

FY 2016-17 & FY 2017-18

ADOPTED BUDGET



San Francisco
Water Power Sewer

Services of the San Francisco Public Utilities Commission



GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished
Budget Presentation
Award*

PRESENTED TO

**San Francisco Public Utilities Commission
California**

For the Biennium Beginning

July 1, 2014

Jeffrey R. Enos

Executive Director

VISION

Innovative utility leader, recognized for excellent results in service, safety, stewardship, and inclusiveness.

MISSION

Provide our customers with high-quality, efficient and reliable water, power and sewer services in a manner that values environmental and community interests and sustains the resources entrusted to our care.

FY 2016-17 AND FY 2017-18 SFPUC BUDGET

A balanced two-year budget covering three public utility enterprises that reflects fiscal and social responsibility, investments in the future of our City and Region and response to affordability demands.

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GENERAL MANAGER'S TRANSMITTAL LETTER



Dear Customers and Stakeholders, Commissioners

The San Francisco Public Utilities Commission (SFPUC) is widely recognized as a national leader for excellent service, stewardship, and innovation. After 25 years of conservation leadership, San Francisco has some of the lowest residential per capita water usage in the United States. While we are very proud of these results and our progress in crucial water supply diversification projects, we had to confront the challenge of rebalancing our finances around new, lower levels of water demand.

This year, we launched our 2020 SFPUC Strategic Plan to ensure that we meet the challenges ahead and continue to deliver reliable services. The Strategic Plan reaffirms our core mission while better aligning the work of our Water, Power and Wastewater Enterprises. The plan will help strengthen our framework for prioritizing areas of improvement, while reducing costs and unifying us toward one set of prioritized actions. We are unique in that our systems are interconnected, and this will allow us to create synergistic projects that will better utilize our resources.

Our Local Water Program will ensure the right water for the right use. In addition to utilizing groundwater to augment our existing water supply, we are also moving forward with recycled water projects for irrigation. Our headquarters utilizes an innovative onsite water treatment system, which reduces our own potable water consumption by 65%. Going forward, onsite water treatment systems are now required in new large-scale developments in San Francisco.

Our Sewer System Improvement Program (SSIP) is deploying cutting edge technology for essential upgrades at our Southeast Treatment Plant (SEP) to further strengthen our seismic reliability while reducing odors. We utilize the captured methane gas created during the wastewater treatment process, meeting up to 40% of the plant's energy needs. Innovative resource reuse is an important part of how we do business.

Hetch Hetchy Power provides clean energy to our municipal facilities, and some residents and businesses. San Franciscans can also participate in our clean energy revolution by signing up for CleanPowerSF. We will be expanding the program rapidly over the next few years, which will be pivotal in achieving the City's climate goals.

We make sound fiscal stewardship of our ratepayer dollars one of our highest priorities. Despite the challenges posed by lower water demands, we are proud to have received a credit rating upgrade to AA for the Wastewater Enterprise. This will allow us to sell bonds at lower interest rates, resulting in lower debt service.

Profile of the San Francisco Public Utilities Commission

The San Francisco Public Utilities Commission (SFPUC) or the Commission, a department of the City and County of San Francisco (the City), is responsible for the operations, maintenance, and development of three utility enterprises: Water, which operates the Hetch Hetchy Water and Power System, Wastewater, and Power. We provide wholesale and retail drinking water to portions of the San Francisco Bay Area, power to residential and commercial customers as well as municipal facilities, and wastewater collection and treatment within San Francisco and three neighboring districts.

In addition to the utility enterprises, Business Services, External Affairs, and Infrastructure provide support and oversight services to all three utilities, and all are supported and paid for by utility rates and charges.

The Water Enterprise operates the Hetch Hetchy Regional Water System, a wholesale drinking water utility that serves 2.6 million residents in Alameda, Santa Clara, San Mateo and San Francisco counties. The upcountry portion of the System is anchored by Hetch Hetchy Reservoir in Yosemite National Park. Impounded by O'Shaughnessy Dam, water is then transported through three tunnels and two hydroelectric powerhouses before entering the San Joaquin Pipelines leading to the Tesla Ultraviolet Treatment Facility and the Coast Range Tunnel.

The Bay Area portion of the System includes water collection, transmission, and treatment facilities from the Alameda East Portal in Alameda County through the wholesale service area to terminal reservoirs in San Francisco. Facilities include the watersheds, reservoirs, and dams that form our Calaveras, San Antonio, Crystal Springs, Pilarcitos, and San Andreas reservoirs. The associated water treatment facilities are Tesla Ultraviolet Treatment Facility disinfecting the Hetch Hetchy supply, Sunol Valley Water Treatment Plant treating the Alameda Creek supply and Harry Tracy Water Treatment Plant treating the Crystal Springs reservoir system supply. The water transmission system in the Bay Area includes the San Antonio, Bay Division, San Andreas, Sunset, and Crystal Springs pipelines, and the Irvington, Bay, Crystal Springs Bypass and Hillsborough tunnels.

The Water Enterprise also manages distribution of water in the City. This system encompasses 1,235 miles of distribution pipelines, 11 reservoirs, and eight water tanks with a total storage capacity of approximately 413 million gallons. Since June 2011, the Water Enterprise has operated the City's Auxiliary Water Supply System (AWSS), an independent, high pressure water supply system for fire suppression.

Approximately 85% of the drinking water supplied by our system originates as snowmelt within the 459-square-mile Hetch Hetchy Watershed on the upper Tuolumne River within Yosemite National Park. This high quality water is then transported 167 miles across California solely by gravity. The remaining 15% of the water supply comes from precipitation collected in the reservoirs of the Alameda Creek Watershed in Alameda County and the Peninsula Watersheds in San Mateo County.

Water Enterprise revenue is based on retail and wholesale water rate payments from customers. Retail rates are set by the SFPUC. Wholesale rates are set by the Commission pursuant to our Water Supply Agreement with our wholesale customers.

The Wastewater Enterprise is responsible for our wastewater treatment utility operations. The Wastewater Enterprise collects, transmits, treats, and discharges flows generated within San Francisco and parts of Northern San Mateo County, the Bayshore Sanitary District, Brisbane, Treasure Island and Yerba Buena Island for the protection of public health and the environmental safety of the San Francisco Bay and the Pacific Ocean. Our mostly combined sewer system is unique in coastal California and offers significant environmental benefits because it captures and treats both stormwater and urban street runoff in addition to wastewater from homes and businesses.

Wastewater and stormwater flows generated in San Francisco are treated by three treatment facilities: the Southeast Treatment Plant, the Oceanside Treatment Plant, and the North Point Wet Weather Facility. The Wastewater Enterprise operates pump stations, multiple deep water and stormwater outfalls, and transport storage structures that can store up to 200 million gallons around the shoreline of the City. We operate, clean, and maintain nearly 1,000 miles of sewer pipes. The system is designed to handle an average 85 million gallons per day (mgd) in dry weather and up to 575 million gallons per day in wet weather. We regularly monitor the beaches around the perimeter of San Francisco where water recreation is common and provide water quality reports to the public using our 24-hour hotline, website, e-newsletters, and a new mobile app.

The Wastewater Enterprise serves both residential and commercial accounts as well as some municipal customers, with cost recovery coming from ratepayer bills based on the volume and strength of the sanitary sewage flow. Our sewer facilities and resource reuse programs have received both state and

national recognition from agencies including the U.S. Environmental Protection Agency, National Association of Clean Water Agencies, and the California Water Environment Association.

The Hetch Hetchy Water and Power Enterprise (Hetch Hetchy) comprises two key components: 1) Hetch Hetchy Water (Hetchy Water), which operates and maintains the upcountry water and power facilities; and 2) Hetch Hetchy Power (Hetchy Power), responsible for all of our power utility commercial transactions and in-City power operations. A number of the facilities are joint assets and are used for both water transmission and power generation and transmission, benefitting both Hetchy Water and Hetchy Power. Operating and capital costs that benefit both are allocated 45% to Hetchy Water and 55% to Hetchy Power.

Hetch Hetchy Power is the clean energy utility for the City. Our Hetch Hetchy Power System generates and then delivers clean, hydroelectric energy to municipal facilities and the City's retail and wholesale electricity customers, which include Treasure Island, The Shipyard, shoreside power hookups, the Modesto Irrigation District (MID), and Turlock Irrigation District (TID). Hetchy Power also owns and maintains 60% of the street lights in the City. Finally, Hetchy Power provides electrical maintenance services, energy efficiency programs, and distributed generation services to our residents, businesses, and customers.

The Hetchy Power System comprises transmission lines that traverse the state of California, three large hydroelectric powerhouses and one small, in-line hydroelectric powerhouse, 22 solar arrays and two biogas facilities. Our main hydroelectric powerhouses, Holm, Kirkwood, and Moccasin, are located in the Sierra Nevada Mountain Range. Our Hetchy Power revenue is based on retail and wholesale power rate payments and charges collected from customers. Retail rates are set by the Commission.

While other utilities move toward cleaner energy, Hetchy Power has already accomplished this goal. Our energy portfolio is 100% greenhouse gas-free and produces no harmful radioactive byproducts. It is some of the cleanest energy in the country.

In May 2016, we launched CleanPowerSF, San Francisco's new Community Choice Aggregation (CCA) program. CCA allows us to partner with PG&E to deliver cleaner energy to residents and businesses. Under this program, PG&E continues to deliver energy on its transmission lines, maintain the grid, respond to power outages, and send your monthly bill. CleanPowerSF allows us to procure electricity from cleaner, more renewable sources such as wind or solar. Our Green product contains 35% renewable energy and our SuperGreen product offers a 100% renewable energy option.

Long-Term Strategic Goals

Our mission at the SFPUC is to provide our customers with high-quality, efficient, and reliable water, wastewater, and power services in a manner that is inclusive of environmental and community interests, and that sustains the resources entrusted to our care.

We have two major financial plans to support our goals of financial sustainability and meeting operating and capital investment needs while managing risk and long-term affordability: The Ten-Year Financial Plan, and the Ten-Year Capital Plan.

In May 2016, we were the first to issue a green bond certified under the Water Climate Bonds Standard. The Water Climate Bonds Standard provides investors with criteria to evaluate water-related bonds which support environmental sustainability. Proceeds from the \$240 million Wastewater Revenue Bond will fund projects in the Sewer System Improvement Plan (SSIP), and these certified Green bonds, further SFPUC's Sustainability Strategic goal.

Our budget is aligned with our long-term strategic goals and objectives as detailed in the SFPUC's 2020 Strategic Plan.

- 1) **Reliable Service and Assets:** We provide reliable service and value to our customers by optimizing the operations, maintenance, replacement, and improvement of all assets in the most cost-effective manner.
- 2) **Organizational Excellence:** We are a high-performing organization focused on efficiency, effectiveness, and accountability across the organization.
- 3) **Effective Workforce:** We attract, retain, and develop an effective workforce, reflective and supportive of our communities, that consistently delivers high-quality services to stakeholders.
- 4) **Financial Sustainability:** We assure financial integrity and sustainability, meeting today's operating and capital investment needs while managing risk and long-term affordability for the future.
- 5) **Stakeholder and Community Interest:** We foster trust and engagement with our customers, employees, and the communities we serve through open and timely communication and education.
- 6) **Environmental Stewardship:** We sustainably manage the resources entrusted to our care to ensure environmental and community health.

Rates: Water, Wastewater and Power

We have begun to assess our Water and Wastewater rate needs for the coming years to ensure affordability and equity across our customer base. We will continue to work with our citizen advisory committees, the community, and business leaders over the next two years to ensure our financial plans and systems provide clear, transparent data.

Pursuant to the City and County of San Francisco Charter section 8B.125, an independent rate study is performed once every five years. In April 2014, the 2014 Water and Wastewater Cost of Service Study was adopted with a recommend four-year rate increase for water and wastewater based on customer usage patterns and utility industry best practices. On May 13, 2014, the Commission approved the new rates through June 2018.

Table 1. Retail Water Rate Adjustments

Retail Water	Adopted			Projected
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Average Annual Adjustment	12.0%	10.0%	7.0%	11.0%

Table 2. Wastewater Rate Adjustments

Wastewater	Adopted			Projected
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Average Annual Adjustment	5.0%	7.0%	11.0%	14.0%

These rate change adjusts rates for Residential and Commercial customers.

Wholesale Rates: Water

Wholesale water rates are managed through our 25-year Water Supply Agreement, with our Wholesale customers. Rates are reset annually with a 28% increase and 9.32% increase in FY 2015-16 and FY 2016-17, respectively. Rate increases of 6.6% in FY 2017-18 and 8.9% in FY 2018-19 are projected. These rates are necessary to continue funding vital capital improvements for the Water System Improvement Program (WSIP) and providing additional resources to the annual renewal and replacement program.

In FY2015-16 there was a decrease in water demand for both retail and wholesale customers as a result of water conservation efforts. To mitigate the consequential revenue shortfall, several things were done including adjusting rates, implementing a 5% operating cost reduction and drawing \$23.2 million of fund balance.

Table 3. Wholesale Water Rate Adjustments

Wholesale Water	Adopted		Projected	
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Average Annual Adjustment	28.0%	9.3%	6.6%	8.9%

Electrical Rates

Hetch Hetchy Water and Power charges for services related to the storage and delivery of water, as well as generating and delivering electricity to contractual and municipal customers. For municipal power services, Enterprise department customers generally pay rates based on the equivalent Pacific Gas & Electric (PG&E) rate. General Fund department customers pay subsidized rates. The Power Enterprise transitioned to a cost-of-service program, increased the kWh rate by 0.5 cents and increased rates to the Water and Wastewater Enterprises by 3% annually. The new electrical rates took effect on July 1, 2016.

Capital Improvement Program

Through our **Water System Improvement Program (WSIP)**, one of the largest infrastructure programs in the nation, we have invested \$4.8 billion into strengthening our Hetch Hetchy Regional Water system. The focus of the program continued to be construction of several ongoing large regional projects and closeout of recently completed projects, creating a seismically-designed water lifeline for the Bay Area. The WSIP has enhanced our ability to provide high-quality, reliable drinking water to our customers, even after a major earthquake and during an extended drought period.

Pipeline Repair and Replacement in San Francisco

With over 1,000 miles each of water and sewer mains, the work of preventative maintenance is a continuing challenge. Funding was approved in the biennial budget for FY2016-17 and FY2017-18, to increase the pipeline replacement rate to 15 miles per year for water and sewer mains. This year, the Wastewater Enterprise inspected 77 miles and replaced 19.5 miles of sewer pipes. The Water Enterprise replaced 11.4 miles of pipe.

Auxiliary Water Supply System

In continuing upgrades to the Auxiliary Water Supply System (also referred to as the Emergency Water Supply System), six new cisterns were completed this fiscal year, adding over 500,000 gallons of additional firefighting water supply in areas of the City not previously served by the cistern system. Seismic and operation upgrades were also completed on one of two high-pressure system water tanks.

Local Water Program

Our **Local Water Program** focuses on diversifying San Francisco's water supply while ensuring we optimize efficient use of our water resources. As water supplies become more vulnerable to climate change, our ratepayers understand the importance of conservation as a way of life. We make it easy and affordable for businesses and households to reduce water consumption and maximize water savings.

Hetchy Capital Improvement Projects

Upgrades to the aging facilities of Hetchy Water and Hetchy Power (HHWP) are underway. Upcountry water and power facilities being assessed and rehabilitated include three impounding reservoirs, three regulating reservoirs, three large powerhouses, one small powerhouse, one switchyard, three

substations, 170 miles of pipeline and tunnels, almost 100 miles of paved road, over 160 miles of transmission lines, watershed land, and rights-of-way property.

Sewer System Improvement Program

The **Sewer System Improvement Program (SSIP)** is a 20-year, \$6.9 billion investment to allow us to continue our mission of protecting public health and the environment. SSIP will upgrade our aging sewer infrastructure, better ensure we are ready for an earthquake, and prepare us for challenges related to climate change. The program has made significant headway this year. Phase One of SSIP is investing over \$2.9 billion across 70 projects to improve and upgrade our collection system, treatment facilities and stormwater management efforts. The Southeast Treatment Plant (SEP), built in 1952, treats 80% of the City's wastewater and is a key focus of our Phase One investments.

Energy Efficiency and Renewable Power Resources

The Power Enterprise offers an array of energy efficiency, renewable energy, and green building programs for our customers. We serve our municipal, residential, and commercial customers some of the cleanest energy in the country. This year, the successful launch of **CleanPowerSF**, San Francisco's Community Choice Aggregation program, has vastly increased the access to renewable energy sources in San Francisco. This will help the City achieve its aggressive climate action goals.

After an extensive outreach and education program, we are pleased to have less than a 2% opt-out rate. CleanPowerSF offers a 35% renewable energy (Green) or a 100% renewable energy (SuperGreen) product, which are easily accessible through our online customer service portal (cleanpowersf.org) or by phone (415.554.0773).

Workforce Planning and Staff Development

Like utilities across the nation, we are facing a wave of retirements in the coming years. To ensure that current and future employees continue to develop the knowledge, experience, and skills necessary, we are improving our hiring and recruitment processes, creating stronger career pathways and advancing our culture of high performance.

We are dedicated to training, recruiting and hiring residents in our local service areas. We are also involved with workforce development planning efforts at the regional level, leveraging collaborative and strategic partnerships with water and wastewater agencies, education institutions, and nonprofit organizations. We continue to be a leading partner in Baywork, a consortium of 29 Bay Area water and wastewater utilities working together to prepare a reliable workforce.

- **Enterprise Workforce Planning (EWP)**: Identifying the professional competencies needed for successful employee performance and leadership. This provides guidance for employee development and allows us to identify workforce skill gaps to support strategic succession planning. We are piloting integration of the competency framework into employee recruitment, training, and performance management in order to align and improve these processes.
- **Local Hire**: For the fifth consecutive year, we have exceeded the requirements of San Francisco's Local Hiring Ordinance. For the 112 SFPUC public works projects subject to the Ordinance through the current reporting period, 40% of total hours and 70% of all apprentice hours have been worked by San Francisco residents.
- **Project Labor Agreement (PLA)**: More than 7.5 million craft hours performed by over 12,500 workers on the WSIP PLA. Nearly half of those hours have been worked by local and regional service territory residents. 71% of all apprentice opportunities were worked by local and regional service territory resident apprentices. We extended the PLA to SSIP, and 180,000 construction craft hours have been worked under the program. 37% of those hours have been worked by San Francisco residents. 77% of all entry-level apprentice hours were worked by San Francisco resident apprentices. SSIP has also enabled more than 120 local businesses to secure contract work, totaling more than \$54 million.

- Youth and Adult Workforce Development: We continue to invest in youth and adult workforce development programs to develop a strong pipeline of skilled and diverse workers for our staffing needs. These programs provide opportunities to historically under-represented communities in our service areas.
- Contractors Assistance Center: We provide local community contractors and small businesses with the tools and resources needed to compete for City funded contracts. The Center offers a wide range of services from classroom style workshops and one-on-one counseling to networking events.
- Annual Women in Construction Expo: We host this well attended Expo which empowers women in the construction industry by sharing valuable information on how to enter pre-apprenticeship programs, deepen professional skills, create and grow successful companies, and navigate the contract bidding process.

Community Engagement

We value the longstanding relationships we have with the diverse communities we serve. We were the first utility in the country to formalize our approach to community engagement when we passed our Environmental Justice Policy in 2009 and our Community Benefits Policy in 2011. These policies shape our approach to project planning in a way that prioritizes community input from those impacted by our services, particularly underserved and low-income communities.

We strive to be good neighbors in our community by maintaining transparent communications and building strong partnerships through:

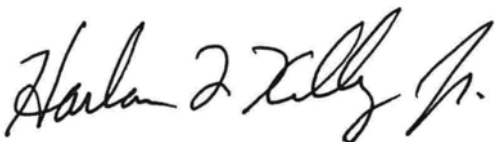
- Innovative educational campaigns
- Media and crisis communications
- Informative print and digital publications in multiple languages
- Timely responses to public inquiries and public records requests
- Engaging and timely social media content
- Public hearings, community events, and educational presentations

Conclusion

We continue to invest in the upgrade and rehabilitation of existing facilities while providing more resilience, enhancements and new facilities, all while fostering environmental, economic and social sustainability for San Francisco and our service areas. We rely upon the support of our community, our staff, and our elected officials to maintain our essential 24/7 operations.

We would like to express appreciation to the Mayor, the Board of Supervisors, and our Commission for their continued support of our achievements in responsible financial management, financial transparency and reporting excellence.

Respectfully submitted,



Harlan L. Kelly, Jr.

General Manager

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NAVIGATING THE SFPUC BUDGET

The City and County of San Francisco's Public Utilities Commission's (SFPUC) FY 2016-17 and FY 2017-18 Budget Document is organized into the following sections:



The General Manager's Transmittal Letter: This section provides an overview of the SFPUC, Long Term Strategic Goals and some of its major programs, including rates.

Introduction: Provides information on the Mission and Organizational Structure of the SFPUC, and includes the SFPUC Organizational Chart, Ten-Year Financial Plan and Ten-Year Capital Plan, and the Strategic Sustainability Plan.

Financial Authority and Policies: Provides the budget cycle calendar, budget process and SFPUC's financial authority and policies.

Budget Summary: Provides an overview of the SFPUC's adopted budget.

- **Budget Appropriation by Fund:** Provides a description of the three Enterprise funds.
- **Budget Sources and Uses:** Provides a high-level summary of the SFPUC adopted budget, budget tables and descriptions by Sources and Uses categories. The budget tables contain: FY 2014-15 Audited Actual; the FY 2015-16 Adopted Budget; FY 2015-16 Actual; and the FY 2016-17 and FY 2017-18 Adopted Budgets. The variance columns measure the dollar and percentage difference between the FY 2016-17 and FY 2015-16 Adopted Budgets, and the FY 2017-18 and FY 2016-17 Adopted Budgets. The descriptions provide explanations of changes between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17, for Adopted Budgets for Sources and Uses categories are also provided.
- **Growth by Categories:** Summarizes the growth across budget categories of uses of funds for FY 2016-17 and FY 2017-18
- **Fund Balance:** Provides a summary by Enterprise and the SFPUC overall beginning and ending fund balances.
- **Authorized and Funded Full-Time Equivalents (FTEs):** Provides a summary by Enterprise, Bureaus, and Infrastructure.

Enterprise, Bureau, and Infrastructure Sections: These sections provide budgetary and operational information for each of the SFPUC's Enterprises – Water, Wastewater, and Hetch Hetchy Water and Power; the Bureaus, including the Office of the General Manager, Business Services, and External Affairs, and Infrastructure.

- **Budget Sources and Uses:** Provides the same information as the SFPUC Budget Summary Section on Budget Sources and Uses, at the Enterprise, Bureau, and Infrastructure level.
- **Approved Rates:** This provides Water and Wastewater rates, and includes descriptions and justifications of Sources of Revenues and Expenditures for the five-year forecast period.
- **Capital Improvement Program (CIP):** Provides descriptions and budgetary information on major projects in each of the Enterprises' CIPs for FY 2016-17 and FY 2017-18.

These projects are part of the Ten-Year Capital Plan.

- **Ten-Year Capital Plan:** Provides an outline of the long-term capital needs of each Enterprise over the next ten years, FY 2016-17 to FY 2025-26.
- **Ten-Year Financial Plan:** Provides a ten-year financial summary (FY 2016-17 to FY 2025-26) for each Enterprise, and describes projected sources and uses, resulting fund balances and key financial reserve ratios.
- **Departmental Section:** Provides operational and financial information on each of the Enterprises, and Bureaus, including an organizational chart, strategic sustainability trends and performance results and division budget summaries.
 - **Divisions:** Describes the roles and responsibilities of the Divisions, along with divisional budget summaries. The budget summaries include FY 2014-15 Audited Actual; the FY 2015-16 Adopted Budget; FY 2015-16 Actual; and the FY 2016-17 and FY 2017-18 Adopted Budget. The variance column measures the dollar and percentage change between the FY 2016-17 and the FY 2015-16 Adopted Budgets; and between the FY 2017-18 and FY 2016-17 Adopted Budgets. The explanations for changes between FY 2016-17 and FY 2015-16, and FY 2017-18 and FY 2016-17 Adopted Budgets for Sources and Uses categories with variances greater than ten percent are also provided.

Glossary of Terms: This section provides explanations and definitions to assist readers in understanding the Budget Document.

The following provides a brief explanation of the categories of FY 2016-17 and FY 2017-18 Budget Sources and Uses of Funds:

Sources of Funds:

Sale of Water

Revenues from sales of water to retail customers in San Francisco and wholesale areas. The wholesale customers are served under the terms of a long-term Water Supply Agreement (WSA).

Sewer Service Charges

Revenues from both San Francisco and neighboring special districts, including Bayshore Sanitary District, the City of Brisbane, and portions of the North San Mateo County Sanitation District, for sewer service charges to retail customers.

Sale of Electricity

Revenues from power sales to City departments for municipal use, wholesale customers, and other retail customers.

Sale of Natural Gas and Steam

Revenues from gas and steam provided to City departments.

Fund Balance

Fund balance is used as a source when uses exceed revenues. Conversely, a general reserve is budgeted when revenue sources exceed uses.

Other Non-Operating Revenues

Revenues from other income, including rent, permit fees, sale of property, custom work, and reimbursements.

Proceeds from Debt

Revenue received through the issuance of bonds, loans, or other borrowing instruments.

Federal Interest Subsidy

The SFPUC receives a subsidy payment from the Federal Government for a portion of their borrowing costs on taxable bonds. The U.S. Treasury Department is estimated to provide a direct subsidy equal to 32.6 percent (net of sequestration) of the interest payable for bonds issued as Build America Bonds per the American Recovery and Reinvestment Act (ARRA).

Interest Income

Revenue earned by an Enterprise on its cash and other financial investments.

Uses of Funds:

Debt Service

Principal and interest payments on revenue bonds, State Revolving Fund loans used to finance system improvements, repayments on other loans, and financing costs.

Revenue-Funded Capital

Revenue-Funded Capital refers to the portion of the capital budget or program funded through revenues.

General Reserve

General Reserve is budgeted when sources exceed uses. Conversely, fund balance is budgeted when uses exceed sources. Use of the General Reserve must be approved by the Mayor and Board of Supervisors.

Operations and Maintenance (O&M costs) include the following:

- **Personnel**
Labor for full-time and temporary employees, and related fringe benefits.
- **Overhead**
SFPUC's share of City-wide overhead, including the County-wide Cost Allocation Plan (COWCAP).
- **Non-Personnel Services**
Services such as maintenance of equipment and facilities, travel, training, memberships, professional services, rent, and other expenses that support maintenance and operations.
- **Materials and Supplies**
Equipment maintenance, safety, fuel, and office supplies, chemicals, and other miscellaneous materials and supplies for the maintenance and operation of the Enterprises.
- **Equipment**
Equipment is identified as having a value greater than \$5,000, and a useful life of three years or more, such as vehicles, machinery, and other heavy equipment.
- **Services of Other Departments**
Services performed for the SFPUC by other City departments.
- **Operating Transfers Out**
On-going operating payments between the Enterprise funds or other City departments.

Programmatic Projects

Programmatic projects are annual projects that close out at the end of the fiscal year. These projects are used to capture costs for specific operating or maintenance programs.

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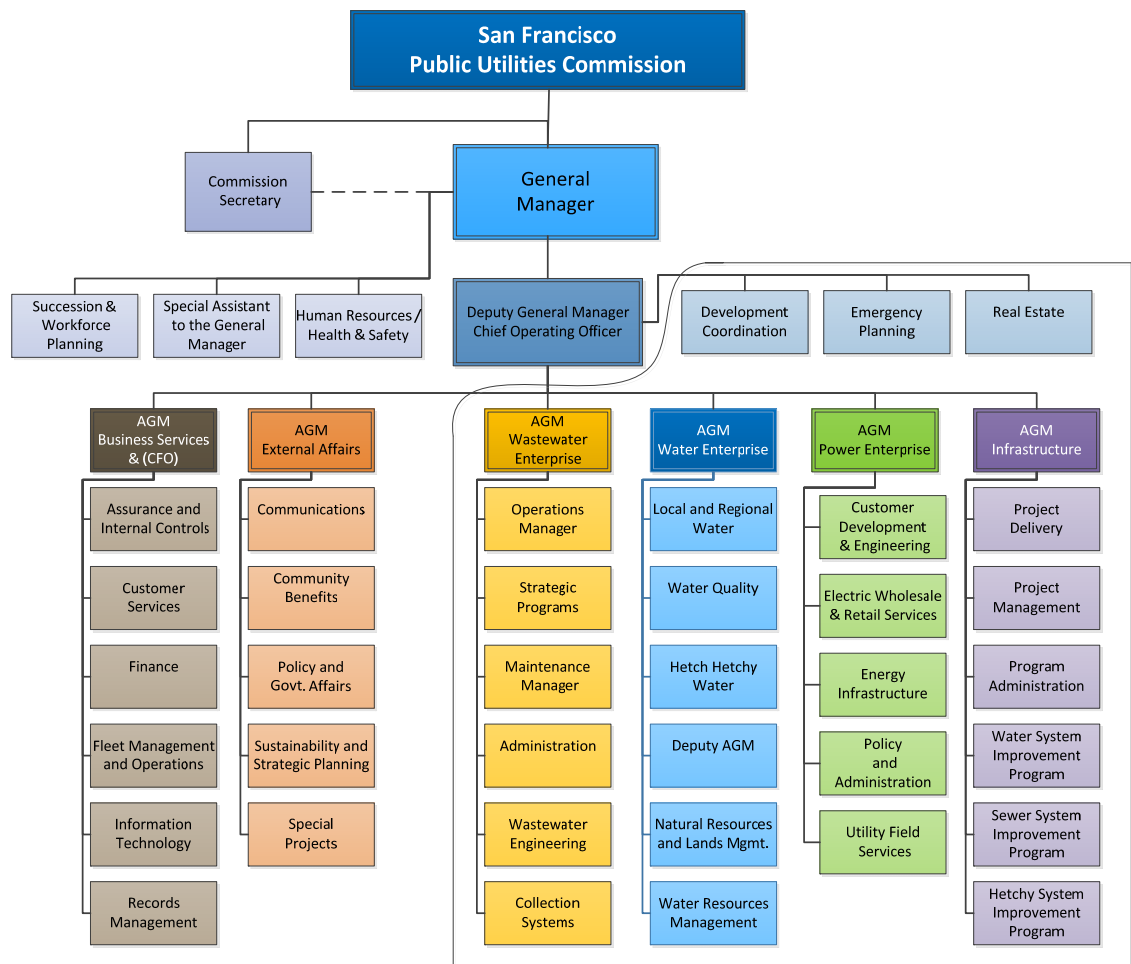
INTRODUCTION

The San Francisco Public Utilities Commission (SFPUC) is an Enterprise Department of the City and County of San Francisco (CCSF) that provides essential service utilities: Water (both regional and local), Wastewater (local collection, treatment and disposal), and Power. The SFPUC supplies water to 2.6 million people in San Francisco and the San Francisco Bay Area. One-third of the water is supplied directly to retail customers primarily in San Francisco (including residential, industrial and commercial customers), and the remaining two-thirds is supplied to wholesale customers through a long-term Water Supply Agreement (WSA). Wastewater services are provided within the City and County of San Francisco (as well as to three neighboring districts, including the San Mateo Sanitation District, Bayshore Sanitary District, and the City of Brisbane). Power is supplied primarily to San Francisco City departments and their tenants, as well as to the Turlock and Modesto Irrigation Districts.

Mission, Vision, and Organization Chart

The mission of the SFPUC is to provide our customers with high quality, efficient and reliable water, power, and sewer services in a manner that is inclusive of environmental and community interests, and that sustains the resources entrusted to our care.

The SFPUC is a sustainable utility leader, recognized for excellent results in service, safety, stewardship and inclusiveness.



Structure

The SFPUC is comprised of three Enterprises, Infrastructure, CleanPowerSF, and the Bureaus. The three Enterprises are the Water Enterprise, Wastewater Enterprise, and the Power Enterprise, operated within Hetch Hetchy Water and Power. Infrastructure manages the planning, design and construction of the capital programs. CleanPowerSF, the electrical power community choice aggregation program, is a new, self-contained program that is managed by the Assistant General Manager (AGM) for Power. The Bureaus comprised of the Office of the General Manager, Business Services, and External Affairs provide critical support services and oversight to the Enterprises and Infrastructure. The Office of the General Manager includes, Human Resources, Security, Emergency Planning, and Real Estate. Business Services includes Administration, Assurance and Internal Controls, Customer Services, Financial Services and Asset Management, Fleet Management & Operations, Information Technology Services, and Records Management. External Affairs includes Communications, Community Benefits and Legislative Affairs.

Department and Fund Relationship

The SFPUC uses a cost-allocation model to determine the amount of funds to recover from the three Enterprises for the cost of services provided by the Office of the General Manager, Business Services and External Affairs. Costs are allocated from both the operating and capital funds depending on whether the services provided are to support Enterprise operations/maintenance or for capital programs or projects. Bureaus allocations to the three Enterprises are detailed and discussed in the "SFPUC Bureaus" section. Chart S1, which illustrates the cost-allocation by showing the breakdown of funding sources.. The uses of these allocated funds are shown in Chart S2. As in past years, the Business Services Division has the larger budget of the bureaus and so represents the largest amount of funds from the cost-allocation model.

The sources of funds for Infrastructure are from capital project budgets, either directly for Infrastructure expenses to capital projects, or indirectly through an overhead rate that is applied to capital projects.

CleanPowerSF is a financially independent program funded through customer energy rates. The Power Enterprise provided a loan to CleanPowerSF to begin operations; the CleanPowerSF annual budget includes funding to repay this loan as shown on Chart CP2.

SFPUC Ten-Year Financial Plan and Ten-Year Capital Plan

Ten-Year Financial Plan

The SFPUC prepares a Ten-Year Financial Plan as part of the budget deliberations process as required by the City and County of San Francisco Charter Section 8B.123. This is a planning document used to develop the Ten-Year Capital Plan, water, power and sewer utility rates, and the biennial budget. The Plan includes a ten-year financial summary (FY 2016-17 through FY 2025-26) for each Enterprise, describing projected sources and uses, resulting fund balances and key financial ratios. Projected costs and revenues are estimates and subject to variations inherent in all such projections. Consequently, the estimates are not viewed as precise predictions but rather as indications of expected trends given expenditure, revenue, and financing assumptions. These assumptions are based on current Commission policies, goals, and objectives representing management's best estimates at the time. While this is not a budget, nor are funds appropriated through this process, it does inform the subsequent budget.

Ten-Year Capital Plan

The SFPUC prepares a Ten-Year Capital Plan as part of the budget deliberations process as required by the City and County of San Francisco Charter Section 3.20. The Ten-Year Capital Plan informs and guides managers, policy makers, elected officials, and the public, by providing the proposed long-term capital programs, projects, and investments. As the budget process progresses through the Spring and into final adoption in the Summer, the annual Capital Improvement Program (CIP) can be revised and final projects, costs, and totals for the two annual

CIPs can change. This is not a budget, nor are funds appropriated driving the Plan adoption. Appropriation follows as part of the subsequent budget process.

Capital Expenditures Impact on Operating Budgets

Each Enterprise has a Ten-Year Capital Plan included in this document, which illustrates continued total growth in capital investments through FY 2025-26. These capital investments are essential for the reliable delivery of clean drinking water, the protection of public health and the environment, including the San Francisco Bay and Pacific Ocean and the continued delivery of clean energy for municipal services. Due to the nature of water utility operations, which rely on personnel, chemicals and electricity, these multi-billion dollar investments are not expected to reduce the annual operating budgets.

Supporting capital expenditures are a significant portion the SFPUC budget for FY 2016-17 and FY 2017-18; most notably debt service which is \$306.5 million or 30.9 percent of the total budget in FY 2016-17; and Revenue-Funded Capital which account for \$90.4 million or 9.1 percent of the FY 2016-17 budget. In FY 2017-18 the total debt service increases to \$337.5 million which is 31.9 percent of the total budget and Revenue-Funded Capital increases to \$105.8 million which is 10.0 percent of the total budget.

The capital programs are intended to support a defined Level of Service for each utility enterprise based on the SFPUC Vision and Mission. This level of capital investment has changed the SFPUC from an operating-based utility, that was primarily focused on service delivery, to a utility that is focused on reliable service delivery, while at the same time ensuring that the environmental, community and resource management components of the mission are at the forefront. For example, an essential outcome of the capital investment is the implementation of local hire, job training and job creation programs to benefit the community that pays for the capital program.

2020 Strategic Plan

Coinciding with the FY 2016-17 and 2017-18 budget development, the Executive Team of the SFPUC developed our **2020 Strategic Plan**; to reaffirm our overall strategic direction, identify key priorities and serve as a roadmap for the SFPUC to ensure we meet the challenges ahead and continue to deliver reliable water, power and sewer services. The Mission and the Visions of the SFPUC were reaffirmed through this process,

- Our Mission: To provide our customers with high quality, efficient and reliable water, power and wastewater services in a manner that values environmental and community interests and sustains the resources entrusted to our care.
- Our Vision: We are an innovative utility leader, recognized for excellence, results in service, safety stewardship and inclusiveness.

Through this process of reaffirming the Mission and Vision, the SFPUC also review and expanded upon their values, as illustrated in Chart 1 which are consistent with the goals of the Strategic Sustainably Plan (SSP) including the core values of stewardship, safety, service and inclusiveness.

The Goals and Objective included in the plan focus on accomplishments in the next four years, covering two budget cycles. They aim to ensure that objectives should be met at the same time that the organization drives while the drive to implement capital programs, diversify the water and energy portfolio and ensure triple bottom line sustainability. Goals and the goal descriptions are in Table 4 in this section.

Chart1. SFPUC Values

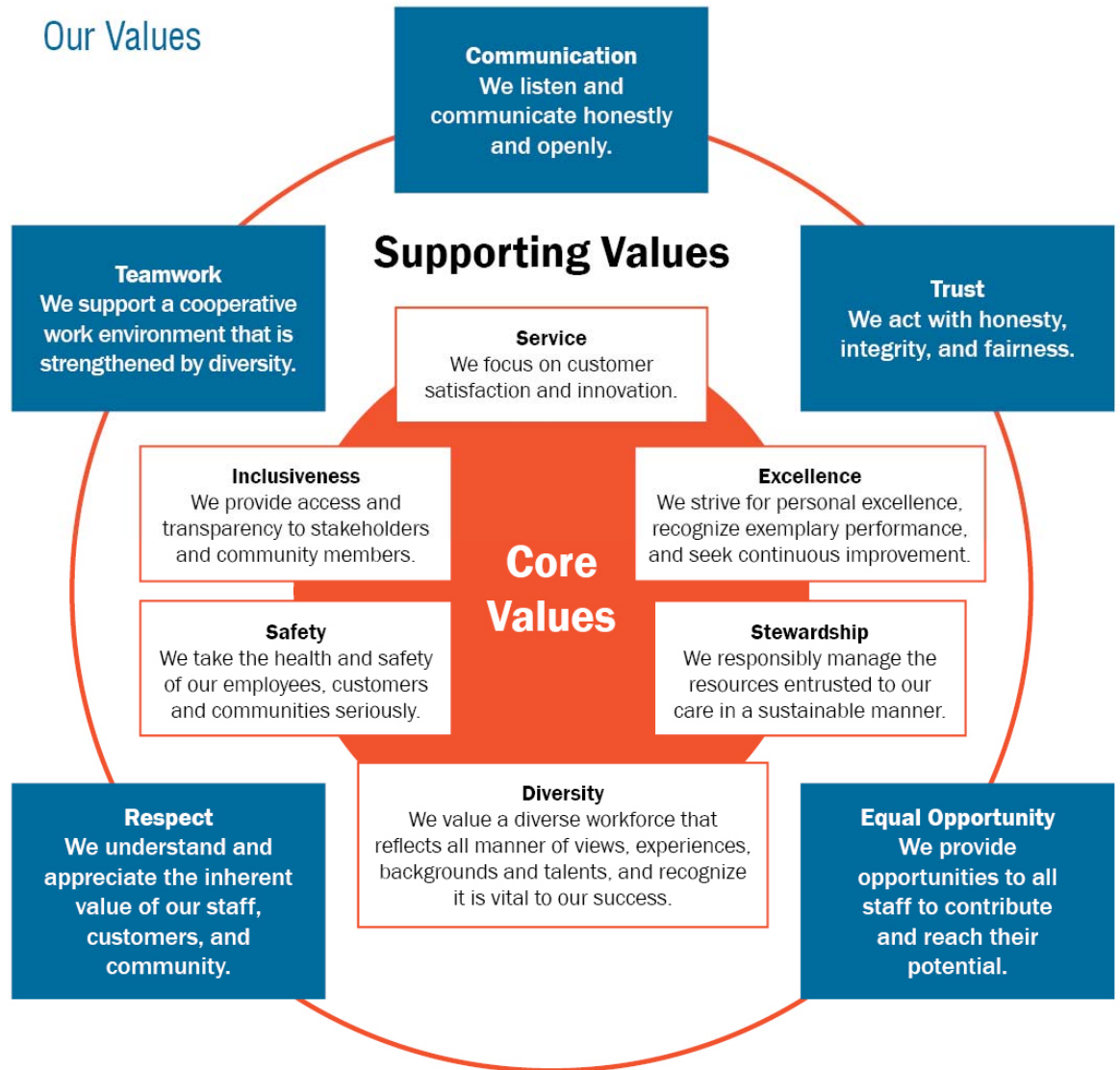


Table 4. 2020 Strategic Plan Goals and Goals Descriptions

2020 Strategic Goals	Goal Descriptions
Reliable Service and Assets	We provide reliable service and value to our customers by optimizing the operations, maintenance, and replacement of all assets in the most cost-effective manner.
Organizational Excellence	We are a high performing organization focused on efficiency, effectiveness and accountability across the organization.
Effective Workforce	We attract, retain, and develop an effective workforce, reflective and supportive of our communities, that consistently delivers high quality services to stakeholders.
Financial Sustainability	We assure financial integrity and sustainability, meeting today's operating and capital investment needs while managing risk and long-term affordability for the future.
Stakeholder and Community Interest	We foster trust and engagement with our customers, employees, and the communities we serve through open and timely communication and education.
Environmental Stewardship	We sustainably manage the resources entrusted to our care to ensure environmental and community health.

The complete 2020 Strategic Plan is in Appendix F.

SFPUC Strategic Sustainability Plan



The San Francisco Public Utilities Commission (SFPUC) defines sustainability as the framework through which we responsibly manage the resources under our care, protect public health, and balance our social and environmental responsibilities to the citizens and community, while providing cost effective services to our ratepayers.

Committed to long-term and continuous improvement, the SFPUC annually measures and reports to stakeholders on its performance toward reaching the goals and objectives of its strategic sustainability plan (SSP).

The Global Reporting Initiative (GRI) approach to sustainability reporting was used to prepare the SSP, the reporting index and the annual performance report. The emphasis for the reporting is accountability, transparency and benchmarking. An annual organization-wide review, measurement and reporting protocol tasks SFPUC management and staff to:

- Plan and deliver quality services to current and future generations of San Franciscans based on triple bottom line sustainability;
- Embed sustainability into our business DNA and long-term strategic decision-making;
- Communicate our organizational culture and build relationships with stakeholders;
- Benchmark our strategic sustainability performance against ourselves and peers;
- Build capacity for longer term trend, risk and foresight analyses; and
- Provide stakeholders with ongoing review of SFPUC-wide triple bottom line performance.

Strategic Sustainability Framework

Sustainability is core to our strategic planning; we consider our challenges holistically and bring them to bear in our management, planning and decision-making. Our framework integrates the triple bottom line (economy, environment, and society) model through five long-term goals. SFPUC expanded this model by integrating it through six categories of issues our stakeholders identified as those most relevant and readily understood and applied within the SFPUC.

Strategic Sustainability Goals

The SFPUC's six sustainability categories and associated objectives are aimed at continuous improvement in the integration of and performance along the triple bottom line, and ultimately at meeting the five key strategic goals:

- Plan for the Future
- Invest in SFPUC's People
- Promote a Green and Sustainable City
- Provide High Quality Services
- Engage SFPUC's Public and Invest in our Communities

Sustainability Categories



Customers: Issues relating to customers, rates and service standards



Community: Issues relating to the SFPUC's relationship and involvement with its communities



Environment & Natural Resources: Issues relating to environmental impacts and the use, protection and health of natural resources



Governance & Management: Issues relating to organizational planning, management, effectiveness, accountability and financial health



Infrastructure & Assets: Issues relating to the management, reliability and performance of assets and infrastructure



Workplace: Issues relating to human resource management, labor relations, and health and safety.

These six categories result from the rigorous outreach and analysis that underlies our foundational sustainability planning. They incorporate the triple bottom line perspective for examining the most relevant economic, environmental and social effects of SFPUC business activities.

Strategic Sustainability Objectives

SFPUC's Sustainability Objectives are identified by our executive leadership and are listed in the Each is, associated with one of our Strategic Sustainability Categories. While we continue to take lessons learned from our annual performance to refine and update our objectives, we anticipate that these objectives will remain relatively durable over time.

Key Performance Indicators, Standards and Best Practices

SFPUC's Key Performance Indicators (KPIs) provide the foundational measures for the critical evaluation, benchmarking and trending of our performance.

We use each KPI to report progress against its associated strategic sustainability category and objective. The KPIs sourced from best practices in applicable international, national and local reporting and performance standards, guidelines, laws and policies. Examples include the international guidelines of the Global Reporting Initiative, the Accountability Stakeholder Engagement Standard, and the American Water Works Association guidelines for strategic planning and sustainability reporting.

We regularly re-examine our KPIs to stay aligned with ongoing developments and internal applicability and utility. As a result, each KPI is associated with the most current industry metrics, standards and best practices to allow for benchmarking performance. Their applicability enables us to more realistically evaluate SFPUC's progressive triple bottom line (Environmental, Financial and Social) performance.

To the extent possible, KPIs are quantitative, directional, measurable, specific and actionable. However, in the case where no rigorous quantitative measure is available, SFPUC uses a qualitative KPI.

Fiscal Year 2014-15 Strategic Sustainability Performance Results

The fiscal year 2014-15 report is the seventh annual assessment of SFPUC-wide performance on our strategic sustainability plan. Over time, we've learned from the feedback of our stakeholders and continue to use their input to improve our actions, data collection and reporting across the triple bottom line.

The SFPUC began reporting on performance with our fiscal year 2005-06 Baseline, released our Sustainability Plan and Program in 2008, and subsequently integrated it with our long-term strategic goals and objectives.

A systemic benefit of our reporting protocol is in the utility of its feedback loop. Our inclusive SFPUC-wide scope provides all stakeholders a snapshot of how SFPUC is performing on its triple bottom line as an organization. Results can be used to inform broad strategic and more discrete or division-specific activities which can be rolled up into subsequent fiscal year SFPUC-wide reporting. This feedback loop allows us to build capacity for better trend and risk analyses and improve longer-term strategic planning.

Strategic Sustainability Performance Profile and Scoring

To facilitate evaluation and benchmarking, we have normalized our data where appropriate representing data against a driver strongest determinant or correlator of performance.

To score its annual performance, SFPUC uses the generic performance scale developed for its Sustainability Baseline Assessment. Because data collection for sustainability performance can result in a variety of quantitative and qualitative forms, this scale enables a more consistent, methodical approach to data analysis and assessment.

Table 5 shows that we score each indicator using an ordinal scale from 1 to 5, indicating progressive levels of performance. Each score represents the following:

Table 5. Scoring Criteria for the Strategic Sustainability Plan

SCORING CRITERIA		Strategic Sustainability Performance Scoring				
		1	2	3	4	5
Impact		Negative impact		No impact / Average	Positive impact	Significantly Positive Impact
Performance	Via Peers (/Via Self)	Doesn't meet requirements		Meets requirements	Exceeds requirements	Significantly exceeds requirements
	Baseline	Baseline data with no benchmark(s) with score 3				
Practice		Doesn't meet best practice		Meets best practice	Exceeds best practice	Leads best practice

For a qualitative indicator that requires a subjective evaluation of performance, SFPUC assumes that enough information is available to provide a basis for an assessment and score. In rare cases, a qualitative indicator may be so unique to SFPUC with variable targets and results, that we will describe but not evaluate or score the results. In case where SFPUC is assessing data for the first time or for which there is no appropriate industry standard or existing trend data, we use the initial data to establish a baseline. Unless this initial data indicates otherwise, we typically assign the result a neutral score of three in order to allow fair evaluation of future results against this baseline.

The Future of Strategic Sustainability Planning at the PUC

In FY 2015-16 we started an evaluation process of our Strategic Sustainability Plan and Program (SSP) to identify areas for improvement. In FY16-17, we will expand on the initial sustainability planning from 2008 to better align the SSP's evaluation measures with SFPUC's current operations, strategic planning and budget processes. The goal for this process is to improve the overall usability of the annual sustainability reports as well as update its processes to be more effective and efficient. The SFPUC will continue to work towards the strategic sustainability goals outlined in the framework to provide high quality services, engage its public and invest in its communities, promote a green and sustainable city, invest in its people, and plan for the future.

Appendix F has data from FY 2014-15. You can view all SFPUC's past annual performance results at sfwater.org/sustainability.

Strategic Sustainability Plan and the 2020 Strategic Plan

Although the SSP and the 2020 Strategic Plan were developed in 2011 and 2016 respectively, they are both grounded in the mission and vision of the SFPUC and contain many common elements. The SSP measures accountability for sustainability and benchmarks progress toward the triple bottom line, while the 2020 Strategic Plan's focus is to improve operational and programmatic delivery of

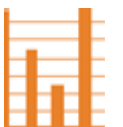
utility services. Nevertheless, the strategic goals of the SSP and the goals of the 2020 Strategic Plan are the same; for example, Planning for the Future, the first goal of the SSP is now the purpose of the 2020 Plan as described in the Forward from the General Manager,

“While this high level plan does not capture all of our work, it identifies key priorities to get us where we want to be in 2020. This plan is a roadmap to ensure we meet the challenges ahead and continue to deliver reliable water, power and sewer services.”

Chart 2 on the next page describes the similarities between the SSP sustainability categories and the 2020 Plan Goals and Objectives.

Chart 2 below describes the similarities between the SSP sustainability categories, the 2020 Plan Goals and objectives

Chart 2. Crosswalk between the Strategic Sustainability Plan (SSP) and the 2020 Strategic Plan Goals and Objectives

	2020 Strategic Plan Goals and Objectives					
SSP Categories	1 Reliable Service & Assets	2 Organizational Excellence	3 Effective Workforce	4 Financial Stability	5 Stakeholder/ Community Interest	6 Environmental Stewardship
 Customers		2.6 Provide responsive and efficient service to internal and external stakeholders		4.2 Ensure rates are fair, equitable, affordable and meet policy goals	5.2 Enhance customer and user satisfaction	
 Community		2.6 Provide responsive and efficient service to internal and external stakeholders	3.3 Position SFPUC as employer of choice, make career paths, opportunities visible to our employees, applicants & community	4.4 Ensure integrity, accountability and transparency in financial management	5.3 Build and leverage long-term community partnerships, inclusive of multiple interests	
 Environmental & Natural Resources	1.4 Ensure SFPUC can mitigate, respond to and recover from threats and disasters					6.1 Sustainably manage our natural resources and physical systems to protect the people, water, land and ecosystem that we affect; 6.2 Consistent approach to mitigate and adapt to climate change
 Governance & Management	1.1 Establish quantifiable operational and capital LOS goals by Enterprise	2.1 Foster continuous improvement; 2.4 Improve operational efficiency	3.4 Select and develop talent to support our vision for a high performance organization	4.3 Formalize enterprise risk management; 4.1 Develop a long-range financial plan to identify current and future funding needs		
 Infrastructure	1.2 Formalize our asset management approach, 1.3 Establish uniform investment prioritization process linked to asset management priorities	2.3 Enhance effectiveness and efficiency of standardized policies, procedures and work processes across the SFPUC				6.3 Be resource efficient in all business operations, 6.4 Investigate feasibility of implementing an environmental management system
 Workplace		2.5 Improve safety management system and culture	3.5 Develop common performance management & recognition framework for assessing performance		5.5 Improve internal communications by encouraging collaboration and strengthening common identity	

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FINANCIAL POLICIES



Calendar and Budget Process

SFPUC's biennial budget cycle begins in September and ends in July. The two-year fixed budget is prepared, reviewed, enacted by the Board of Supervisors (BOS), signed by the Mayor, and implemented by departments. The Board of Supervisors does not adopt a new budget for the second fiscal year of the cycle, but may amend the second year through supplemental budget adjustments if increases or decreases in revenues or expenditures are significant¹. SFPUC's two-year budget is comprised of two, single-year spending plans. The budget process is described below.

Participants

- The Public is invited to all public meetings, notified in advance to ensure stakeholder awareness of any budget items. This includes SFPUC's Citizen Advisory Committee.
- The SFPUC Commissioners hold publicly-noticed Budget meetings, during business hours for public comment on the proposed budget.
- The Committee on Information Technology (COIT) evaluates all departmental technology plans and makes recommendations for approval and funding of the departmental technologies budget requests.
- The Capital Planning Committee (CPC) provides recommendations to the Board of Supervisors' on City-wide priorities for capital and the level of investment needed to meet the priorities they identify.
- The Mayor prepares and submits a balanced budget to the Board of Supervisors on a biennial basis.
- The Board of Supervisors is the City's legislative body and is responsible for reviewing and may amend then approve the Mayor's proposed budget. The Board's Budget and Legislative Analyst also participates in reviews of City spending and financial projections.
- The Controller is the City's Chief Accounting and Auditing Officer and ensures the accuracy of the final budget.

Calendar and Process

Beginning in September and concluding in July, the biennial two-year budget cycle can be divided into four major stages.

- **Commission Budget Policy Review:** budget policy review and implementation.
- **Budget Preparation:** budget development and submission to the Commission.
- **Approval:** budget review and enactment by the SFPUC, Mayor, and Board of Supervisors.
- **Implementation:** department execution and budget adjustments.

Preparation

The Commission starts the review of budget policies in early September and establishes budget guidelines to staff. Once these guidelines have been established, the budget staff begins the planning, development and preparation of the biennial budgets:

¹ "Significant increases or decreases in revenues or expenditures shall be defined as greater than five percent difference between the projected and adopted budget for operating or capital expenditures or revenues for the second year of the department's biennial budget." (Resolution 464-11)

Two categories of budgets are prepared:

- **Enterprise and Bureau Operating Budgets:** Enterprise departments generate non-discretionary revenue primarily from charges for services that are used to support operations and revenue-funded capital.
- **Capital Budgets:** the biennial capital budget requests and Ten-Year Capital Plan proposals are submitted to the Capital Planning Committee (CPC) for review and inclusion in the City's annual Ten-Year Capital Plan. The Capital Budget is submitted to the Mayor and Board of Supervisors for approval.

Beginning in October, SFPUC Enterprises prepare their budget requests which are then submitted to SFPUC's Budget Section. From November to December, the Assistant General Managers (AGM), the Deputy General Manager, and the General Manager review the capital budget and department operating budget requests. In December and early January, the General Manager's proposed budget is consolidated and submitted to the SFPUC Commission for deliberations. From January to February, the Commission holds public hearings to review the operating and capital budget requests, Ten-Year Capital Plan, and Ten-Year Financial Plan. By mid-February, the budget requests are submitted to the Controller's Office. The Controller consolidates, verifies, and refines all the information that departments have submitted. The Controller submits departments' proposed budget requests to the Mayor's Office of Public Policy and Finance for review by mid-March.

The Mayor and the Mayor's staff meet with community groups to provide budget updates and to hear concerns and requests for funding to improve public services. The Controller ensures that the Mayor's final budget request is balanced, accurate, and based on reasonable assumptions.

Approval

On May 1, the Mayor's proposed budget for the request for the Enterprises is submitted to the Board of Supervisors. The Budget and Finance Committee of the Board of Supervisors holds public hearings during the months of May and June to review departmental requests and solicit public input. Board of Supervisors' Budget Analyst develops recommendations on departmental budgets which are shared and discussed with departments. Based on these discussions, the Board's Budget Analyst forwards the Budget and Finance Committee the recommendation for their review with the departments and public. The Budget and Finance Committee submits final recommendations to the full Board by June 1 for review and budget approval. If the Board of Supervisors' budget review lapses into the new fiscal year, a continuing resolution adopting the Interim Budget, the Mayor's proposed budget with some limitations, is passed by the Board and serves as the operating budget until the budget is finalized in late July. The Mayor typically signs the budget ordinance into law by the end of July.

Original Budget Amendments: The City Charter requires that the Board of Supervisors vote on the budget twice between July 15 and August 1. The first reading occurs the first Tuesday after July 15, and amendments may be proposed. These amendments are added to the budget if they are passed by a simple majority. Amendments may be proposed by any member of the Board of Supervisors and can reflect further public input and/or Board policy priorities. The Board votes on the amended budget during the second reading and if the budget is passed, it is sent to the Mayor for final signature. If other amendments are proposed during the second reading, there is a further reading a week later. The Board of Supervisors must pass a final budget before the August 1 deadline.

The Mayor has ten days to approve the final budget, referred to as the Annual Appropriation Ordinance (AAO). The Mayor may sign the budget as approved by the Board, making it effective immediately. The Mayor may also veto any portion of the budget, whereupon it returns to the Board of Supervisors. The Board has ten days to override any or all of the Mayor's vetoes with a two-thirds majority vote. In this case, upon the Board vote, the budget is immediately enacted, thus completing the budget process for the fiscal year. Should the Mayor opt not to sign the budget within the ten-day period, the budget is automatically enacted but without the Mayor's signature of approval. Once the AAO is passed, it supersedes the Interim Budget.

Implementation

The budget is implemented and executed by SFPUC staff as originally adopted by the Mayor and the Board of Supervisors, at the start of the fiscal year.

Supplemental Budget Adjustments: Budget adjustments during the fiscal year can be made through surplus transfers if available, or supplemental appropriation requests, when a department has inadequate revenue for the remainder of the fiscal year or when additional appropriation is needed for operating or capital project funding, grants appropriation legislation, or when a third party awards funding to a department. Budget adjustments for the second year of the biennial budget can be made through a supplemental appropriation, when increases or decreases in revenues or expenditures between the adopted and projected budget are significant. These adjustment requests require Board of Supervisors approval before going to the Mayor for final signature. The Commission must approve any budget adjustments in advance of it being presented to the Board of Supervisors. The public is informed and has the opportunity to engage in the budget amendment process through the SFPUC Commission agenda and public meetings, and the Board of Supervisors agenda and public meetings.

Biennial Budget Activity by Month

In FY 2010-11, the City adopted two-year budgets for the SFPUC and three other pilot departments (the Airport, the Port, and the Municipal Transportation Agency), in accordance with Proposition A passed in 2009. FY 2016-17 & FY 2017-18 represent SFPUC's fourth biennial budget. The SFPUC will amend the budget mid-cycle for FY 2017-18 budget only if revenues or expenditures are five percent below or above projections.

