)	0	(1,687)	
Subtotal	20,991	1,260	22,251	

ENTERPRISE FUNDS OVERVIEW

Enterprise Fund Reserves

Reserves (\$000)	FY 2016 Projected Ending Balance	FY 2017 Changes	FY 2017 Projected Ending Balance	FY 2017 Reserve Guideline Range
Airport Fund				
Fund Reserves	(1,299)	103	(1,196)	
Capital Improvement Projects	6	(6)	0	
GASB 68 Pension Reserve	(397)	0	(397)	
Subtotal	(1,690)	97	(1,593)	
TOTAL RESERVES	187,824	(36,479)	151,345	
Summary of Reserves				
Emergency Plant Replacement	2,980	0	2,980	
Rate Stabilization	91,038	7,389	98,427	
Operations	95,018	(20,273)	74,745	
Capital	31,342	(23,698)	7,644	
Electric Special Projects	51,838	0	51,838	
Public Benefit	2,574	0	2,574	
Central Valley O&M	0	0	0	
Underground Loan	730	0	730	
Landfill Corrective Action Reserve	721	0	721	
Fund Reserves	(1,299)	103	(1,196)	
GASB 68 Pension Reserve	(87,118)	0	(87,118)	
TOTAL RESERVES	187,824	(36,479)	151,345	
Landfill Closure and Postclosure Care Liability	10,997	0	10,997	
TOTAL RESERVES AND FULLY-FUNDED LIABILITY	198,821	(36,479)	162,342	

Residential Monthly Utility Cost Information

Utility	Adopted FY 2016 Bill	Proposed FY 2017 Bill	\$ Difference	% Difference
Electric	42.76	49.75	6.99	16.3%
Water (1)	82.51	87.24	4.73	5.7%
Gas (2)	34.68	37.43	2.75	7.9%
Wastewater	31.95	34.83	2.88	9.0%
Refuse	43.75	47.69	3.94	9.0%
Storm Drain (3)	12.63	13.03	0.40	3.1%
User Tax	8.00	8.72	0.72	9.0%
Total Monthly Bill	252.22	278.69	22.41	8.9%

COMMENTS:

- 1) Water FY 2016 Adjusted Rate effective September 15, 2015
- 2) Gas FY 2016 Adjusted Rate based on monthly market rates
- 3) Storm Drain FY 2017 Proposed increase based on CPI index

UTILITIES

Mission Statement



in sound financial condition.

The City of Palo Alto Utilities' mission is to provide safe, reliable, environmentally sustainable and cost-effective services.

Purpose

The purpose of the City of Palo Alto Utilities is to provide high quality, cost-effective electric, gas, fiber optics, water and wastewater collection services; promote effective energy and water efficiency programs; proactively manage infrastructure needs and replace deteriorated or aging facilities with new technologies to ensure safe and reliable delivery of services; and ensure the City's utilities are



Description

Palo Alto is the only city in California that offers a full array of utility services to its citizens and businesses. Because of this, the City has a unique opportunity to partner with the Palo Alto community to enjoy the benefits and achievements of reliable, home-grown, and environmentally-focused utilities. Palo Alto has a tradition of over 100 years of successful public utility operations. It is a tradition that continues to provide the Palo Alto community with safe and reliable utilities service, local decision-making over policies, utility rate-making, environmental programs, and customized services.

The City of Palo Alto Utilities (CPAU) continues to focus on customer service, infrastructure reliability, regulatory compliance and cost containment. Marketing of energy and water efficiency, increasing renewable energy supplies and promoting technological development for utility efficiency services continue to be focal points, especially in light of the City Council's environmental sustainability priority and state mandated efficiency goals.

ADMINISTRATION

Utilities Administration is responsible for the overall management of the CPAU including communication, regulatory compliance, strategic planning, budget coordination, legislation and regulatory policy analysis, and personnel and administrative support to the entire Department.

CUSTOMER SUPPORT SERVICES

This group annually bills \$250 million for the City's electric, natural gas, water, commercial fiber optic, wastewater collection (operated by CPAU), storm drain and refuse (operated by Public Works) services; operates the Customer Service Call Center with 75,000 annual customer interactions; reads 90,000 utility meters per month; and implements Credit and Collection policies.

ENGINEERING

Engineering is responsible for managing all phases of CPAU's capital improvement projects including providing new or upgrading existing service to customers, and replacing and rehabilitating the City's electric, fiber, water, gas, and wastewater distribution systems.

OPERATIONS

Utilities Operations is responsible for the operations, maintenance, and emergency response for the electric, fiber, water, gas and wastewater distribution systems.

RESOURCE MANAGEMENT

Resource Management is responsible for: the long-term resource acquisition plan, including electricity, natural gas, and water; contract negotiations to acquire renewable resources; financial planning; rate development; energy efficiency and water conservation programs; and management of key accounts.

Accomplishments

- Launched the PaloAltoGreen Gas Program, a new voluntary green program to allow customers to reduce or eliminate the greenhouse gas (GHG) emissions associated with their gas usage.
- Launched and achieved very high participation in Peninsula SunShares program, a local solar program that used the power of group buying to gain a discount in the cost of residential solar systems.
- Increased the City's Renewable Portfolio Standard to 25% of retail energy sales supplied by eligible renewable energy resources by the end of FY 2016.
- Launched a heat pump water heater pilot program to determine the performance and customer satisfaction of this electrification technology.
- Coordinated successful citywide drought response efforts to achieve the state-mandated water use reductions including home water report, increased water efficiency rebates and launched Palo Alto 311 App for drought water waste reporting.
- Completed the Urban Water Management Plan, including the water shortage (drought) contingency plan.
- Launched the Home Efficiency Genie program which provides residents with free expert advice, discounted home assessments and resource for energy-efficiency projects.
- Launched a new customer engagement portal for residential customers to view and manage their energy and water usages.
- Collaborated with Public Works in completion of Environmental Impact Report (EIR) for the recycled water extension to the Stanford Research Park.
- Designated as a Reliable Public Power Provider (RP3) by the American Public Power Association for proficiency, sound business practices, and a utility-wide commitment to safe and reliable delivery of electricity, system improvement, energy efficiency, and workforce development.
- Won the Beacon Award – Silver Level for leading in implementing innovative energy efficiency and resource conservation programs, achieving notable greenhouse gas emissions reductions.

- Recognized in Green Power Leadership Club by the Environmental Protection Agency for demonstrating exemplary environmental stewardship.
- Placed in the Solar Electric Power Association's (SEPA) Top Ten list of utilities that integrated the most solar into the grid. Ranked #3 on the Watts-per-Customer list for 2015.
- Awarded Tree Line USA Utility designation by the Arbor Day Foundation; in recognition of quality tree care, annual worker training, and tree planting and public education.
- Received the highest honor for Sustainability through the Acterra Business Environmental Awards.
- Awarded 30 Palo Alto buildings with the Mayor's Green Business Leader Award – A Palo Alto City Council sponsored annual recognition event – for achieving an Energy Star rating of 75 or above in the Environmental Protection Agency's Portfolio Manager.

Initiatives

- Capital Improvement Programs: Continue replacement of aging infrastructure on Electric, Gas, Fiber, Wastewater Collection, and Water systems; develop a long range master infrastructure plan for Gas and Water utilities.
- Sustainability Programs: Develop two new programs to increase the penetration of local solar systems – a community solar program to allow those without good solar access to participate in local solar projects and a solar donation program to assist schools and non-profits with buying solar systems. Evaluate cost-effective programs to support electrification or fuel-switching from natural gas to electricity.
- Increased the City's Renewable Portfolio Standard to 52.5% of retail energy sales supplied by eligible renewable energy resources by the end of FY 2017.
- When the Net Energy Metering (NEM) cap is reached (expected by the end of 2016), launch a NEM successor program to provide fair compensation for local solar generation.
- Evaluate all water supply alternatives with a focus on recycled water options including nonpotable use, indirect potable reuse, direct potable reuse, on-site water treatment, storm water, and groundwater.
- Expand efforts to compete for the \$5M Georgetown University Energy Prize by reducing energy consumption through innovation, education and community participation.
- Workforce Development: Implement a Succession Development Program to promote talent development and inspire new leaders to ensure a continued level of quality service to the community.
- Collaborate with Development Services to streamline the permit application process and provide timely review and approval of project plan submittals.
- Technology: Implement an interactive voice response system to provide a 24/7 communication and payment option to customers.
- Issue a Request for Proposal for a new best-of-breed customer self-service web application that offers a complete suite of functionality for Utilities specific online processes, mobility, e-billing, and account management services.

UTILITIES

- Communications Outreach: Increase customer feedback by providing a coordinated package of surveys and other market research methods to better evaluate the effectiveness of outreach communications.

Key Performance Measures

COMPARABLE AND COST-EFFECTIVE SERVICES

Goal	Ensure fiscally sound and cost-effective services				
Objective	Reduce the cost of delivering services through best management practices.				
	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Palo Alto's average residential monthly utility bill above/(below) the median of neighboring cities	2.00%	(7.00)%	(6.00)%	(6.00)%	(6.80)%
Description	This compares the average residential monthly utility bill which includes electricity, gas, water, and wastewater services to the nearby communities (Menlo Park \$278.17, Mountain View \$211.84, Santa Clara \$167.32, Hayward \$213.24, Redwood City \$264.45, Los Altos \$206.42).				
Purpose	This measure compares the City's average utility rates charged to residents to other comparable cities (e.g., similar size, similar commodity purchase options, similar geography).				
Status	Our electric rates are significantly lower than PGE and slightly higher than Santa Clara. Natural gas rates are lower than surrounding communities due to PGE increasing its distribution rates for capital improvement and maintenance. Water rates are higher than many neighboring communities primarily because of differing system characteristics and levels of infrastructure investment, but also because some communities have different sources of supply. Palo Alto's pristine high quality supply comes from the SFPUC who is in the middle of a \$4.6 billion improvement project, and Palo Alto is investing more than other areas in improving our local distribution pipelines and enhancing our emergency water supply system. For 2017, the monthly average for nearby communities is \$223.57 and for Palo Alto the average is \$209.25. The Fiscal Year 2017 Proposed Measure is to be 6.8% below the average for the comparable cities.				

CUSTOMER SATISFACTION

Goal	Provide excellent customer service				
Objective	Maintain a high level of customer satisfaction, equal to or greater than 83 percent of Palo Alto citizens rating satisfaction of utility services as "Excellent" or "Good" in the National Citizen Survey.				
	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Percent rating services (electric, gas, wastewater, and water) "Good" or Excellent	84.00%	84.00%	84.00%	85.00%	85.00%
Description	The National Citizen Survey (NCS) is a collaborative effort between National Research Center, Inc. (NRC) and the International City/County Management Association (ICMA). The NCS was developed by NRC to provide a statistically valid survey of opinions about community and services provided by local governments. The survey results may be used by staff, elected officials and other stakeholders for community planning and resource allocation, program improvement and policy-making. There are ten California communities participating in the survey.				
Purpose	The best way to get feedback on whether our customers are satisfied with the nature, extent and delivery of services we provide them is to ask outright, using random-selection survey processes that include a good cross-section of our customer base.				
Status	Results are statistically weighted to reflect the proper demographic composition of the entire community. A total of 721 completed surveys were obtained, providing an overall response rate of 25 percent. Typically, response rates obtained on citizen surveys range from 25 percent to 40 percent. From Fiscal Year 2012 to Fiscal Year 2015, Utilities has met its target of 83 percent.				

Workload Measures

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Total cost of Capital Improvement Program annually (Millions)	\$34.70	\$27.00	\$41.20	\$30.30	\$42.90

Budget Summary

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Change %
Dollars by Fund						
Electric Fund - Operating	47,039,928	47,565,953	63,664,278	68,992,518	5,328,240	8.4%
Electric Supply	81,796,644	91,302,629	89,799,836	101,501,369	11,701,536	13.0%
Fiber Optics	1,975,736	1,999,420	3,785,219	3,993,103	207,885	5.5%
Gas Fund - Operating	24,780,905	22,825,964	25,987,534	25,919,843	(67,690)	(0.3)%
Gas Supply	15,074,561	11,543,034	16,941,780	14,368,358	(2,573,422)	(15.2)%
Wastewater Collection - Operating	16,652,352	15,951,184	20,929,179	21,672,920	743,742	3.6%

Budget Summary

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Change %
Water Fund - Operating	38,422,764	34,451,902	48,051,612	47,550,055	(501,556)	(1.0)%
Total	225,742,890	225,640,086	269,159,438	283,998,166	14,838,735	5.5%
Revenues						
Charges for Services	369,021	529,927	270,000	270,000	—	—%
Charges to Other Funds	728,607	592,102	687,618	682,191	(5,427)	(0.79)%
From Other Agencies	553,014	534,328	576,632	576,632	—	—%
Net Sales	208,163,762	196,794,497	213,662,121	228,776,506	15,114,384	7.1%
Operating Transfers-In	1,553,460	751,521	318,719	2,922,786	2,604,067	817.0%
Other Revenue	10,925,693	11,909,526	9,955,000	18,468,731	8,513,730	85.5%
Other Taxes and Fines	—	112,392	—	—	—	—%
Return on Investments	4,996,993	4,442,020	4,442,200	4,442,200	—	—%
Total Revenues	227,290,550	215,666,313	229,912,290	256,139,046	26,226,754	11.4%
Positions by Fund						
Electric Fund - Operating	104.70	106.11	106.38	104.40	(1.98)	(1.86)%
Electric Supply	8.15	8.15	10.00	8.18	(1.82)	(18.21)%
Fiber Optics	7.24	7.24	6.76	6.82	0.06	0.89%
Gas Fund - Operating	51.08	50.52	49.38	51.05	1.67	3.38%
Gas Supply	2.28	2.28	2.77	1.65	(1.12)	(40.55)%
Utilities Admin - Operating	19.68	19.52	18.12	18.22	0.10	0.53%
Wastewater Collection - Operating	30.22	29.57	29.74	29.17	(0.58)	(1.93)%
Water Fund - Operating	48.18	48.38	46.15	48.58	2.43	5.26%
Total	271.53	271.77	269.31	268.06	(1.25)	(0.47)%

ELECTRIC FUND

Description

On January 16, 1900, the City of Palo Alto began operation of its own electric system. A steam engine was the initial source of the City's electricity, and was replaced by a diesel engine in 1914. As demand for electricity and the population continued to grow, the City of Palo Alto Utilities (CPAU) connected to the Pacific Gas and Electric distribution system and purchased power from additional sources.

The integrity of the infrastructure required for achieving a high level of reliability and value for our customers is of paramount importance to the CPAU. The Electric Fund plans to enhance the customer service connection experience, increase energy efficiency participation, and increase the percentage of electric supply obtained from renewable energy supplies. The City has entered into a number of contracts with producers of wind, landfill gas, and solar energy for more than 15-year terms.

Accomplishments

- Increased renewable supply sources secured through competitive solicitation. The City's qualifying supply for the State's Renewable Portfolio Standard was 24 percent in 2014, 28 percent in 2015, and is expected to grow to 30 percent in 2016 and 57 percent by 2017, well above required levels.
- Launched Peninsula SunShares with a consortium of other cities in the Bay Area, a new solar program under the Local Solar Plan. This program pooled the buying power of the community to offer homeowners discounted pricing on solar systems. Palo Alto had the largest participation of all participating cities to install new solar systems using group buying power.
- Launched a pilot program to install heat pump water heaters to learn about this electrification technology as to system performance and customer satisfaction.
- Expanded the Demand Response (peak demand reduction) Pilot Program to tie into commercial customer building energy management systems.

UTILITIES

- Accepted new applications via the Program for Emerging Technology (PET), including Advanced Lighting, Electric Vehicle Charging, and Smart Grid projects.
- Completed work to provide new electric service to several new buildings and other major improvements in the Stanford Hospital/Lucille Packard Hospital area.
- Upgraded the Supervisory Control and Data Acquisition (SCADA) system use for real time monitoring and control of the utility's electric, water, and gas systems.
- Complete installation of underground substructures necessary to convert the overhead utility lines to underground in Underground Utility District 47 (area bounded by Forest Ave/Middlefield Road/Addison Avenue/Cowper Street).
- Completed substation security measures at two (2) electric substations, with only two remaining to be done.
- Met all Western Electricity Coordinating Council (WECC) and North American Electric Reliability Corporation (NERC) regulatory reporting requirements.
- Completed development of Electric Underground Construction Standards to guide Engineering and Operations staff on construction practices.
- Completed upgrade of the 60 kV protection equipment (Pilot Wire system) between Quarry Substation and Hopkins Substation.
- Completed upgrade of electric substation battery systems, used for backup and operation of protection equipment.

Initiatives

- Develop new solar programs under the Local Solar Plan. These include a new community solar program and a solar donation program to be launched in 2016 or 2017.
- Develop new programs to encourage residential customer 'electrification', or the substitution of natural gas using appliances for those using electricity.
- Implementation new residential and commercial efficiency programs.
- Continue to offer electric safety education presentations to school and community groups.
- Increase the City's Renewable Portfolio Standard (RPS) to 52.2% by the end of FY 2017 as more long-term solar projects come on line. By the end of calendar year 2017, the City's RPS is expected to increase to about 57%.
- Expand the Demand Response (peak demand reduction) Pilot Program to integrate with distributed energy resources.
- Evaluate storage alternatives and develop recommendations regarding goals for installation of storage systems.
- Expand efforts to compete for the \$5 million Georgetown University Energy Prize by saving energy (gas and electricity) in 2015 and 2016.
- Launched new portal for residential customers to view their utilities usage for all commodities at one location.

- Continue discussions on building a second transmission line to provide electric service to Palo Alto.
- Replace deteriorated substation facilities and increase electric system capacity in the Colorado/Hopkins/Quarry load areas to meet projected load growth.
- Improve efficiency of Utility Electric System with installation of Power Factor correction capacitor banks.
- Add new facilities to meet the electric loads proposed by the VA Hospital for their site upgrades.
- Relocate/reconstruct city electric and communication facilities as necessary to facilitate the electrification of the CALTRAIN system.
- Complete General Order 95, 128 and 174 Inspection and Maintenance relating to electrical overhead, underground and substation facilities.
- Completion of District 24, rebuild underground facilities in the downtown area.
- Complete the pole replacement program for 2015/2016.
- Continue to plan and replace electric facilities before they reach the end of their useful and life to maintain high system reliability.

Goals and Objectives

GOAL 1

Provide safe and reliable delivery of electric services to our customers.

Objectives:

- Develop a plan to complete a second electric transmission line source to improve service reliability.
- Provide exceptional system reliability.
- Reduce the backlog of infrastructure assets whose ages are beyond their useful lives.

GOAL 2

Increase environmental sustainability and promote efficient use of resources.

Objectives:

- Achieve a Renewable Portfolio Standard (RPS) of 33 percent by 2015.
- Achieve the ten-year goal for electric energy efficiency of 4.8 percent of the electric load by 2023.
- Measure actual electric energy efficiency achievement.
- Increase the penetration of local solar installations so that 4% of the City's energy use is generated by local solar systems by 2023.

Key Performance Measures

ENVIRONMENTAL SUSTAINABILITY

Goal	Support environmental sustainability and promote efficient use of resources				
Objective	Achieve Renewable Portfolio Standard (RPS) of at least 52% percent by 2017.				
	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Percent of retail electric sales volume provided by renewable supply resources under long-term PPAs	49.80%	25.70%	35.10%	31.00%	52.30%
Description	This measures the fraction of the City's retail electric sales volume that is provided by renewable supply resources that are under long-term agreement.				
Purpose	The California Renewable Energy Resources Act (SBX 1 2) requires that utilities supply 33 percent of their total retail electric sales volume with eligible renewable energy resources by 2020. The City's internal target, established by the Long-term Electric Acquisition Plan (LEAP), is to meet at least 33 percent by 2015. In March 2013, the City also adopted a 100 percent carbon neutral electric supply portfolio target. This measure also supports the City to achieve a 100 percent carbon neutral electric supply portfolio.				
Status	The City established a target by 2015 to have a 33% renewable portfolio. However, the City was unable to reach this 2015 target and plans to meet or exceed the 2017 target of 52.3%. This target will be reached through the execution of additional long-term renewable energy supply agreements, and through the procurement of short-term renewable energy certificates (RECs). The City's goal exceeds California's RPS mandate of 33% by 2020 (California Renewable Energy Resources Act SBX1-2). The City currently meets its 100% carbon neutral electric supply portfolio target since 2013, primarily through long-term renewable energy supply agreements, supplemented by short-term REC purchases.				

SYSTEM RELIABILITY

Goal	Provide safe and efficient delivery of electric services to our customers.				
Objective	Provide exceptional system reliability.				
	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Average duration of customer outages in minutes as reported using industry guidelines	16	47	60	32	29
Description	System Average Interruptible Duration Index (SAIDI) is a measure of outage duration. It measures the number of minutes over the year that the average customer is without power.				
Purpose	Reliability indices were introduced in order to keep track of utility performance. This information will help Utilities prioritize capital and operating spending so that reliability can be improved without increasing costs.				
Status	Despite continuous lineperson and system operator vacancies, The Electric Utility continues to meet the goal of average customer outages being 60 minutes or less in duration for the average customer by minimizing the number of outages and customers directly affected. This can be attributed to the Department's ongoing efforts for infrastructure replacement, outage isolation improvements, system maintenance, and improved response times.				

ENVIRONMENTAL SUSTAINABILITY - SOLAR

Goal	Support environmental sustainability and promote efficient use of resources.				
Objective	Increase the penetration of local solar installations.				
	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Cumulative installed capacity of photovoltaic (PV) systems measured in megawatts (MW)	5	6	8	8	9
Description	This measures the percentage of the cumulatively installed capacity of PV systems in Palo Alto, measured in MW . It includes PV systems installed prior to the passage of Senate Bill 1 (SB1), which enacts the Million Solar Roofs Initiative and expands upon the current California Solar Initiative (CSI) and the Energy Commission's New Solar Homes Partnership (NSHP).				
Purpose	The California Million Solar Roofs Bill (SB1) requires an expanded funding commitment by all California electric utilities, with a Statewide goal to add 3,000 MW of new PV systems over ten years. In addition to complying with state law, PV installations will benefit the environment and expand flexibility to Palo Alto's electric generation portfolio. This measure also supports the City to achieve a 100 percent carbon neutral electric supply portfolio. This measure also supports The City's goal to meet 4% of The City's electricity needs by 2023.				
Status	Solar installations continue to grow with lower installation prices. Rebate funds for residential solar have been fully reserved, and we expect the commercial funds to be reserved well before the 2017 goal set by SB1. Changes to The State net metering regulations may impact electric utility changes to PV customers.				