Year One

Date	Activity
September 8, 2015	Commission budget policy discussion
September 25, 2015	Biennial Capital and Operating Budget Instructions issued
September 28, 2015	Budget training and development (scheduled and as-needed)
October 1, 2015	Budget system available for input
October 30, 2015	Proposed structure reorganizations due to Financial Services
November 2, 2015	Ten-Year Capital Plan, and Operating budget request and Department's Technology Plan, due to Financial Services
November 2 to November 13, 2015	- Staff review and analysis: ➤ Operating budget ➤ Ten-Year Capital Plan ➤ Ten-Year Financial Plan
November 16 to November 20, 2015	- Deputy General Manager and Assistant General Managers' review: ➤ Operating budget ➤ Ten-Year Capital Plan ➤ Ten-Year Financial Plan ➤ Technology Plan
November 20, 2015	Update of major changes to the Ten-Year Capital Plan due to CPC
December 7, to December 11, 2015	- General Manager's review: - Operating budget - Ten-Year Capital Plan - Technology Plan
January to March, 2016	SFPUC and Capital Planning Committee (CPC) staff review of capital budget and Ten-Year Capital Plan
January 12, 19, & 26, 2016	- Commission's budget workshops: ➤ Operating budget ➤ Ten-Year Capital Plan ➤ Ten-Year Financial Plan
January 15, 2016	- Departmental technology plans submitted to COIT. - Biennial Capital budget requests submitted Capital Planning Committee - Ten-Year Capital Plan submitted to Capital Planning Commission
February 9, 2016	Commission adopts Operating Budget, Ten-Year Capital Plan, and Ten-Year Financial Plan
February 22, 2016	Operating budget requests submittal to Controller
March to May, 2016	CPC reviews Ten-Year Capital Plan and staff recommendations
May 1, 2016	Operating and capital budget requests submitted to Board of Supervisors
July 26, 2016	- Final budget adoption by Board of Supervisors. - Mayor signs Adopted Biennial Budget

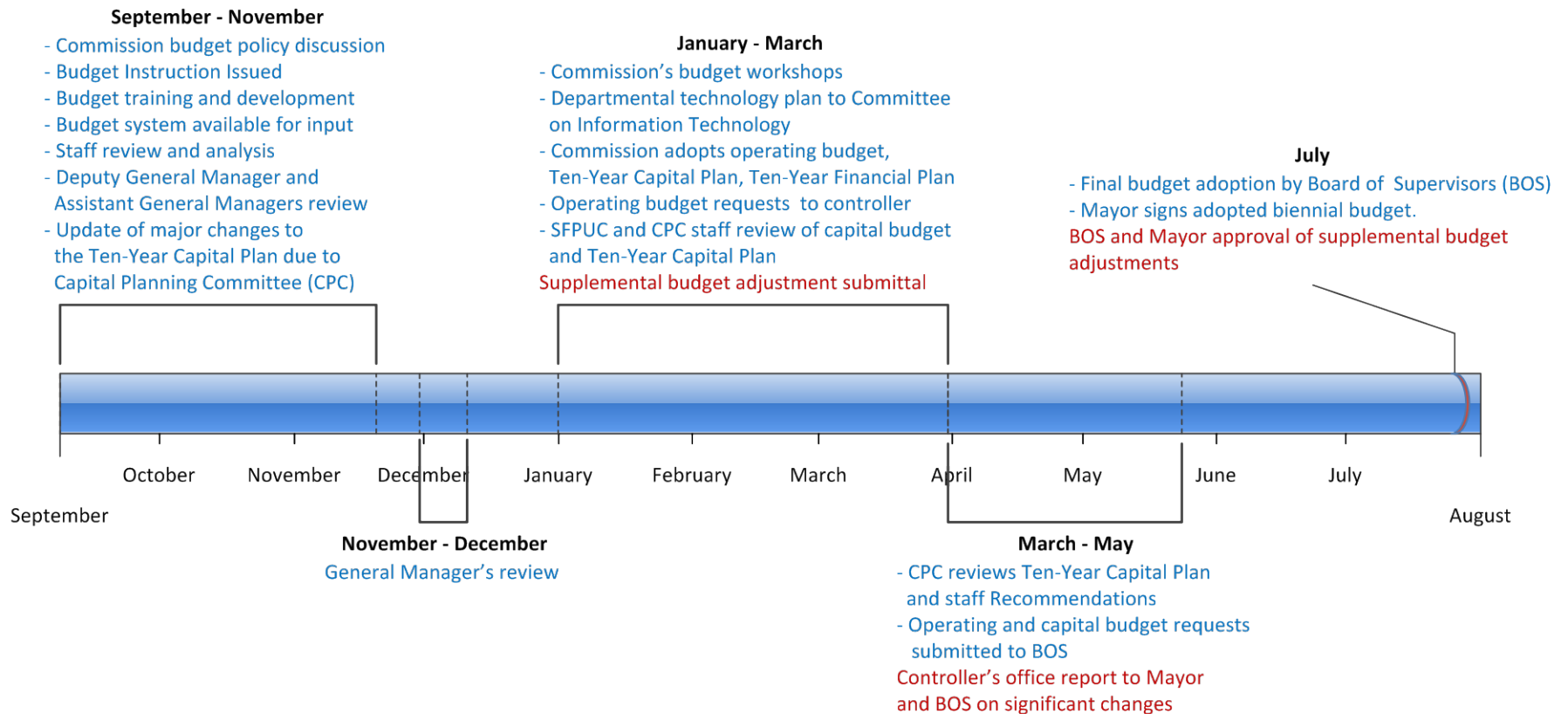
Year 2, Mid-Cycle

From January to February, the SFPUC submits supplemental budget adjustments to the Controller's Office for changes greater than five percent between the projected and adopted budgets. From March to April, the Controller's Office submits a report to the Mayor and Board of Supervisors, stating whether they project significant changes in SFPUC revenues or expenditures. Budget adjustments greater or less than five percent triggers the opening of the second year budget. From May to June, the Budget and Finance Committee reviews and takes action on operating and capital supplemental budget adjustments. From July to August, the supplemental budget adjustments receive approval by the Board of Supervisors and Mayor's Office.

SUMMARY TIMELINE OF BUDGET

Year One & Year 2, Mid-Cycle

Year One & Year 2, Mid-Cycle



Budgeting Basis

The City historically adopted annual budgets for all government funds on a budget basis relying on a current financial resources measurement focus and a modified accrual basis of accounting. Since the passage of Proposition A (2009), the SFPUC and other enterprises of the City have transitioned to a two-year fixed, biennial budget. The modified accrual method is a basis of accounting used with a current financial resources measurement focus. It modifies the accrual basis of accounting in two significant ways: first, revenues are not recognized until they are measurable and available; and second, expenditures are recognized in the period in which the SFPUC normally liquidates the related liability rather than when the liability is first incurred, if earlier. Under the modified accrual basis of accounting method, Actuals in the Tables located throughout this Budget Book include spending authorized by a carryforward appropriation; these are funds carried forward from the prior fiscal year to be expended in the subsequent fiscal year. Examples typically include capital project funds and certain debt service funds that adopt project-length budgets. The budget of the City is a detailed operating plan that identifies estimated costs and results in relation to estimated revenues. The budget includes (1) the programs, projects, services, and activities to be provided during the fiscal year; (2) the estimated resources (inflows) available for appropriation; and (3) the estimated charges to appropriations. The budget represents a process through which policy decisions are deliberated, implemented, and controlled. The City Charter prohibits expending funds for which there is no legal appropriation.

Accounting Basis

The accounts of the SFPUC Enterprises are organized on the basis of a proprietary fund type, specifically an enterprise fund. The activities of the Enterprises are accounted for with a separate set of self-balancing accounts that comprise the Enterprises' assets, liabilities, net position, revenues, and expenses. Enterprise funds account for activities (i) that are financed with debt secured solely by a pledge of the net revenues from fees and charges of the activity; or (ii) that are required by laws or regulations that the activity's costs of providing services, including capital costs (such as depreciation or debt service), be recovered with fees and charges, rather than with taxes or similar revenues; or (iii) that the pricing policies of the activity establish fees and charges designed to recover its costs, including capital costs (such as depreciation or debt service).

The financial activities of the Enterprises and the year-end audited financial statements are accounted for using an economic resources measurement focus, with a full accrual basis of accounting. Under this method, all assets and liabilities associated with its operations are included on the statement of net position; revenues are recorded when earned, and expenses recorded when liabilities are incurred.

The SFPUC Enterprises do not apply Financial Accounting Standards Board (FASB) statements and interpretations issued after November 30, 1989. The Enterprises apply all applicable Governmental Accounting Standards Board (GASB) pronouncements, as well as statements and interpretations of the FASB, Accounting Principles Board Opinions, and Accounting Research Bulletins of the Committee on Accounting Procedures issued on or before November 30, 1989, unless those pronouncements conflict with or contradict GASB pronouncements.

Financial Authority and Policies

General

The City and County of San Francisco is a Charter City under the California Constitution, and as a result, the Charter is the guiding document for financial authority and policies for City departments. The SFPUC is the department of the City responsible for the maintenance, operation and development of three utility enterprises: the Water Enterprise, the Wastewater Enterprise and the Hetch Hetchy Water and Power Enterprise (which collectively represents Power and Hetchy Water funds). Each of the SFPUC's

Enterprise funds are operated and managed as a separate financial entity and separate enterprise funds are maintained.

Below are specific sections of the Charter which pertain to the requirements and parameters of activities in which the SFPUC engages, including the development, content, and approvals of budgets, rates, debt, contracts and capital plans.

Financial Authority

PUBLIC UTILITIES COMMISSION (SF CHARTER SEC. 8B.121.)

- (a) Notwithstanding Charter section 4.112, the Public Utilities Commission shall have exclusive charge of the construction, management, supervision, maintenance, extension, expansion, operation, use and control of all water, clean water and energy supplies and utilities of the City as well as the real, personal and financial assets that are under the Commission's jurisdiction or assigned to the Commission under Section 4.132.
- (b) The Public Utilities Commission may enter into Joint Powers Agreements with other public entities in furtherance of the responsibilities of the Commission.
- (c) Except to the extent otherwise provided in this Article, the Public Utilities Commission shall be subject to the provisions of Charter sections 4.100 et seq. generally applicable to boards and commissions of the City and County.
- (d) The General Manager shall have the authority to organize and reorganize the department. The General Manager shall adopt rules and regulations governing all matters within the jurisdiction of the department subject to section 4.102 as applicable.
- (e) Ownership or control of any public utility or any part thereof under the jurisdiction of the Public Utilities Commission may not be transferred or conveyed absent approval by the Public Utilities Commission and approval by a vote of the electors of the City at the election next ensuing not less than 90 days after the adoption of such ordinance, which shall not go into effect until ratified by a majority of the voters voting thereon. Voter approval shall not be required for sales or transfers of real property declared surplus to the needs of any utility by the Public Utilities Commission or to leases or permits for the use of utility real property approved by the Public Utilities Commission.

(Added November 2002)

GOALS AND OBJECTIVES RELATED TO WATER AND CLEAN WATER [WASTEWATER] (SF CHARTER SEC. 8B.122.)

- (a) The Commission shall develop, periodically update and implement programs to achieve goals and objectives consistent with the following:
 - (1) Provide water and clean water services to San Francisco and water service to its wholesale customers while maintaining stewardship of the system by the City;
 - (2) Establish equitable rates sufficient to meet and maintain operation, maintenance and financial health of the system;
 - (3) Provide reliable water and clean water services and optimize the systems' ability to withstand disasters;
 - (4) Protect and manage lands and natural resources used by the Commission to provide utility services consistent with applicable laws in an environmentally sustainable manner. Operate hydroelectric generation facilities in a manner that causes no reasonably anticipated adverse impacts on water service and habitat;

- (5) Develop and implement priority programs to increase and to monitor water conservation and efficiency system-wide;
- (6) Utilize state-of-the-art innovative technologies where feasible and beneficial;
- (7) Develop and implement a comprehensive set of environmental justice guidelines for use in connection with its operations and projects in the City;
- (8) Create opportunities for meaningful community participation in development and implementation of the Commission's policies and programs; and
- (9) Improve drinking water quality with a goal of exceeding applicable drinking water standards if feasible.

(Added November 2002)

Financial Policies

MISSION-DRIVEN BUDGET (SF CHARTER SEC. 9.114.)

Each departmental budget shall describe each proposed activity of that department and the cost of that activity. In addition, each department shall provide the Mayor and the Board of Supervisors with the following details regarding its budget:

- (a) The overall mission and goals of the department;
- (b) The specific programs and activities conducted by the department to accomplish its mission and goals;
- (c) The customer(s) or client(s) served by the department;
- (d) The service outcome desired by the customer(s) or client(s) of the department's programs and activities;
- (e) Strategic plans that guide each program or activity;
- (f) Productivity goals that measure progress toward strategic plans;
- (g) The total cost of carrying out each program or activity; and
- (h) The extent to which the department achieved, exceeded or failed to meet its missions, goals, productivity objectives, service objectives, strategic plans and spending constraints identified in subsections (1) through (6) during the prior year.

Departmental budget estimates shall be prepared in such form as the Controller, after consulting with the Mayor, directs in writing.

PLANNING AND REPORTING (SF CHARTER SEC. 8B.123.)

- (a) Planning and Reporting

The Public Utilities Commission shall annually hold public hearings to review, update and adopt:

- (1) A long-term capital plan, covering projects during the next 10-year period; including cost estimates and schedules.
- (2) A long-range financial plan, for a 10-year period, including estimates of operation and maintenance expenses, repair and replacement costs, debt costs and rate increase requirements.
- (3) A Long-Term Strategic Plan, setting forth strategic goals and objectives and establishing performance standards as appropriate.

The long-term capital plan and long-range financial plan shall serve as a basis and supporting documentation for the Commission's capital budget, the issuance of revenue bonds, other forms of indebtedness and execution of governmental loans under this Charter.

(b) Citizens' Advisory Committee

The Board of Supervisors, in consultation with the General Manager of the Public Utilities Commission, shall establish by ordinance a Citizens' Advisory Committee to provide recommendations to the General Manager of the Public Utilities Commission, the Public Utilities Commission and the Board of Supervisors.

(Added November 2002)

PROPOSED BIENNIAL AND MULTI-YEAR BUDGETS (SF CHARTER SEC. 9.101)

- (a) The Mayor shall submit to the Board of Supervisors each year a proposed biennial budget, ordinances and resolutions fixing wages and benefits for all classifications and related appropriation ordinances.
- (b) The proposed biennial budget shall include:
 - (1) Estimated revenues and surpluses from whatever sources, to the extent feasible, for the forthcoming two fiscal years and the allocation of such revenues and surpluses to various departments, functions and programs to support expenditures. Proposed expenditures may include such necessary and prudent reserves as recommended by the Controller; and
 - (2) A summary of the proposed biennial budget with a narrative description of priorities, services to be provided and economic assumptions used in preparing the revenue estimates.
- (c) The proposed biennial budget and appropriation ordinances shall be balanced for each fiscal year so that the proposed annual expenditures of each fund do not exceed the estimated annual revenues and surpluses of that fund. If the proposed budget contains new revenue or fees, the Mayor shall submit to the Board of Supervisors the relevant implementing ordinances at the same time the biennial budget is submitted.
- (d) Until the appropriation ordinances are adopted by the Board of Supervisors, the Mayor may submit to the Board of Supervisors revisions to the proposed biennial budget, appropriation ordinances, and ordinances and resolutions fixing wages and benefits.

The Mayor may instruct the Controller to prepare the draft appropriation ordinances.

- (e) The Mayor shall file a copy of the proposed biennial budget at the Main Library and shall give notice of the budget summary, including making copies available to the public. Upon final approval of the budget by both the Board and the Mayor, notice shall be given of the final budget summary.
- (f) The Board of Supervisors by ordinance may require multi-year budget plans and other budget planning strategies to be performed by the several departments and offices of the City and County.
- (g) No later than February 1 of any even-numbered fiscal year, the Mayor and the Board of Supervisors by resolution may determine that the upcoming budgetary cycle or cycles for some or all City departments and offices shall be a fixed budgetary cycle or cycles in which the biennial budget will remain in effect for two fiscal years. With respect to the designated City departments and offices, the Board will not adopt a new budget for the second fiscal year of such fixed budgetary cycle or cycles, except as provided in subsection (h), below. But the City shall adjust the biennial budget for the second year of any fixed budget cycle if certain conditions exist, using the following process:

- (3) If, during the first year of any fixed budgetary cycle, the Controller projects that the City will experience significant increases or decreases in revenues or expenditures during the second year of such budgetary cycle, the Controller shall submit a report to the Mayor and the Board of Supervisors identifying those increases or decreases.
- (4) The Mayor shall prepare and submit to the Board of Supervisors a proposed amendment to the biennial budget responding to the Controller's report. The Board may approve or amend the Mayor's proposed budget amendment subject to the limitations that apply to the approval of the budget in Section 9.103. The Mayor's proposed budget amendment shall be deemed approved by operation of law unless the Board finally adopts an amendment to the biennial budget on second reading no later than July 15.
- (5) The Board's resolution declaring that an upcoming budgetary cycle or cycles shall be fixed, shall include a definition of the term "significant increases or decreases in revenues or expenditures," a deadline for the Controller's submission of a report identifying such increases or decreases, and a deadline for the Mayor to submit to the Board a proposed amendment to the biennial budget in response to the Controller's report.
- (h) Nothing in this section shall limit the ability of the Mayor or a member of the Board of Supervisors to introduce at his or her discretion an amendment to a biennial budget at any time during the budgetary cycle.

(Amended by Proposition A, Approved 11/5/2009)

WATER AND CLEAN WATER [WASTEWATER] REVENUE BONDS (SF CHARTER SEC. 8B.124.)

Notwithstanding, and in addition to, the authority granted under Charter Section 9.107, the Public Utilities Commission is hereby authorized to issue revenue bonds, including notes, commercial paper or other forms of indebtedness, when authorized by ordinance approved by a two-thirds vote of the Board of Supervisors, for the purpose of reconstructing, replacing, expanding, repairing or improving water facilities or clean water facilities or combinations of water and clean water facilities under the jurisdiction of the Public Utilities Commission.

Any legislation authorizing the issuance of revenue bonds (except for refunding bonds) under this section shall be subject to the referendum requirements of Section 14.102 of this Charter. The ordinance authorizing the issuance of such revenue bonds shall not become effective until 30 days after its adoption.

Notwithstanding any other provision of this Charter or of any ordinance of the City and County, the Board of Supervisors may take any and all actions necessary to authorize, issue and repay such bonds, including, but not limited to, modifying schedules of rates and charges to provide for the payment and retirement of such bonds, subject to the following conditions:

- (a) Certification by an independent engineer retained by the Public Utilities Commission that:
 - (1) The projects to be financed by the bonds, including the prioritization, cost estimates and scheduling, meet utility standards; and
 - (2) That estimated net revenue after payment of operating and maintenance expenses will be sufficient to meet debt service coverage and other indenture or resolution requirements, including debt service on the bonds to be issued, and estimated repair and replacement costs.
- (b) Certification by the San Francisco Planning Department that facilities under the jurisdiction of the Public Utilities Commission funded with such bonds will comply with applicable requirements of the California Environmental Quality Act (CEQA).

Except as expressly provided in this Charter, all revenue bonds may be issued and sold in accordance with state law or any procedure provided for by ordinance of the Board of Supervisors.

(Added November 2002)

RATES (SF CHARTER SEC. 8B.125.)²

Notwithstanding Charter sections 2.109, 3.100 and 4.102 or any ordinance (including, without limitation, Administrative Code Appendix 39), the Public Utilities Commission shall set rates, fees and other charges in connection with providing the utility services under its jurisdiction, subject to rejection--within 30 days of submission--by resolution of the Board of Supervisors. If the Board of Supervisors fails to act within 30 days the rates shall become effective without further action.

In setting retail rates, fees and charges the Commission shall:

1. Establish rates, fees and charges at levels sufficient to improve or maintain financial condition and bond ratings at or above levels equivalent to highly rated utilities of each enterprise under its jurisdiction, meet requirements and covenants under all bond resolutions and indentures, (including, without limitation, increases necessary to pay for the retail water customers' share of the debt service on bonds and operating expenses of any state financing authority such as the Regional Water System Financing Authority), and provide sufficient resources for the continued financial health (including appropriate reserves), operation, maintenance and repair of each enterprise, consistent with good utility practice;
2. Retain an independent rate consultant to conduct rate and cost of service studies for each utility at least every five years;
3. Set retail rates, fees and charges based on the cost of service;
4. Conduct all studies mandated by applicable state and federal law to consider implementing connection fees for water and clean water facilities servicing new development;
5. Conduct studies of rate-based conservation incentives and/or lifeline rates and similar rate structures to provide assistance to low income users, and take the results of such studies into account when establishing rates, fees and charges, in accordance with applicable state and federal laws;
6. Adopt annually a rolling five-year forecast of rates, fees and other charges; and
7. Establish a Rate Fairness Board consisting of seven members: the City Administrator or his or her designee; the Controller or his or her designee; the Director of the Mayor's Office of Public Finance or his or her designee; two residential City retail customers, consisting of one appointed by the Mayor and one by the Board of Supervisors; and two City retail business customers, consisting of a large business customer appointed by the Mayor and a small business customer appointed by the Board of Supervisors.

The Rate Fairness Board may:

- i. Review the five-year rate forecast;
- ii. Hold one or more public hearings on annual rate recommendations before the Public Utilities Commission adopts rates;
- iii. Provide a report and recommendations to the Public Utilities Commission on the rate proposal; and
- iv. In connection with periodic rate studies, submit to the Public Utilities Commission rate policy recommendations for the Commission's consideration, including recommendations to reallocate costs among various retail utility customer classifications, subject to any outstanding bond requirements.

² See Appendix C for further information on the SFPUC Rates Policy.

These provisions shall be effective January 3, 2003 for the setting of retail rates, fees and charges related to the clean water system. If the voters approve bonds for the Public Utilities Commission's capital program at the November 5, 2002 election then the provisions of this section shall take effect on July 2, 2006 for the setting of retail rates, fees and charges related to the water system. If the voters do not approve such bonds then this section will take effect on January 3, 2003.

(Added November 2002)

CONTRACTING AND PURCHASING (SF CHARTER SEC. 8B.127.)

Notwithstanding Charter Section 9.118 or any ordinance, the Public Utilities Commission shall have the sole authority to enter into agreements for the purchase of water; the sale of water to wholesale customers; and agreements necessary to implement Joint Powers Agreements with any wholesale water customer.

In order to promote labor stability and to ensure the Ten-Year Capital Plan is completed expeditiously and efficiently, the Public Utilities Commission is authorized, to the extent legally appropriate, to enter into project labor agreements, with appropriate Building Construction and Trades Councils, covering significant capital projects.

Debt Management Policies³

REVENUE BONDS (SF CHARTER SEC. 9.107.)

The Board of Supervisors is hereby authorized to provide for the issuance of revenue bonds. Revenue bonds shall be issued only with the assent of a majority of the voters upon any proposition for the issuance of revenue bonds, except that no voter approval shall be required with respect to revenue bonds:

1. Approved by three-fourths of all the Board of Supervisors if the bonds are to finance buildings, fixtures or equipment which are deemed necessary by the Board of Supervisors to comply with an order of a duly constituted state or federal authority having jurisdiction over the subject matter;
2. Approved by the Board of Supervisors prior to January 1, 1977;
3. Approved by the Board of Supervisors if the bonds are to establish a fund for the purpose of financing or refinancing for acquisition, construction or rehabilitation of housing in the City and County;
4. Authorized and issued by the Port Commission for any Port-related purpose and secured solely by Port revenues, or authorized and issued for any Airport-related purpose and secured solely by Airport revenues;
5. Issued for the proposes of assisting private parties and not-for-profit entities in the financing and refinancing of the acquisition, construction, reconstruction or equipping of any improvement for industrial, manufacturing, research and development, commercial and energy uses or other facilities and activities incidental thereto, provided the bonds are not secured or payable from any monies of the City and County or its commissions.
6. Issued for the purpose of the reconstruction or replacement of existing water facilities or electric power facilities or combinations of water and electric power facilities under the jurisdiction of the Public Utilities Commission, when authorized by resolution adopted by a three-fourths affirmative vote of all members of the Board of Supervisors.
7. Approved and authorized by the Board of Supervisors and secured solely by an assessment imposed by the City.

³ See Appendix E for further information on SFPUC Debt and Derivatives Policies, and Disclosure Requirements.

8. Issued to finance or refinance the acquisition, construction, installation, equipping, improvement or rehabilitation of equipment or facilities for renewable energy and energy conservation.

Except as expressly provided in this Charter, all revenue bonds may be issued and sold in accordance with state law or any procedure provided for by ordinance.

(Amended November 2001)

REFUNDING BONDS (SF CHARTER SEC. 9.109.)

The Board of Supervisors is hereby authorized to provide for the issuance of bonds of the City and County for the purpose of refunding any general obligation or revenue bonds of the City and County then outstanding. No voter approval shall be required for the authorization, issuance and sale of refunding bonds, which are expected to result in net debt service savings to the City and County on a present value basis, calculated as provided by ordinance.

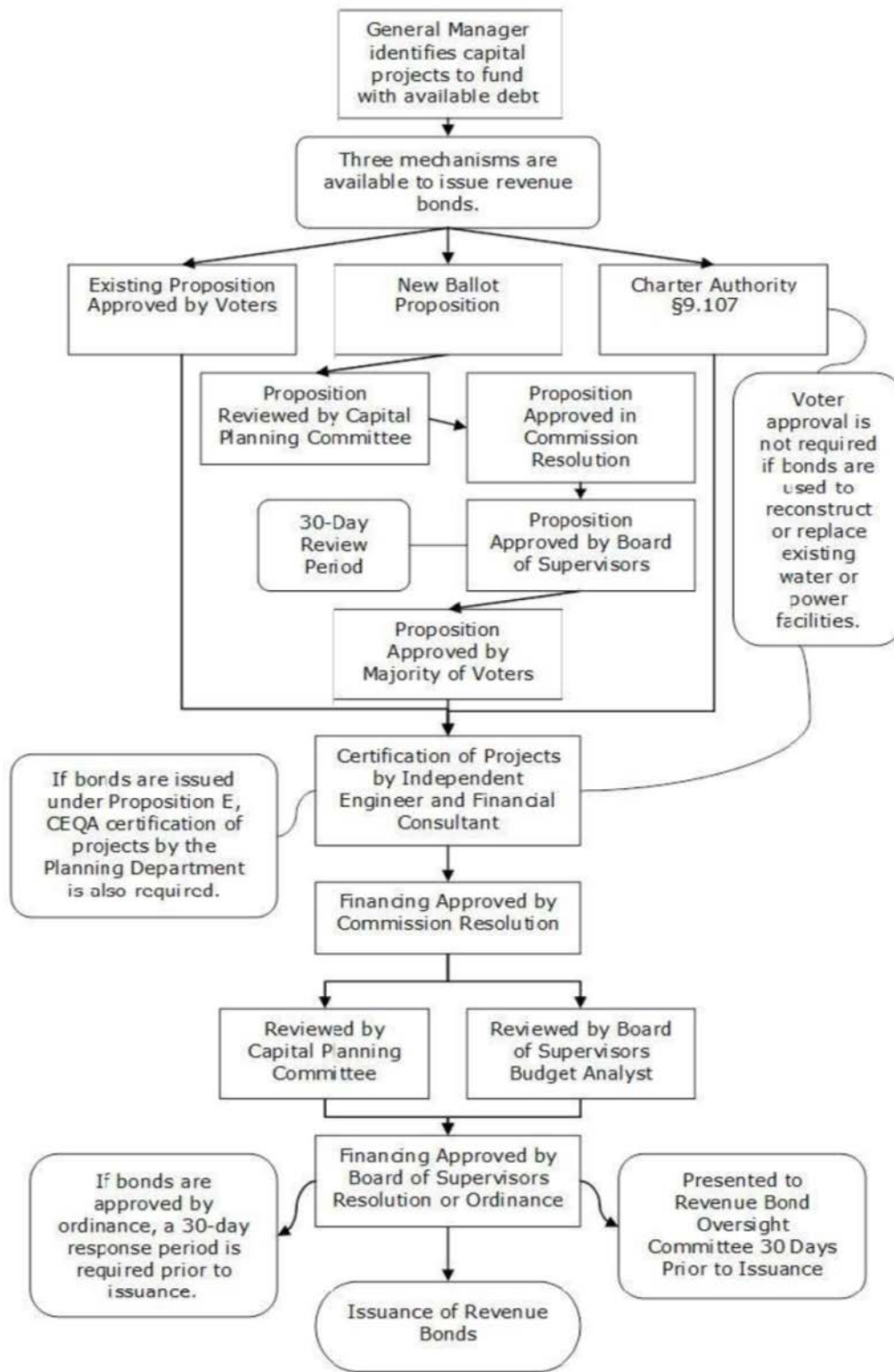
DEBT POLICY AND INDENTURE REQUIREMENTS

- (a) Current SFPUC financing documents require that net revenues plus unappropriated fund balance equal 1.25 times annual debt services. On a current basis, without fund balance, the requirement is that the revenues equal a minimum of 1.00 times annual debt service. From time to time, utility user rates may have to be increased to comply with financing document covenants.
- (b) To issue additional bonds, SFPUC financing documents require an independent certification that debt coverage of 1.25 will be maintained for three years after issuance of additional bonds.

The Commission and Board of Supervisors must approve any additional indebtedness.

Chart 3. illustrates SFPUC/City & County of San Francisco debt management approval process.

Chart 3. Debt Management Approval Process⁴



⁴ Does not include bond refundings, which are authorized pursuant to Section 9.109 of the Charter.

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BUDGET SUMMARY

Funds Subject to Appropriation

The SFPUC is comprised of three utility Enterprises, the Office of the General Manager, two support Bureaus and Infrastructure. The three Enterprises are Water, Wastewater, and Power, which is a component of Hetch Hetchy Water and Power. The Enterprises support the management, operations, facilities maintenance, and capital needs of each utility. The Bureaus that include Business Services and External Affairs provide support and oversight services to the Enterprises. Business Services and External Affairs budgets are funded through an allocation model that recovers costs of services to the Enterprises. Infrastructure is focused on planning, design and construction of Enterprise capital facilities, thus the budget is funded through capital projects appropriations.

The Water Enterprise The Water Enterprise collects, transmits, treats, and distributes pure drinking water to approximately 2.6 million people, including retail customers in the City and wholesale customers located in San Mateo, Santa Clara, and Alameda Counties. Approximately two-thirds of the water delivered by the Enterprise is to wholesale customers. Retail customers include residential, commercial, industrial, and governmental uses, and the Enterprise recovers costs of service through user fees. These fees are assessed based on water consumption which is collected by water meters. Wholesale customers include other cities and water districts, one private utility and one nonprofit university. Services to these customers are provided pursuant to the 25-year Water Supply Agreement (WSA), dated on July 1, 2009, which established the basis for determining cost recovery and rates for associated wholesale water service.

The Wastewater Enterprise The Wastewater Enterprise was formally created after San Francisco voters approved a proposition in 1976 authorizing the City to issue \$240.0 million in bonds for the purpose of acquiring, constructing, improving, and financing improvements to the City's municipal sewage treatment and disposal system. The Enterprise collects transports, treats, and discharges sanitary and stormwater flows known as combined sewage, generated within the City for the protection of public health and the bay and ocean environment. In addition, the Enterprise provides services on a contractual basis to municipal customers located outside the City limits, including the North San Mateo County Sanitation District, Bayshore Sanitary District, and the City of Brisbane. The Enterprise recovers cost of service in two ways: through user fees which are based on measured volume of water used by residential customers; and volume and strength of sanitary flow for commercial and industrial customers measured by meters and type of discharge. The Enterprise serves 163,589 retail accounts.

Hetch Hetchy Water and Power, Including CleanPowerSF The Power Enterprise is San Francisco's clean energy backbone and the source of our municipal power. Services include the collection and distribution of approximately 85.0 percent of the City's water supply and the electricity generation and transmission. Approximately 65 percent of the electricity generated by the Enterprise is used by the City's municipal customers (including the San Francisco International Airport, San Francisco Municipal Transportation Agency, Recreation and Parks, the Port of San Francisco, San Francisco General Hospital, City Hall streetlights, the Moccasin Center, and the SFPUC Water and Wastewater Enterprises). Most of the balance of electricity is sold to other utility districts, such as the Turlock and Modesto Irrigation Districts and the Western System Power Pool (WSPP). The Enterprise includes a system of reservoirs, hydroelectric power plants, aqueducts, pipelines, and transmission lines, which carry water over 170 miles and power more than 160 miles from the Sierra Nevada Mountains to customers in the City and portions of the surrounding San Francisco Bay Area.

CleanPowerSF is San Francisco's Community Choice Aggregation program. Community Choice Aggregation allows cities and counties to partner with their investor-owned utility (PG&E in San Francisco) to deliver cleaner energy to residents and businesses. Under this



program, PG&E continues to maintain the power grid, respond to outages and send customers their monthly bills. CleanPowerSF began delivering cleaner energy to customers in May 2016 and will grow the program until every eligible customer in San Francisco has been offered service. CleanPowerSF offers two products: Green and SuperGreen. Green initially contains a target of 35.0 percent renewable energy that meets California's strict Renewable Portfolio Standards (RPS). SuperGreen, contains 100 percent RPS-eligible electricity.

There are different categories of Sources and Uses of Funds within the Enterprises, Bureaus, and Infrastructure funds. A list and descriptions of these sources and uses are located in the "Navigating the SFPUC Budget" section.

Budget Summary

Table 6 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

This following table illustrates total budget for Sources and Uses for the three Enterprises for the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

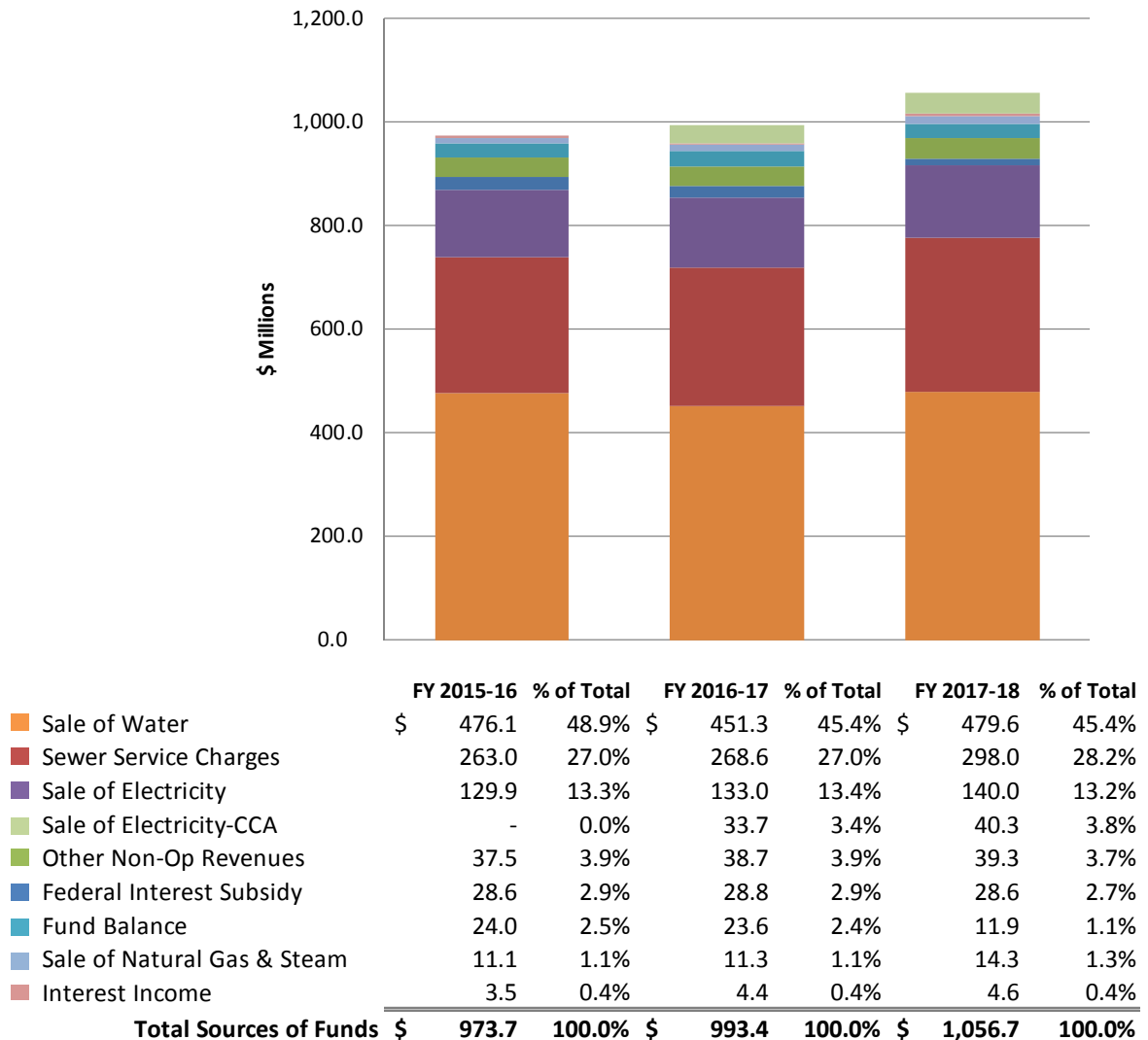
Table 6. SFPUC Sources and Uses of Funds

\$ Millions	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
Category						Amount	%	Amount	%
SOURCES OF FUNDS									
Sale of Water	381.1	476.1	416.2	451.3	479.6	(24.8)	-5.2%	28.3	6.3%
Sewer Service Charges	248.2	263.0	252.9	268.6	298.0	5.6	2.1%	29.5	11.0%
Sale of Electricity	109.7	129.9	122.5	133.0	140.0	3.1	2.4%	7.0	5.2%
Sale of Electricity-CCA	-	-	-	33.7	40.3	33.7	100.0%	6.6	19.4%
Sale of Natural Gas & Steam	8.1	11.1	6.9	11.3	14.3	0.2	1.4%	3.0	26.7%
Fund Balance	19.9	24.0	36.3	23.6	11.9	(0.4)	-1.8%	(11.6)	-49.4%
Other Non-Op Revenues	57.6	37.5	33.7	38.7	39.3	1.2	3.1%	0.6	1.6%
Federal Interest Subsidy	28.8	28.6	28.9	28.8	28.6	0.3	0.9%	(0.2)	-0.7%
Interest Income	4.0	3.5	3.7	4.4	4.6	0.9	25.7%	0.3	5.8%
Total Sources of Funds	857.4	973.7	901.0	993.4	1,056.7	19.7	2.0%	63.3	6.4%
USES OF FUNDS									
Personnel	183.8	194.0	187.3	199.5	205.4	5.5	2.8%	5.9	2.9%
Overhead	-	-	-	1.1	1.2	1.1	100.0%	0.1	13.9%
Non-Personnel Services	77.2	119.1	80.1	139.7	146.5	20.6	17.3%	6.8	4.9%
Materials & Supplies	24.0	27.0	24.0	26.0	26.7	(1.0)	-3.6%	0.7	2.6%
Equipment	2.5	3.9	4.7	5.1	4.4	1.2	30.3%	(0.8)	-15.4%
Debt Service	268.8	325.4	285.7	306.5	337.5	(19.0)	-5.8%	31.0	10.1%
Services Of Other Depts	142.0	146.7	142.8	151.3	154.5	4.6	3.1%	3.2	2.1%
General Reserve	18.8	9.9	28.8	28.3	28.7	18.4	187.1%	0.4	1.4%
Subtotal Expenditures	717.0	826.0	753.3	857.4	904.7	31.4	3.8%	47.3	5.5%
Revenue-Funded Capital	91.5	95.8	95.8	90.4	105.8	(5.4)	-5.6%	15.4	17.0%
Programmatic Projects	48.9	51.8	51.8	45.5	46.2	(6.3)	-12.1%	0.6	1.4%
Total Uses of Funds	857.4	973.7	901.0	993.4	1,056.7	19.7	2.0%	63.3	6.4%

Sources of Funds

Chart 4 shows the FY 2015-16 to FY 2017-18 budgeted Sources of Funds by revenue category.

Chart 4. FY 2015-16 to FY 2017-18 SFPUC Sources of Funds



Summary

FY 2016-17 estimated revenues from Sale of Water, Sewer Service Charges, Sale of Electricity, Sale of Electricity-CCA, Fund Balance, Other Non-Operating Revenues, Federal Interest Subsidy, Sale of Natural Gas and Steam, and Interest Income are budgeted at \$993.4 million. This represents a \$19.7 million or a 2.0 percent increase from FY 2015-16. The increase is due primarily to a new revenue source, Sale of Electricity-CCA, from CleanPowerSF which began delivering clean energy to San Francisco retail customers in May 2016. Increases for Sewer Service Charges, Sale of Electricity, Other Non-Operating Revenues, Interest Income, Federal Interest Subsidy and Sale of Natural Gas & Steam are offset by reductions in Sale of Water and Fund Balance.

FY 2017-18 projected revenues total \$1,056.7 million, \$63.3 million or a 6.4 percent increase from FY 2016-17. Increases for Sale of Water, Sewer Service Charges, and Sale of Electricity reflect rate increases. Increases in Sale of Electricity-CCA, Sale of Natural

Gas & Steam, Other Non-Operating Revenues, and Interest Income, are offset by reductions in Fund Balance and Federal Interest Subsidy.

Chart 4 shows the FY 2015-16 to FY 2017-18 Sources of Funds by revenue category; and Table 6 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 pre-audit actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

Sale of Water

FY 2016-17 total Water Sales revenues are budgeted at \$451.3 million, a \$24.8 million or 5.2 percent decrease from the FY 2015-16 budget. Water sales revenue decreased due to the on-going drought and implementation of water conservation.

FY 2017-18 Sale of Water revenues are budgeted at \$479.6 million, a \$28.3 million or 6.3 percent increase from the FY 2016-17 budget. The increase reflects a 7.0 percent increase adopted by the Commission in May 2014 for retail, customer classes, including single-family and multiple-family residential and non-residential and wholesale customers.

Sewer Service Charges

FY 2016-17 Sewer Service Charges are budgeted at \$268.6 million, a \$5.6 million or a 2.1 percent net increase from the FY 2015-16 budget and are based on an 11.0 percent increase in the sewer service retail rates adopted by the Commission in May 2014, which includes rates for single-family and multiple-family residential and non-residential customers. As sewer service charges are tied to water usage, reduced water usage has resulted in lower sewer service revenues.

FY 2017-18 Sewer Service Charges are budgeted at \$298.0 million, a \$29.5 million or 11.0 percent increase consistent with adopted rates.

Sale of Electricity

FY 2016-17 Sale of Electricity is budgeted at \$133.0 million, a \$3.1 million or 2.4 percent increase from FY 2015-16. The increase in revenues includes:

- \$1.8 million from City departments, which is based on an increase in general fund Enterprise rates and usage;
- \$0.8 million from retail customers, including Treasure Island tenants based on projected rates and usage increases; and
- \$0.5 million for wholesale customers based on projected market prices for Western System Power Pool (WSPP) and updated rates for district sales.

FY 2017-18 Sale of Electricity is budgeted at \$140.0 million, an increase of \$7.0 million or 5.2 percent from the FY 2016-17. The net increase reflects a rate usage increases for City departments.

Sale of Electricity-CCA

FY 2016-17 projected revenues from Sale of Electricity-CCA are budgeted at \$33.7 million. Sale of Electricity-CCA revenues are derived from selling greener energy at competitive rates to San Francisco residents who choose to enroll in the program. FY 2016-17 Sale Electricity-CCA revenues are based on estimated consumption by customers and reflects the program's first year appropriation.

FY 2017-18 Sale of Electricity is budgeted at \$40.3 million, an increase of \$6.6 million from FY 2016-17. The net change reflects an estimated increase in the number of new customers.

Fund Balance

FY 2016-17 Fund Balance is budgeted at \$23.6 million, \$0.4 million or 1.8 percent less than in FY 2015-16. Fund balance is used as a source when projected uses exceed projected revenues.

FY 2017-18 Fund Balance is budgeted at \$11.9 million, a decrease of \$11.6 million from FY 2016-17. The decrease in the use of fund balance reflects an increase in revenues.

Other Non-Operating Revenues

FY 2016-17 Other Non-Operating Revenues are budgeted at \$38.7 million, \$1.2 million or 3.1 percent more than in FY 2015-16. The net change reflects an increase in water service installations and reimbursements from Infrastructure for their share of the maintenance and financing costs for the SFPUC's Headquarters, offset by reductions in other miscellaneous revenues.

FY 2017-18 revenues total \$39.3 million, a \$0.6 million or 1.6 percent, increase from FY 2016-17 to due to increases in the Water Enterprise's miscellaneous revenues.

Federal Interest Subsidy

The FY 2016-17 Federal Interest Subsidy is budgeted at \$28.8 million, \$0.3 million or 0.9 percent, more than in FY 2015-16. The SFPUC receives a subsidy payment from the Federal Government for a portion of borrowing costs on taxable bonds. The U.S. Treasury Department is estimated to provide a direct subsidy equal to 32.6 percent (net of sequestration) of the interest payable for bonds issued as Build America Bonds per the American Recovery and Reinvestment Act (ARRA).

The FY 2017-18 Federal Interest Subsidy is budgeted at \$28.6 million or \$0.2 million less than in FY 2016-17.

Sale of Gas and Steam (Pass-through)

FY 2016-17 Sale of Gas and Steam is budgeted at \$11.3 million, based on PG&E and the California Department of General Services (DGS) retail rates and projected usage. Power is responsible for processing and billing City departments for natural gas and steam. The revenue generated from natural gas and steam is a pass-through and ultimately has no impact on Hetch Hetchy's revenues. The budget includes \$9.9 million for gas and \$1.4 million for steam. The \$0.2 million increase from the FY 2015-16 budget is due to commodity rates adjustments, projected consumption and adjustments for City facilities going online or offline.

In FY 2017-18 the estimated revenue is \$14.3 million, an increase of \$3.0 million from the prior year. The change reflects projected rates and consumption.

Interest Income

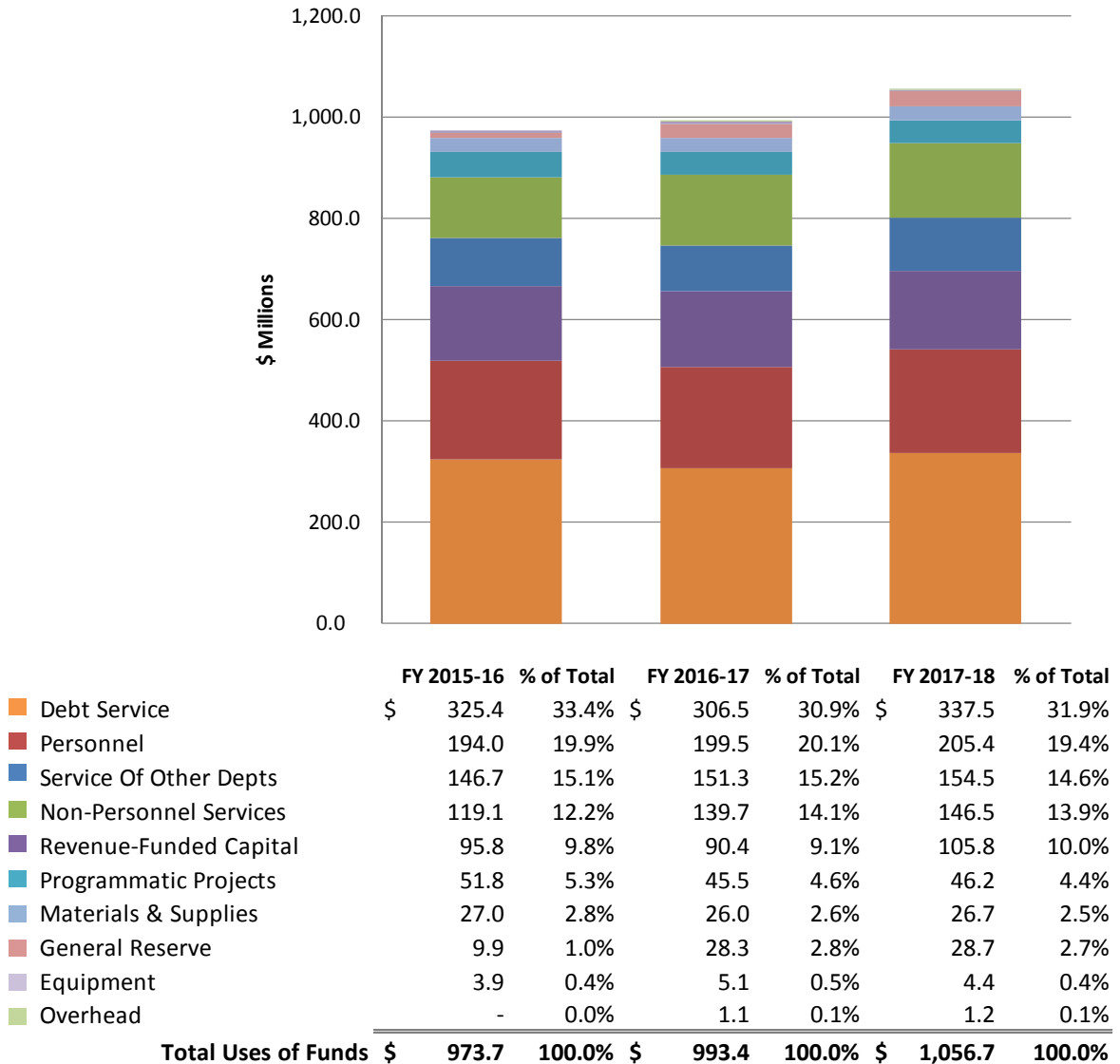
FY 2016-17 Interest Income is budgeted at \$4.4 million, a \$0.9 million or 25.7 percent, increase from FY 2015-16 budget and is based on cash balance and interest rates in the County Investment Pool. The increase is based on projected interest rates and cash balances for each enterprise.

FY 2017-18 revenues from Interest Income is projected to be \$4.6 million, \$0.3 million or 5.8 percent more than in FY 2016-17 as a result of higher projected cash balances.

Uses of Funds

Chart 5 shows the FY 2015-16 to FY 2017-18 budgeted Uses of Funds by expenditure category.

Chart 5. FY 2015-16 to FY 2017-18 SFPUC Uses of Funds



Summary

Total Uses of Funds for FY 2016-17 are \$993.4 million, a \$19.7 million or 2.0 percent increase from FY 2015-16. The net increase includes \$51.4 million in General Reserve, Non-Personnel Services, Personnel, Services of Other Departments, Equipment and Overhead, offset by a \$31.7 million decrease in Debt Service, Programmatic Projects, Revenue-Funded Capital, and Materials and Supplies.

Total Uses of Funds for FY 2017-18 are \$1,056.7 million, a \$63.3 million or 6.4 percent increase from FY 2016-17. Increases in Debt Service, Capital Revenue Reserve, Non-Personnel Services, Personnel, Services of Other Departments, Materials and Supplies, Programmatic Projects, General Reserve and Overhead are offset by a reduction in Equipment.

Debt Service

FY 2016-17 Debt Service is budgeted at \$306.5 million, a \$19.0 million or 5.8 percent, decrease from the FY 2015-16 budget. This budget is based on principal and interest payments on revenue bonds to finance the Water Enterprise, Wastewater and Power Enterprise's capital programs. The decrease is based on achieved saving in debt service for the Water Enterprise, offset by an increase in the Wastewater 2013 Series A bonds and Power's Clean Renewable Energy Bonds.

FY 2017-18 Debt Service is budgeted at \$337.5 million, a \$31.0 million or 10.1 percent increase from the FY 2016-17 budget. The increase reflects scheduled debt service payments on revenue bonds financing for Water and Wastewater. Funding for Power's debt service remained the same as in FY 2016-17.

Personnel

FY 2016-17 Personnel, labor and benefits, are budgeted at \$199.5 million, a \$5.5 million or 2.8 percent increase from the FY 2015-16 budget. The budget includes \$138.1 million for salaries and \$61.4 million for fringe benefits. The \$3.3 million increase in salaries funds:

- new positions to support Power's Wholesale and Retail Service Program;
- CleanPowerSF's outreach and customer education/marketing and power generation programs; and
- Water Enterprise's Water Quality Ground Water Monitoring Program; and position substitutions and cost of living adjustments as required by the various labor agreements.

FY 2016-17 mandatory fringe benefits increase of \$2.2 million reflects adjustments to salaries and increases in health benefit and retiree benefit rates.

FY 2017-18 Personnel is budgeted at \$205.4 million, a \$5.9 million or 2.9 percent, increase from the FY 2016-17 budget. The budget includes \$138.8 million for salaries and \$66.6 million for fringe benefits. The net change in salaries includes increases to fund new positions, position substitutions and cost of living adjustments as required by the various labor agreements.

FY 2017-18 mandatory fringe benefits increase of \$5.2 million includes a \$3.4 million in retiree benefits, \$1.7 million in health benefits and \$0.1 million in miscellaneous benefits.

Services of Other Departments

FY 2016-17 Services of Other Departments is budgeted at \$151.3 million, a \$4.6 million or 3.1 percent increase from the FY 2015-16 budget. This budget is based on services provided to SFPUC by City departments. The increase mainly reflects cost adjustments for administrative services provided by the Bureaus to the Enterprises, legal services from the City Attorney, risk management and technology support.

FY 2017-18 Services of Other Departments is budgeted at \$154.5 million, a \$3.2 million or 2.1 percent increase from the FY 2016-17 budget based on increases in administrative services provided to SFPUC Enterprises and technology support.

Non-Personnel Services

FY 2016-17 Non-Personnel Services are budgeted at \$139.7 million, a \$20.6 million or 17.3 percent increase from the FY 2015-16 budget. This budget funds contractual obligations to support the Enterprises. \$80.8 million or 57.8 percent of the total Non-Personnel Services budget is for purchase of power and purchase of natural gas and steam. The remaining budget funds other contractual services such as professional services, maintenance services and rents and leases of facilities and equipment. The \$20.6 million increase is comprised of \$18.3 million in purchase of power and natural gas and steam and \$2.3 million for water regulatory fees, professional services for planning and regulatory services and other ancillary costs.

FY 2017-18 Non-Personnel Services are budgeted at \$146.5 million, a \$6.8 million or 4.9 percent increase from the FY 2016-17 budget. The increase funds purchase of power and natural gas and steam, biosolids and grit hauling and disposal contract services.

Revenue-Funded Capital

FY 2016-17 Revenue-Funded Capital is budgeted at \$90.4 million, a \$5.4 million or 5.6 percent decrease from the FY 2015-16 budget. This reserve represents the revenue-funded portion of the total biennial Capital Program approved and funded through a supplemental appropriation outside of the budget process. Changes to the Capital Program are discussed the in Enterprises' Capital Improvement Program (CIP Sections). The decrease is due to the shift from revenue to bond funded projects.

FY 2017-18 Revenue-Funded Capital is budgeted at \$105.8 million, a \$15.4 million or 17.0 percent increase from FY 2016-17.

Programmatic Projects

FY 2016-17 Programmatic Projects are budgeted at \$45.5 million, a \$6.3 million or 12.1 percent decrease from the FY 2015-16 budget. This budget supports annual programs including facilities maintenance for the three Enterprises. The decrease is the result of reclassifying a portion of costs from programmatic to capital expenditures.

FY 2017-18 Programmatic Projects are budgeted at \$46.2 million, \$0.6 million or 1.4 percent more than in FY 2016-17. The net increase reflects an increase for Regional Water long-term monitoring and permits requirements, offset by a reduction in Wastewater for one-time costs associated with Community Benefits Program.

Materials and Supplies

FY 2016-17 Materials and Supplies are budgeted at \$26.0 million, \$1.0 million or 3.6 percent less than in FY 2015-16. The budget funds materials and supplies to support the maintenance and operations of the Enterprises. The increase from FY 2015-16 is based on projected one-time costs for minor office furnishing and equipment and sewage treatment supplies for odor control.

FY 2016-17 Materials and Supplies are budgeted at \$26.7 million, a \$0.7 million or 2.6 percent increase from FY 2016-17. The net increase reflects higher costs for water and wastewater treatment chemicals, equipment and maintenance supplies.

General Reserve

The FY 2016-17 General Reserve budget is \$28.3 million, \$18.4 million more than the FY 2015-16 budget. The General Reserve is used to balance budgeted sources and uses, when budgeted revenues exceed budgeted expenditures. Use of General Reserve must be approved by the Mayor and Board of Supervisors. The increase in the General Reserve primarily reflects a decrease in debt service for the Wastewater Enterprise.

The FY 2017-18 the General Reserve budget is \$28.7 million, a \$0.4 million or 1.4 percent increase from the FY 2016-17 budget. The change reflects increases in CleanPowerSF, Hetch Hetchy and Water Enterprise revenues.

Equipment

FY 2016-17 Equipment is budgeted at \$5.1 million, a \$1.2 million or 30.3 percent increase from FY 2015-16. Equipment is defined as a unit having a value greater than \$5,000 and a useful life of three years or more, such as vehicles, machinery and heavy equipment. The increase supports the SFPUC's vehicle replacement program and the City and County's high frequency radio system and the SFPUC's low-band radio system.

FY 2017-18 Equipment is budgeted at \$4.4 million, a \$0.8 million or 15.4 percent reduction from the FY 2016-17 budget, due primarily to eliminate the one-time funding for the high frequency radio system.

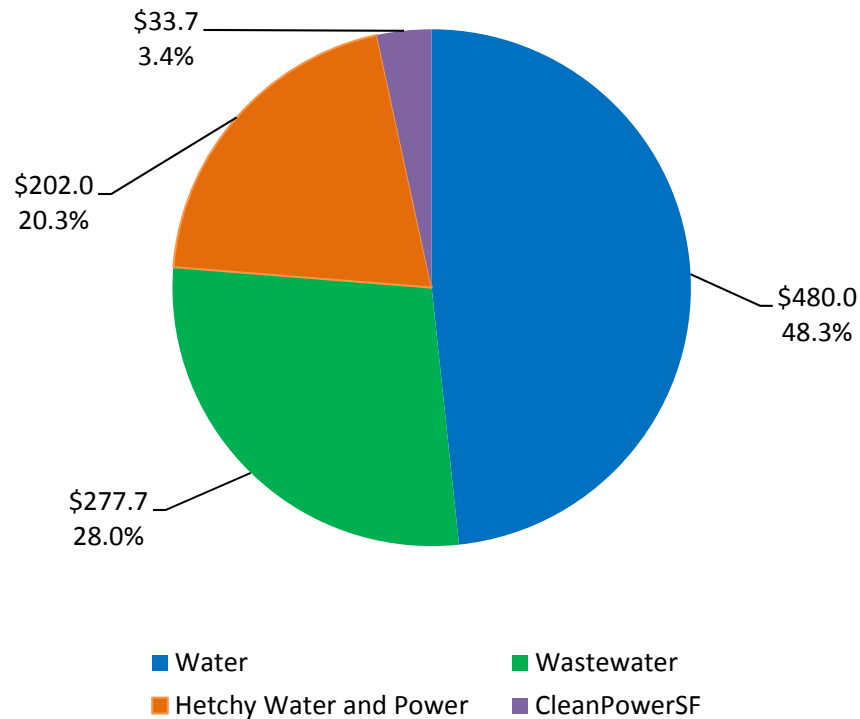
Overhead

FY 2016-17 Overhead is budgeted at \$1.1 million. The Overhead budget funds costs for Power's services and facilities provided to CleanPowerSF. The overhead rate of 81.0 percent reflects the Enterprise Recovery Rate per SFPUC's Indirect Cost Study of June, 2014.

FY 2017-18 Overhead is budgeted at \$1.2 million, an increase of \$0.1 million from the FY 2016-17 budget.

Chart 6 displays the allocation of the total SFPUC adopted budget for FY 2016-17 by Enterprise.

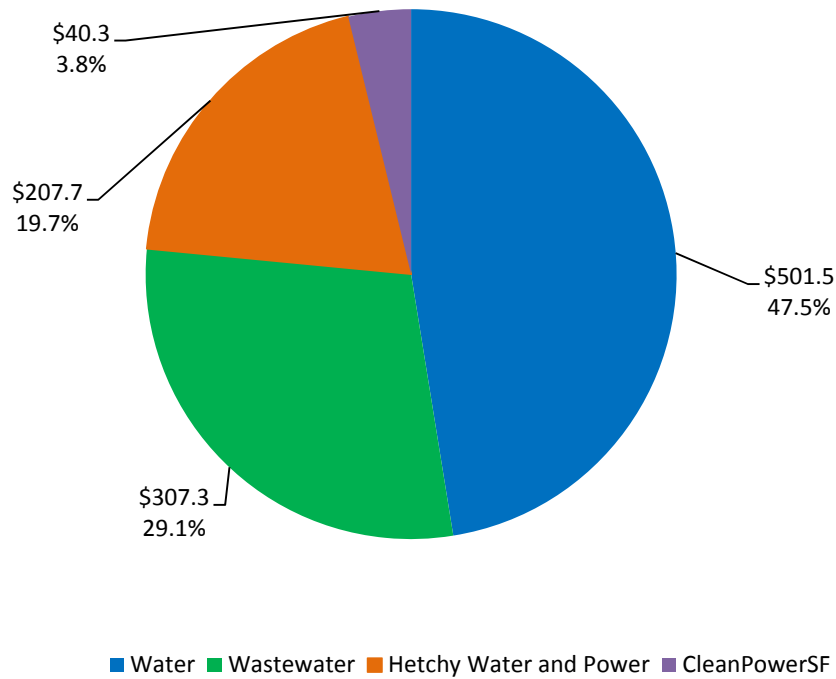
Chart 6. FY 2016-17 SFPUC Budget by Enterprise: \$993.4 Million



The FY 2016-17 SFPUC budget totals \$993.4 million, a \$19.7 million or 2.0 percent increase from the FY 2015-16 approved budget of \$973.7 million. The Water Enterprise budget is 48.3 percent, slightly less than half of the entire SFPUC budget. The net increase from FY 2015-16 includes an increase of 7.2 percent for Hetchy Water & Power, 1.7 percent for the Wastewater Enterprise. CleanPowerSF is budgeted for the first time in FY 2016-17, resulting in a 100.0 percent increase. The increases are offset by a reduction of 6.3 percent for the Water Enterprise.

Chart 7 displays the allocation of the total SFPUC adopted budget for FY 2017-18 by Enterprise.

Chart 7. FY 2017-18 SFPUC Budget by Enterprise: \$1,056.7 Million



The FY 2017-18 SFPUC budget totals \$1,056.7 million, \$63.3 million or 6.4 percent more than the FY 2016-17 approved budget of \$993.4 million. The Water Enterprise budget is 47.5 percent, or slightly less than half of the entire SFPUC budget. The increase from FY 2016-17 includes 10.7 percent for the Wastewater Enterprise, 19.4 percent for CleanPowerSF, 2.8 percent for the Hetch Hetchy Water and Power and 4.5 percent for Water Enterprise.

Table 7 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17 by Enterprise, by Division and Debt Service, Revenue-Funded Capital, Programmatic Projects and General Reserve.

Table 7. SFPUC Uses of Funds by Enterprise and Division

\$ Millions Category	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
						Amount	%	Amount	%
Administration	59.2	60.7	59.0	64.1	65.9	3.3	5.5%	1.9	2.9%
City Distribution	35.9	38.2	36.9	38.0	38.7	(0.2)	-0.5%	0.7	2.0%
Water Quality	15.4	16.7	17.0	17.3	17.6	0.7	4.0%	0.2	1.4%
Water Supply & Treatment	45.4	49.8	47.0	50.4	50.2	0.5	1.1%	(0.2)	-0.4%
Natural Resources	10.0	11.2	10.1	11.3	11.6	0.1	0.9%	0.3	2.3%
Water Resources	6.2	8.1	5.7	7.8	8.0	(0.3)	-3.8%	0.2	3.2%
Debt Service	214.5	259.8	221.7	250.9	254.4	(8.8)	-3.4%	3.5	1.4%
Revenue-Funded Capital	29.2	37.5	37.5	16.8	27.8	(20.6)	-55.1%	11.0	65.3%
Programmatic Projects	20.6	26.9	26.9	23.2	24.1	(3.6)	-13.5%	0.9	3.9%
General Reserve	-	3.5	-	0.2	3.1	(3.3)	-94.9%	2.9	1668.2%
Total Water	436.4	512.3	461.7	480.0	501.5	(32.3)	-6.3%	21.5	4.5%
Administration, Planning, & Regulatory	45.8	46.4	44.1	49.0	50.3	2.6	5.7%	1.3	2.6%
Maintenance	26.1	27.8	25.5	27.0	27.7	(0.8)	-2.9%	0.6	2.4%
Operations	37.4	39.3	39.9	40.4	41.3	1.1	2.7%	0.9	2.2%
Environmental Engineering	5.0	4.6	5.0	4.7	4.8	0.1	1.2%	0.1	1.8%
Collection Systems	29.0	32.2	30.1	31.5	32.1	(0.7)	-2.2%	0.6	1.8%
Wastewater Labs	3.7	4.7	3.9	4.6	4.7	(0.1)	-1.9%	0.1	1.7%
Debt Service	52.3	63.5	63.5	52.3	76.2	(11.2)	-17.6%	23.9	45.7%
Revenue-Funded Capital	39.0	41.0	41.0	36.8	45.0	(4.2)	-10.3%	8.2	22.4%
Programmatic Projects	8.8	7.3	7.3	7.5	7.2	0.2	2.4%	(0.3)	-3.4%
General Reserve	8.9	6.1	2.3	23.9	18.1	17.8	289.8%	(5.8)	-24.3%
Total Wastewater	255.9	273.0	262.5	277.7	307.3	4.7	1.7%	29.6	10.7%
Power Administration	10.7	12.3	11.6	14.4	15.1	2.1	16.9%	0.7	4.7%
Energy Services	8.3	10.5	8.1	8.8	9.0	(1.7)	-16.1%	0.2	2.2%
Long Range Planning and Power Purchase	24.1	52.8	26.9	49.4	50.1	(3.4)	-6.5%	0.7	1.4%
Light, Heat and Power	13.9	18.6	13.8	18.0	21.4	(0.7)	-3.6%	3.4	19.0%
Project Operations	53.5	56.7	54.4	57.3	58.2	0.5	1.0%	0.9	1.6%
Debt service	1.9	2.2	0.5	2.5	4.8	0.3	14.7%	2.3	94.5%
Revenue-Funded Capital	19.5	17.6	17.6	13.3	14.8	(4.3)	-24.3%	1.4	10.8%
Programmatic Projects	23.3	17.4	17.4	38.3	33.0	20.9	120.5%	(5.3)	-13.8%
General Reserve	9.9	0.2	26.5	0.0	1.3	(0.2)	0.0%	1.3	3246.7%
Total Hetch Hetchy Water and Power	165.1	188.4	176.7	202.0	207.7	\$ 13.6	7.2%	5.7	2.8%
CleanPowerSF	-	-	-	29.5	34.1	29.5	100.0%	4.6	15.4%
General Reserve	-	-	-	4.2	6.2	4.2	100.0%	2.0	47.8%
Total CleanPowerSF	-	-	-	33.7	40.3	33.7	100.0%	6.6	19.4%
Total SFPUC	857.4	973.7	901.0	993.4	1,056.7	19.7	2.0%	63.3	6.4%

Comparing the FY 2015-16 adopted budget to FY 2016-17, the Water Enterprise budget decreased by \$32.3 million or 6.3 percent. This included increases of \$3.3 million in Administration, \$1.3 million in Water Quality, Water Supply & Treatment and Natural Resources offset by reductions of \$20.6 million in Revenue-Funded Capital, \$8.8 million in Debt Service, \$3.6 million in Programmatic Projects, \$3.3 million in General Reserve and \$0.6 million City Distribution and Water Resources.

The Wastewater Enterprise budget increased by \$4.7 million, or 1.7 percent including increases of \$17.8 million in General Reserve, \$2.6 million in Administration and \$1.4 million in Operations, Programmatic Projects and Environmental Engineering, offset by reductions of \$11.2 million in Debt Service, \$4.2 million in Revenue-Funded Capital and \$1.7 million in Maintenance, Collection Systems and Wastewater Laboratories.

Hetch Hetchy Water and Power increased by \$13.6 million, or 7.2 percent including increases of \$20.9 million in Programmatic Projects, \$2.1 million in Administration, and \$0.7 million in Project Operations and Debt Service. These increases were offset by reductions of \$4.3 million Revenue-Funded Capital, \$3.4 million in Long Range Planning and Power Purchase, \$1.7 million in Energy Services, and \$0.7 million in Light, Heat and Power.

The CleanPowerSF Enterprise budget was newly appropriated in FY 2016-17.

From FY 2016-17 to FY 2017-18, the Water Enterprise budget increased by \$21.5 million or 4.5 percent. This included increases of \$11.0 million in Revenue-Funded Capital, \$3.5 million in Debt Service, \$2.9 million in General Reserve, \$1.9 million in Administration and \$2.4 million in Programmatic Projects, City Distribution, Natural Resources and Water Quality, and Water Resources. The increases were offset by reductions of \$0.2 million in Water Supply & Treatment.

The Wastewater Enterprise budget increased by \$29.6 million, or 10.7 percent, including increases of \$23.9 million in Debt Service, \$8.2 million in Revenue-Funded Capital, \$2.3 million in Operations, Maintenance, Collection Systems, Environmental Engineering and Wastewater Labs and \$1.3 million in Administration, which was offset by reductions of \$6.1 million in General Reserve and Programmatic Projects.

Hetch Hetchy Water and Power's budget increased by \$5.7 million or 2.8 percent, which included increases of \$3.4 million in Light, Heat and Power, \$2.6 million in Project Operations, Power Administration, Long Range Planning and Power Purchase, and Energy services, \$2.3 million in Debt Service, \$1.4 million in Revenue-Funded Capital, and \$1.3 million in General Reserve. This was offset by a reduction of \$5.3 million in Programmatic Projects.

The CleanPowerSF budget increased by \$6.6 million or 19.4 percent, including \$4.6 million for CleanPowerSF operations and \$2.0 million for General Reserve.

Tables 8 show a breakdown of budgeted Sources and Uses of Funds for FY 2016-17 by Enterprise.

Table 8. FY 2016-17 SFPUC Sources and Uses of Funds by Enterprise

\$ Millions	Hetch Hetchy				Total
	Water	Wastewater	Water & Power	CleanPowerSF	
Sources of Funds					
Sale of Water	414.6	-	36.7	-	451.3
Federal Interest Subsidy	24.2	4.0	0.7	-	28.8
Sewer Service Charges	-	268.6	-	-	268.6
Sale of Electricity	-	-	133.0	-	133.0
Sale of Electricity-CCA	-	-	-	33.7	33.7
Sale of Natural Gas & Steam	-	-	11.3	-	11.3
Fund Balance	10.7	-	12.8	-	23.6
Other Non-Op Revenues	28.6	3.8	6.3	-	38.7
Interest Income	1.9	1.3	1.2	-	4.4
Total Sources of Funds	480.0	277.7	202.0	33.7	993.4
Uses of Funds					
Personnel	89.7	67.1	40.9	1.8	199.5
Overhead				1.1	1.1
Non-Personnel Services	16.5	17.1	81.1	25.0	139.7
Materials & Supplies	13.2	10.2	2.6	0.0	26.0
Equipment	3.7	0.9	0.5	-	5.1
Debt Service	250.9	52.3	2.5	0.8	306.5
Services Of Other Depts	65.7	61.9	22.8	0.8	151.3
General Reserve	0.2	23.9	0.0	4.2	28.3
Sub-total Expenditures	439.9	233.4	150.4	33.7	857.4
Revenue-Funded Capital	16.8	36.8	36.8	-	90.4
Programmatic Projects	23.2	7.5	14.8	-	45.5
Total Uses of Funds	480.0	277.7	202.0	33.7	993.4

The major sources of funds are Sale of Water, Sewer Service Charges, Sale of Electricity, and General Reserve. The largest use of funds for Water and Wastewater is Debt Service, Personnel and Services to Other Departments, and for Hetch Hetchy Water and Power is Personnel and Non-Personnel Services and the Debt Service is small reflecting the relatively minor use of bonds for capital projects.

Tables 9 show a breakdown of budgeted Sources and Uses of Funds for FY 2017-18 by Enterprise.

Table 9. FY 2017-18 SFPUC Sources and Uses of Funds by Enterprise

\$ Millions	Hetch Hetchy				Total
	Water	Wastewater	Water & Power	CleanPowerSF	
Sources of Funds					
Sale of Water	444.8	-	34.9		479.6
Federal Interest Subsidy	24.0	4.0	0.6		28.6
Sewer Service Charges	-	298.0	-		298.0
Sale of Electricity	-	-	140.0		140.0
Sale of Electricity-CCA			-	40.3	40.3
Sale of Natural Gas & Steam	-	-	14.3		14.3
Fund Balance	1.6	-	10.3		11.9
Other Non-Op Revenues	29.2	3.8	6.3		39.3
Interest Income	1.8	1.5	1.3		4.6
Total Sources of Funds	501.5	307.3	207.7	40.3	1,056.7
Uses of Funds					
Personnel	91.7	68.9	42.6	2.2	205.3
Overhead	-	-	-	1.2	1.2
Non-Personnel Services	16.5	17.3	84.8	27.8	146.5
Materials & Supplies	13.6	10.4	2.7	0.0	26.7
Equipment	3.0	0.9	0.4	-	4.4
Debt Service	254.4	76.2	4.8	2.0	337.5
Services Of Other Depts	67.1	63.3	23.2	0.8	154.5
General Reserve	3.1	18.1	1.3	6.2	28.7
Sub-total Expenditures	449.5	255.0	159.9	40.3	904.7
Revenue-Funded Capital	27.8	45.0	33.0	-	105.8
Programmatic Projects	24.1	7.2	14.8	-	46.2
Total Uses of Funds	501.5	307.3	207.7	40.3	1,056.7

The major sources of funds are for the Sale of Water, and Sewer Service Charges and the Sale of Electricity and Sale of Natural Gas and Steam. The largest use of funds is for Debt Service, reflecting the Capital programs for the three Enterprises, followed by Personnel and Services of Other Departments for the Water and Wastewater Enterprises. Hetch Hetchy Water and Power's and CleanPowerSF's largest use of funds is for Non-Personnel Services which includes the purchase of power and natural gas and steam budgets.

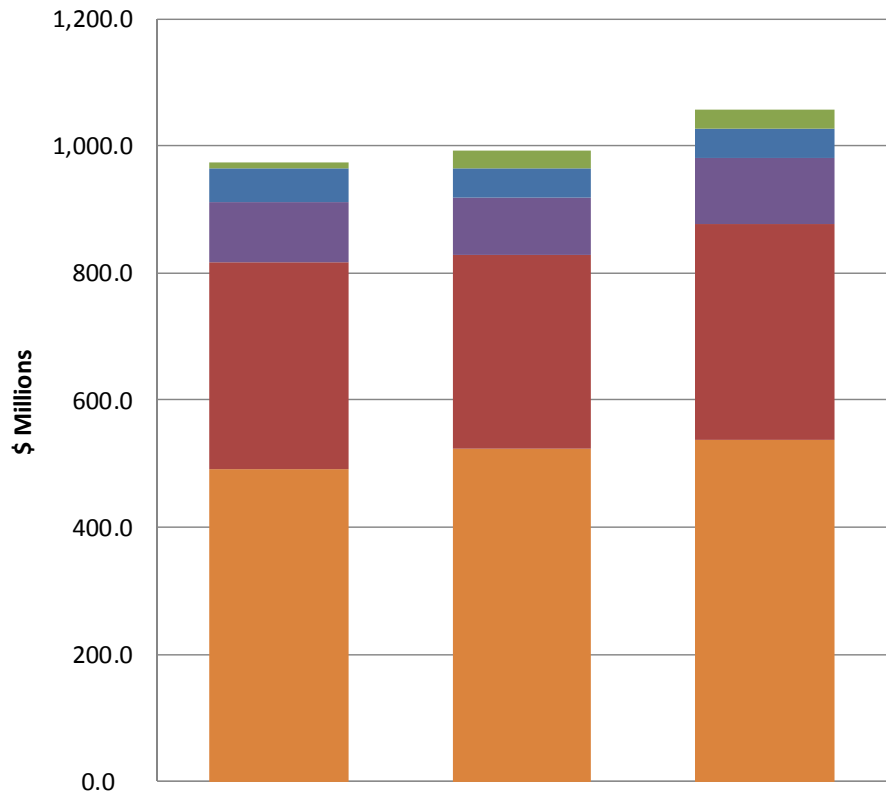
Growth by Budget Categories

The continued specter of drought, combined with potential new mandatory water conservation requirements result in reduced revenues for water, sewer and power, which demands that we contain costs. Consequently, the budget is growing only by 2.0 percent from FY 2015-16. Previously the major growth in the SFPUC budget has been in Debt Service and Revenue-Funded Capital to support the growth of the capital program. This budget reflects a decrease in these categories in FY 2016-17. There are also increases in Operations and Maintenance of 6.5 percent from FY 2015-16, with much of this coming from the new CleanPowerSF program (shown on Chart CP2 in the CleanPowerSF section of this document).

In FY 2017-18 the major increases are seen in Debt Service by 10.1 percent and the Revenue-Funded Capitals by 17.0 percent. These two increases largely accounts for the overall budget growth from FY 2016-17 to FY 2017-18. The 3.0 percent increase in Operations and Maintenance is considered a flat increase when considering the cost increases for personnel driven by labor agreements, cost of electricity, chemicals and other costs. The General Reserve is also flat with only a 1.4 percent increase from FY 2016-17 to FY 2017-18.

Chart 8 displays the budget growth from FY 2015-16 to FY 2017-18 by major categories.

Chart 8. SFPUC Budget Growth from FY 2015-16 to FY 2017-18



	Adopted FY 2015-16	Adopted FY 2016-17	% Change	Adopted FY 2017-18	% Change
Operations and Maintenance	\$ 490.7	\$ 522.7	6.5%	\$ 538.5	3.0%
Debt Service	325.4	306.5	-5.8%	337.5	10.1%
Revenue-Funded Capital	95.8	90.4	-5.6%	105.8	17.0%
Programmatic Projects	51.8	45.5	-12.1%	46.2	1.4%
General Reserve	9.9	28.3	187.1%	28.7	1.4%
Total Uses of Funds	\$ 973.7	\$ 993.4	2.0%	\$ 1,056.7	6.4%

Fund Balance

The City and County of San Francisco and the SFPUC are legally required to balance their budgets each year. The San Francisco City Charter requires that proposed budgets be balanced such that the proposed expenditures of each fund do not exceed the projected revenues and available Fund Balance of that Enterprise. When actual spending is determined at the end of fiscal year, the net of actual expenditures and revenues is applied to fund balance. The reverse is true as well, if actual expenditures are greater than revenues, the difference is funded by use of fund balance.

Table 10 displays changes to fund balance for FY 2016-17 by Enterprise.

Table 10. FY 2016-17 SFPUC Beginning and Ending Available Fund Balance

\$ Millions	FY 2016-17				
	All Funds	Water	Wastewater	Hetch Hetchy Water & Power	CleanPowerSF
Beginning Available Fund Balance, July 1, 2016	298.7	116.6	118.1	64.0	-
Sources					
Sale of Water	451.3	414.6	-	36.7	-
Federal Interest Subsidy	28.8	24.2	4.0	0.7	-
Sewer Service Charges	268.6	-	268.6	-	-
Sale of Electricity	133.0	-	-	133.0	-
Sale of Electricity-CCA	33.7	-	-	-	33.7
Sale of Natural Gas & Steam	11.3	-	-	11.3	-
Fund Balance	23.6	10.7	-	12.8	-
Other Non-Op Revenues	38.7	28.6	3.8	6.3	-
Interest Income	4.4	1.9	1.3	1.2	-
Total Sources	993.4	480.0	277.7	202.0	33.7
Uses					
Operations and Maintenance	511.4	188.8	157.3	136.6	28.7
Natural Gas & Steam	11.3	-	-	11.3	-
Debt Service	306.5	250.9	52.3	2.5	0.8
General Reserve	28.3	0.2	23.9	0.0	4.2
Revenue-Funded Capital	91.9	16.8	36.8	38.3	-
Programmatic Projects	44.1	23.2	7.5	13.3	-
Total Uses	993.4	480.0	277.7	202.0	33.7
Net Revenues	-	-	-	-	-
Use of Available Fund Balance	(23.6)	(10.7)	-	(12.8)	-
Planned Unspent General Reserve	28.3	0.2	23.9	0.0	4.2
Ending Available Fund Balance, June 30, 2017	303.4	106.0	142.0	51.2	4.2

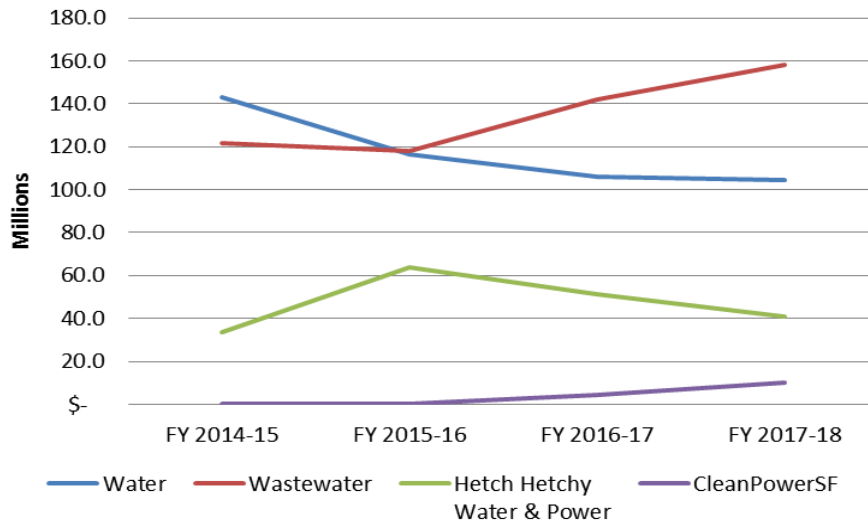
Table 11 displays changes to fund balance for FY 2017-18 by Enterprise.

Table 11. FY 2017-18 SFPUC Beginning and Ending Available Fund Balance

\$ Millions	FY 2017-18				
	All Funds	Water	Wastewater	Hetch Hetchy Water & Power	CleanPowerSF
Beginning Available Fund Balance, July 1, 2017	303.4	106.0	142.0	51.2	4.2
Sources					
Sale of Water	479.6	444.8	-	34.9	-
Federal Interest Subsidy	28.6	24.0	4.0	0.6	-
Sewer Service Charges	298.0	-	298.0	-	-
Sale of Electricity	140.0	-	-	140.0	-
Sale of Electricity-CCA	40.3	-	-	-	40.3
Sale of Natural Gas & Steam	14.3	-	-	14.3	-
Fund Balance	11.9	1.6	-	10.3	-
Other Non-Op Revenues	39.3	29.2	3.8	6.3	-
Interest Income	4.6	1.8	1.5	1.3	-
Total Sources	1,056.7	501.5	307.3	207.7	40.3
Uses					
Operations and Maintenance	524.2	192.0	160.8	139.5	32.0
Natural Gas & Steam	14.3	-	-	14.3	-
Debt Service	337.5	254.4	76.2	4.8	2.0
General Reserve	28.7	3.1	18.1	1.3	6.2
Revenue-Funded Capital	105.8	27.8	45.0	33.0	-
Programmatic Projects	46.2	24.1	7.2	14.8	-
Total Uses	1,056.7	501.5	307.3	207.7	40.3
Net Revenues	-	-	-	-	-
Use of Available Fund Balance	(11.9)	(1.6)	-	(10.3)	-
Planned Unspent General Reserve	16.3	0.3	16.0	-	6.2
Ending Available Fund Balance, June 30, 2018	307.8	104.7	157.9	40.9	10.4

Chart 9 displays the Ending Available Fund Balance trend for FY 2015-16 to FY 2017-18. FY 2014-15 and FY 2015-16 reflect the actual ending fund balance for each fiscal year and FY 2016-17 and FY 2017-18 reflect the projected ending fund balance based on the approved budgets.

Chart 9. FY 2014-15 to FY 2017-18 SFPUC Ending Available Fund Balance Trend



Authorized and Funded Full-Time Equivalents (FTEs)

The SFPUC uses a full-time equivalent (FTE) ratio to develop a budget for positions. The FTE ratio is calculated based on an employee working 80 hours per (two weeks) pay period, for a full year. FTEs apply to both operating and project-funded positions.

Table 12 provides a total organization count of FTEs by position and by type: permanent, temporary, project or infrastructure permanent position for FY 2014-15 to FY 2017-18 for the entire SFPUC.

Table 12. SFPUC Authorized and Funded Full-Time Equivalents (FTEs)

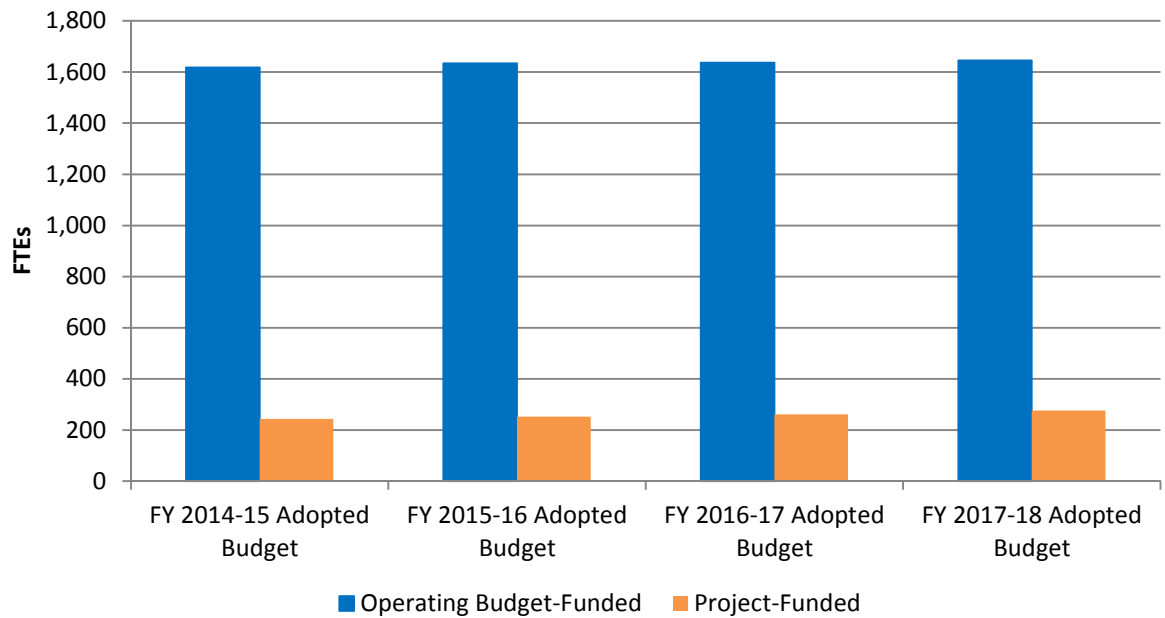
Position Type	FY 2014-15 Adopted Budget	FY 2015-16 Adopted Budget	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16	FY 2017-18 vs. FY 2016-17
Permanent Positions	1,579.06	1,595.08	1,591.69	1,601.00	(3.39)	9.31
Temporary Positions	39.19	38.45	45.27	44.35	6.82	(0.92)
Subtotal Operating Budget-Funded	1,618.25	1,633.53	1,636.96	1,645.35	3.43	8.39
Project-Funded	243.66	252.58	261.74	276.05	9.16	14.31
Subtotal	1,861.91	1,886.11	1,898.70	1,921.40	12.59	22.70
Infrastructure Permanent Positions	384.16	389.00	385.00	385.00	(4.00)	-
Total SFPUC	2,246.07	2,275.11	2,283.70	2,306.40	8.59	22.70

As noted above in Table 12, the total authorized and funded full-time equivalent (FTE) operating budget, project-funded, and temporary positions for FY 2016-17 are 1,898.70, an increase of 12.59 FTEs from FY 2015-16. The net increase includes an increase of 6.82 temporary FTE positions and 9.16 project-funded FTEs offset by a reduction of 3.39 permanent FTEs. Changes to temporary salaries reflect an increase in temporary salaries funding as well as an increase in new project-funded positions to support the three Enterprises and CleanPowerSF activities. Changes in permanent positions reflect new positions, position deletions, position reassignments from Infrastructure and adjustments to attrition savings. Infrastructure permanent positions are not included in the total operating budget funded positions; Infrastructure's personnel are all funded directly and indirectly through capital projects. The FTEs change in Infrastructure reflects position reassignments to other SFPUC Enterprises.

FY 2017-18 FTEs total 1,921.40, an increase of 22.70 FTEs from FY 2016-17 including new operating and project-funded positions, increases to annualize partially-funded FY 2016-17 and adjustments in attrition savings. Infrastructure's position count did not change.

Chart 10 illustrates the trend of operating and project-funded FTEs from FY 2014-15 to FY 2017-18.

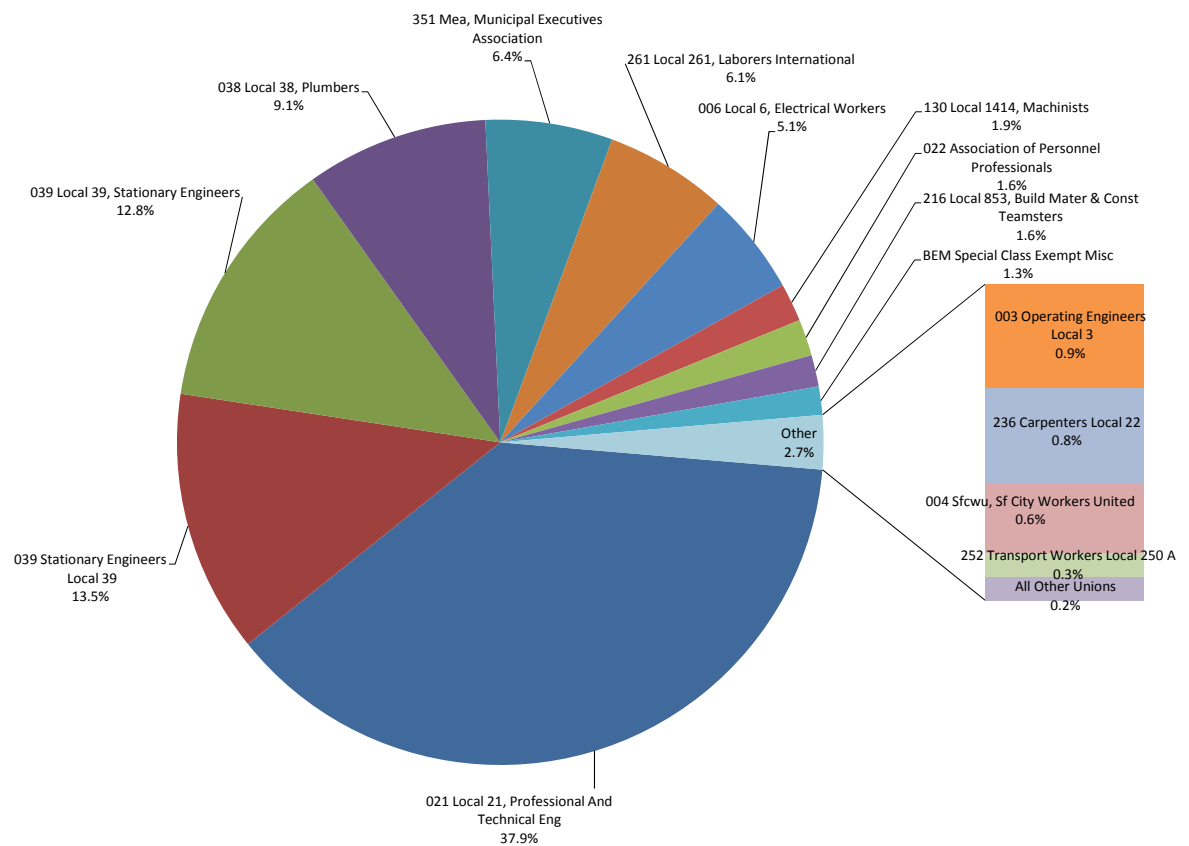
Chart 10. SFPUC Operating and Project FTEs Trend



The breakdown of FTEs by Enterprise and CleanPowerSF can be found in the individual budget sections of this document. The breakdown of FTEs for the General Manager's Office, the Bureaus and Infrastructure are aggregated and provided in each Bureau Section respectively.

Chart 11 shows the percentage of total SFPUC appropriated FTEs represented by various unions for FY 2016-17.

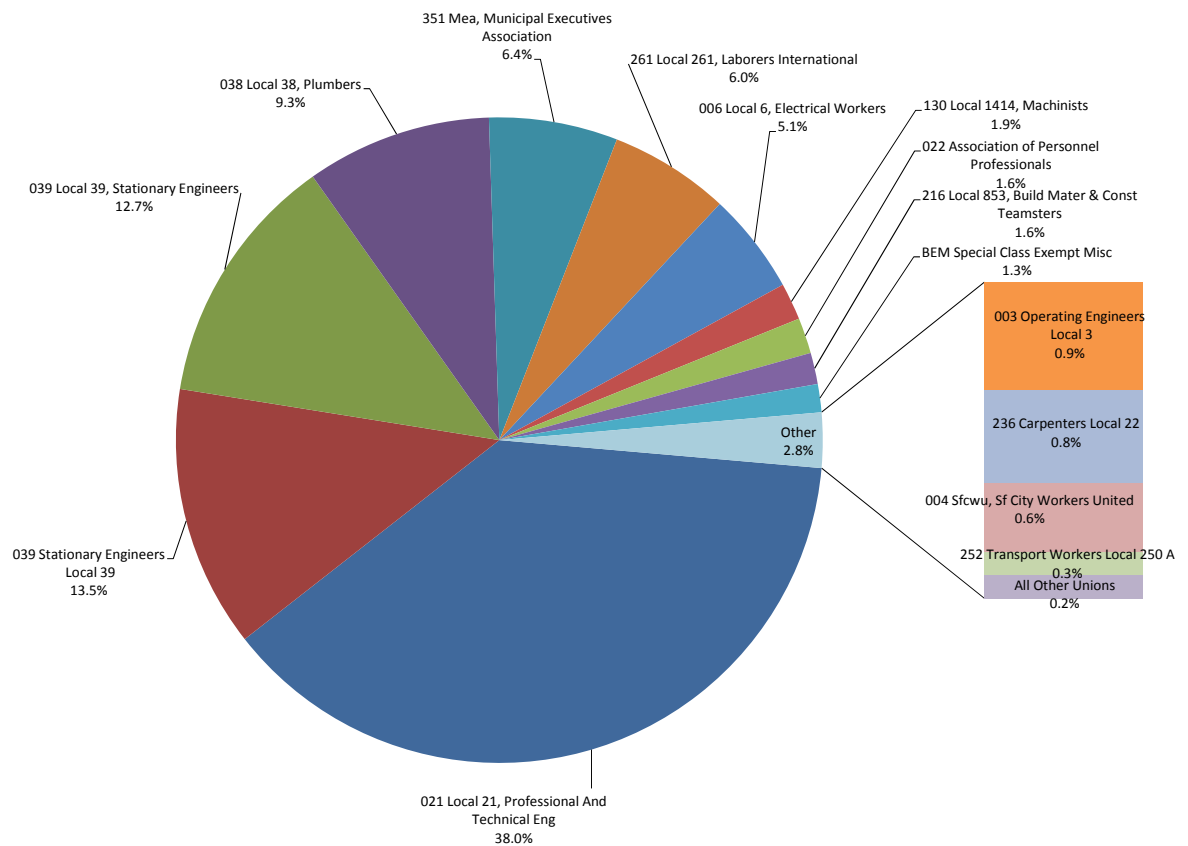
Chart 11. SFPUC FY 2016-17 Percentage of Positions by Union



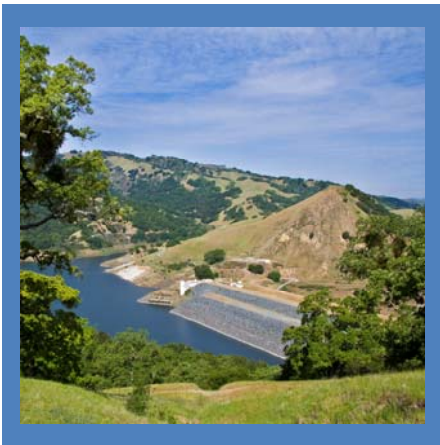
In FY 2016-17 three unions represent the majority or 63.2 percent of authorized SFPUC positions: 37.9 percent represented by Local 21, Professional and Technical Engineering, 13.5 percent represented by Local 39, Stationary Engineers and 12.8 percent represented by Local 790, Service Employees International Union (SEIU).

Chart 12 shows the percentage of total SFPUC appropriated FTEs represented by various unions for FY 2017-18.

Chart 12. SFPUC FY 2017-18 Percentage of Positions by Union



In FY 2017-18 three unions continue to represent the majority or 64.2 percent of authorized SFPUC positions: 38.0 percent represented by Local 21, Professional and Technical Engineering, 13.5 percent represented by Local 39, Stationary Engineers and 12.7 percent represented by Local 790 SEIU. The trend is consistent with FY 2016-17.



WATER ENTERPRISE

Mission, Roles, and Responsibilities

The San Francisco Public Utilities Commission operates the facilities of its Water Enterprise to optimize the reliability and quality of its water deliveries. The SFPUC has made and will continue to make significant capital investments in the facilities of the Water Enterprise, designed to

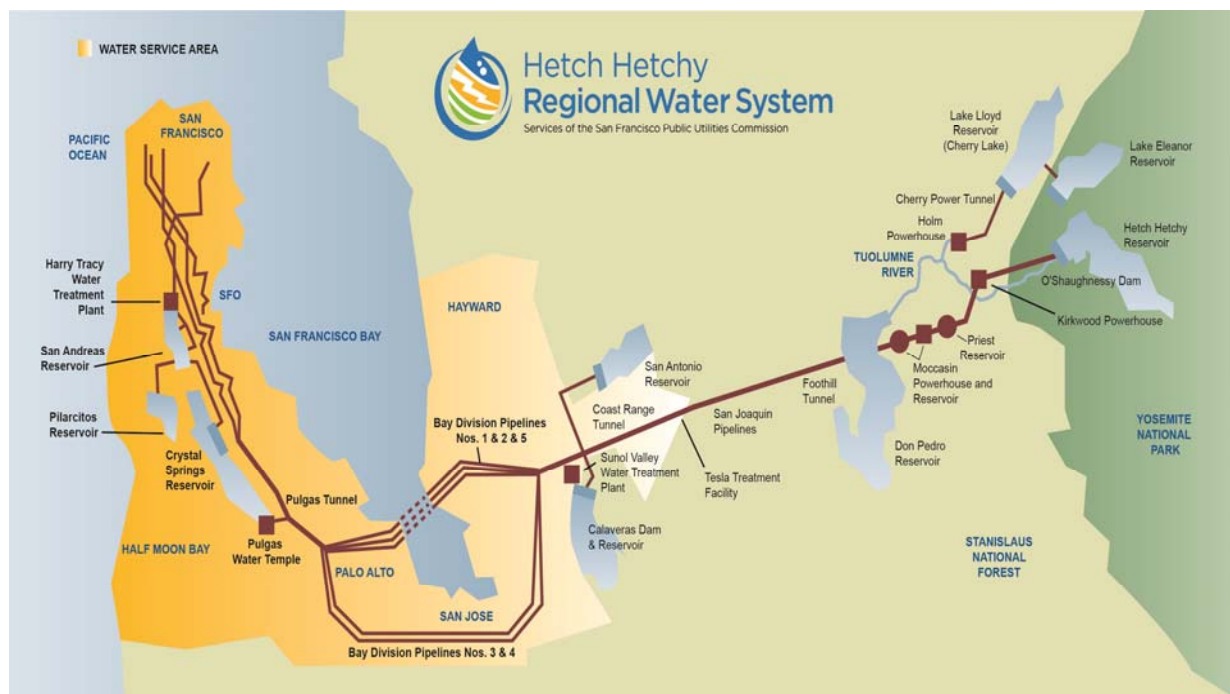
maximize the Water Enterprise's ability to deliver water sufficient to meet the needs of its customers following the occurrence of a major seismic event or during an extended period of drought.

The SFPUC serves as the retail water supplier for the City and is responsible for water deliveries to residents and institutions within the City limits, as well as to a number of retail accounts outside of the City limits. In addition, the SFPUC sells water to 27 Wholesale Customer entities in San Mateo, Alameda and Santa Clara Counties under the WSA and related individual contractual agreements. Collectively, with the exception of the Cordilleras Mutual Water Company, the Wholesale Customers are members of BAWSCA, which is a public agency separate and apart from the 27 Wholesale Customers. Altogether, nearly 2.6 million people rely on water supplied by the Water Enterprise.

The Water Enterprise consists of over 389 miles of pipeline, over 74 miles of tunnels, 11 reservoirs, five pump stations, and three water treatment plants located outside of the City and over 1,235 miles of pipeline, 11 reservoirs, eight storage tanks, 24 pump stations, eight hydropneumatic stations and 17 chlorination stations located within the City limit.

The Regional Water System draws approximately 85% of its water from the Upper Tuolumne River Watershed, collected in Hetch Hetchy Reservoir in Yosemite National Park, feeding a single aqueduct system, delivering water 120 miles by gravity to Bay Area reservoirs and users. The remaining water supply is drawn from local surface waters in the Alameda and Peninsula watersheds.

Map of Regional Water System



Budget Summary

Table W1 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and between FY 2017-18 and FY 2016-17.

Table W1 shows budgeted revenues from the Sale of Water decreasing from FY 2015-16 to FY 2016-17 by \$24.1 million or 5.1 percent as a result of drought conditions and water conservation efforts. The increasing use of water from FY 2016-17 to FY 2017-18 reflects a 7% rate increase. Uses of funds for FY 2016-17 are decreasing by \$32.3 million or 6.3% compared to FY 2015-16 due to decreasing debt service, capital/revenue and general reserves. Uses for FY 2017-18 are increasing by \$21.5 million or 4.5% compared to FY 2016-17. Changes in sources and uses are discussed in the following pages.

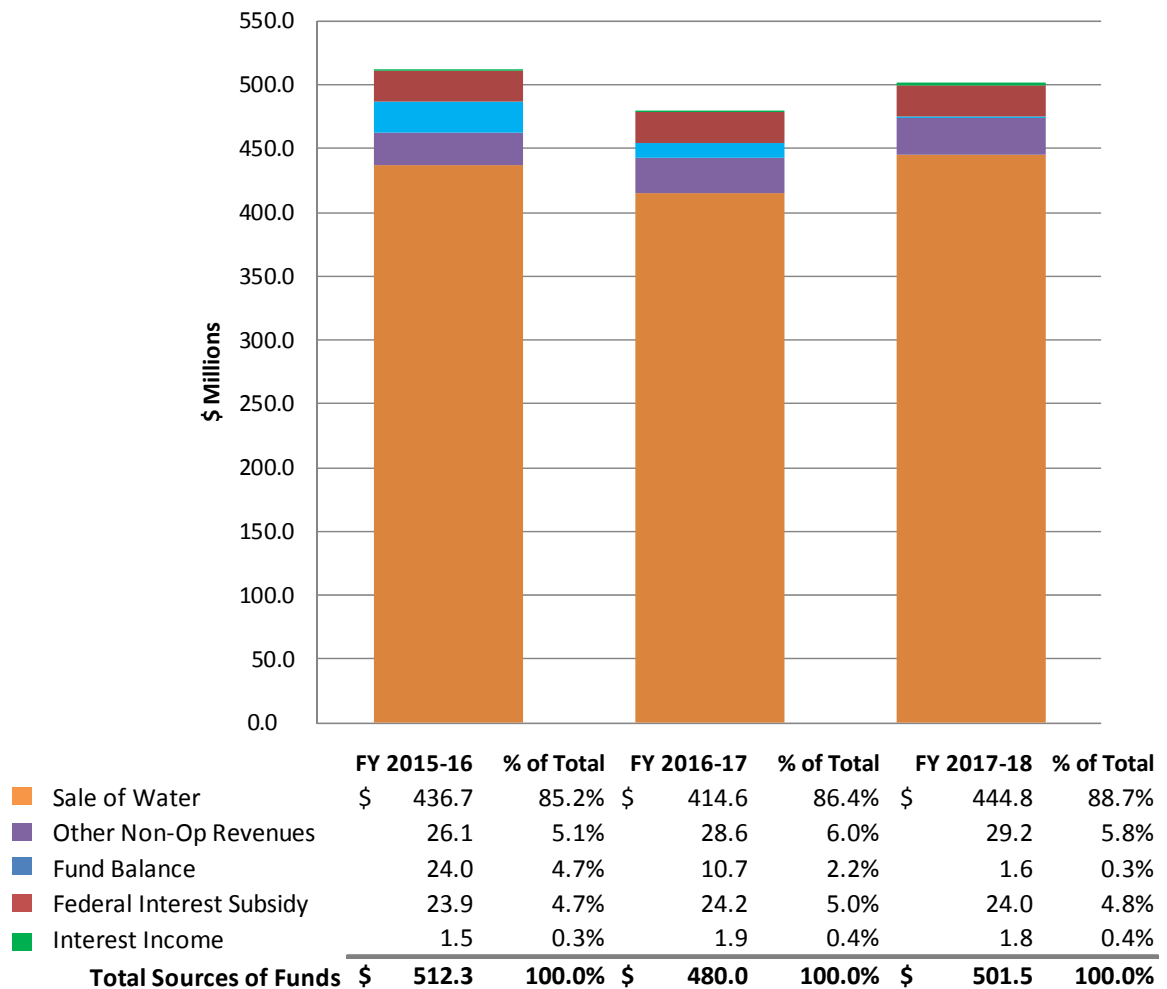
Table W1. Water Enterprise Sources and Uses of Funds

\$ Millions	FY 2014-15		FY 2015-16		FY 2016-17		FY 2017-18		FY 2016-17 vs. FY 2015-16 Adopted		FY 2017-18 vs. FY 2016-17 Adopted	
	Audited Actual	Adopted Budget	FY 2015-16 Actual	Adopted Budget	Adopted Budget	Adopted Budget	Budget Amount	%	Budget Amount	%	Budget Amount	%
SOURCES OF FUNDS												
Sale of Water	379.2	473.3	414.1	449.2	477.4	(24.1)	-5.1%	28.1	6.3%			
Less Water Costs to Hetchy	(36.8)	(36.6)	(36.6)	(34.6)	(32.6)	2.0	-5.5%	2.0	-5.8%			
Fund Balance	19.9	24.0	36.3	10.7	1.6	(13.2)	-55.2%	(9.1)	-84.7%			
Federal Interest Subsidy	24.1	23.9	24.3	24.2	24.0	0.3	1.0%	(0.1)	-0.6%			
Other Non-Op Revenues	48.1	26.1	22.0	28.6	29.2	2.5	9.5%	0.6	2.1%			
Interest Income	1.9	1.5	1.6	1.9	1.8	0.3	19.4%	(0.0)	-0.5%			
Total Sources of Funds	436.4	512.3	461.7	480.0	501.5	(32.3)	-6.3%	21.5	4.5%			
USES OF FUNDS												
Personnel	82.7	87.1	85.4	89.7	91.7	2.6	3.0%	2.0	2.3%			
Non-Personnel Services	13.7	16.4	14.3	16.5	16.5	0.0	0.2%	0.1	0.4%			
Materials & Supplies	11.7	13.9	11.7	13.2	13.6	(0.7)	-5.1%	0.4	2.8%			
Equipment	1.5	2.5	2.6	3.7	3.0	1.2	49.5%	(0.7)	-17.9%			
Debt Service	214.5	259.8	221.7	250.9	254.4	(8.8)	-3.4%	3.5	1.4%			
Services Of Other Depts	62.5	64.7	61.7	65.7	67.1	1.0	1.6%	1.4	2.1%			
General Reserves	-	3.5	-	0.2	3.1	(3.3)	-94.9%	2.9	-			
Capital/Revenue Reserve	29.2	37.5	37.5	16.8	27.8	(20.6)	-55.1%	11.0	65.3%			
Programmatic Projects	20.6	26.9	26.9	23.2	24.1	(3.6)	-13.5%	0.9	3.9%			
Total Uses of Funds	436.4	512.3	461.7	480.0	501.5	(32.3)	-6.3%	21.5	4.5%			

Sources of Funds

Chart W1 shows the FY 2015-16, 2016-17 and FY 2017-18 budgeted Sources of Funds by revenue category. Table W1 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and between FY 2017-18 and FY 2016-17.

Chart W1. FY 2015-16 to FY 2017-18 Water Enterprise Sources of Funds



Summary

Estimated revenues for FY 2016-17 from the Sale of Water, Federal Interest Subsidy, Other Non-Operating Interest, Fund Balance and Interest Income are \$480.0 million, a \$32.3 million or 6.3 percent decrease from FY 2015-16. The net decrease reflects a \$22.1 million decrease in net Water Sales due to water conservation, a \$13.3 million decrease in the use of Fund Balance, offset by a \$2.5 million increase in Other Non-Operating Revenue, a \$0.4 million increase in Interest Income and a \$0.3 million increase in the Federal Interest Subsidy.

Estimated revenues for FY 2017-18 from the Sale of Water, Federal Interest Subsidy, Other Non-Operating Revenues, Fund Balance and Interest Income are \$501.5 million, \$21.5 million or 4.5 percent increase over FY 2016-17. The net increase reflects a \$30.2 million increase in net Water Sales, a \$0.6 million increase in Other Non-Operating Revenue, offset by a \$9.1 million decrease in the use of Fund Balance, a \$0.2 million decrease in the Federal Interest Subsidy and a \$0.1 million decrease in Interest Income.

Sale of Water

Gross water sales for FY 2016-17 are budgeted at \$449.2 million including \$414.6 million of direct sales, see Chart W1, and \$34.6 million of water transfer sales shown under Hetchy Water, see Hetchy Water and Power, Chart H1. Net water sales revenue is 86.4 percent of total sources of funds. In FY 2017-18 water sales are budgeted at \$444.8 million, net of the \$32.6 million budgeted under Hetchy Water. Net water sales revenue is 88.7 percent of total sources of funds. Water sales reflect rates adopted by the SFPUC in

May 2014 for retail customer classes, including single-family and multiple-family residential and non-residential customers.

Other Non-Operating Revenues

FY 2016-17 non-operating revenues total \$28.6 million, 6.0 percent of total sources, including \$12.9 million from property rentals; \$5.1 million for service installations; \$3.7 million recovery from Infrastructure, a payment on their share of the cost for the SFPUC Headquarters building costs; \$4.1 million for late fees and liens; \$1.5 million in other miscellaneous services; and \$1.3 million from Treasure Island utilities. The \$2.5 million increase from the prior year is primarily due to the increase in water service installations. The FY 2017-18 revenues are budgeted at \$29.2 million which is 5.8 percent of total sources.

Fund Balance

Fund Balance totaling \$10.7 million is appropriated to support the Water Enterprise operating and revenue-funded capital for FY 2016-17; this equates to 2.2% of the sources. In FY 2017-18, fund balance decreased by \$9.1 million from \$10.7 million to \$1.6 million, 0.3% of sources, as a result of cost reductions, specifically debt service.

Federal Interest Subsidy

The FY 2016-17 budget for Federal Interest Subsidy is \$24.2 million or 5.0 percent of total sources. The SFPUC receives a subsidy payment from the Federal Government for a portion of borrowing costs on taxable bonds. The U.S. Treasury Department is estimated to provide a direct subsidy equal to 32.6 percent (net of sequestration) of the interest payable for bonds issued as Build America Bonds per the American Recovery and Reinvestment Act (ARRA). A portion of the Water Enterprise's outstanding bonds qualify under this subsidy program. FY 2017-18 Subsidy is budgeted at \$24.0 million, 4.8 percent of total sources.

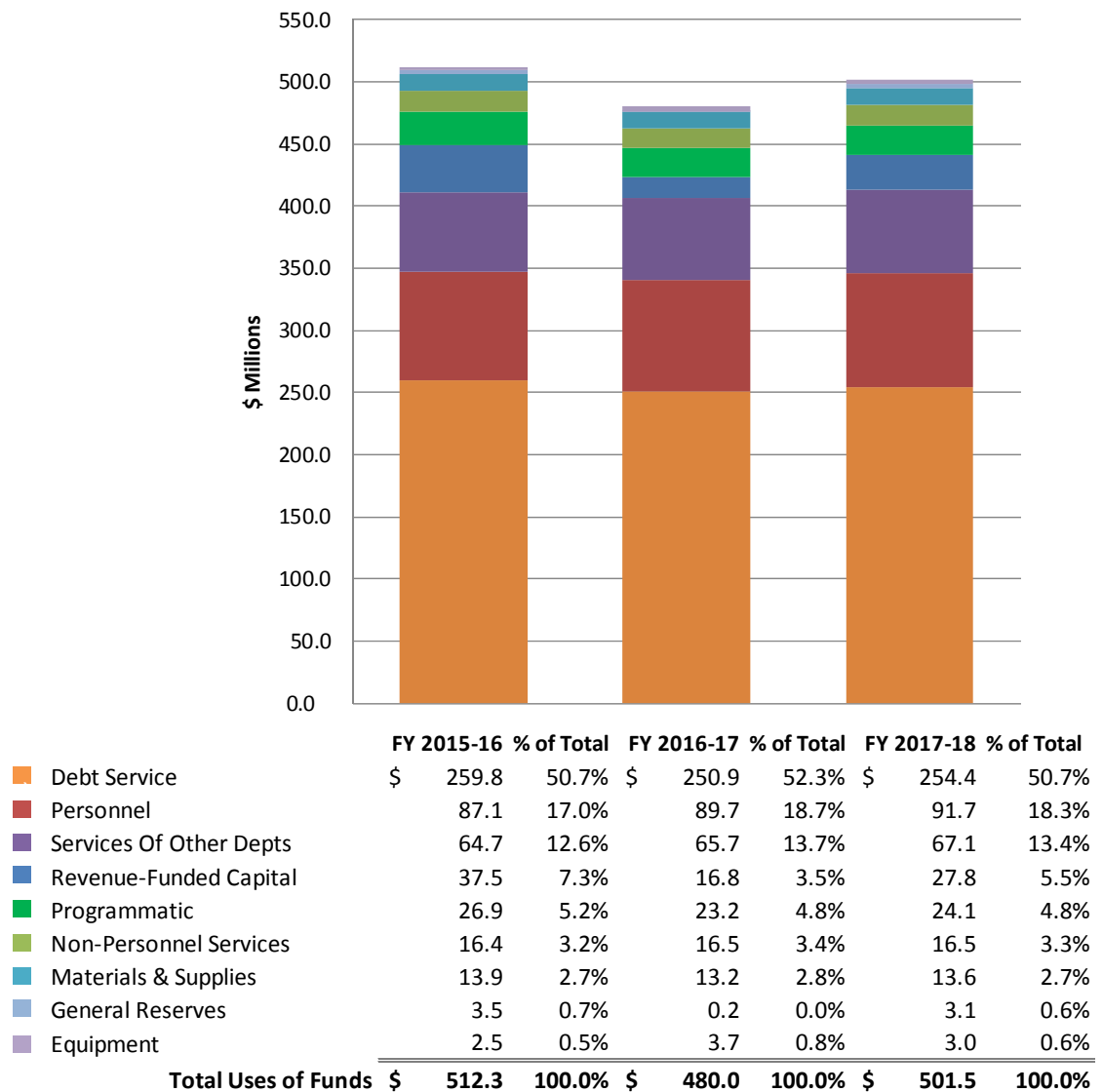
Interest Income

FY 2016-17 Interest Income is budgeted at \$1.9 million and is based on the projected cash balance and interest rates on the County Investment Pool. Interest income for FY 2016-17 is projected to be \$0.4 million more than the FY 2015-16 budget. The FY 2017-18 interest income is projected to be \$1.8 million, a decrease of \$0.1 million from FY 2016-17.

Uses of Funds

Chart W2 shows the budgeted Uses of Funds by expenditure category from FY 2015-16 through FY 2017-18. Table W1 (page 74) shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and between FY 2017-18 and FY 2016-17.

Chart W2. FY 2015-16 to FY 2017-18 Water Enterprise Uses of Funds



Summary

Comparing the Use of Funds categories as a percentage of the total amount shows that there is relatively no growth from FY 2015-16 through FY 2017-18.

The Enterprise estimated uses for FY 2016-17 total \$480.0 million, see Chart W2 and Table W1. This is a \$32.3 million decrease or 6.3 percent from FY 2015-16. The net decrease is mainly due to the decrease in debt service and capital/revenue reserve.

The FY 2017-18 budget totals \$501.5 million, see Chart W2 and Table W1. This is a \$21.5 million increase or 4.5 percent from FY 2016-17 mainly due to the increase in debt service, capital/revenue reserve and programmatic.

Debt Service

The FY 2016-17 Debt Service is budgeted at \$250.9 million based on principal and interest scheduled payments on revenue bonds to finance the Water System Improvement Program (WSIP) and the rest of the Enterprise's capital programs. This reflects a decrease of approximately \$8.9 million or 3.0 percent from the FY 2015-16 adopted budget of \$259.8 million (net of subordinate debt service and miscellaneous fees) mainly due to refunding savings realized with issuance of Series 2015A refunding bonds in April of 2015.

The FY 2017-18 Debt Service is budgeted at \$254.4 million, a \$3.5 million, or 1.4 percent increase from the FY 2016-17 budget. The increase is primarily due to the principal amortization on the Series 2010F revenue bonds.

Personnel

The FY 2016-17 Personnel budget is \$89.7 million, comprised of \$61.9 million for salaries and \$27.8 million for fringe benefits. The net increase of \$2.6 million or 3.0 percent from the FY 2015-16 budget reflects cost of living adjustments required under various labor agreements, and increases in retirement and health benefit costs.

The FY 2017-18 Personnel budget is \$91.7 million, comprised of \$61.7 million for salaries and \$30.0 million for fringe benefits. The net increase of \$2.0 million or 2.3 percent from FY 2016-17 budget primarily results from a \$2.1 million increase for fringe benefits, primarily in retirement benefits.

Services of Other Departments

The FY 2016-17 Services of Other Departments budget is \$65.7 million, an increase of \$1.0 million or 1.5 percent over the FY 2015-16 approved budget. The net increase reflects a \$1.6 million increase in administrative services provided by the SFPUC Bureaus, a \$0.6 million increase in telecommunication services, \$0.5 million increase in risk management services provided by the CAO office, offset by \$1.1 million reduction in gas and electricity projections, \$0.4 million reduction in worker's compensation costs and \$0.2 million reduction for sewer services.

The FY 2017-18 Services of Other Departments budget is \$67.1 million, an increase of \$1.4 million or 2.1 percent over the FY 2016-17 approved budget. The net increase reflects a \$1.3 million increase in administrative services provided by the SFPUC Bureaus, a \$0.4 million increase in gas and electricity services, \$0.1 million increase in risk management services provided by the CAO office and \$0.1 million increase in worker's compensation costs, offset primarily by a \$0.5 million reduction in telecommunication services.

Revenue-Funded Capital

The FY 2016-17 Revenue-Funded Capital is budgeted at \$16.8 million, which funds the revenue portion of the two-year capital program approved through a supplemental appropriation as part of the annual budget process. The \$20.7 million decrease from FY 2015-16 reflects available revenues to support the capital program.

The FY 2017-18 Revenue-Funded Capital is budgeted at \$27.8 million, an \$11.0 million increase from the FY 2016-17 amount of \$16.8 million to support the regional water transmission program.

Programmatic Projects

The FY 2016-17 Programmatic Project budget mainly decreased from \$26.9 million in FY 2015-16 to \$23.2 million. This \$3.7 million decrease is the result from shifting a portion of the Long-Term Monitoring project from programmatic to a capital project.

The FY 2017-18 Programmatic Project budget increased from \$23.2 million in FY 2016-17 to \$24.1 million. This \$0.9 million increase is primarily to adjust the non-capital portion of the Long-Term Monitoring project.

Non-Personnel Services

The FY 2016-17 Non-Personnel Services budget is \$16.5 million, a \$0.1 million increase or 0.6 percent from the FY 2015-16 approved budget. The net increase mainly reflects a \$0.5 million from an increase in regulatory fees, offset by a \$0.3 million decrease in the City Grants Program for water conservation fixtures and \$0.1 million decrease in miscellaneous expenses, including the training budget.

The FY 2017-18 Non-Personnel Services budget is \$16.5 million and remains the same as FY 2016-17.

Material and Supplies

The FY 2016-17 Materials and Supplies budget is \$13.2 million, a \$0.7 million decrease or 5.0 percent from the FY 2015-16 approved budget. The net decrease reflects a \$1.4 decrease in chemical supplies, a \$0.3 million decrease in fuel and lubricants, offset by a \$0.9 million increase in other materials and supplies and a \$0.1 million increase in building maintenance supplies.

The FY 2017-18 Materials and Supplies budget is \$13.6 million, a \$0.4 million increase or 2.8 percent from the FY 2016-17 approved budget. The decrease reflects a \$0.8 million decrease in miscellaneous materials and supplies, offset by a \$0.4 million increase in building/equipment maintenance supplies, \$0.3 million increase in fuels and lubricants, a \$0.3 million increase in chemical supplies, and a \$0.2 million increase in safety supplies.

General Reserves

The FY 2016-17 General Reserves is budgeted at \$0.2 million which is used to balance budgeted sources and uses when budgeted revenues exceed budgeted expenditures.

The FY 2017-18 General Reserves budget is estimated at \$3.1 million, a \$2.9 million increase from FY 2016-17. The increase may be used to fund unanticipated expenditures.

Equipment

The FY 2016-17 Equipment budget is \$3.7 million, an increase of \$1.2 million or 48 percent from the FY 2015-16 budget. The increase is primarily to support the City and County high frequency radio system and the SFPUC low band radio system.

There is a \$0.7 million decrease in the Equipment budget from FY 2016-17 to FY 2017-18.

Authorized and Funded Full-Time Equivalents (FTEs)

Table W2 shows total full-time equivalents (FTEs) operating budget, project funded, and temporary positions for FY 2014-15 to FY 2017-18.