Workload Measures

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Number of Customer Accounts (Electric)	29,338	29,299	29,299	29,299	29,299
Number of momentary outages	4	1	1	1	0
Percent of residents surveyed who rate the quality of the Electric Utility as "Good" or "Excellent"	73	83	87	87	88
Total Number of Outages	20	19	20	7	20

Budget Summary

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Change %
Dollars by Division						
CIP Electric Fund	12,139,969	11,727,427	16,386,639	21,630,736	5,244,097	32.0%
Electric Administration	19,459,675	20,476,339	24,762,554	25,684,788	922,234	3.7%
Electric Customer Service	2,032,231	1,548,851	2,348,349	2,226,652	(121,697)	(5.2)%
Electric Demand Side Management	3,187,875	3,559,586	7,492,131	6,817,126	(675,005)	(9.0)%

Budget Summary

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Change %
Electric Engineering (Operating)	1,280,044	1,405,600	1,929,843	1,841,173	(88,670)	(4.6)%
Electric Operations and Maintenance	9,488,627	10,716,881	12,216,961	13,735,487	1,518,526	12.4%
Electric Resource Management	81,248,152	89,457,201	88,327,636	98,557,925	10,230,288	11.6%
Total	128,836,573	138,891,884	153,464,117	170,493,890	17,029,773	11.1%

Dollars by Category

Salary & Benefits

Healthcare	1,722,630	1,858,579	1,577,720	1,504,340	(73,380)	(4.7)%
Other Benefits	297,786	294,915	239,147	185,936	(53,211)	(22.3)%
Overtime	406,488	519,414	442,173	442,173	—	—%
Pension	2,213,560	1,851,677	2,240,589	2,270,121	29,532	1.3%
Retiree Medical	656,811	1,083,423	1,159,756	1,537,264	377,508	32.6%
Salary	7,051,249	7,873,119	8,708,280	8,634,552	(73,728)	(0.8)%
Workers' Compensation	282,929	241,886	239,250	157,312	(81,938)	(34.2)%
Total Salary & Benefits	12,631,452	13,723,014	14,606,916	14,731,699	124,783	0.9%
Allocated Charges	8,467,472	8,247,863	9,090,404	9,137,388	46,984	0.5%
Capital Improvement Program	7,900,770	7,477,068	16,339,130	21,630,736	5,291,606	32.4%
Contract Services	2,684,756	3,083,615	5,056,414	7,017,914	1,961,500	38.8%
Debt Service	8,923,951	8,940,084	9,142,923	8,957,186	(185,737)	(2.0)%
Equity Transfer	11,203,000	11,412,000	11,659,000	12,035,000	376,000	3.2%
Facilities & Equipment	3,387	—	44,475	44,475	—	—%
General Expense	3,348,605	2,153,071	4,908,817	3,930,817	(978,001)	(19.9)%
Operating Transfers-Out	122,855	661,061	119,415	255,269	135,854	113.8%
Rents & Leases	4,038,332	4,136,105	5,301,728	5,439,572	137,844	2.6%
Supplies & Material	592,329	677,677	873,097	873,097	—	—%
Transfer to Infrastructure	133,687	—	—	—	—	—%
Utility Purchase	68,785,977	78,380,327	76,321,794	86,440,735	10,118,944	13.3%
Total Dollars by Expense Category	128,836,572	138,891,886	153,464,111	170,493,889	17,029,778	11.1%

Revenues

Charges for Services	243,512	421,977	230,000	230,000	—	—%
Charges to Other Funds	390,991	305,151	300,011	289,096	(10,915)	(3.6)%

Budget Summary

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Change %
From Other Agencies	4,000	—	—	—	—	—%
Net Sales	113,054,403	112,001,079	116,654,061	131,990,403	15,336,342	13.1%
Operating Transfers-In	1,088,463	547,139	135,386	2,678,768	2,543,382	1,878.6%
Other Revenue	8,474,522	7,865,325	7,778,000	15,514,731	7,736,731	99.5%
Other Taxes and Fines	—	112,392	—	—	—	—%
Return on Investments	2,831,222	2,414,464	2,507,700	2,507,700	—	—%
Total Revenues	126,087,109	123,667,528	127,605,158	153,210,698	25,605,530	20.1%

Positions by Division

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Change %
CIP Electric Fund	32.81	32.57	32.14	32.14	—	—%
Electric Customer Service	13.53	13.63	13.54	12.07	(1.46)	(10.81)%
Electric Demand Side Management	6.57	6.57	6.61	6.85	0.23	3.54%
Electric Engineering (Operating)	4.50	4.50	5.73	4.98	(0.75)	(13.09)%
Electric Operations and Maintenance	47.29	48.84	48.36	48.36	(0.00)	(0.00)%
Electric Resource Management	8.15	8.15	10.00	8.18	(1.82)	(18.21)%
Total	112.85	114.26	116.38	112.58	(3.80)	(3.27)%

Staffing

Job Classification	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Salary
Account Specialist	0.24	0.24	0.26	0.33	0.07	20,635
Administrative Associate I	1.00	—	—	—	—	—
Administrative Associate II	3.10	4.10	4.10	4.00	(0.10)	265,220
Assistant Director Administrative Services	0.15	0.15	0.15	0.20	0.05	38,837
Assistant Director Utilities Customer Support Services	0.40	0.40	0.40	0.40	—	66,942
Assistant Director Utilities Engineering	0.40	0.40	0.40	0.40	—	76,053
Assistant Director Utilities Operations	0.60	0.60	0.60	0.60	—	114,079
Assistant Director Utilities/Resource Management	0.50	0.50	0.50	0.50	—	105,622
Business Analyst	2.13	2.13	2.89	2.04	(0.85)	255,967

UTILITIES

Staffing

Job Classification	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Salary
Contracts Administrator	0.10	0.10	0.10	0.10	—	10,924
Coordinator Utilities Projects	1.25	1.80	1.80	1.55	(0.25)	126,796
Coordinator Utilities Safety & Security	0.55	—	—	—	—	—
Customer Service Representative	1.62	1.62	1.86	1.62	(0.24)	109,302
Customer Service Specialist	0.66	0.66	0.62	0.66	0.04	48,968
Customer Service Specialist-Lead	0.58	0.58	0.62	0.58	(0.04)	46,024
Electric Project Engineer	1.95	1.95	1.95	1.95	—	229,101
Electric Underground Inspector	2.00	2.00	2.00	2.00	—	177,022
Electric Underground Inspector-Lead	1.00	1.00	1.00	1.00	—	94,853
Electrical Equipment Technician	—	—	—	1.00	1.00	78,623
Electrician Assistant I	4.00	4.00	4.00	3.00	(1.00)	181,241
Engineering Manager - Electric	0.55	0.55	0.55	0.55	—	89,758
Engineering Technician III	2.40	2.40	2.40	2.40	—	186,230
Heavy Equipment Operator	2.00	2.00	2.00	2.00	—	166,042
Inspector, Field Services	—	—	—	0.25	0.25	22,592
Lineperson/Cable Specialist	11.00	11.00	11.00	11.00	—	1,186,085
Lineperson/Cable Specialist-Lead	4.00	4.00	4.00	4.00	—	480,336
Manager Customer Service	—	—	0.33	0.33	—	42,721
Manager Customer Service and Meter Reading	0.33	0.33	—	—	—	—
Manager Electric Operations	1.00	1.00	1.00	1.00	—	157,871
Manager Treasury, Debt & Investments	—	—	—	0.30	0.30	39,879
Manager Utilities Compliance	0.15	0.15	0.15	0.15	—	24,233
Manager Utilities Credit & Collection	0.15	0.15	0.15	0.15	—	19,609
Manager Utilities Marketing Services	0.40	0.40	0.40	—	(0.40)	—
Manager Utilities Program Services	—	—	—	0.40	0.40	48,804
Marketing Engineer	1.00	1.00	1.00	—	(1.00)	—
Meter Reader	1.99	1.99	2.41	1.99	(0.42)	115,638
Meter Reader-Lead	0.33	0.33	0.40	0.33	(0.07)	22,324
Metering Technician	2.00	3.00	3.00	3.00	—	317,358

Staffing

Job Classification	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Salary
Metering Technician-Lead	1.00	1.00	1.00	1.00	—	113,197
Offset Equipment Operator	0.48	0.48	0.48	0.48	—	28,972
Overhead Underground Troubleshooter	2.00	2.00	2.00	2.00	—	235,768
Planner	0.15	0.15	—	—	—	—
Power Engineer	2.30	2.30	2.30	2.30	—	255,114
Principal Business Analyst	—	—	0.34	0.34	—	47,672
Principal Management Analyst	—	0.34	—	—	—	—
Project Manager	0.75	0.75	0.75	0.75	—	80,527
Resource Planner	2.65	2.65	3.95	3.65	(0.30)	442,019
SCADA Technologist	1.00	1.00	1.00	1.00	—	126,500
Senior Business Analyst	0.68	0.68	0.68	0.68	—	86,058
Senior Electrical Engineer	3.95	3.95	3.95	3.95	—	557,576
Senior Management Analyst	0.45	0.45	0.45	0.10	(0.35)	12,317
Senior Resource Planner	3.69	3.69	4.08	3.06	(1.02)	445,645
Senior Technologist	0.29	0.29	—	—	—	—
Senior Utilities Field Service Representative	0.10	0.10	0.10	0.10	—	9,629
Street Light, Traffic Signal & Fiber Technician	2.00	2.00	3.00	3.00	—	303,564
Street Light, Traffic Signal & Fiber Technician Apprentice	1.00	1.00	—	—	—	—
Street Light, Traffic Signal & Fiber-Lead	1.00	1.00	1.00	1.00	—	108,271
Substation Electrician	5.50	5.50	5.50	5.50	—	578,827
Substation Electrician-Lead	2.00	2.00	2.00	2.00	—	236,252
Supervising Electric Project Engineer	1.00	1.00	1.00	1.00	—	137,070
Tree Maintenance Person	1.00	1.00	1.00	1.00	—	75,563
Utilities Compliance Technician	2.00	2.00	2.00	2.00	—	179,528
Utilities Compliance Technician-Lead	1.00	1.00	1.00	1.00	—	115,839
Utilities Credit/Collection Specialist	2.00	2.00	2.00	2.00	—	153,678
Utilities Engineer Estimator	3.25	3.25	3.25	3.25	—	340,952
Utilities Field Services Representative	0.50	0.50	0.50	0.50	—	43,314

UTILITIES

Staffing

Job Classification	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Salary
Utilities Key Account Representative	1.90	1.90	1.90	1.60	(0.30)	166,625
Utilities Locator	1.95	1.95	1.95	1.95	—	147,858
Utilities Marketing Program Administrator	2.55	2.55	2.25	1.90	(0.35)	172,880
Utilities Safety Officer	—	0.55	0.55	0.55	—	60,688
Utilities Supervisor	5.00	5.00	5.00	5.00	—	671,629
Utilities System Operator	5.00	5.00	5.00	5.00	—	551,334
Sub-total: Full-Time Equivalent Positions	107.67	109.56	112.02	107.44	(4.58)	11,450,554
Temporary/Hourly	5.18	4.70	4.37	5.15	0.78	663,135
Total Positions	112.85	114.26	116.38	112.58	(3.80)	12,113,689

Budget Reconciliation

	Positions	Expenditures	Revenues	Net Electric Fund
Prior Year Budget	116.38	153,464,114	127,605,158	25,858,956
Base Adjustments				
Adjustments to Costs of Ongoing Activities				
Salaries and Benefits Adjustments	(3.80)	235,058	—	235,058
Capital Improvement Program Adjustments	—	5,291,606	—	5,291,606
Electric Commodity Purchases Expenditure Adjustment	—	10,118,944	—	10,118,944
Overhead Construction Services Contract Expenditure Adjustment	—	1,000,000	—	1,000,000
Rents & Leases Expenditure Adjustment (COLA)	—	137,844	—	137,844
Equity Transfer to General Fund Adjustment	—	376,000	—	376,000
Debt Service Expenditure Adjustment	—	(185,737)	—	(185,737)
Transfer In from Tech Fund for Elwell Rent Share Revenue Adjustment	—	—	4,590	(4,590)
Transfer In from Water and Gas Fund for Capital Project EL-11014 Smart Grid Technology Installation Revenue Adjustment	—	—	272,670	(272,670)
Palo Alto Green Gas Program Sales Revenue Adjustment	—	—	(10,915)	10,915

Budget Reconciliation

	Positions	Expenditures	Revenues	Net Electric Fund
Central Valley Project (CVP) O&M Loan Repayment Revenue Adjustment	—	—	646,731	—
Electric Connection Fee Charges (various Capital Improvement Projects) Revenue Adjustment	—	—	7,090,000	(7,090,000)
Electric Sales Revenue Adjustment (11% rate increase & changes in consumption levels)	—	—	14,736,342	(14,736,342)
Fiber Optic License Fee Allocated Charges Adjustment	—	10,307	—	10,307
General Fund Cost Allocation Plan Charges Adjustment	—	(322,701)	—	(322,701)
General Liability Insurance Allocated Charges Adjustment	—	(131,033)	—	(131,033)
Print & Mail Allocated Charges Adjustment	—	(81,491)	—	(81,491)
Utilities Admin Allocated Charges Adjustment	—	251,600	—	251,600
Utility and Public Works Charges to City Allocated Charges Adjustment	—	15,757	—	15,757
Vehicle Fund Allocated Charges Adjustment	—	304,545	—	304,545
Adjustments to Costs of Ongoing Activities	(3.80)	17,020,699	22,739,418	(5,071,988)
Total FY 2017 Base Budget	112.58	170,484,813	150,344,576	20,786,968
Budget Proposals				
1 Transfer from the General Fund: Traffic Signal and Streetlight Electric Costs	—	—	2,266,122	2,266,122
2 State & Local Solar Program Funding Adjustment	—	(638,500)	—	638,500
3 Reclassification: 1.0 FTE Electric Assistant I to 1.0 FTE Electric Equipment Technician	—	10,150	—	(10,150)
4 Reclassification: 1.0 FTE Marketing Engineer to 1.0 FTE Resource Planner (Two 0.5 FTE)	—	14,103	—	(14,103)
5 Title Change: Manager, Utilities Marketing Services to Manager, Utility Program Services	—	0	—	0
6 Low Carbon Fuel Standard (LCFS) Program	—	600,000	600,000	—
7 Reclassification of 1.0 FTE Senior Management Analyst to 1.0 FTE Utilities Strategic Business Manager	—	26,119	—	(26,119)
8 Reclassification of 1.0 FTE Coordinator, Utility Projects to 1.0 FTE Inspector, Field Services	—	(2,796)	—	2,796
Budget Changes	—	9,076	2,866,122	2,857,046
Total FY 2017 Proposed Budget	112.58	170,493,889	153,210,698	23,644,014



Budget Adjustments

Budget Adjustments	Positions	Expenditures	Revenues	Net Electric Fund
1 Transfer from the General Fund: Traffic Signal and Streetlight Electric Costs	0.00	0	2,266,122	2,266,122

This action recognizes a transfer from the General Fund to reimburse the Electric Fund for electricity costs associated with City street light and traffic signal costs. As part of the Electric Fund Cost of Services Analysis (COSA), these costs were identified as more appropriately aligned with the General Fund. This transfer will be evaluated over the next year and the long term implications on staffing and workload impacts will be revisited in the development of the Fiscal Year 2018 budget process. (Ongoing: \$2,266,122)

Performance Results

No impacts to current service levels are anticipated as a result of this funding realignment.

2 State & Local Solar Program Funding Adjustment	0.00	(638,500)	0	638,500
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This action reduces the expenditures in the photo voltaic (PV) rebate program mandated by California Million Solar Roofs Bill (SB1, August 2006) for Fiscal Year 2017 based on the number of rebate applications remaining. City committed to funding \$13 million in PV rebates over 10 years. Based upon the applications received, all \$13 million has been reserved, and the City is at the stage of waiting for customers to complete their projects before paying out the rebate. As the state mandated solar program draws to a close, the City will be exploring and proposing new local solar programs to encourage alternative and renewable energy sources. (Ongoing Savings: \$638,500)

Performance Results



The number of residential and commercial businesses in Palo Alto generating solar energy will increase in Fiscal Year 2017 as the rebate program funded projects are completed. Staff currently working on the state mandated program will be absorbed into new local solar initiatives as they are developed.

3 Reclassification: 1.0 FTE Electric Assistant I to 1.0 FTE Electric Equipment Technician	0.00	10,150	0	(10,150)
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This action reclassifies 1.0 FTE Electric Assistant I to 1.0 FTE Electric Equipment Technician. The creation of the Electric Equipment Technician classification will provide the Electric Operations personnel with additional career growth and help the division to retain trained and experienced personnel. The addition of this new classification will serve as an optional career path and bridges the gap between the Electric Assistant I position and the Substation Apprentice position. (Ongoing: \$10,150)

Performance Results

Budget Adjustments

Budget Adjustments	Positions	Expenditures	Revenues	Net Electric Fund
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The position reclassifications reflect the current operational needs of the Electric Ops section.

4 Reclassification: 1.0 FTE Marketing Engineer to 1.0 FTE Resource Planner (Two 0.5 FTE)	0.00	14,103	0	(14,103)
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This action reclassifies 1.0 FTE Marketing Engineer position to 1.0 FTE Resource Planner position (that will be filled by two 0.5 FTE) to more accurately reflect how the position have been hired are functioning in practice. (Ongoing \$14,103)

Performance Results

No impacts to current service levels are anticipated as a result of this title change.

5 Title Change: Manager, Utilities Marketing Services to Manager, Utility Program Services	0.00	0	0	0
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This action amends the Table of Organization by retitling the Manager, Utilities Marketing Services to Manager, Utility Program Services in the Utilities Customer Service Support section to more accurately reflect the duties of the position. Utility Program Services is where customers can find answers regarding energy efficiency programs, green power programs, water efficiency programs, renewable energy programs, water and energy workshops, key account program and connecting to the City's commercial dark fiber backbone. (Ongoing: \$0)

Performance Results

No impacts to current service levels are anticipated as a result of this title change.

6 Low Carbon Fuel Standard (LCFS) Program	0.00	600,000	600,000	0
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This action adds revenue from the estimated sales of Low Carbon Fuel Standard (LCFS) credits, offset by expenditures promoting Electric Vehicle adoption and related EV programs. The California Air Resources Board (CARB) developed the LCFS program to reduce the carbon intensity of transportation fuels used in California by 10% by 2020. Electric utilities that provide electricity to charge electric vehicles (EVs) are eligible to receive LCFS credits based on the number of EVs in their service territory. The City Council approved a Master Agreement to sell LCFS credits on March 14, 2016.

Performance Results

The establishment of this program will promote Electric Vehicle use, contributing to the reduction of carbon emissions.

7 Reclassification of 1.0 FTE Senior Management Analyst to 1.0 FTE Utilities Strategic Business Manager	0.00	26,119	0	(26,119)
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This action amends the Table of Organization by reclassifying 1.0 Senior Management Analyst position to 1.0 FTE Utilities Strategic Business Manager position to more accurately reflect the duties of the position. Adopting this reclassification will make permanent the functions of a trial over-strength position created last year to serve in this capacity. This position guides improvements to internal processes, customer focused services, workforce development, and financial stability. This position will oversee Utilities strategic plan, operating and CIP budgets, technology roadmap, workforce development and succession program, and fiber policy.†(Ongoing: \$26,119)

Performance Results

Budget Adjustments

Budget Adjustments	Positions	Expenditures	Revenues	Net Electric Fund
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No impacts to current service levels are anticipated as a result of this title change.

8 Reclassification of 1.0 FTE Coordinator, Utility Projects to 1.0 FTE Inspector, Field Services	0.00	(2,796)	0	2,796
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This action amends the Table of Organization by reclassifying 1.0 Coordinator Utility Projects to 1.0 Inspector Field Services to more accurately reflect the operational needs of the department. In FY 2013, Utilities reclassified one of three Inspector, Field Services positions to Supervisor, Inspection Services who would supervise, oversee, and ensure that all of the inspector's geospatial and pipe/fitting attribute data is consistently accurate, both from staff and contract inspectors and outside developers in compliance with Utilities Standards. As a result of the reclass, there are only two inspectors assigned to WGW Engineering to review project plans and verify contract work are in compliance with specifications. Based on the volume of plan reviews and inspections, Utilities is requesting to add back a third field service inspector. The supervision of the inspectors and oversight of the geospatial database will be reassigned to a Senior Engineer. (Ongoing Savings: \$2,796)

Performance Results



The position reclassifications reflect the current operational needs of the Electric/Water/Gas/Wastewater inspection services group.

FIBER OPTICS FUND

Description

In 1996, the City built a dark fiber ring around Palo Alto that would be capable of supporting multiple network developers and service providers with significant growth potential. The fiber backbone network was routed to pass by and provide access to key City facilities and the Palo Alto business community, including research centers and commercial properties.

Dark fiber optics service consists of providing the fiber optics cabling, splice points, service connections, and other infrastructure providing high-capacity bandwidth needed to transport large quantities of data. It does not include the transmitters, receivers, or data itself, which are owned and operated by each customer.

Accomplishments

- Completed the Fiber-to-the-Premises Master Plan and the Wireless Network Plan.
- Completed the physical audit of the dark fiber optic network to enable system improvements, increase capacity for customer connections, and respond more effectively to outages.
- Upgraded inter-departmental Dark Fiber databases (Engineering, Operations and Business Development) to fully leverage the physical audit data.
- Continuing discussions with Google Fiber to build a fiber optic network.
- Issued Request for Proposal to secure Engineering and Construction Inspection services to meet the needs of the potential Google Fiber project.

Initiatives

- Continue the rebuild of City's dark fiber ring to improve network performance and enable future expansion opportunities for licensing dark fiber to commercial firms and anchor institutions.

- Finalize a Master Encroachment Agreement, Master License Agreement for utility pole attachments and a Cost Recovery Agreement with Google Fiber to build a citywide fiber optic network in Palo Alto.
- Negotiate with Google Fiber to execute a ‘co-build’ agreement for a City-owned fiber network built in parallel with Google Fiber’s network.
- Issue a Request for Information to determine interest in a public-private partnership for deployment of citywide Fiber-to-the-Premises.
- Issue a Request for Proposal to build Wi-Fi and wireless communication facilities for unserved City facilities, Public Safety and Utilities, in addition to offering Wi-Fi connectivity in high-traffic commercial zones such as California Avenue and University Avenue.
- Develop a ‘Dig Once’ policy or ordinance to support the expansion of broadband in Palo Alto and to preserve City infrastructure.
- Complete the conversion of the dark fiber mapping system to AutoCAD AME.

Goals and Objectives

GOAL 1

Increase the value of fiber utility services to customers.

Objectives:

- Provide high-quality and competitively-priced fiber optic utility services to City departments and commercial customers in the City of Palo Alto.
- Manage costs and add new dark fiber license agreements with commercial customers.

GOAL 2

Improve capacity and reliability of the Dark Fiber system.

Objectives:

- Ensure sufficient fiber optic cables are available to meet future customer needs.
- Make system enhancements to prevent damage from outside sources and improve reliability.

Key Performance Measures

CUSTOMER SATISFACTION

Goal	Provide excellent customer service.				
Objective	Provide high-quality and competitively-priced fiber optic utility services to City Departments and commercial customers in the City of Palo Alto.				
	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Number of commercial fiber connections completed	230	228	240	240	241
Description	This measure shows the growth of the Fiber Enterprise based on customers and connections. Some customers have multiple fiber connections at various locations.				
Purpose	The purpose of this measure is to add value to companies doing business in Palo Alto by providing a cost-effective, world class telecommunications system. The goal is to build out and fully leverage the fiber network to add value to the business and other communities as needed.				
Status	The Fiber Enterprise continues to build out its network to provide more service options to our ever-expanding customer base. For example, a network was completed for the Palo Alto Unified School District (PAUSD) that will not only serve the schools, but provide fiber access to previously unserved areas.				

Workload Measures

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Number of Wholesale re-sellers	9	11	10	14	14
Number of Connections serving individual users	75	74	220	220	229

Budget Summary

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Change %
Dollars by Division						
CIP Fiber Optics Fund	481,898	412,667	1,763,821	1,700,000	(63,821)	(3.6)%
Fiber Optics Administration	186,332	62,472	800,178	755,942	(44,236)	(5.5)%
Fiber Optics Customer Service	398,448	420,523	706,970	1,017,098	310,129	43.9%
Fiber Optics Operations and Maintenance	909,058	1,103,758	514,250	520,063	5,813	1.1%
Total	1,975,736	1,999,420	3,785,219	3,993,103	207,885	5.5%

Budget Summary

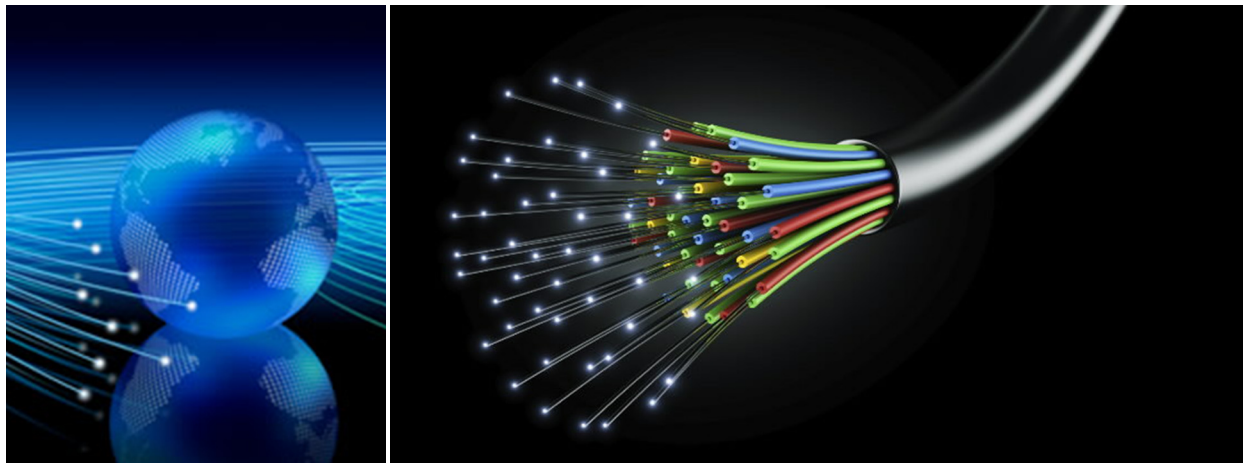
	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Change %
Dollars by Category						
Salary & Benefits						
Healthcare	121,877	140,208	135,983	139,646	3,663	2.7%
Other Benefits	16,204	20,634	18,919	16,310	(2,609)	(13.8)%
Overtime	32,542	28,891	7,854	7,854	—	—%
Pension	134,907	111,875	168,418	186,904	18,486	11.0%
Salary	611,858	523,811	680,717	694,424	13,707	2.0%
Workers' Compensation	—	—	—	10,082	10,082	—%
Total Salary & Benefits	917,387	825,418	1,011,891	1,055,220	43,329	4.3%
Allocated Charges	394,179	693,503	633,044	577,974	(55,070)	(8.7)%
Capital Improvement Program	393,306	309,543	1,763,205	1,700,000	(63,205)	(3.6)%
Contract Services	75,418	99,791	180,300	458,300	278,000	154.2%
General Expense	4,680	2,999	12,000	14,000	2,000	16.7%
Operating Transfers-Out	941	9,441	103,091	104,032	941	0.9%
Rents & Leases	52,468	53,692	72,688	74,577	1,889	2.6%
Supplies & Material	3,671	5,033	9,000	9,000	—	—%
Transfer to Infrastructure	133,687	—	—	—	—	—%
Total Dollars by Expense Category	1,975,736	1,999,420	3,785,219	3,993,103	207,885	5.5%
Revenues						
Charges for Services	4,463	20,026	—	—	—	—%
Net Sales	4,476,533	4,606,321	4,475,388	4,886,920	411,532	9.2%
Operating Transfers-In	204	169	—	—	—	—%
Other Revenue	57	2,752	—	—	—	—%
Return on Investments	380,404	411,870	366,400	366,400	—	—%
Total Revenues	4,861,661	5,041,137	4,841,788	5,253,320	411,532	8.5%
Positions by Division						
CIP Fiber Optics Fund	0.79	0.79	0.79	0.79	—	—%
Fiber Optics Customer Service	3.32	3.32	2.84	2.90	0.06	2.12%
Fiber Optics Operations and Maintenance	3.13	3.13	3.13	3.13	—	—%
Total	7.24	7.24	6.76	6.82	0.06	0.89%

Staffing

Job Classification	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Salary
Administrative Associate II	—	—	—	0.10	0.10	6,795
Assistant Director Utilities Customer Support Services	0.20	0.20	0.20	0.20	—	33,471
Assistant Director Utilities Engineering	0.05	0.05	0.05	0.05	—	9,506
Business Analyst	—	—	0.10	0.20	0.10	24,182
Chief Sustainability Officer	0.10	0.10	—	—	—	—
Electric Project Engineer	0.05	0.05	0.05	0.05	—	5,337
Manager Utilities Compliance	0.10	0.10	0.10	0.10	—	16,155
Manager Utilities Credit & Collection	0.40	0.40	0.40	0.40	—	52,291
Manager Utilities Marketing Services	0.20	0.20	0.20	—	(0.20)	—
Manager Utilities Program Services	—	—	—	0.20	0.20	24,402
Manager Utilities Telecommunications	1.00	1.00	1.00	1.00	—	126,880
Power Engineer	0.40	0.40	0.40	0.40	—	46,336
Senior Electrical Engineer	0.05	0.05	0.05	0.05	—	6,764
Street Light, Traffic Signal & Fiber Technician	2.00	2.00	2.00	2.00	—	202,378
Street Light, Traffic Signal & Fiber-Lead	1.00	1.00	1.00	1.00	—	89,764
Utilities Key Account Representative	0.60	0.60	0.60	0.70	0.10	72,975
Utilities Locator	0.03	0.03	0.03	0.03	—	2,478
Utilities Marketing Program Administrator	0.10	0.10	—	—	—	—
Sub-total: Full-Time Equivalent Positions	6.28	6.28	6.18	6.48	0.30	719,714
Temporary/Hourly	0.96	0.96	0.58	0.34	(0.24)	111,759
Total Positions	7.24	7.24	6.76	6.82	0.06	831,473

Budget Reconciliation

	Positions	Expenditures	Revenues	Net Fiber Optics Fund
Prior Year Budget	6.76	3,785,219	4,841,788	1,056,569
Adjustments to Costs of Ongoing Activities				
Salaries and Benefits Adjustments	0.06	43,747	—	(43,747)
Capital Improvement Program Expenditure Adjustments	—	(63,205)	—	63,205
Temporary Fiber Program Manager Contract Expenditure Adjustment	—	228,000	—	(228,000)
Fiber Legal Support Expenditure Adjustment	—	50,000	—	(50,000)
Rents and Leases Expenditure Adjustments	—	1,889	—	(1,889)
Transfer Out From Fiber Optic Fund to Technology Fund Expenditure Adjustment	—	941	—	(941)
Fiber Revenue Adjustment (Rate Increase 3.2% COLA)	—	—	411,532	411,532
General Fund Cost Allocation Plan Charges Adjustment	—	(69,557)	—	69,557
General Liability Insurance Allocated Charges Adjustment	—	(7,145)	—	7,145
Utilities Admin Allocated Charges Adjustment	—	21,632	—	(21,632)
Adjustments to Costs of Ongoing Activities	0.06	206,302	411,532	205,230
Total FY 2017 Base Budget	6.82	3,991,521	5,253,320	1,261,799
Budget Proposals				
1 Reclassification of 1.0 FTE Senior Management Analyst to 1.0 FTE Utilities Strategic Business Manager	—	1,582	—	(1,582)
Budget Changes	—	1,582	—	(1,582)
Total FY 2017 Proposed Budget	6.82	3,993,103	5,253,320	1,260,217



Budget Adjustments

Budget Adjustments	Positions	Expenditures	Revenues	Net Fiber Optics Fund
1 Reclassification of 1.0 FTE Senior Management Analyst to 1.0 FTE Utilities Strategic Business Manager	0.00	1,582	0	(1,582)

This action amends the Table of Organization by reclassifying 1.0 Senior Management Analyst position to 1.0 FTE Utilities Strategic Business Manager position to more accurately reflect the duties of the position. Adopting this reclassification will make permanent the functions of a trial over-strength position created last year to serve in this capacity. This position guides improvements to internal processes, customer focused services, workforce development, and financial stability. This position will oversee Utilities strategic plan, operating and CIP budgets, technology roadmap, workforce development and succession program, and fiber policy. (Ongoing: \$1,582)

Performance Results



No impacts to current service levels are anticipated as a result of this title change.