Table W2. Water Enterprise Authorized and Funded Full-Time Equivalents (FTEs)

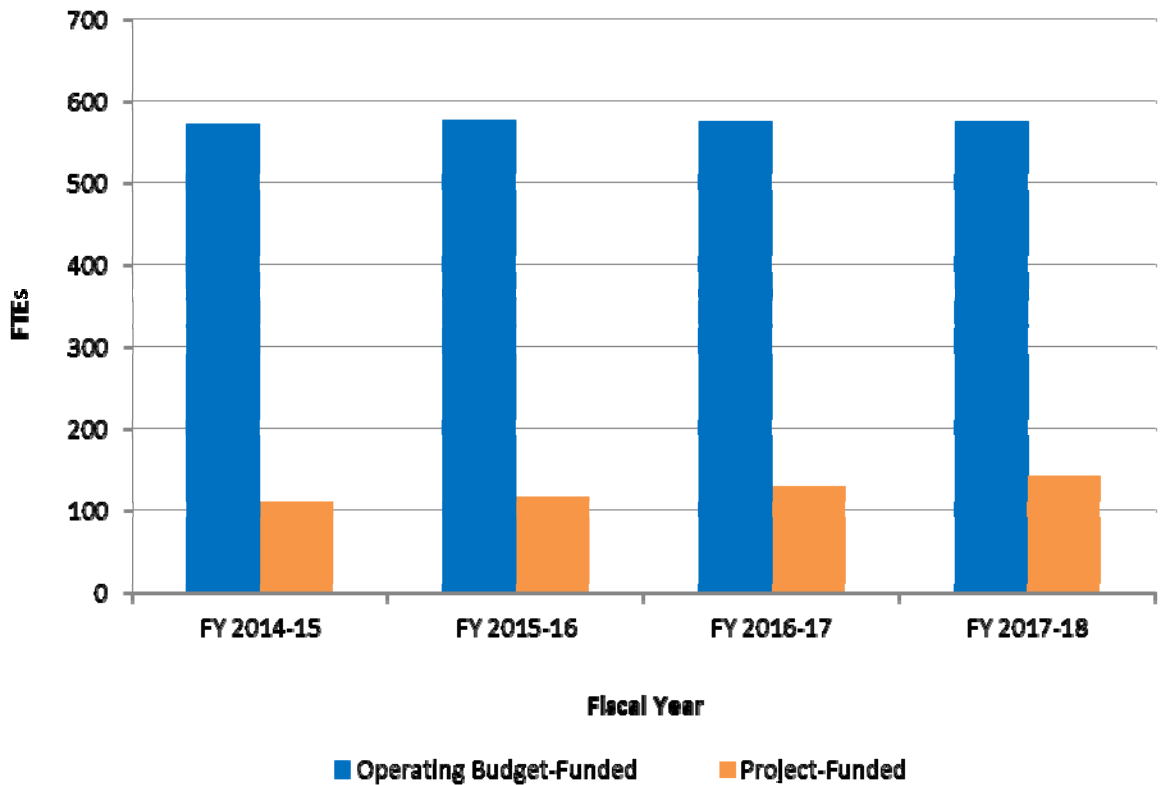
	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2016-17	FY 2017-18
Position Type	Adopted Budget	Adopted Budget	Adopted Budget	Adopted Budget	vs. FY 2015-16	vs. FY 2016-17
Permanent Positions	559.70	565.76	565.81	567.06	0.05	1.25
Temporary Positions	11.81	11.15	9.03	8.80	(2.12)	(0.23)
Subtotal Operating Budget-Funded	571.51	576.91	574.84	575.86	(2.07)	1.02
Project-Funded Positions	111.54	117.77	130.70	143.01	12.93	12.31
Total Positions	683.05	694.68	705.54	718.87	10.86	13.33

As noted in Table W2, the total full-time equivalents (FTEs) operating budget, project-funded, and temporary positions for FY 2016-17 is 705.54 FTEs, a increase of 10.86 FTEs from FY 2015-16. The net change reflects: ten new project-funded positions to support the Automated Meter Reading System, Project Development, AWSS Renewal/Replacement, Cross Connection Compliance, Transmission Pipeline Assessment and the Sunol Long-Term Improvement Project; five project-funded and one operating position reassignment from the Bureau; elimination of two long-term vacant positions; a decrease in temporary salaries; and adjustments for attrition.

The FY 2017-18 FTE count is increased by 13.33 FTEs as a result of thirteen new project-funded positions supporting the Water Main Replacement Program and two new operating positions to support the Sunol Long-Term Improvement Project. Other changes include the standardization of ten project-funded positions approved in FY 2016-17; a decrease in temporary salaries; and adjustments for attrition. Chart W3 shows the operating budget and project-funded positions four-year trend.

Chart W3 shows the operating budget and project-funded positions four-year trend.

Chart W3. Water Enterprise Operating and Project FTEs Trend



Four-Year Approved Rates and Charges

Rates and Charges

San Francisco City Charter Rate Requirements

The City Charter (Sections 8B.125) establishes a number of goals and objectives for the setting of retail water rates. A summary of the major goals and objectives include:

- Provide sufficient revenues for the operation, maintenance and repair of the Enterprise consistent with good utility practice;
- Provide sufficient revenues to improve or maintain financial condition and bond ratings at or above levels equivalent to highly-rated utilities of each Enterprise;
- Meet requirements and covenants under all bond indentures;
- Set rates based on costs of service;
- Investigate and develop capacity fees for new development;
- Investigate and develop rate-based conservation incentives; and
- Investigate and develop affordability programs for low-income customers.

Rate Objectives

A number of other rate objectives have been considered in developing rates. These objectives, together with the San Francisco Charter requirements and other legal considerations, provide a basis for evaluating rate alternatives and selecting a preferred rate structure. The objectives include:

Conservation. The rate structure should encourage customers to conserve water and to use water and sewer services in an environmentally sustainable manner.

Simplicity. The rate structure should be easy to communicate to customers, and customers should be able to use their knowledge of the rate structure to reliably predict the amount of their water and sewer bill.

Stability. The rate structure should provide a reliable revenue stream such that small changes in residential use patterns should not lead to large changes in revenues. Rate adjustments should be minimized year-to-year to avoid large changes.

Fairness. The rate structure should ensure that all customer classes pay their fair share of costs. Cost of service is a basis for evaluating fairness.

Appendix C of this budget document provides more information about the SFPUC Rates Policy and the SFPUC Ratepayer Assurance Policy.

2014 SFPUC Water and Wastewater Cost of Service Study

As required by the City Charter (Sections 8B.125), the SFPUC must complete a cost of service study by an independent consultant at least once every five years. The most recent cost of service study was completed in FY 2014. The findings and recommendations of the independent cost of service study, entitled *SFPUC Water and Wastewater Cost of Service Study*, were reviewed by the SFPUC Commission on May 13, 2014. In addition to the rate objectives listed above, the the SFPUC has a goal that the combined water and sewer bill, for average consumption, does not exceed 2.5 percent of the average household income in San Francisco. This affordability index is consistent with the Federal Environmental Protection Agency guideline for utility cost affordability. The 4-year rate package, adopted by the Commission in May 2014, included retail water and wastewater rates for FY 2014-15 through FY 2017-18 as well as water and wastewater capacity charges, connection fees, and miscellaneous charges.

Throughout the rate-setting process, SFPUC staff worked closely with the Rate Fairness Board during the development of rates to meet Charter and Commission objectives. During this rate-setting cycle, the Rate Fairness Board met ten times, between July 2013 and April 2014, to evaluate staff proposals and to assess their impacts on customers. The final rates package adopted by the SFPUC Commission in May 2014 addresses rate policy objectives established by the Commission and reflected priorities contained in the Water Enterprise FY 2016-17 and FY 2017-18 budgets, as approved by the Commission in February 2016.

SFPUC staff also participated in an extensive public outreach program, delivering over 100 presentations on the proposed rate adjustments to organizations representing a wide spectrum of community, environmental, business, labor and other interests. Outreach was also made through the SFPUC's website, which includes tools for customers to estimate rate impacts based on their current usage. In compliance with California Proposition 218 which requires proposed rates be publicized through specific mailings, the proposed rates were mailed more than 45 days prior to the April 22, 2014 hearing to approximately 215,000 ratepayers and property owners; in response, the SFPUC received approximately 125 formal protest letters. Through the rate adoption, the Commission affirmed that the SFPUC met all requirements of the City Charter and Proposition 218.

Monthly Service Charges

SFPUC rates include a monthly service charge applicable to all retail classes of service. The monthly service charge has two components, a fixed and a variable or volume-based charge. Certain costs such as meter reading and customer billing are equal for all customers and are included in the monthly service charge as fixed cost per account. Other costs such as meter maintenance and replacement are a function of meter size. While also fixed in type, these costs are included in the monthly service charge and are higher for larger metered accounts. Other costs are highly correlated to volume usage and are a part of the variable cost portion of the bill.

Adopted Retail Water Rates

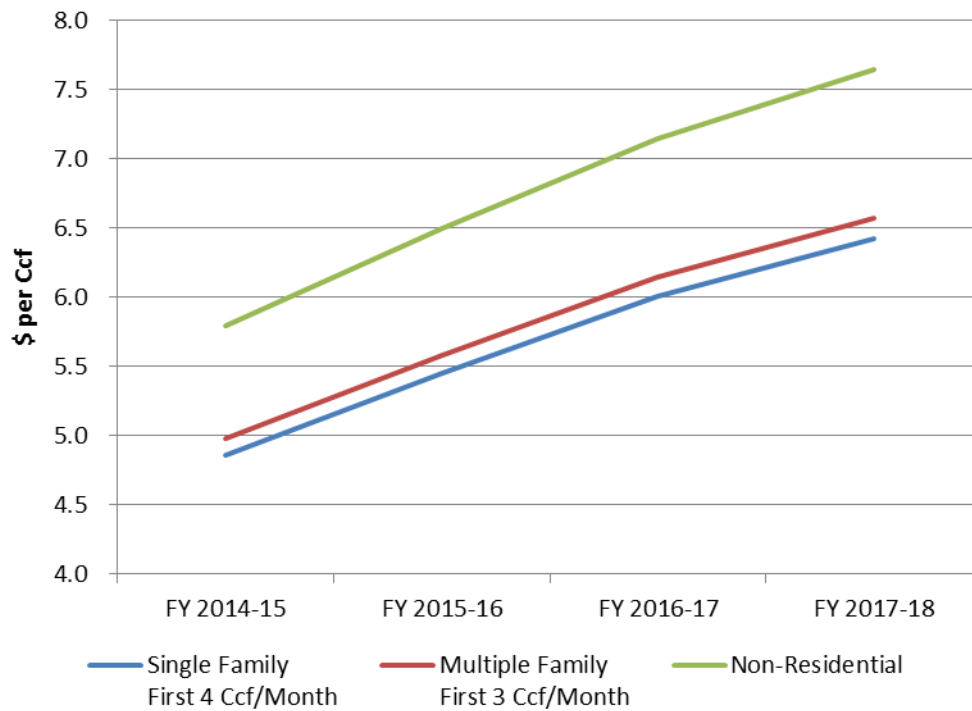
Table W3 below reflects water rates per Ccf units (where 1 Ccf or 100 cubic feet equals 748 gallons of water) approved by the Commission on May 13, 2014, effective starting in FY 2014-15 through FY 2017-18. As recommended by the 2014 Cost of Service Study, the overall rate increase is 12 percent in FY 2014-15 and FY 2015-16, 10 percent in FY 2016-17, and 7 percent in FY 2017-18. Table W3 shows Commission approved rates FY 2014-15 through FY 2017-18.

Table W3. Summary of Approved Retail Water Rates

\$					
Cost Components		FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Monthly Service Charge					
5/8 in		8.81	9.87	10.86	11.63
3/4 in		11.09	12.43	13.68	14.64
1 in		15.66	17.54	19.30	20.66
1-1/2 in		27.08	30.33	33.37	35.71
2 in		40.79	45.69	50.26	53.78
3 in		72.77	81.51	89.67	95.95
4 in		118.46	132.68	145.95	156.17
6 in		232.69	260.62	286.69	306.76
8 in		369.76	414.14	455.56	487.45
10 in		529.67	593.24	652.57	698.25
12 in		986.57	1,104.96	1,215.46	1,300.55
16 in		1,717.61	1,923.73	2,116.11	2,264.24
Single Family					
Single Family					
First 4 Ccf/Month		4.86	5.45	6.00	6.42
All Additional		6.52	7.31	8.05	8.62
Multiple Family					
Multiple Family					
First 3 Ccf/Month		4.98	5.58	6.14	6.57
All Additional		6.67	7.48	8.23	8.81
Non-Residential		5.79	6.49	7.14	7.64
Interruptible		5.25	5.88	6.47	6.93
Docks & Shipping		7.64	8.57	9.43	10.10
Builders & Contractors		6.95	7.79	8.57	9.17

Chart W4 shows the summary of approved retail water rate for FY 2014-15 through FY 2017-18.

Chart W4. Summary of Approved Retail Water Rate Trends

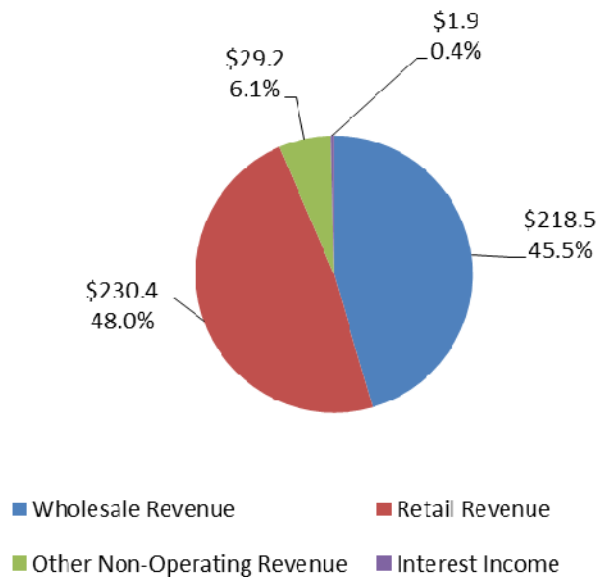


Revenue Sources

The Water Enterprise receives revenues from sales of water to retail customers in San Francisco and suburban areas and to wholesale customers under the terms of a long-term Water Supply Agreement. Interest income earned on the investment of available cash balances and other miscellaneous activities are additional sources of revenue. Chart W5 illustrates the proportion of revenues received from each source.

Chart W5. FY 2016-17 Water Enterprise Sources of Revenues: \$480.0 Million

(\$ Millions)

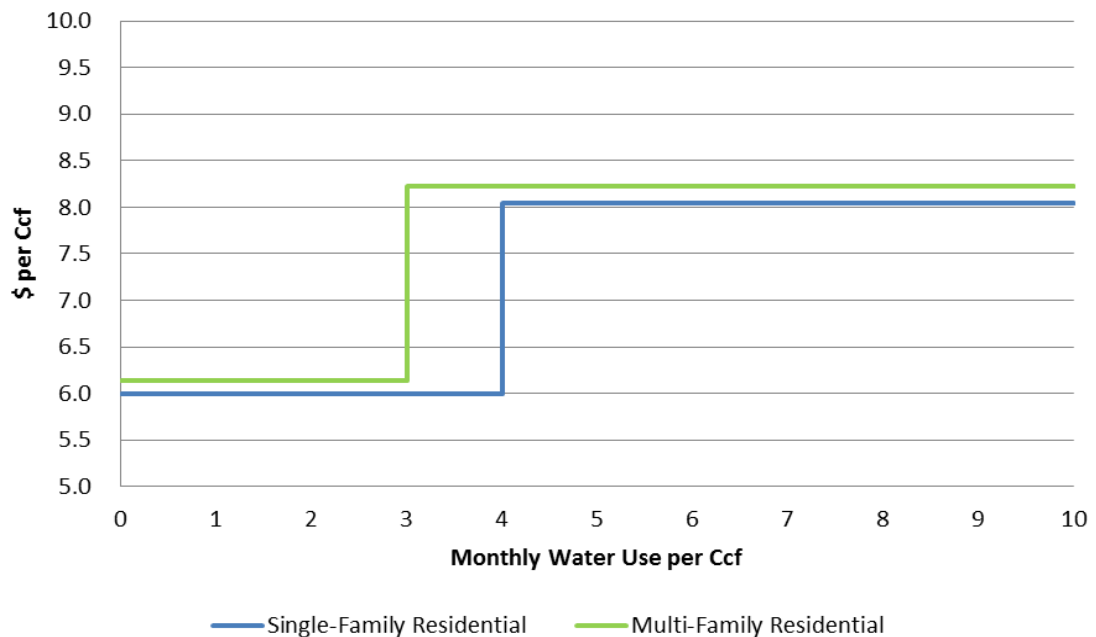


Retail Water Sales

In FY 2016-17, retail water sales are budgeted at \$230.4 million, an increase of \$19.6 million over FY 2015-16 actual. There are eight rate schedules applicable to retail water sales in San Francisco. Schedule W-1A is applicable to water sales to single-family residential customers and Schedule W-1B is applicable to multiple-family residential customers. Both rate schedules consist of a monthly service charge based on meter size and a two-tier commodity charge (see Chart W6). For single-family residential customers, the first tier is applicable to the first 4 Ccf of use per month. The second tier is applicable to all additional use. For multiple-family residential customers, the first tier is applicable to the first 3 Ccf of use per month. The second tier is applicable to all additional use. Schedule W-1C is applicable to commercial, industrial, and other general uses. It includes a monthly service charge based on meter size and an uniform commodity charge. Schedule W-2 is applicable to private fire protection. Schedule W-3A is applicable to public uses and the charges for this rate are identical to Schedule W-1C. Schedule W-3B is an interruptible rate applicable to parks and other irrigation uses that can be interrupted during water shortages and other emergencies. Schedule W-4 is applicable to shipping service where water is not provided through a regular service connection. Schedule W-5 is applicable to builders and contractors who receive service from a fire hydrant or other unmetered sources. There are seven additional rates applicable to retail water sales outside San Francisco. One of these (W-24 Untreated Water) is available to customers who provide all facilities necessary to take non-potable water directly from reservoirs. Chart W6 shows the Two-Tier Residential Rate Structure.

Rates within San Francisco	
W-1A Single-Family Residential	
W-1B Multiple-Family Residential	
W-1C Commerical/Industrial	
W-2 Private Fire Service	
W-3A Municipal Use	
W-3B Interruptible Use	
W-4 Docks and Shipping Supply	
W-5 Builders and Contractors	
Rates outside San Francisco	
W-21 Single-Family Residential	
W-22 Private Fire Service	
W-24 Untreated Water	
W-25 Wholesale Use / Contract	
W-31 Multiple-Family Residential, Commercial, Industrial, and General Use	
W-33 Public Use	
W-34 Interruptible Use	

Chart W6. FY 2016-17 Water Enterprise Two-Tier Residential Rate Structure



The two-tiered residential rate structure is intended to encourage water conservation because the water becomes more expensive as volume use increases. This rate approach is consistent with California Urban Water Conservation Council's Best Practices Memorandum of Understanding and the California Water Conservation Act of 2009.

City Retail Rates

Most customers are billed under schedules W-1A Single-Family, W-1B Multi-Family or W-1C Commercial/Industrial. The schedules include monthly service charges based on meter size and commodity charges applicable to all water use. For FY 2016-17, the monthly service charges have a range based on meter sizes from a five-eighth inch diameter meter to a 16-inch diameter meter (See table W3). As noted in Table W3 and Chart W6, single-family residential customers pay a lower rate for the first 4 Ccf monthly and higher rate for all additional water use. As a result of the independent 2014 SFPUC Water and Wastewater Cost of Service Study, the Commission adopted a new single-family residential rate structure, changing the first tier from 3 Ccf monthly to 4 Ccf monthly. Approximately 57% of single-family residential use is billed at the tier-1 rate with the remaining use billed at the tier-2 rate.

Multi-family residential customers pay a lower rate for the first 3 Ccf monthly and a higher rate for all additional water use. The block feature for multi-family customers calculates the usage allowance in the first tier by the number of dwelling units. For example, a multi-family account with 5 dwelling units would be billed at tier-1 rate for first 15 Ccf of monthly use (3 Ccf/Dwelling Unit x 5 Dwelling Units). Approximately 65 percent of multi-family residential use is billed at the tier-1 rate and remaining use at the tier-2 rate.

Although single-family and multi-family residential customers have similar usage characteristics, the differences in the use falling in each tier requires that each class have its own rate in order to recover each class's proportionate share of costs. This is consistent with Proposition 218 passed by voters in 1996 where property-related fees and charges may not exceed the cost required to provide the property-related service. The higher charge for tier-2 water reflects the higher cost associated with the SFPUC's seasonal peak wherein summer use is roughly 10 percent higher than winter use. In addition to tying back to cost of service, tiered rates provide a conservation incentive and promote affordability by charging a lower rate for the first tier of use.

Non-residential customers pay a uniform volumetric rate as specified in Table W3. Because of the different usage characteristics exhibited by non-residential customers, particularly with respect to the quantity of water used..

In addition to the general use rates, there are rates applicable to private fire service (Schedule W-2), to public uses (Schedules W-3A Uninterruptible and W-3B Interruptible), to docks and shipping (Schedule W-4), and to builders and contractors (Schedule W-5). In FY 2016-17, each of these schedules has monthly service charges and volumetric rates that differ from those shown on Schedule W-1C, with exception of private fire service which continues to charge Schedule W-1C for applicable volumetric use. As a result of the 2014 SFPUC Utility Rate Study, the Commission adopted separate volumetric rates for Schedules W-3A, W-3B, W-4, and W-5.

Suburban Retail Rates

There are four rate schedules applicable to suburban retail water service. Schedule W-21 is a general use rate applicable to residential use. Schedule W-31 is applicable to commercial, industrial and other general uses. Schedule W-22 is applicable to private fire protection. Schedule W-23 is applicable to public uses except resale. Schedule W-24 is applicable to non-potable water service. Suburban areas covered by retail water services include Alameda, Santa Clara and San Mateo counties.

Wholesale Water Sales

The Water Enterprise also provides wholesale water service to 27 wholesale customers, which consist of 24 municipalities and water districts, one private utility, one non-profit university and one mutual water association. Wholesale customers are located in Alameda, Santa Clara and San Mateo counties. Total budgeted wholesale revenues in FY 2016-17 are \$218.4 million, \$15.1 million above FY 2015-16 actuals.

The SFPUC provides water service to wholesale customers as described by the 25-year Water Supply Agreement (WSA) effective July 1, 2009. Wholesale customers pay a proportionate share of regional system operating expenses, debt service on bonds sold to finance regional improvements, and other regional system improvements funded from current revenues.

The existing wholesale rate structure consists of a monthly service charge based on meter size and type and a uniform volume charge, see Table W4. The volume charge portion of the wholesale rate represents approximately 98% of total wholesale revenues received by the Water Enterprise. Consequently, estimating water sales is a key component in the rate-setting process. Projected sales based on historical averages and demand studies have been used for calculating revenues under existing rates, allocating costs, and determining the required rate adjustment percentage. For FY 2016-17, there was no change in the monthly service charges applicable to wholesale water sales, however, the volume charge increased 9.3% from \$3.75/Ccf to \$4.10/Ccf. The WSA requires the rate be calculated and set annually and include a "true-up" between prior-year revenues and expenses. Table W4 shows the approved wholesale water rates.

Table W4. FY 2016-17 Approved Wholesale Water Rates

\$	Approved Rates				
	Disc/Compound				
Monthly Service Charge	Meters	Crest Meters	Magnetic Meters	Turbine Meters	
5/8 in	\$ 11				
3/4 in	18				
1 in	30				
1-1/2 in	43				
2 in	79				
3 in	158				
4 in	318	\$ 353		\$ 577	
6 in	476	685		1,256	
8 in	635	1,335	\$ 2,265	1,875	
10 in	793	1,732		3,391	
12 in	953	1,840	5,159		
16 in	1,270	5,628		7,215	
18 in		6,133			
20 in		6,349			
Volume Charge Ccf	4.10				

Interest Income

The Water Enterprise earns interest income from the investment of available funds. Interest income on unrestricted cash assets may be used to meet any purpose of the Enterprise, whereas earnings associated with restricted assets come with spending restrictions. Interest income earned from the investment of monies in restricted funds such as bond reserves may only be used for the purpose of that fund and are not available to meet day-to-day operating expenses. In the FY 2016-17 budget, it is anticipated that investment income earned from unrestricted funds will be \$1.9 million. This projection is based on an estimated yield on investments made by the City Treasurer and projected cash balances.

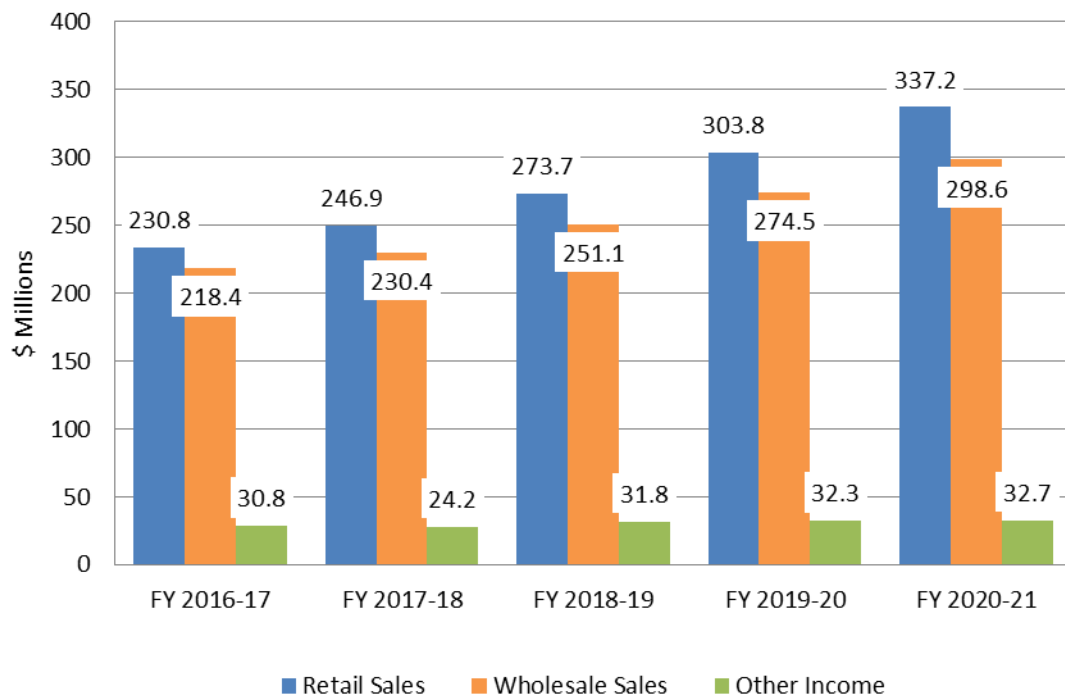
Other Income

The Water Enterprise derives additional income from rents and permit fees for secondary uses of its watershed lands and pipeline right-of-way. The Water Enterprise has entered into long-term leases that allow portions of its Peninsula watersheds to be used for golf courses and for land adjacent to our Sunol Headquarters to be mined for gravel. Typical uses of pipeline rights-of-way are parking and landscaping for adjoining properties. The Water Enterprise receives other income from custom work, reimbursements for service installations and meter relocations done at the customer's request, miscellaneous service charges and other fees. The income from these uses is projected to be \$29.8 million in FY 2016-17 or 6.3 percent of annual revenues, and for FY 2017-18, the amount projected is \$24.2 million or 4.8 percent of annual revenues.

Total Sources

Estimates of revenues under existing rates are based on an analysis of the number of customers and the corresponding water volumes used by those customers. Chart W7 shows projected revenues with the approved rate increases through FY 2017-18. Over the five years from FY 2016-17 to FY 2020-21, income from retail sales and other income increases by \$107.8 million, while revenue from wholesale water increases by \$80.2 million. The total increase in income over the five-year period is estimated to be \$188.0 million.

Chart W7. Water Enterprise Revenues by Source, FY 2016-17 through FY 2020-21



Miscellaneous Fees and Charges

In addition to rates for water service, the Water Enterprise also imposes a variety of fees and charges related to the provision of water service (see Table W5). These fees and charges include new account fees, late payment penalties, service and meter relocation charges and so forth. The cost for each service has been reviewed and adjustments to miscellaneous fees and charges have been made in FY 2016-17 in accordance with the rate study. Table W5 provides a summary of miscellaneous service fees and charges.

Table W5. FY 2016-17 Miscellaneous Service Fees

Service Fee	Current Charge as of 07/01/2016
Late Payment Penalty	0.5% per 30 days (or fraction thereof) on the amount owed
Return Check Charge	\$102
New Account Charge	\$61
48 Hour Notice	\$53
Service Shut-off	\$53
Service Turn-on	\$53
Lock Charge	\$14
Meter Test	\$106 for first test; \$345 for each subsequent test within 24-months
Lien Fee	Set by Administrative Code
Builders Contractors Connection Fee	\$120
Docks & Shipping Connection Fee	\$245
Meter Deposit	\$847: 1" meter \$2,860: 3" meter
No-Reporting Penalty Fee	Charge for 25 Ccf water per month at the current W-5 rate
Manual Meter-Reading Fee	\$5.00 per month

The Water Enterprise charges for service and meter relocations and for changes in meter size made at the customer's request. Services include meter testing, shut-offs, turn-ons and manual meter readings.

Capacity Charges

The SFPUC imposes a capacity charge on any retail customer requesting a new connection to the water distribution system, or requiring additional capacity as a result of any addition, improvement, modification or change in use of an existing connection to the water distribution system. The capacity charge, as of July 1, 2016, is \$1,302 per equivalent 5/8 inch meter. The capacity charge is adjusted on July 1 of each year by the annual change in the 20 City Average Construction Cost Index published by ENR Magazine. Capacity charge revenues are dependent upon economic growth and development and are used to support renewal and replacement capital projects as funds are available, consequently capacity charges are not a source of funds in the Water Enterprise operating budget.

Expenditures

The Water Enterprise's annual operating budget includes operation and maintenance costs, debt service on revenue bonds used to finance capital improvements, and repair and replacement costs funded from current revenues. It is critical to understand the current and projected budgets in order to ensure the cost of service will be covered by future revenues. Chart W8 shows budgeted and projected expenses for FY 2016-17 through FY 2020-21.

Operation and Maintenance Expenses

Operation and maintenance expenses include personnel costs, material and supplies, power and energy, and services of the other City Departments including SFPUC Bureaus. The cost of operating the water system in FY 2016-17 is budgeted at \$212.3 million. The operation and maintenance expense forecast assumes that WSIP projects start-up and integration into the water system will not materially increase costs. The forecast assumes there will be no changes in regulations or operating procedures that could impact operating expenses.

Debt Service & Lease Payments

Debt service includes principal and interest payments on senior lien revenue bonds used to finance water system improvements. As of June 30, 2016, the Water Enterprise had \$4.1 billion of principal outstanding, as listed in Table W6.

In addition to debt service payments on existing long-term debt, the Water Enterprise utilizes its \$500 million commercial paper program (CP) to meet interim expenditure and encumbrance needs relating to various capital projects. The Water Enterprise has \$236 million of taxable Commercial Paper Notes outstanding as of June 30, 2016, secured and payable from Net Revenues on a subordinate basis to the payment of debt service on revenue bonds. Table W6 shows Water Enterprise's Outstanding Parity Revenue Bonds as of June 30, 2016.

Table W6. Outstanding Water Enterprise Parity Revenue Bonds

\$ Thousands Series	Original Par	Outstanding Par: 06-30-16
1991 A (CAB)	70,145	7,100
2006 B (Refunding)	110,065	78,635
2006 C (Refunding)	48,730	24,630
2009 A	412,000	324,780
2009 B	412,000	364,655
2010 A	56,945	41,965
2010 B	417,720	417,720
2010 D (New Money)	71,360	54,740
2010 D (Refunding)	31,365	31,365
2010 E (New Money)	344,200	344,200
2010 F	180,960	177,665
2010 G	351,470	351,470
2011A	602,715	602,715
2011B	28,975	28,525
2011C	33,595	30,140
2011D (Refunding)	55,465	47,165
2012A	591,610	591,610
2012B	16,520	16,520
2012C (Refunding)	93,750	93,750
2012D (Refunding)	24,040	24,040
2015A (Refunding)	429,600	429,600
Total Outstanding		4,082,990

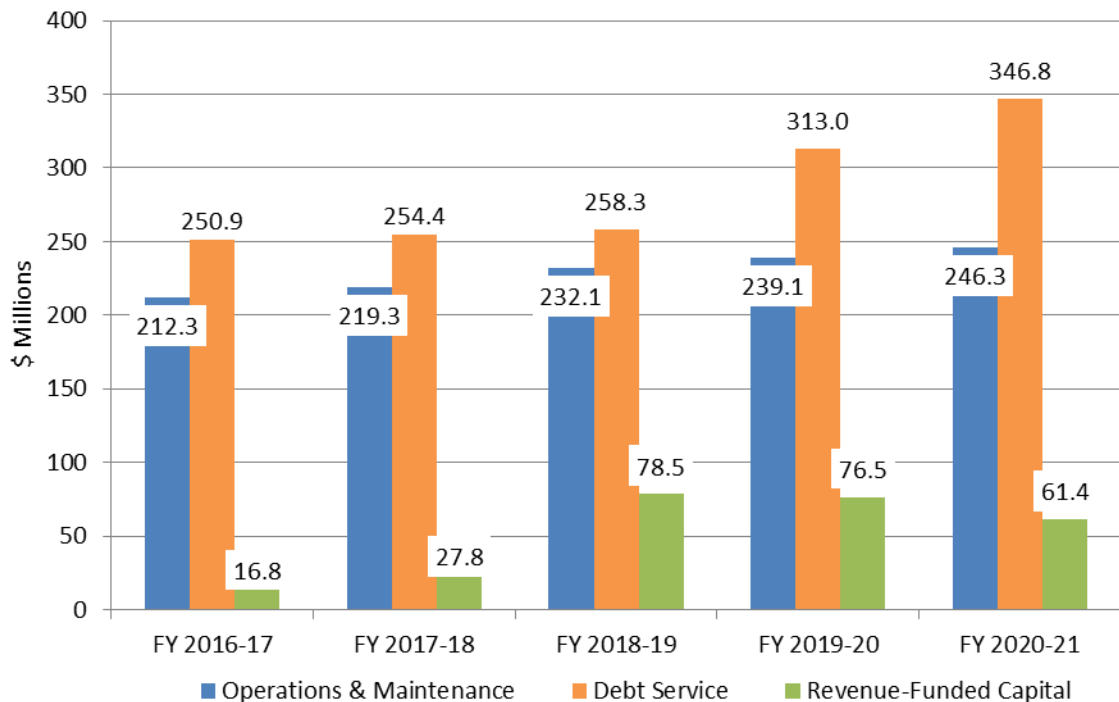
Future debt funding needs to support the remainder of WSIP as well as other projects in the Water Capital Improvement Plan total approximately \$1.83 billion for FY 2016-17 through FY 2020-21. The repayment of principal and interest on these future debt issues has been incorporated into the Commission's approved rates through FY 2017-18 as well as projected rates through FY 2025-26.

Revenue-Funded Capital

Revenue-funded capital expenditures may include minor construction projects, major maintenance and rehabilitation projects, planning studies, and preliminary engineering analysis for major capital improvements. The projected funding averages \$75.0 million per year over the next ten years; see Table W11.

Summary of Projected Expenses

Chart W8. Water Enterprise Budgeted and Projected Operating Expenses



Over the five years FY 2016-17 through FY 2020-21, debt service and operations & maintenance costs are the major expenses. Operations & maintenance will increase 2.4 percent from 2016-17 to 2017-8 and another 2.4 percent between 2017-18 and 2018-19. Thereafter there are much larger increases, leading to a projected 16.0 percent increase overall from FY 2016-17 to FY 2020-21. Debt Service is projected to increase 38.2 percent for the same period. Overall, total expenses are projected to increase 36.4 percent from increased operations as a result of integrating new or upgraded facilities into existing ones.

Revenue Requirement

The annual expenditures for operation and maintenance, debt service and revenue-funded capital make up the Water Enterprise's revenue requirement. However, to determine the revenue requirement for rate purposes, the income derived from interest, rents and other miscellaneous sources are deducted from the total revenue requirement. Operating surpluses from prior years can be included in the calculation of net revenue requirement. The net revenue requirement represents the amount to be recovered through water sales revenues.

To develop the projected retail cost responsibility, the projected wholesale revenue requirement (WRR) and other operating and non-operating revenues are deducted from total expenditures. The WRR represents the wholesale water customers' proportionate share of operation and maintenance expense, debt service, and annual appropriations for revenue-funded capital improvements. The wholesale revenue requirement has been calculated based on projected expenditures and in accordance with the adopted Water Supply Agreement. Finally, the application of available fund balance, if any, is deducted from the retail revenue requirement. The available fund balance, if adequate, can be used to offset any funding shortfall assigned to retail customers in lieu of raising rates.

Water Enterprise Capital Improvement Program (CIP)

The Water Enterprise of the San Francisco Public Utilities Commission is responsible for the distribution of high quality water to San Francisco and Bay Area Customers. The Enterprise operates and maintains facilities listed in Table W7.

Table W7. Facilities Maintained by the Water Enterprise

	Regional Water System	In-City Distribution System
Pipelines	389 miles	1,235 miles
Tunnels	74 miles	None
Pump Stations	5	24
Reservoirs	11	11
Treatment Plants	3	None
Water Tanks	None	8

The Water Distribution System consists of three Regional Water Systems: the Hetch Hetchy System; the Regional Water System (East Bay), Regional Water System (Peninsula/West Bay) and the Local Water distribution which includes an In-City Distribution System.

- **Hetch Hetchy System:** Water is diverted from Hetch Hetchy Reservoir into a series of tunnels and aqueducts from the Sierra Nevada to the San Joaquin Pipelines that cross the San Joaquin Valley to the Coast Range Tunnel which connects to the Alameda system at the Alameda East Portal.
- **Regional Water System (East Bay):** This includes two reservoirs, San Antonio Reservoir and Calaveras Reservoir, which collect water from the upper Alameda and San Antonio Creek watersheds in Alameda County plus conveyance facilities connecting the Hetch Hetchy System and Alameda water sources to the Peninsula System. These conveyance facilities include pipelines known as the Alameda Siphons that connect the Coast Range Tunnel to the Irvington Tunnel.
- **Regional Water System (Peninsula/West Bay):** This includes conveyance facilities connecting the Bay Division Pipelines to the In-City Distribution System and to other SFPUC customers on the Peninsula. Three reservoirs, Crystal Springs, San Andreas, and Pilarcitos collect runoff from the San Mateo Creek and Pilarcitos watersheds. Water from these reservoirs serves all wholesale customers, including the Coast side County Water District.
- **In-City Distribution System:** The City's retail water supply is delivered to the City in several major pipelines. Two pipelines provide water to the eastside of the In-City Distribution System and three pipelines serve the west side of the In-City Distribution System. The "In-City Distribution System" delivers water to homes and businesses in the City. Several major pipelines convey water from the Peninsula System to the City.

Water Enterprise Ten-Year Capital Plan

The adopted capital project costs for the Water Enterprise total approximately \$1.4 billion over the next ten years. These investments, divided between regional and local needs, are shown on Table W8. Identified capital needs will be financed with a combination of water revenue bonds and Water Enterprise revenues along with general obligation bonds for the Auxiliary Water System. Project timelines may be adjusted to match available funding. The table also shows the estimated number of jobs per year that this ten-year program will create.

Table W8. Water Enterprise Ten-Year Capital Plan

\$ Thousands							
Program/Project	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-26	Plan Total
Spending Plan							
Regional Costs							
Water Treatment Program	6,122	3,891	2,992	1,901	1,908	9,831	26,645
Water Transmission Program	18,131	21,635	48,785	58,647	23,147	71,054	241,399
Water Supply & Storage Program	7,563	6,908	39,749	52,479	24,130	89,905	220,734
Watersheds & Land Management	13,993	1,990	1,990	1,990	1,990	10,001	31,954
Communication & Monitoring Program	939	994	950	500	500	2,545	6,428
Buildings and Grounds Programs	8,522	6,221	1,786	5,795	804	3,378	26,506
WSIP Augmentation - Regional	44,748	27,000	20,000	-	-	-	91,748
Regional Total	100,018	68,639	116,252	121,312	52,479	186,714	645,414
Local Costs							
Water Conveyance /Distribution System	55,500	57,100	56,100	56,100	56,100	280,500	561,400
Buildings & Grounds Improvements	750	1,000	10,525	5,000	1,000	2,500	20,775
Systems Monitoring & Control	100	500	2,000	2,000	500	2,500	7,600
Water Storage Facilities/Pump Stations	5,500	2,000	14,000	2,000	1,000	5,000	29,500
San Francisco Groundwater Supply	4,995	-	-	-	-	-	4,995
San Francisco Westside Recycled Water Project	21,306	6,500	6,500	272	-	-	34,578
Local Total	88,151	67,100	89,125	65,372	58,600	290,500	658,848
Auxiliary Water System	-	-	-	-	-	110,000	110,000
Total Regional & Local	188,169	135,739	205,377	186,684	111,079	587,214	1,414,262
Revenues							
Water Revenue	18,341	27,830	51,804	51,804	38,971	324,224	512,974
Water Bonds	165,528	106,909	152,573	133,880	71,108	147,990	777,988
General Obligation Bonds	-	-	-	-	-	110,000	110,000
Capacity Fee	4,300	1,000	1,000	1,000	1,000	5,000	13,300
Total	188,169	135,739	205,377	186,684	111,079	587,214	1,414,262
Total San Francisco Jobs/Year	1,678	1,211	1,832	1,665	991	5,238	12,615

The SFPUC is required to develop a Ten-Year Capital Plan. Reliability of water supply and delivery of high quality water are the most critical objectives of the Water Enterprise. The purpose of the capital investment is to extend the useful life of the infrastructure and provide continued reliable operation of the system components. Therefore, understanding the long-term capital needs of the system and determining how to finance these capital needs are essential to the mission of the SFPUC.

The Ten-Year Capital Plan is not a budget; it is the plan that guides the annual capital budget. The Ten-Year Capital Plan is updated each year by the SFPUC and approved by the Commission early in the budget development process. The plan helps inform and guide managers, policy makers, elected officials and the public by providing the proposed long-term capital program and guides the Ten-Year Financial Plan and the rate analysis approved every five years. As the budget process progresses through the spring and into final adoption in the summer, the annual CIPs can be revised and final projects, costs and totals for the two annual CIPs can change. Consequently, even though the annual CIPs are based on the Ten-Year Capital Plan, they do not always match by project or dollar amount.

Table W8 and Chart W9 show that regional spending will decline over the next several years from \$100.0 million in FY 2016-17 to an average of \$37.3 million per fiscal year in the final five years of the Ten-Year Plan. Local Water improvement costs over the same five-year period, FY 2021-26, average \$58.1 million per year. Chart W9 shows Water's capital budget trend over ten years.

Chart W9. Water Enterprise Ten-Year Capital Plan Trend



The SFPUC's Water Enterprise uses the annual updates to the Ten-Year Capital Plan to ensure projects and investments are in place to ensure adopted levels of service are maintained. To update the Ten-Year Capital Plan, the Water Enterprise relies on the latest information including condition assessments (performance and remaining useful life of existing assets), master plan updates, review of levels of service objectives, and financial data (revenue requirement, project expenditures and cash flow).

Regional Water

As shown in Table W8, the Regional Water Ten-Year Capital Plan is \$645.4 million and funds the following projects:

Regional Water Treatment Program, \$26.6 million

This program includes major upgrades to the Sunol Valley and Harry Tracy Water Treatment Plants. Projects are identified through condition assessments, operation staff review, level of service and feasibility studies and alternative analysis at each plant. Projects include upgrades of chemical dosage, flow monitoring, valve and pump replacement and chemical handling upgrades.

Regional Water Transmission Program, \$241.4 million

This program will provide upgrades to the Transmission System including pipeline inspection and repairs, valve replacements, metering upgrades, corrosion protection to extend the useful life of the pipelines, pump station upgrades and vault upgrades.

As part of the pipeline improvement program, funding is included to monitor, strengthen and replace older pipeline to achieve higher level performance and reliability Included is funding to replace or slip line up to 10 miles of pipeline in densely populated areas.

Regional Water Supply & Storage Program, \$220.7 million

This program includes upgrades to structures to meet State Division of Safety of Dams requirements including geotechnical work and installation of monitoring systems, and regional desalination project. The automated data acquisition system, part of the monitoring system, will provide timely, accurate data related to inspections at various dams.

The program also includes funding for the Potable Reuse project to identify opportunities for direct and indirect potable water reuse and the Daly City Recycled Water Expansion Project providing 3.4 MGD recycled water to customers of the Regional Water System.

Regional Watersheds & Land Management, \$31.9 million

This program supports projects that improve and/or protect the water quality and/or ecological resources impacted by the siting and operation of the SFPUC facilities. Projects include the repair, replacement, maintenance, or construction of roads, fences, or trails, the acquisition of easements and/or fee title of properties, (within the Pilarcitos Creek, San Mateo Creek, or Alameda Creek watersheds), and other ecosystem restoration or public access, recreation, and education projects.

Regional Communications & Monitoring Program, \$6.4 million

This project will provide much needed redundant emergency communication capability and increased bandwidth for security data transfer. Specifically, the development of a microwave backbone to link the entire SFPUC Regional water system from the Hetch Hetchy Dam site in Yosemite to the rest of the SFPUC sites (San Francisco, San Mateo, Santa Clara and Alameda counties).

Regional Buildings & Grounds Programs, \$26.5 million

The program provides funding for major improvements to the Sunol and Millbrae Yards.

Sunol Yard improvements include replacement structures with LEED Facilities for maintenance shops and equipment storage, new fueling center and administration building, re-surfacing of yard, and demolition of six dilapidated structures.

Millbrae Yard improvements include a new administration building to consolidate the Water and Wastewater laboratory, maintenance shop, and equipment storage, demolition of large unused abandoned building, new parking lot, and new vehicle wash site. The upgrades address occupational safety, reliability and functional regulatory compliance.

Regional WSIP Augmentation, \$91.7 million

Funding additional excavation and slope mitigation measures at Calaveras and the Alameda Creek Diversion Dam, additional site improvements for the Irvington Tunnel Project, seismic upgrades to the Bay Division Pipeline 3 & 4, the Bioregional Habitat Restoration Program, Alameda Creek Project, and the Regional Groundwater Storage and Recovery Project

Local Water

As shown in Table W8, the Local Water Ten-Year Capital Plan is \$658.8 million and funds the following projects:

Local Water Conveyance / Distribution System, \$561.4 million

Includes funding to install, replace and renew distribution system pipelines and service connections for the 1,230 miles of drinking water mains in San Francisco and meet customer level of service goals for uninterrupted service. The increased investment is needed to improve annual replacement rate to 15 miles per year to minimize main breaks. Improvements include replacement, rehabilitation, re-lining, and cathodic protection of all pipe categories to extend or renew pipeline useful life.

Local Buildings & Grounds Improvements, \$20.8 million

This provides funding for capital improvements at CDD facilities and structures. Projects include a new fueling station, yard improvements to address health and safety issues and security, a comprehensive arc flash and electrical hazard study and construction of a seismically reliable building for CDD's communications and control systems.

System Monitoring and Control, \$7.6 million

This project provides improvements to facilities that control and monitor San Francisco's water distribution system. Facilities include enhancements to the System Control and Data Acquisition (SCADA) for remote monitoring of pressure, flow, and valve position status at key locations throughout the distribution system. This program will also fund installation of fiber optic communications to critical facilities and security installations not completed under WSIP.

Water Storage Facilities/Pump Stations, \$29.5 million

Provides long-term funding for renewal and rehabilitation of water storage reservoirs and tanks, major water pump stations and hydronuematic tanks that boost pressure within the San Francisco Distribution System.

San Francisco Groundwater Supply, \$5.0 million

Project includes all facilities required to produce and deliver an average of 4 MGD of groundwater from the Westside Basin in San Francisco to the Sunset and Sutro reservoirs.

San Francisco Westside Recycled Water Project, \$34.6 million

This project includes all facilities to generate and deliver 2 MGD of recycled water for irrigation use in the western end of San Francisco. The project includes a new recycled water treatment facility consisting of membrane filtration, reverse osmosis, and ultraviolet light disinfection; a 1.1 million gallon storage reservoir; distribution pumping facilities; and 5 to 6 miles of new pipelines.

Auxiliary Water Supply System (AWSS)

The AWSS is primarily a water supply to fight fires. The water that is stored and supplied is not intended for consumptive use and so a user fee is not possible. The funding for this system is from the CCSF General Fund. The 2010 Earthquake Safety and Emergency Response (ESER) bond provided funding for repairs to the AWSS to increase the earthquake safety response capacity of the Fire Department following a major earthquake and during multiple-alarm fires from other causes.

In June 2014, San Francisco voters approved Proposition A – the Earthquake Safety and Emergency Response Bond 2014 (ESER 2014) for \$400 million. ESER 2014 will pay for repairs that will allow San Francisco to quickly respond to a major earthquake or disaster and included \$51.4 million for the AWSS.

The AWSS capital plan includes \$110.0 million for the retrofit, improvements or replacement of existing firefighting pipes and tunnels, construct new or retrofit existing cisterns, and improve and seismically upgrade two pump stations, two storage tanks, and the primary reservoir. The project will be funded through the issuance of City of San Francisco General Obligation Bonds.

FY 2016-17 and 2017-18 Capital Project Budget

The Regional Program continues to be dominated by the WSIP which is 42 percent of the FY 2016-17 and FY 2017-18 Regional CIP, along with an increase in funding for the Water Transmission Program, 22 percent. The Local Water Conveyance and Distribution System (for the City of San Francisco) is 72 percent of the Local CIP. Water revenue and capacity fees make up less than 20 percent of total funding, with the remaining revenue being debt-funded. Nevertheless, the water revenue funding is increasing each budget year as the SFPUC funds a larger portion of the Water Enterprise annual Renewal and Replacement program with revenue funds. Table W9 shows the Water Enterprise's CIP for FY 2015-16, FY 2016-17 and FY 2017-18 by major programs.

Table W9. Water Enterprise CIP by Major Program

\$ Millions			
Program/Project	FY 2015-16 Adopted Budget	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget
Regional Costs			
Water Treatment Program	3.6	6.1	3.9
Water Transmission Program	11.6	18.1	21.6
Water Supply & Storage Program	1.2	7.6	6.9
Watersheds & Land Management	2.8	14.0	2.0
Communication & Monitoring Program	2.0	0.9	1.0
Buildings and Grounds Programs	27.4	8.5	6.2
WSIP Augmentation - Regional *	41.1	44.7	27.0
Regional Total	89.7	100.0	68.6
Local Costs			
Local Water Conveyance /Distribution System	53.7	55.5	57.1
Buildings & Grounds Improvements	1.5	0.8	1.0
Pacific Rod & Gun Club Remediation Project *	0.2	-	-
Systems Monitoring & Control	5.9	0.1	0.5
Water Storage Facilities/Pump Stations	3.4	5.5	2.0
Other Recycled Water Projects - Local	3.9	-	-
San Francisco Groundwater Supply *	-	5.0	0.0
San Francisco Westside Recycled Water Project *	-	21.3	6.5
Local Total	68.7	88.2	67.1
Financing Cost	24.2	18.5	13.6
Total Regional & Local	182.5	206.7	149.3
Revenues			
Water Revenue (1)	37.5	18.3	27.8
Water Bonds	142.1	184.1	120.5
Capacity Fee	3.0	4.3	1.0
Total Sources	182.5	206.7	149.3

(1) FY 2016-17 revenue amount includes \$16.8M funded through the revenue reserve and \$1.5M from project closeouts.

* Capital Enhancement – Non-recurring

The capital budget includes continuing Renewal and Replacement Projects for the Regional and Local Water Enterprise along with significant non reoccurring capital expenditures for the WSIP Augmentation Project and the San Francisco Westside Recycle Water Project. The CIP is funded by a combination of Water Enterprise revenues, Water revenue bonds and capacity fees. The capital budget for FY 2016-17 and FY 2017-18 totals \$356 million.

FY 2016-17

As shown in Table W9, the FY 2016-17 Water Enterprise CIP of \$206.7 million, which includes financing costs, increased \$24.2 million from the FY 2015-16 approved CIP of \$182.5 million.

In FY 2017-18 the annual CIP will be \$149.3 million, a decrease of \$57.4 million from FY 2016-17.

Major projects in the Water Enterprise FY 2016-17 CIP include:

Regional Water Costs

Renewal and Replacement Projects (Recurring)

- \$6.1 million for Water Treatment Program including and major improvements to the Sunol Valley Water Treatment Plant (SVWTP) and Harry Tracy Water Treatment Plant (HTWTP) to achieve a higher level of performance and reliability.
- \$18.1 million for the Water Transmission Program including pipeline inspections, seismic monitoring, vault upgrades, metering upgrades, pump station upgrades and corrosion control protection projects. Increased funding for the Pipeline improvement program to replace 10 miles of pipe in densely populated areas.
- \$7.6 million for Water Supply & Storage Program supporting additional geotechnical monitoring and analysis for structural upgrades at various dam locations and funding for the Daly City Recycled Water Expansion Project to identify opportunities for direct and indirect potable water use.
- \$14.0 million for Watersheds & Land Management which supports capital projects that improve and/or protect the water quality and/or ecological resources impacted by the operations of the SFPUC water system. Projects include the repair, replacement and maintenance of roads, fences, or trails and the acquisition of easements or properties to meet these purposes.
- \$0.9 million for Communication & Monitoring Program including developing a microwave radio communication system to link the SFPUC Regional water system from the Hetch Hetchy Dam in Yosemite to other SPUC sites (San Francisco, San Mateo, Santa Clara and Alameda counties) and ongoing upgrades to the water supply security infrastructure.
- \$8.5 million for Buildings & Grounds Programs for the Sunol and Millbrae Yards including replacement structures for maintenance shops and equipment storage, new fueling center and administration building, re-surfacing of yard, and demolition of dilapidated structures. The work addresses occupational safety, reliability and functional regulatory compliance.

Capital Enhancements – (Non-recurring)

- \$44.7 million for Water System Improvement Program (WSIP) Augmentation to fund additional excavation and slope mitigation measures at Calaveras Dam and the Alameda Creek Diversion Dam, additional site improvements for the Irvington Tunnel Project, seismic upgrades to the Bay Division Pipeline 3 & 4, the Bioregional Habitat Restoration Program, Alameda Creek Project, and the Regional Groundwater Storage and Recovery Project.

Local Water Costs

Renewal and Replacement Projects – (Recurring)

- \$55.5 million for the Local Water Conveyance and Distribution program to fund the management of all linear assets in the local water distribution system. Project to install, replace, and renew pipelines and service connections for the 1,230 mile drinking water distribution system in San Francisco with the goal of replacing 15 miles per year to minimize main breaks and meet customer level of service goals for uninterrupted service.
- \$0.8 million for Local Buildings & Grounds Improvements will fund capital improvements at all City Distribution Division (CDD) facilities and structures including

replacing the current fueling station, yard improvements and a comprehensive arc flash and electrical hazard study of the electrical distribution systems at all CDD facilities.

- \$0.1 million for System Monitoring and Control including improvements to the System Control and Data Acquisition (SCADA) for remote monitoring of pressure, flow, and valve position status at key locations throughout the distribution system and security system upgrades to improve safety and reliability.
- \$5.5 million for Water Storage Facilities/Pump Stations provides long-term funding for renewal and rehabilitation of water storage reservoirs and tanks, major water pump stations and hydronuematic tanks that boost pressure to the San Francisco Distribution System.

Capital Enhancements – Non-recurring

- \$5.0 million for San Francisco Groundwater Supply project storage reservoir; distribution pumping facilities; and 5 to 6 miles of new pipelines.
- \$21.3 million San Francisco Westside Recycled Water Project which includes all facilities to generate and deliver 2 MGD of recycled water for irrigation use in the western end of San Francisco. The project includes a new recycled water treatment facility consisting of membrane filtration, reverse osmosis, and ultraviolet light disinfection; a 1.1 million gallon storage reservoir; distribution pumping facilities; and 5 to 6 miles of new pipelines.

Included in the FY 2016-17 budgets is \$18.5 million of financing costs.

FY 2017-18

As shown on Table W9, the Water Enterprise FY 2017-18 Capital Budget totals \$149.3 million: \$32.4 million for Regional Water Treatment, Transmission, and Supply & Storage Program projects, \$2.0 million for Watershed/Rights-of-Way Management, \$1.0 million for Communication and Monitoring Programs, \$6.2 Buildings and Grounds Programs, and \$27.0 million for WSIP augmentation.

The Local Water budget includes \$57.1 million for water conveyance/distribution, \$1.0 million for buildings and grounds improvements, \$0.5 million for System Monitoring and Control, \$2.0 million for water storage facilities, and \$6.5 million for San Francisco Westside Recycled Water Project.

Included in the FY 2017-18 budgets is \$13.6 million of financing costs.

Water Programmatic Projects

Table W10 shows the Water Enterprise Programmatic Projects, for FY 2015-16, FY 2016-17, and FY 2017-18, by major programs. Programmatic projects are annually appropriated projects in support of routine maintenance of programs most of which were initiated in support of the capital program. These programmatic projects include monitoring, mitigation, watershed protection, community benefits, and the Water Enterprise share of lease payment and operation of the SFPUC headquarters at 525 Golden Gate Avenue.

Table W10. Water Enterprise Programmatic Projects

\$ Millions	FY 2015-16	FY 2016-17	FY 2017-18
Program/Project	Adopted Budget	Adopted Budget	Adopted Budget
Regional Costs			
Natural Resources Planning	0.3	0.5	0.5
Long Term Monitoring & Permit Program	4.5	2.0	3.1
Water Resource Planning & Development	0.4	-	-
Watershed Protection	0.8	0.7	0.7
Total Regional	6.0	3.2	4.3
Local Costs			
Landscape Conservation Program	1.3	1.5	1.5
AWSS Maintenance	0.5	1.3	1.5
Community Benefits - Water	1.0	0.9	0.7
Treasure Island Facilities Maintenance	1.2	1.2	1.2
Youth Employment Project	1.3	1.3	1.3
Retrofit Grant Program	2.6	0.7	0.6
Casitas Properties	0.0	5.0	0.0
525 Golden Gate - Operations & Maintenance	3.5	3.6	3.7
525 Golden Gate - Lease Payment	9.2	9.2	9.2
Total Local	20.6	24.6	19.7
Total Regional & Local	26.6	27.8	24.0
Sources			
Infrastructure - Recovery Capital	3.8	3.7	3.7
Federal Bond Interest Subsidy	1.9	1.9	1.9
Water Enterprise Revenue (1)	20.8	22.2	18.4
Total Sources	26.6	27.8	24.0

(1) FY 2016-17 revenue amount includes \$22.2M funded through the revenues and \$1.0M from project closeouts.

FY 2016-17

The Water Enterprise Programmatic Project budget increased from \$26.6 million in FY 2015-16 to \$27.8 million in FY 2016-17. This increase is a largely a result of the addition of the Casitas Properties Project and a portion of the costs for the Long Term Monitoring and Permit Program being moved Capital Budget Watershed and Lands Management Project.

FY 2017-18

The Water Enterprise Programmatic Project budget decreased in FY 2017-18 due to the removal of the Casitas Properties Project.

Water Enterprise Ten-Year Financial Plan

Table W11 shows the Water Enterprise Ten-Year Financial Plan, from FY 2016-17 to FY 2025-26

Table W11. Water Enterprise Ten-Year Financial Plan

\$ Millions	FY 2015-16 Forecast	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Beginning Operating Fund Balance	166.7	143.5	119.2	113.8	101.5	83.6	97.6	115.5	115.5	113.8	120.8
Sources											
Retail Sales - Base Rates	186.9	209.5	230.4	246.5	273.7	303.8	337.2	360.8	382.4	405.4	429.7
Retail Sales - Rate Increases	22.6	20.9	16.1	27.1	30.1	33.4	23.6	21.6	22.9	24.3	17.2
Wholesale Sales - Operating Costs	82.7	93.4	96.6	99.9	103.2	115.7	117.7	118.1	121.0	124.0	128.0
Wholesale Sales - Capital & Debt	128.9	125.1	133.8	151.2	171.4	183.0	190.9	201.5	209.8	217.1	229.7
Interest Income	1.6	1.8	1.8	3.4	3.0	2.5	2.9	3.5	3.5	3.4	3.6
Other Income	27.8	26.8	27.6	28.4	29.3	30.2	31.1	32.0	33.0	33.9	35.0
Total Sources	450.5	477.4	506.4	556.6	610.6	668.5	703.3	737.5	772.6	808.2	843.2
Uses											
Operations & Maintenance	198.2	189.3	192.8	198.5	204.5	210.6	217.0	223.5	230.2	237.1	244.2
Hetchy Transfer	36.6	34.6	32.6	33.6	34.6	35.6	36.7	37.8	38.9	40.1	41.3
Debt Service	197.5	228.6	232.3	258.3	313.0	346.8	361.4	400.8	424.6	429.4	442.6
Projects - Revenue Funded	41.4	49.2	54.1	78.5	76.5	61.4	70.3	75.5	80.6	94.5	109.1
Total Uses	473.7	501.8	511.7	568.9	628.6	654.5	685.3	737.5	774.3	801.1	837.2
Net Revenues	-23.2	-24.3	-5.3	-12.3	-18.0	14.0	18.0	-0.1	-1.7	7.1	6.0
Ending Fund Balance	143.5	119.2	113.8	101.5	83.6	97.6	115.5	115.5	113.8	120.8	126.8
Requirement - Retail	12%	10%	7%	11%	11%	11%	7%	6%	6%	6%	4%
Requirement - Wholesale	28%	9%	5%	9%	10%	9%	3%	4%	4%	3%	5%
Fund Balance as % of Revenue	32%	25%	22%	18%	15%	15%	16%	16%	15%	15%	15%
Fund Balance as % of Expense	22%	24%	22%	18%	13%	15%	17%	16%	15%	15%	15%
Fund Balance as % of Operating Expense	72%	63%	59%	51%	41%	46%	53%	52%	49%	51%	52%
Debt Service Coverage (Indenture)	1.86	1.57	1.59	1.54	1.37	1.43	1.50	1.42	1.40	1.47	1.50
Debt Service Coverage (Current)	1.15	1.05	1.10	1.15	1.11	1.15	1.18	1.13	1.13	1.19	1.21
*FYE 2016 Forecast reflects Commission approved 10-Yr plan Feb 10, 2016											

Chart W10. Water Enterprise Ten-Year Financial Plan Trend

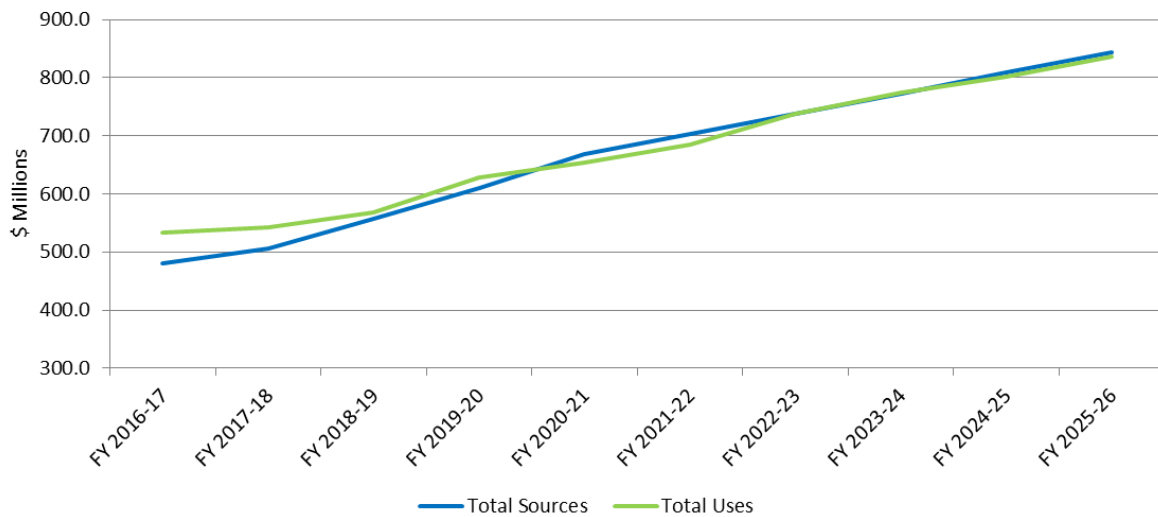


Table W11 and Chart W10 reflect the SFPUC's Water Enterprise Ten-Year Financial Plan as required by City and County of San Francisco Charter Section 8B.123. This is a plan, not a budget nor are funds appropriated. The Plan includes a ten-year financial summary (FY 2016-17 through FY 2025-26) describing projected sources and uses, resulting fund balances and associated financial reserve ratios. Projected costs and revenues are estimates and subject to variations inherent in all such projections. It is a planning document intended to inform the development of the Ten-Year Capital Plan, the water rates and the fiscal year budgets. Consequently, the estimates should not be viewed as precise predictions but rather as indications of expected trends, given certain expenditure, receipt, and financing assumptions. These assumptions are based on current Board of Supervisors and Commission policies, goals, and objectives representing management's best estimates at this time.

Rates and Charges

In May 2014, the Commission approved average retail water rate changes of 12.0 percent for FY 2014-15 and FY 2015-16, 10.0 percent for FY 2016-17, and 7.0 percent for FY 2017-18. Projected average annual retail water rate changes are 11.0 percent for FY 2018-19 through FY 2020-21, 7.0 percent for FY 2021-22, 6.0 percent for FY 2022-23 through FY 2024-25 and 4.0 percent for FY 2025-26. Wholesale water rates are managed through a 25-year Water Supply Agreement (WSA), with rates increasing 9.3 percent in FY 2016-17, and then trending an average annual increase of 7.2 percent from FY 2017-18 to FY 2020-21. These rate changes are necessary to continue funding vital capital improvements along with providing additional resources to the annual Repair and Replacement program.

Sources of Funds

The Water Enterprise provides water to 2.6 million people in San Francisco, Santa Clara, Alameda and San Mateo counties. Water Enterprise customers are grouped into retail and wholesale service categories. The retail customer category is further divided into in-city and suburban customers. Customers within each sub-category are then grouped into revenue classes based on their service characteristics. The wholesale customer category consists of only one revenue class – wholesale resale with long-term contract. Total sources are projected to grow from \$477.4 million in FY 2016-17 to \$843.2 million by FY 2025-26.

- Retail water sales revenues are projected to increase from \$230.4 million in FY 2016-17 to \$446.9 million over the ten-year period. This increase assumes zero growth in annual consumption with population growth being offset by conservation and other water saving measures.

- Wholesale customers' water sales, representing about half of the Enterprise revenues and two-thirds of water deliveries, are forecasted to increase revenues from \$218.4 million in FY 2016-17, to \$357.7 million over the period. This increase assumes no growth in water consumption.
- Other income includes interest income on fund balances along with rents and miscellaneous income. These revenues are assumed to average approximately at \$30.7 million over the ten years and are mainly derived from interest earnings on fund balances, rents and permit fees for secondary uses of its watershed lands and pipeline rights-of-way.

Uses of Funds

In the absence of more specific forecast data, the Ten-Year Financial Plan includes a general 3.0 percent annual growth assumption for operations and maintenance costs and a 5.0 percent annual escalation in revenue-funded capital costs.

The annual operating budget includes operation and maintenance costs, debt service on revenue bonds used to finance capital improvements, and repair and replacement costs funded from current revenues. Debt Service in FY 2016-17 is the largest component of the Water Enterprise's expenses (45.6 percent), projected to increase to 52.9 percent of total expenses by FY 2025-26. Total expenditures are increasing from \$501.8 million in FY 2016-17 to \$837.2 million by FY 2025-26.

- Operations and Maintenance costs include salaries and fringe benefits, material and supplies, power and energy, and services of the other City departments including SFPUC Bureaus. The cost of operating the water system in FY 2016-17 is projected to be \$223.9 million; increasing to \$285.5 million by FY 2025-26. As projects in the WSIP are completed and placed into service, we project no increase to operation and maintenance expenses associated with the new facilities beyond the forecast shown in this report of 3.0 percent annual growth assumption. In addition, the forecast assumes there will be no changes in regulations or operating procedures that could impact operating expenses.
- Debt Service costs includes principal and interest payments on revenue bonds used to finance system improvements. Future debt service cost projections assume the issuance of new debt to fund WSIP and non-WSIP Water Enterprise capital projects. The plan reflects debt service costs increasing from \$228.6 million in FY 2016-17 (net of Federal subsidy) to \$442.6 million by FY 2025-26. The actual timing and size of bond sales may vary depending on construction timing.
- Revenue-Funded Capital Project spending is projected to average \$75.0 million annually over the next 10 years. Projects include minor construction projects, major maintenance and rehabilitation projects, planning studies, and preliminary engineering analysis for major capital improvements.

Debt Financing of Capital Needs

The Capital and Financial Plans assume significant debt financing of capital needs over the next ten-year period. The WSIP, approximately 85% complete as of June 30, 2016, will require \$4.845 billion in total financing for the program, authorized by the voters under Propositions A and E in November 2002.

The Plan assumes a financing strategy that utilizes short-term financing via the existing Commercial Paper (CP) program to calibrate financing needs with project spending. Long-term (30-year) 5 percent fixed rate debt issuance is assumed to periodically refund the CP program. The CP program facilitates short-term financing typically at lower interest rates than longer term debt, which minimizes costs. The authorized CP program for the Water Enterprise is \$500.0 million. As of July 2016, the Enterprise has \$236 million in commercial paper notes outstanding and \$3.9 billion of water revenue bonds have been issued to finance the \$4.845 billion WSIP. The remaining capital financing will occur periodically through the scheduled completion of the program in 2019.

Financial Ratios

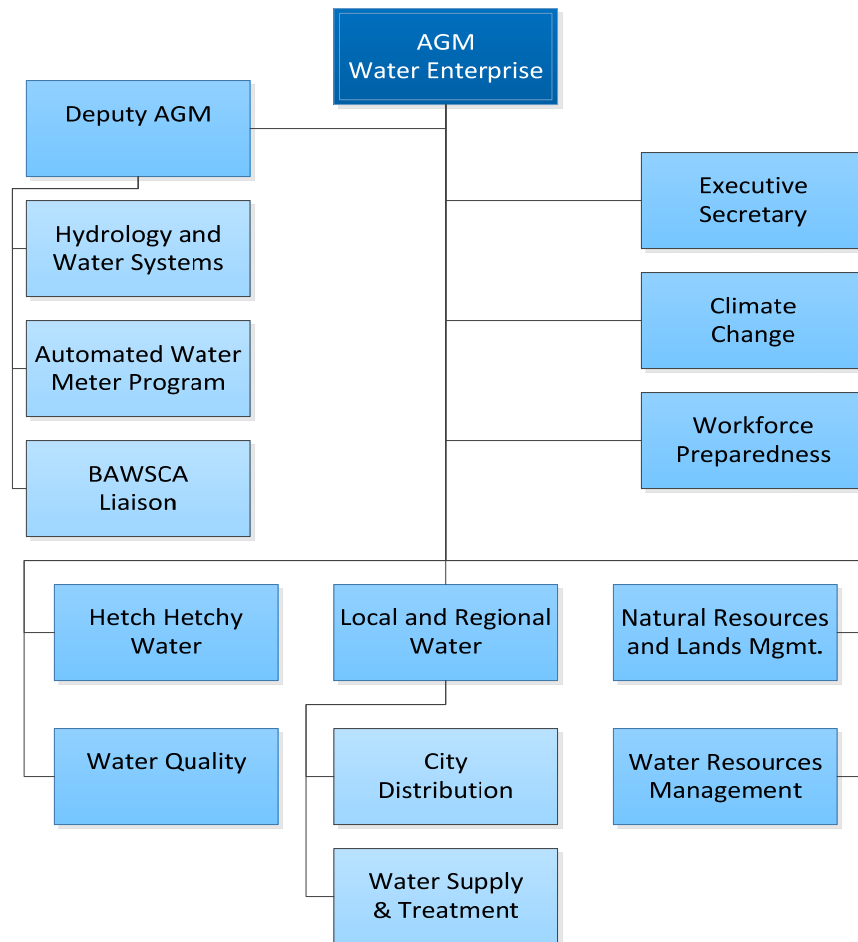
It is the financial objective of the SFPUC to maintain a minimum revenue bond coverage ratio of 1.25 times on an indenture basis and 1.00 times on a current operations basis, which does not include fund balance. Over the ten-year period, the indenture coverage ranges from 1.59 to 1.37 times coverage. On a current basis, the coverage ratio ranges from 1.05 to 1.21 times coverage, above the 1.00 minimum.

Fund Balances and Reserves

As the Ten-Year Financial Plan indicates, the Water Enterprise's ending fund balance will increase from \$119.2 million in FY 2016-17 to \$126.8 million in FY 2025-26. The use of fund balance for capital projects over the 10-year period balances the need to maintain infrastructure with rate increases, and conforms to established fund balance reserve policies.

Departmental Section

Water Enterprise Organization Chart



Water's Strategic Sustainability Trends

The Strategic Sustainability Plan (SSP) provides the SFPUC with a system for planning, managing, and evaluating SFPUC-wide performance that takes into account the long-term economic, environmental, and social impacts of its business activities. The SSP is described in the introduction of this report and in Appendix F are the 2014-15 performance results. The SSP combines the SFPUC strategic mission and goals, essential business activities and appropriate sustainability measures consistent with the Global Reporting Initiative recommendations.

The SSP report communicates a cross section of performance goals and objectives to support planning and inform customers, the SFPUC Commission, the Controller's Office, Bond holders, rating agencies, regulators and the general public. The annual organization- wide review, measurement and reporting protocol tasks SFPUC management and staff to:

- Plan and deliver high quality water services to current and future generations of San Franciscans based on triple bottom line sustainability;
- Embed sustainability into SFPUC's business DNA and long-term strategic decision-making;
- Communicate SFPUC's organizational culture and build relationships with stakeholders;
- Benchmark SFPUC's strategic sustainability performance against SFPUC's and peers;

- Build capacity for longer term trend, risk and foresight analyses; and
- Provide stakeholders with ongoing review of SFPUC-wide triple bottom line performance.

Fiscal Year 2014-15 Strategic Sustainability Performance Results

The fiscal year 2014-15 report is the sixth annual assessment of SFPUC-wide performance on the strategic sustainability plan.

The SFPUC's six sustainability categories as described in the Introduction Chapter are:

- Customers (CR)
- Community (CY)
- Environmental and Natural Resources (ENR)
- Governance and Management (GM)
- Infrastructure and Assets (IA)
- Workplace (WP)

The associated objectives in the SSP are aimed at continuous improvement and meeting the SFPUC-wide 2014-15 five key strategic goals:

- Plan for the Future
- Invest in SFPUC's People
- Promote a Green and Sustainable City
- Provide High Quality Services
- Engage SFPUC's Public and Invest in Communities

Note that in 2016 the **2020 Strategic Plan** was adopted which includes updated key strategic goals. Consequently, the 2014-15 performance results are compared to the key strategic goals that were active as of that date.

Chart W11 in the following page provides a representation of the performance of the Water Enterprise in FY 2014-15 in these categories. As shown in Appendix F there are some trends for the Water Enterprise that can be noted:

- The percentage of apprentice labor hours worked by service area residents has dropped by 3.5 percent since FY 2011-12 which is a result of the WSIP program being largely completed but at the same time, the percentage of hours worked by local residents has been consistently exceeding requirements.
- The amount of gallons per capita per day (gpcd) sold to San Francisco residents has reduced from 50.29 in FY 2011-12 to 43.58 in FY 2014-15; this trend could be the result of the call for outdoor water conservation and other drought measures.
- The SFPUC-wide security plan is still in progress; work began in FY 2012-13 and by the end of FY 2014-15 the plan was at 75% complete. The Emergency Drinking Water Supply plan is at the 75% completion level; a task order has been developed to complete the remaining parts of this plan in the next year
- The preventative maintenance (PM) ratio has increased from 80.8% in FY 2011-12 to 91.93% in FY 2014-15.

Chart W11 provides a representation of the performance of the Water Enterprise in FY 2014-15 in SFPUC's six sustainability categories.

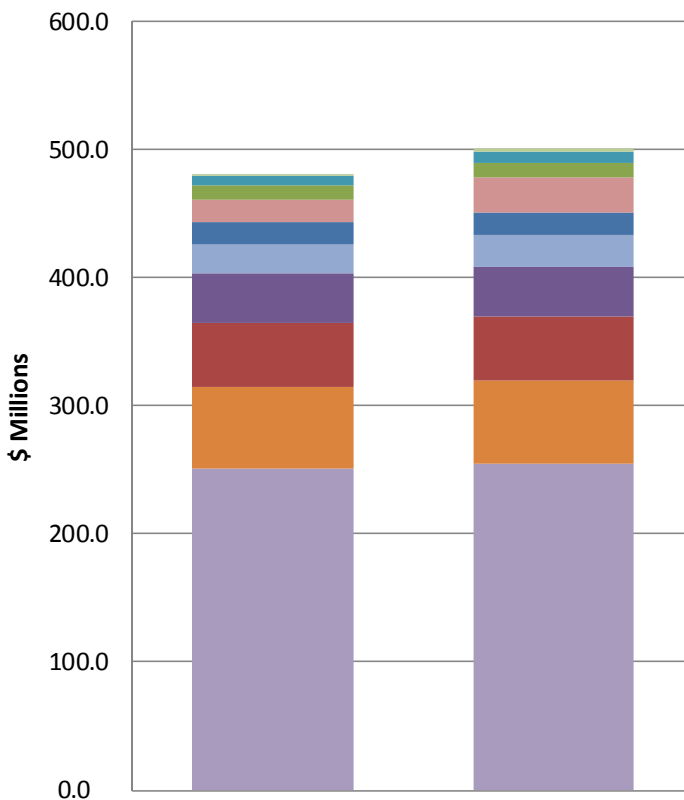
Chart W11 – FY 2014-15 Water Enterprise Excerpts from the Strategic Sustainability Plan

	Strategic Sustainability Categories					
Strategic Mission						
	CR	CY	EN	GM	IA	WP
Provide High Quality Services	100% of Fees reflect cost of service 84% of CR rate good or better services Wholesale CR 4.6 score out of 5		Energy Intensity: Water Delivered (In-City Retail Water): 1.20 MWh/MG Water Delivered (Regional Water System): 0.51 MWh/MG	Percent of deliveries that can be met in drought years: 100% Percent of deliveries that can be met after seismic events: 50%	11.4 miles of water mains repaired or replaced	
Promote a Green and Sustainable City	100 % of retail rate encourages conservation	Launched a new pilot initiative called the "Bayview Garden Supply Pop-ups" to provide resources to local community groups promoting healthy food access	43.58 gpcd to SF retail customers	99.73% rate of water quality compliance	Advanced its commitment to organization-wide Asset Management by dedicating accountable staff who established a program framework, set multiple-year targets for benchmarking performance	
Plan for the Future	Average residential water, bill as a percent of median income in San Francisco: .58%	Renewed all 25 Project Learning Grants for youth workforce development	80% of acreage is protected in 3 primary Watersheds: 22% in Alameda, 96% in Peninsula & 100% in Hetch Hetchy.	S&P credit rating AA-Moody's Aa3	91.93 % Preventive maintenance ratio	Advance Succession Planning: Implement a competency model framework to be populated as the basis for succession preparedness
Invest in SFPUC's People		Developed "Equitable Engagement Guidelines" for all project managers and communication staff to utilize in SSIP capital project outreach and engagement.	The Water Enterprise regularly leads environmental trainings, for instance on avoiding impacts on sensitive species.	Security Plan is 75% completed	Lost time incident rate for procured construction hours	16 average hours of training per year
Engage SFPUC's Public and Invest in our Communities	Water meter reading accuracy (number of errors per 1,000 reads): .58	47.5% of labor hours worked by service area residents; 49% of labor hours worked by local residents (goal is 30%); 74% of apprentice labor hours worked by local residents (goal is 50%)		Emergency drinking water plan in place, and reviewed, updated and tested annually		

Divisions

The Water Enterprise is comprised of the following six Divisions: Water Administration, City Distribution Division (CDD), Water Quality Division, Water Supply and Treatment (WS&T), Natural Resources, and Water Resources. Chart W12 shows the FY 2016-17 and FY 2017-18 operating budgets by Division. The chart also includes budget information on Enterprise-wide categories including debt service, general reserve, programmatic and capital/revenue reserve.

Chart W12. FY 2016-17 and FY 2017-18 Water Enterprise Uses of Funds by Division and Other Categories



	FY 2016-17		% of Total	FY 2017-18		% of Total
Debt Service	\$	250.9	52.3%	\$	254.4	50.7%
Water Administration		64.1	13.3%		65.9	13.1%
Water Supply & Treatment		50.4	10.5%		50.2	10.0%
City Distribution		38.0	7.9%		38.7	7.7%
Programmatic Projects		23.2	4.8%		24.1	4.8%
Water Quality		17.3	3.6%		17.6	3.5%
Capital/Revenue Reserve		16.8	3.5%		27.8	5.5%
Natural Resources		11.3	2.4%		11.6	2.3%
Water Resources		7.8	1.6%		8.0	1.6%
General Reserve		0.2	0.0%		3.1	0.6%
Grand Total	\$	480.0	100.0%	\$	501.5	100.0%

Table W12 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2015-16 and FY 2016-17 and between FY 2016-17 and FY 2017-18, for all Water Divisions, including debt service, general reserve, programmatic and capital/revenue reserve.

Table W12. Water Enterprise Uses of Funds by Division and Other Categories

\$	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
Expenditure Category						Amount	%	Amount	%
Administration	59.2	60.7	59.0	64.1	65.9	3.3	5.5%	1.9	2.9%
Debt Service	214.5	259.8	221.7	250.9	254.4	(8.8)	-3.4%	3.5	1.4%
City Distribution	35.9	38.2	36.9	38.0	38.7	(0.2)	-0.5%	0.7	2.0%
Water Quality	15.4	16.7	17.0	17.3	17.6	0.7	4.0%	0.2	1.4%
Water Supply & Treatment	45.4	49.8	47.0	50.4	50.2	0.5	1.1%	(0.2)	-0.4%
Natural Resources	10.0	11.2	10.1	11.3	11.6	0.1	0.9%	0.3	2.3%
Water Resources	6.2	8.1	5.7	7.8	8.0	(0.3)	-3.8%	0.2	3.2%
Programmatic Projects	20.6	26.9	26.9	23.2	24.1	(3.6)	-13.5%	0.9	3.9%
General Reserve	-	3.5	-	0.2	3.1	(3.3)	-94.9%	2.9	-
Capital/Revenue Reserve	29.2	37.5	37.5	16.8	27.8	(20.6)	-55.1%	11.0	65.3%
Water Total	436.4	512.3	461.7	480.0	501.5	(32.3)	-6.3%	21.5	4.5%

Water Administration

The Administrative Division provides direction and administrative support to the Water Enterprise.

The budget funds Enterprise-wide expenses including debt service, travel/training, memberships and administrative services from other City departments.

Budget Summary

Table W13 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2015-16 and FY 2016-17 and between FY 2016-17 and FY 2017-18.

Table W13. Water Administration Budget Summary, including Debt Service

\$	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
Expenditure Category						Amount	%	Amount	%
Personnel	5,255,482	6,714,049	5,266,817	7,252,422	7,663,600	538,373	8.0%	411,178	5.7%
Non-Personnel Services	2,949,956	2,007,330	2,415,859	1,922,929	1,802,929	(84,401)	-4.2%	(120,000)	-6.2%
Materials & Supplies	66,866	47,239	46,622	37,239	37,239	(10,000)	-21.2%	0	0.0%
Equipment	-	335,000	551,902	1,365,000	1,455,000	1,030,000	307.5%	90,000	6.6%
Debt Service	214,485,965	259,768,998	221,692,820	250,924,005	254,397,658	(8,844,993)	-3.4%	3,473,653	1.4%
Services Of Other Departments	50,913,608	51,600,135	50,724,439	53,475,413	54,975,489	1,875,278	3.6%	1,500,076	2.8%
Water Total	273,671,877	320,472,751	280,698,459	314,977,008	320,331,915	(5,495,743)	-1.7%	5,354,907	1.7%

Reasons for Changes, FY 2015-16 to FY 2016-17

The following describes FY 2015-16 and FY 2016-17 budget category variances greater than ten percent.

- **Materials & Supplies** - Reflects a decrease in office supplies based on projected needs.
- **Equipment** – Reflects an increase to support the City and County high frequency radio system and the SFPUC low band radio system.

Reasons for Changes, FY 2016-17 to FY 2017-18

There were no major changes in FY 2017-18.

City Distribution Division (CDD)

The City Distribution Division (CDD) distributes high quality treated water to San Francisco customers. On average, approximately 70 million gallons of water a day are delivered to nearly 800,000 people in San Francisco. CDD maintains the water distribution system within the City, which consists of 12 reservoirs, 12 pumping stations, 8 water tanks, a network of approximately 1,300 miles of pipeline and 12,000 water valves. CDD also operates and maintains the Auxiliary Water Supply System (AWSS) which includes 120 miles of high-pressure pipelines, two pump stations, approximately 200 cisterns, and 3 reservoirs.

Budget Summary

Table W14 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2015-16 and FY 2016-17 and between FY 2016-17 and FY 2017-18.

Table W14. City Distribution Division (CDD) Budget Summary

\$	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
Expenditure Category						Amount	%	Amount	%
Personnel	24,871,940	26,832,549	25,975,027	27,652,239	28,131,900	819,690	3.1%	479,661	1.7%
Non-Personnel Services	2,000,263	2,133,790	2,583,096	1,839,531	1,878,286	(294,259)	-13.8%	38,755	2.1%
Materials & Supplies	2,851,939	2,435,492	2,551,247	2,355,489	2,582,713	(80,003)	-3.3%	227,224	9.6%
Equipment	949,604	1,184,461	961,738	817,486	655,410	(366,975)	-31.0%	(162,076)	-19.8%
Services Of Other Departments	5,228,958	5,596,023	4,814,255	5,323,459	5,486,661	(272,564)	-4.9%	163,202	3.1%
Water Total	35,902,704	38,182,315	36,885,363	37,988,204	38,734,970	(194,111)	-0.5%	746,766	2.0%

Reasons for Changes, FY 2015-16 to FY 2016-17

- **Non-Personnel Services** – Reflects a decrease in building maintenance based on prior year actual spending and projected need for FY 2016-17.
- **Equipment** – Decrease reflects one-time funding for vehicles eligible for replacement.

Reasons for Changes, FY 2016-17 to FY 2017-18

- **Equipment** – Decrease reflects one-time funding for vehicles eligible for replacement.

Water Quality Division (WQD)

The Water Quality Division (WQD) mission is to ensure that the SFPUC complies with all current and future water quality regulations and customer expectations through: sample collection; field and laboratory analyses; process engineering; applied research; inspections; quality control/assurance programs; regulatory liaison and reporting; and on-site support to source/treatment/distribution operations. In addition, the WQD's mission includes analysis of discharges (into the sewer system, Bay and Ocean) for the Wastewater Enterprise, and treatment performance samples, assessing environmental impacts, recommending/overseeing any necessary mitigation, and responding to and resolving customer inquiries about the quality of drinking and receiving waters.

Budget Summary

Table W15 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2015-16 and FY 2016-17 and between FY 2016-17 and FY 2017-18.

Table W15. Water Quality Division (WQD) Budget Summary

\$	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
Expenditure Category						Amount	%	Amount	%
Personnel	12,276,604	11,631,902	12,800,862	12,058,358	12,341,618	426,456	3.7%	283,260	2.3%
Non-Personnel Services	2,012,944	3,424,007	2,825,288	3,663,210	3,672,983	239,203	7.0%	9,773	0.3%
Materials & Supplies	994,824	1,304,746	920,293	1,250,607	1,400,220	(54,139)	-4.1%	149,613	12.0%
Equipment	98,274	315,267	463,931	372,917	174,646	57,650	18.3%	(198,271)	-53.2%
Services Of Other Departments	6,029	2,696	28,535	2,576	2,576	(120)	-4.5%	0	0.0%
Water Total	15,388,675	16,678,618	17,038,909	17,347,668	17,592,043	669,050	4.0%	244,375	1.4%

Reasons for Changes, FY 2015-16 to FY 2016-17

- **Equipment** - Reflects an increase for replacement vehicles to support the non-potable water program.

Reasons for Changes, FY 2016-17 to FY 2017-18

- **Materials & Supplies** – Reflects an increase in equipment maintenance supplies, parts and consumables for laboratory and engineering field equipment.
- **Equipment** - Decrease reflects one-time funding for equipment.

Water Supply & Treatment Division (WS&T)

The Water Supply & Treatment Division manages the SFPUC's Regional Water System and delivers high quality water to residents in the City and County of San Francisco as well as to wholesale customers in Santa Clara, Alameda, and San Mateo counties with supplies derived from watersheds in Yosemite National Park (Hetch Hetchy), Alameda County, and the Peninsula. WS&T operates and maintains three major water treatment plants, 260 miles of pipelines and associated right-of-way, and five Bay Area reservoirs.

Budget Summary

Table W16 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2015-16 and FY 2016-17 and between FY 2016-17 and FY 2017-18.

Table W16. Water Supply and Treatment Division Budget Summary

\$	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
Expenditure Category						Amount	%	Amount	%
Personnel	28,186,703	28,991,867	29,554,570	29,329,946	29,856,388	338,079	1.2%	526,442	1.8%
Non-Personnel Services	3,649,320	3,892,608	3,369,000	4,689,232	4,652,266	796,624	20.5%	(36,966)	-0.8%
Materials & Supplies	7,317,858	9,362,065	7,654,946	8,835,116	8,825,606	(526,949)	-5.6%	(9,510)	-0.1%
Equipment	248,364	402,175	567,929	908,661	514,291	506,486	125.9%	(394,370)	-43.4%
Services Of Other Departments	5,958,225	7,195,165	5,830,467	6,608,437	6,307,878	(586,728)	-8.2%	(300,559)	-4.5%
Water Total	45,360,470	49,843,880	46,976,912	50,371,392	50,156,429	527,512	1.1%	(214,963)	-0.4%

Reasons for Changes, FY 2015-16 to FY 2016-17

- **Non-Personnel Services** - Reflects an increase in taxes and licenses, outside consultant services and equipment and building maintenance.
- **Equipment** – Reflects replacement of eleven vehicles and a large portable generator.

Reasons for Changes, FY 2016-17 to FY 2017-18

- **Equipment** - Decrease reflects one-time funding for equipment.

Natural Resources Division

The Natural Resources Division is responsible for monitoring, protecting and restoring those lands and ecological resources under the management of the SFPUC. Natural Resources is responsible for management of the significant resources within the Tuolumne River, Alameda Creek and Peninsula watersheds, and also reflects the high priority the SFPUC gives to its role as the steward of these natural resources for current and future generations.

Budget Summary

Table W17 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2015-16 and FY 2016-17 and between FY 2016-17 and FY 2017-18.

Table W17. Natural Resources Division Budget Summary

\$	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
Expenditure Category						Amount	%	Amount	%
Personnel	8,577,534	9,116,007	8,308,807	9,420,174	9,684,404	304,167	3.3%	264,230	2.8%
Non-Personnel Services	775,603	1,241,315	1,232,885	1,072,107	1,072,107	(169,208)	-13.6%	0	0.0%
Materials & Supplies	321,476	402,703	323,261	369,456	369,456	(33,247)	-8.3%	0	0.0%
Equipment	161,940	242,000	73,459	242,000	242,000	0	0.0%	0	0.0%
Services Of Other Departments	187,156	184,385	167,709	184,265	184,265	(120)	-0.1%	0	0.0%
Water Total	10,023,709	11,186,410	10,106,121	11,288,002	11,552,232	101,592	0.9%	264,230	2.3%

Reasons for Changes, FY 2015-16 to FY 2016-17

- **Non-Personnel Services** – Reflects a projected decrease in building maintenance services.

Reasons for Changes, FY 2016-17 to FY 2017-18

There were no major changes in FY 2017-18.

Water Resources Division

The Water Resources Division conducts water supply planning studies and implements projects to develop additional water supplies from groundwater, recycled water, conservation, desalination, groundwater dewatering and other alternate water sources. These services are developed on a local and regional level. The Water Resources Division coordinates with bureaus and divisions within the SFPUC, other City departments, Bay Area Water Supply and Conservation Agency (BAWSCA), and SFPUC member agencies in the development and implementation of these water supply planning studies and projects.

Budget Summary

Table W18 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2015-16 and FY 2016-17 and between FY 2016-17 and FY 2017-18.

Table W18. Water Resources Division Budget Summary

\$	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
Expenditure Category						Amount	%	Amount	%
Personnel	3,504,601	3,804,876	3,527,070	3,959,785	4,023,652	154,909	4.1%	63,867	1.6%
Non-Personnel Services	2,270,962	3,731,362	1,847,461	3,271,940	3,453,781	(459,422)	-12.3%	181,841	5.6%
Materials & Supplies	143,362	383,508	207,740	383,508	383,508	0	0.0%	0	0.0%
Equipment	25,028	0	0	0	0	0	-	0	-
Services Of Other Departments	237,222	143,154	116,697	140,300	140,536	(2,854)	-2.0%	236	0.2%
Water Total	6,181,175	8,062,900	5,698,968	7,755,533	8,001,477	(307,367)	-3.8%	245,944	3.2%

Reasons for Changes, FY 2015-16 to FY 2016-17

- **Non-Personnel Services** – Reflects a decrease in water conservation rebate program.

Reasons for Changes, FY 2016-17 to FY 2017-18

There were no major changes in FY 2017-18.



WASTEWATER ENTERPRISE

Mission, Roles, and Responsibilities

The Wastewater Enterprise provides sewage and stormwater collection, treatment and disposal services through the operation of combined sewage and stormwater system. The sanitary wastewater and stormwater services extend across eight distinct urban watersheds, with one all-weather wastewater treatment plant and one wet-weather

treatment plant serving the North Shore, Channel, Islais, Sunnyside, and Yosemite urban watersheds with effluent outfalls to the San Francisco Bay (the "Bayside Watersheds"), and a separate all-weather wastewater treatment plant serving the Richmond, Sunset, and Lake Merced urban watersheds with an effluent outfall to the Pacific Ocean (the "Westside Watersheds").

Of an estimated total combined wastewater flow of 40 billion gallons per year throughout the entire system, aggregating all watersheds, approximately 34 billion gallons per year receive full secondary treatment, 4.5 billion gallons per year receive primary or decant treatment and are discharged to deep-water outfalls, and 1.5 billion gallons per year receive the equivalent to wet weather primary treatment and are discharged through nearshore outfalls. There are nearly 1,000 miles of sewers and 29 pump stations in the San Francisco sewer system.

The Wastewater Enterprise serves residential, commercial and industrial users, making up a daytime "population equivalent" of approximately 1,069,731 in 2014. The service area of the Wastewater Enterprise encompasses - approximately 29,773 acres and includes residents of San Francisco (City) and of northern San Mateo County through arrangements with three municipal sewer service providers: North San Mateo County Sanitation District, the Bayshore Sanitary District and the City of Brisbane (collectively, the "Municipal Customers"). The SFPUC also currently provides waste treatment service on Treasure Island pursuant to contract, and expects eventually to expand its service area to include Treasure Island.

As of June 2016, SFPUC has 163,589 active retail wastewater accounts. Of these, over 90 percent are residential accounts, with the remainder being commercial, industrial, or municipal. Major non-residential customer categories include retail, offices, restaurants, and services, which together account for 50 percent of non-residential customers.

Budget Summary

Table C1 shows the FY 2014-15 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

The increases in the Sources of Funds are a reflection of the increased Sewer Service Charges approved in May 2014. The Use of Funds remains consistent for the budget year with the exception of debt service and the general reserve.

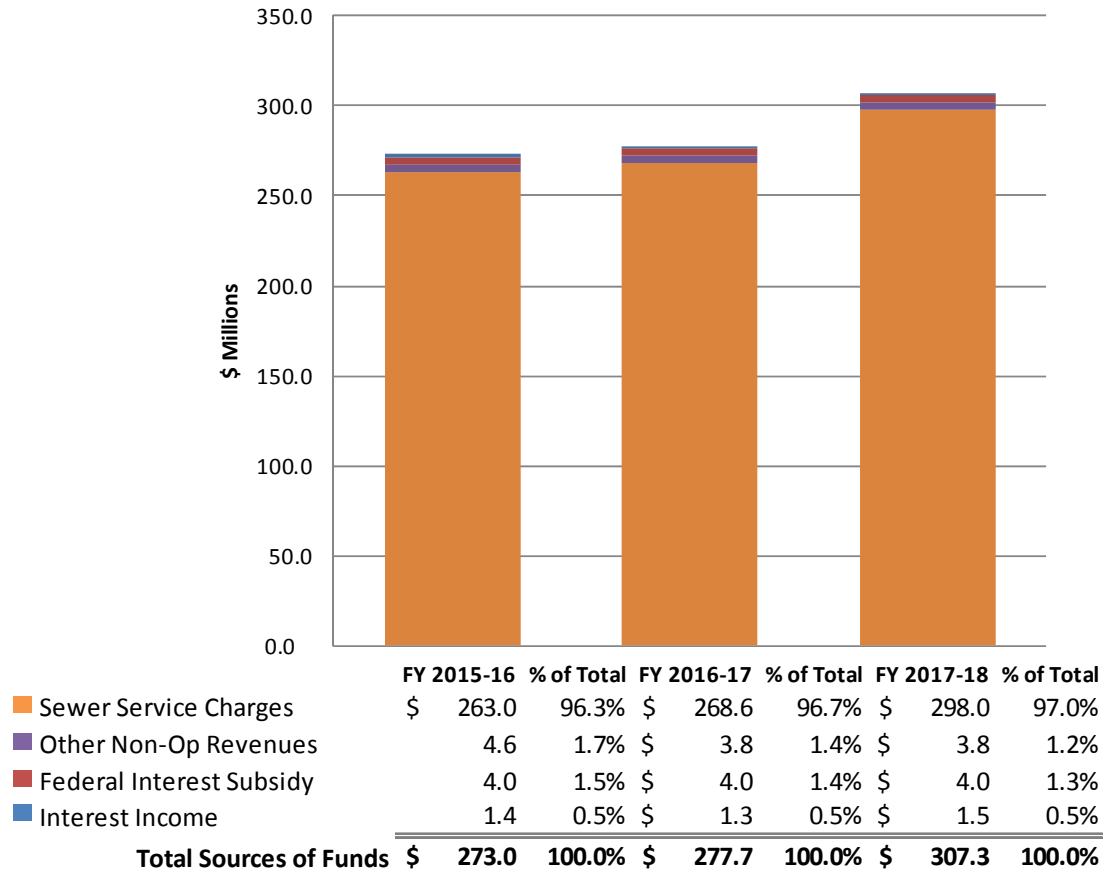
Table C1. Wastewater Enterprise Sources and Uses of Funds

Expenditure Category	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2016-17 vs.		FY 2017-18 vs.	
	Audited	Adopted	Adopted	Adopted	FY 2015-16	FY 2016-17	FY 2016-17	FY 2017-18
	Actual	Budget	Actual	Budget	Actual	Budget	Amount	%
SOURCES OF FUNDS								
Sewer Service Charges	248.2	263.0	252.9	268.6	298.0	5.6	2.1%	10.9%
Federal Interest Subsidy	4.0	4.0	4.0	4.0	4.0	-	0.0%	0.0%
Other Non-Op Revenues	2.9	4.6	4.8	3.8	3.8	(0.8)	-17.5%	0.0%
Interest Income	0.8	1.4	0.9	1.3	1.5	(0.1)	-3.9%	18.4%
Total Sources of Funds	255.9	273.0	262.5	277.7	307.3	4.7	1.7%	10.7%
USES OF FUNDS								
Personnel	62.9	67.0	64.2	67.1	68.9	0.1	0.2%	2.7%
Non-Personnel Services	14.3	16.1	14.3	17.1	17.3	1.1	6.7%	1.0%
Materials & Supplies	9.7	10.1	9.3	10.2	10.4	0.1	0.9%	1.8%
Equipment	0.5	0.7	1.2	0.9	0.9	0.2	32.1%	1.6%
Debt Service	52.3	63.5	63.5	52.3	76.2	(11.2)	-17.7%	45.8%
Services Of Other Depts	59.4	61.2	59.4	61.9	63.3	0.7	1.1%	2.3%
General Reserve	8.9	6.1	2.3	23.9	18.1	17.8	289.8%	-24.3%
Capital/Revenue Reserve	39.0	41.0	41.0	36.8	45.0	(4.2)	-10.3%	22.4%
Programmatic Projects	8.8	7.3	7.3	7.5	7.2	0.2	2.4%	-3.4%
Total Uses of Funds	255.9	273.0	262.5	277.7	307.3	4.7	1.7%	10.7%

Sources of Funds

The Wastewater Enterprise is dependent upon the Sewer Service Charge revenue, and the user fees paid by the system customers. Other revenue sources combined are less than 4 percent of the total Sources of Funds. Chart C1 shows the FY 2015-16 to FY 2017-18 budgeted Sources of Funds by revenue category.

Chart C1. FY 2015-16 to FY 2017-18 Wastewater Enterprise Sources of Funds



Summary

Estimated revenues for FY 2016-17 from Sewer Service Charges, Federal Interest Subsidy, Other Non-Operating Revenues, and Interest Income are projected at \$277.7 million, a \$4.7 million increase, or 1.7 percent from FY 2015-16. The net increase from FY 2015-16 revenues reflects an increase of \$5.6 million in Sewer Service Charges, offset by a decrease of \$0.8 million in Other Non-Operating Revenues and \$0.1 million decrease in Interest Income.

Estimated revenues for FY 2017-18 are projected at \$307.3 million. The \$29.6 million increase includes \$29.4 million in Sewer Service Charges and \$0.2 million in Interest Income.

Sewer Service Charges

Sewer Service Charge revenues, which are based on water consumption and approved rates, are budgeted at \$268.6 million in FY 2016-17, and \$298.0 million in FY 2017-18. Sewer service rates were adopted by the SFPUC Commission in May 2014, and include rates for single-family and multiple-family residential and non-residential customers. The \$5.6 million increase from FY 2015-16 to FY 2016-17, and the \$29.4 million increase from

FY 2016-17 to FY 2017-18, are consistent with the approved rates. See the Wastewater Enterprise Approved Rates Section for more detail.

Other Non-Operating Revenues

Other Non-Operating Revenues are budgeted at \$3.8 million in FY 2016-17 and FY 2017-18. They include the following: \$2.1 million recovery from Infrastructure, a payment on their share of the cost for the SFPUC Headquarter building costs, \$0.4 million from miscellaneous revenues including biofuel, \$0.8 million from property rental, and \$0.5 million from services provided to other City departments. The \$0.8 million net decrease from FY 2015-16 reflects an increase of \$0.2 million recovery from Infrastructure for their share of the cost of the SFPUC Headquarters, offset by a decrease of \$1.0 million in miscellaneous revenues.

Federal Interest Subsidy

The SFPUC receives a subsidy payment from the Federal Government for a portion of borrowing costs on taxable bonds. The U.S. Treasury Department is estimated to provide a direct subsidy equal to 32.6 percent (net of sequestration) of the interest payable for bonds issued as Build America Bonds per the American Recovery and Reinvestment Act (ARRA). A portion of the Wastewater Enterprise's outstanding bonds qualify under this subsidy program. The Federal Interest Subsidy in FY 2016-17 and FY 2017-18 is budgeted at \$4.0 million; the same as in FY 2015-16.

Interest Income

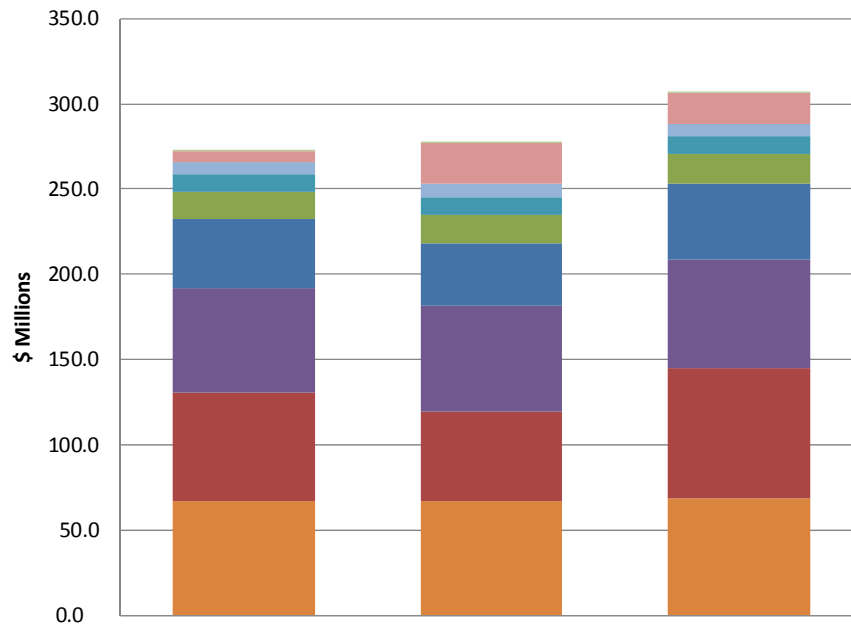
Interest Income revenues are budgeted at \$1.3 million in FY 2016-17. Interest income is based on the projected cash balance and interest rates on the County Investment Pool. Interest revenues are projected to be \$0.1 million less than in FY 2015-16. The decrease reflects a lower cash balance in the investment pool.

In FY 2017-18, Interest Income is projected to be \$1.5 million or \$0.2 million more than FY 2016-17. The increase reflects a projected higher cash balance in the investment pool.

Uses of Funds

The Uses of Funds remain consistent from FY 2015-16 through FY 2017-18 with the majority of the funds allocated to the four main categories of Personnel, Debt, Service to Other Departments and Capital/Revenue Reserve. Chart C2 shows the FY 2015-16 to FY 2017-18 budgeted Uses of Funds by expenditure category.

Chart C2. FY 2015-16 to FY 2017-18 Wastewater Enterprise Uses of Funds



	FY 2015-16	% of Total	FY 2016-17	% of Total	FY 2017-18	% of Total
Personnel	\$ 67.0	24.6%	\$ 67.1	24.2%	\$ 68.9	22.4%
Debt Service	63.5	23.3%	52.3	18.8%	76.2	24.8%
Services Of Other Depts	61.2	22.4%	61.9	22.3%	63.3	20.6%
Revenue-Funded Capital	41.0	15.0%	36.8	13.2%	45.0	14.6%
Non-Personnel Services	16.1	5.9%	17.1	6.2%	17.3	5.6%
Materials & Supplies	10.1	3.7%	10.2	3.7%	10.4	3.4%
Programmatic Projects	7.3	2.7%	7.5	2.7%	7.2	2.4%
General Reserves	6.1	2.2%	23.9	8.6%	18.1	5.9%
Equipment	0.7	0.2%	0.9	0.3%	0.9	0.3%
Total Uses of Funds	\$ 273.0	100.0%	\$ 277.7	100.0%	\$ 307.3	100.0%

Summary

The Wastewater Enterprise's FY 2016-17 Uses of Funds are \$277.7 million, a \$4.7 million increase, or 1.7 percent, from FY 2015-16. It includes \$67.1 million for Personnel; \$61.9 million for Services of Other Departments; \$52.3 million for Debt Service; \$36.8 million for Revenue-Funded Capital; \$23.9 million for General Reserves; and \$17.1 million for Non-Personnel Services, and \$18.6 million for Materials and Supplies, Programmatic Projects and Equipment. The net increase of \$4.7 million from FY 2015-16 reflects increases of \$0.1 million in Personnel, \$0.7 million in Services of Other Departments, \$17.8 million in General Reserve, and \$1.5 million in Non-Personnel Services, and \$0.5 million for Materials and Supplies, Programmatic Projects, and Equipment offset by a decrease of \$11.2 million in Debt Service and \$4.2 million in Capital/Revenue Reserve.

The Wastewater Enterprise's FY 2017-18 Uses of Funds are \$307.3 million, a \$29.6 million increase or 10.7 percent from FY 2016-17. It includes \$68.9 million in Personnel; \$63.3 million in Services of Other Departments; \$76.2 million in Debt Service; \$45.0 million in Revenue-Funded Capital; \$18.1 million in General Reserve; \$17.3 million for Non-

Personnel Services, and \$18.5 million for Materials and Supplies, Programmatic Projects, and Equipment. The net increase of \$29.6 million from FY 2016-17 reflects increases of \$1.8 million in Personnel, \$23.9 million in Debt Service, \$8.2 million in Capital/Revenue Reserve, \$1.8 million in Services of Other Departments, Non-Personnel Services, and Materials and Supplies offset by a decrease of \$6.1 million in General Reserve and Programmatic Projects.

Personnel

The FY 2016-17 Personnel budget is \$67.1 million. It includes \$46.4 million for salaries and \$20.7 million for fringe benefits, a net overall increase of \$0.1 million as compared to prior year. The decrease in salaries of \$0.3 million from FY 2015-16 includes: elimination of four positions offset by the reassignment of one position from Infrastructure to the Wastewater Environmental Engineering Division, salary adjustments based on labor agreements and the substitution of one position class to meet demands of the department.

Mandatory Fringe Benefits are budgeted at \$20.7 million and includes funding for retirement and healthcare costs. This budget is determined by salaries and headcount for healthcare costs, including retirement and social security. The net increase of \$0.4 million from the FY 2015-16 budgets reflects adjustments to salaries and retirement and health benefit rates.

The 2017-18 Personnel budget is \$68.9 million, a \$1.8 million increase, or 2.7 percent from FY 2016-17. The increase includes: a \$0.1 million increase in salaries resulting from adjustments to labor agreements, the addition of one new position, and by a \$1.7 million increase in fringe benefits resulting from higher retirement rates.

Debt Service

The FY 2016-17 Debt Service is budget at \$52.3 million based on principal and interest payments on outstanding senior-lien revenue bonds issued to fund the Sewer System Improvement Program (SSIP) and other Wastewater Capital Improvement Projects. This reflects a decrease of approximately \$13.0 million or 18 percent from the FY 2015-16 adopted budget of \$52.3 million (net of subordinate debt and miscellaneous fees) mainly due to a near-term reduction in debt service related to the Wastewater 2013 Series A bonds, which refunded both the 2003 Wastewater bonds as well as the State Revolving Fund loans.

The FY 2017-18 Debt Service is budgeted at \$76.2 million, a \$23.9 million or 45.7 percent increase from the FY 2016-17 budget. The increase is primarily due to the issuance of the 2016 Series AB revenue bonds in May 2016.

Services of Other Departments

The FY 2016-17 Services of Other Departments budget is \$61.9 million to support services provided by other City departments to the Wastewater Enterprise. These services include City-wide dispatch, City attorney fees, sewer cleaning, facilities maintenance, and fleet maintenance, among other services. The \$0.7 million increase from the FY 2015-16 reflects an increase in SFPUC administrative support services and power costs partially offset by decreases in sewer repair planned usage.

The FY 2017-18 Services of Other Departments budget is \$63.3 million, a \$1.4 million increase or 2.3 percent from FY 2016-17. The increase primarily reflects an increase in power costs as well as administrative support services.

Revenue-Funded Capital

The FY 2016-17 Revenue-Funded Capital budget is \$36.8 million, a \$4.2 million decrease from FY 2015-16. This budget funds the revenue portion of the capital program approved and funded through a supplemental appropriation. The Renewal and Replacement (R&R) program is part of Wastewater's Capital Program, specifically for renewal of the collection system and treatment plant improvements.

The FY 2017-18 Revenue-Funded Capital budget is \$45.0 million, an \$8.2 million increase or 22.3 percent from FY 2016-17. The increase is consistent with the policy to optimize the value and reliability of all assets.

Non-Personnel Services

The FY 2016-17 Non-Personnel Services budget is \$17.1 million and funds services for the Enterprise including equipment and facility maintenance, travel, training, memberships, entertainment and promotion expenses, utilities, professional services, and rent. The increase of \$1.0 million from the FY 2015-16 budget funds increases in professional services to support planning and regulatory services, and biosolids/grit hauling and disposal service contract increases.

The FY 2017-18 Non-Personnel Services budget is \$17.3 million, an increase of \$0.2 million or 1.2 percent from FY 2016-17. The increase funds expected increases to biosolids/grit hauling and disposal service contract.

Materials and Supplies

The FY 2016-17 Materials and Supplies budget is \$10.2 million and funds materials and supplies, including equipment maintenance supplies, sewage treatment supplies, office and safety supplies, fuel for equipment, vehicles and portable generators, and software licenses. The increase of \$0.1 million from FY 2015-16 reflects projected costs for sewage treatment supplies used in various processes of wastewater treatment and City-wide odor control.

The FY 2017-18 Materials and Supplies budget is \$10.4 million, an increase of \$0.2 million or 2.0 percent from FY 2016-17. The increase reflects higher costs for equipment, and maintenance supplies.

Programmatic Projects

FY 2016-17 Programmatic Projects are budgeted at \$7.5 million to support facilities maintenance programs. The \$0.2 million, or 2.7 percent, increase from FY 2015-16 reflects increased funding for the Community Benefits Program, including workforce development, low impact design programs such as the sidewalk garden grants and green infrastructure development programs.

FY 2017-18 Programmatic Projects are budgeted at \$7.2 million, a decrease of \$0.3 million or 4.0 percent from FY 2016-17. The decrease reflects one-time costs associated with the Community Benefits Program.

General Reserves

The FY 2016-17 General Reserves budget is \$23.9 million. The General Reserve is used to balance budgeted fund sources and uses when budget revenues exceed budgeted expenditures. The \$17.8 million increase from the FY 2015-16 budget reflects increases in Sewer Service Charges revenue and a flat budget.

The FY 2017-18 General Reserve budget is \$18.1 million, a decrease of \$5.8 million or 24.3 percent from FY 2016-17 due to increases mainly in debt service and a reserve to fund unanticipated expenses.

Equipment

The FY 2016-17 and FY 2017-18 Equipment budget is \$0.9 million. This budget funds equipment required to support the Enterprise's operations. The \$0.2 million increase reflects the costs of several large vehicles needed for the continual maintenance of the City's vast sewer system network.

Authorized and Funded Full-Time Equivalents (FTEs)

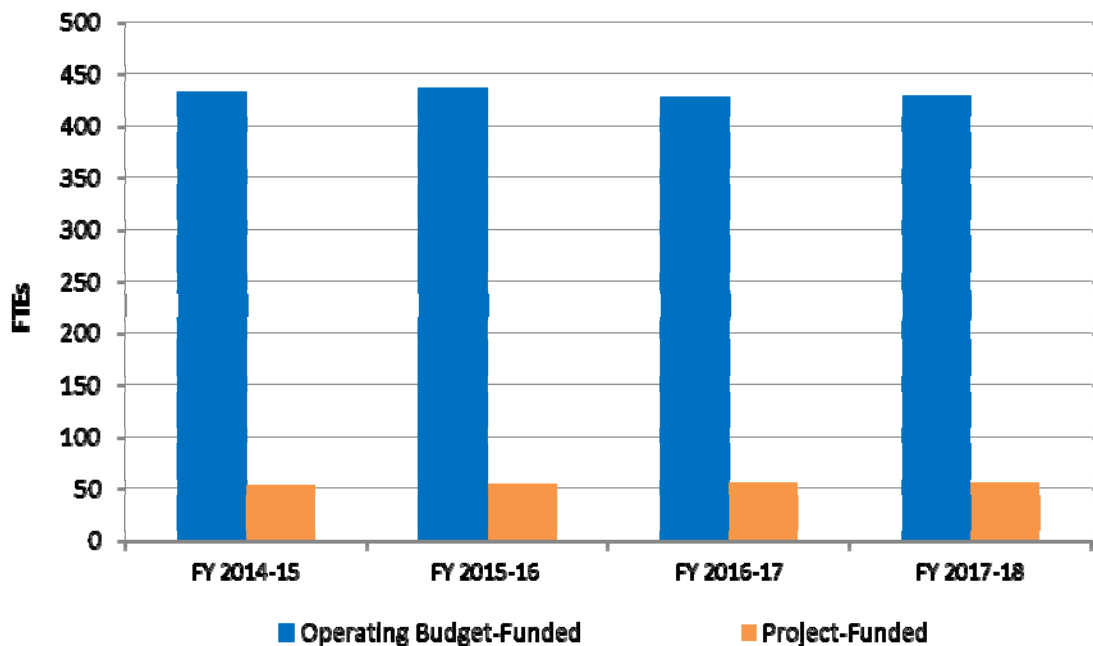
Table C2 shows a breakdown of positions by position type for FY 2014-15 to FY 2017-18.

Table C2. Wastewater Enterprise Authorized and Funded Full-Time Equivalents (FTEs)

Position Type	FY 2014-15 Adopted Budget	FY 2015-16 Adopted Budget	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs FY 2015-16 Adopted Budget	FY 2017-18 vs FY 2016-17 Adopted Budget
Permanent Positions	429.03	433.14	423.98	425.95	(9.16)	1.97
Temporary Positions	3.91	3.69	3.55	3.46	(0.14)	(0.09)
Subtotal Operating Budget-Funded	432.94	436.83	427.53	429.41	(9.30)	1.88
Project-Funded Positions	53.81	54.50	55.50	56.27	1.00	0.77
Total Positions	486.75	491.33	483.03	485.68	(8.30)	2.65

Chart C3 shows the operating budget and project-funded positions four-year trend.

Chart C3. Wastewater Enterprise Operating and Project FTEs Trend



As noted above in Table C2, the Wastewater Enterprise full-time equivalent (FTE) operating, project-funded, and temporary positions for FY 2016-17 is 483.03 FTEs, a 8.30 FTE decrease from FY 2015-16. Chart C3, illustrates the trend of the number of operating and project-funded FTEs from FY 2014-15 to FY 2017-18. FY 2016-17 permanent positions decreased by 9.16 FTEs, from 433.14 in FY 2015-16 to 423.98 FTEs in FY 2016-17. The net Permanent Position decrease includes: a 5.16 FTE increase in salary savings to adjust for vacancies and the elimination of four long-term vacant positions.

The number of temporary positions from FY 2015-16 to FY 2016-17 decreased by 0.14 FTEs, from 3.69 FTEs in FY 2015-16 to 3.55 FTEs in FY 2016-17 resulting from a slight reduction in temporary salaries funding.

Project-funded positions increased by 1.00 FTEs from FY 2015-16 to FY 2016-17, from 54.50 FTEs in FY 2015-16 to 55.50 FTEs in FY 2016-17. The increase reflects the reassignment of one position, an Associate Engineer, from the Infrastructure Bureau to support Wastewater's Environmental Engineering Division.

The FY 2017-18 Wastewater Enterprise FTE count increased by 2.65 FTEs from FY 2016-17 based on: adjustments to salary savings to reflect the projected vacancy rate;

adjustments to the temporary salaries to reflect changes to the temporary salaries budget; and the addition of one new project-funded position, a utility specialist to support compliance of the Stormwater Control Ordinance.

Four-Year Approved Rates and Charges

Rates and Charges

San Francisco City Charter Requirements

In addition to Federal and State guidelines, the City Charter (Sections 8B.125) establishes a number of goals and objectives for the setting of retail sewer rates. A summary of the major goals and objectives appears below:

- Provide sufficient revenues for the operation, maintenance and repair of the Enterprise consistent with good utility practice;
- Provide sufficient revenues to improve or maintain financial condition and bond ratings at or above levels equivalent to highly-rated utilities of each Enterprise;
- Meet requirements and covenants under all bond indentures;
- Set rates based on cost of service;
- Investigate and develop capacity fees for new development;
- Investigate and develop rate-based conservation incentives;
- Investigate and develop affordability programs for low-income customers.

Rate Objectives

Sewer rates generate revenue from individual customers to meet the cost of serving each customer class. The SFPUC has identified a series of objectives to be reflected in its rate structure. Those objectives include:

- **Conservation.** The residential rate structure should encourage customers to conserve water and to use water and sewer services in a responsible manner that promotes environmental stewardship.
- **Simplicity.** The residential rate structure should be easy to communicate to customers, and customers should be able to use their knowledge of the rate structure to reliably predict the amount of their water and sewer bill.
- **Stability.** The residential rate structure should provide a reliable revenue stream to the Wastewater Enterprise, and a small change in residential use patterns should not lead to large changes in revenues.
- **Fairness.** The residential rate structure should ensure that all customers pay their fair share of costs. Cost of service serves as a basis for evaluating the equity.

Appendix C and D of this budget document provides more information about the SFPUC Rates Policy and the SFPUC Ratepayer Assurance Policy.

2014 SFPUC Water and Wastewater Cost of Service Study

As required by the City Charter (Sections 8B.125), the SFPUC must complete a cost of service study by an independent consultant at least every five years. The most recent cost of service study was completed in FY 2013-14. The findings and recommendations of the independent cost of service study, entitled *SFPUC Water and Wastewater Cost of Service*

Study, were reviewed by the SFPUC Commission on May 13, 2014. In addition to the rate objectives listed above, the SFPUC has a goal that the combined water and sewer bill, for average consumption, does not exceed 2.5 percent of the average household income in San Francisco. This affordability index is consistent with the Federal Environmental Protection Agency guideline for utility cost affordability. The 4-year rate package, adopted by the Commission in May 2014, included retail water and wastewater rates for FY 2014-15 through FY 2017-18 as well as water and wastewater capacity charges, connection fees, and miscellaneous charges.

Throughout the rate-setting process, SFPUC staff worked closely with the Rate Fairness Board during the development of rates to meet Charter and Commission objectives. During this rate-setting cycle, the Rate Fairness Board met ten times, between July 2013 and April 2014, to evaluate staff proposals and to assess their impacts on customers. The final rates package adopted by the SFPUC Commission in May 2014 addresses rate policy objectives established by the Commission and reflected priorities contained in the Water Enterprise FY 2015-16 and FY 2016-17 budgets, as approved by the Commission in February 2016.