GAS FUND

Description

The municipal natural gas system began operations in 1917 when Palo Alto acquired a privately-owned gas business. During the early years, gas was manufactured from coal tar. This was replaced in the 1920s by natural gas from Pacific Gas and Electric. Today, gas is purchased from several sources. The Gas Utility services include Crossbore Safety, Gas Main Replacements, and Home Energy Audits. The Gas utility infrastructure and its crews maintains an excellent safety record. The gas fund is responsible for planning, designing, budgeting, and constructing major capital improvements to the City's gas distribution system.

Accomplishments

- Completed the PVC gas pipeline study for evaluation of enhanced system reliability. Pipeline improvements recommended from this study will be included in future capital improvement projects.
- Completed the design of gas main replacement project GMR 22 to replace approximately 19,440 linear feet of gas main pipelines and 367 service pipelines. This project will also include approximately 2,700 LF of water main to be placed in the joint-trench with gas main on University Avenue.

Initiatives

- Evaluate the cost-effectiveness and feasibility of 'fuel switching', or substituting electric using appliances for those using natural gas.
- Promote sustainable PaloAltoGreen Gas program with goals of 20% customer participation and 10% greenhouse gas reductions.
- Complete the development of a computer model to perform complex natural gas distribution system analyses.
- Expand efforts to compete for the \$5 million Georgetown University Energy Prize by saving energy (gas and electricity) in 2015 and 2016.
- Continue to enhance outreach for gas safety awareness to all customer groups, as well as non-customers, living around a gas pipeline and/or working with utility services in Palo Alto.

- Implementation of new residential and commercial efficiency programs.
- Launched new portal for residential customers to view their utilities usage for all commodities at one location.

Goals and Objectives

GOAL 1

Provide safe and efficient delivery of natural gas to our customers.

Objectives:

- Continue repairing 100 percent of laterals damaged by crossbore within 24 hours.
- Remove and replace the remaining acrylonitrile butadiene styrene (ABS) pipe from the gas system.
- Complete a walking gas leak survey for 50 percent of the City, and a mobile gas leak survey of services in business districts and 100 percent of the City's gas mains on an annual basis.

GOAL 2

Increase environmental sustainability and promote efficient use of natural gas resources.

Objectives:

- Ten-year goal for natural gas efficiency is a reduction in expected gas use of 2.85 percent by 2023.
- Reduce the carbon intensity of the gas portfolio in accordance with the Climate Protection Plan.

Key Performance Measures

GAS LEAKS REPAIRED

Goal	Provide safe and efficient delivery of natural gas to customers.				
Objective	Respond to and repair all Grade 1 gas leaks immediately.				
	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Percentage of Grade 1 leaks responded to within 24 hours	100.00%	100.00%	100.00%	100.00%	100.00%
Description	This measures the total response time to Grade 1 leaks found during the walking and mobile (vehicle) surveys, and any reported leaks classified as Grade 1. The City's policy is to respond and repair Grade 1 leaks within 24 hours. Grade 1 leaks are hazardous leaks that pose an immediate hazard to persons or property and require continuous action until conditions are no longer hazardous.				
Purpose	Leaks are assigned priority gradings according to location, extent of migration, gas concentration, potential for concentration, ignition sources, and potential hazard to the public and property. These priority grades are intended only as guidelines.				
Status	Utilities Operations responds immediately to Grade 1 leaks. The average repair time can vary depending on the size and location of the gas leak.				

UTILITIES

GAS SAFETY

Goal	Provide safe and efficient delivery of natural gas to our customers.				
Objective	Complete a walking gas leak survey for 50 percent of the City, and a mobile gas leak survey of services in business districts and 100 percent of the City's gas mains on an annual basis.				
	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Percentage of gas system surveyed by walking	100.00%	100.00%	100.00%	100.00%	100.00%
Percentage of gas system surveyed by mobile (vehicle)	100.00%	100.00%	100.00%	100.00%	100.00%
Description	A walking survey is conducted to check for gas leaks on service/gas meters and covers one-half of the City (approximately 105 miles of gas mains and 36 miles of service lines) every year, so that the entire City's gas service system can be reviewed in a two-year period. Department of Transportation (DOT) regulations require a survey of the entire City once every five years. The City of Palo Alto gas leak survey exceeds the DOT requirements. In addition to walking survey, a mobile (vehicle) survey of all gas mains and some gas service lines (services in the business district) are conducted annually.				
Purpose	To ensure the safety of all who live and work in Palo Alto and to comply with Federal (Department of Transportation) requirements.				
Status	We are meeting the requirements and repairing all discovered gas leaks in a timely manner.				

INCREASE ENVIRONMENTAL SUSTAINABILITY AND PROMOTE EFFICIENT USE OF NATURAL GAS RESOURCES

Goal	Support environmental sustainability and promote efficient use of natural gas resources.				
Objective	Ten-year goals for natural gas are a reduction in expected gas use of 2.85 percent by 2023 (2013 base year).				
	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Natural gas savings achieved annually through efficiency programs	1.20%	0.50%	0.90%	0.90%	0.55%
Description	We measure specific savings achieved from the installation of natural gas efficiency improvements, which we track through our rebate, audit, loan and other incentive programs. We can also track overall savings by customers class, which include behavioral changes, including those implemented as a results of programs such as the Home Energy Reports, which proved customers information on their energy use and can provide the with comparisons of their home's energy use to others nearby.				
Purpose	The carbon intensity of the natural gas portfolio is a function of where and how the gas is acquired and how much of it then burned in use. Improving gas efficiency directly reduces the gas-related carbon footprint in Palo Alto.				
Status	FY 2015 gas efficiency savings were well above the goal, but below the last two years. Nearly two thirds of the gas savings are attributed to the Home Energy Report program. As the cost of gas continued to decrease, we saw a decline in large commercial gas savings projects.				

Workload Measures

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Number of Customer Accounts (Gas)	23,592	23,461	23,659	23,659	23,659
Number of gas leaks repaired	137	100	131	131	100

Budget Summary

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Change %
Dollars by Division						
CIP Gas Fund	8,879,417	7,460,806	7,134,621	6,306,179	(828,443)	(11.6)%
Gas Administration	9,830,091	9,245,419	10,494,355	12,357,387	1,863,032	17.8%
Gas Customer Service	1,338,432	1,195,633	1,502,959	1,583,952	80,993	5.4%
Gas Demand Side Management	495,782	631,749	1,330,070	1,471,467	141,397	10.6%
Gas Engineering (Operating)	351,558	369,154	474,834	528,730	53,896	11.4%
Gas Operations and Maintenance	4,119,090	4,403,054	5,564,316	4,979,614	(584,703)	(10.5)%
Gas Resource Management	14,841,094	11,074,833	16,428,159	13,060,873	(3,367,286)	(20.5)%
Total	39,855,465	34,380,649	42,929,315	40,288,201	(2,641,113)	(6.2)%

Dollars by Category						
Salary & Benefits						
Healthcare	900,498	898,497	617,414	619,444	2,030	0.3%
Other Benefits	144,028	131,774	101,413	78,007	(23,406)	(23.1)%
Overtime	216,622	187,321	151,865	151,865	—	—%
Pension	996,793	837,860	816,062	905,019	88,957	10.9%
Retiree Medical	248,987	386,978	414,271	594,708	180,437	43.6%
Salary	3,060,672	3,143,294	3,224,270	3,448,611	224,342	7.0%
Workers' Compensation	55,939	43,214	47,300	62,988	15,688	33.2%
Total Salary & Benefits	5,623,538	5,628,938	5,372,595	5,860,642	488,047	9.1%
Allocated Charges	3,563,241	3,683,117	4,359,942	4,317,556	(42,386)	(1.0)%
Capital Improvement Program	7,574,629	6,098,939	6,771,382	6,306,179	(465,204)	(6.9)%
Contract Services	844,916	841,287	2,387,600	1,446,000	(941,600)	(39.4)%
Debt Service	281,866	265,519	802,615	802,615	—	—%
Equity Transfer	5,811,000	5,730,000	5,642,000	6,726,000	1,084,000	19.2%
Facilities & Equipment	—	—	19,790	19,790	—	—%

Budget Summary

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Change %
General Expense	385,362	522,091	748,161	780,361	32,200	4.3%
Operating Transfers-Out	472,318	150,635	137,659	484,066	346,407	251.6%
Rents & Leases	504,867	512,509	691,967	709,958	17,991	2.6%
Supplies & Material	334,773	428,429	464,114	498,034	33,920	7.3%
Transfer to Infrastructure	133,687	—	—	—	—	—%
Utility Purchase	14,325,269	10,519,185	15,531,489	12,337,000	(3,194,489)	(20.6)%
Total Dollars by Expense Category	39,855,466	34,380,648	42,929,314	40,288,201	(2,641,113)	(6.2)%

Revenues

Charges for Services	27,520	19,698	20,000	20,000	—	—%
Charges to Other Funds	120,157	96,316	202,542	208,104	5,562	2.7%
Net Sales	34,878,848	29,830,007	36,021,524	34,605,526	(1,416,002)	(3.9)%
Operating Transfers-In	151,330	8,221	—	—	—	—%
Other Revenue	745,576	787,248	668,000	1,030,000	362,000	54.2%
Return on Investments	644,722	499,912	526,300	526,300	—	—%
Total Revenues	36,568,153	31,241,400	37,438,366	36,389,930	(1,048,440)	(2.8)%

Positions by Division

CIP Gas Fund	17.12	17.10	17.10	17.10	—	—%
Gas Customer Service	9.52	9.61	8.41	8.78	0.37	4.40%
Gas Demand Side Management	0.34	0.34	0.34	1.34	1.00	294.12%
Gas Engineering (Operating)	1.40	1.40	1.15	1.40	0.25	21.74%
Gas Operations and Maintenance	22.70	22.07	22.38	22.43	0.05	0.22%
Gas Resource Management	2.28	2.28	2.77	1.65	(1.12)	(40.55)%
Total	53.36	52.80	52.16	52.70	0.54	1.04%

Staffing

Job Classification	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Salary
Account Specialist	0.26	0.26	0.26	0.23	(0.03)	14,287
Administrative Associate II	0.65	0.65	0.65	0.75	0.10	50,967

Staffing

Job Classification	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Salary
Assistant Director Administrative Services	0.10	0.10	0.10	0.05	(0.05)	9,709
Assistant Director Utilities Customer Support Services	0.20	0.20	0.20	0.20	—	33,471
Assistant Director Utilities Engineering	0.20	0.20	0.20	0.20	—	38,026
Assistant Director Utilities Operations	0.15	0.15	0.15	0.15	—	28,519
Assistant Director Utilities/Resource Management	0.25	0.25	0.25	0.25	—	52,811
Business Analyst	1.37	1.37	0.83	1.28	0.45	158,054
Cathodic Protection Technician Assistant	1.00	1.00	1.00	1.00	—	88,568
Cathodic Technician	1.00	1.00	1.00	1.00	—	108,734
Cement Finisher	0.25	0.25	0.25	0.25	—	19,867
Contracts Administrator	0.10	0.10	0.10	0.10	—	10,924
Coordinator Utilities Projects	1.31	1.51	1.51	1.26	(0.25)	120,495
Coordinator Utilities Safety & Security	0.20	—	—	—	—	—
Customer Service Representative	1.62	1.62	1.50	1.62	0.12	109,302
Customer Service Specialist	0.68	0.68	0.50	0.68	0.18	50,452
Customer Service Specialist-Lead	0.58	0.58	0.50	0.58	0.08	46,024
Engineer	2.00	2.00	2.00	2.00	—	207,968
Engineering Manager - Electric	0.15	0.15	0.15	0.15	—	24,479
Engineering Manager - WGW	0.33	0.33	0.33	0.33	—	51,884
Engineering Technician III	0.70	0.70	0.70	0.70	—	51,187
Equipment Operator	0.43	0.43	0.43	0.43	—	31,527
Gas System Technician	2.00	2.00	2.00	—	(2.00)	—
Gas Systems Technician II	0.90	0.90	0.90	2.90	2.00	236,998
Heavy Equipment Operator	2.57	2.57	2.57	2.52	(0.05)	208,466
Heavy Equipment Operator/Install Repair	—	—	—	0.65	0.65	59,324
Inspector, Field Services	1.17	1.17	1.17	1.42	0.25	128,320
Maintenance Mechanic-Welding	1.00	1.00	1.00	1.00	—	85,416
Manager Customer Service	—	—	0.33	0.33	—	42,721

UTILITIES

Staffing

Job Classification	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Salary
Manager Customer Service and Meter Reading	0.33	0.33	—	—	—	—
Manager Treasury, Debt & Investments	—	—	—	0.10	0.10	13,293
Manager Utilities Compliance	0.25	0.25	0.25	0.25	—	40,388
Manager Utilities Credit & Collection	0.15	0.15	0.15	0.15	—	19,609
Manager Utilities Marketing Services	0.20	0.20	0.20	—	(0.20)	—
Manager Utilities Operations WGW	0.20	0.20	0.20	0.20	—	31,212
Manager Utilities Program Services	—	—	—	0.20	0.20	24,402
Meter Reader	1.98	1.98	1.92	1.98	0.06	115,006
Meter Reader-Lead	0.33	0.33	0.32	0.33	0.01	22,324
Principal Business Analyst	—	—	0.33	0.33	—	46,270
Principal Management Analyst	—	0.33	—	—	—	—
Program Assistant I	0.33	0.33	0.33	0.33	—	19,192
Project Engineer	1.00	1.00	1.00	1.00	—	122,383
Resource Planner	1.15	1.15	0.95	0.65	(0.30)	78,220
Restoration Lead	0.43	0.43	0.43	0.43	—	37,677
SCADA Technologist	0.20	0.20	0.20	0.20	—	25,300
Senior Business Analyst	0.66	0.66	0.66	0.66	—	83,527
Senior Engineer	2.70	2.10	2.70	2.70	—	375,872
Senior Management Analyst	0.05	0.05	0.05	—	(0.05)	—
Senior Mechanic	0.33	0.33	0.33	0.33	—	31,829
Senior Project Engineer	—	0.60	—	—	—	—
Senior Resource Planner	0.46	0.46	0.77	0.45	(0.32)	64,751
Senior Technologist	0.29	0.29	—	—	—	—
Senior Utilities Field Service Representative	0.41	0.41	0.41	0.41	—	39,482
Substation Electrician	0.10	0.10	0.10	0.10	—	9,153
Supervisor Inspection Services	0.29	0.29	0.29	—	(0.29)	—
Utilities Engineer Estimator	0.85	0.85	0.85	0.85	—	90,621
Utilities Field Services Representative	1.75	1.75	1.75	1.75	—	151,608
Utilities Install Repair-Lead-Welding Certified	1.30	1.30	1.30	1.30	—	127,456

Staffing

Job Classification	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Salary
Utilities Install Repair-Welding Certified	1.95	1.95	1.95	1.95	—	167,371
Utilities Install/Repair	4.45	4.45	4.45	3.85	(0.60)	325,794
Utilities Install/Repair Assistant	0.65	0.65	0.65	0.65	—	42,609
Utilities Install/Repair-Lead	1.98	1.98	1.98	1.98	—	189,696
Utilities Key Account Representative	0.35	0.35	0.35	0.45	0.10	46,897
Utilities Locator	0.29	0.29	0.29	0.29	—	23,679
Utilities Marketing Program Administrator	0.35	0.35	0.35	0.70	0.35	62,765
Utilities Safety Officer	—	0.20	0.20	0.20	—	22,068
Utilities Supervisor	2.08	2.08	2.08	2.37	0.29	324,141
Water System Operator II	0.66	0.66	0.66	0.66	—	56,766
Sub-total: Full-Time Equivalent Positions	49.67	50.20	49.03	49.83	0.80	4,899,861
Temporary/Hourly	3.69	2.60	3.13	2.88	(0.26)	234,058
Total Positions	53.36	52.80	52.16	52.70	0.54	5,133,919

Budget Reconciliation

	Positions	Expenditures	Revenues	Net Gas Fund
Prior Year Budget	52.16	42,929,314	37,438,366	(5,490,948)
Base Adjustments				
One-Time Prior Year Expenditures and Revenues Deleted				
Cross-bore Inspection Contract	—	(1,000,000)	—	1,000,000
One-Time Prior Year Expenditures and Revenues	—	(1,000,000)	—	1,000,000
Adjustments to Costs of Ongoing Activities				
Salaries and Benefits Adjustments	0.54	260,600	—	(260,600)
Capital Improvement Program Adjustments	—	(465,203)	—	465,203
Gas Commodity Purchases Expenditure Adjustment	—	(3,194,489)	—	3,194,489
Rents and Leases Expenditure Adjustment	—	17,991	—	(17,991)
Hauling/Disposal of Construction Materials Contract Increase Expenditure Adjustment	—	50,000	—	(50,000)

Budget Reconciliation

	Positions	Expenditures	Revenues	Net Gas Fund
Debt Service Expenditure Adjustment	—	249,865	—	(249,865)
Equity Transfer to General Fund Expenditure Adjustment	—	1,084,000	—	(1,084,000)
Transfer to Technology Fund Expenditure Adjustment	—	179,780	—	(179,780)
Transfer to Electric Fund Expenditure Adjustment	—	136,335	—	(136,335)
Transfer to Water Fund Expenditure Adjustment	—	30,342	—	(30,342)
Palo Alto Green Gas Program Sales to City Revenue Adjustment	—	—	5,562	5,562
Gas Connection Fees Revenue Adjustment	—	—	362,000	362,000
Gas Sales Revenue Adjustment (Rate Increase, Consumption Decrease, Commodity Cost Decrease)	—	—	(1,415,998)	(1,415,998)
General Fund Cost Allocation Plan Charges Adjustment	—	(149,942)	—	149,942
General Liability Insurance Allocated Charges Adjustment	—	(36,635)	—	36,635
Print & Mail Allocated Charges Adjustment	—	(13,581)	—	13,581
Utilities Admin Allocated Charges Adjustment	—	91,108	—	(91,108)
Utility and Public Works Charges to City Allocated Charges Adjustment	—	13,744	—	(13,744)
Adjustments to Costs of Ongoing Activities	0.54	(1,746,085)	(1,048,436)	697,649
Total FY 2017 Base Budget	52.70	40,183,229	36,389,930	(3,793,299)
Budget Proposals				
1 Contract for Advisory Consultant for Gas and Water Operations	—	65,000	—	(65,000)
2 Reclassification of 2.0 FTE Gas System Technician I to 2.0 FTE Gas System Technician II	—	11,170	—	(11,170)
3 Reclassification of 2.0 FTE Heavy Equipment Operators, 1.0 FTE Installer Repairer and 1.0 FTE Assistant Installer Repairer to 4.0 FTE Heavy Equipment Operator/Installer-Repairer	—	3,256	—	(3,256)
4 Title Change, Manager, Utilities Marketing Services to Manager, Utility Program Services	—	0	—	0

Budget Reconciliation

	Positions	Expenditures	Revenues	Net Gas Fund
5 Reclassification of 1.0 FTE Senior Management Analyst to 1.0 FTE Utilities Strategic Business Manager	—	12,227	—	(12,227)
6 Reclassification of 1.0 FTE Coordinator, Utility Projects to 1.0 FTE Inspector, Field Services	—	(2,796)	—	2,796
7 Reclassification of 1.0 FTE Supervisor, Inspection Services to 1.0 FTE Utilities Supervisor	—	16,115	—	(16,115)
Budget Changes	—	104,972	—	(104,972)
Total FY 2017 Proposed Budget	52.70	40,288,201	36,389,930	(3,898,271)



Budget Adjustments

Budget Adjustments	Positions	Expenditures	Revenues	Net Gas Fund
1 Contract for Advisory Consultant for Gas and Water Operations	0.00	65,000	0	(65,000)

This action provides funding for an advisory consulting contract to assist with operational evaluations, updating master plans, create procedures for data collection and reporting to meet compliance requirements, and updating procedure manuals. This service has helped the Sewer Operations improve its processes and meet its compliance obligations. The Gas and Water Operations will benefit from the same type of support. (Ongoing: \$65,000)

Performance Results



The addition of these resources to the Gas and Water operation will increase operation efficiencies and help with compliance regulation.

2 Reclassification of 2.0 FTE Gas System Technician I to 2.0 FTE Gas System Technician II	0.00	11,170	0	(11,170)
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This action reclassifies 2.0 FTE Gas System Technician I's to 2.0 FTE Gas System Technician II's to more accurately reflect the duties and work requirements of the position.

Budget Adjustments

Budget Adjustments	Positions	Expenditures	Revenues	Net Gas Fund
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Performance Results

No impacts to current service levels are anticipated as a result of this position reclassification.

3 Reclassification of 2.0 FTE Heavy Equipment Operators, 1.0 FTE Installer Repairer and 1.0 FTE Assistant Installer Repairer to 4.0 FTE Heavy Equipment Operator/Installer-Repairer	0.00	3,256	0	(3,256)
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This action would create a new combo Heavy Equipment Operator / Installer-Repairer classification in the Heavy Equipment Operator and Installer-Repairer job families in the Water/Gas/Wastewater group. Currently there are separate sets of duties for heavy equipment operators and installer/repairers who work on the same water, gas, and sewer jobs. This proposal creates a combined position that would enable some employees to perform both sets of duties. This would increase productivity, provide greater flexibility during employee absences, and would provide more job development opportunities. 2.0 FTE Heavy Equipment Operator positions, 1.0 FTE Installer-Repairer, and 1.0 Assistant Installer-Repairer will be reclassified to 4.0 FTE Heavy Equipment Operator/Installer-Repairer positions. (Ongoing: \$3,256)

Performance Results



The position reclassifications reflect the current operational needs of the Water/Gas/Wastewater operation. This would increase productivity, provide greater flexibility during employee absences, and would provide more job development opportunities.

4 Title Change, Manager, Utilities Marketing Services to Manager, Utility Program Services	0.00	0	0	0
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This action amends the Table of Organization by retitling the Manager, Utilities Marketing Services to Manager, Utility Program Services in the Utilities Customer Service Support section to more accurately reflect the duties of the position. Utility Program Services is where customers can find answers regarding energy efficiency programs, green power programs, water efficiency programs, renewable energy programs, water and energy workshops, key account program and connecting to the City's commercial dark fiber backbone. (Ongoing: \$0)

Performance Results

No impacts to current service levels are anticipated as a result of this title change.

5 Reclassification of 1.0 FTE Senior Management Analyst to 1.0 FTE Utilities Strategic Business Manager	0.00	12,227	0	(12,227)
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This action amends the Table of Organization by reclassifying 1.0 Senior Management Analyst position to 1.0 FTE Utilities Strategic Business Manager position to more accurately reflect the duties of the position. Adopting this reclassification will make permanent the functions of a trial over-strength position created last year to serve in this capacity. This position guides improvements to internal processes, customer focused services, workforce development, and financial stability. This position will oversee Utilities strategic plan, operating and CIP budgets, technology roadmap, workforce development and succession program, and fiber policy. (Ongoing: \$12,227)

Performance Results

No impacts to current service levels are anticipated as a result of this title change.