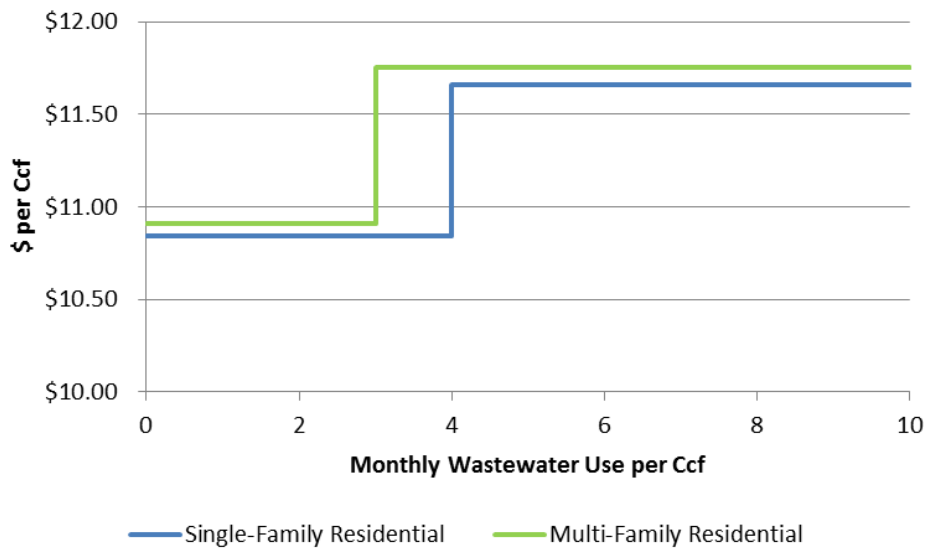
SFPUC staff also participated in an extensive public outreach program, delivering over 100 presentations on the proposed rate adjustments to organizations representing a wide spectrum of community, environmental, business, labor and other interests. Outreach was also made through the SFPUC's website, which includes tools for customers to estimate rate impacts based on their current usage. In compliance with California Proposition 218 which requires proposed rates be publicized through specific mailings, the proposed rates were mailed more than 45 days prior to the April 22, 2014 hearing to approximately 215,000 ratepayers and property owners; in response, the SFPUC received approximately 125 formal protest letters. Through the rate adoption, the Commission affirmed that the SFPUC met all requirements of the City Charter and Proposition 218.

Residential Rate Structure

Single-family residential customers and multi-family Wastewater customers are separated into separate classes, allowing rates to be designed to reflect the particular usage characteristic of each group of residential customers. Separate classes ensure each customer group pays their fair share of costs. As a result of the independent 2014 Water and Wastewater Cost of Service Study, the Commission adopted residential rate structures that phase out the second tier for all residential wastewater rates by FY 2017-18. This rate structure change was based on recommendations made in 2014 Water and Wastewater Cost of Service Study to better align the SFPUC with utility industry best practices.

Chart C4 shows the rate structure for single-family residential and multi-family residential.

Chart C4. FY 2016-17 Wastewater Enterprise Two-Tier Residential Rate Structure



Non-Residential Rate Structure

Non-residential customers pay rates based on the unit costs of volume, oil and grease (O/G), total suspended solids (TSS), and chemical oxygen demand (COD), which are discharged to the Wastewater sewers. The latter three components are means of measuring the pollutant loading of a customer's discharge. Pollutant loadings are identified through individual sampling of significant dischargers or are based on a standard strength for dischargers engaged in the same or similar business activity. Table C3 shows unit costs for the approved rates through FY 2017-18, and an illustrative rate based on normal strength sewage.

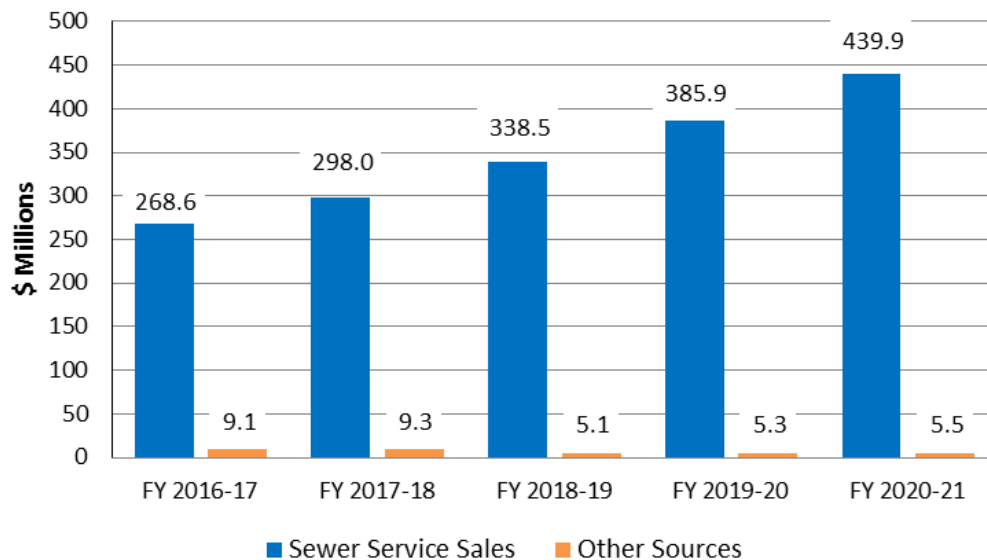
Table C3. Summary of Approved Wastewater Rates

\$	Approved Rates			
	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Single-Family Residential				
First Four Ccf/Month	\$ 9.06	\$ 9.82	\$ 10.84	\$ 12.40
All Additional	11.23	11.34	11.66	12.40
Multi-Family Residential				
First Three Ccf/Month	9.24	9.95	10.91	12.40
All Additional	\$ 11.48	\$ 11.51	\$ 11.75	\$ 12.40
Non-Residential				
Volume per Ccf	6.15	6.45	6.90	7.66
COD per lb.	0.44	0.46	0.49	0.55
SS per lb.	0.83	0.87	0.93	1.03
O/G per lb.	0.87	0.91	0.97	1.08
Normal Strength per Ccf	9.92	10.42	11.15	12.37

Revenue Sources

As an Enterprise department, the Wastewater Enterprise is required to generate sufficient revenues to fund its annual budget and to comply with the conditions of Federal grants, State loans, and bond covenants. The Enterprise derives its revenues from sewer service charges, interest income, and other non-operating income. Sewer service charges produce the vast majority of total revenues received. Chart C5 shows the Wastewater Enterprises Revenue by Source.

Chart C5. Wastewater Enterprise Revenues by Source, FY 2016-17 through FY 2020-21



The following paragraphs describe revenues in detail.

Sewer Service Charges

Prior to 1977, the City funded sewer service costs principally from property taxes, supplemented by a flat fee per connection. Since 1977, the sewer service charge has been the Wastewater Enterprise's primary source of revenue to fund operations. As a recipient of Federal and State grants and a borrower under the State Revolving Fund (SRF) loan program, and under Proposition 218, the City is required to adopt sewer service charges based on each customer class's proportional use of the sewage system and to establish a dedicated source of revenues to pay for operating the system. The use of the sewage system is determined by actual water consumed, which is measured by the Water Enterprise's water meters. For single family residential customers, sewer charges assume an effluent rate of 90 percent of water consumed, and 95 percent for multi-family. Total sewer service sales are projected at \$268.6 million in FY 2016-17, \$14.8 million higher than prior year actuals. FY 2017-18 Sewer Service Charges are projected at \$298.0 million, a \$29.4 million increase consistent with approved rates. Revenues are projected to increase to \$439.9 million by FY 2020-21, based on projected rate increases.

Residential

The sewer service charge applicable to residential service in FY 2016-17 is an inclining block rate structure; however, the second wastewater tier for residential customers will be progressively phased into a unified rate by FY 2017-18. A uniform (i.e. single-tier) residential wastewater rate was adopted by the Commission to better align the SFPUC with utility industry best practices. For single-family residential customers, sewer charges assume a flow factor of 90 percent of water consumed, and multiple-family residential customers receive a flow factor of 95 percent of water consumed. For multiple-family

residential accounts, the billable use in each block is calculated by multiplying the allowed use by the number of dwelling units. An account with ten dwelling units, for example, would be allowed 30 discharge units in the first block per month. There is no adjustment for vacant units in multi-family dwellings.

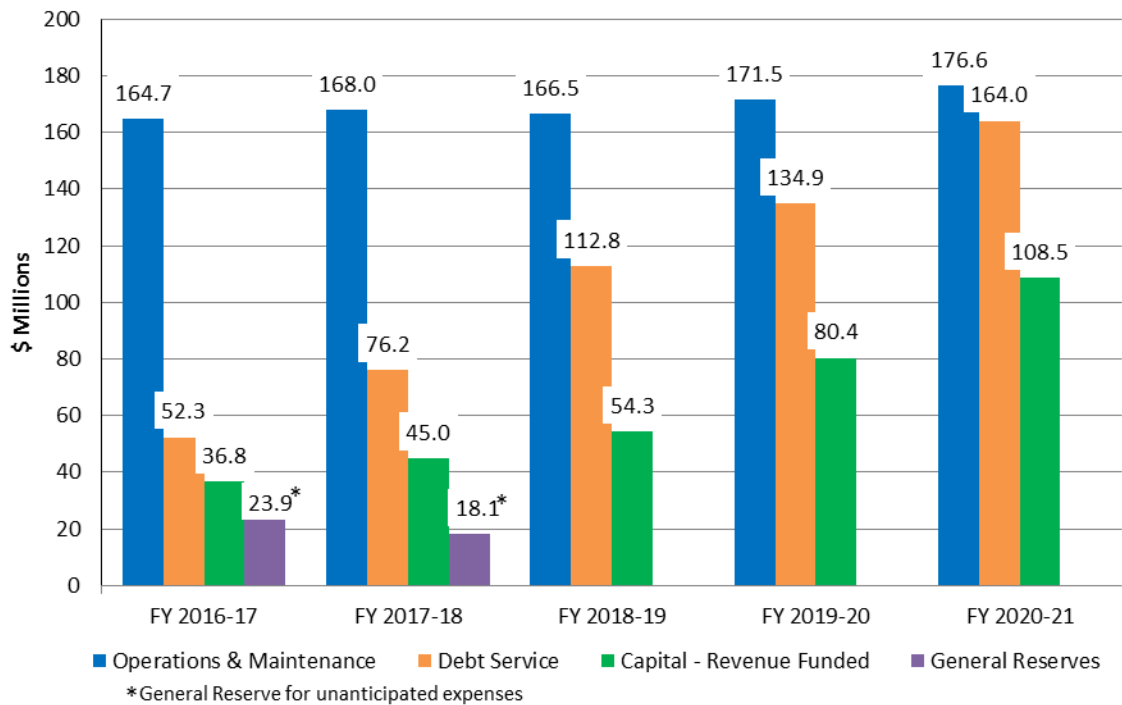
Non-Residential

For non-residential customers, the sewer service charge is calculated based on the volume of wastewater discharged and the pounds of pollutants contained in that discharge. For non-residential customers, sewer charges assume a flow factor of 90 percent of water consumed. The charges for customers with sampled discharges are billed based on their specific waste characteristics. Other customers are billed based on the standard waste characteristics for their respective business activity. A customer or business activity that discharges high-strength wastes is charged a higher rate than a customer or business activity that discharges wastes similar to residential customers. In addition to the costs shared with residential customers, all non-residential customers are responsible for the costs of the Wastewater Enterprise's pretreatment program. The pretreatment program monitors customers with high-strength wastes to ensure prohibited substances are not discharged to the sewage system. Therefore non-residential customers cover these costs and residential customers do not bear any cost responsibility for the pretreatment program.

Summary of Projected Expenses

Operations and maintenance costs are the largest Wastewater Enterprise expense category; however, debt service is forecast to grow by 214 percent between FY 2016-17 and FY 2020-21 due to investment in the multi-billion dollar Sewer System Improvement Program (SSIP). The SSIP is focused on reliability, resiliency, flood minimization, essential seismic upgrades, and the renewal and replacement of infrastructure that is beyond its useful life. These investments are essential for the protection of public health and the environment, including protection of the San Francisco Bay and the Pacific Ocean. There is also an increase of 16 percent in Capital/Revenue-funded projects. This represents a policy decision to optimize the value and reliability of assets, including hundreds of miles of smaller sewers, by annually increasing the Renewal and Replacement (R&R) funding. Due to the nature of wastewater operations, which rely on personnel, chemicals, and electricity, these multi-billion-dollar capital investments are not expected to reduce the annual operating budgets. As the SFPUC brings new capital wastewater assets on-line, the impact on future operating budgets will be further refined. Chart C6 shows projected expenses for FY 2016-17 to FY 2020-21.

Chart C6. Wastewater Enterprise Budgeted and Projected Operating Expenses for FY 2016-17 to FY 2020-21



Operations and Maintenance Expenses

Operations and Maintenance expenses are budgeted \$164.7 million in FY 2016-17 and \$168.0 million in FY 2017-18, a 2 percent increase. Expenses are projected to increase by three percent annually for FY 2018-19 to FY 2020-21.

Debt Service and Lease Payments

Debt service includes principal and interest payments on senior lien revenue bonds used to finance system improvements. As of June 30, 2016, the Wastewater Enterprise had \$978.1 million of principal outstanding, as listed in Table C4.

In addition to debt service payments on existing long-term debt, the Wastewater Enterprise utilizes its \$500 million commercial paper program (CP) to meet interim expenditure and encumbrance needs relating to various capital projects. As of June 30, 2016, the Wastewater Enterprise had \$71 million of tax-exempt Commercial Paper Notes outstanding, all of which are secured by and payable from Net Revenues on a subordinate basis to the payment of debt service on revenue bonds. Table C4 shows Wastewater Enterprise's Outstanding Revenue Bonds and Certificates of Participation (COP).

Table C4. Outstanding Wastewater Enterprise Revenue Bonds and Certificates of Participation (COP)

\$ Thousands	Outstanding as	
Series	Original Par	of 06-30-16
2010 A (Refunding)	47,050	47,050
2010 B (New Money)	192,515	192,515
2013 A (Refunding)	193,400	98,585
2013 B (New Money)	331,585	331,585
2016 A (New Money)	240,580	240,580
2016 B (New Money)	67,820	67,820
Total Outstanding		\$ 978,135

In FY 2015-16, the Enterprise issued \$308.4 million of revenue bonds, Series 2016 AB to finance and refinance (through the retirement of commercial paper notes) certain capital projects benefiting the Wastewater Enterprise. The 2016 Series A Bonds were designated by the SFPUC as "Green Bonds." The purpose of such designation is to allow investors to invest directly in bonds which finance environmentally beneficial projects.

Future debt issuances to fund renewal and replacement and SSIP capital projects are expected to total approximately \$1.7 billion for FY 2016-17 through FY 2020-21. The repayment of principal and interest on these future debt issuances has been incorporated into the Commission's approved rates through FY 2017-18 as well as projected rates through FY 2025-26.

Revenue-Funded Capital

The total revenue-funded capital in FY 2016-17 is \$49.2 million. Revenue-funded capital project spending, averaging \$87.9 million per year, from FY 2016-17 to FY 2025-26, is included in the Ten-Year Capital Plan to accelerate the replacement of aging sewers.

Revenue Requirement

The annual expenditures for operations and maintenance, debt service, and renewal and replacement make up the revenue requirement of the Wastewater Enterprise. The income derived from interest and non-operating income is subtracted from the annual revenue requirement to determine the net revenue requirement to be met from sewer service charges. Rates have been approved through FY 2017-18, with the next rate-setting cycle to begin with an independent rate study in the fall of 2016 as required at least every five years by the City Charter.

Wastewater Enterprise Capital Improvement Program (CIP)

The Wastewater Enterprise is responsible for the operations, maintenance, capital improvements and repair/replacement of the following wastewater facilities and assets:

- Four Water Pollution Control Plants including: Southeast Treatment Plant, Oceanside Treatment Plant, North Point Wet Weather Facility, and Treasure Island Treatment Plant;
- Twenty-nine Pump Stations, including those in Mission Bay, in San Francisco; twenty-eight sanitary pump stations on Treasure and Yerba Buena Islands and six stormwater pump stations on Treasure Island;
- Nine Transport/Storage Facilities with 199 million gallons of capacity for combined sewage;
- Three Bay and one Ocean Outfalls off of San Francisco;
- One Bay Outfall off of Treasure Island;
- Thirty-six Combined Sewer Discharge Structures in San Francisco;
- Fifty stormwater outfalls on Treasure and Yerba Buena Islands;
- Nine hundred and ninety-three miles of Sewers, Tunnels, Force Mains and Transport/Storage facilities;
- Two chemical feed stations for odor control in San Francisco;
- Six continuous deflective separation (CSD) units for stormwater management in San Francisco; and
- One Southeast Community Facility in San Francisco.

San Francisco dry-weather wastewater is treated by two main treatment plants, Southeast and Oceanside, with a combined dry-weather design capacity of 107 MGD. During wet-weather, three plants, Southeast, Oceanside and North Point Facility, with a peak design capacity of 465 MGD, treat the combined sanitary and stormwater flows which are called “combined sewage”. Wastewater generated at Treasure Island is treated at the Treasure Island facility with a dry-weather capacity of 2 MGD. The treatment plants are:

- **North Point Wet Weather Facility:** The North Point Wet Weather Facility has been in operation since 1951. The facility provides primary-level treatment and disinfection of combined sewage collected in the north part of the City during rainstorms. The facility has a treatment capacity of 150 MGD. Treated combined sewage is discharged approximately 800 feet into the San Francisco Bay. In a typical year, the North Point Wet-Weather Facility treats about 1.3 billion gallons of combined sewage.
- **Southeast Treatment Plant:** The Southeast Treatment Plant was built in 1952 and has been expanded several times since. The Plant treats an average dry-weather flow of approximately 58 MGD and discharges into the San Francisco Bay through an 810 foot-long pipe. The Plant has a peak wet-weather capacity of 250 MGD which is discharged through both the 810 foot-long pipe into the Bay and an auxiliary wet-weather-only outfall into Islais Creek. In a typical year, the Southeast Treatment Plant treats about 25 billion gallons of combined sewage.
- **Oceanside Treatment Plant:** Completed in 1993, the Oceanside Treatment Plant treats an average dry-weather flow of approximately 16 mgd and has a total capacity of 65 MGD during wet-weather. It treats wastewater from the west side of the City. Treated wastewater is discharged from the plant to the Pacific Ocean through the Southwest Ocean Outfall 4.5 miles offshore. In a typical year, the Oceanside Treatment Plant treats approximately 6.6 billion gallons of combined sewage. In 2004, the Oceanside Plant was awarded the U.S. Environmental Protection Agency's "Plant of the Year" Award over similar-sized treatment plants

around the nation and in 2014 the Plant received the National Association of Clean Water Agencies Platinum Award for 18 consecutive years of compliance.

- **Treasure Island Treatment Plant:** The San Francisco Public Utilities Commission (SFPUC), under a 1997 Cooperative Agreement between the U.S. Navy, agreed to operate and maintain the utility systems at Treasure Island, including the Treasure Island Plant, while the Navy retains ownership of all the utility systems. The Plant provides secondary treatment of wastewater from facilities on Treasure Island and Yerba Buena Island. It serves a population of approximately 2,400 and has a design capacity of 2 MGD; daily influent flows measured between December 2005 and June 2009 ranged between 0.35 and 0.50 MGD.

Wastewater Enterprise Ten-Year Capital Plan

This Plan includes \$4.25 billion of the SSIP program including the completion of the \$2.9 billion Phase I and the initiation of the Phase II which will continue beyond this Ten-Year Plan. The Plan also includes significant increases in the R&R program and essential investments in Treasure Island, Ocean Beach and the Southeast Community Facility. Table C5 shows total projected costs over ten-year period.

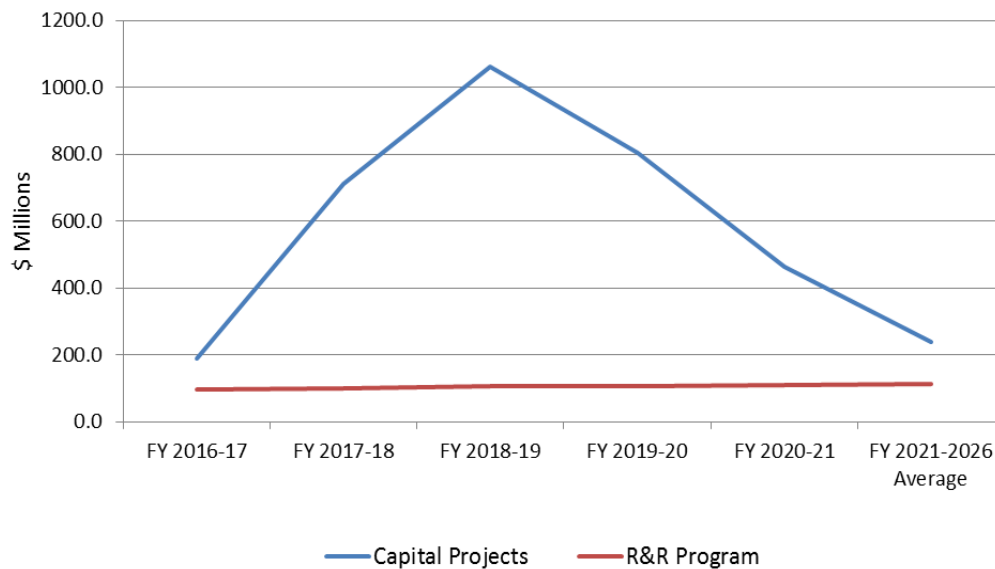
Table C5. Wastewater Enterprise Ten-Year Capital Plan

\$ Thousands							
Program/Project	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-2026	Plan Total
Spending Plan							
Sewer System Improvement Program							
Program Wide Management	6,000	6,000	16,500	16,500	16,500	63,500	125,000
Land Reuse	28,108	-	-	-	-	-	28,108
Treatment Facilities	130,055	573,008	506,841	377,977	192,752	677,012	2,457,645
Sewer/Collection System	-	70,319	426,764	348,036	27,528	294,864	1,167,511
Stormwater Management/Flood Control	11,758	21,233	58,724	14,320	205,336	159,384	470,755
Total SSIP	175,921	670,560	1,008,829	756,833	442,116	1,194,760	4,249,019
Renewal and Replacement							
Collection System - Condition Assessment	3,781	3,327	3,443	-	-	-	10,551
Collection System - Sewer Improvements	57,598	59,902	62,299	64,790	67,382	387,222	699,193
Collection System - Spot Sewer	21,121	21,965	22,844	23,757	24,708	78,906	193,301
Collection System - Salt Water Intrusion	1,100	1,139	1,179	1,219	1,262	7,005	12,904
Treatment Plant Improvements	13,715	14,402	15,121	15,878	16,673	96,733	172,522
Total R&R	97,315	100,735	104,886	105,644	110,025	569,866	1,088,471
Treasure Island - New Wastewater Treatment Facility	-	20,463	22,240	21,090	-	-	63,793
Wastewater Facilities & Infrastructure							
Ocean Beach Protection	2,000	4,000	4,000	6,000	-	-	16,000
Islais Creek Outfall	5,000	10,000	-	-	-	-	15,000
Southeast Community Center Improvements	5,000	5,000	25,000	20,000	20,000	-	75,000
Total Wastewater Facilities & Infrastructure	12,000	19,000	29,000	26,000	20,000	-	106,000
Total Wastewater	285,236	810,758	1,164,955	909,567	572,141	1,764,626	5,507,283
Revenues							
Revenue	43,000	45,000	48,000	74,000	102,000	507,366	819,366
Revenue Bonds	230,136	763,258	1,114,455	833,067	467,641	1,244,760	4,653,317
Capacity Fee	12,100	2,500	2,500	2,500	2,500	12,500	34,600
Total	285,236	810,758	1,164,955	909,567	572,141	1,764,626	5,507,283
Total San Francisco Jobs/Year	2,544	7,232	10,391	8,113	5,103	15,740	49,125

The SFPUC is required to develop a Ten-Year Capital Plan. Safe and reliable wastewater service which protects the public health and the water environment of the San Francisco Bay and Ocean are the most critical objectives of the Wastewater Enterprise. The purpose of the capital investment is to extend the useful life of the infrastructure and provide continued reliable and compliant operation of the system components. Therefore, understanding the long-term capital needs of the system and determining how to finance these capital needs are essential to the mission of the SFPUC.

The Ten-Year Capital Plan is developed each year by the SFPUC and is approved by the Commission early in the budget development process. The Ten-Year Capital Plan informs and guides managers, policy makers, elected officials, and the public by providing the proposed long-term capital program, projects, and investments. The Ten-Year Capital Plan also guides the Ten-Year Financial Plan and the rate analysis approved every five years. The Ten-Year Capital Plan is not a budget; it is the plan that guides the annual capital budget. As the budget process progresses through the spring and into final adoption in the summer, the annual CIPs can be revised, and final projects, costs, and totals for the two annual CIPs can change. The annual CIPs are based on the Ten-Year Capital Plan, but they do not always match by project or dollar amount.

Chart C5. Wastewater Enterprise Ten-Year Capital Plan Trend



The Ten-Year Capital Plan includes the Renewal and Replacement (R&R) program, which is partially revenue-financed, Sewer System Improvement Program (SSIP), and improvements to Treasure Island, and other Wastewater Facilities and Infrastructure which are debt financed.

Capital Program

The Ten-Year Capital Plan (Table C5 and Chart C5) shows total project costs for the Wastewater Enterprise of approximately \$5.5 billion of which \$4.2 billion is for the SSIP, the remainder is for R&R and Treasure Island. Capital investments during the ten-year period are in the following areas:

- Treatment Facilities, \$2,457.6 million;
- Sewer/Collection System, \$1,167.5 million;
- Collection System Improvements, \$915.9 million;
- Flood Control, \$470.7 million;
- Treatment Plant Improvements, \$172.5 million;
- Program-Wide Management, \$125.0 million;
- Wastewater Facilities & Infrastructure, \$106.0 million;
- Treasure Island Capital Improvements, \$63.8 million;
- Land Reuse, \$28.1 million

Sewer System Improvement Program (SSIP), \$4.2 billion

The San Francisco Public Utilities Commission endorsed a \$6.9 billion Sewer System Improvement Program (SSIP) to help the Wastewater Enterprise meet the SFPUC goals and levels of service for operational reliability, regulatory compliance, effective stormwater management, community benefits, climate change adaptation, economic and environmental sustainability and ratepayer affordability. The SSIP will be implemented in three phases over the next 18 years. In March 2016, the commission approved a new budget and schedule for the SSIP. Phase 1 increased from \$2.7 billion to \$2.9 billion.

The SSIP evaluated the current treatment and collection system to provide a long-term strategy for wastewater and stormwater management to ensure reliability and resilience. The SSIP is based on a comprehensive planning effort that: (1) outlines a long-term strategy for San Francisco's wastewater and stormwater management; (2) addresses specific system deficiencies, aging infrastructure, and future operational and repair/replacement needs; and (3) provides a roadmap for future capital improvement programs, ensuring reliable service meeting all regulatory requirements. The SSIP will be implemented over a 20 to 30-year timeframe, a portion of which is addressed in the Ten-Year Capital Plan.

The Ten-Year Capital Plan as adopted anticipates approximately \$4.5 billion of investments in the SSIP, focusing on projects in the following categories:

- **Program-Wide Efforts: \$125.0 million** – the SSIP is a series of capital improvement projects focused on improving the wastewater system to meet the present and future needs of the City. The Program-Wide Management Project will support the SSIP implementation, providing condition assessments (facility inspections), project definition and prioritization, public outreach and education, analysis of the impacts of climate change, sustainability evaluation, and general program management (program controls, change control, constructability). The initial focus will be on scope optimization and program implementation of the \$2.9 billion SSIP Phase 1; and the continued development of programmatic schedules, construction cost estimates; and rates and cash flow projections for the SSIP.
- **Land Reuse \$28.1 million** – this program addresses long-term planning and ongoing needs for physical space to support SSIP projects by upgrade and/or replacing aging infrastructure. Over the next ten years, multiple construction projects have been planned at SEP to upgrade and/or replace aging infrastructure. Each of these potential projects will require staging areas as well as secured space for physical storage of equipment. Space is also required for large scale physical modeling to test equipment for collection system facilities projects prior to installation.
- **Treatment Facilities: \$2,457.6 million** - projects include the Bayside Biosolids (Digester) Project which funds the planning, design and construction of a new digester and solids facility to be located in the southeast area of San Francisco, improvements to the combined sewer transport storage and near shore combined sewer discharge structures, major improvements to: the liquid treatment at the Southeast Water Pollution Control Plant; the North Point Wet Weather Facility; North Shore Pump Station and associated outfalls, and the Oceanside Water Pollution Control Plant, Westside Pump Station and Westside Force Main.
- **Sewer/Collection System: \$1,167.5 million** – includes the proposed Central Bayside System Improvement Project to provide system enhancements to the Channel Drainage Basin, and needed redundancy for the existing 66-inch Channel Force Main, hydraulic improvements to sewers/pump stations, and improvements to stormwater management through elements of both grey and green infrastructure. Also provides funding for replacement of existing sewers to increase hydraulic capacity, transportation/storage and combined sewer discharge structures, pump stations and force mains.
- **Stormwater Management/Flood Control: \$470.7 million**
 - o **Drainage Basins** - In Phase I of the SSIP, SFPUC will build, monitor and evaluate the effectiveness of eight green infrastructure projects to minimize stormwater impacts throughout San Francisco's eight urban watersheds. Green Infrastructure (GI) improvements will sustainably augment the collection system for the

management of stormwater flows. These projects will support the levels of service goals to minimize flooding, provide benefits to impacted communities and achieve economic and environmental sustainability. Ancillary benefits from GI projects may include: reduction of energy use (reduced pumping and treatment), potable water conservation, groundwater recharge, and improved community aesthetics.

- o Flood Resilience - This group of projects will address combined sewer flooding caused by heavy rain. The primary planning effort is comprised of two major components: (1) an infrastructure component that identifies capital improvement priorities to reduce flood risk City-wide, and (2) of flood risk reduction measures including things like providing financial incentives to property owners to flood proof their properties, amending the Building Code, providing options for affordable flood insurance, and enhancing City-wide coordination for storm response.
- o Green Infrastructure - Includes construction of green infrastructure to use permeable surfaces and engineered subsurface systems to manage stormwater. One important goal of SSIP is to use peak flow attenuation (slowing stormwater) and volume reduction (on-site management of stormwater). The majority of the projects will be in the right-of-ways and sometimes include: sidewalk bulb-outs, vegetation, permeable sidewalks and parking spaces, subsurface stormwater storage, and on-site reuse of stormwater for irrigation.
- o Advanced Rainfall - This SSIP project will provide the SFPUC with better rainfall forecasting capabilities, especially 4-8 hours in advance of an event, which will be beneficial in managing wet weather flows in the combined collection system and preparing for flooding. This decision support tool will rely on the strategy and concepts for real-time control being developed under the SSIP, and represents the first step in implementing system-wide real-time control.

Renewal and Replacement (R&R) Program

The Wastewater R&R program includes two major categories: sewer replacements and treatment facilities.

Collection System, \$915.9 million

Condition Assessment Project – Includes cleaning and inspection of large diameter sewers, transport/storage boxes and collection system discharge/overflow structures. The results of the inspection program will inform the R&R Spot Repair and Collection System Sewer Improvements Programs, as well as the SSIP regarding needed sewer repairs. This project will assist with the on-going gathering of data necessary for the Wastewater Enterprise Collection Systems Asset Management Program.

Sewer Replacement/Improvement Program – This program maintains the existing functionality of the sewage collection system and includes planned and emergency repairs and replacement of structurally inadequate sewers. Failure of the collection system will reduce the City's ability to handle and dispose of wastewater and stormwater which can lead to public health, safety and environmental risks and non-compliance with State discharge permit. Projects are identified utilizing an asset management approach which factors in physical condition, age, location, risk, public safety, paving schedule and other factors. The estimated annual cost for sewer replacement beginning in FY 2016-17 is approximately \$57.6 million. This amount increases to \$85.1 million by FY 2025-26 to replace 15 miles of sewer per year.

Collection System Spot Sewer Repair Project – This project provides as-needed contingency-based repairs of existing sewer pipes for a city block or less in length. FY 2016-17 and FY 2017-18 budgets are approximately \$21.1 million and \$22.0 million respectively, which is projected to repair approximately 700 individual spot sewer locations per fiscal year, to meet the targeted levels of service goals. It is anticipated that this base rate of spot repair will continue for the next several years and would ultimately decrease as the overall R&R program continues to be implemented.

Salt Water Intrusion –The R&R Program Collection System Salt Water Intrusion projects will reduce salt water intrusion into the sewer system. Salt water not only corrodes the pipes and concrete of the system, if it reaches the treatment plant in large quantities, it can harm or kill the biological secondary treatment process which in turn will render the treatment plant useless, cause discharge permit violations and harm receiving water quality. Collection system salt water intrusion projects are identified as part of the ongoing Collection System Asset Management Program (CSAMP). Projects will consist of sewer pipeline joint sealing work. FY 2016-17 and FY 2017-18 budgets are approximately \$1.10 million and \$1.14 million, respectively.

Treatment Plants, \$172.5 million

The Treatment Plant Improvement program helps maintain the capacity and reliable performance of the Wastewater treatment facilities owned and operated by the Wastewater Enterprise. This is a continuing annual program to extend the useful life of Wastewater treatment assets including Transport Boxes, Discharge Structures, Pump Stations, Force Mains, Tunnels and Treatment Plants.

The projects are prioritized based upon regulatory compliance, condition assessments, operation staff recommendations and Level of Service goals which were formally adopted as part of the SSIP. The completion of projects under the Treatment Plant Improvement program will increase reliability and efficiency of Wastewater Enterprise facilities and will ensure that the performance of the treatment facilities meets the established levels of service. The estimated annual cost for the treatment plant renewal program, beginning in FY 2016-17, is approximately \$13.7 million. This amount increases to \$21.3 million by FY 2025-26.

Treasure Islands Capital Improvement, \$63.8 million

On October 1, 1997, concurrent with the operational closure of the Treasure Island Naval Station, the City entered into a Cooperative Agreement with the U.S. Navy in which the City agreed to take responsibility for caretaker services on Treasure Island and Yerba Buena Island. As a result of this agreement, the SFPUC provides utility operations and maintenance services for the wastewater and stormwater systems. This project includes \$63.8 million for the New Wastewater Treatment Facility. A new tertiary two-million gallon per day wastewater treatment facility is proposed for the Treasure Island/Yerba Buena Island service area to replace the existing, aged facility. The new treatment facility will include influent screening, a combined primary/secondary treatment process, anaerobic sludge digestion, sludge dewatering and truck load-out, disinfection, odor control, and tertiary treatment.

Wastewater Facilities and Infrastructure, \$106.0 million

- Islais Creek Outfall: \$15.0 million – This project includes improvements to Islais Creek crossing of the effluent pipelines and modifications to the Booster Pump Station at Islais Creek. The project primarily addresses the compromised section of the effluent discharge outfall into the San Francisco Bay.
- Ocean Beach Protection Process: \$16.0 million - This project is to develop comprehensive shoreline management and protection plan in partnership with relevant stakeholders and regulatory agencies and to establish a long-term solution to the erosion issues along Ocean Beach. This long term solution is necessary to protect the integrity of critical wastewater assets that were planned, built, permitted and constructed to protect public health and the environment. These assets include the Lake Merced Transport/Storage facility, the Westside Pump Station and the Oceanside Treatment Plant which are threatened by sea level rise, and erosion at Ocean Beach
- Southeast Community Center Improvements: \$75.0 million – This project focuses on evaluating and improving the functional and operational reliability of the existing Southeast Community Facility by providing infrastructure improvements. The project improvements include efficiency upgrades, building envelope repairs, tenant space reconfigurations and consolidations, structural/seismic, life/safety, and accessibility upgrades.

Table C6 shows the Wastewater Enterprise's CIP for FY 2015-16, FY 2016-17, and FY 2017-18, by major program. The table shows a shift in funding from FY 2016-17 to FY 2017-18 in the SSIP to reflect the March 2016 update to the budget and schedule.

Table C6. Wastewater Enterprise CIP by Major Program

\$ Millions			
Program/Project	FY 2015-16 Adopted Budget	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget
Cost			
Sewer System Improvement Program			
Program Wide Management	24.0	6.0	6.0
Land Reuse	29.3	28.1	-
Treatment Facilities	270.9	130.1	573.0
Sewer/Collection System	74.5	-	70.3
Stormwater Management/Flood Control	23.7	11.8	21.2
Total SSIP	422.3	175.9	670.6
Renewal and Replacement			
Collection System - Condition Assessment	3.7	3.8	3.3
Collection System - Salt Water Intrusion	-	1.1	1.1
Collection System - Sewer Improvements	54.3	57.6	59.9
Collection System - Spot Sewer	19.9	21.1	22.0
Treatment Plant Improvements	13.1	13.7	14.4
Total R&R	91.1	97.3	100.7
Treasure Island - Wastewater Treatment Facility	-	-	20.5
Wastewater Facilities & Infrastructure			
Collection System Division Consolidation	20.0	-	-
Ocean Beach Protection	3.3	2.0	4.0
Islais Creek Outfall	-	5.0	10.0
Southeast Community Center Improvements	-	5.0	5.0
Total Wastewater Facilities & Infrastructure	23.3	12.0	19.0
Financing Cost	71.5	27.6	91.6
Total Cost	608.1	312.9	902.3
Sources			
Revenue (1)	41.0	43.0	45.0
Revenue Bonds	554.1	257.8	854.8
Capacity Fee	13.0	12.1	2.5
Total Sources	608.1	312.9	902.3

(1) FY 2016-17 revenue amount includes \$36.8M funded through the revenue reserve and \$6.2M from project closeouts.

FY 2016-17 and 2017-18 Capital Budget

The Wastewater FY 2016-17 and FY 2017-18 Capital Budget is \$1,215.3 million.

The capital budget includes continuing Renewal and Replacement (R&R) Projects for the Collection System Sewer R&R, spot sewer repair and Treatment Plant Facilities Improvements and significant non-recurring capital expenditures for the Sewer System Improvement Program (SSIP), Treasure Island and other Wastewater Facilities. The budget is funded by a combination of Wastewater Enterprise revenues, Wastewater revenue bonds and capacity fees.

FY 2016-17

The Wastewater Enterprise's Capital Improvement Program (CIP) for FY 2016-17 is \$312.9 million and includes \$285.3 million for Wastewater Capital Projects and \$27.6 million for financing cost. The FY 2016-17 Wastewater Enterprise CIP including financing cost is \$295.2 million less than the FY 2015-16 approved CIP. The decrease is the result of the March 2016 budget and schedule update that shifted SSIP costs from FY 2016-17 to FY 2017-18.

Major projects in the CIP include:

Capital Enhancements included in the SSIP

- \$6.0 million for SSIP Program-Wide Management – Budget to fund SSIP management and implementation including project definition and prioritization, public outreach and education, analysis of the impacts of climate change, sustainability evaluation, and general program controls and management..
- \$28.1 million for Land Reuse program, this program addresses long-term planning and ongoing needs for physical space to support SSIP projects. By upgrading and/or replacing aging infrastructure. Over the next ten years, multiple construction projects have been planned at Southeast Plant to upgrade and/or replace aging infrastructure. Each of these potential projects will require staging areas as well as secured space for physical storage of equipment. Space is also required for large scale physical modeling to test equipment for collection system facilities projects prior to installation.
- \$130.1 million for SSIP Treatment Facilities including the annual funding to plan, design and construction of a new digester and solids handling facility replacing the existing facility at the Southeast Plant (with a total project cost of \$1.3 billion), major improvements to the North Point Facility, North Shore Pump Station, and associated outfalls (with a total project cost of \$614.5 million, and improvements to the Oceanside Water Pollution Control Plant with total project cost of \$379.2 million).
- \$11.8 million for Stormwater Management/Flood Control projects, Low Impact Design (LID) program and SSIP Urban Watershed Assessment to address combined sewer flooding in various areas throughout the city caused by heavy rain.

Renewal and Replacement Projects (Recurring)

- \$83.6 million for Collection System R&R projects including sewer condition assessments which support the Collection System Asset Management program, spot sewer repairs (repair that cover less than one block), and planned/emergency projects to repair/replace 15 miles of structurally inadequate sewers to maintain the existing functionality of the collection system.
- \$13.7 million for Treatment Plant R&R program to maintain the capacity and reliable performance of the wastewater treatment facilities. Includes repairs to Transport Boxes, Pump Stations, Force Mains, Tunnels and Treatment Plants prioritized by condition assessments, regulatory compliance, staff recommendations and level of service goals.

Capital Enhancements Non-SSIP

- \$2.0 million for Ocean Beach Protection Project, which facilitates the planning and development of the long-term shoreline protection measures along Ocean Beach in the effort to protect the integrity of critical Wastewater assets including the Lake Merced Transport/Storage facility, the Westside Pump Station and the Oceanside Treatment Plant all of which are at risk with sea level rise and beach erosion.
- \$5.0 million for Islais Creek Outfall, which will rehabilitate pipelines and modify the effluent pump station at Islais Creek to ensure compliance with regulatory requirements and increase reliability.
- \$5.0 million for Southeast Community Center Improvements, to evaluate and implement and improvement to the functional and operational reliability of the existing Southeast Community Facility including energy efficiency, seismic/structural, life/safety and accessibility.

FY 2017-18

The CIP total for FY 2017-18 is \$902.3 million. It includes funding for: SSIP Program-Wide Management, \$6.0 million; SSIP Treatment Facilities, \$573.0 million; SSIP Sewer/Collection System, \$70.3 million; Flood Control Program, \$21.2 million; Collection System R&R, \$86.3 million; Treatment Plan Improvement, \$14.4 million; Islais Creek Outfall, \$10.0 million; Southeast Community Center Improvements, \$5.0 million and the Ocean Beach Protection Project, \$4.0 million.

Wastewater Programmatic Projects

Table C7 shows The Wastewater Enterprise Programmatic Projects, for FY 2015-16, FY 2016-17, and FY 2017-18, by major programs. Programmatic projects are annually appropriated projects in support of routine maintenance of programs most of which were initiated in support of the capital program.

Table C7. Wastewater Enterprise Programmatic Projects

\$ Millions	FY 2015-16	FY 2016-17	FY 2017-18
Program/Project	Adopted Budget	Adopted Budget	Adopted Budget
Cost			
Treasure Island Facilities Maintenance	1.2	1.3	1.3
Low Impact Development	0.7	0.7	0.7
Youth Employment Project	0.7	0.7	0.7
Community Benefits - Wastewater	1.1	1.3	1.0
525 Golden Gate - Operations & Maintenance	1.1	1.1	1.1
525 Golden Gate - Lease Payments	2.4	2.4	2.4
Total Cost	7.2	7.5	7.2
Sources			
Infrastructure - Recovery Capital (O&M)	0.2	0.2	0.2
Infrastructure - Recovery Capital (Lease)	1.7	1.9	1.9
Federal Bond Interest Subsidy	0.5	0.5	0.5
Revenue	4.9	4.9	4.6
Total Sources	7.2	7.5	7.2

FY 2016-17

The Wastewater Enterprise Programmatic Project budget increased in FY 2016-17 to \$7.5 million to fund \$0.3 million for the Community Benefits Program. Wastewater Enterprise Programmatic Projects fund facilities maintenance activities at Treasure Island and the SFPUC 525 Golden Gate Headquarters Building, Youth Employment Programs and the Community Benefits Program responsible for implementing policies and guiding our efforts to be a good neighbor to all whose lives or neighborhoods are directly affected by wastewater operations.

FY 2017-18

The Wastewater Enterprise Programmatic Project budget for FY 2017-18 is \$7.2 million, and fund projects similar to those in FY 2016-17.

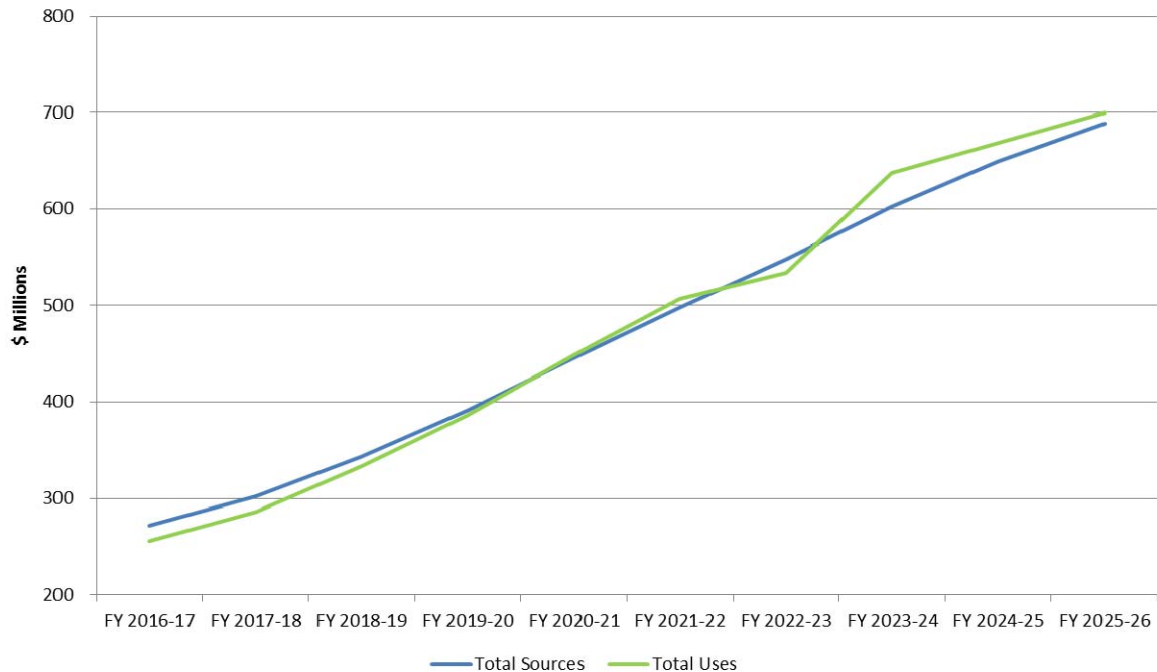
Wastewater Enterprise Ten-Year Financial Plan

Table C8 shows Wastewater Enterprise Ten-Year Financial Plan, from FY 2016-17 to FY 2025-26.

Table C8. Wastewater Enterprise Ten-Year Financial Plan

\$ Millions	FY 2015-16 Forecast	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Beginning Operating Fund Balance	121.2	119.6	136.2	152.5	162.5	166.9	163.1	154.7	168.9	133.7	114.5
Sources											
Sewer Service Sales - Base Rates	238.1	250.0	267.5	296.9	338.5	385.9	439.9	492.7	542.0	596.2	643.9
Sewer Service Sales - Rate Increases	11.9	17.5	29.4	41.6	47.4	54.0	52.8	49.3	54.2	47.7	38.6
Interest Income on Fund Balances	0.8	1.3	1.4	1.6	1.7	1.9	1.9	2.1	2.1	2.1	2.2
Other Miscellaneous Income	4.6	3.4	3.5	3.5	3.6	3.6	3.7	3.7	3.8	3.8	3.9
Total Sources	255.4	272.2	301.9	343.6	391.2	445.4	498.3	547.9	602.1	649.8	688.5
Uses											
Operations & Maintenance	158.0	157.6	161.6	166.5	171.5	176.6	181.9	187.4	193.0	198.8	204.8
Debt Service (net of Bond Interest Subsidy)	59.8	48.8	72.7	112.8	134.9	164.0	217.6	288.8	326.4	346.6	365.6
Projects - Revenue Funded	48.2	49.2	51.3	54.3	80.4	108.5	107.2	57.5	117.9	123.6	129.5
Total Uses	266.0	255.6	285.6	333.6	386.8	449.2	506.8	533.6	637.3	669.0	699.9
Net Revenues	(10.6)	16.6	16.2	10.0	4.4	(3.8)	(8.5)	14.2	(35.2)	(19.2)	(11.3)
Ending Fund Balance	119.6	136.2	152.5	162.5	166.9	163.1	154.7	168.9	133.7	114.5	103.2
Revenue Requirement Impact	5.0%	7.0%	11.0%	14.0%	14.0%	14.0%	12.0%	10.0%	10.0%	8.0%	6.0%
Fund Balance as % of Revenue	46.8%	50.0%	50.5%	47.3%	42.7%	36.6%	31.0%	30.8%	22.2%	17.6%	15.0%
Fund Balance as % of Expense	45.0%	53.3%	53.4%	48.7%	43.1%	36.3%	30.5%	31.7%	21.0%	17.1%	14.7%
Fund Balance as % of Operating Expense	75.7%	86.4%	94.3%	97.6%	97.3%	92.4%	85.0%	90.1%	69.2%	57.6%	50.4%
Debt Service Coverage (Indenture)	3.72	4.72	3.75	2.89	2.80	2.63	2.18	1.77	1.76	1.67	1.62
Debt Service Coverage (Current)	1.51	2.22	1.84	1.51	1.58	1.60	1.42	1.23	1.23	1.28	1.31

Chart C8. Wastewater Enterprise Ten-Year Financial Plan Trend



The SFPUC's Ten-Year Financial Plan, as required by City and County of San Francisco Charter, Section 8B.123, includes a Wastewater Enterprise ten-year financial summary (FY 2016-17 to FY 2025-26) describing projected sources and uses, resulting fund balances, and associated financial reserve ratios. This is a plan, not a budget, nor are funds appropriated like a budget. It is a planning document intended to inform the development of the Ten-Year Capital Plan, the sewer rates, and the fiscal year budgets. Projected costs and revenues are estimates and subject to variations inherent in all such projections. Consequently, the estimates should not be viewed as precise predictions but rather as indications of expected trends, given certain expenditure, receipt, and financing assumptions. These assumptions are based on current Board of Supervisors and Commission policies, goals, and objectives representing management's best estimates at this time. Table C8 above details the Ten-Year Financial Plan, and Chart C8 shows the Ten-Year Financial Plan trend.

Rates and Charges

In May 2014, the Commission approved average sewer service rate increases of 5.0 percent for FY 2014-15 and FY 2015-16, 7.0 percent for FY 2016-17, and 11.0 percent for FY 2017-18. Projected average annual sewer service rate changes are 14.0 percent annually from FY 2018-19 through FY 2020-21, 12 percent in FY 2021-22, 10 percent in FY 2022-23 and FY 2023-24, 8 percent in FY 2024-25 and 6 percent in FY 2025-26. These rate changes are needed to fund the Wastewater Capital Improvement Program (CIP) to construct new digesters at the Southeast Plant, provide other treatment plant improvements, and better manage stormwater to minimize flooding.

Sources of Funds

The Wastewater Enterprise serves a population of approximately 840,000 within San Francisco and adjacent communities. Customers are grouped into two classes: residential and non-residential. Grouping customers with the same or similar wastewater characteristics into classes allows the Enterprise to allocate costs responsibility to each class based on their respective volumes and strengths (i.e., wastewater characteristics). Within each class, subgroups have been established to facilitate rate analysis and rate administration. Total sources excluding bond proceeds are expected to increase from \$272.2 million to \$688.5 million over the ten-year period.

- Sewer service charges are projected to increase from \$267.5 million in FY 2016-17 to \$682.5 million by FY 2025-26. The City has adopted sewer service charges through FY 2017-18, based on each customer class's proportional use of the sewage system and to establish a dedicated source of revenues to pay for operating the system.
- Interest Income on Fund Balances is projected to average \$1.9 million annually over the ten-year period.
- Other miscellaneous income is projected to average \$3.7 million annually over the ten-year period.

Uses of Funds

The Ten-Year Financial Plan includes projections of three percent annual growth for operations and maintenance costs, and five percent annual escalation in revenue-funded capital costs.

The Ten-Year Financial Plan includes operation and maintenance costs, renewal and replacement costs for existing equipment and facilities, and debt service on bonds and loans used to finance capital improvements. Operations and maintenance costs, currently the largest expense component, make up 61.7 percent of total expense in FY 2016-17, but will decrease to 29.3 percent of total expense over the next ten years as debt service costs increase. Total expenditures are forecasted to more than double from \$255.6 million to \$699.9 million over the period.

- Operations and Maintenance costs include personnel costs, material and supplies, treatment chemicals, power and energy, sludge disposal, and services of other City departments (including the SFPUC Bureaus). FY 2016-17 projections to operate the water pollution control system are \$157.6 million, increasing to \$204.8 million by FY 2025-26. The majority of these costs are fixed in nature and associated with running a 24/7 operation.
- Debt Service includes principal and interest payments on revenue bonds used to finance system improvements, and are projected to increase from \$48.8 million to \$365.6 million over the ten-year period. The increase towards the end of the forecast period results from estimated debt service expense associated with the early years of the SSIP, currently in project development.
- Revenue-Funded Capital Projects are used to fund major maintenance and routine additions and improvements to sewers, pumping stations, and treatment plants. As a recipient of State and Federal grants under the Clean Water Act, the Enterprise is required to include annual funding for repairs and replacement as a part of its annual revenue requirement. A 1986 Board of Supervisors resolution set the minimum R&R expenditure at \$5.0 million and requires the expenditure to increase at least five percent annually until the amount of the annual contribution reaches \$20.0 million. The annual contribution is projected to be \$49.2 million in FY 2016-17. As a result of the decision to accelerate replacement of aging sewers, revenue-funded capital expenditures will reach \$129.5 million by FY 2025-26.

Debt Financing of Capital Needs

The Ten-Year Capital Plan largely assumes debt financing of capital needs over the next ten-year period. The SSIP will require significant debt financing as authorized under Proposition E (2002).

The SFPUC Plan assumes a financing strategy that utilizes short-term financing via the existing commercial paper (CP) program to calibrate financing needs with project spending. Long-term (30-year), five percent fixed-rate debt issuance is assumed to periodically refund the CP program. The CP program facilitates short-term financing, typically at lower interest rates than longer term debt, which minimizes costs. The authorized CP program for the Enterprise is \$500 million, as of June 30, 2016.

Financial Ratios

It is the financial objective of the SFPUC to maintain a minimum revenue bond coverage ratio of 1.25 times on an indenture basis and 1.00 times on a current operations basis; the latter does not include available fund balances. Over the ten-year period, the Wastewater Enterprise indenture coverage ranges from 4.72 to 1.62. On a current basis, the coverage ratio is projected to exceed the 1.00 minimum with a range from 2.22 to 1.31 times coverage.

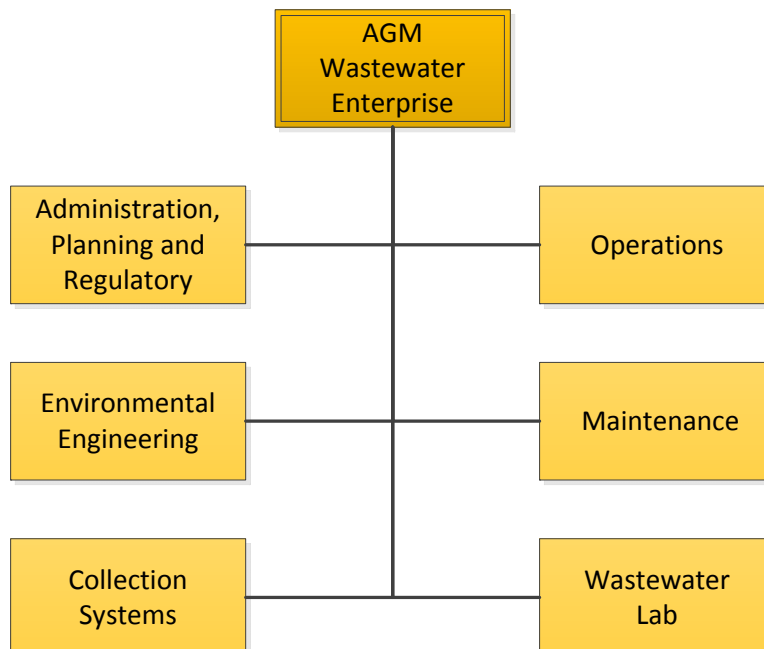
Fund Balances and Reserves

Ending fund balance is projected to grow in the Wastewater Enterprise from \$136.2 million in FY 2016-17 to \$168.9 million in FY 2022-23, then decrease to \$103.2 million by FY 2025-26. This mid-range increase is necessary for the ramping up of debt service purposes, and is funded by rate increases. The new debt service during the period is related to funding the enterprise's Capital Plan, including the annual CIP, as well as the SSIP. Projected fund balance conforms to established fund balance reserve policies.

Departmental Section

Wastewater Enterprise Organization Chart

This organizational chart reflects the budget structure of the Wastewater Enterprise.



Wastewater's Strategic Sustainability Trends

The Strategic Sustainability Plan (SSP) provides the SFPUC with a system for planning, managing, and evaluating SFPUC-wide performance that takes into account the long-term economic, environmental, and social impacts of its business activities. The SSP is described in the introduction of this report and in Appendix F are the 2014-15 performance results. The SSP combines the SFPUC strategic mission and goals, essential business activities and appropriate sustainability measures consistent with the Global Reporting Initiative recommendations.

The SSP report communicates a cross section of performance goals and objectives to support planning and inform customers, the SFPUC Commission, the Controller's Office, Bond holders, rating agencies, regulators and the general public. The annual organization-wide review, measurement and reporting protocol tasks SFPUC management and staff to:

- Plan and deliver high quality wastewater services to current and future generations of San Franciscans based on triple bottom line sustainability;
- Embed sustainability into SFPUC's business DNA and long-term strategic decision-making;
- Communicate SFPUC's organizational culture and build relationships with stakeholders;
- Benchmark SFPUC's strategic sustainability performance against SFPUC's and peers;
- Build capacity for longer term trend, risk and foresight analyses; and
- Provide stakeholders with ongoing review of SFPUC-wide triple bottom line performance.

Fiscal Year 2014-15 Strategic Sustainability Performance Results

The fiscal year 2013-14 report is the sixth annual assessment of SFPUC-wide performance on the strategic sustainability plan.

The fiscal year 2014-15 report is the sixth annual assessment of SFPUC-wide performance on the strategic sustainability plan.

The SFPUC's six sustainability categories as described in the Introduction are:

- Customers (CR)
- Community (CY)
- Environmental and Natural Resources (ENR)
- Governance and Management (GM)
- Infrastructure and Assets (IA)
- Workplace (WP)

The associated objectives in the SSP are aimed at continuous improvement and meeting the SFPUC-wide 2014-15 five key strategic goals:

- Plan for the Future
- Invest in SFPUC's People
- Promote a Green and Sustainable City
- Provide High Quality Services
- Engage SFPUC's Public and Invest in Communities

Note that in 2016 the **2020 Strategic Plan** was adopted which includes updated key strategic goals. Consequently, the 2014-15 performance results are compared to the key strategic goals that were active as of that date. Chart C9, on the next page, provides a representation of the performance of the Wastewater Enterprise in FY 2014-15 in the (six) sustainability categories as noted above. Targets for FY 2014-15 and FY 2015-16 are included in Appendix F where the Performance Measure Report is located. As shown in Appendix F there are some trends for the Wastewater Enterprise that can be noted:

- The Wastewater Enterprise has reported seven un-authorized discharges in FY 2014-15. This is an increase from zero in previous years; the amount of electricity used to treat a million gallons of sewage slightly decreased to 2.1 (MWh/MG) from the previous year of 2.2 (MWh/MG) and the preventative maintenance ratio is 54 percent, down from 50 in FY 2012-13. All of these metrics point to Wastewater Enterprise's aging infrastructure. WWE is investing \$4.5 billion in the SSIP program and \$911 million in the R&R program in the next ten years.
- In FY 2014-15 14.89 miles of pipeline were repaired or replaced which is an increase from 12.75 miles in FY 2013-14.
- SFPUC-wide the number of hours of training for staff was reported to be 16 in FY 2014-15 which is an increase from 11.59 hours the previous year.

Chart C9 provides representation of the performance of the Wastewater in FY 2014-15 in SFPUC's six sustainability categories.

Chart C9. FY 2014-15 Wastewater Enterprise Excerpts from the Strategic Sustainability Plan

Strategic Mission	Strategic Sustainability Categories					
						
	CR	CY	ENR	GM	IA	WP
Provide High Quality Service	100% of Fees reflect cost of service		7 Discharges that were not authorized	157 miles of sewer lines inspected and cleaned	14.89 miles in R&R	
Promote a Green and Sustainable City	100 % of retail rate encourages conservation	Launched a new pilot initiative called the "Bayview Garden Supply Pop-ups" to provide resources to local community groups promoting healthy food access	Energy Intensity: Wastewater Treated: 2.10 MWh/MG	Work with Water on Climate Change Impact Assessment	Advanced its commitment to organization-wide Asset Management by dedicating accountable staff who established a program framework, set multiple-year targets for benchmarking performance	
Plan for the Future	Average residential water, bill as a percent of median income in San Francisco: 0.71%	Renewed all 25 Project Learning Grants for youth workforce development	Reduction in peak storm flows to combined system due to low impact development initiatives and/or surface drainage management plans	S&P credit rating AA- Moody's Aa3	54 % Preventive maintenance ratio	Advance Succession Planning: Implement a competency model framework to be populated as the basis for succession preparedness
Invest in SFPUC's People		Developed "Equitable Engagement Guidelines" for all project managers and communication staff to utilize in SSIP capital project outreach and engagement		Security Plan is 75% completed	Lost time incident rate for procured construction hours	16 average hours of training per year
Engage SFPUC's Public and Invest in our Communities		47.5% of labor hours worked by service area residents 49% of labor hours worked by local residents (goal is 30%) 74% of apprentice labor hours worked by local residents (goal is 50%)	100% of biosolids go to beneficial reuse			

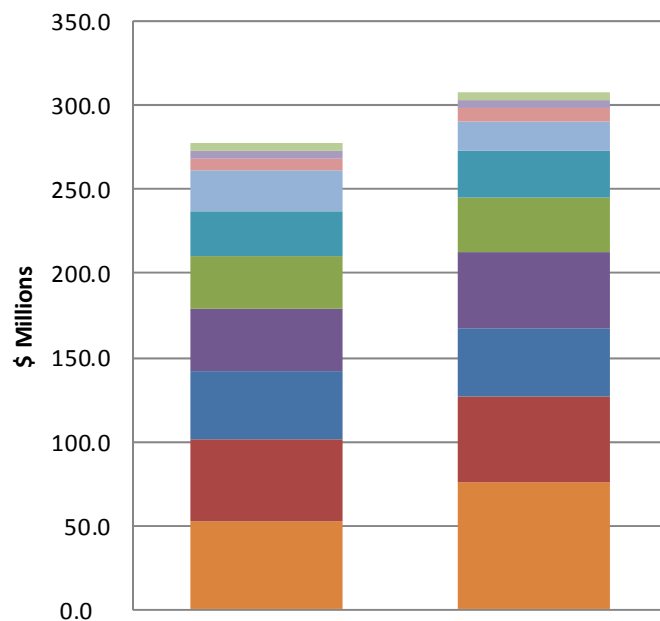
Divisions

The Wastewater Enterprise is comprised of six Divisions: Wastewater Administration, Planning and Regulatory, Maintenance, Operations, Environmental Engineering, Collection Systems, and Wastewater Laboratory.