6 Reclassification of 1.0 FTE Coordinator, Utility Projects to 1.0 FTE Inspector, Field Services	0.00	(2,796)	0	2,796
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Budget Adjustments

Budget Adjustments	Positions	Expenditures	Revenues	Net Gas Fund
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This action amends the Table of Organization by reclassifying 1.0 Coordinator Utility Projects to 1.0 Inspector Field Services to more accurately reflect the operational needs of the department. In FY 2013, Utilities reclassified one of three Inspector, Field Services positions to Supervisor, Inspection Services who would supervise, oversee, and ensure that all of the inspector's geospatial and pipe/fitting attribute data is consistently accurate, both from staff and contract inspectors and outside developers in compliance with Utilities Standards. As a result of the reclass, there are only two inspectors assigned to WGW Engineering to review project plans and verify contract work are in compliance with specifications. Based on the volume of plan reviews and inspections, Utilities is requesting to add back a third field service inspector. The supervision of the inspectors and oversight of the geospatial database will be reassigned to a Senior Engineer. (Ongoing Savings: \$2,796)

Performance Results

The position reclassifications reflect the current operational needs of the Electric/Water/Gas/Wastewater inspection services group.

7 Reclassification of 1.0 FTE Supervisor, Inspection Services to 1.0 FTE Utilities Supervisor	0.00	16,115	0	(16,115)
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This action reclassifies 1.0 FTE Supervisor, Inspection Services to 1.0 FTE Utilities Supervisor in the Operations Division. There is a need for coordination between the WGW and Electric businesses. The supervisor position will act as a bridge that will allocate resources across the Divisions. The position will also functionally be able to fill in for the operation supervisors positions and develop skills to assume the duties of the other supervisors upon their retirement, which is key to the Utilities succession planning efforts. (Ongoing: \$16,115)

Performance Results

The position reclassifications reflect the current operational needs of the Water/Gas/Wastewater & Electric operation. This would increase productivity, provide greater flexibility during employee absences, and would provide more job development opportunities.

WASTEWATER COLLECTION FUND

Description

In 1898, Palo Alto approved \$28,000 in bond money to fund construction of the City's first sewer network, which was completed in 1899. Private cesspools and privies were banned, and the City Health Officer had residents connected to the sewer system within a few years.

Wastewater Collection's staff is responsible for design, construction, operation, and maintenance of approximately 216 miles of sewer mains and over 18,000 City-owned laterals. Staff continues overlapping the design and construction elements of rehabilitation and augmentation projects. Wastewater Collection's priorities are: maintaining infrastructure reliability; identifying problems in mains and service laterals through expanded use of video technology; complying with all regulatory requirements; and maintaining its excellent safety record.

Accomplishments

- Surveyed, inspected, and cleaned 3,977 City-owned sewer laterals.
- Continued to minimize Sanitary Sewer Overflows (SSOs) by increasing preventive maintenance work on laterals and mains; reduced total number of SSOs by 22% in 2015 compared to 2014
- Repaired and/or replaced over 136 laterals with structural damage.
- Continue to develop the next phase of the Crossbore program to address partially inspected and uninspected laterals based on a prioritized list and available budget.
- Awarded contract for sanitary sewer replacement project SSR 24/25/26 and replaced 5,100 of the 42,000 linear feet of sanitary sewer mains in University South, Professorville, and Old Palo Alto neighborhoods to date.

- Completed the design of sanitary sewer replacement project SSR 27 to replace approximately 15,753 linear feet of wastewater main pipelines, 259 lateral pipelines, and 46 manholes.

Initiatives

- Implement a more aggressive sewer lateral replacement program as a result of the findings in the crossbore inspection program.
- Continue customer and plumber safety outreach about the importance of calling Utilities prior to clearing a sewer lateral to confirm no risk of crossbore.
- Reduce the total number of Sanitary Sewer Overflows (SSOs) by 5% annually per State Water Resources Control Board's requirement.
- Request proposals and procure a contractor to do Phase II of the Crossbore program to address high priority laterals.
- Replace aging sewer combination cleaning units with new units.
- Continue the multi-year construction of sanitary sewer replacement project SSR 24/25/26 to replace approximately 42,398 LF of wastewater main pipelines, 779 lateral pipelines, and 121 manholes.
- Award the contract and start the construction of sanitary sewer replacement project SSR 27 to replace approximately 15,753 LF of wastewater main pipelines, 259 lateral pipelines, and 46 manholes.

Goals and Objectives

GOAL 1

Maintain and provide reliable wastewater services to our customers.

Objectives:

- Clean and maintain 100 percent of the sewer mains in commercial area on a quarterly basis.
- Clean and video a minimum of 17 percent of the City-owned laterals annually, to comply with City's Sewer Overflow Reduction Plan.
- Maintain a low level of inflow and infiltration of saltwater into the City's wastewater system.
- Maintain the integrity of our wastewater collection system by replacing mains and laterals as identified on our Wastewater Collection System Rehabilitation/Augmentation Capital Improvement Project plan.
- Minimize Sanitary Sewer Overflows and stoppages.

Key Performance Measures

MAINTAIN AND PROVIDE RELIABLE SERVICES

Goal	Maintain and provide a reliable wastewater system to our customers				
Objective	Inspect and clean 100 percent of the sewer mains in commercial areas on a quarterly basis. Clean and video a minimum of 17 percent of the City-owned laterals annually to comply with City's Sewer Overflow Reduction Plan.				
	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Percent of miles of sewer lines cleaned/treated in a fiscal year	108.00%	61.00%	62.00%	63.00%	63.00%
Percentage of sewer laterals inspected annually	16.00%	22.00%	19.00%	18.00%	19.00%
Description	The purpose of the Sewer System Management Plan (SSMP) is to maintain and improve the condition of the collection system infrastructure; control infiltration and provide appropriate sewer capacity; and minimize the number and impact of sanitary sewer overflows. The goal is to perform sewer main cleaning of the entire collection system every 30 months (81.6 miles per year). This measures inspections and maintenance of 17 percent of City-owned laterals annually using closed-circuit television (CCTV) inspection data, including results of the on-going crossbore lateral inspection program, to target sewer mains and lower laterals for rehabilitation and replacement.				
Purpose	To prevent blockage, sewer overflows, and to comply with the City's Sanitary Sewer Management Plan (SSMP), all the City's sewer mains must be cleaned within 30 months.				
Status	The City is meeting the objectives of its Sanitary Sewer Management Plan, and through the implementation of an aggressive sewer main cleaning, the number of blockages and overflows have decreased. WGW Operations is on target to complete inspection of 17% or 3,108 laterals of 18,141 in the City.				

Workload Measures

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Number of Customer Accounts (Wastewater)	22,105	22,241	22,174	22,174	22,174
Number of sewage overflows in a fiscal year	105	96	65	72	64
Percent of sewage spill and line blockage responses within two hours	98.00%	97.00%	100.00%	100.00%	100.00%
Percent of surveyed residents rating the quality of the Sewer Service as good/excellent	89.00%	83.00%	88.00%	88.00%	88.00%
Percent of miles of sewer lines replaced	3.00%	3.00%	2.00%	1.76%	1.94%

Budget Summary

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Change %
Dollars by Division						
CIP Wastewater Collection Fund	5,074,880	3,090,810	6,055,611	4,827,281	(1,228,330)	(20.3)%
Wastewater Collection Administration	1,701,786	1,454,325	2,562,518	2,696,774	134,256	5.2%
Wastewater Collection Customer Service	132,713	(323,934)	353,076	271,245	(81,831)	(23.2)%
Wastewater Collection Engineering (Operating)	310,374	318,560	391,212	447,371	56,159	14.4%
Wastewater Collection Operations and Maintenance	9,432,600	11,423,074	11,566,762	13,430,249	1,863,487	16.1%
Total	16,652,353	15,962,835	20,929,179	21,672,920	743,741	3.6%
Dollars by Category						
Salary & Benefits						
Healthcare	533,024	539,838	307,130	325,781	18,651	6.1%
Other Benefits	78,231	70,690	40,593	34,417	(6,177)	(15.2)%
Overtime	152,654	146,040	47,554	47,554	—	—%
Pension	558,324	469,096	399,983	426,797	26,814	6.7%
Retiree Medical	86,804	70,919	80,385	136,521	56,136	69.8%
Salary	1,427,205	1,122,447	1,548,070	1,606,009	57,939	3.7%
Workers' Compensation	26,416	18,019	22,339	35,739	13,400	60.0%
Total Salary & Benefits	2,862,659	2,437,050	2,446,054	2,612,817	166,762	6.8%
Allocated Charges	1,953,415	2,184,449	2,579,841	2,814,147	234,306	9.1%
Capital Improvement Program	3,936,230	1,642,939	5,955,478	4,827,281	(1,128,197)	(18.9)%
Contract Services	154,427	86,187	250,990	247,640	(3,350)	(1.3)%
Debt Service	54,376	50,663	129,001	129,001	—	—%
Facilities & Equipment	20	—	3,000	3,000	—	—%
General Expense	73,112	75,022	107,100	122,160	15,060	14.1%
Operating Transfers-Out	107,522	119,173	107,078	285,689	178,611	166.8%
Rents & Leases	269,221	276,107	380,741	390,039	9,298	2.4%
Supplies & Material	244,812	314,451	342,870	386,120	43,250	12.6%
Transfer to Infrastructure	133,687	—	—	—	—	—%

Budget Summary

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Change %
Utility Purchase	6,862,872	8,776,795	8,627,026	9,855,026	1,228,000	14.23%
Total Dollars by Expense Category	16,652,352	15,962,835	20,929,179	21,672,920	743,741	3.55%
Revenues						
Charges for Services	18,121	23,042	10,000	10,000	—	—%
Charges to Other Funds	30,107	30,107	30,107	30,107	—	—%
Net Sales	15,877,228	15,494,811	17,064,999	17,947,509	882,510	5.2%
Operating Transfers-In	42,242	4,467	—	—	—	—%
Other Revenue	696,908	1,251,859	652,000	1,046,000	394,000	60.4%
Return on Investments	309,139	323,123	266,500	266,500	—	—%
Total Revenues	16,973,745	17,127,410	18,023,605	19,300,115	1,276,510	7.1%
Positions by Division						
CIP Wastewater Collection Fund	13.34	13.00	12.52	12.52	—	—%
Wastewater Collection Customer Service	2.47	2.47	3.06	2.19	(0.87)	(28.48)%
Wastewater Collection Engineering (Operating)	1.40	1.40	1.15	1.40	0.25	21.74%
Wastewater Collection Operations and Maintenance	13.01	12.70	13.02	13.06	0.04	0.34%
Total	30.22	29.57	29.74	29.17	(0.58)	(1.93)%

Staffing

Job Classification	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Salary
Account Specialist	0.25	0.25	0.25	0.23	(0.02)	14,287
Administrative Associate II	0.40	0.40	0.40	0.40	—	27,183
Assistant Director Utilities Engineering	0.15	0.15	0.15	0.15	—	28,519
Assistant Director Utilities Operations	0.10	0.10	0.10	0.10	—	19,013
Associate Engineer	0.50	0.50	0.50	—	(0.50)	—
Business Analyst	0.75	0.75	0.50	0.75	0.25	91,357

Staffing

Job Classification	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Salary
Cement Finisher	0.50	0.50	0.50	0.50	—	39,734
Contracts Administrator	0.05	0.05	0.05	0.05	—	5,462
Coordinator Utilities Projects	1.25	1.35	1.35	1.10	(0.25)	106,341
Coordinator Utilities Safety & Security	0.10	—	—	—	—	—
Customer Service Representative	1.20	1.20	1.38	1.20	(0.18)	80,964
Customer Service Specialist	—	—	0.46	—	(0.46)	—
Customer Service Specialist-Lead	0.25	0.25	0.46	0.25	(0.21)	19,838
Engineer	1.00	1.00	1.00	1.00	—	113,706
Engineering Manager - Electric	0.15	0.15	0.15	0.15	—	24,479
Engineering Manager - WGW	0.34	0.34	0.34	0.34	—	53,457
Engineering Technician III	0.45	0.45	0.45	0.45	—	33,808
Equipment Operator	0.26	0.26	0.26	0.26	—	19,062
Heavy Equipment Operator	2.13	2.13	2.13	0.23	(1.90)	18,383
Heavy Equipment Operator/Install Repair	—	—	—	3.15	3.15	271,895
Industrial Waste Investigator	—	—	—	0.50	0.50	46,585
Inspector, Field Services	1.43	1.43	1.43	1.68	0.25	151,816
Maintenance Mechanic-Welding	0.20	0.20	0.20	0.20	—	17,082
Manager Utilities Credit & Collection	0.15	0.15	0.15	0.15	—	19,609
Manager Utilities Operations WGW	0.30	0.30	0.30	0.30	—	46,818
Program Assistant I	0.34	0.34	0.34	0.34	—	19,774
Project Engineer	2.00	2.00	2.00	2.00	—	214,243
Restoration Lead	0.26	0.26	0.26	0.26	—	22,781
Senior Engineer	1.30	1.15	1.30	1.30	—	184,805
Senior Mechanic	0.33	0.33	0.33	0.33	—	31,829
Senior Project Engineer	—	0.15	—	—	—	—
Supervisor Inspection Services	0.42	0.42	0.42	—	(0.42)	—
Utilities Engineer Estimator	0.47	0.47	0.47	0.47	—	50,011
Utilities Field Services Representative	1.25	1.25	1.25	1.25	—	108,290
Utilities Install Repair-Lead-Welding Certified	0.24	0.24	0.24	0.24	—	23,530

UTILITIES

Staffing

Job Classification	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Salary
Utilities Install Repair-Welding Certified	0.36	0.36	0.36	0.36	—	30,898
Utilities Install/Repair	5.50	5.50	5.50	4.25	(1.25)	347,881
Utilities Install/Repair-Lead	2.00	2.00	2.00	2.00	—	191,610
Utilities Locator	0.39	0.39	0.39	0.39	—	31,942
Utilities Safety Officer	—	0.10	0.10	0.10	—	11,034
Utilities Supervisor	1.30	1.30	1.30	1.72	0.42	233,872
Sub-total: Full-Time Equivalent Positions	28.07	28.17	28.77	28.15	(0.62)	2,751,898
Temporary/Hourly	2.15	1.40	0.98	1.02	0.04	65,510
Total Positions	30.22	29.57	29.74	29.17	(0.58)	2,817,408

Budget Reconciliation

	Positions	Expenditures	Revenues	Net Wastewater Collection Fund
Prior Year Budget	29.74	20,929,179	18,023,605	(2,905,574)
Adjustments to Costs of Ongoing Activities				
Salaries and Benefits Adjustments	(0.58)	119,169	—	(119,169)
Capital Improvement Program Adjustments	—	(1,128,197)	—	1,128,197
Rents and Leases Expenditure Adjustment	—	9,298	—	(9,298)
Off-hauling/Disposal of Materials Cost Adjustments	—	50,000	—	(50,000)
Wastewater Treatment Purchases Expenditure Adjustment	—	1,228,000	—	(1,228,000)
Transfer Out to Technology Fund Expenditure Adjustment	—	148,268	—	(148,268)
Transfer Out to Water Fund Expenditure Adjustment	—	30,343	—	(30,343)
Wastewater Treatment Sales Revenue Adjustment (Rate Increase 9%)	—	—	882,510	882,510
Wastewater Connection Fees Revenue Adjustment	—	—	394,000	394,000
Utilities and Public Works Charges to City Allocated Charges Adjustment	—	235,247	—	(235,247)

Budget Reconciliation

	Positions	Expenditures	Revenues	Net Wastewater Collection Fund
General Fund Cost Allocation Plan Charges Adjustment	—	(150,584)	—	150,584
General Liability Insurance Allocated Charges Adjustment	—	(30,585)	—	30,585
Print & Mail Allocated Charges Adjustment	—	(4,596)	—	4,596
Utilities Admin Allocated Charges Adjustment	—	35,806	—	(35,806)
Vehicle Fund Allocated Charges Adjustment	—	149,017	—	(149,017)
Adjustments to Costs of Ongoing Activities	(0.58)	691,186	1,276,510	585,324
Total FY 2017 Base Budget	29.17	21,620,365	19,300,115	(2,320,250)
Budget Proposals				
1 Reclassification of 2.0 FTE Heavy Equipment Operators, 1.0 FTE Installer Repairer and 1.0 FTE Assistant Installer Repairer to 4.0 FTE Heavy Equipment Operator/Installer-Repairer	—	25,244	—	(25,244)
2 Reclassification of 1.0 FTE Senior Management Analyst to 1.0 FTE Utilities Strategic Business Manager	—	6,768	—	(6,768)
3 Reclassification of 1.0 FTE Coordinator Utility Projects to 1.0 FTE Inspector Field Services	—	(2,796)	—	2,796
4 Reclassification of 1.0 FTE Supervisor, Inspection Services to 1.0 FTE Utilities Supervisor	—	23,339	—	(23,339)
Budget Changes	—	52,555	—	(52,555)
Total FY 2017 Proposed Budget	29.17	21,672,920	19,300,115	(2,372,805)

Budget Adjustments

Budget Adjustments	Positions	Expenditures	Revenues	Net Wastewater Collection Fund
1 Reclassification of 2.0 FTE Heavy Equipment Operators, 1.0 FTE Installer Repairer and 1.0 FTE Assistant Installer Repairer to 4.0 FTE Heavy Equipment Operator/Installer-Repairer	0.00	25,244	0	(25,244)

This action would create a new combo Heavy Equipment Operator/Installer-Repairer classification in the Heavy Equipment Operator and Installer-Repairer job families in the Water/Gas/Wastewater group. Currently there are separate sets of duties for heavy equipment operators and installer-repairers who work on the same water, gas, and sewer jobs. This proposal creates a combined position that would enable some employees to perform both sets of duties. This would increase productivity, provide greater flexibility during employee absences, and would provide more job development opportunities. 2.0 FTE Heavy Equipment Operator positions, 1.0 FTE Installer-Repairer, and 1.0 Assistant Installer-Repairer will be reclassified to 4.0 FTE Heavy Equipment Operator/Installer-Repairer positions. (Ongoing: \$1,216)

Performance Results



The position reclassifications reflect the current operational needs of the Water/Gas/Wastewater operation. This would increase productivity, provide greater flexibility during employee absences, and would provide more job development opportunities.

2 Reclassification of 1.0 FTE Sr. Management Analyst to 1.0 FTE Strategic Business Manager	0.00	6,768	0	(6,768)
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This action amends the Table of Organization by reclassifying 1.0 Senior Management Analyst position to 1.0 FTE Utilities Strategic Business Manager position to more accurately reflect the duties of the position. Adopting this reclassification will make permanent the functions of a trial over-strength position created last year to serve in this capacity. This position guides improvements to internal processes, customer focused services, workforce development, and financial stability. This position will oversee Utilities strategic plan, operating and CIP budgets, technology roadmap, workforce development and succession program, and fiber policy. (Ongoing: \$6,768)

Performance Results

No impacts to current service levels are anticipated as a result of this title change.

3 Reclassification of 1.0 FTE Coordinator Utility Projects to 1.0 FTE Inspector Field Services	0.00	(2,796)	0	2,796
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This action amends the Table of Organization by reclassifying 1.0 Coordinator Utility Projects to 1.0 Inspector Field Services to more accurately reflect the operational needs of the department. In FY 2013, Utilities reclassified one of three Inspector, Field Services positions to Supervisor, Inspection Services who would supervise, oversee, and ensure that all of the inspector's geospatial and pipe/fitting attribute data is consistently accurate, both from staff and contract inspectors and outside developers in compliance with Utilities Standards. As a result of the reclass, there are only two inspectors assigned to WGW Engineering to review project plans and verify contract work are in compliance with specifications. Based on the volume of plan reviews and inspections, Utilities is requesting to add back a third field service inspector. The supervision of the inspectors and oversight of the geospatial database will be reassigned to a Senior Engineer. (Ongoing Savings: \$2,796)

Performance Results

Budget Adjustments

Budget Adjustments	Positions	Expenditures	Revenues	Net Wastewater Collection Fund
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The position reclassifications reflect the current operational needs of the Electric/Water/Gas/Wastewater inspection services group.

4 Reclassification of 1.0 FTE Supervisor, Inspection Services to 1.0 FTE Utilities Supervisor	0.00	23,339	0	(23,339)
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This action reclassifies 1.0 FTE Supervisor, Inspection Services to 1.0 FTE Utilities Supervisor in the Operations Division. There is a need for coordination between the WGW and Electric businesses. The supervisor position will act as a bridge that will allocate resources across the Divisions. The position will also functionally be able to fill in for the operation supervisors positions and develop skills to assume the duties of the other supervisors upon their retirement, which is key to the Utilities succession planning efforts. (Ongoing: \$23,339)

Performance Results

The position reclassifications reflect the current operational needs of the Water/Gas/Wastewater & Electric operation. This would increase productivity, provide greater flexibility during employee absences, and would provide more job development opportunities.

WATER FUND

Description

From 1895 until 1928, the City's water supply came from deep wells. When the groundwater supply started to decline, water was purchased from the San Francisco Regional Water System to supplement the local water system. Since 1962, when Palo Alto's wells were discontinued as the primary water system, 100 percent of the water has come from the Regional Water System: 85 percent derived from snow melt flowing into the Hetch Hetchy Reservoir and the balance from runoff stored in San Francisco Bay Area reservoirs. The Water Fund focuses on increasing infrastructure reliability and responsiveness to meet the City's water supply needs during an emergency; maintaining high-quality and reliable sources of water; updating water efficiency goals; and implementing water efficiency programs and services. Additionally, Engineering is implementing a seismic upgrade to the existing reservoirs, wells and receiving stations to increase supply reliability during catastrophic emergencies.

Accomplishments

- Achieved drought water savings substantially in excess of the 24% water use reduction mandated by the State Water Resources Control Board.
- Led citywide drought response initiative including water conservation education and water use restriction enforcement.
- Completed the 2015 Urban Water Management Plan.
- Certified the environmental impact report for the expansion of the recycled water system to deliver recycled water to City parks and the Stanford Research Park.
- Completed the Water distribution system seismic evaluation and condition assessment master study to determine the reliability of water system and seismic stability of water pipelines in the Foothills. Pipeline improvements recommended from this study will be included in future capital improvement projects.

- Completed the construction of original scope of water main replacement project WMR 25 to replace approximately 12,000 LF of water main pipelines, 225 service pipelines, and 16 fire hydrants. Currently the contractor is working on the additional scope on Hopkins Avenue.

Initiatives

- Complete the business plan to evaluate the potential expansion of the recycled water system to deliver recycled water to City parks and the Stanford Research Park.
- Work with Public Works to complete the Recycled Water Strategic Plan, a comprehensive evaluation of all potential recycled water supply options including nonpotable reuse, indirect and direct potable reuse, on-site treatment and use, storm water use, and groundwater.
- Complete an assessment of potential potable water supplies.
- Respond to drought regulations and implement the Urban Water Shortage Contingency Plan to meet usage reduction targets.
- Complete the construction of Boronda Reservoir concrete water tank rehabilitation by removing the old steel tension cable and rewinding with new cable and shotcrete.
- Assess the current condition of water reservoirs in the Foothills and identify structural integrity issues. Determine the feasibility and cost effectiveness of alternatives to address the structural integrity issues. Develop a work plan to retrofit the existing reservoirs or to build new reservoirs.
- Complete the design of water main replacement project WMR 26 to replace approximately 10,629 water main pipelines, 174 service pipelines, and 40 fire hydrants.
- Continue the multi-year construction for seismic upgrade of 2 water steel tanks and 3 turnouts.
- Initiated two pilot programs with grants from the Santa Clara Valley Water District (SCVWD). One to develop Business Water Reports for restaurants and hotels and another to install real-time water meters for City facilities and selected commercial properties.

Goals and Objectives

GOAL 1

Provide safe and clean drinking water for our customers.

Objectives:

- Ensure drinking water meets all regulatory standards.
- Maintain and update water infrastructure to ensure reliable service.
- Educate customers about backflow prevention as part of the City's Cross Connection Control Program.
- Ensure adequate water supplies are available to meet existing and future water demands.
- Complete seismic upgrades to water system (reservoirs, receiving stations and wells).

GOAL 2

Increase environmental sustainability of the water supply system.

Objective:

- Increase water conservation and efficiency participation.
- Develop updated long-term water efficiency goals as part of the 2015 Urban Water Management Plan update.
- Evaluate expanding the recycled water delivery system to help drought-proof the system, reuse local water supplies, and reduce the City's dependence on the Tuolumne River.

Key Performance Measures

PROVIDE SAFE AND CLEAN DRINKING WATER FOR OUR CUSTOMERS

Goal	Provide safe and clean drinking water for our customers.				
Objective	Ensure drinking water meets all regulatory standards.				
	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Percentage of customer-owned water backflow prevention devices in compliance	96.00%	94.00%	90.00%	94.00%	94.00%
Description	Customer-owned and maintained backflow devices are an integral part of the City's Cross Connection Control Program which began in early 2010. The devices help to ensure that no contaminants of any kind (e.g., chemicals, debris, reclaimed water) enter the potable water system.				
Purpose	The California Department of Public Health Services provides regulations for the City and our customers through California Code of Regulations, Title 17. These regulations specify the types of hazards that require backflow devices.				
Status	We are achieving a compliance rate of up to 95-96 percent on an annual basis. There are 3,330 backflow devices. This number is growing every year as current codes require backflow installation for residences as well as Commercial properties.				

WATER EFFICIENCY

Goal	Increase environmental sustainability of the water supply system.				
Objective	Increase water conservation and efficiency participation.				
	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Water savings achieved through efficiency programs.	0.64%	0.91%	0.91%	0.91%	0.91%
Description	We measure specific savings achieved by the installation of water efficiency improvements through methods we can track: our rebate, audit, loan and other incentive programs. We can also track overall savings by customer class, which include behavioral changes, including those implemented as a result of programs such as the Home Water Reports, which provide customers tools to enable them to manage their own water use.				
Purpose	Improving water efficiency for homes and businesses can result in water supply, water operations and wastewater processing savings. This measure supports the Water Fund's ten-year goals for water, to reduce expected water use by 20 percent by 2020.				
Status	Water efficiency program savings were significantly higher in FY 2015 compared to FY 2014 due to the California drought and the Governor's Executive Order mandating water conservation. In order to meet local water restrictions, both CPAU and the SCVWD doubled their landscape rebates, resulting in a program that was very popular and resulted in substantial water savings.				

WATER QUALITY

Goal	Ensure the provision of safe and clean drinking water for our customers.				
Objective	Safe testing of drinking water to meet all regulatory standards.				
	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Percentage of samples passed from all sampling stations	100.00%	100.00%	100.00%	100.00%	100.00%
Description	The City of Palo Alto (CPA) regularly collects and tests water samples from connection points between the San Francisco Public Utilities Commission/City of Palo Alto (SFPUC/CPA), storage reservoirs, emergency wells, residential, and sample station locations within the distribution system to ensure that the water quality meets all California Department of Public Health (CDPH) and U.S. Environmental Protection Agency (EPA) prescribed regulations that limit the amount of contaminants in the drinking water. The City has 18 sampling stations and collects 84-105 samples monthly to test levels of chlorine residual, coliform and pH levels are within regulatory guidelines. All sample results are reported to CDPH on a monthly basis.				
Purpose	Complying with regulations guarantees we maintain our high standards of water quality and avoid fines.				
Status	Palo Alto drinking water continues to be in complete compliance with all existing county, state, and federal standards for water quality.				

Workload Measures

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted	FY 2016 Estimated	FY 2017 Proposed
Percent of miles of water mains replaced	0.10%	0.00%	0.00%	1.00%	0.90%
Number of customer accounts (Water)	20,087	22,421	19,638	19,638	19,638
Percent of surveyed rating the quality of the Drinking Water (Water) as "Good" or "Excellent"	89.00%	83.00%	88.00%	88.00%	88.00%

Budget Summary

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Change %
Dollars by Division						
CIP Water Fund	8,088,995	4,313,935	10,288,169	9,596,570	(691,599)	(6.7)%
Water Administration	7,003,097	6,528,352	8,135,564	8,626,159	490,595	6.0%
Water Customer Service	1,677,926	1,821,447	2,002,659	2,095,208	92,550	4.6%
Water Engineering (Operating)	391,143	358,128	447,404	504,489	57,085	12.8%
Water Operations and Maintenance	4,986,274	5,283,426	6,345,288	6,866,562	521,275	8.2%
Water Resource Management	16,275,328	16,158,265	20,832,529	19,861,067	(971,460)	(4.7)%
Total	38,422,765	34,463,553	48,051,611	47,550,056	(501,555)	(1.0)%
Dollars by Category						
Salary & Benefits						
Healthcare	765,018	759,274	677,040	709,498	32,458	4.8%
Other Benefits	122,185	108,612	102,592	90,606	(11,986)	(11.7)%
Overtime	206,398	187,046	168,764	168,764	—	—%
Pension	934,755	787,607	894,784	1,073,736	178,953	20.0%
Retiree Medical	304,426	221,560	247,218	285,198	37,980	15.4%
Salary	3,645,983	3,850,986	3,541,733	4,075,232	533,499	15.1%
Workers' Compensation	123,393	76,724	104,320	57,907	(46,413)	(44.5)%
Total Salary & Benefits	6,102,157	5,991,809	5,736,450	6,460,942	724,492	12.6%
Allocated Charges	3,444,985	3,633,073	4,035,313	4,161,168	125,856	3.1%
Capital Improvement Program	7,307,830	3,378,101	10,199,498	9,596,570	(602,928)	(5.9)%
Contract Services	373,478	728,992	682,006	827,806	145,800	21.4%
Debt Service	1,906,221	1,863,964	3,222,606	3,222,606	—	—%

Budget Summary

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Change %
Facilities & Equipment	—	286	2,000	2,000	—	—%
General Expense	385,806	366,062	547,927	568,146	20,220	3.7%
Operating Transfers-Out	388,596	63,612	27,381	324,306	296,925	1,084.4%
Rents & Leases	2,274,743	2,329,829	2,803,606	2,876,500	72,894	2.6%
Supplies & Material	392,244	437,889	566,860	610,010	43,150	7.6%
Transfer to Infrastructure	141,415	—	—	—	—	—%
Utility Purchase	15,705,288	15,669,935	20,227,965	18,900,000	(1,327,964)	(6.6)%
Total Dollars by Expense Category	38,422,763	34,463,554	48,051,611	47,550,055	(501,556)	(1.0)%

Revenues						
Charges for Services	75,405	45,184	10,000	10,000	—	—%
Charges to Other Funds	187,352	160,528	154,958	154,958	—	—%
From Other Agencies	549,014	534,328	576,632	576,632	—	—%
Net Sales	39,876,751	34,862,279	39,446,148	39,346,148	(100,000)	(0.3)%
Operating Transfers-In	271,221	191,525	183,333	244,018	60,685	33.1%
Other Revenue	1,008,630	2,002,342	857,000	878,000	21,000	2.5%
Return on Investments	831,506	792,652	775,300	775,300	—	—%
Total Revenues	42,799,880	38,588,839	42,003,371	41,985,056	(18,315)	(0.0)%

Positions by Division						
CIP Water Fund	9.65	9.53	9.05	9.05	—	—%
Water Customer Service	10.47	10.80	9.01	9.68	0.67	7.44%
Water Engineering (Operating)	1.37	1.37	1.12	1.37	0.25	22.32%
Water Operations and Maintenance	24.98	24.97	25.44	25.44	—	0.02%
Water Resource Management	1.71	1.71	1.53	3.03	1.50	97.98%
Total	48.18	48.38	46.15	48.58	2.43	5.26%

Staffing

Job Classification	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Salary
Account Specialist	0.25	0.25	0.25	0.23	(0.02)	14,287

UTILITIES

Staffing

Job Classification	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Salary
Administrative Associate II	0.85	0.85	0.85	0.75	(0.10)	50,967
Assistant Director Utilities Customer Support Services	0.20	0.20	0.20	0.20	—	33,471
Assistant Director Utilities Engineering	0.20	0.20	0.20	0.20	—	38,026
Assistant Director Utilities Operations	0.15	0.15	0.15	0.15	—	28,519
Assistant Director Utilities/ Resource Management	0.25	0.25	0.25	0.25	—	52,811
Business Analyst	1.62	1.62	1.68	1.73	0.05	214,446
Cement Finisher	0.25	0.25	0.25	0.25	—	19,867
Contracts Administrator	0.10	0.10	0.10	0.10	—	10,924
Coordinator Utilities Projects	1.19	1.34	1.34	1.09	(0.25)	104,589
Coordinator Utilities Safety & Security	0.15	—	—	—	—	—
Customer Service Representative	1.56	1.56	1.26	1.56	0.30	105,258
Customer Service Specialist	0.66	0.66	0.42	0.66	0.24	48,968
Customer Service Specialist-Lead	0.59	0.59	0.42	0.59	0.17	46,817
Engineer	1.00	1.00	1.00	1.00	—	113,705
Engineering Manager - Electric	0.15	0.15	0.15	0.15	—	24,479
Engineering Manager - WGW	0.33	0.33	0.33	0.33	—	51,884
Engineering Technician III	0.45	0.45	0.45	1.45	1.00	102,106
Equipment Operator	0.31	0.31	0.31	0.31	—	22,728
Gas Systems Technician II	0.10	0.10	0.10	0.10	—	8,420
Heavy Equipment Operator	2.00	2.00	2.00	1.95	(0.05)	161,179
Heavy Equipment Operator/Install Repair	—	—	—	0.20	0.20	18,253
Inspector, Field Services	1.40	1.40	1.40	1.65	0.25	149,104
Maintenance Mechanic-Welding	0.80	0.80	0.80	0.80	—	68,332
Manager Customer Service	—	—	0.34	0.34	—	44,016
Manager Customer Service and Meter Reading	0.34	0.34	—	—	—	—
Manager Utilities Compliance	0.50	0.50	0.50	0.50	—	80,776
Manager Utilities Credit & Collection	0.15	0.15	0.15	0.15	—	19,609

Staffing

Job Classification	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Salary
Manager Utilities Marketing Services	0.20	0.20	0.20	—	(0.20)	—
Manager Utilities Operations WG	0.50	0.50	0.50	0.50	—	78,030
Manager Utilities Program Services	—	—	—	0.20	0.20	24,402
Meter Reader	2.03	2.03	1.67	2.03	0.36	117,860
Meter Reader-Lead	0.34	0.34	0.28	0.34	0.06	23,000
Planner	0.15	0.15	—	—	—	—
Power Engineer	0.30	0.30	0.30	0.30	—	36,416
Principal Business Analyst	—	—	0.33	0.33	—	46,270
Principal Management Analyst	—	0.33	—	—	—	—
Program Assistant I	0.33	0.33	0.33	0.33	—	19,192
Project Engineer	2.00	2.00	2.00	2.00	—	244,767
Resource Planner	0.20	0.20	0.10	0.70	0.60	84,156
Restoration Lead	0.31	0.31	0.31	0.31	—	27,162
SCADA Technologist	0.80	0.80	0.80	0.80	—	101,200
Senior Business Analyst	0.66	0.66	0.66	0.66	—	83,527
Senior Engineer	1.00	0.75	1.00	1.00	—	139,127
Senior Mechanic	0.34	0.34	0.34	0.34	—	32,793
Senior Project Engineer	—	0.25	—	—	—	—
Senior Resource Planner	1.05	1.05	0.55	1.69	1.14	246,113
Senior Technologist	0.29	0.29	—	—	—	—
Senior Utilities Field Service Representative	0.49	0.49	0.49	0.49	—	47,186
Senior Water Systems Operator	2.00	2.00	2.00	2.00	—	195,094
Substation Electrician	0.40	0.40	0.40	0.40	—	36,612
Supervisor Inspection Services	0.29	0.29	0.29	—	(0.29)	—
Utilities Engineer Estimator	0.43	0.43	0.43	0.43	—	45,736
Utilities Field Services Representative	1.50	1.50	1.50	1.50	—	129,949
Utilities Install Repair-Lead-Welding Certified	0.46	0.46	0.46	0.46	—	45,100
Utilities Install Repair-Welding Certified	0.69	0.69	0.69	0.69	—	59,222
Utilities Install/Repair	2.05	2.05	2.05	1.90	(0.15)	160,994
Utilities Install/Repair Assistant	0.35	0.35	0.35	0.35	—	22,942

UTILITIES

Staffing

Job Classification	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change \$	FY 2017 Salary
Utilities Install/Repair-Lead	1.02	1.02	1.02	1.02	—	97,719
Utilities Key Account Representative	0.15	0.15	0.15	0.25	0.10	26,014
Utilities Locator	0.34	0.34	0.34	0.34	—	27,811
Utilities Marketing Program Administrator	1.00	1.00	0.40	0.40	—	39,637
Utilities Safety Officer	—	0.15	0.15	0.15	—	16,551
Utilities Supervisor	2.62	2.62	2.62	2.91	0.29	398,499
Water Meter Cross Connection Technician	2.00	2.00	2.00	—	(2.00)	—
Water System Operator I	—	—	—	1.00	1.00	66,846
Water System Operator II	3.34	3.34	3.34	3.34	—	280,963
Sub-total: Full-Time Equivalent Positions	45.18	45.66	42.95	45.85	2.90	4,634,431
Temporary/Hourly	3.00	2.72	3.21	2.73	(0.47)	217,144
Total Positions	48.18	48.38	46.15	48.58	2.43	4,851,575

Budget Reconciliation

	Positions	Expenditures	Revenues	Net Water Fund
Prior Year Budget	46.15	48,043,985	42,003,371	(6,040,614)
Adjustments to Costs of Ongoing Activities				
Salaries and Benefits Adjustments	2.43	623,683	—	(623,683)
Capital Improvement Program Expenditure Adjustments	—	(602,928)	—	602,928
Water Commodity Purchases Expenditure Adjustments	—	(1,327,965)	—	1,327,965
Transfer Out to Electric Fund Expenditure Adjustment	—	136,335	—	—
Transfer Out to Technology Fund Expenditure Adjustment	—	160,590	—	(160,590)
Contract Services for Large Water Meter Calibration Cost Adjustments	—	85,000	—	(85,000)
Off-hauling/Disposal of Materials Cost Adjustments	—	50,000	—	(50,000)
Rents and Leases Expenditure Adjustment	—	72,894	—	(72,894)

Budget Reconciliation

	Positions	Expenditures	Revenues	Net Water Fund
Water Utility Sales to the City Revenue Adjustment	—	—	(100,000)	(100,000)
Transfer In from Wastewater Fund Revenue Adjustment	—	—	30,343	30,343
Transfer In from Gas Fund Revenue Adjustment	—	—	30,342	30,342
Water Connection Fees Revenue Adjustments	—	—	21,000	21,000
Utility and Public Works Charges to the City Allocated Charges	—	1,687	—	(1,687)
General Fund Cost Allocation Plan Charges Adjustment	—	(53,044)	—	53,044
General Liability Insurance Allocated Charges Adjustment	—	(51,171)	—	51,171
Print & Mail Allocated Charges Adjustment	—	(6,565)	—	6,565
Vehicle Fund Allocated Charges Adjustment	—	149,371	—	—
Utilities Admin Allocated Charges Adjustment	—	164,325	—	(164,325)
Adjustments to Costs of Ongoing Activities	2.43	(597,788)	(18,315)	579,473
Total FY 2017 Base Budget	48.58	47,446,197	41,985,056	(5,461,141)
Budget Proposals				
1 Contract for Advisory Consultant for Gas and Water Operations	—	65,000	—	(65,000)
2 Reclassification of 2.0 FTE Water Meter Cross Technicians to 1.0 FTE Water System Operator I and 1.0 FTE Engineering Technician III	—	13,053	—	(13,053)
3 Reclassify 2.0 FTE Heavy Equipment Operators, 1.0 FTE Installer Repairer and 1.0 FTE Assistant Installer Repairer to 4.0 FTE Heavy Equipment Operator/Installer-Repairer	—	1,216	—	(1,216)
4 Reclassification of 1.0 FTE Sr. Management Analyst to 1.0 FTE Strategic Business Manager	—	11,271	—	(11,271)
5 Reclassification of 1.0 FTE Coordinator Utility Projects to 1.0 FTE Inspector Field Services	—	(2,796)	—	2,796
6 Reclassification: 1.0 FTE Supervisor, Inspection Services to 1.0 FTE Utilities Supervisor	—	16,115	—	(16,115)
7 Title Change: Manager, Utilities Marketing Services to Manager, Utility Program Services	—	0	—	0
Budget Changes	—	103,859	—	(103,859)
Total FY 2017 Proposed Budget	48.58	47,550,056	41,985,056	(5,565,000)



Budget Adjustments

Budget Adjustments	Positions	Expenditures	Revenues	Net Water Fund
1 Contract for Advisory Consultant for Gas and Water Operations	0.00	65,000	0	(65,000)

This action provides funding for an advisory consulting contract to assist with operational evaluations, updating master plans, create procedures for data collection and reporting to meet compliance requirements, and updating procedure manuals. This service has helped the Sewer Operations improve its processes and meet its compliance obligations. The Gas and Water Operations would benefit from the same type of support. (Ongoing: \$65,000)

Performance Results

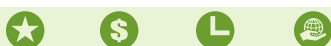


The addition of these resources to the Gas and Water operation will increase operation efficiencies and help with compliance regulation.

2 Reclassification of 2.0 FTE Water Meter Cross Technicians to 1.0 FTE Water System Operator I and 1.0 FTE Engineering Technician III	0.00	13,053	0	(13,053)
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This action reclassifies 2.0 Water Meter Cross Technicians to 1.0 Water Systems Operator and 1.0 Engineering Technician III. The water meter cross tech positions (meter installers) are consistently are subjected to repetitive stress, injury and subsequent disability leave. This reclass will shift the function and role of the meter installer positions in supporting the water transmission system, thereby increasing productivity and efficiency. The Water System Operator I would be responsible for occasional meter replacements, meter investigations, and backflow testing that are not part of the planned meter replacement program. The Engineering Tech III position would oversee the new water meter construction. Large meter replacement projects are proposed to be funded (and contracted out) through the CIP. (Ongoing: \$13,053)

Performance Results



The position reclassifications reflect the current operational needs of the Water operation. This would increase productivity, reduce safety/injury hazards which would reduce employee absences, and would provide more job development opportunities.

3 Reclassify 2.0 FTE Heavy Equipment Operators, 1.0 FTE Installer Repairer and 1.0 FTE Assistant Installer Repairer to 4.0 FTE Heavy Equipment Operator/Installer-Repairer	0.00	1,216	0	(1,216)
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Budget Adjustments

Budget Adjustments	Positions	Expenditures	Revenues	Net Water Fund
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This action would create a new combo Heavy Equipment Operator / Installer-Repairer classification in the Heavy Equipment Operator and Installer-Repairer job families in the Water/Gas/Wastewater group. Currently there are separate sets of duties for heavy equipment operators and installer/repairers who work on the same water, gas, and sewer jobs. This proposal creates a combined position that would enable some employees to perform both sets of duties. This would increase productivity, provide greater flexibility during employee absences, and would provide more job development opportunities. 2.0 FTE Heavy Equipment Operator positions, 1.0 FTE Installer-Repairer, and 1.0 Assistant Installer-Repairer will be reclassified to 4.0 FTE Heavy Equipment Operator/Installer-Repairer positions. (Ongoing: \$1,216)

Performance Results



The position reclassifications reflect the current operational needs of the Water/Gas/Wastewater operation. This would increase productivity, provide greater flexibility during employee absences, and would provide more job development opportunities.

4 Reclassification of 1.0 FTE Sr. Management Analyst to 1.0 FTE Strategic Business Manager	0.00	11,271	0	(11,271)
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This action amends the Table of Organization by reclassifying 1.0 Senior Management Analyst position to 1.0 FTE Utilities Strategic Business Manager position to more accurately reflect the duties of the position. Adopting this reclassification will make permanent the functions of a trial over-strength position created last year to serve in this capacity. This position guides improvements to internal processes, customer focused services, workforce development, and financial stability. This position will oversee Utilities strategic plan, operating and CIP budgets, technology roadmap, workforce development and succession program, and fiber policy. (Ongoing: \$11,271)

Performance Results

No impacts to current service levels are anticipated as a result of this title change.

5 Reclassification of 1.0 FTE Coordinator Utility Projects to 1.0 FTE Inspector Field Services	0.00	(2,796)	0	2,796
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This action amends the Table of Organization by reclassifying 1.0 Coordinator Utility Projects to 1.0 Inspector Field Services to more accurately reflect the operational needs of the department. In FY 2013, Utilities reclassified one of three Inspector, Field Services positions to Supervisor, Inspection Services who would supervise, oversee, and ensure that all of the inspector's geospatial and pipe/fitting attribute data is consistently accurate, both from staff and contract inspectors and outside developers in compliance with Utilities Standards. As a result of the reclass, there are only two inspectors assigned to WGW Engineering to review project plans and verify contract work are in compliance with specifications. Based on the volume of plan reviews and inspections, Utilities is requesting to add back a third field service inspector. The supervision of the inspectors and oversight of the geospatial database will be reassigned to a Senior Engineer. (Ongoing Savings: \$2,796)

Performance Results

The position reclassifications reflect the current operational needs of the Electric/Water/Gas/Wastewater inspection services group.

6 Reclassification: 1.0 FTE Supervisor, Inspection Services to 1.0 FTE Utilities Supervisor	0.00	16,115	0	(16,115)
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This action reclassifies 1.0 FTE Supervisor, Inspection Services to 1.0 FTE Utilities Supervisor in the Operations Division. There is a need for coordination between the WGW and Electric businesses. The supervisor position will act as a bridge that will allocate resources across the Divisions. The position will also functionally be able to fill in for the operation supervisors positions and develop skills to assume the duties of the other supervisors upon their retirement, which is key to the Utilities succession planning efforts. (Ongoing: \$16,115)

Performance Results



Budget Adjustments

Budget Adjustments	Positions	Expenditures	Revenues	Net Water Fund
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The position reclassifications reflect the current operational needs of the Water/Gas/Wastewater & Electric operation. This would increase productivity, provide greater flexibility during employee absences, and would provide more job development opportunities.

7 Title Change, Manager, Utilities Marketing Services to Manager, Utilities Program Services	0.00	0	0	0
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This action amends the Table of Organization by retitling the Manager, Utilities Marketing Services to Manager, Utilities Program Services in the Utilities Customer Service Support section to more accurately reflect the duties of the position. Utility Program Services is where customers can find answers regarding energy efficiency programs, green power programs, water efficiency programs, renewable energy programs, water and energy workshops, key account program and connecting to the City's commercial dark fiber backbone. (Ongoing: \$0)

Performance Results

No impacts to current service levels are anticipated as a result of this title change.



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Table of Organization

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change FTE	FY 2017 Change %
Senior Engineer	1.80	1.76	1.76	3.76	2.00	113.64%
Senior Industrial Waste Investigator	1.00	0.99	0.99	0.99	0.00	0.00%
Senior Management Analyst	0.21	0.21	0.21	0.21	0.00	0.00%
Senior Mechanic	1.00	1.00	1.00	1.00	0.00	0.00%
Senior Operator WQC	6.00	6.00	6.00	6.00	0.00	0.00%
Senior Technologist	1.13	1.13	1.00	1.00	0.00	0.00%
Storekeeper	1.00	1.00	1.00	1.00	0.00	0.00%
Street Maintenance Assistant	0.00	0.00	0.00	1.00	1.00	0.00%
Street Sweeper Operator	5.96	1.63	1.63	1.63	0.00	0.00%
Supervisor WQCP Operations	3.00	3.00	3.00	3.00	0.00	0.00%
Surveyor, Public Works	0.11	0.11	0.35	0.12	-0.23	(65.71)%
Technologist	1.00	1.00	1.00	1.00	0.00	0.00%
Traffic Controller Maintainer I	0.06	0.06	0.06	0.06	0.00	0.00%
WQC Plant Operator II	16.00	16.00	16.00	16.00	0.00	0.00%
Zero Waste Coordinator	2.00	2.00	2.00	1.00	-1.00	(50.00)%
Total Public Works	99.19	94.23	95.12	98.69	3.57	3.75%

Utilities						
Account Specialist	2.55	2.55	2.55	1.70	-0.85	(33.33)%
Accountant	0.60	0.60	0.60	0.60	0.00	0.00%
Administrative Assistant	1.00	1.00	1.00	1.00	0.00	0.00%
Administrative Associate I	1.00	0.00	0.00	0.00	0.00	0.00%
Administrative Associate II	5.00	6.00	6.00	6.00	0.00	0.00%
Assistant Director Administrative Services	0.25	0.25	0.25	0.25	0.00	0.00%
Assistant Director Utilities Customer Support Services	1.00	1.00	1.00	1.00	0.00	0.00%
Assistant Director Utilities Engineering	1.00	1.00	1.00	1.00	0.00	0.00%
Assistant Director Utilities Operations	1.00	1.00	1.00	1.00	0.00	0.00%
Assistant Director Utilities/Resource Management	1.00	1.00	1.00	1.00	0.00	0.00%
Associate Engineer	0.50	0.50	0.50	0.00	-0.50	(100.00)%
Business Analyst	6.87	6.87	7.00	7.00	0.00	0.00%
Cathodic Protection Technician Assistant	1.00	1.00	1.00	1.00	0.00	0.00%
Cathodic Technician	1.00	1.00	1.00	1.00	0.00	0.00%
Cement Finisher	1.00	1.00	1.00	1.00	0.00	0.00%
Chief Sustainability Officer	0.35	0.35	0.00	0.00	0.00	0.00%
Contracts Administrator	0.70	0.70	0.70	0.70	0.00	0.00%
Coordinator Utilities Projects	6.00	7.00	7.00	6.00	-1.00	(14.29)%
Coordinator Utilities Safety & Security	1.00	0.00	0.00	0.00	0.00	0.00%

TABLE OF ORGANIZATION

Table of Organization

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change FTE	FY 2017 Change %
Customer Service Representative	6.00	6.00	6.00	6.00	0.00	0.00%
Customer Service Specialist	2.00	2.00	2.00	2.00	0.00	0.00%
Customer Service Specialist-Lead	2.00	2.00	2.00	2.00	0.00	0.00%
Deputy Chief/Fire Marshal	0.08	0.08	0.08	0.08	0.00	0.00%
Director Administrative Services/CFO	0.20	0.20	0.20	0.20	0.00	0.00%
Director Utilities	1.00	1.00	1.00	1.00	0.00	0.00%
Electric Project Engineer	2.00	2.00	2.00	2.00	0.00	0.00%
Electric Underground Inspector	2.00	2.00	2.00	2.00	0.00	0.00%
Electric Underground Inspector-Lead	1.00	1.00	1.00	1.00	0.00	0.00%
Electrical Equipment Technician	0.00	0.00	0.00	1.00	1.00	0.00%
Electrician Assistant I	4.00	4.00	4.00	3.00	-1.00	(25.00)%
Engineer	4.00	4.00	4.00	4.00	0.00	0.00%
Engineering Manager - Electric	1.00	1.00	1.00	1.00	0.00	0.00%
Engineering Manager - GWG	1.00	1.00	1.00	1.00	0.00	0.00%
Engineering Technician III	4.00	4.00	4.00	5.00	1.00	25.00%
Equipment Operator	1.00	1.00	1.00	1.00	0.00	0.00%
Gas System Technician	2.00	2.00	2.00	0.00	-2.00	(100.00)%
Gas Systems Technician II	1.00	1.00	1.00	3.00	2.00	200.00%
Hazardous Materials Inspector	0.06	0.06	0.06	0.06	0.00	0.00%
Heavy Equipment Operator	8.70	8.70	8.70	6.70	-2.00	(22.99)%
Heavy Equipment Operator/Install Repair	0.00	0.00	0.00	4.00	4.00	0.00%
Industrial Waste Investigator	0.00	0.00	0.00	0.50	0.50	0.00%
Inspector, Field Services	4.00	4.00	4.00	5.00	1.00	25.00%
Lineperson/Cable Specialist	11.00	11.00	11.00	11.00	0.00	0.00%
Lineperson/Cable Specialist-Lead	4.00	4.00	4.00	4.00	0.00	0.00%
Maintenance Mechanic-Welding	2.00	2.00	2.00	2.00	0.00	0.00%
Manager Communications	1.00	1.00	1.00	1.00	0.00	0.00%
Manager Customer Service	0.00	0.00	1.00	1.00	0.00	0.00%
Manager Customer Service and Meter Reading	1.00	1.00	0.00	0.00	0.00	0.00%
Manager Electric Operations	1.00	1.00	1.00	1.00	0.00	0.00%
Manager Treasury, Debt & Investments	0.00	0.00	0.00	0.40	0.40	0.00%
Manager Utilities Compliance	1.00	1.00	1.00	1.00	0.00	0.00%
Manager Utilities Credit & Collection	1.00	1.00	1.00	1.00	0.00	0.00%
Manager Utilities Marketing Services	1.00	1.00	1.00	0.00	-1.00	(100.00)%
Manager Utilities Operations WG	1.00	1.00	1.00	1.00	0.00	0.00%
Manager Utilities Program Services	0.00	0.00	0.00	1.00	1.00	0.00%
Manager Utilities Strategic Business	0.00	0.00	0.00	1.00	1.00	0.00%
Manager Utilities Telecommunications	1.00	1.00	1.00	1.00	0.00	0.00%