Chart C10 shows the FY 2016-17 and FY 2017-18 budgets by Wastewater Divisions. The chart also shows budget information for Enterprise level categories including debt service, programmatic projects, and capital/revenue reserve.

The significant change from FY 2016-17 to FY 2017-18 is a 45.8 percent increase in debt service and a 22.4 percent increase in Capital/Revenue Reserves offset by a 24.3 percent decrease in General Reserve. The other categories are relatively flat from one year to the next.

Chart C10. FY 2016-17 and FY 2017-18 Wastewater Enterprise Uses of Funds by Division and Other Categories



	FY 2016-17	% of Total	FY 2017-18	% of Total
Debt Service	\$ 52.3	18.8%	\$ 76.2	24.8%
Administration, Planning & Regulatory	49.0	17.7%	50.3	16.4%
Operations	40.4	14.6%	41.3	13.4%
Capital/Revenue Reserve	36.8	13.2%	45.0	14.6%
Collection Systems	31.5	11.3%	32.1	10.4%
Maintenance	27.0	9.7%	27.7	9.0%
General Reserve	23.9	8.6%	18.1	5.9%
Programmatic Projects	7.5	2.7%	7.2	2.4%
Environmental Engineering	4.7	1.7%	4.8	1.6%
Laboratory	4.6	1.7%	4.7	1.5%
Total Uses of Funds	\$ 277.7	100.0%	\$ 307.3	100.0%

The FY 2016-17 operations budget includes: \$49.0 million for Administration, Planning and Regulatory, \$40.4 million for Operations, \$31.5 million for Collection Systems, \$27.0 million for Maintenance, \$4.7 million for Environmental Engineering and \$4.6 million for the Laboratory Division. Enterprise level categories include Debt Service at \$52.3 million, Capital/revenue reserve at \$36.8 million, General Reserve at \$23.9 million, and Programmatic Projects at \$7.5 million.

The FY 2017-18 operations budget includes: \$50.3 million for Administration, Planning and Regulatory, \$41.3 million for Operations, \$32.1 million for Collection Systems, \$27.7 million for Maintenance, \$4.8 million for Environmental Engineering and \$4.7 million for the Laboratory Division. Enterprise level categories include Debt Service at \$76.2 million, Capital/revenue reserve at \$45.0 million, General Reserve at \$18.1 million, and Programmatic Projects at \$7.2 million.

Budget Summary

Table C9 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17 for all Wastewater Divisions. The table also shows budget information for Enterprise level categories including debt service, programmatic projects, and capital/revenue reserve.

Table C9. Wastewater Enterprise Uses of Funds by Division and Other Categories

\$ Millions	FY 2014-15 Audited	FY 2015-16 Adopted	FY 2015-16 Actual	FY 2016-17 Adopted	FY 2017-18 Adopted	FY 2016-17 vs. FY 2015-16 Adopted Budget	FY 2017-18 vs. FY 2016-17 Adopted Budget
Expenditure Category	Actual	Budget		Budget	Budget	Amount %	Amount %
Administration, Planning & Regulatory	45.7	46.4	44.1	49.0	50.3	2.6 5.7%	1.3 2.6%
Maintenance	26.1	27.8	25.5	27.0	27.7	(0.8) -2.9%	0.6 2.4%
Operations	37.4	39.3	39.9	40.4	41.3	1.1 2.7%	0.9 2.2%
Environmental Engineering	5.0	4.6	5.0	4.7	4.8	0.1 1.2%	0.1 1.8%
Collection Systems	29.0	32.2	30.1	31.5	32.1	(0.7) -2.2%	0.6 1.8%
Laboratory	3.7	4.7	3.9	4.6	4.7	(0.1) -1.9%	0.1 1.7%
Debt Service	52.3	63.5	63.5	52.3	76.2	(11.2) -17.7%	23.9 45.8%
General Reserve	8.9	6.1	2.3	23.9	18.1	17.8 289.8%	(5.8) -24.3%
Capital/Revenue Reserve	39.0	41.0	41.0	36.8	45.0	(4.2) -10.3%	8.2 22.4%
Programmatic Projects	8.8	7.3	7.3	7.5	7.2	0.2 2.4%	(0.3) -3.4%
Wastewater Total	255.9	273.0	262.5	277.7	307.3	4.7 1.7%	29.6 10.7%

Administration, Planning and Regulatory

The Administration, Planning and Regulatory Division are responsible for providing direction to the Wastewater operating divisions. The Division supports all of the administrative functions for the Enterprise including budget, procurement, contracting and personnel matters. The Division is committed to maintaining and supporting a diverse work group and offering the opportunity for advancement within the organization.

The Administration, Planning and Regulatory activities include financial administration, environmental and sustainability planning, regulatory compliance, biosolids resource planning and compliance, and policy developments. Other responsibilities include developing and implementing the Asset Management Program, Urban Watershed management, and Workforce Development. The areas of these responsibilities are divided as follows:

The Regulatory Compliance group is responsible for providing information and support regarding environmental compliance impacts, occupational health and safety risks, and biosolids management impacts for all of Wastewater's activities.

The Asset Management group is responsible for developing, implementing and managing Wastewater in a manner consistent with industry best practices in asset management, to achieve consistent regulatory compliance, defensible risk management, and cost-effective delivery of services to customers.

The Urban Watershed Management group is responsible for developing, implementing and managing stormwater policy, protocols, and projects. In addition, the group performs project review and enforcement in the City's separate storm and sanitary areas to ensure

that developments have adequate stormwater control measures necessary for compliance with regulatory permit requirements.

The Workforce Development group is responsible for recruiting, developing and retaining a motivated, diverse, highly qualified, and supported workforce, to ensure effective services today and in the future.

Budget Summary

Table C10 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

Table C10. Administration, Planning and Regulatory Budget Summary

\$	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
Expenditure Category						Amount	%	Amount	%
Personnel	10,105,452	9,939,930	9,973,053	10,207,994	10,598,717	268,064	2.7%	390,723	3.8%
Non-Personnel Services	5,201,370	4,130,325	3,612,235	5,247,343	5,272,343	1,117,018	27.0%	25,000	0.5%
Materials & Supplies	181,007	254,232	185,860	254,232	254,232	-	0.0%	-	0.0%
Debt Service	52,344,992	63,498,125	63,498,125	52,267,411	76,190,411	(11,230,714)	-17.7%	23,923,000	45.8%
Services Of Other Depts	30,239,937	32,070,208	30,383,046	33,324,108	34,177,755	1,253,900	3.9%	853,647	2.6%
Total	98,072,758	109,892,820	107,652,319	101,301,088	126,493,458	(8,591,732)	-7.8%	25,192,370	24.9%

Reasons for Changes, FY 2015-16 to FY 2016-17

The following describes FY 2015-16 and FY 2016-17 budget category variances greater than ten percent.

- **Non-Personnel Services** – Reflects the centralization of professional services and third party vendor support under the Administration, Planning and Regulatory Division.
- **Debt Service** – Reflects a near-term saving in debt service related to the Wastewater 2013 Series A Bonds which refunded both the 2003 Wastewater Bonds as well as the State Revolving Fund loans.

Reasons for Changes, FY 2016-17 to FY 2017-18

The following describes FY 2016-17 and FY 2017-18 budget category variances that are greater than ten percent.

- **Debt Service** – Reflects an increase due to the 2016 Series AB revenue bonds issued in May 2016.

Maintenance

The Maintenance Division is responsible for repairs and improvements to Wastewater's process equipment and facilities. These support treatment at the four treatment facilities, conveyance, and pumping, to allow Wastewater to meet permit standards efficiently and effectively.

Conveyance and pumping requires maintaining a network of 32 pump stations in San Francisco designed to move combined sewage/runoff flows to treatment plants, storage/transport boxes, and outfalls. During wet-weather, pumping facilities transport up to 575 mgd. The Division also maintains 34 pump stations on Treasure Island. The entire system consists of more than 900 pumps and related supporting assets including motors, valves, tanks and pipes.

Treatment and conveyance maintenance activities focus on preventative maintenance, repairs, and overhaul work.

Budget Summary

Table C11 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

Table C11. Maintenance Budget Summary

\$	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget Amount	FY 2016-17 vs. FY 2015-16 %	FY 2017-18 vs. FY 2016-17 Adopted Budget Amount	FY 2017-18 vs. FY 2016-17 %
Expenditure Category									
Personnel	17,986,386	19,294,341	17,788,206	19,050,801	19,506,413	(243,540)	-1.3%	455,612	2.4%
Non-Personnel Services	1,940,591	2,714,990	1,970,151	2,358,832	2,465,997	(356,158)	-13.1%	107,165	4.5%
Materials & Supplies	2,568,945	2,481,461	2,373,263	2,488,901	2,573,170	7,440	0.3%	84,269	3.4%
Equipment	137,314	-	187,736	171,257	53,909	171,257	100.0%	(117,348)	-68.5%
Services Of Other Depts	3,441,243	3,331,879	3,177,311	2,950,931	3,063,077	(380,948)	-11.4%	112,146	3.8%
Total	26,074,479	27,822,671	25,496,667	27,020,722	27,662,566	(801,949)	-2.9%	641,844	2.4%

Reasons for Changes, FY 2015-16 to FY 2016-17

- **Non-Personnel Services** – Reflects the centralization of professional services and third party vendor support under the Wastewater Administration, Planning and Regulatory Division.
- **Equipment** – Reflects funding for the purchase of a crane-mounted truck to support maintenance activities.
- **Services of Other Departments** – Reflects an increase to the Facilities Maintenance work order to support custodial services at the Southeast Community Facility.

Reasons for Changes, FY 2016-17 to FY 2017-18

- **Equipment** – Reflects funding for the purchase of a flatbed truck to support the SFGreasecycle Program.

Operations

The Operations Division is responsible for the 24/7 operation of the Wastewater Enterprise's treatment facilities and pump stations. The Operations Division's primary mission is to protect public health and the environment by treating an average daily flow of 80 million gallons of wastewater, equal to 26.3 billion gallons a year. The Operations Division treats all combined sewage, 575 MGD during peak wet weather while meeting all the regulatory standards and discharge requirements.

Wastewater treatment is performed at four different locations: Southeast Treatment Plant, Treasure Island Treatment Plant, Oceanside Treatment Plant, and North Point Wet-Weather Facility. Wastewater treatment includes pre-treatment, primary treatment, secondary treatment, disinfection, solids treatment, and odor control. The Southeast Treatment Plant treats 75 percent of dry-weather wastewater, or 58 MGD, and can process up to 250 MGD of combined sewage during the rainy season. Oceanside treats a dry-weather average flow of 16 MGD with a total capacity of 65 MGD and with the Westside Transport system, can process up to 195 MGD of combined sewage during wet weather. Treasure Island treats less than 1 mgd with a peak capacity of 2 mgd. The North Point Wet-Weather Facility provides primary-level treatment of wastewater collected in the north part of the City during storms, with a treatment capacity of 150 MGD of combined sewage. Treatments plants and pump stations operate 365 days per year, 24-hour per day.

Budget Summary

Table C12 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

Table C12. Operations Budget Summary

\$	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2016-17 vs. FY 2015-16	FY 2017-18 vs. FY 2016-17
Expenditure Category	Audited Actual	Adopted Budget	FY 2015-16 Actual	Adopted Budget	Adopted Budget Amount	Adopted Budget %
Personnel	16,714,294	17,610,095	17,997,874	17,210,771	17,616,910	(399,324) -2.3%
Non-Personnel Services	4,557,348	5,509,646	5,971,278	6,306,829	6,300,671	797,183 14.5%
Materials & Supplies	6,172,401	6,291,013	5,841,359	6,683,345	6,689,503	392,332 6.2%
Equipment	-	40,000	47,763	-	-	(40,000) -100.0%
Services Of Other Depts	10,005,694	9,879,407	10,049,574	10,209,840	10,689,502	330,433 3.3%
Total	37,449,737	39,330,161	39,907,848	40,410,785	41,296,586	1,080,624 2.7%

Reasons for Changes, FY 2015-16 to FY 2016-17

- **Non-Personnel Services** – Reflects additional funding to support projected levels for hauling and disposal of biosolids, grit, and screenings and projected costs for garbage and recycling services.
- **Equipment** – Decrease reflects one-time funding for the purchase of electric carts included in the FY 2015-16 budget.

Reasons for Changes, FY 2016-17 to FY 2017-18

There were no major changes to the FY 2017-18 adopted budget

Environmental Engineering

The Environmental Engineering Division is responsible for providing engineering services to the Wastewater Enterprise in four core service areas: wastewater process support, maintenance, design, and planning of large projects and master planning. These services allow Wastewater to maintain and improve the efficiency and reliability of wastewater collection and treatment to ensure the public's safety and welfare, environmental protection, and regulatory compliance.

Wastewater process support services include process design, design review, construction liaison, research and testing, process performance review and troubleshooting, and regulatory supports services.

- Maintenance support services include vibration monitoring, procurement specifications, and equipment failure troubleshooting.
- Design support services include design and contract preparation for small to medium-size projects, updating as-built records when changes are made, and other drafting, documentation and technical services.
- Planning and Compliance support services include the development and implementation of the SSIP and compliance with special studies, reports and analyses as required by NPDES permits.

Budget Summary

Table C13 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

Table C13. Environmental Engineering Budget Summary

\$	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
Expenditure Category						Amount	%	Amount	%
Personnel	4,944,213	4,511,504	4,912,579	4,663,835	4,749,280	152,331	3.4%	85,445	1.8%
Non-Personnel Services	5,326	78,737	19,792	29,455	29,455	(49,282)	-62.6%	-	0.0%
Materials & Supplies	15,334	53,922	36,319	7,706	7,706	(46,216)	-85.7%	-	0.0%
Total	4,964,873	4,644,163	4,968,690	4,700,996	4,786,441	56,833	1.2%	85,445	1.8%

Reasons for Changes, FY 2015-16 to FY 2016-17

- **Non-Personnel Services** – Reflects the centralization of professional services and third party vendor support under the Wastewater Administration, Planning and Regulatory Division.
- **Materials and Supplies** – The reduction reflects the projected supply needs of the Division and reflects the reallocation of funds to support Personnel costs.

Reasons for Changes, FY 2016-17 to FY 2017-18

There were no major changes to the FY 2017-18 adopted budget.

Collection Systems

The Collection System Division is responsible for collecting and transporting an average daily flow of 85 MGD and up to 575 MGD during peak wet weather of wastewater to treatment plants that support one million residents, and business and visitors. Sewage reaches the treatment plants through a conveyance system that starts with side sewers that connect public or private property to local public sewers in the streets.

Proper operation and regular maintenance of the sewer system is a result of the Sewer Collection Systems' preventive maintenance program. Preventive maintenance occurs year round and includes cleaning and condition assessment. The program keeps all sewers on a regular maintenance cycle to ensure that lines are in good working order and free of debris, this minimizing their potential to clog and malfunction. In addition to the pipelines, the collection system contains 19,500 catch basins and 25,000 manholes. Activities within this program include cleaning, inspection, and repair of sewers; responding to public service requests; control of odors in the sewers system; and hydraulic analysis and modeling. To ensure regulatory compliance in the system as a whole, both pretreatment and pollution prevention (P2) programs are implemented, focusing on contaminant reduction activities for residential, commercial, and industrial dischargers. The major P2 programs include: street sweeping, a program to control discharge of fats, oils and grease (FOG) into the sewers, mercury reduction program, pesticides/integrated pest management, and stormwater P2 program to control construction runoff which carries pollutant to surface waters.

Budget Summary

Table C14 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

Table C14. Collection Systems Budget Summary

\$	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget Amount	%	FY 2017-18 vs. FY 2016-17 Adopted Budget Amount	%
Expenditure Category									
Personnel	9,977,927	11,634,131	10,200,040	11,825,427	12,119,261	191,296	1.6%	293,834	2.5%
Non-Personnel Services	2,372,240	3,474,692	2,615,164	3,090,104	3,138,011	(384,588)	-11.1%	47,907	1.6%
Materials & Supplies	517,611	786,885	684,540	591,091	686,197	(195,794)	-24.9%	95,106	16.1%
Equipment	362,669	407,768	784,221	616,301	744,992	208,533	51.1%	128,691	20.9%
Services Of Other Depts	15,734,542	15,902,469	15,833,962	15,376,623	15,388,989	(525,846)	-3.3%	12,366	0.1%
Total	28,964,989	32,205,945	30,117,927	31,499,546	32,077,450	(706,399)	-2.2%	577,904	1.8%

Reasons for Changes, FY 2015-16 to FY 2016-17

- **Non-Personnel Services** – Reflects the centralization of professional services and third party vendor support under the Wastewater Administration, Planning and Regulatory Division.
- **Materials and Supplies** – The reduction in laboratory and sewer monitoring supplies reflects the needs of the Division as well as the reallocation of funds to support the Division's equipment needs.
- **Equipment** – Reflects projected equipment needs for the Collection Systems Division including an HD Camera and Lateral Launcher to locate, identify and measure defects in the combined sewer systems.

Reasons for Changes, FY 2016-17 to FY 2017-18

- **Materials and Supplies** – Increase from FY 2016-17 is due to fund traffic control signage and sandbags for flood control.
- **Equipment** – Reflects equipment needs for the Collection Systems Division including a customized vehicle designed to remove waste from underground storage bins and transport them for disposal.

Laboratory

The Laboratory Division consists of a network of full-service, state-certified laboratories that provide quality analytical and advisory services through advanced measurement science and standards. The Division is responsible for analytical testing for real-time wastewater process control, regulatory compliance, and industrial source control purposes. In addition, the Division provides technical consulting on the interpretation of analytical data for Wastewater staff, regulatory compliance report generation for SFPUC, National Pollution Discharge Elimination System (NPDES) permits, and interfacing with regulatory agencies concerning analytical data issues. The Division also actively participates in special projects with analytical applications. Staff operates from three laboratory facilities located at the Southeast, Oceanside and Treasure Island Treatment Plants.

Budget Summary

Table C15 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

Table C15. Laboratory Budget Summary

\$	FY 2014-15	FY 2015-16		FY 2016-17	FY 2017-18	FY 2016-17 vs. FY 2015-16		FY 2017-18 vs. FY 2016-17	
Expenditure Category	Audited Actual	Adopted Budget	FY 2015-16 Actual	Adopted Budget	Adopted Budget	Adopted Budget Amount	%	Adopted Budget Amount	%
Personnel	3,191,000	4,045,804	3,331,129	4,183,810	4,260,437	138,006	3.4%	76,627	1.8%
Non-Personnel Services	182,509	143,497	185,877	98,133	98,133	(45,364)	-31.6%	-	0.0%
Materials & Supplies	263,030	241,625	217,812	176,420	173,255	(65,205)	-27.0%	(3,165)	-1.8%
Equipment	30,281	245,233	139,419	128,075	131,243	(117,158)	-47.8%	3,168	2.5%
Total	3,666,820	4,676,159	3,874,237	4,586,438	4,663,068	(89,721)	0.0%	76,630	0.0%

Reasons for Changes, FY 2015-16 to FY 2016-17

- **Non-Personnel Services** – Reflects the centralization of professional services and third party vendor support under the Wastewater Administration, Planning and Regulatory Division.
- **Materials and Supplies** – The reduction reflects the projected supply needs of the Division and reflects the reallocation of funds to support Personnel costs.
- **Equipment** – Decrease reflects one-time funding for the purchase of two Inductively Coupled Plasma-Mass Spectrometer (ICP-MS) systems used for regulatory compliance in accordance with National Pollutant Discharge Elimination System (NPDES). This equipment was included in FY 2015-16 budget.

Reasons for Changes, FY 2016-17 to FY 2017-18

There were no major changes to the FY 2017-18 adopted budget.

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HETCH HETCHY WATER & POWER, INCLUDING THE POWER ENTERPRISE

Hetch Hetchy Water and Power is comprised of two components: Hetchy Water, which operates and maintains the Hetch Hetchy Project, and Hetch Hetchy Power (known and referred to as Power Enterprise), which is responsible for all SFPUC power utility commercial transactions and in-City power operations. The Hetch Hetchy Project provides water for distribution through the Water Enterprise and hydroelectric power to municipal and other customers through the Power Enterprise. A

number of the facilities of the Hetch Hetchy Project are joint assets and are used for both water transmission and power generation and transmission, benefiting both Hetch Hetchy Water and the Power Enterprise. All power sales revenues are allocated to the Power Enterprise. Operating and capital costs benefitting Power and 55 percent of operating and capital costs that jointly benefit both Hetch Hetchy Water and Power are allocated to the Power Enterprise. Operating and capital costs benefitting Hetch Hetchy Water and 45 percent of operating capital costs jointly benefitting both Hetch Hetchy Water and the Power Enterprise are allocated to the Water Enterprise.

The Hetch Hetchy Project impounds and delivers to the Water Enterprise water for approximately 2.6 million Bay Area residents and, in an average year, generates more than 1,600,000 MWh of clean, renewable electricity which the Power Enterprise used to serve its customers, including the City and the Districts.

Hetchy Water

Mission, Roles, and Responsibilities

Hetchy Water endeavors to operate as an efficient, reliable water and power supplier, in a manner inclusive of both environmental and community interest while sustaining resources entrusted to its care. Hetchy Water distributes high quality water to SFPUC customers while optimizing the generation of clean hydropower as water is transported through the system. Hetchy Water is responsible for the operation, maintenance and improvement of water, power and joint facilities to a high standard of safety and reliability while meeting regulatory requirements. Hetchy Water also maintains land and properties consistent with public health, watershed values and neighborhood concerns, and promotes diversity, health, safety and professional development of its employees.

Power Enterprise

Mission, Roles and Responsibilities

The core business of the Power Enterprise is to provide adequate and reliable supplies of electric power to meet the electricity needs of the City and County of San Francisco's municipal and retail customers, and to satisfy the municipal loads and agricultural pumping demands of the Modesto and Turlock Irrigation Districts consistent with prescribed contractual obligations and Federal law.

The Power Enterprise's portfolio consists of hydroelectric generation, on-site solar at SFPUC and other City facilities, generation using bio-methane produced at SFPUC Wastewater's treatment facilities, and third-party purchases. Consistent with its commitment to the development of cleaner and greener power, and to address environmental concerns and community objectives, Power Enterprise continues to evaluate and expand its existing resource base to include additional renewables, distributed generation, demand management, and energy efficiency programs. As part of its mission and core functions, Power provides reliable energy services at reasonable cost to customers, with attention to environmental effects and community concern.

Budget Summary

Table H1 below shows the Hetch Hetchy Water and Power budget increasing by 7.2 percent between FY 2015-16 and FY 2016-17 and a slight increase between FY 2016-17 and FY 2017-18 of 2.8 percent. Table H1 includes the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

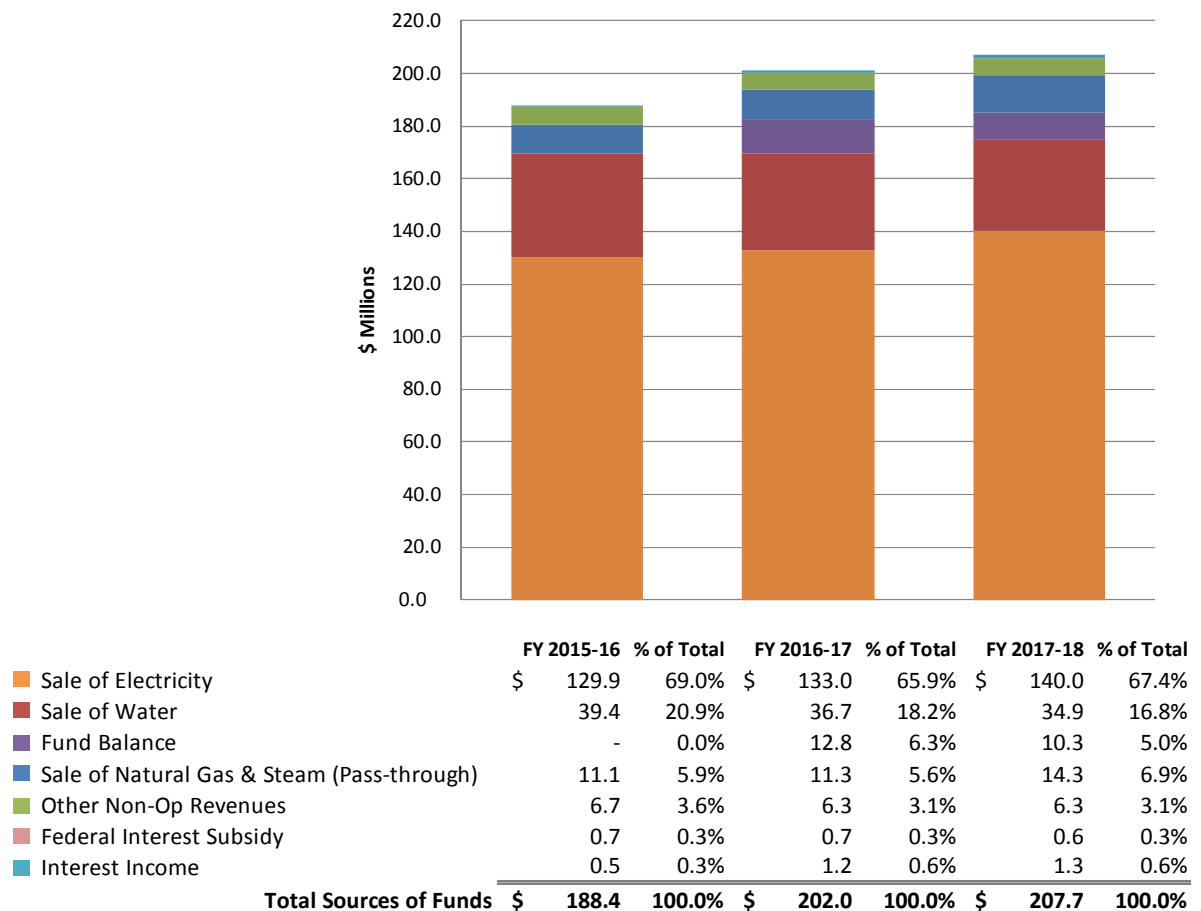
Table H1. Hetch Hetchy Water and Power Sources and Uses of Funds

\$ Millions	FY 2014-15	FY 2015-16		FY 2016-17	FY 2017-18	FY 2016-17 vs. FY 2015-16		FY 2017-18 vs. FY 2016-17	
	Audited	Adopted	FY 2015-16	Adopted	Adopted	Adopted Budget		Adopted Budget	
Category	Actual	Budget	Actual	Budget	Budget	Amount	%	Amount	%
SOURCES OF FUNDS									
Sale of Water	38.7	39.4	38.6	36.7	34.9	(2.7)	-6.9%	(1.8)	-5.0%
Sale of Electricity	109.7	129.9	122.5	133.0	140.0	3.1	2.4%	7.0	5.3%
Sale of Natural Gas & Steam (Pass-through)	8.1	11.1	6.9	11.3	14.3	0.2	1.4%	3.0	26.7%
Fund Balance	-	-	-	12.8	10.3	12.8	100.0%	(2.5)	-19.8%
Other Non-Op Revenues	6.6	6.7	6.9	6.3	6.3	(0.4)	-6.0%	0.0	0.2%
Interest Income	1.3	0.5	1.2	1.2	1.3	0.6	119.7%	0.1	9.3%
Federal Interest Subsidy	0.7	0.7	0.7	0.7	0.6	0.0	2.2%	(0.1)	-8.9%
Total Sources of Funds	165.1	188.4	176.7	202.0	207.7	13.6	7.2%	5.7	2.8%
USES OF FUNDS									
Personnel	38.2	39.9	37.7	40.9	42.6	1.0	2.5%	1.7	4.3%
Non-Personnel Services	49.2	86.6	51.6	81.1	84.8	(5.5)	-6.4%	3.8	4.6%
Materials & Supplies	2.5	3.0	2.9	2.6	2.7	(0.4)	-12.6%	0.1	4.6%
Equipment	0.5	0.8	0.9	0.5	0.4	(0.3)	-32.8%	(0.1)	-26.8%
Debt Service	1.9	2.2	0.5	2.5	4.8	0.3	14.7%	2.3	94.5%
Services Of Other Depts	20.0	20.8	21.7	22.8	23.2	2.0	9.9%	0.4	1.6%
General Reserve	9.9	0.2	26.5	0.0	1.3	(0.2)	-83.3%	1.3	3246.7%
Revenue-Funded Capital	23.3	17.4	17.4	36.8	33.0	19.4	112.0%	(3.8)	-10.3%
Programmatic Projects	19.5	17.6	17.6	14.8	14.8	(2.8)	-16.1%	(0.0)	-0.1%
Total Uses of Funds	165.1	188.4	176.7	202.0	207.7	13.6	7.2%	5.7	2.8%

Sources of Funds

The combination of the Sale of Electricity and the Sale of Water continues to be the main Sources of Funds in FY 2016-17 and FY 2017-18, accounting for slightly over 84.0 percent in both fiscal years of the Total Sources of Funds. The use of Fund Balance was added in FY 2016-17 and in FY 2017-18. As shown in Chart H1 and discussed below, the overall change in FY 2016-17 Sources of Funds from FY 2015-16 is 7.2 percent and in FY 2017-18 from FY 2016-17 is 2.8 percent. Reasons for these changes are explained on the next page. Chart H1 shows the FY 2015-16 to FY 2017-18 budgeted Sources of Funds by revenue category.

Chart H1. FY 2015-16 to FY 2017-18 Hetch Hetchy Water and Power Sources of Funds



Summary

Estimated revenues for FY 2016-17 for Sale of Electricity, Sale of Water, Fund Balance, Sale of Natural Gas and Steam, Other Non-Operating Revenues, Interest Income and Federal Interest Subsidy are \$202.0 million, \$13.6 million or 7.2 percent more than FY 2015-16 revenues. Changes from the FY 2015-16 budget include increases in the use of Fund Balance of \$12.7 million, and Sale of Electricity, Interest Income and Sale of Natural Gas & Steam of \$4.0 million. The increases are offset by reductions of \$3.1 million in Sales of Water, and Other Non-Operating Revenues.

Estimated revenues for FY 2017-18 are \$207.7 million, \$5.7 million or 2.8 percent more than FY 2016-17 estimated revenues. Changes from FY 2016-17 include increases for Sale of Electricity of \$7.0 million, Sale of Natural Gas and Steam and Interest Income of \$3.1 million offset by a \$2.5 million decrease in the use of Fund Balance and \$1.9 million in Sale of Water and Federal Interest Subsidy.

Sale of Electricity

FY 2016-17 Sale of Electricity is budgeted at \$133.0 million, which is \$3.1 million more than the amount budgeted for FY 2015-16. The increase is mainly due planned rate increases.

- \$88.6 million is estimated from municipal customers (General Fund and Enterprise departments) driven by rates, projected power usage adjusted for new facilities and energy efficiency measures. The increase of \$1.8 million from the FY 2015-16 budget reflects changes in consumption for both the Enterprises and the General Fund departments and rate adjustments.
- \$20.4 million is estimated from retail customers including customers from the Retail Electric Settlement Account, San Francisco Housing Authority, San Francisco Parking Garages, San Francisco Port tenants, San Francisco Unified School District, Community College of San Francisco, California Academy of Sciences, and other miscellaneous customers. Projected revenues are driven by rates, and projected electric usage adjusted for new facilities, and energy efficiency measures. The \$0.6 million increase from the FY 2015-16 budget reflects projected increases in rates and consumption.
- \$20.8 million is estimated from wholesale customers, Modesto Irrigation District (MID), Turlock Irrigation District (TID), the Western Systems Power Pool (WSPP) and miscellaneous customers including the Riverbank Redevelopment Authority and Caltrans. Estimated revenues from MID and TID are based on rates and loads specified in the Amended and Restated Long-Term Agreements with San Francisco. WSPP revenue estimates are based on Power's available excess power and projected market rates. Estimated revenues from miscellaneous customers are based on rates specified by contract and projected electric usage. The \$0.5 million increase from the FY 2015-16 budget is based on projected market prices for WSPP and updated rates for district sales.
- \$3.2 million is estimated from electric sales to the Treasure Island tenants. The increase of \$0.2 million from the FY 2015-16 budget reflects updated rates and consumption projections for FY 2016-17.

FY 2017-18 Sale of Electricity is budgeted at \$140.0 million, an increase of \$7.0 million from FY 2016-17. The net increase reflects projected consumption and rates for the General Fund departments and Enterprises.

Sale of Water

FY 2016-17 Sale of Water is budgeted at \$36.7 million. The estimated revenues include \$34.6 million from the Sale of Water to the Water Enterprise (shown as an offset in the Table W1), the balance of \$2.1 million is from water sales to Lawrence Livermore Labs and Groveland based on applicable rates and projected consumption. The \$2.7 million reduction from FY 2015-16 includes a \$2.0 million decrease from sales to the Water Enterprise and a \$0.7 million reduction from sales to Lawrence Livermore Labs and Groveland based on projected costs and consumption.

FY 2017-18 revenues from the Sale of Water are \$34.9 million, a net decrease of \$1.8 million from FY 2016-17. The net decrease includes a \$0.2 million increase from sale of water to Lawrence Livermore Labs and Groveland, offset by a \$2.0 million reduction in Sale of Water to the Water Enterprise.

Fund Balance

FY 2016-17 use of Fund Balance is budgeted at \$12.8 million. Fund Balance is appropriated to support Hetch Hetchy Water and Power's operating and revenue-funded capital.

FY 2017-18 use of Fund Balance is budgeted at \$10.3 million, a reduction of \$2.5 million due to a decrease in Revenue-Funded Capital.

Sale of Gas and Steam (Pass-through)

FY 2016-17 Sale of Gas and Steam is budgeted at \$11.3 million based on PG&E and the California Department of General Services (DGS) retail rates and projected usage. Power is responsible for processing and billing City departments for natural gas and steam. The revenue generated from natural gas and steam is a pass-through and ultimately has no impact on Hetch Hetchy's operating revenues. The budget includes \$9.9 million for natural gas and \$1.4 million for steam. The \$0.2 million increase from the FY 2015-16 budget is due to commodity rates adjustments and projected consumption for City facilities.

In FY 2017-18 the estimated revenue is \$14.3 million, an increase of \$3.0 million from FY 2016-17. The change reflects projected rates and consumption.

Other Non-Operating Revenues

FY 2016-17 Other Non-Operating Revenues are budgeted at \$6.3 million and includes: \$2.0 million payment from the Transbay Cable Project as a condition of the operational license issued by the City and County of San Francisco; \$0.8 million from the San Francisco International Airport and its tenants, CleanPowerSF, and Water Enterprise for miscellaneous services provided by Hetch Hetchy based on projected costs of labor and materials for requested services; and \$1.7 million from property rents, PG&E rebates, claim settlements, the Distributed Antenna System Program, a recovery from Infrastructure for their share of the cost of the SFPUC Headquarters, and other miscellaneous income. Other miscellaneous revenues include \$1.8 million from Treasure Island for utility and other services provided to Treasure Island Development Authority (TIDA) managed facilities. The net decrease of \$0.4 million from the FY 2015-16 budget is due to a decrease in other miscellaneous revenues.

The FY 2017-18 budget remains the same as in FY 2016-17.

Federal Interest Subsidy

FY 2016-17 Federal Interest Subsidy is budgeted at \$0.7 million; no change from the FY 2015-16 budget. The SFPUC receives a subsidy payment from the Federal Government for a portion of their borrowing costs on taxable bonds. The U.S. Treasury Department is estimated to provide a direct subsidy equal to 32.6 percent (net of sequestration) of the interest payable for bonds issued as Build America Bonds per the American Recovery and Reinvestment Act (ARRA).

FY 2017-18 Federal Interest Subsidy is budgeted at \$0.6 million, \$0.1 million less than in FY 2016-17 due to the pay down of principal.

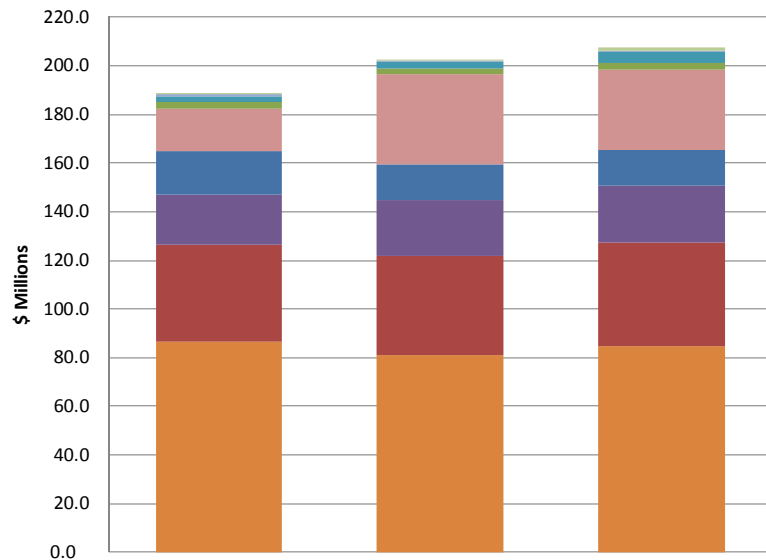
Interest Income

FY 2016-17 Interest Income is budgeted at \$1.2 million, a \$0.6 million increase over FY 2015-16. The budget is based on the projected cash balance and interest rates on the County Investment Pool.

FY 2017-18 Interest Income is budgeted at \$1.3 million, a \$0.1 million increase from FY 2016-17.

Uses of Funds

Chart H2. FY 2015-16 to FY 2017-18 Hetch Hetchy Water and Power Uses of Funds



	FY 2015-16		FY 2016-17		FY 2017-18	
	\$	% of Total	\$	% of Total	\$	% of Total
Non-Personnel Services	86.6	46.0%	81.1	40.1%	84.8	40.8%
Personnel	39.9	21.2%	40.9	20.2%	42.6	20.5%
Services Of Other Depts	20.8	11.0%	22.8	11.3%	23.2	11.2%
Programmatic Projects	17.6	9.4%	14.8	7.3%	14.8	7.1%
Revenue-Funded Capital	17.4	9.2%	36.8	18.2%	33.0	15.9%
Materials & Supplies	3.0	1.6%	2.6	1.3%	2.7	1.3%
Debt Service	2.2	1.1%	2.5	1.2%	4.8	2.3%
Equipment	0.8	0.4%	0.5	0.3%	0.4	0.2%
General Reserve	0.2	0.1%	0.0	0.0%	1.3	0.6%
Total Uses of Funds	\$ 188.4	100.0%	\$ 202.0	100.0%	\$ 207.7	100.0%

Summary

Chart H2 shows the FY 2015-16 to FY 2017-18 budgeted Uses of Funds by expenditure category.

Total Uses of Funds for FY 2016-17 are \$202.0 million, \$13.6 million or 7.2 percent more than in FY 2015-16. The FY 2016-17 Uses of Funds include \$81.1 million for Non-Personnel Services, \$40.9 million for Personnel, \$36.8 million for Revenue-Funded Capital, \$22.8 million for Services of Other Departments, \$14.8 million for Programmatic Projects, and \$5.6 million in Materials & Supplies, Debt Service and Equipment. Changes from the FY 2015-16 budget include increases of \$19.4 million in Capital Revenue Reserve, \$2.0 million in Services of Other Departments, \$1.3 million Personnel and Debt Service offset by reductions of \$5.5 million in Non-Personnel Services, \$2.8 in Programmatic Projects and \$0.8 in Materials and Supplies, Equipment and in General Reserve.

Total Uses of Funds for FY 2017-18 are \$207.7 million, \$5.7 million or 2.8 percent more than in FY 2016-17. The FY 2017-18 Uses of Funds include \$84.8 million for Non-Personnel Services, \$42.6 million for Personnel, \$33.0 million for Revenue-Funded Capital, \$23.2 million for Services of Other Departments, \$14.8 million for Programmatic Projects, \$4.8 million for Debt Service, and \$4.5 million for Materials and Supplies, Equipment and General Reserve. Changes from FY 2015-16 include increases of \$3.8 million in Non-Personnel Services, \$2.3 million in Debt Service, \$1.7 million Personnel, \$1.8 million General Reserve, Services of Other Departments and Materials & Supplies offset by decreases of \$3.9 million in Revenue-Funded Capital and Equipment.

Non-Personnel Services

FY 2016-17 Non-Personnel Services is budgeted at \$81.1 million and is based on projected spending levels for various services provided to Hetch Hetchy Water and Power. The Non-Personnel Services budget includes funding for purchase of power, transmission and distribution, natural gas and steam, professional services, facilities and equipment maintenance, taxes licenses and permits and other miscellaneous services. The net change is \$5.5 million, or 6.4 percent less compared to the FY 2015-16 budget. The change includes reductions in power purchases from the Western System Power Pool (WSPP) which supplement the City's load obligations that cannot be met by Hetchy generation. Estimates are based on normal hydrological conditions. Energy prices are projected from industry standard price indices. Transmission costs for the California Independent System Operator (CAISO) were reduced based on historical CAISO transmission charges and historical rate adjustments for wheeling approved by the Federal Energy Regulatory Commission (FERC) in the Interconnection agreement with Pacific Gas & Electric (PG&E).

FY 2017-18 Non-Personnel Services is budgeted at \$84.8 million, a \$3.8 million or a 4.6 percent net increase from FY 2016-17. The increase adjusts the purchase of power and transmission budgets (based on maintenance and operating changes, updated energy prices based on forward energy curves and historical CAISO charges) and rate adjustments. The increase is offset by the elimination of professional services funding for the Integrated Resource Plan Development.

Personnel

FY 2016-17 Personnel is budgeted at \$40.9 million, including \$28.4 million for salaries and \$12.5 million for fringe benefits. The net salaries increase of \$0.7 million over the FY 2015-16 salaries budget reflects position substitutions, one new operating-funded position to support Power's Wholesale and Retail Services Program, four position transfers from Power to CleanPowerSF, adjustments to salary savings to reflect scheduled hiring of vacant positions and salaries adjustments as required per labor agreements.

FY 2016-17 Mandatory Fringe Benefits are budgeted at \$12.5 million. The net increase of \$0.3 million over the FY 2015-16 budget reflects increases to salaries and retirement and other benefit rate adjustments.

FY 2017-18 Personnel is budgeted at \$42.6 million including \$28.9 million for salaries and \$13.7 million for fringe benefits. The \$0.5 million salaries increase from FY 2016-17 funds position substitutions and salaries adjustments per labor agreements.

FY 2017-18 Mandatory Fringe Benefits is budgeted at \$13.7 million. The net increase of \$1.2 million from FY 2016-17 reflects adjustments to salaries based on labor agreements and increases in benefit rates.

Services of Other Departments

FY 2016-17 Services of Other Departments is budgeted at \$22.8 million and is based on the projected costs of services provided by other City departments to Hetch Hetchy. The \$2.0 million increase from FY 2015-16 funds Hetch Hetchy's share of SFPUC Bureaus' projected costs, as well as workers compensation and City Attorney.

The FY 2017-18 Services of Other Departments budget is \$23.2 million, a \$0.4 million increase from FY 2016-17 to fund Hetch Hetchy's share of services of the SFPUC Bureaus' projected costs.

Programmatic Projects

FY 2016-17 Programmatic Projects are budgeted at \$14.8 million, a \$2.8 million reduction from FY 2015-16. The reduction reflects shifting a portion of the Western Electricity Coordinating Council/North American Electric Reliability Corporation (WECC/NERC) Project from programmatic to capital projects.

FY 2017-18 Programmatic Projects are budgeted at \$14.8 million; no change from FY 2016-17.

Revenue-Funded Capital

FY 2016-17 Revenue-Funded Capital budget is \$36.8 million. The budget funds the revenue portion of the capital program approved and funded through an annual supplemental appropriation. The \$19.4 million increase from the FY 2015-16 budget reflects SFPUC efforts to increase the renewal and replacement program.

FY 2017-18 Revenue-Funded Capital budget is \$33.0 million, \$3.8 million less than in FY 2016-17. The decrease reflects shifting a portion of the capital revenue funding to bonds.

Materials and Supplies

FY 2016-17 Materials and Supplies are budgeted at \$2.6 million based on projected cost and usage for materials and supplies related to operations and maintenance. The \$0.4 million reduction from FY 2015-16 reflects a decrease in the cost of fuel.

FY 2017-18 Materials and Supplies are budgeted at \$2.7 million or \$0.1 million more than the FY 2016-17 budget based on projected costs for water and sewage treatment supplies and building maintenance supplies for upcountry facilities.

Debt Service

FY 2016-17 Debt Service is budgeted at \$2.5 million based on principal and interest on Power Revenue bonds to fund Power's capital program as well as Clean Renewable Energy Bonds and New Clean Renewable Energy Bonds (CREBs and NCREBs), Qualified Energy Conservation Bonds (QEBCs) and lease payment of the SFPUC's headquarters. The \$0.3 million net increase from FY 2015-16 reflects the projected principal and interest payments on New Clean Renewable Energy Bonds issued in October, 2015.

FY 2017-18 Debt Service is budgeted at \$4.8 million, a \$2.3 million increase from FY 2016-17. The increase funds costs for new Clean Renewable Energy Bonds Series 2015 and projected increases in interest payments.

Equipment

FY 2016-17 Equipment is budgeted at \$0.5 million, a \$0.3 million decrease from FY 2015-16. The budget funds equipment required to efficiently and effectively operate and maintain the overall system consisting of dams, reservoirs, water and power transmission lines, streetlights and power generation facilities. The \$0.3 million decrease from FY 2015-16 is based on projected equipment needs.

FY 2017-18 Equipment is budgeted at \$0.4 million, a \$0.1 million decrease from the FY 2016-17 budget. The decrease reflects projected equipment needs for FY 2017-18.

General Reserve

The FY 2016-17 General Reserve budget is eliminated, resulting in a \$0.2 million reduction from FY 2015-16. The General Reserve is used to balance budgeted sources and uses of funds, when budgeted revenues exceed budgeted expenditures.

FY 2017-18 General Reserve is budgeted at \$1.3 million to fund unanticipated costs.

Table H2. Hetch Hetchy Water and Power Uses of Funds by Section and Other Categories

\$ Millions	FY 2014-15	FY 2015-16		FY 2016-17	FY 2017-18	FY 2016-17 vs. FY 2015-16		FY 2017-18 vs. FY 2016-17	
	Audited	Adopted		Adopted	Adopted	Adopted Budget		Adopted Budget	
Section	Actual	Budget	FY 2015-16	Budget	Budget	Amount	%	Amount	%
Power Administration	10.7	12.3	11.6	14.4	15.1	2.1	16.9%	0.7	4.7%
Energy Services	8.3	10.5	8.1	8.8	9.0	(1.7)	-16.1%	0.2	2.2%
Long Range Planning and Power Purchase	24.1	52.8	26.9	49.5	50.1	(3.4)	-6.4%	0.7	1.3%
Light, Heat and Power	13.9	18.6	13.8	18.0	21.4	(0.7)	-3.6%	3.4	19.0%
Project Operations	53.5	56.7	54.4	57.3	58.2	0.5	1.0%	0.9	1.6%
Debt Service	1.9	2.2	0.5	2.5	4.8	0.3	14.7%	2.3	94.5%
Revenue-Funded Capital	23.3	17.4	17.4	36.8	33.0	19.4	112.0%	(3.8)	-10.3%
Programmatic Projects	19.5	17.6	17.6	14.8	14.8	(2.8)	-16.1%	(0.0)	-0.1%
General Reserve	9.9	0.2	26.5	0.0	1.3	(0.2)	-83.3%	1.3	3246.7%
Hetch Hetchy Total	165.1	188.4	176.7	202.0	207.7	13.6	7.2%	5.7	2.8%

Table H2 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and the budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17 for all Hetch Hetchy Water and Power Sections.

Project Operations is 28.4 percent of the total uses of funds in FY 2016-17 and 28.0 percent in FY 2017-18. The Long Range Planning and Power Purchases is the next highest percentage of the total uses, at 24.5 percent in FY 2016-17 and 24.1 percent in FY 2017-18. The largest dollars and percentage increase is the capital revenue reserve, see the Hetch Hetchy Water and Power Capital Improvement Program (CIP).

Authorized and Funded Full-Time Equivalents (FTEs)

Table H3. Hetch Hetchy Water and Power Authorized and Funded Full-Time Equivalents (FTEs)

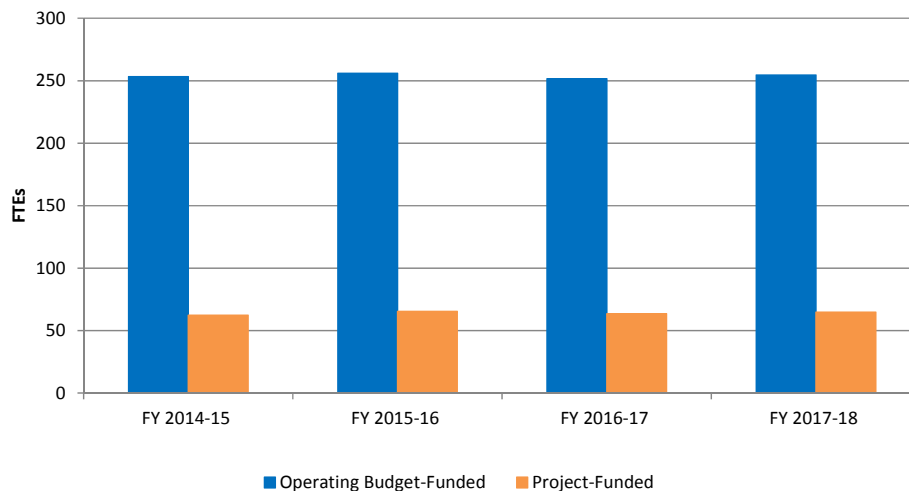
	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18		
Position Type	Adopted Budget	Adopted Budget	Adopted Budget	Adopted Budget	FY 2016-17 vs. FY 2015-16	FY 2017-18 vs. FY 2016-17
Permanent Positions	242.72	245.85	241.06	244.38	(4.79)	3.32
Temporary Positions	10.63	10.04	10.55	10.30	0.51	(0.25)
Subtotal Operating Budget-Funded	253.35	255.89	251.61	254.68	(4.28)	3.07
Project-Funded Positions	62.31	65.31	63.54	64.77	(1.77)	1.23
Total Positions	315.66	321.20	315.15	319.45	(6.05)	4.30

Table H3 shows a breakdown of positions by position type for FY 2014-15 to FY 2017-18.

As noted above in Table H3, the total authorized and funded full-time equivalent (FTE) operating, project-funded, and temporary positions for FY 2016-17 are 315.15 FTEs, a 6.05 FTE decrease from FY 2015-16. In FY 2016-17 the net change in the FTEs Permanent positions count from FY 2015-16 includes adjustments to salary savings to reflect scheduled hiring of vacant positions, offset by an increase of one new position to support Power's Wholesale and Retail Services Program. Temporary Positions funding was increased to reflect actual costs for streetlight maintenance. The net changes for Project-Funded Positions FTEs count includes the reassignment of four positions from Power to CleanPowerSF to reflect where the positions work and report and the addition of three new positions to support Power's Customer Development Program and energy tracking risk management functions.

The FY 2017-18 FTEs are 319.45, an increase of 4.30 FTEs from FY 2016-17. The FTE includes the annualization of new operating and project-funded positions in FY 2016-17, one new project-funded position to support Western Electricity Coordinating Council/North American Reliability Corporation (WECC/NERC) activities, and adjustments to salary savings and temporary salaries. Chart H3 illustrates the trend of operating and project-funded FTEs from FY 2014-15 to FY 2017-18. The operating and project FTEs trend is relatively flat for FY 2014-15 through FY 2017-18.

Chart H3. Hetch Hetchy Water and Power Operating and Project FTEs Trend



Hetch Hetchy Water and Power Capital Improvement Program (CIP)

The Hetch Hetchy Water and Power of the San Francisco Public Utilities Commission is responsible for providing reliable, high quality water and electric energy to the City and other customers, operates and maintains facilities to a high standard of safety and reliability, and maximizes revenue opportunities within approved levels of risk.

Hetchy Water operates, maintains, and improves water and power facilities, smaller dams and reservoirs, water transmission systems, power generation facilities, and power transmission assets, including transmission lines to the Newark substation.

Power consists of hydroelectric generation, onsite solar at SFPUC and other City facilities, generation using bio-methane produced at SFPUC wastewater treatment facilities, and third-party purchases.

Hetch Hetchy Water and Power Ten-Year Capital Plan

The SFPUC is required to develop a Ten-Year Capital Plan. Reliability and delivery of high quality water and renewable sources of power are the most critical objectives of Hetch Hetchy Water and Power. The purpose of the capital investment is to extend the useful life of the infrastructure and provide continued reliable operation of the system components. Therefore, understanding the long-term capital needs of the system and determining how to finance these capital needs are essential to the mission of the SFPUC.

Table H4 shows the Hetch Hetchy Water and Power Ten-Year Capital Plan by program and project. The table also shows the different sources of revenue that are expected to finance the CIP over these ten-years and the anticipated number of jobs created by this program.

The \$1,062 million Ten-Year Capital Plan represents a consistent and growing investment over ten years with greater amount of funds allocated to the Power infrastructure. The trend to shift from revenue funding to debt funding is evident with revenues only supporting 19.6% of the CIP. The new revenue source is the California Cap and Trade Auction funding which although small in comparison, is consistent at \$2.1 million between FY 2016-17 and FY 2019-20 with a slight decrease to \$1.8 million in FY 2020-21.

Revenues are projected to be \$1,062.2 million resulting in a balanced plan.

Table H4. Hetch Hetchy Water and Power Ten-Year Capital Plan

\$ Thousands							
Program/Project	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-26	Plan Total
Spending Plan							
Hetch Hetchy Power							
Streetlights	3,510	3,510	5,160	5,160	5,210	20,020	42,570
Renewable/Generation	1,100	1,100	1,100	1,100	1,100	5,500	11,000
Energy Efficiency	1,000	1,000	1,000	1,000	1,000	5,000	10,000
Redevelopment	6,100	7,100	6,450	4,950	2,100	2,100	28,800
Distribution Services for Retail Customers	20,000	20,000	-	-	-	-	40,000
Reclassification - Power Only Joint Projects	25,930	31,424	41,510	329,725	9,648	47,714	485,951
Total Hetchy Power	57,640	64,134	55,220	341,935	19,058	80,334	618,321
Hetchy Water							
Water Infrastructure	5,100	10,000	9,502	8,460	8,460	62,550	104,072
Power Infrastructure	11,738	15,800	22,883	2,883	2,883	14,417	70,604
Joint Projects - Water Infrastructure 45%	11,612	12,783	15,240	267,416	5,535	27,243	339,829
Joint Projects - Power Infrastructure 55%	14,193	15,624	18,626	326,841	6,765	33,297	415,346
Reclassification - Power Only Joint Projects	(25,930)	(31,424)	(41,510)	(329,725)	(9,648)	(47,714)	(485,951)
Total Hetchy Water	16,712	22,783	24,742	275,876	13,995	89,793	443,901
Total Hetchy Power & Water	74,353	86,917	79,961	617,810	33,053	170,127	1,062,221
Revenues							
Revenue	38,270	33,000	20,000	20,000	17,258	80,334	208,862
Power Bonds	11,333	29,034	33,120	319,835	-	-	393,321
Water Bonds	16,712	22,783	24,742	275,876	13,995	89,793	443,901
Developer Fees	5,938	-	-	-	-	-	5,938
Cap and Trade Auction Revenue	2,100	2,100	2,100	2,100	1,800	-	10,200
Total Revenues	74,353	86,917	79,961	617,810	33,053	170,127	1,062,221
Total San Francisco Jobs/Year	663	775	713	5,511	295	1,518	9,475

Table H4 and Chart H4 shows total project costs for Hetch Hetchy Water and Power of \$1,062.2 million.

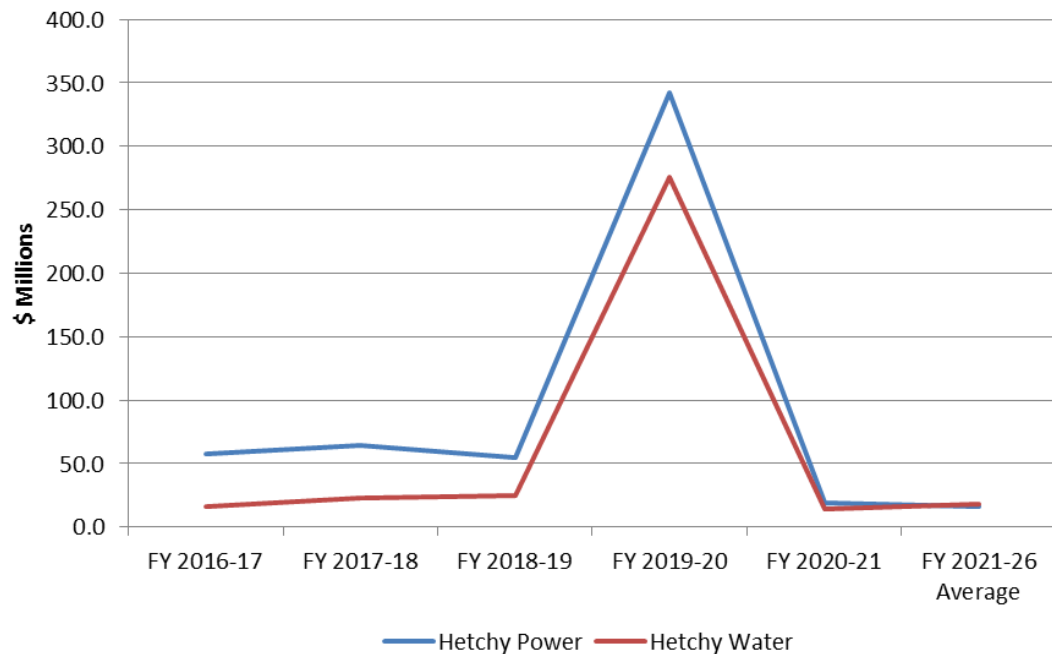
The Ten-Year Capital Plan is developed every year by the SFPUC and approved by the Commission. The Ten-Year Capital Plan informs and guides managers, policy makers, elected officials and the public by providing the proposed long-term capital program, projects and investment. The Ten-Year Capital Plan also guides the Ten-Year Financial Plan. The Ten-Year Capital Plan is not a budget; it is the plan that guides the annual capital budget. As the budget process progresses through the Spring and into final adoption in the Summer, the annual CIPs can be revised and final projects, costs and totals for the two annual CIPs can change. Consequently, even though the annual CIPs are based on the Ten-Year Capital Plan, they do not always match by project or dollar amount.

There are two sections to the Ten-Year Capital Plan:

1. Power Enterprise Capital Program - The program undertakes projects both within San Francisco and up-country and is financed by operating revenues, Cap and Trade Carbon auction revenues, Developer Fees in FY 2016-17, and Power revenue bonds. Power includes the renewable generation and energy efficiency projects critical to attain greenhouse gas reductions and begin climate change mitigation.
2. The Hetchy Water Renewal and Replacement Program – This program is financed by Water revenue bonds, Power revenue bonds and Power revenue; the Hetchy Water Renewal and Replacement budget includes Water Infrastructure, Power Infrastructure and Joint, Water (45%)/Power (55%) projects that are located up-country and managed by Hetchy Water.

Chart H4 shows Hetch Hetchy's capital budget trend over ten-years. These trend lines show a mostly even allocation between Power and Water funding with the spike in FY 2019-20 for the Mountain Tunnel Improvement Project.