Table of Organization

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change FTE	FY 2017 Change %
Marketing Engineer	1.00	1.00	1.00	0.00	-1.00	(100.00)%
Meter Reader	6.00	6.00	6.00	6.00	0.00	0.00%
Meter Reader-Lead	1.00	1.00	1.00	1.00	0.00	0.00%
Metering Technician	2.00	3.00	3.00	3.00	0.00	0.00%
Metering Technician-Lead	1.00	1.00	1.00	1.00	0.00	0.00%
Offset Equipment Operator	0.48	0.48	0.48	0.48	0.00	0.00%
Overhead Underground Troubleshooter	2.00	2.00	2.00	2.00	0.00	0.00%
Planner	0.30	0.30	0.00	0.00	0.00	0.00%
Power Engineer	3.00	3.00	3.00	3.00	0.00	0.00%
Principal Business Analyst	0.00	0.00	1.00	1.00	0.00	0.00%
Principal Management Analyst	0.00	1.00	0.00	0.00	0.00	0.00%
Program Assistant I	2.50	2.50	2.50	2.50	0.00	0.00%
Project Engineer	5.00	5.00	5.00	5.00	0.00	0.00%
Project Manager	0.75	0.75	0.75	0.75	0.00	0.00%
Resource Planner	5.00	5.00	5.00	6.00	1.00	20.00%
Restoration Lead	1.00	1.00	1.00	1.00	0.00	0.00%
SCADA Technologist	2.00	2.00	2.00	2.00	0.00	0.00%
Senior Accountant	0.70	0.70	0.70	0.70	0.00	0.00%
Senior Business Analyst	2.00	2.00	2.00	2.00	0.00	0.00%
Senior Deputy City Attorney	1.00	1.00	1.00	1.00	0.00	0.00%
Senior Electrical Engineer	4.00	4.00	4.00	4.00	0.00	0.00%
Senior Engineer	5.00	4.00	5.00	5.00	0.00	0.00%
Senior Management Analyst	2.40	2.40	2.40	0.70	-1.70	(70.83)%
Senior Mechanic	1.00	1.00	1.00	1.00	0.00	0.00%
Senior Performance Auditor	1.00	1.00	1.00	1.00	0.00	0.00%
Senior Project Engineer	0.00	1.00	0.00	0.00	0.00	0.00%
Senior Resource Planner	6.00	6.00	6.00	6.00	0.00	0.00%
Senior Technologist	0.87	0.87	0.00	0.00	0.00	0.00%
Senior Utilities Field Service Representative	1.00	1.00	1.00	1.00	0.00	0.00%
Senior Water Systems Operator	2.00	2.00	2.00	2.00	0.00	0.00%
Storekeeper	2.00	2.00	2.00	1.00	-1.00	(50.00)%
Storekeeper-Lead	0.00	0.00	0.00	0.80	0.80	0.00%
Street Light, Traffic Signal & Fiber Technician	4.00	4.00	5.00	5.00	0.00	0.00%
Street Light, Traffic Signal & Fiber Technician Apprentice	1.00	1.00	0.00	0.00	0.00	0.00%
Street Light, Traffic Signal & Fiber-Lead	2.00	2.00	2.00	2.00	0.00	0.00%
Substation Electrician	6.00	6.00	6.00	6.00	0.00	0.00%
Substation Electrician-Lead	2.00	2.00	2.00	2.00	0.00	0.00%
Supervising Electric Project Engineer	1.00	1.00	1.00	1.00	0.00	0.00%

TABLE OF ORGANIZATION

Table of Organization

	FY 2014 Actuals	FY 2015 Actuals	FY 2016 Adopted Budget	FY 2017 Proposed Budget	FY 2017 Change FTE	FY 2017 Change %
Supervisor Inspection Services	1.00	1.00	1.00	0.00	-1.00	(100.00)%
Tree Maintenance Person	1.00	1.00	1.00	1.00	0.00	0.00%
Utilities Compliance Technician	2.00	2.00	2.00	2.00	0.00	0.00%
Utilities Compliance Technician-Lead	1.00	1.00	1.00	1.00	0.00	0.00%
Utilities Credit/Collection Specialist	2.00	2.00	2.00	2.00	0.00	0.00%
Utilities Engineer Estimator	5.00	5.00	5.00	5.00	0.00	0.00%
Utilities Field Services Representative	5.00	5.00	5.00	5.00	0.00	0.00%
Utilities Install Repair-Lead-Welding Certified	2.00	2.00	2.00	2.00	0.00	0.00%
Utilities Install Repair-Welding Certified	3.00	3.00	3.00	3.00	0.00	0.00%
Utilities Install/Repair	12.00	12.00	12.00	10.00	-2.00	(16.67)%
Utilities Install/Repair Assistant	1.00	1.00	1.00	1.00	0.00	0.00%
Utilities Install/Repair-Lead	5.00	5.00	5.00	5.00	0.00	0.00%
Utilities Key Account Representative	3.00	3.00	3.00	3.00	0.00	0.00%
Utilities Locator	3.00	3.00	3.00	3.00	0.00	0.00%
Utilities Marketing Program Administrator	4.00	4.00	3.00	3.00	0.00	0.00%
Utilities Safety Officer	0.00	1.00	1.00	1.00	0.00	0.00%
Utilities Supervisor	11.00	11.00	11.00	12.00	1.00	9.09%
Utilities System Operator	5.00	5.00	5.00	5.00	0.00	0.00%
Warehouse Supervisor	0.50	0.50	0.50	0.80	0.30	60.00%
Water Meter Cross Connection Technician	2.00	2.00	2.00	0.00	-2.00	(100.00)%
Water System Operator I	0.00	0.00	0.00	1.00	1.00	0.00%
Water System Operator II	4.00	4.00	4.00	4.00	0.00	0.00%
Total Utilities	255.36	258.36	255.97	257.92	-1.05	(0.41)%
Total Enterprise Fund	354.55	352.59	351.09	353.61	2.52	0.72%

Other Funds

Capital Improvement Fund

Administrative Associate I	0.80	0.80	0.80	0.80	0.00	0.00%
Administrative Associate III	0.90	0.89	0.89	0.89	0.00	0.00%
Assistant Director Public Works	0.15	0.15	0.58	0.58	0.00	0.00%
Associate Engineer	2.70	2.69	2.69	2.69	0.00	0.00%
Cement Finisher	3.00	3.00	0.00	0.00	0.00	0.00%
Cement Finisher-Lead	1.00	1.00	0.74	0.74	0.00	0.00%
Chief Transportation Official	0.00	0.50	0.50	0.30	-0.20	(40.00)%
Contracts Administrator	0.60	0.60	0.60	0.60	0.00	0.00%
Coordinator Public Works Projects	0.00	0.00	1.00	1.50	0.50	50.00%



Fiscal Year 2017 Proposed Capital Budget

City Council

Patrick Burt, Mayor

Gregory Scharff, Vice Mayor

Marc Berman

Tom DuBois

Eric Filseth

Karen Holman

Liz Kniss

Greg Schmid

Cory Wolbach

James Keene, City Manager

Suzanne Mason, Assistant City Manager

Ed Shikada, Assistant City Manager

Lalo Perez, Director of Administrative Services/Chief Financial Officer

David Ramberg & Joe Saccio, Assistant Director of Administrative Services

Kiely Nose, Budget Manager, Office of Management and Budget

Michael Bruckner, Sr. Management Analyst, Office of Management and Budget

Eric Filseth, Finance Committee Chair

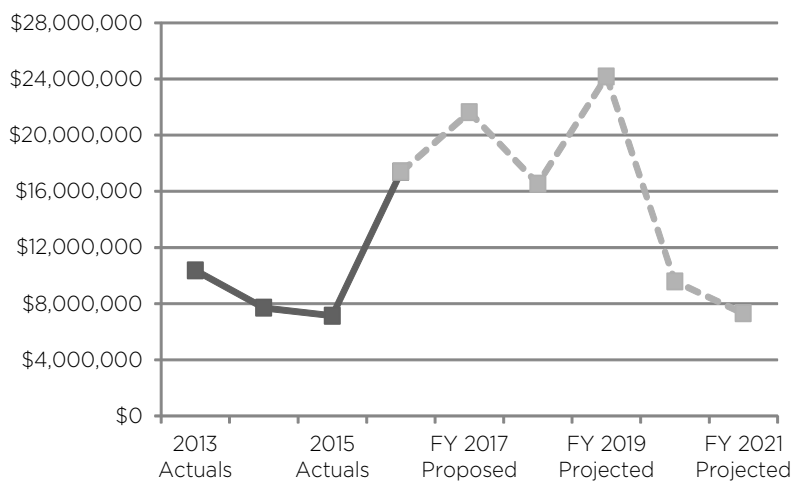
ELECTRIC FUND

Overview

The City of Palo Alto is the only municipality in California that operates a full suite of City-owned utility services. The municipal electric power system began operation in 1900 and continues to provide safe, reliable, cost effective electric service to residents and customers of Palo Alto. For the 2017-2021 Capital Improvement Program (CIP), approximately \$79.2 million is programmed, with \$21.6 million budgeted in Fiscal Year 2017, of which \$1.9 million is reappropriated funds from Fiscal Year 2016. Overall, a total of thirty-five projects are programmed over the 5 year CIP.

Major projects funded in the 2017-2021 Proposed CIP include Electric Customer Connections (\$16.7 million), Electric System Improvements (\$10 million), Smart Grid Technology Installation (\$12.9 million), and Electric Pole Replacements for Fiber to the Home (\$8 million). The budget for the Electric Fund CIP is broken into three separate categories: Customer Connections, System Improvements, and Undergrounding Projects.

Electric Fund Capital Expenditures



Infrastructure Inventory

CLASSIFICATION	QUANTITY
Miles of 60kV sub transmission lines	18 miles
Substations (w/300 MVA total capacity)	9
Traffic Signals (intersections) maintained	101
Streetlights maintained	6,600
Overhead Primary Distribution	117 miles
Underground Primary Distribution	175.21 miles
Overhead Secondary Distribution	93.77 miles
Underground Secondary Distribution	74 miles

Customer Connections

As customers continually change their electric power needs due to equipment additions, new construction, building expansions, building remodels, teardowns and rebuilds, and new building occupancy types, the electric system must evolve to meet these needs. The Electric Customer

Connections Project, which is the largest project within the Electric Fund (\$3.1 million in Fiscal Year 2017, \$16.7 million over the 2017-2021 CIP), is accounted for within this category. This project allows for the completion of work required to meet the needs of customers who have applied for new or upgraded electric service, need temporary power for construction, or require other services. The Electric Fund pays for a portion of this project, while remaining costs are supported by reimbursements from customers, telephone, and cable television companies for project work performed by the City.

Recent Accomplishments

- In Fiscal Year 2015 the Utilities Electric Division completed over 286 customer service projects with a total cost of \$1.9 million and revenue of \$1.4 million.

2017-2021 Capital Improvement Program

Recurring Projects

The Electric Customer Connections project, described above, is the only recurring project in this category.

Non-Recurring Projects

A total of \$30.2 million is being allocated in the 2017-2021 CIP for non-recurring projects. Plans for the following projects have been submitted to the City for review and engineering:

- VA Hospital Load Expansion (Fiscal Year 2017: \$3.0 million; 5-Year CIP: \$5.0 million)
- Stanford Load Expansion (Fiscal Year 2017: \$0.5 million; 5-Year CIP: \$0.5 million)
- Electric Pole Replacements for Fiber to the Home or Google Fiber (Fiscal Year 2017: \$5.0 million; 5-Year CIP: \$8.0 million)}

System Improvements

Necessary elements in ensuring reliable electric service to City of Palo Alto residents and customers include the replacement of electric system components before they reach their end of life and the installation of protective equipment to minimize the impact of system problems.

Projects in the System Improvements category allow for a variety of improvements, including the replacement/upgrade of old cables and equipment and bringing designs up to current standard, installation of protective equipment and switches, conversion of the electric system from 4,160 Volts (4kV) to 12,470 Volts (12kV), and installation of capacitors to improve efficiency.

The 2017-2021 CIP includes total funding of \$56.2 million in this category, with \$17.7 million allocated in Fiscal Year 2017. Significant projects in this category include Electric Distribution System Improvements (\$10.0 million), Smart Grid Technology Installation (\$12.9 million), and various projects to rebuild underground districts and substation components (\$16.7 million).

Recent Accomplishments

- Rebuilt the electric underground system in several locations along San Antonio Road between East Charleston Road and Middlefield Road, including Green House Condo area

- Upgraded the servers and software dedicated to the Supervisory Control and Data Acquisition System (SCADA) used to monitor the electric, water, and gas utility distribution systems
- Added security cameras at two electric substations
- Upgraded protective relays for Quarry substation
- Completed installation of new primary electric service to facilitate Stanford Hospital upgrades; and replacement of primary cables that were reaching the end of their useful life on two Quarry Feeders feeding the hospital.
- Completed replacement of 40 wood poles identified to be unsafe for its intended purpose and workers.
- Completed 25 other system improvement projects dealing with replacement of deteriorated facilities or to improve system operation and reliability.

2017-2021 Capital Improvement Program

Recurring Projects

A total of \$17 million is programmed for System Improvements recurring projects in the 2017-2021 CIP, with \$4.3 million allocated in Fiscal Year 2017. Recurring projects in this category include the following:

- Communication System Improvements (Fiscal Year 2017: \$0.1 million; 5-Year CIP: \$0.5 million)
- Electric Distribution System Improvements (Fiscal Year 2017: \$2.0 million; 5-Year CIP: \$10.0 million)
- Electric Utility GIS (Fiscal Year 2017: \$0.2 million; 5-Year CIP: \$0.8 million)
- SCADA System Upgrades (Fiscal Year 2017: \$0.3 million; 5-Year CIP: \$0.5 million)
- Smart Grid Technology Installation (Fiscal Year 2017: \$0.7 million; 5-Year CIP: \$12.9 million)
- Substation Facility Improvements (Fiscal Year 2017: \$0.2 million; 5-Year CIP: \$1.0 million)
- Substation Protection Improvements (Fiscal Year 2017: \$0.5 million; 5-Year CIP: \$1.7 million)
- Underground System Rebuild (Fiscal Year 2017: \$0.6 million; 5-Year CIP: \$1.9 million)

Non-Recurring Projects

A total of \$13.4 million is allocated in the 2017-2021 CIP for non-recurring System Improvement projects. Approximately \$6.9 million is for the continuation of projects approved by the City Council in prior years. Three new projects are recommended as within this category, including the following:

- Rebuild Underground District 23 (5-Year CIP: \$0.8 million)
- East Meadow Circle 4/12kV Conversion (Fiscal Year 2017: \$0.1 million; 5-Year CIP: \$1.8 million)
- Substation Break Replacement (Fiscal Year 2017: \$0.2 million, 5-Year CIP: \$0.6 million)
- 60kV Relay Replacement (Fiscal Year 2017: \$0.2 million, 5-Year CIP: \$0.5 million)

Undergrounding Projects

The City of Palo Alto began a program to underground overhead electric, telephone, and cable TV facilities in 1965 with a project along Oregon Expressway. Since that time 45 Underground Districts have been formed. The undergrounding of electrical lines is a joint process between the City and AT&T, due to joint ownership of the poles, and Comcast which leases pole space from AT&T. All three Utilities share in the cost of the installation of underground conduit and boxes necessary to enclose and protect wires and equipment. The City typically takes the lead in the design, bidding, and construction processes with AT&T and Comcast reimbursing the City for construction and administrative costs. During the 2017-2021 Capital Improvement Program period, \$6.4 million is allocated for Undergrounding Projects, with \$0.9 million allocated in Fiscal Year 2017.

Recent Accomplishment

- Underground District 47 - Completed the installation of underground substructures (conduits and boxes) in the area bounded by Middlefield Road/Addison Avenue/Cowper Street/Homer Avenue.
- Underground District 46 - Completed preliminary designs for undergrounding electric lines.

2017-2021 Capital Improvement Program

Recurring Projects

There are no recurring projects under this category.

Non-Recurring Projects

A total of \$6.4 million is allocated in the 2017-2021 CIP for non-recurring Undergrounding projects, with \$0.9 million allocated in Fiscal Year 2017. All of the funds for the projects were approved by the City Council in prior years. Significant projects in this category include the following:

- Underground District 42 (\$2.3 million), which will underground overhead utility facilities in the area near Embarcadero Road/Emerson Street/Middlefield Road
- Underground District 43 (\$2.7 million) which will underground overhead utility facilities in the area along Alma Street and Embarcadero Road
- Underground District 46 (\$0.7 million), which will underground overhead utility facilities in the area near El Camino Real/Arastradero Road/West Charleston Road

Summary of Capital Activity

ELECTRIC FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Proposed	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Source of Funds									
Transfers from Other Funds									
Gas Fund									
EL-11014	Smart Grid Technology	0	0	136,335	300,000	3,375,000	0	0	3,811,335
	Total Gas Tax Fund Transfers	0	0	136,335	300,000	3,375,000	0	0	3,811,335
Water Fund									
EL-11014	Smart Grid Technology	0	0	136,335	300,000	3,375,000	0		3,811,335
	Total Water Fund Transfers	0	0	136,335	300,000	3,375,000	0	0	3,811,335
	Total Transfers from Other Funds	0	0	272,670	600,000	6,750,000	0	0	7,622,670
Reimbursement from Customers, Telephone, and Cable Television Companies									
EL-98003	Electric System Improvements	(19,289)	250,000	190,000	200,000	210,000	210,000	210,000	1,020,000
EL-89028	Electric Customer Connections	1,429,428	2,160,800	1,650,000	1,650,000	1,700,000	1,700,000	1,700,000	8,400,000
EL-17006	Electric Pole Replacements for FTTP	0	0	4,000,000	2,400,000	0	0	0	6,400,000
EL-17004	Stanford - Customer Load Requirements	0	0	400,000	0	0	0	0	400,000
EL-17003	VA Hospital - Customer Load Requirements	0	0	2,400,000	1,600,000	0	0	0	4,000,000
	Reimbursement from Customers, Telephone, and Cable Television Companies Total	1,410,139	2,410,800	8,640,000	5,850,000	1,910,000	1,910,000	1,910,000	20,220,000
	Total Sources	1,410,139	2,410,800	8,912,670	6,450,000	8,660,000	1,910,000	1,910,000	27,842,670
Use of Funds									
Customer Connections									
EL-89028	Electric Customer Connections	1,701,435	4,236,859	3,108,000	3,219,888	3,335,804	3,455,893	3,580,305	16,699,890
	Customer Connections Total	1,701,435	4,236,859	3,108,000	3,219,888	3,335,804	3,455,893	3,580,305	16,699,890
System Improvements									
EL-06001	230 Kv Electric Intertie	46,155	7,000	173,360	0	0	0	0	173,360
EL-10008	Advanced Metering Infrastructure (AMI) System	9,783	436	0	0	0	0		0
EL-16002	Capacitor Bank Installation	0	75,000	275,000		0	0	0	275,000
EL-14000	Coleridge/Cowper/Tennyson 4/12Kv Conversion	0	0	0	120,000	400,000	0	0	520,000
EL-15000	Colorado/Hopkins System Improvement	0	50,000	775,000	750,000	0	0	0	1,525,000
EL-89031	Communications System Improvements	68,437	207,699	100,000	100,000	100,000	100,000	100,000	500,000

ELECTRIC FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Proposed	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
EL-08000	East Charleston 4/12Kv Conversion	322,725	60,861	0	0	0	0	0	0
EL-17001	East Meadow Circles 4/12Kv Conversion	0	0	50,000	1,750,000	0	0	0	1,800,000
EL-13000	Edgewood/Wildwood 4Kv Tie	0	0		50,000	400,000	0	0	450,000
EL-05000	El Camino Underground Rebuild	57,389	0	0	0	0	0	0	0
EL-17006	Electric Pole Replacement for FTTP	0	0	5,000,000	3,000,000	0	0	0	8,000,000
EL-15001	Electric Substation Battery Replacement	0	400,000	0	0	0	0	0	0
EL-98003	Electric System Improvements	2,005,036	4,449,933	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	10,000,000
EL-02011	Electric Utility Geographic Information System	67,135	200,000	165,000	165,000	165,000	165,000	165,000	825,000
EL-04010	Foothills System Rebuild	0	0	0	0	0	0	0	0
EL-12002	Hanover 22 - Transformer Replacement	0	0	0	0	0	0	0	0
EL-17005	HCB Pilot Wire Relay Replacement	0	0	167,000	167,000	167,000	0	0	501,000
EL-11004	Hewlett Subdivision Rebuild Los Trancos Road	0	0	0	0	0	0	0	0
EL-14004	Maybell 1&2 4/12Kv Conversion	255,478	188,649	0	0	0	0	0	0
EL-09000	Middlefield Underground Rebuild	29,906	378,021	0	0	0	0	0	0
EL-11007	Rebuild Greenhouse Condo Area	307,473	26,118	0	0	0	0	0	0
EL-12000	Rebuild Underground District 12	424,351	0	0	0	0	0	0	0
EL-11003	Rebuild Underground District 15	4,812	144,181	307,434	0	0	0	0	307,434
EL-13003	Rebuild Underground District 16	0	0	300,000	0	0	0	0	300,000
EL-11006	Rebuild Underground District 18	49,413	468,542	0	0	0	0	0	0
EL-11008	Rebuild Underground District 19	2,602	98,871	0	0	0	0	0	0
EL-14002	Rebuild Underground District 20	0	0	950,000	500,000	500,000	0	0	1,950,000
EL-17000	Rebuild Underground District 23	0	0	0	200,000	600,000	0	0	800,000
EL-10006	Rebuild Underground District 24	226,746	1,836,153	0	0	0	0	0	0
EL-19000	Rebuild Underground District 25	0	0	0	0	50,000	500,000	0	550,000
EL-16000	Rebuild Underground District 26	0	60,000	50,000	0	650,000	0	0	700,000
EL-14005	Reconfigure Quarry Feeders	69,169	106,024	774,758	0	0	0	0	774,758
EL-13002	Relocate Quarry/Hopkins Substation 60Kv Line (A & B)	0	0	0	100,000	750,000	0	0	850,000
EL-13006	Sand Hill/Quarry Road 12Kv Tie	4,374	183,126	0	0	0	0	0	0
EL-02010	SCADA System Upgrades	64,226	171,699	270,000	60,000	65,000	65,000	65,000	525,000
EL-11014	Smart Grid Technology Installation	65,625	223,210	672,670	1,000,000	11,250,000	0	0	12,922,670
EL-17004	Stanford University Customer Load Requirements	0	0	500,000	0	0	0	0	500,000
EL-10009	Street Light System Conversion Project	666,918	25,000	0	0	0	0	0	0
EL-17002	Substation 60Kv Breaker Replacement			150,000	150,000	150,000	150,000	0	600,000
EL-89044	Substation Facility Improvements	258,214	210,270	195,000	195,000	195,000	200,000	200,000	985,000
EL-89038	Substation Protection Improvements	232,348	619,521	450,000	300,000	300,000	300,000	300,000	1,650,000
EL-16003	Substation Security	0	50,000	200,000	0	0	0	0	200,000
EL-16001	Underground System Rebuild	0	20,000	580,000	300,000	350,000	350,000	350,000	1,930,000
EL-13008	Upgrade Electric Estimating System	0	45,000	103,650	0	0	0	0	103,650
EL-06003	Utility Control Center Upgrades	0	0	400,000	0	0	0	0	400,000

ELECTRIC FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Proposed	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
EL-04012	Utility Site Security Improvements	31,126	524,148	50,000	50,000	300,000	50,000	50,000	500,000
EL-17003	VA Hospital Customer Load Requirements	0	0	3,000,000	2,000,000	0	0	0	5,000,000
EL-09004	West Charleston/Wilkie to South City Limit 4/12 Kv Conversion	701	0	0	0	0	0	0	0
	System Improvements Total	5,270,142	10,829,462	17,658,872	12,957,000	18,392,000	3,880,000	3,230,000	56,117,872
Undergrounding Projects									
EL-13007	Underground Distribution System Security	8,638	50,000	240,534	300,000	300,000	0	0	840,534
EL-08001	Underground District 42 - Embarcadero Road, Emerson, Middlefield	0	0	0	50,000	2,000,000	250,000	0	2,300,000
EL-11009	Underground District 43 - Alma/Embarcadero	0	0		0	150,000	2,000,000	500,000	2,650,000
EL-12001	Underground District 46 - Charleston/El Camino Real	3,535	62,497	622,315	0	0	0	0	622,315
EL-11010	Underground District 47 - Middlefield, Homer, Webster, Addison	195,283	2,198,525	0	0	0	0	0	0
	Undergrounding Projects Total	207,456	2,311,022	862,849	350,000	2,450,000	2,250,000	500,000	6,412,849
	Total Uses	7,179,033	17,377,343	21,629,721	16,526,888	24,177,804	9,585,893	7,310,305	79,230,611

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: East Charleston/Alma Street/East Meadow Drive/Middlefield Road area
Managing Department: Utilities
Initial Project Start: Summer 2017
Initial Project Completion: Spring 2018
Revised Project Start:
Revised Project Completion:
Project Number: EL-17001

East Meadow Circles 4/12kV Conversion

Description

The project will convert the primary electric distribution system in the East Charleston/Alma Street/East Meadow Drive/Middlefield Road area from 4 kV to 12 kV.

Justification

Because of the difference in voltage, the 4kV and 12kV systems cannot be directly connected and used to back up one another. Due to prior 4kV to 12 kV conversions in adjacent areas, this area, now at 4kV, needs to be converted to 12kV so that adequate circuit connections can be restored to allow customers to be switched from one circuit to another during normal or emergency conditions. This will improve operating flexibility of the system and service reliability to customers in this area. In addition, there is equipment in the area that has reached the end of its useful life and needs to be replaced. Converting to 12 kV will eliminate the need to replace this equipment as it is not needed at that voltage level.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	50,000	1,750,000	0	0	0	1,800,000	0	1,800,000
Total	0	0	0	50,000	1,750,000	0	0	0	1,800,000	0	1,800,000

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	50,000	1,750,000	0	0	0	1,800,000	0	1,800,000
Total	0	0	0	50,000	1,750,000	0	0	0	1,800,000	0	1,800,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Summer 2017
Initial Project Completion: Summer 2018
Revised Project Start:
Revised Project Completion:
Project Number: EL-17006

Electric Pole Replacements for FTTP

Description

City of Palo Alto Utilities staff has had several meetings with Google regarding their interest in Palo Alto for their new internet service product, Google Fiber. Google intends to start construction in those neighborhoods with electric utility poles in Palo Alto where they can attach the fiber optic cable. This work will significantly impact the workload for Utilities' administrative, engineering, and operations staff.

Justification

Google Fiber requires deploying fiber optic cable throughout the City of Palo Alto attaching to utility poles and also some pulled into underground conduit. This project requires the Electric Utility to replace about 20% of its poles to accommodate the proposed services. Currently, Google has an aggressive schedule of submitting permit applications in February 2016, requesting to attach to electric utility poles and to start construction by Spring 2016. The current staffing levels of administrative, engineering, and operations employees in Utilities cannot support Google's project and meet their project schedule, while maintaining normal CPA new customer, CIP, and maintenance jobs. Utilities staff is proposing a new budget for 3 years to allow for temporary staff recruitment or issuing an RFP to contract a firm to provide the necessary services.

Supplemental Information

Google will reimburse the City of Palo Alto for a majority of the costs for this project, but the City will incur some costs to correct existing conditions on the poles. Staff has provided a preliminary estimate for revenue, but the exact amount is not known at this time.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	1,000,000	600,000	0	0	0	1,600,000	0	1,600,000
Revenue from Other Agencies	0	0	0	4,000,000	2,400,000	0	0	0	6,400,000	0	6,400,000
Total	0	0	0	5,000,000	3,000,000	0	0	0	8,000,000	0	8,000,000

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Planning and Engineering	0	0	0	5,000,000	3,000,000	0	0	0	8,000,000	0	8,000,000
Total	0	0	0	5,000,000	3,000,000	0	0	0	8,000,000	0	8,000,000

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Customer Service

Goal: C-2

Policy: C-9

Program: C-12

Relationship to Comprehensive Plan

Secondary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

Program: L-81

Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Environmental Impact Analysis:

May Require Environmental Review

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Stanford Medical facilities and the Stanford Shopping Center
Managing Department: Utilities
Initial Project Start: Summer 2017
Initial Project Completion: Winter 2017
Revised Project Start:
Revised Project Completion:
Project Number: EL-17004

Stanford - Customer Load Requirements

Description

This project allows for the installation of new primary conduits, vaults, cables and equipment to serve new customer demands in the Quarry Road/Welch Road/Sand Hill Road area.

Justification

The recent expansion of the Stanford Medical facilities and the Stanford Shopping Center has exhausted the existing facilities of Quarry Road Substation to serve any new customers in the Quarry Road/Welch Road/ Sand Hill Road area. This project will provide for new primary feeder outlets which will provide ample capability to serve both existing and new customers for the next 5 years.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	100,000	0	0	0	0	100,000	0	100,000
Revenue from Other Agencies	0	0	0	400,000	0	0	0	0	400,000	0	400,000
Total	0	0	0	500,000	0	0	0	0	500,000	0	500,000

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	500,000	0	0	0	0	500,000	0	500,000
Total	0	0	0	500,000	0	0	0	0	500,000	0	500,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Program: N-63

Relationship to Comprehensive Plan**Secondary Connection**

Element: Community Services & Facilities

Section: Customer Service

Goal: C-2

Policy: C-9

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Summer 2017
Initial Project Completion: Summer 2020
Revised Project Start:
Revised Project Completion:
Project Number: EL-17002

Substation 60kV Breaker Replacement

Description

This project funds the purchase and replacement of high voltage circuit breakers that interconnect the nine electric substations and two power switching stations due circuit breakers that are reaching their recommended reliable useful life expectancy and/or are now underrated for the use.

Justification

A recent 60kV circuit breaker study performed for the City of Palo Alto found that the interrupting current rating of two of these circuit breakers on the system is not high enough to handle the expected maximum fault current level. Three other circuit breakers are marginal with respect to their interrupting current rating. Six additional older oil circuit breakers are obsolete and have reached or are reaching the ends of their operable lives. One oil circuit breaker has experienced a non-catastrophic failure. Should there be a fault, it could result in a failure of any one of these twelve circuit breakers to operate properly, damage to the breaker, and a prolonged electric outage. These circuit breakers are integral and critical cornerstones of the electric utility transmission system. The project will be a 10 year program replacing 1-2 breakers per year.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	150,000	150,000	150,000	150,000	0	600,000	0	600,000
Total	0	0	0	150,000	150,000	150,000	150,000	0	600,000	0	600,000

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	150,000	150,000	150,000	150,000	0	600,000	0	600,000
Total	0	0	0	150,000	150,000	150,000	150,000	0	600,000	0	600,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



Fund: Electric Fund - Operating
Category: System Improvements
Project Location: VA Hospital
Managing Department: Utilities
Initial Project Start: Summer 2017
Initial Project Completion: Summer 2018
Revised Project Start:
Revised Project Completion:
Project Number: EL-17003

VA Hospital - Customer Load Requirements

Description

The VA Hospital is outgrowing the capability of the electric infrastructure the City has traditionally provided. Hanover and Maybell Substations currently serve the VA Hospital campus with 2 electric lines, as the federal guidelines require full redundancy of electric power in case one line goes down. The VA Hospital is reaching the full capacity of a single line this year in 2016. Additional capacity is required and will be met using mostly existing underground conduits in the short term. In the long term, a new 60kV substation will be installed to provide the full capacity needed.

Justification

The interim, short term solution will be implemented in one year by using existing underground pathways to upsize the existing 12kV wires and to bring additional 12kV wires to the VA from Hanover and Maybell Substations to meet the rapid load growth needs, since the long term solution cannot be built and energized for a minimum of 2.5 years from now. The long term, 60kV substation addition is necessary to meet both the VA Hospital's power needs and the needs of other 12kV power users in the neighborhood as the local 12kV system cannot also support the full VA Hospital load projections by 2022. A 60kV substation takes its power from a higher level in the electric system that has adequate capacity. Without this improvement, in the event of an outage in the Hanover/Maybell area once the VA Hospital is at full load, the majority of Customers would experience sustained timeframes until the power can be restored.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	600,000	400,000	0	0	0	1,000,000	0	1,000,000
Revenue from Other Agencies	0	0	0	2,400,000	1,600,000	0	0	0	4,000,000	0	4,000,000
Total	0	0	0	3,000,000	2,000,000	0	0	0	5,000,000	0	5,000,000

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	3,000,000	2,000,000	0	0	0	5,000,000	0	5,000,000
Total	0	0	0	3,000,000	2,000,000	0	0	0	5,000,000	0	5,000,000

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Program: N-65

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

ELECTRIC FUND



Fund: Electric Fund - Operating
Category: System Rehabilitation
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Summer 2017
Initial Project Completion: Spring 2019
Revised Project Start:
Revised Project Completion:
Project Number: EL-17005

HCB Pilot Wire Relay Replacement

Description

This project funds the replacement of existing HCB pilot wire relays with new microprocessor based line differential protective relays to protect the city's 60kV sub-transmission line sections and equipment from damage due to faults (i.e. short circuits) on the 60kV line sections.

Justification

The existing electro-mechanical HCB pilot wire differential relays are approaching the end of their useful life and rely on a copper pilot wire cable system running between each substation to maintain communication between the relay pairs located at the ends of each 60kV line section. These pilot wire cables have aged significantly and are the source of repeated failures due to corrosion in connections and splices which cause open circuits, particularly during the winter rainy season. During these periods of interrupted pilot wire communication, the existing pilot wire relays do not provide adequate back-up protection putting the city at risk of an outage should a fault occur on the 60kV line section.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	167,000	167,000	167,000	0	0	501,000	0	501,000
Total	0	0	0	167,000	167,000	167,000	0	0	501,000	0	501,000

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	167,000	167,000	167,000	0	0	501,000	0	501,000
Total	0	0	0	167,000	167,000	167,000	0	0	501,000	0	501,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Goal: N-9

Policy: N-44

Program: N-63

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

FIBER OPTICS FUND

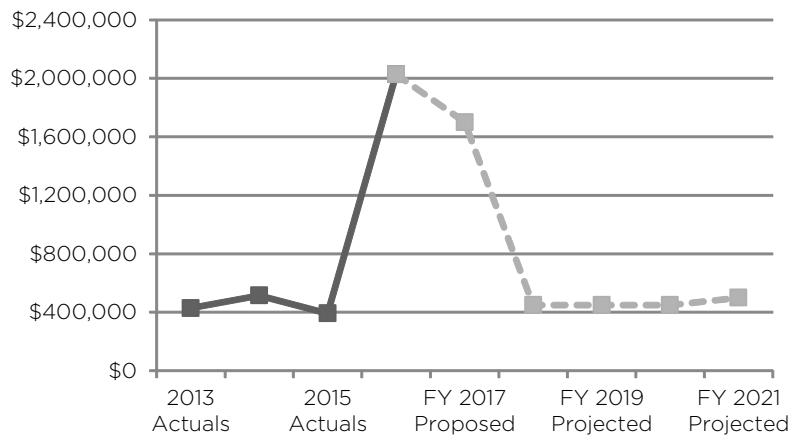
Overview

The City of Palo Alto is the only municipality in California that operates a full suite of City-owned utility services. The most recent addition to this list of services provided to City of Palo Alto residents and customers is the leasing of “dark” fiber on a fiber optic loop, built by the City in 1996. For the 2017-2021 Capital Improvement Program, expenditures of \$3.6 million are programmed, with \$1.7 million allocated in Fiscal Year 2017. Major projects funded in the 2017-2021 CIP include the Fiber Optic System Rebuild Project (\$1.3 million), Fiber Optics Customer Connections (\$1.3 million), and Fiber Optics Network System Improvements (\$1.0 million). The budget for the Fiber Optics Capital Improvement Program is broken into two separate categories: Capacity Improvements and Customer Connections.

Capacity Improvements

With the advance in technology; increase in online services, and increase in data transmission needs to meet consumer demand; the capability afforded by fiber optic cables is increasingly in demand. To ensure reliable fiber optic service to City of Palo Alto residents and customers, fiber optic system components (fiber optic cable and splice cabinets) need to be upgraded or added to increase capacity; replaced or protected from damage by animals; and rerouted away from hazardous conditions.

Fiber Optics Fund Capital Expenditures



Infrastructure Inventory

CLASSIFICATION	QUANTITY
Route Miles of Backbone Fiber Cable	42
Miles of Overhead Fiber Optic Cable	25
Miles of Underground Fiber Optic Cable	60

Recent Accomplishments

- Upgraded the downtown backbone between splice points BK-AX-CZ to improve efficiency for customer connections and free up fibers.
- Converted upgrade of AutoCAD fiber maps to AutoCAD AME GIS system.

2017-2021 Capital Improvement Program

Recurring Projects

There is one recurring project in the Capacity Improvements Category: the Fiber Optics Network System Improvements. This project extends the “dark” fiber optic network around Palo Alto through the development of fiber sub-rings and completion of general improvements to the fiber system. The annual funding for this project remains at \$200,000 throughout the CIP.

Non-Recurring Projects

As part of the 2017-2021 Capital Improvement Program, one project is included within this category: Fiber Optic System Rebuild (Fiscal Year 2017: \$1.2 million, total cost \$2.4 million). This project is expected to extend through Fiscal Year 2017 and will rebuild portions of the “dark” fiber optics network. Certain sections of the system have reached capacity limiting the City’s ability to provide fiber optics service to all potential customers. Rebuilding portions of the “dark” fiber optic network includes installation of additional fiber optic cables in the Stanford Research Park area and replacement of several below ground splice closures with pad-mounted pedestals.

Recent Accomplishments

- Upgraded the dark fiber network from University to Lytton at Bryant to add capacity and improve efficiency for downtown businesses
- Completed upgrade of fiber maps to Utilities GIS system, enabling a single view of multiple utility infrastructures
- Conducted a physical audit of the dark fiber network to improve network performance and add capacity

Customer Connections

As customers continually change their fiber optic needs due to equipment additions, new construction, building expansions, building remodels, teardowns and rebuilds, and new building occupancy types, the fiber optics system must evolve to meet these needs. Projects in this category include work required to meet the needs of customers who have applied for new or upgraded fiber optic service. The connection costs associated with new or upgraded connections are offset by charges to the customer.

Recent Accomplishments

- Several services installed for Stanford University offsite facilities and other customers in the Stanford Research Park area.

2017-2021 Capital Improvement Program

Recurring Projects

In the Customer Connections category there is one recurring project: Fiber Optics Customer Connections. In the 2017-2021 Capital Improvement Program, recurring funding in this project

remains at \$250,000. This project provides funding for the installation of fiber optic infrastructure for new service connections.

Non-Recurring Projects

There are no non-recurring projects in this category.

Summary of Capital Activity

FIBER OPTICS FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Proposed	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Source of Funds									
Other Revenues									
FO-10000	Fiber Optics Customer Connections: Connection Charges	161,785	150,000	200,000	200,000	200,000	200,000	200,000	1,000,000
	Other Revenues Total	161,785	150,000	200,000	200,000	200,000	200,000	200,000	1,000,000
	Total Sources	161,785	150,000	200,000	200,000	200,000	200,000	200,000	1,000,000
Use of Funds									
Capacity Enhancements									
FO-10001	Fiber Optics Network System Improvements	173,853	513,218	200,000	200,000	200,000	200,000	200,000	1,000,000
FO-16000	Fiber Optic System Rebuild	0	1,150,000	1,250,000	0	0	0	0	1,250,000
	Capacity Enhancements Total	173,853	1,663,218	1,450,000	200,000	200,000	200,000	200,000	2,250,000
Customer Connections									
FO-10000	Fiber Optics Customer Connections	218,366	364,502	250,000	250,000	250,000	250,000	250,000	1,250,000
	Customer Connections Total	218,366	364,502	250,000	250,000	250,000	250,000	250,000	1,250,000
	Total Uses	392,219	2,027,720	1,700,000	450,000	450,000	450,000	450,000	3,500,000



Fund: Fiber Optics
Category: System Improvements
Project Location: Various locations
Managing Department: Utilities
Initial Project Start: Spring 2016
Initial Project Completion: Spring 2018
Revised Project Start:
Revised Project Completion:
Project Number: FO-16000

Fiber optic splice closer ready for inspection and work

Fiber Optic System Rebuild

Description

This system capacity improvement project rebuilds portions of the "dark" fiber optic network around Palo Alto which, in turn, is leased to parties providing telecommunication services to citizens and businesses in Palo Alto. The rebuild projects will install new aerial duct or substructures (conduit and boxes), and additional fiber backbone cable to increase capacity for sections of the dark fiber ring that are at or near capacity, and allow the Utilities Department to meet customer requests for service. The rebuild project areas are mainly comprised of the Stanford Research Park, Palo Alto Internet Exchange, and Downtown areas.

Justification

The Dark Fiber system was constructed in the early 1990s and started leasing fibers to customers in 1996. Since that time several sections of the dark fiber system have reached capacity and limited the City's ability to serve its customers. This project improves the ability to maintain a competitive market for telecommunications in Palo Alto, accelerating the pace at which high quality, low cost, advanced telecommunications services are delivered to the residents and businesses of Palo Alto. Work included in the project is intended to increase system capacity and improve system reliability.

Significant Changes

2017-2021 CIP: The budget was reduced by the City Council during the Fiscal Year 2016 budget process. The Fiscal Year 2017 budget reflects this adjustment.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Fiber Optics Fund	0	1,150,000	1,150,000	1,250,000	0	0	0	0	1,250,000	0	2,400,000
Total	0	1,150,000	1,150,000	1,250,000	0	0	0	0	1,250,000	0	2,400,000

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	1,150,000	1,150,000	1,250,000	0	0	0	0	1,250,000	0	2,400,000
Total	0	1,150,000	1,150,000	1,250,000	0	0	0	0	1,250,000	0	2,400,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Business & Economics

Section: Growth

Goal: B-3

Policy: B-13

Program: B-4

Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

GAS FUND

Overview

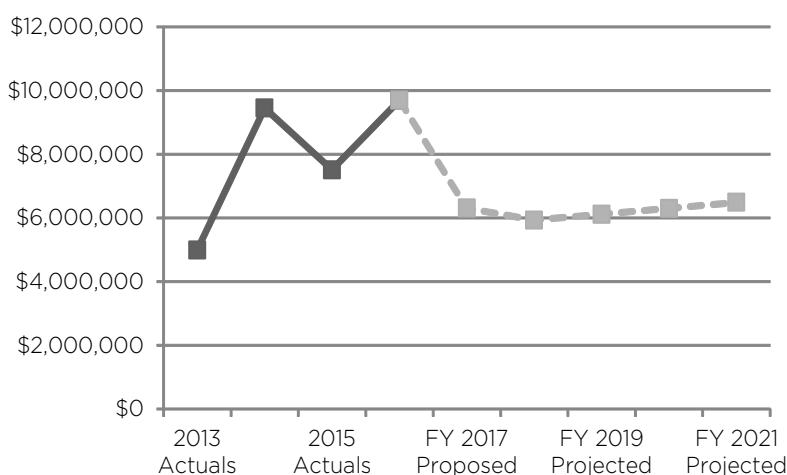
The City of Palo Alto is the only municipality in California that operates a full suite of City-owned utility services. The municipal gas distribution system began operation in 1917. It provides safe, reliable, and cost effective gas service to residents and customers of Palo Alto. For the 2017-2021 Capital Improvement Program (CIP), approximately \$31.1 million is programmed, with \$6.3 million allocated in Fiscal Year 2017. Overall, a total of eleven projects are programmed for the 5-year CIP. Major projects funded in the 2017-2021 CIP include Gas Main Replacements (cumulative total of \$20.0 million), Gas System Customer Connections (\$6.5 million), and Gas Meters and Regulators (\$1.9 million). The budget for the Gas Fund CIP is broken into three separate categories: Customer Connections, Gas Main Replacements, and System Improvements.

Customer Connections

As customers continually change their gas needs due to equipment additions, new construction, building expansions, building remodels, teardowns and rebuilds, and new building occupancy types, the gas system must evolve to meet these needs. The Gas System Customer Connections project,

which is the largest project within the Gas Fund (\$1.2 million in Fiscal Year 2017, \$6.5 million over the 2017-2021 CIP), is accounted for within this category. This project allows for the completion of work required to meet the needs of customers who have applied for new or upgraded gas service. The Gas Fund pays for a portion of this project, while remaining costs are supported by reimbursements from customers for project work performed by the City.

Gas Fund Capital Expenditures



Infrastructure Inventory

CLASSIFICATION	QUANTITY
Total miles of gas main distribution system	210.31 miles
Total miles of gas service extension to residents and businesses	205.55 miles
Number of gas receiving stations	4

Recent Accomplishments

In Fiscal Year 2015 the Utilities Gas Division completed approximately 195 customer service projects, at a cost of \$0.26 million.

Recurring Projects

A total of \$7.6 million is programmed for Customer Connection recurring projects in the 2017-2021 CIP, with \$1.4 million allocated in Fiscal Year 2017. Recurring projects in this category include the following:

- Gas System Customer Connections (Fiscal Year 2017: \$1.2 million; 5-Year CIP: \$6.5 million)
- System Extensions - Unreimbursed (Fiscal Year 2017: \$0.2 million; 5-Year CIP: \$1.1 million)

Non-Recurring Projects

There are no non-recurring projects under this category.

Gas Main Replacements

The Gas Main Replacements category accounts for the replacement of inadequately-sized and structurally deficient gas mains. The Utilities Department coordinates with the Public Works Department's street maintenance projects to minimize damage to the City's pavement and maximize cost efficiencies. In the next five years, it is anticipated that 88,380 linear feet of gas mains, or 8 percent of the entire system, will be replaced. The 2017-2021 Proposed CIP includes \$20.0 million in funding for projects within this category, with \$4.2 million allocated in Fiscal Year 2017.

Recent Accomplishments

Completed the design and construction of approximately 69,700 linear feet of gas mains and 996 gas service extensions from the City's main distribution system with the recent CIP project Gas Main Replacement projects 19, 20, & 21.

2017-2021 Capital Improvement Program

Recurring Projects

There are no recurring projects under this category.

Non-Recurring Projects

Six Gas Main Replacement projects are included in the 2017-2021 CIP (Fiscal Year 2017: \$4.2 million; 5-Year CIP: \$20.0 million)

System Improvements

To ensure reliable gas services for the City of Palo Alto residents and customers, gas infrastructure must be replaced upon reaching the end of its expected life. The System Improvements

category includes three projects during the 2017-2021 CIP at a total cost of \$3.6 million, with \$0.7 million allocated in Fiscal Year 2017.

Recent Accomplishments

- Completed building the gas distribution system model.

2017-2021 Capital Improvement Program

Recurring Projects

There are three funded recurring projects in the System Improvements category in the 2017-2021 CIP: Gas Distribution System Improvements (Fiscal Year 2017: \$0.2 million, 5-Year CIP: \$1.2 million), Gas Equipment and Tools (Fiscal Year 2017: \$0.1 million, 5-Year CIP: \$0.5 million), and Gas Meters and Regulators (Fiscal Year 2017: \$0.4 million, 5-Year CIP: \$1.9 million).

Non-Recurring Projects

There are no non-recurring projects under this category.

Please refer to the City of Palo Alto Utilities webpage to confirm project details: <http://www.cityofpaloalto.org/depts/utl/projects/default.asp>

Summary of Capital Activity

GAS FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Proposed	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Source of Funds									
Other Revenues									
GS-80017	Gas System, Customer Connections	747,954	850,000	1,017,000	1,047,510	1,078,935	1,111,303	1,144,642	5,399,390
	Other Revenue Total	747,954	850,000	1,017,000	1,047,510	1,078,935	1,111,303	1,144,642	5,399,390
	Total Sources	747,954	850,000	1,017,000	1,047,510	1,078,935	1,111,303	1,144,642	5,399,390
Use of Funds									
Customer Connections									
GS-80017	Gas System, Customer Connections	1,005,525	953,000	1,228,500	1,265,355	1,303,315	1,342,415	1,382,688	6,522,273
GS-03009	System Extensions - Unreimbursed	49,274	100,000	198,500	204,455	210,590	216,908	223,415	1,053,868
	Customer Connections Total	1,054,799	1,053,000	1,427,000	1,469,810	1,513,905	1,559,323	1,606,103	7,576,141
Gas Main Replacements									
GS-09002	Gas Main Replacement - Project 19	1,821,628	496,211	0	0	0	0	0	0
GS-10001	Gas Main Replacement - Project 20	2,443,978	2,297,621	0	0	0	0	0	0
GS-11000	Gas Main Replacement - Project 21	1,447,686	917,251	0	0	0	0	0	0

GAS FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Proposed	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
GS-12001	Gas Main Replacement - Project 22	306,590	3,835,985	0	0	0	0	0	0
GS-13001	Gas Main Replacement - Project 23	0	80,000	3,550,650	0	0	0	0	3,550,650
GS-14003	Gas Main Replacement - Project 24	0	0	640,000	3,100,000	0	0	0	3,740,000
GS-15000	Gas Main Replacement - Project 25	0	0	0	659,000	3,200,000	0	0	3,859,000
GS-16000	Gas Main Replacement - Project 26	0	0	0	0	678,200	3,300,000	0	3,978,200
GS-20000	Gas Main Replacement - Project 27	0	0	0	0	0	700,000	3,400,000	4,100,000
GS-20001	Gas Main Replacement - Project 28	0	0	0	0	0	0	721,000	721,000
	Gas Main Replacements Total	6,019,882	7,627,068	4,190,650	3,759,000	3,878,200	4,000,000	4,121,000	19,948,850
System Improvements									
GS-10000	Gas Station 3 Rebuild	30,125	0	0	0	0	0	0	0
GS-14004	Gas Distribution System Model	7,866	140,472	0	0	0	0	0	0
GS-13002	Gas Equipment and Tools	17,131	80,000	100,000	100,000	100,000	100,000	100,000	500,000
GS-80019	Gas Meters and Regulators	36,891	347,799	355,030	365,681	376,652	387,952	399,591	1,884,906
GS-11002	Gas Distribution System Improvements	334,349	300,000	231,913	238,870	246,036	253,417	261,020	1,231,256
GS-01019	GPS Global Positioning	6,728	1,300	0	0	0	0	0	0
GS-15001	Security at City Gas Receiving Stations	0	150,000	0	0	0	0	0	0
	System Improvements Total	433,090	1,019,571	686,943	704,551	722,688	741,369	760,611	3,616,162
	Total Uses	7,507,771	9,699,639	6,304,593	5,933,361	6,114,793	6,300,692	6,487,714	31,141,153



Fund: Gas Fund - Operating
Category: Gas Main Replacements
Project Location: University South and Old Palo Alto neighborhoods
Managing Department: Utilities
Initial Project Start: Summer 2021
Initial Project Completion: Winter 2023
Revised Project Start:
Revised Project Completion:
Project Number: GS-20001

Gas Main Replacement, January 2016

Gas Main Replacement - Project 28

Description

This project replaces approximately 12,500 linear feet (which represents 1.1% of the City's Gas distribution system) of leaking, inadequately-sized, and structurally deficient gas mains and services located on various streets in the University South and Old Palo Alto neighborhoods. Staff identifies problematic mains/services by researching maintenance and leak histories, analyzing performance of the entire gas distribution system, and considering risks ratings of the Distribution Integrity Management Plan.

Justification

The project will target replacing PVC mains and services, located in business districts, and steel mains and services with ineffective corrosion protection, also known in the industry as cathodic protection. This project is mandatory due to the need to replace aging infrastructure and to reduce the City's liability exposure due to PVC and steel gas facilities with ineffective cathodic protection.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	0	0	0	0	0	0	0	721,000	721,000	0	721,000
Total	0	0	0	0	0	0	0	721,000	721,000	0	721,000

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	0	0	0	0	721,000	721,000	0	721,000
Total	0	0	0	0	0	0	0	721,000	721,000	0	721,000

Relationship to Comprehensive Plan**Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Program: N-63

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

WASTEWATER COLLECTION FUND

Overview

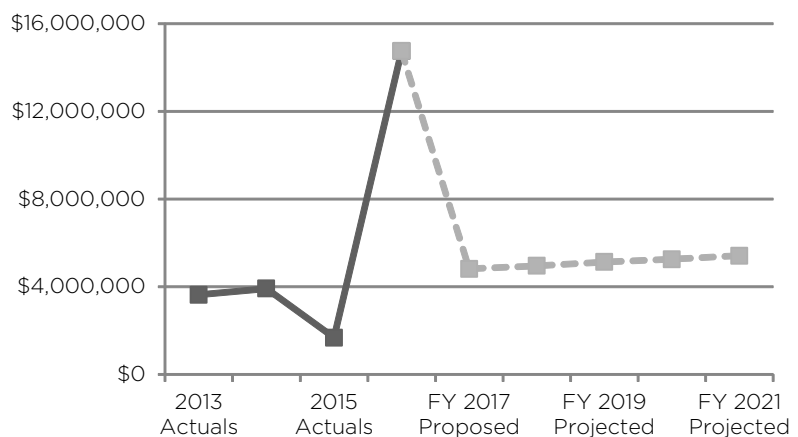
The City of Palo Alto is the only municipality in California that operates a full suite of City-owned utility services. The municipal wastewater collection system began operation in 1898 and continues to provide safe, reliable, and cost effective wastewater service to residents and customers of Palo Alto. For the 2017-2021 Capital Improvement Program (CIP), approximately \$25.6 million is programmed, with \$4.8 million allocated in Fiscal Year 2017. Overall, a total of ten projects are programmed for the 5-year CIP. Major projects funded in the 2017-2021 CIP include Wastewater Collection System Rehabilitation/Augmentation projects (cumulative total of \$18.7 million), Sewer Lateral/Manhole Rehabilitation and Replacement (\$3.3 million), and Sewer System Customer Connections (\$2.1 million). The budget for the Wastewater Collection Fund CIP is broken into two separate categories: Customer Connections and System Improvements.

Customer Connections

As customers continually change their wastewater needs due to equipment additions, new construction, building expansions, building remodels, teardowns and rebuilds, and new building occupancy types, the wastewater collection system evolve to meet these needs. The Sewer System Customer Connections

project is the only project within this category and includes work required to meet the needs of customers who have applied for new sewer laterals. The Wastewater Fund pays for a portion of this project, while remaining costs are supported by reimbursements from customers for project work performed by the City.

Wastewater Collection Fund Capital Expenditures



Infrastructure Inventory

CLASSIFICATION	QUANTITY
Total miles of sanitary sewer lines	217 miles
Total number of sanitary laterals	18,141

Recent Accomplishments

In Fiscal Year 2015 the Utilities Wastewater Division completed over 58 customer service projects with a total cost of \$0.3 million.

2017-2021 Capital Improvement Program

Recurring Projects

There is only one project within this category, the Sewer System Customer Connections project of \$2.1 million. This project funds customer connections and offset by reimbursements from customers.

Non-Recurring Projects

There are no non-recurring projects in this category.

System Improvement

To ensure reliable wastewater services for the City of Palo Alto residents and customers, infrastructure must be replaced upon reaching the end of its useful life. The infrastructure replacement program includes projects that will rehabilitate or replace deteriorated pipelines. In the next five years, it is estimated that approximately 91,917 linear feet of wastewater mains will be replaced.

Recent Accomplishments

- Began construction of multi-year CIP projects for Wastewater Collection System Rehabilitation/Augmentation Projects 24, 25, & 26 which includes replacement of 42,398 linear feet of wastewater mains and 779 sewer laterals.
- Completed the design of 15,753 linear feet of wastewater mains and 259 wastewater laterals as part of CIP project Wastewater Collection System Rehabilitation/Augmentation Projects 27.

2017-2021 Capital Improvement Program

Recurring Projects

A total of \$23.5 million is programmed for System Improvement recurring projects in the 2017-2021 CIP, with \$4.4 million allocated in Fiscal Year 2017. Recurring projects in this category include the following:

- Wastewater System Improvements (Fiscal Year 2017: \$0.2 million; 5-Year CIP: \$1.3 million)
- Wastewater General Equipment and Tools (Fiscal Year 2017: \$0.05 million; 5-Year CIP: \$0.3 million)
- Sewer Lateral/Manhole Rehabilitation and Replacement (Fiscal Year 2017: \$0.6 million; 5-Year CIP: \$3.3 million)

Non-Recurring Projects

The majority of funding within this category is allocated towards Wastewater Collection System Rehabilitation/Augmentation Projects (cumulative total of \$18.7 million). These projects implement high priority rehabilitation, augmentation, and lateral replacement work which reduces inflow of rainfall and ground water into the collection system. The Utilities Department coordi-

WASTEWATER COLLECTION FUND

nates with the Public Works Department's street maintenance projects to minimize damage to the City's pavement and maximize cost efficiencies.

Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details: <http://www.cityofpaloalto.org/gov/depts/utl/projects/default.asp>.

Summary of Capital Activity

WASTEWATER COLLECTION FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Proposed	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Source of Funds									
Other Revenues									
WC-80020	Sewer System, Customer Connections	1,385,192	373,098	394,000	405,820	417,995	430,534	443,450	2,091,799
	Other Revenue Total	1,385,192	373,098	394,000	405,820	417,995	430,534	443,450	2,091,799
	Total Sources	1,385,192	373,098	394,000	405,820	417,995	430,534	443,450	2,091,799
Use of Funds									
Customer Connections									
WC-80020	Sewer System, Customer Connections	319,952	373,098	394,000	405,820	417,995	430,534	443,450	2,091,799
	Customer Connections Total	319,952	373,098	394,000	405,820	417,995	430,534	443,450	2,091,799
System Improvements									
WC-99013	Sewer Lateral/Manhole Rehabilitation and Replacement	357,207	1,221,411	618,000	636,540	655,636	675,305	695,564	3,281,045
WC-08012	Wastewater Collection System Rehabilitation/ Augmentation Project 21	36,961	0	0	0	0	0	0	0
WC-09001	Wastewater Collection System Rehabilitation/ Augmentation Project 22	49,901	0	0	0	0	0	0	0
WC-10002	Wastewater Collection System Rehabilitation/ Augmentation Project 23	290,027	982,263	0	0	0	0	0	0
WC-11000	Wastewater Collection System Rehabilitation/ Augmentation Project 24	172,305	2,340,130	0	0	0	0	0	0
WC-12001	Wastewater Collection System Rehabilitation/ Augmentation Project 25	168,802	2,686,175	0	0	0	0	0	0
WC-13001	Wastewater Collection System Rehabilitation/ Augmentation Project 26	108,901	3,163,649	0	0	0	0	0	0
WC-14001	Wastewater Collection System Rehabilitation/ Augmentation Project 27	103,583	3,306,417	0	0	0	0	0	0
WC-15001	Wastewater Collection System Rehabilitation/ Augmentation Project 28	0	330,000	3,183,000	0	0	0	0	3,183,000
WC-16001	Wastewater Collection System Rehabilitation/ Augmentation Project 29	0	0	327,849	3,278,490	0	0	0	3,606,339
WC-17001	Wastewater Collection System Rehabilitation/ Augmentation Project 30	0	0	0	337,684	3,376,845	0	0	3,714,529

WASTEWATER COLLECTION FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Proposed	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
WC-19001	Wastewater Collection System Rehabilitation/ Augmentation Project 31	0	0	0	0	372,185	3,478,150	0	3,850,335
WC-20000	Wastewater Collection System Rehabilitation/ Augmentation Project 32	0	0	0	0	0	358,249	3,582,495	3,940,744
WC-21000	Wastewater Collection System Rehabilitation/ Augmentation Project 33	0	0	0	0	0	0	368,997	368,997
WC-13002	Wastewater General Equipment and Tools	0	50,000	50,000	50,000	50,000	50,000	50,000	250,000
WC-15002	Wastewater System Improvements	70,721	290,264	239,000	246,000	253,000	260,000	269,000	1,267,000
	System Improvements Total	1,358,408	14,370,309	4,417,849	4,548,714	4,707,666	4,821,704	4,966,056	23,461,989
	Total Uses	1,678,360	14,743,407	4,811,849	4,954,534	5,125,661	5,252,238	5,409,506	25,553,788



Fund: Wastewater Collection - Operating

Category: System Improvements

Project Location: Various locations

Managing Department: Utilities

Initial Project Start: Summer 2021

Initial Project Completion: Winter 2023

Revised Project Start:

Revised Project Completion:

Project Number: WC-21000

Rehabilitation Equipment

Wastewater Collection System Rehabilitation/Augmentation Project 33

Description

This project funds the design and construction of high priority main and lateral replacement work, which reduces inflow of rainfall and ground water into the collection system. The project scope is as yet undetermined but may include approximately 15,000 - 25,000 linear feet for various streets within the City's limits. The project will be comprised of laterals identified in video inspection work or through maintenance records as deficient and in need of replacement. Priority will be given to areas identified by Public Works as targeted work zones ensuring infrastructure coordination among different City departments.

Justification

The 2004 Collection System Master Plan update indicated certain facilities are in need of enlargement to handle growth and peak flows. The mains selected for replacement and/or rehabilitation are determined by the recommendations for the Master Plan Study; research and analysis of sewer main maintenance records; cleaning and videotaping of sanitary sewer mains; condition assessment; real time flow monitoring of existing sewers; and hydraulic computer modeling.

Supplemental Information

The mains selected for replacement and/or rehabilitation are determined by the recommendations of the Master Plan Study; research and analysis of sewer main maintenance records; clean-

WASTEWATER COLLECTION FUND

ing and videotaping of sanitary sewer mains; condition assessment; real time flow monitoring of existing sewers; and hydraulic computer modeling. Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	0	0	0	0	0	0	368,997	368,997	3,689,969	4,058,966
Total	0	0	0	0	0	0	0	368,997	368,997	3,689,969	4,058,966

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	0	0	3,689,969	3,689,969
Design	0	0	0	0	0	0	0	368,997	368,997	0	368,997
Total	0	0	0	0	0	0	0	368,997	368,997	3,689,969	4,058,966

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-18

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

WATER FUND

Overview

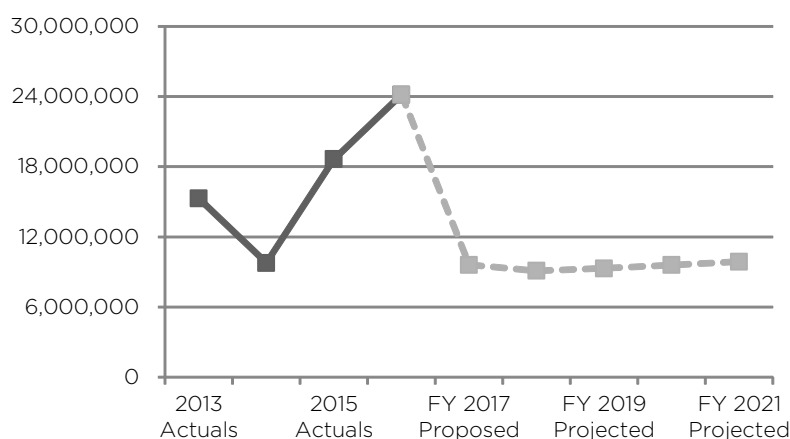
The City of Palo Alto is the only municipality in California that operates a full suite of City-owned utility services. The municipal water distribution system began operation in 1896 and continues to provide safe, reliable, and cost effective water service to residents and customers of Palo Alto. For the 2017-2021 Proposed Capital Improvement Program (CIP), approximately \$47.4 million is programmed, with \$9.6 million allocated in Fiscal Year 2017. Overall, a total of fifteen projects are programmed for the 5-year CIP. Major projects funded in the 2017-2021 CIP include Water Main Replacements (cumulative total of \$33.3 million), Water System Customer Connections (\$3.7 million), Water Meters (\$2.7 million) and Water, Gas, and Wastewater Utility GIS Data (\$2.1 million). The Budget for the Water Fund is broken into three separate categories: Customer Connections, System Improvements, and Water Main Replacements.

Customer Connections

As customers continually change their water needs due to equipment additions, new construction, building expansions, building remodels, teardowns and rebuilds, and new building occupancy types, the water system must evolve to meet these needs. Projects in this category include work required to meet

the needs of customers who have applied for new or upgraded water service. The Water Fund pays for a portion of this project, while remaining costs are supported by reimbursements from customers for project work performed by the City.

Water Fund Capital Expenditures



Infrastructure Inventory

CLASSIFICATION	QUANTITY
Miles of water main	235.58 miles
Number of wells	1 active standby and 7 emergency standby
Number of reservoirs	4 steel and 3 reinforced concrete

Recent Accomplishments

- In Fiscal Year 2015 the Utilities Water Utility completed over 67 customer service projects with a total cost of \$0.23 million.

2017-2021 Capital Improvement Program

Recurring Projects

The Water System Customer Connections project is the only project within this category. Over the course of the 2017-2021 CIP, \$3.7 million is programmed, with \$0.7 million allocated in Fiscal Year 2017.

Non-Recurring Projects

There are no non-recurring projects in this category.

System Improvements

To ensure reliable water services for the City of Palo Alto residents and customers, infrastructure must be replaced upon reaching the end of its expected life. The System Improvements category includes eleven projects during the 2017-2021 CIP at a total cost of \$10.5 million, with \$2.6 million allocated in Fiscal Year 2017.

Recent Accomplishments

- Completed the water distribution system seismic evaluation and condition assessment master study to determine the reliability of water system and seismic stability of water pipelines in the Foothills. Pipeline improvements recommended from this study will be included in future capital improvement projects.
- Completed 90% construction of concrete water tank rehabilitation work at Boronda Reservoir.

2017-2021 Capital Improvement Program

Recurring Projects

A total of \$10.5 million is programmed for System Improvement recurring projects during the 2017-2021 CIP, with \$2.5 million allocated in Fiscal Year 2017. Recurring projects in this category include the following:

- Water distribution system improvements (Fiscal Year 2017: \$0.7 million; 5-Year CIP: \$1.8 million)
- Water Fusion and General Equipment/Tools (Fiscal Year 2017: \$0.05 million; 5-Year CIP: \$0.3 million)
- Water Meters (Fiscal Year 2017: \$0.6 million; 5-Year CIP: \$2.7 million)
- Water Service Hydrant Replacement (Fiscal Year 2017: \$0.4 million; 5-Year CIP: \$2.1 million)
- Water System Supply Improvements (Fiscal Year 2017: \$0.2 million; 5-Year CIP: \$1.3 million)
- Water, Gas, Wastewater Utility GIS Data (Fiscal Year 2017: \$0.4 million; 5-Year CIP: \$2.1 million)

Non-Recurring Projects

A total of \$0.2 million is allocated in Fiscal Year 2017 for one non-recurring project. Funding for the non-recurring project represents funding approved by the City Council in prior fiscal years

and are recommended to be carried over to Fiscal Year 2017 to complete projects. This project is the Water Recycling Facilities (\$0.2 million). There is no funding for non-recurring projects beyond Fiscal Year 2017.

Water Main Replacements

The Water Main Replacements category accounts for the replacement of inadequately-sized and structurally deficient water mains. In the next five years, it is estimated that approximately 54,717 linear feet of water mains will be replaced.

Recent Accomplishments

- Completed the design and construction of 12,000 linear feet of water mains and 225 services with CIP project WMR 25.

2017-2021 Capital Improvement Program

Recurring Projects

There are no recurring projects in this category.

Non-Recurring Projects

The 2017-2021 Proposed CIP includes \$33.3 million in funding for six non-recurring projects within this category, with \$6.3 million approved for Fiscal Year 2017. The Utilities Department coordinates with the Public Works Department's street maintenance projects to minimize damage to the City's pavement and maximize cost efficiencies.

Summary of Capital Activity

WATER FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Proposed	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Source of Funds									
Transfer from Other Funds									
Gas Fund									
WS-02014	Water Gas Wastewater GIS Data	91,667	110,917	122,009	134,209	147,630	152,059	156,621	712,528
	Total Gas Fund Transfers	91,667	110,917	122,009	134,209	147,630	152,059	156,621	712,528
Wastewater Collection Fund									
WS-02014	Water Gas Wastewater GIS Data	91,667	110,917	122,009	134,209	147,630	152,059	156,621	712,528
	Total Wastewater Collection Fund	91,667	110,917	122,009	134,209	147,630	152,059	156,621	712,528
	Total Transfer from Other Funds	183,334	221,834	244,018	268,418	295,260	304,118	313,242	1,425,056

WATER FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Proposed	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Other Revenues									
WS-80014	Water Service Hydrant Replacement	1,776	0	0	0	0	0	0	0
WS-80013	Customer Connections	2,150,370	463,000	876,000	902,280	929,348	957,228	985,946	4,650,802
	Other Revenue Total	2,152,146	463,000	876,000	902,280	929,348	957,228	985,946	4,650,802
	Total Sources	2,335,480	684,834	1,120,018	1,170,698	1,224,608	1,261,346	1,299,188	6,075,858
Use of Funds									
Customer Connections									
WS-80013	Water System, Customer Connections	666,872	463,000	690,000	710,700	732,021	753,981	776,601	3,663,303
	Customer Connections Total	666,872	463,000	690,000	710,700	732,021	753,981	776,601	3,663,303
System Improvements									
WS-13004	Asset Management Mobile Deployment	6,308	10,000	82,163	0	0	0	0	82,163
WS-08002	Emergency Water Supply Project	430,778	779,712	0	0	0	0	0	0
WS-09000	Seismic Water System Upgrades	714,139	5,407,094	0	0	0	0	0	0
WS-11003	Water Distribution System Improvements	733,636	210,606	739,000	247,000	254,000	261,620	269,469	1,771,089
WS-13002	Water Fusion and General Equipment/Tools	6,675	15,000	50,000	50,000	50,000	50,000	50,000	250,000
WS-13006	Water Meter Shop Renovations	10,001	0	0	0	0	0	0	0
WS-80015	Water Meters	207,623	535,000	565,000	565,000	500,000	515,000	530,450	2,675,450
WS-07001	Water Recycling Facilities	144,705	243,716	200,000	0	0	0	0	200,000
WS-07000	Water Regulation System Improvements	40,417	1,717,259	0	0	0	0	0	0
WS-08001	Water Reservoir Coating Improvements	42,870	2,491,502	0	0	0	0	0	0
WS-80014	Water Service Hydrant Replacement	133,211	100,000	400,000	412,000	424,360	437,091	450,204	2,123,655
WS-15004	Water System Master Plan	192,207	307,793	0	0	0	0	0	0
WS-11004	Water System Supply Improvements	289,494	158,076	239,000	247,000	254,000	261,620	269,469	1,271,089
WS-02014	Water, Gas, Wastewater Utility GIS Data	210,905	332,750	366,025	402,628	442,890	456,177	469,862	2,137,582
	System Improvements Total	3,162,969	12,308,508	2,641,188	1,923,628	1,925,250	1,981,508	2,039,454	10,511,028
Water Main Replacements									
WS-11000	Water Main Replacement - Project 25	380,487	4,857,873	0	0	0	0	0	0
WS-12001	Water Main Replacement - Project 26	22,005	5,954,255	0	0	0	0	0	0
WS-13001	Water Main Replacement - Project 27	0	568,065	5,680,651	0	0	0	0	5,680,651
WS-14001	Water Main Replacement - Project 28	0	0	585,107	5,851,070	0	0	0	6,436,177
WS-15002	Water Main Replacement - Project 29	0	0	0	602,660	6,026,602	0	0	6,629,262
WS-16001	Water Main Replacement - Project 30	0	0	0	0	620,740	6,207,400	0	6,828,140

WATER FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Proposed	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
WS-19001	Water Main Replacement - Project 31	0	0	0	0	0	639,362	6,396,320	7,035,682
WS-20000	Water Main Replacement - Project 32	0	0	0	0	0	0	658,543	658,543
	Water Main Replacements Total	402,492	11,380,193	6,265,758	6,453,730	6,647,342	6,846,762	7,054,863	33,268,455
	Total Uses	4,232,333	24,151,701	9,596,946	9,088,058	9,304,613	9,582,251	9,870,918	47,442,786



Fund: Water Fund - Operating
Category: Water Main Replacements
Project Location: Various Locations
Managing Department: Utilities
Initial Project Start: Summer 2021
Initial Project Completion: Winter 2023
Revised Project Start:
Revised Project Completion:
Project Number: WS-20000

Installed 16" HDPE pipe waiting to be backfilled

Water Main Replacement - Project 32

Description

Funding for this project is a placeholder that will allow for the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2021 and 2022. Mains are selected by researching the maintenance history of the system and identifying those that are undersized, corroded, and subject to breaks. The project scope is as yet undetermined but may include 15,000 - 25,000 linear feet of mains and services on various streets within the City.

Justification

Some mains are inadequate in size to supply required flows and pressures for fire protection, and others are subject to recurring breaks.

Supplemental Information

Each year the projects are re-evaluated and the highest priority is given to the most deteriorated portions of the system. Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	0	0	0	0	0	0	0	658,543	658,543	0	658,543
Total	0	0	0	0	0	0	0	658,543	658,543	0	658,543

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	0	0	6,588,210	6,588,210
Design	0	0	0	0	0	0	0	658,543	658,543	0	658,543
Total	0	0	0	0	0	0	0	658,543	658,543	6,588,210	7,246,753

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-20

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-19

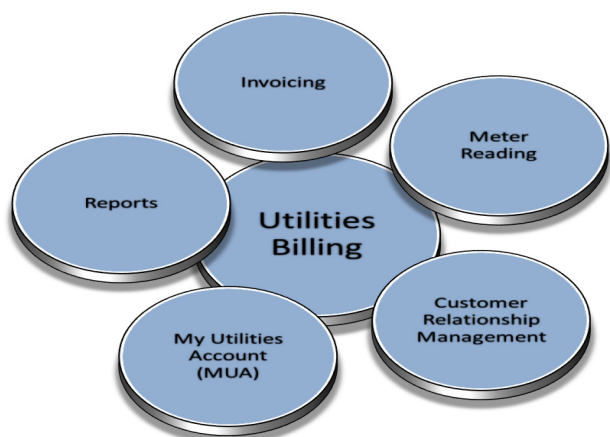
Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

TECHNOLOGY FUND



Fund: Technology Fund

Category: Department Technology Upgrades and Improvements

Project Location: Various

Managing Department: Information Technology

Initial Project Start: Recurring

Initial Project Completion: Recurring

Project Number: TE-10001

Utilities Customer Billing System Improvements

Utilities Customer Bill System Improvements

Description

This project provides regulatory enhancements and improved security for the Utilities billing system. Through the implementation of this recurring project, the Utilities Department will be responsive to new legislation and legal requirements. Securing customer sensitive information and complying with Payment Card Industry (PCI) data security standards will continue to be a priority as well.

Justification

This project provides software system updates to meet mandatory security, regulatory, and governing requirements. This includes reviewing the various Meter-to-Cash business processes, the My Utilities Account online customer portal, reporting tools, bill print software, and the Customer Relationship Management (CRM) solution for the Utilities Billing System. The Enterprise Funds share proportionately in the costs of this project.

Significant Changes

This project has traditionally been a recurring project, with new funding being transferred to the Technology Fund from the various enterprise funds each year. We are extending funding into Fiscal Year 2017 to address a required technical upgrade to the Utilities bill print and electronic vaulting software as well as proceed with a scheduled upgrade to the My Utilities Account self-customer service portal to allow for mobile optimized viewing and enhanced functionality.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	N/A	5,002	0	0	0	0	0	0	0	0	N/A
Transfer from Electric Fund	N/A	119,415	24,572	122,856	0	0	0	0	122,856	0	N/A
Transfer from Fiber Optics Fund	N/A	915	188	941	0	0	0	0	941	0	N/A
Transfer from Gas Fund	N/A	45,992	9,463	47,317	0	0	0	0	47,317	0	N/A
Transfer from Refuse Fund	N/A	27,914	5,744	28,718	0	0	0	0	28,718	0	N/A
Transfer From Storm Drainage Fund	N/A	5,970	1,228	6,142	0	0	0	0	6,142	0	N/A
Transfer from Wastewater Collection Fund	N/A	15,412	3,171	15,856	0	0	0	0	15,856	0	N/A
Transfer from Water Fund	N/A	27,381	5,634	28,170	0	0	0	0	28,170	0	N/A
Total	N/A	248,001	50,000	250,000	0	0	0	0	250,000	0	N/A

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	248,002	0	0	0	0	0	0	0	0	N/A
Other	N/A	0	50,000	250,000	0	0	0	0	250,000	0	N/A
Total	N/A	248,002	50,000	250,000	0	0	0	0	250,000	0	N/A

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Customer Service

Goal: C-2

Policy: C-10

Program: C-12

Environmental Impact Analysis:

This project is categorically exempt from CEQA under section 15301.