Chart H4. Hetch Hetchy Water and Power Ten-Year Capital Plan Trend



Power Capital Program

The \$618.3 million per year capital program is comprised of the following:

Streetlights, \$42.6 million

Hetchy provides power to all of San Francisco's 44,528 streetlights and maintains the 25,509 streetlights owned by the City and funds the maintenance of the 19,019 streetlights owned by Pacific Gas & Electric (PG&E). The Plan includes \$42.6 million over 10 years for upgrades to street lighting infrastructure.

The plan funds street lighting area improvements to correct inadequate lighting and provide safer street and pedestrian friendly environment, replace insufficient lighting through the conversion of high voltages series loop circuit into multiple standard voltage service and LED lighting, holiday and festivity pole use, street and pedestrian poles assessment to determine the severity of pole deterioration, streetlight pole rehabilitation and replacement of transformer based poles as well as poles determined to need replacement by the pole assessment.

Renewable /Generation Power, \$11.0 million

In accordance with City policies and directives to increase renewable energy and reduce greenhouse gases, Power is continuously developing and implementing new renewable generation resources. The Capital Plan proposes a series of small municipal and energy development projects including solar photovoltaic, solar thermal, biogas fuel cells, wind projects, and other renewable energy projects.

The Capital Plan provides funding for small renewable solar and hydroelectric projects. These projects inherently mitigate the impacts of climate change as they generate energy from renewable resources. The power generated from the Renewable/Generation projects will offset on-site power need at each project location.

Energy Efficiency, \$10.0 million

Energy efficiency improvements are an important component of an electric utility's resource portfolio. These investments reduce facility operating costs and electric bills for customers, improve system functionality, and reduce the environmental impact of energy use. The plan proposes funding for lighting and mechanical system efficiency upgrades. These investments are consistent with state policies that place emphasis on energy efficiency and that support greenhouse gas reduction.

- General Fund Departments – Funds energy efficiency investments in City facilities covering the planning, design and construction of energy efficiency projects for "direct install" projects, as well as technical assistance and project assistance for departments with their own capital funds. Energy retrofits include lighting, heating and ventilation, retro-commissioning, and energy management systems projects. The budget funds efficiency projects in municipal facilities for departments such as Police, Real Estate, Recreation & Parks, Muni, Yerba Buena Center, and Fine Arts departments.
- Civic Center District - Planning, design and construction of projects in the green energy district in the Civic Center District in accordance with the partnership Memorandum of Understanding with the Clinton Global Initiative. This effort will employ new technologies in energy efficiency and obtain Leadership in Energy and Environmental Design certification for upgraded buildings from the US Green Building Council. This program includes City Hall, Davies Symphony hall, Opera House, Main Library, Public Health Headquarters, Asian Art Museum, Bill Graham Auditorium, Civic Center Garage, and the Civic Center.

Redevelopment, \$28.8 million

Treasure Island

The Cooperative Agreement discussed in the Wastewater Enterprise's Renewal Program also requires the SFPUC to provide utility operations and maintenance services at Treasure Island and Yerba Buena Island for the electrical and natural gas utility systems. The SFPUC has developed a work plan for creating a public power utility on each of the islands.

The capital projects identified are required to support the future development electric load at Treasure and Yerba Buena Islands. The current planning for the development shows that the existing electrical overhead poles, lines, and substation are adequate to serve the first phase of development. At some point in the development, when the electric load approaches the design limit of the electric lines at approximately 10 megawatts, the lines will have to be upgraded and subsequently installed underground.

Alice Griffith/Candlestick Point

This project provides for the second phase of development at Hunters Point Shipyard, Candlestick Point, and the Alice Griffith Housing Complex. The Development Team comprised of the Office of Community Investment and Infrastructure and Developer will pay for the installation the required infrastructure and substructure required for the new 12-kV underground electrical distribution system. The SFPUC as the electric utility provider will install the conductors in the conduits, transformers, switches, and metering equipment required for the electric distribution system.

Distribution Services for Retail Customers - \$40.0 million

The Capital Plan provides funding for the design and construction of transmission and distribution facilities to serve new retail customers, installation of Intervening Facilities required under the new Wholesale Distribution Tariff and the development, administration, and incentive payments to new retail customers.

This project is consistent with San Francisco Administrative Code Section 99.3 establishing the SFPUC's role as the exclusive electric service provider for existing and new City facilities, and redevelopment and development projects. The project will also look into the feasibility and implementation of a supervisory control and data acquisition (SCADA) system, automated metering information (AMI) system, and integration of both with other technologies into a possible smart grid electric system.

Reclassification – Power Infrastructure, Joint Water & Power Projects, \$485.9 million

The Power Capital budget includes the reallocation from Hetchy Water for the Power Infrastructure, \$70.6 million, and the Power Enterprise's share (55%) of Joint Water & Power projects, \$415.3 million. The projects are located up-country and managed by Hetchy Water.

Hetchy Water Renewal and Replacement (R&R) Program

The \$443.9 million Hetchy Water Renewal and Replacement Program is comprised of several programs. The proposed program costs will be financed with a combination of revenue bonds and power revenues.

Many Hetch Hetchy Water and Power facilities and system components are aging and/or have reached/exceeded their useful life. The condition of these facilities and equipment must be or has been assessed and proposed projects evaluated and prioritized based on risk (financial/criticality, safety and regulatory), efficiency of operations, and to provide a safe working environment for employees working in remote areas.

Water Infrastructure, \$104.0 million

The Water Infrastructure R&R program will include concept, development, design and upgrades for operating, managing, and maintaining the Hetchy Water Infrastructure. In general, this includes water facilities from Hetch Hetchy Reservoir to Alameda East. The new and upgraded systems will have increased coverage, capacity or reliability, or improve employee safety and/or operating efficiency for those projects. R&R projects consist of continued rehabilitation to the San Joaquin Pipeline including evaluation and assessment of structural integrity, structural upgrade of the pipeline and other projects including pipeline cathodic protection, coating and lining, an update to the SCADA system for Water assets and funding for Water Infrastructure Project Development.

Power Infrastructure – \$70.6 million

Power Infrastructure, facilities and equipment have reached their life expectancy. Power generation will become less reliable if upgrades are not performed.

The Capital Plan provides funding for improvements at the Holm, Kirkwood and Moccasin Powerhouses. Projects include upgrades to the powerhouse protection, control and monitoring systems and equipment replacement and upgrades.

The Capital Plan also includes rehabilitation of transmission lines and distribution systems. Transmission improvements consist of reliability projects to address North American Electric Reliability (NERC) requirements. Typical projects include replacement of insulators, switches, tower infrastructure, grounding and protection. Regulatory projects to achieve clearance mitigation and resolve clearance discrepancies and meet regulatory requirements along with the power system impact mitigation project to mitigate impacts on the City's electric system caused by interconnections with private developments

Distribution system projects include upgrades to distribution lines, dry transformers, distribution substations; disconnect switches, breakers, protection, and metering.

The plan also includes funding for Power Infrastructure Project Development.

Joint Projects – Water & Power Infrastructure, \$755.2 million

The plan proposes a condition assessment of Hetchy reservoirs and dams to address safety and environmental issues and loss of storage or conveyance. It also includes funding for the rehabilitation of O'Shaughnessy dam.

This funds security upgrades at all Hetchy facilities to minimize risk of intrusion. Security measures include fencing, card access and camera monitoring and fiber projects to upgrade Hetchy primary communication with SFPUC facilities.

This also funds facilities upgrades to over 80 Hetchy structures required to meet Water levels of service for sustainability, operational objectives for power system reliability and regulatory compliance.

The plan includes \$640.2 million for the Mountain Tunnel Rehabilitation Project. The project consists of 3 phases:

Mountain Tunnel Adits & Access Improvements

Project will enlarge adits to accommodate quick entry of construction crews and equipment into the tunnel and improve access roads to the adits and tunnel. Project will also provide for the implementation of the Emergency Restoration Plan.

Mountain Tunnel Inspection & Repairs Project

Funds tunnel inspections in 2017 to update the Condition Assessment conducted in 2008, as well as short-term repairs in 2017 and 2018 to reduce the risk of failures in the concrete lining prior to the long-term project being implemented.

Mountain Tunnel Bypass Project

The project provides for evaluation of alternatives for the Mountain Tunnel facility and the design and construction of the preferred engineering alternative that will keep this vital component of the Hetch Hetchy Water and Power System in reliable service. SFPUC has made a commitment to confirm the final long-term alternative - new 12-mile bypass tunnel or rehabilitation of existing tunnel - after an in-depth tunnel inspection and condition assessment has been conducted in 2017.

The plan also includes funding for Joint Project Development.

Reclassification - Power Infrastructure, Joint Water & Power Projects, (\$485.9) million

The Hetchy Water Capital budget includes the reallocation of Power infrastructure, \$70.6 million, and Power's share (55%) of Joint Water & Power projects, \$415.3 million to the Power Capital Budget. These cost reallocations are for projects located up-country and are managed by Hetchy Water.

Table H5 shows the Hetch Hetchy Water and Power CIP for FY 2015-16, FY 2016-17 and FY 2017-18 by major programs.

Table H5. Hetch Hetchy Water and Power CIP by Major Program

\$ Millions	FY 2015-16 Adopted Budget	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget
Program/Project			
Hetchy Power Costs			
Streetlights	11.9	3.5	3.5
Transmission/Distribution	1.3	-	-
Renewable/Generation	6.2	1.1	1.1
Energy Efficiency	1.0	1.0	1.0
Redevelopment	3.0	6.1	7.1
Distribution Services for Retail Customers	-	20.0	20.0
Reclassification - Power Only Joint Projects	50.3	25.9	31.4
Total Hetchy Power Costs	73.6	57.6	64.1
Hetchy Water Costs			
Water Infrastructure	4.0	5.1	10.0
Power Infrastructure	31.6	11.7	15.8
Joint Projects - Water Infrastructure 45%	15.3	11.6	12.8
Joint Projects - Power Infrastructure 55%	18.7	14.2	15.6
Reclassification - Power Only Joint Projects	(50.3)	(25.9)	(31.4)
Total Hetchy Water Costs	19.3	16.7	22.8
Financing Cost - Hetchy Water	3.9	2.0	2.7
Financing Cost - Hetchy Power	14.8	-	3.4
Total Financing Costs	18.7	2.0	6.2
Total Hetchy Power & Water Costs	111.6	76.4	93.1
Sources			
Revenue (1)	17.4	38.3	33.0
Power Bonds	69.3	11.3	32.5
Water Bonds	23.2	18.7	25.5
Developer Fees	-	5.9	-
Cap and Trade Auction Revenue	1.7	2.1	2.1
Total Sources	111.6	76.4	93.1

(1) FY 2016-17 revenue amount includes \$36.8M funded through the revenue reserve and \$1.5M from project closeouts.

FY 2016-17 and 2017-18 Capital Budget

The FY 2016-17 and FY 2017-18 SFPUC Capital Budget is \$169.5 million for projects and financing costs for Hetchy Water and Power.

Table H5 shows an overall decrease in the FY 2016-17 Hetchy Water and Power Capital Program. The Power Capital Program decreased \$16.0 million from FY 2015-16 to FY 2016-17 as projects had sufficient unspent balances from prior year's appropriations to use in FY 2016-17. The program increases \$6.5 million from FY 2016-17 to FY 2017-18. The Hetchy Water Capital Program remains relatively constant with a small decrease of \$2.6 million from FY 2015-16 to 2016-17 and an increase of \$6.1 million from FY 2016-17 to FY 2017-18 to reflect an increase in spending on the Mountain Tunnel Improvement Project.

The table shows an increase in revenue funded capital, over 100 percent, from FY 2015-16 to FY 2016-17. This is a result of the SFPUC effort to increase the amount of revenue funded capital in the Enterprises' ongoing annual Renewal and Replacement program. As a result, bond funded capital decreased in FY 2016-17 consistent with the overall decrease in the budget for FY 2016-17.

FY 2016-17 Summary

The Hetchy Water and Power Capital Improvement Program (CIP) for FY 2016-17 are \$76.4 million and include: \$57.6 million for Power and joint-related projects, \$16.7 million for Hetchy Water and joint-related projects and \$2.0 million for financing cost. The FY 2016-17 CIP is funded by \$38.3 million in Hetch Hetchy Water and Power revenue, \$11.3 million from the issuance of Power Enterprise revenue bonds for projects considered Power or 55 percent of joint assets, \$18.7 million from the issuance of Water Enterprise revenue bonds for projects considered Water or 45 percent of joint Water's assets, \$5.9 million from Developer Fees and \$2.1 million from Cap and Trade Auction revenue. The projects are included in the SFPUC's Ten-Year Capital Plan which is part of the City and County of San Francisco's Ten-Year Capital Plan approved by the Board of Supervisors biannually.

The CIP represents continued investment in upgrading and improving infrastructure to ensure reliability of power generation and water delivery. The CIP grows the Power portfolio with continued investment in renewable sources and efficiency.

Power

Projects in the FY 2016-17 CIP include:

- \$3.5 million to fund the continued replacement/repair of streetlights, pull boxes, and conduit on an as needed basis and various streetlight improvements including holiday and special event street pole lighting, pedestrian streetlight assessments and improvements and lighting for the Van Ness Bus Rapid Transit Project. Funding was decreased from \$11.9 million in FY 2015-16 to \$3.5 million in FY 2016-17 as the project had a significant unspent balances from prior year appropriations that will be expended in FY 2016-17.
- \$1.1 million for Renewable/Generation projects such as small renewable (solar photovoltaic, solar thermal, wind, geothermal, fuel cells), small hydro (in-line turbines, turbines in existing pipelines, incremental hydro). Power generated from the Renewable/Generation projects will offset on-site power need at each project location.
- \$1.0 million for Energy Efficiency Projects including \$0.7 million for General Fund departments, \$0.3 million for the Civic Center Sustainability District. This project involves retrofitting the City buildings and other facilities to significantly improve operation and energy efficiency, and enhance indoor air quality and occupant/public experience.
- \$6.1 million for Redevelopment at Treasure Island, Alice Griffith and Candlestick Point.
 - Treasure Island - Install a new underground 12 kilovolt (kV) distribution system at Treasure and Yerba Buena Island. The developer will pay for the installation of the new underground 12-kV electric distribution system while the SFPUC, as the electric utility provider, will be responsible for installing the conduit wires, transformers, switches, and metering equipment and connecting the existing electrical distribution system with the new system.

- Alice Griffith/Candlestick Point - This project provides for the second phase of development at Hunters Point Shipyard, Candlestick Point, and the Alice Griffith Housing Complex. The Development Team comprised of the Office of Community Investment and Infrastructure and Developer will pay for the installation the required infrastructure and substructure required for the new 12-kV underground electrical distribution system. The SFPUC as the electric utility provider will install the conductors in the conduits, transformers, switches, and metering equipment required for the electric distribution system.

- \$20.0 million for Distribution Services for Retail Customers. This project provides for the design and construction of transmission and distribution facilities to serve new retail customers, installation of Intervening Facilities required under the new Wholesale Distribution Tariff and the development, administration, and incentive payments to new retail customers

- \$25.9 million for reclassification to Power's share of improvements to the power infrastructure up-country. This includes: \$11.7 million to fund major improvements to the power generation and transmission system portion of the Hetch Hetchy Project, including a number of power related projects and work at all facilities including powerhouses, switchyards and transmission/distribution system; and \$14.2 million to fund major improvements on joint assets located up-country (this represents Power's 55.0% share).

Hetchy Water

Projects in the FY 2016-17 CIP include:

- \$5.1 million for Water Infrastructure projects to fund major improvements and maintenance activities involved with the water supply and delivery portion of the Hetch Hetchy Project. Funding is included for recurring repairs in different segments of the San Joaquin Pipeline. Work on the pipeline includes evaluation and assessment of structural integrity, structural upgrade of the pipeline and other projects including pipeline cathodic protection, coating and lining.

- \$11.7 million for Kirkwood Powerhouse upgrades, transmission line clearance mitigation project to implement measures to resolve clearance discrepancies and meet regulatory requirements, and the power system impact mitigation project to mitigate impacts on the City's electric system caused by interconnection with private developments.

- \$25.8 million for Water's (45%) and Power's (55%) share of costs of joint asset property to support the infrastructure required for the operation and maintenance for both the Hetchy water and power systems including improvements to Moccasin facilities, road improvements, and the Mountain Tunnel Improvement Project including access/adit improvements and tunnel inspections and interim repairs.

- (\$25.9 million) for reclassification from Hetchy Water to Power for power infrastructure improvements up-country. This includes \$11.7 million in Power infrastructure Projects (see Power Infrastructure above) and \$14.2 million for Power's share of joint assets located upcountry (See Joint Water/Power Projects above).

FY 2017-18 Summary

Power

The Power FY 2017-18 Capital Budget is \$64.1 million and includes \$3.5 million to fund continued assessments and improvements to the SFPUC's streetlights, \$1.1 million for investments in renewable generation projects, \$1.0 million for energy efficiency projects for General Fund and Enterprise departments, \$7.1 million for the Treasure Island and Alice Griffith/Candlestick Point development projects, \$20.0 million for Distribution Services for Retail Customers and \$31.4 million for Power's share of improvements to the power infrastructure up-country.

Hetchy Water

The Hetchy Water FY 2017-18 Capital Budget is \$22.8 million and includes \$10.0 million for improvements to the water transmission system San Joaquin Pipeline, \$15.8 million for

Power Infrastructure projects including powerhouse projects and transmission line clearance mitigation, \$28.4 million for rehabilitation of joint (power/water) infrastructure projects including road improvements and the Mountain Tunnel Improvement Project. The budget also includes the reclassification (reduction) of \$31.4 million to Power for its share of improvements to power infrastructure up-country, which is operated and managed by Hetchy Water.

Hetch Hetchy Water and Power Programmatic Projects

Table H6 shows Hetch Hetchy Water and Power Programmatic Projects, for FY 2015-16, FY 2016-17 to FY 2017-18, by major programs.

Table H6. Hetch Hetchy Water and Power Programmatic Projects

\$ Millions	FY 2015-16 Adopted Budget	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget
Program/Project			
Hetchy Costs			
SF Electric Reliability - Trans Bay Cable Funding	2.0	2.0	2.0
Community Benefits - Power	-	0.5	0.6
Community Benefits - Water	-	0.6	0.4
Treasure Island Facilities Maintenance	3.0	3.1	3.3
Youth Employment Project	0.3	0.2	0.2
525 Golden Gate - Operations & Maintenance	0.7	0.7	0.7
525 Golden Gate - Lease Payments	1.2	1.2	1.2
Facilities Maintenance	1.6	2.5	2.5
WECC/NERC Transmission Line Clearance	2.0	0.2	0.2
WECC/NERC Compliance	6.1	3.7	3.7
Community Choice Aggregation	0.7	-	-
Total Costs	17.5	14.8	14.8
Sources			
Infrastructure - Recovery Capital (O&M)	0.1	0.1	0.1
Infrastructure - Recovery Capital (Lease)	0.2	0.2	0.2
Federal Bond Interest Subsidy	0.3	0.3	0.3
Trans Bay Cable Payment	2.0	2.0	2.0
Revenue	15.0	12.2	12.2
Total Sources	17.5	14.8	14.8

The Hetch Hetchy Water and Power Programmatic Projects budget decreased from \$17.5 million in FY 2015-16 to \$14.8 million in FY 2016-17. This \$2.7 million decrease is due to the WECC/NERC Project budget moving to the Power Infrastructure project in the Power Capital Budget.

There is no change in The Hetch Hetchy Water and Power Programmatic Projects budget from FY 2016-17 to FY 2017-18.

Hetch Hetchy Water and Power Ten-Year Financial Plan

Table H7 shows Hetch Hetchy Water and Power Ten-Year Financial Plan, from FY 2016-17 to FY 2025-26.

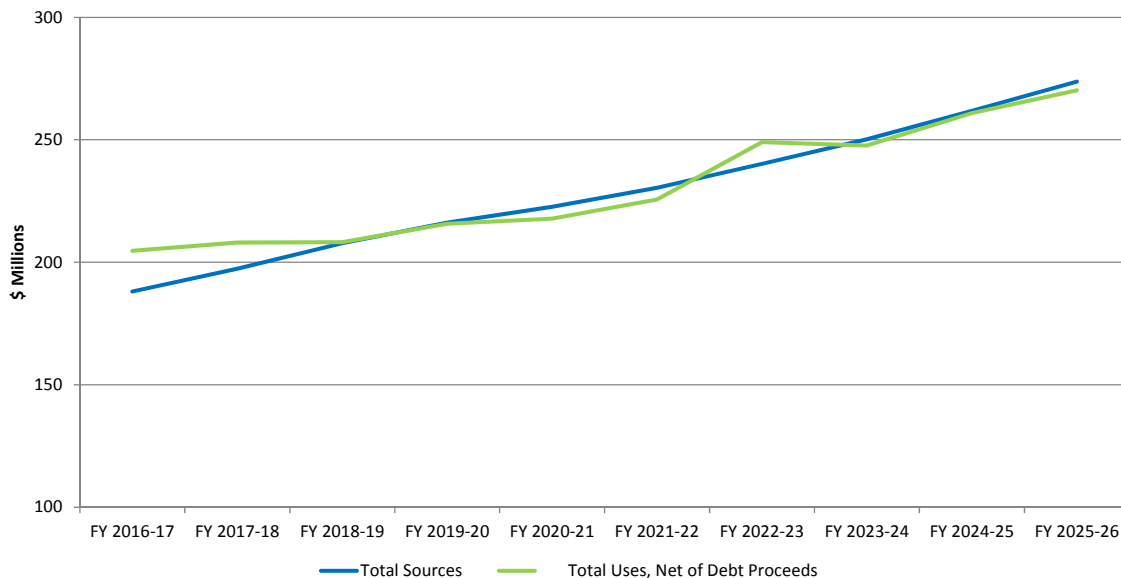
Table H7. Hetch Hetchy Water and Power Ten-Year Financial Plan

\$ Millions	FY 2015-16 Forecast	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Beginning Operating Fund Balance	33.4	54.4	38.5	29.9	31.4	33.9	40.1	44.8	36.0	38.6	39.5
CCA Reserve Reprogrammed	(4.00)	0.80	2.00	2.00	2.00	1.30	-	-	-	-	-
Sources											
Power Sales	133.4	132.9	140.8	149.3	155.9	163.7	171.7	179.8	188.2	197.8	207.8
Water Sales	38.5	36.5	34.6	35.6	36.7	37.8	38.9	40.1	41.3	42.5	43.8
Natural Gas & Steam	10.1	11.3	14.3	14.7	15.1	15.6	16.1	16.5	17.0	17.5	18.1
Interest Income	1.1	1.2	1.3	1.1	1.2	1.3	1.4	1.3	1.2	1.3	1.4
Other Misc Income	9.2	6.1	6.5	7.0	7.2	4.3	2.3	2.4	2.5	2.6	2.7
Total Sources	192.3	188.0	197.4	207.8	216.1	222.7	230.4	240.2	250.2	261.8	273.7
Uses											
Operations & Maintenance	144.0	148.3	154.3	160.8	167.0	173.7	179.7	185.7	192.3	199.8	208.4
Water Programmatic Projects	0.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Power Programmatic Projects	16.2	12.5	12.7	12.9	13.1	13.3	11.5	11.7	11.9	12.2	12.4
Debt Service	2.0	2.1	4.5	10.6	11.5	13.6	15.7	40.6	40.2	40.2	40.5
Total Uses	162.8	164.0	172.6	185.4	192.7	201.7	208.0	239.2	245.6	253.4	262.5
Net Revenues Before Capital	29.5	24.1	24.8	22.3	23.5	21.0	22.4	1.0	4.6	8.4	11.2
Capital and Programmatic Projects	19.1	40.7	35.4	22.8	23.0	16.1	17.7	9.8	2.1	7.6	7.7
Less: Capital Financing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Uses, Net of Debt Proceeds	181.9	204.7	208.0	208.2	215.7	217.8	225.7	249.0	247.7	260.9	270.2
Net Revenues After Capital	10.4	(16.7)	(10.6)	(0.5)	0.4	4.9	4.7	(8.8)	2.6	0.9	3.5
Ending Fund Balance	54.4	38.5	29.9	31.4	33.9	40.1	44.8	36.0	38.6	39.5	43.0
Fund Balance as % of Revenue	28%	21%	15%	15%	16%	18%	19%	15%	15%	15%	16%
Fund Balance as % of Expense	39%	27%	20%	20%	21%	24%	26%	20%	20%	20%	21%
Fund Balance as % of Operating Expense	15%	19%	15%	15%	16%	19%	20%	15%	16%	15%	16%
Debt Service Coverage (Indenture)	37.4	26.3	10.2	4.7	4.7	4.4	4.3	2.3	2.2	2.3	2.4
Debt Service Coverage (Current)	10.4	7.8	3.7	2.0	2.0	1.6	1.6	1.2	1.3	1.4	1.4

All SFPUC Enterprises develop a Ten-Year Financial Plan as well as a Ten-Year Capital Plan. As noted in Table H7, the Enterprise will increasingly issue revenue bonds instead of relying on cash funding all of its projects.

Chart H5 provides the Ten-Year financial Plan trend.

Chart H5. Hetch Hetchy Water and Power Ten-Year Financial Plan Trend



The SFPUC's Ten-Year Financial Plan as required by City and County of San Francisco Charter Section 8B.123, includes a ten-year financial summary (FY 2016-17 through FY 2025-26), describing projected sources and uses, resulting fund balances and associated financial reserve ratios. This is not a budget nor are funds appropriated based on the Plan. It is a planning document intended to inform the development of the Ten-Year Capital Plan, the water and power rates and the fiscal year budgets. Projected costs and revenues are estimates and subject to variations inherent in all such projections. Consequently, the estimates should not be viewed as precise predictions but rather as indications of expected trends, given certain expenditure, receipt, and financing assumptions. These assumptions are based on current Board of Supervisors' and Commission policies, goals, and objectives representing management's best estimates at this time.

Rates and Charges

Hetch Hetchy Water and Power charges for services related to the storage and delivery of water, as well as generating and delivering electricity to contractual and municipal customers. Transfers from the Water Enterprise fund water operating and maintenance costs and based on projected Hetchy water expenses. As determined by an analysis of water-allocated Hetchy expenses, the fund transfer in FY 2016-17 and FY 2017-18 will be \$34.6 million and \$32.6 respectively. Beginning in FY 2018-19 the fund transfer from the Water Enterprise is projected to increase as associated operating and capital costs increase at their respective 3.0 percent and 5.0 percent annual rates. For municipal power services, Enterprise department customers generally pay rates based on the projected PG&E equivalent rate based on customer class. General Fund department customers generally pay subsidized rates referred to as General Use (GUSE) rates. Non-municipal customers pay a rate that is below the PG&E equivalent rate.

The Power Enterprise completed a charter-required, independent cost of service study in April 2016 which recommended power rates and charges for FY 2016-17 and FY 2017-18.

Based on the results of the study, in May 2016, the Commission approved a 0.5 cent per kWh increase per year in GUSE rates for years FY 2016-17 and FY 2017-18. For non-municipal customers in redevelopment areas, the Commission approved the creation of additional rate classes, such as industrial and large commercial, in anticipation of new development in these areas. All retail non-municipal redevelopment rates were set to be below PG&E equivalent rates.

Total monthly services charges are calculated using the total rates shown in the rate schedule (www.sfwater.org), based on monthly meter readings.

Sources of Funds

Hetch Hetchy Water and Power operates the Hetch Hetchy Reservoir, the main source of water for the Hetch Hetchy system and is responsible for generating, transmitting and distributing electricity to City and County of San Francisco customers. The Power Enterprise operates and maintains power transmission and generation facilities, buys and sells electric power, provides energy conservation and renewable resource solutions to City departments and maintains approximately 25,000 City-owned streetlights as well as providing the power and required funding for approximately 19,000 streetlights operated by PG&E. Total sources are forecast to increase from \$188.0 million in FY 2016-17 to \$273.7 million by FY 2025-26.

- Power Sales receipts are projected to increase from \$132.9 million to \$207.8 million over the ten year period. Over the period, about 65.0 percent of power sales are projected to be made to City departments for municipal use; 15.0 percent to the Modesto and Turlock Irrigation Districts as wholesale customers; and the remaining, about 20.0 percent, to other customers.
- Water-related Sales will increase from \$36.5 million to \$43.8 million over the ten years, representing services related to maintaining the Hetch Hetchy Water system and water sales up-country.
- Other income including natural gas and steam, reimbursements and interest income, are forecast to average \$21.2 million annually over the period.

Uses of Funds

The Ten-Year Financial Plan includes a 3.0 percent annual growth assumption for operations and maintenance costs and a 5.0 percent annual escalation in capital costs.

The Ten-Year Financial Plan includes operation and maintenance costs, repair and replacement costs for existing equipment and facilities, and loans used to finance capital improvements. Operations and maintenance costs average approximately 84.0 percent of the Hetch Hetchy Water and Power's expenditures with revenue-funded capital projects the remaining 16.0 percent. Over the period, total expenditures, net of debt proceeds, average \$212.5 million per year with annual variations in operating and capital funding requirements.

- Operations and Maintenance costs include labor salaries and fringe benefits, materials and supplies, watershed management costs, power purchases, and services of other City departments (including the SFPUC Bureaus). The FY 2016-17 budget to operate the Enterprise is \$148.3 million, increasing to \$208.4 million by FY 2025-26. Beginning in FY 2017-18, costs are projected to increase an estimated 4.0 percent per year over the period.
- Debt Service costs, which represent the Power Enterprise's debt service as Water's debt service is separately budgeted in the Water Enterprise fund for both upcountry and in-City needs, include repayment on loans and debt financings; these costs are projected to increase from \$2.1 million to \$40.5 million over the ten years to fund capital projects. Hetch Hetchy Water and Power developed a financial plan that will allow for future capital financing needs to be funded with Power Revenue Bonds as well as revenues.
- Revenue-funded Capital Projects include major maintenance and rebuilding projects associated with the up-country power infrastructure. This includes projects associated with the Hetch Hetchy Reservoir as well as the nearby power generating and distribution facilities. Project needs, net of debt proceeds, average \$18.3 million annually over the ten-year period.

These investments represented by the debt service and revenue-funded capital costs are to improve reliability, provide essential seismic upgrades, and repair and replace infrastructure which is beyond its useful life. However, these investments will not reduce the personnel, non-personnel service or services of other departments needed to operate and maintain the systems. Debt revenue and revenue-funded capital projects dominate the operating budget.

Financing of Capital Needs

The Hetch Hetchy Water and Power Ten-Year Financial Plan assumes both revenue and bond financing of Water and Power capital needs. Of the \$748.4 million Power capital program over the next ten years, \$193.0 million is revenue-funded and \$555.4 million is debt financed. Of the \$494.0 million Water Ten-Year Capital Plan, all \$494.0 million is debt financed, through Water revenue bonds.

Financial Ratios

It is the financial objective of the SFPUC to maintain a minimum revenue bond coverage ratio of 1.25 times on an indenture basis and 1.00 times on a current operations basis; the latter does not include available fund balances. Over the ten year period, the Power Enterprise indenture coverage ranges from 26.3 to 2.2. On a current basis, the coverage ratio is projected to exceed the 1.00 minimum with a range from 7.8 to 1.2 times coverage.

Fund Balances and Reserves

In FY 2016-17, the ending fund balance as a proportion of operating expense is projected to be 19.0 percent (2.3 months) of operating expense. Capital financing options are currently being developed to fund the Power Enterprise capital needs over the longer term. Projected fund balances conform to established fund balance reserve policies.

Hetch Hetchy Water and Power, Pro-forma Allocation

FY 2016-17 sources and uses of funds are \$202.0 million of which \$164.0 million, or 81.2 percent is for Power and \$38.0 million, or 18.8 percent, is for Hetchy Water. Uses of funds show operating costs of \$20.3 million and programmatic costs of \$1.4 million being allocated from Hetchy Water to Power.

FY 2017-18 sources and uses are \$207.7 million of which \$168.0 million, or 80.9 percent is for Power and \$39.7 million, or 19.1 percent, is for Hetchy Water. Uses of funds show operating costs of \$20.5 million and programmatic costs of \$1.4 million being allocated from Hetchy Water to Power.

Table H8 shows the allocation of Hetch Hetchy Water and Power Sources and Uses of Funds based on water and power service delivery by the respective Divisions, Hetchy Water and Power for the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

Table H8. Hetch Hetchy Water and Power Sources and Uses of Funds by Division

\$ Millions									
Category	FY 2014-15	FY 2015-16	FY 2015-16	FY 2016-17	FY 2017-18	FY 2016-17 vs. FY 2015-16		FY 2017-18 vs. FY 2016-17	
	Audited Actual	Adopted Budget	Actual	Adopted Budget	Adopted Budget	Amount	%	Amount	%
SOURCES OF FUNDS									
Hetchy Power									
Federal Interest Subsidy	0.7	0.7	0.7	0.7	0.6	0.0	2.2%	-	0.0%
Interest Income	0.8	0.5	0.7	1.2	1.3	0.6	119.7%	-	0.0%
Other Revenues	6.2	6.4	6.4	5.8	5.8	(0.6)	-9.5%	-	0.0%
Sale of Natural Gas & Steam (Pass-through)	8.1	11.1	6.9	11.3	14.3	0.1	1.2%	3.0	26.9%
Fund Balance	-	0.5	-	12.0	6.0	11.5	2297.1%	(6.0)	-50.2%
Sale of Water	-	-	-	-	-	-	0.0%	-	0.0%
Sale of Electricity	109.7	129.9	122.5	133.0	140.0	3.1	2.4%	7.0	5.2%
Hetchy Power Subtotal	125.5	149.2	137.2	164.0	168.0	14.8	9.9%	4.0	2.5%
Hetchy Water									
Federal Interest Subsidy	-	-	-	-	-	-	0.0%	-	0.0%
Interest Income	0.5	-	0.5	-	-	-	0.0%	-	0.0%
Other Revenues	0.4	0.3	0.4	0.5	0.5	0.2	74.8%	-	0.0%
Sale of Natural Gas & Steam (Pass-through)	-	-	-	-	-	-	0.0%	-	0.0%
Fund Balance	-	(0.5)	-	0.8	4.3	1.3	-261.7%	3.5	430.5%
Sale of Water	38.7	39.4	38.6	36.7	34.9	(2.7)	-6.9%	(1.9)	-5.1%
Sale of Electricity	-	-	-	-	-	-	0.0%	-	0.0%
Hetchy Water Subtotal	39.6	39.2	39.6	38.0	39.7	(1.2)	-3.0%	1.6	4.3%
Hetch Hetchy Water and Power									
Federal Interest Subsidy	0.7	0.7	0.7	0.7	0.6	0.0	2.2%	-	0.0%
Interest Income	1.3	0.5	1.2	1.2	1.3	0.6	119.7%	-	0.0%
Other Revenues	6.6	6.7	6.9	6.3	6.3	(0.4)	-6.0%	-	0.0%
Sale of Natural Gas & Steam (Pass-through)	8.1	11.1	6.9	11.3	14.3	0.1	1.2%	3.0	26.9%
Fund Balance	-	-	-	12.8	10.3	12.8	100.0%	(2.5)	-19.8%
Sale of Water	38.7	39.4	38.6	36.7	34.9	(2.7)	-6.9%	(1.9)	-5.1%
Sale of Electricity	109.7	129.9	122.5	133.0	140.0	3.1	2.4%	7.0	5.2%
Hetch Hetchy Total Sources	165.1	188.4	176.7	202.0	207.7	13.6	7.2%	5.7	2.8%
USES OF FUNDS									
Hetchy Power									
Operations and Maintenance	48.8	83.2	53.5	79.4	81.3	(3.7)	-4.5%	1.9	2.4%
Natural Gas & Steam (Pass-through)	8.2	11.1	6.9	11.3	14.3	0.1	1.2%	3.0	26.7%
Debt Service	1.9	2.2	0.5	2.5	4.8	0.3	14.7%	-	0.0%
General Reserve	9.9	(0.4)	26.5	0.0	0.4	0.5	-109.5%	0.4	1037.0%
Reclass, Power Only & Joint Operating Costs	25.9	18.9	25.3	20.3	20.5	1.4	7.2%	0.2	1.0%
Subtotal	94.7	115.0	112.6	113.5	121.3	(1.5)	-1.3%	5.5	4.8%
Revenue-Funded Capital	23.3	17.4	17.4	36.8	33.0	19.5	112.1%	(3.8)	-10.4%
Programmatic Projects	7.9	16.0	16.0	12.3	12.2	(3.8)	-23.5%	(0.0)	-0.1%
Reclass, Power Only & Joint	10.9	0.8	0.8	1.4	1.4	0.6	74.7%	-	0.0%
Hetchy Power Subtotal	136.7	149.2	146.8	164.0	168.0	14.8	9.9%	4.0	2.4%
Hetchy Water									
Operations and Maintenance	53.5	56.7	54.4	57.2	58.2	0.5	0.9%	1.0	1.7%
General Reserve	-	0.6	-	-	0.9	(0.6)	0.0%	0.9	100.0%
Reclass, Power Only & Joint Operating Costs	(25.9)	(18.9)	(25.3)	(20.3)	(20.5)	(1.4)	7.2%	(0.2)	1.0%
Subtotal	27.6	38.4	29.1	36.9	38.5	(1.5)	-4.0%	1.6	4.4%
Revenue-Funded Capital	-	-	-	-	-	-	0.0%	-	0.0%
Programmatic Projects	11.6	1.6	1.6	2.5	2.5	0.9	58.8%	-	0.0%
Reclass, Power Only & Joint	(10.9)	(0.8)	(0.8)	(1.4)	(1.4)	(0.6)	74.7%	-	0.0%
Hetchy Water Subtotal	28.4	39.2	29.9	38.0	39.7	(1.2)	-3.0%	1.6	4.3%
Hetch Hetchy Water and Power									
Operations and Maintenance	102.3	139.9	107.8	136.6	139.5	(3.3)	-2.3%	2.9	2.1%
Natural Gas & Steam (Pass-through)	8.2	11.1	6.9	11.3	14.3	0.1	1.2%	3.0	26.7%
Debt Service	1.9	2.2	0.5	2.5	4.8	0.3	14.7%	-	0.0%
General Reserve	9.9	0.2	26.5	0.0	1.3	(0.2)	-83.3%	1.3	3246.7%
Subtotal	122.3	153.4	141.8	150.4	159.9	(3.0)	-2.0%	7.1	4.7%
Revenue-Funded Capital	23.3	17.4	17.4	36.8	33.0	19.5	112.1%	(3.8)	-10.4%
Programmatic Projects	19.5	17.6	17.6	14.8	14.8	(2.8)	-16.1%	(0.0)	-0.1%
Hetch Hetchy Total Uses	165.1	188.4	176.7	202.0	207.7	13.6	7.2%	5.7	2.8%

Chart H6 show the allocation of Hetch Hetchy Water and Power FY 2016-17 sources based on water and power service delivery by the respective Divisions.

Chart H6. FY 2016-17 Hetch Hetchy Water and Power Sources of Funds by Division, by Category

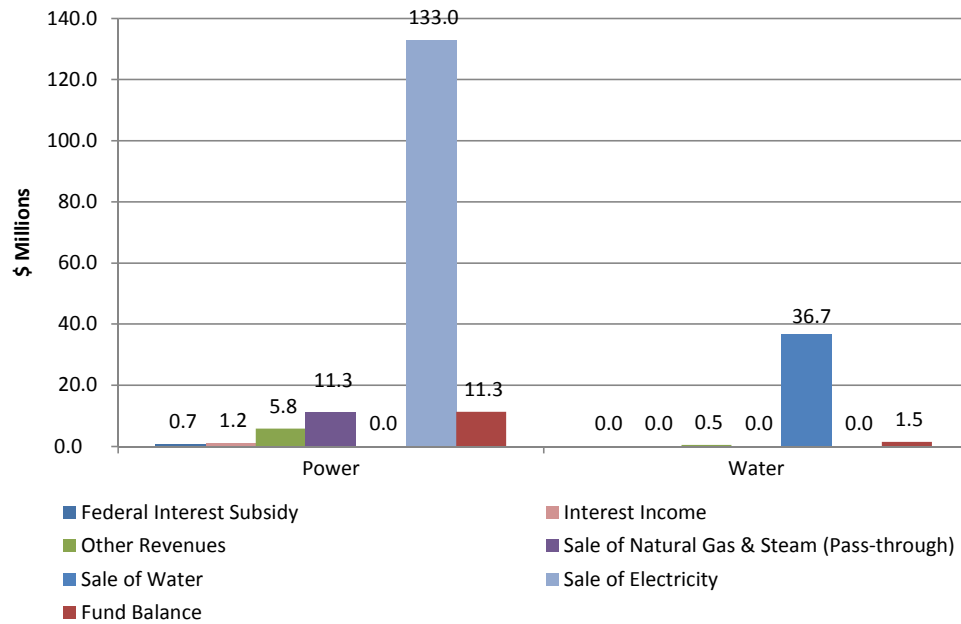


Chart H7 shows the allocation of Hetch Hetchy Water and Power FY 2016-17 uses based on water and power service delivery by the respective Divisions.

Chart H7. FY 2016-17 Hetch Hetchy Water and Power Uses of Funds by Division, by Category

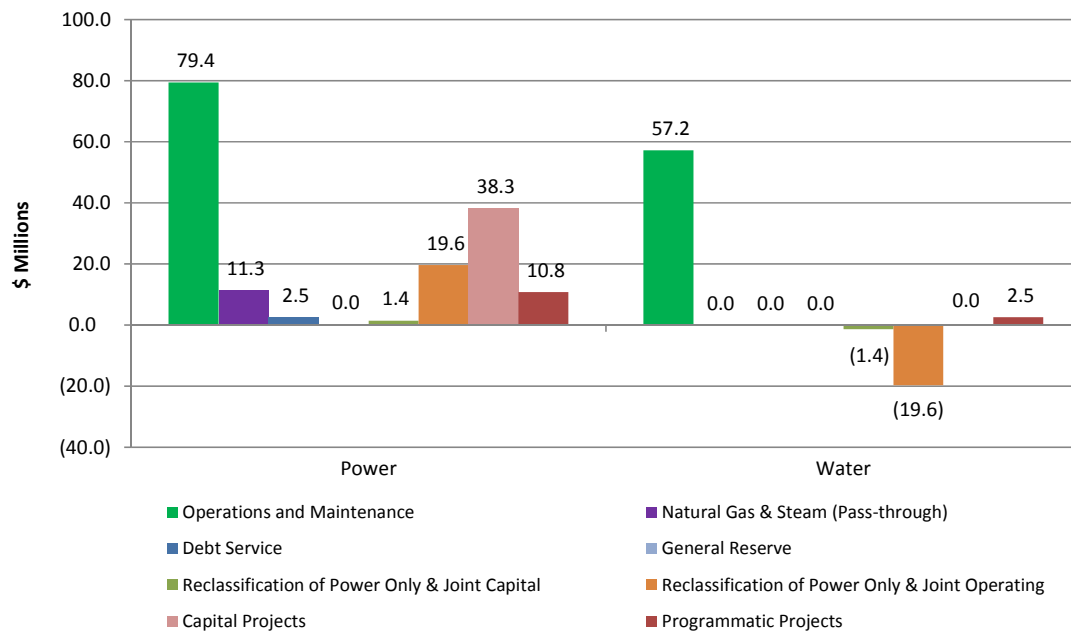


Chart H8 shows the allocation of Hetch Hetchy Water and Power FY 2017-18 fund sources based on water and power service delivery by the respective Divisions.

Chart H8. FY 2017-18 Hetch Hetchy Water and Power Sources of Funds by Division, by Category

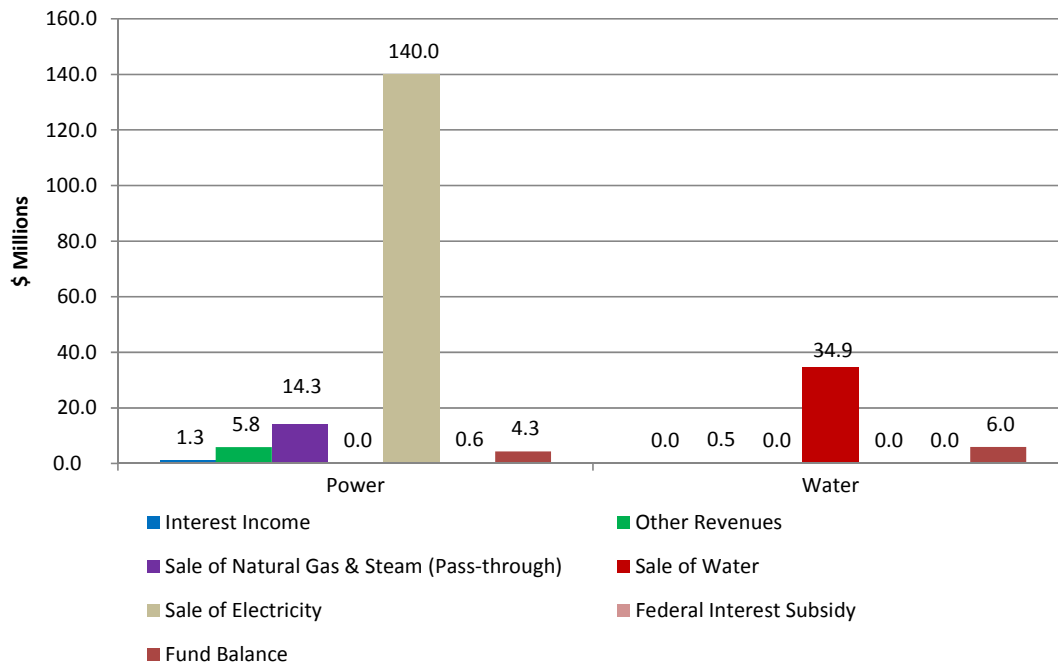
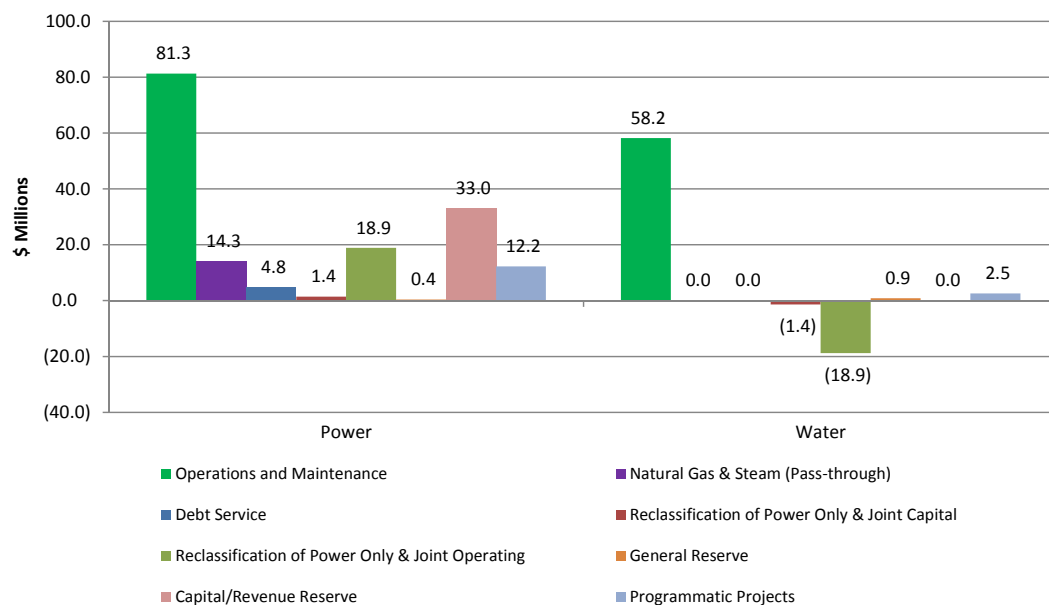


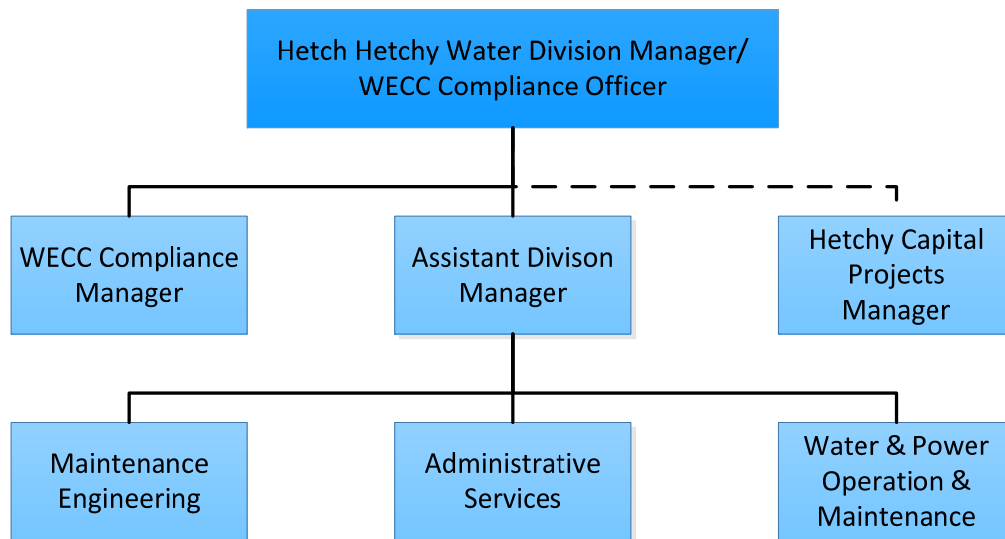
Chart H9 shows the allocation of Hetch Hetchy Water and Power FY 2017-18 fund uses based on water and power service delivery by the respective Divisions.

Chart H9. FY 2017-18 Hetch Hetchy Water and Power Uses of Funds by Division, by Category



Hetch Hetchy Water

Hetch Hetchy Water Organization Chart



Budget Summary

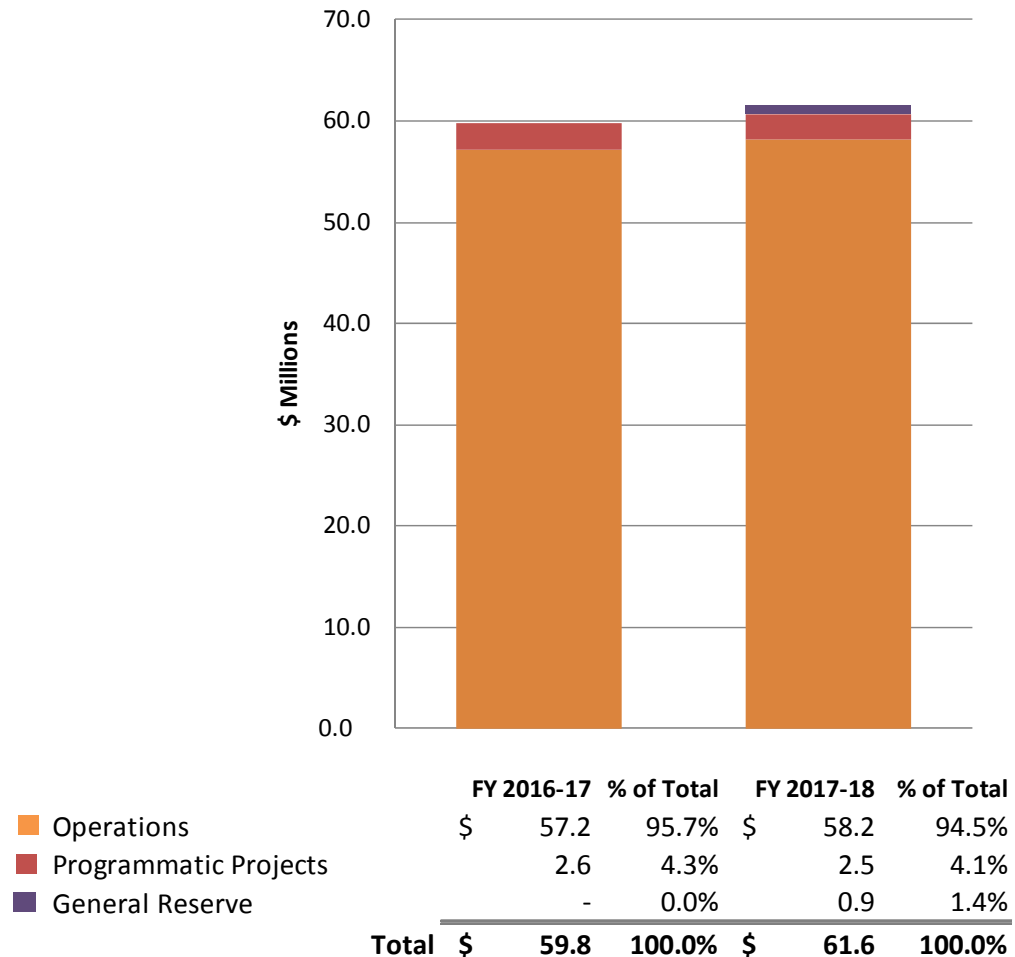
Hetchy Water is responsible for managing, operating and maintaining three up-country reservoirs including the main source of water for San Francisco and several other Bay Area communities, Hetch Hetchy Reservoir. The operation, maintenance, and improvements of dams and smaller reservoirs within the Hetch Hetchy system, as well as, the water transmission systems, power generation facilities and power transmission systems, are also managed by Hetchy Water. The assets making up these system start at Hetch Hetchy Reservoir located in Yosemite National Park and span all the way to Alameda East located in Sunol and Newark in Alameda County. Additionally, Hetchy Water manages and maintains almost 50 miles of paved roads, 11 bridges, and hundreds of square miles of watershed lands and right-of-way easements.

The activities of these multifunctional systems are balanced based on priorities identified within the previously defined mission statement. With many Hetchy Water an asset serving multiple purposes, a funding system has been established that is based on the function or benefit individual assets provide. An asset may be classified as "water only", "power only" or "joint". Funding to improve or rehabilitate an asset comes from Water funds, Power funds or a combination of the two for those assets classified as Joint.

Hetchy Water has and will continue to spend significant resources to meet new reliability requirements designed to protect the Nation's power grid established through agreements with the North American Electric Reliability Corporation (NERC). Hetch Hetchy Water and Power (HHWP) is a NERC registered Generator Owner, Generator Operator, Transmission Owner, Transmission Operator and Transmission Planner. Over the last year, NERC regulatory efforts have focused on two main areas: transitioning to the new Critical Infrastructure Protection (CIP) Standards, and implementing a risk-based approach to Reliability Standards compliance monitoring and enforcement. Additionally, SFPUC entered into an agreement with the California Independent System Operator (CAISO) for CAISO to provide Planning Coordinator services to HHWP.

Chart H10 displays Hetchy Water's Uses of Funds budget allocation for operations, programmatic projects and general reserve.

Chart H10. FY 2016-17 and FY 2017-18 Hetchy Water Uses of Funds



The FY 2016-17 budget for Hetchy Water includes \$57.2 million for Operations or 95.7 percent of the total budget, and \$2.6 million for Programmatic Projects or 4.3 percent of the total budget.

The FY 2017-18 budget for Hetchy Water includes \$58.2 million for Operations or 94.5 percent of the total budget, \$2.5 million for Programmatic Projects, or 4.1 percent of the total budget and \$0.9 million for General Reserve or 1.4 percent of the total budget.

Table H9 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

Table H9. Hetchy Water Operations Budget Summary

Expenditure Category	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
						Amount	%	Amount	%
Personnel	25,528,001	26,989,825	25,636,268	27,173,921	28,300,464	184,096	0.7%	1,126,543	4.1%
Non-Personnel Services	15,400,405	17,074,900	15,742,553	16,581,348	16,396,897	(493,552)	-2.9%	(184,451)	-1.1%
Materials & Supplies	2,213,481	2,384,822	2,235,228	1,988,961	2,131,609	(395,861)	-16.6%	142,648	7.2%
Equipment	536,277	562,282	653,075	425,201	70,507	(137,081)	-24.4%	(354,694)	-83.4%
Services Of Other Depts	9,864,962	9,694,848	10,106,547	11,082,604	11,271,363	1,387,756	14.3%	188,759	1.7%
Total	53,543,126	56,706,677	54,373,671	57,252,035	58,170,840	545,358	1.0%	918,805	1.6%

As shown in Table H9 above, there is a 1.0 percent increase in the Operations Budget for Hetchy Water between FY 2015-16 and FY 2016-17 adopted budgets; and a 1.6 percent increase from FY 2016-17 to FY 2017-18; the result is a net increase from FY 2015-16 adopted budget to FY 2017-18 of 2.6 percent.

Reasons for Changes, FY 2015-16 to FY 2016-17

The following describes FY 2015-16 to FY 2016-17 budget category variances greater than ten percent.

- **Materials & Supplies** - Adjusts the budget for projected costs of fuel.
- **Equipment** - Reflects a decrease for one-time funding for replacement vehicles.
- **Services of Other Departments** - Adjusts the budget for services of the SFPUC Bureaus, services of the City Attorney and telephone services.

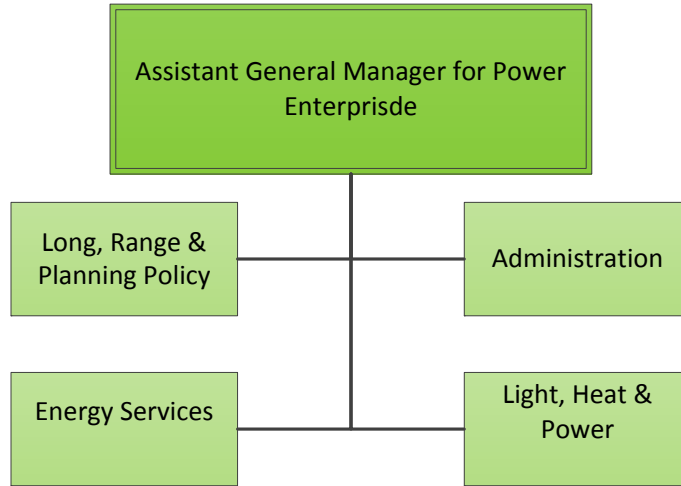
Reasons for Changes, FY 2016-17 to FY 2017-18

The following describes FY 2016-17 to FY 2017-18 budget category variances greater than ten percent.

- **Equipment** – Further adjusts the budget for one-time funding for vehicles.

Power Enterprise

Power Organization Chart



Power's Strategic Sustainability Trends

The Strategic Sustainability Plan (SSP) provides the SFPUC with a system for planning, managing, and evaluating SFPUC-wide performance that takes into account the long-term economic, environmental, and social impacts of its business activities. The SSP is described in the introduction of this report and in Appendix F are the 2014-15 performance results. The SSP combines the SFPUC strategic mission and goals, essential business activities and appropriate sustainability measures consistent with the Global Reporting Initiative recommendations.

The SSP report communicates a cross section of performance goals to support planning and inform customers, the SFPUC Commission, the Controller's Office, Bondholders, rating agencies, regulators and the general public. The annual organization-wide review, measurement and reporting protocol tasks SFPUC management and staff to:

- Plan and deliver high quality power services to current and future generations of San Franciscans based on triple bottom line sustainability;
- Embed sustainability into SFPUC's business DNA and long-term strategic decision-making;
- Communicate SFPUC's organizational culture and build relationships with stakeholders;
- Benchmark SFPUC's strategic sustainability performance against SFPUC's and peers;
- Build capacity for longer term trend, risk and foresight analyses; and
- Provide stakeholders with ongoing review of SFPUC-wide triple bottom line performance.

Fiscal Year 2014-15 Strategic Sustainability Performance Results

The fiscal year 2014-15 report is the sixth annual assessment of SFPUC-wide performance on the strategic sustainability plan.

The SFPUC's six sustainability categories as described in the Introduction Chapter are:

- Customers (CR)
- Community (CY)
- Environmental and Natural Resources (ENR)
- Governance and Management (GM)
- Infrastructure and Assets (IA)

- Workplace (WP)

The associated objectives in the SSP are aimed at continuous improvement and meeting the SFPUC-wide FY 2014-15 five key strategic goals:

- Plan for the Future
- Invest in SFPUC's People
- Promote a Green and Sustainable City
- Provide High Quality Services
- Engage SFPUC's Public and Invest in Communities

Note that in 2016 the 2020 Strategic Plan was adopted which includes updated key strategic goals. Consequently, the FY 2014-15 performance results are compared to the key strategic goals that were active as of that date.

Chart H11 on the next page provides a representation of the performance of Power in FY 2014-15 in these categories. As shown in Appendix F there are some trends for the Power Enterprise that can be noted:

- The high percentage of metered customers provides Power information about who is using power, how much, and when. This information is essential for a modern utility business. Such information is critical as the Power program moves into a debt funded capital program and new rates structures.
- The average monthly kWh used per SFPUC streetlights is 45.97 kWh which is an improvement over the FY 2013-14 report of 51.67 kWh. Power has been upgrading street lights over the last few years as part of its capital program, this reduction in use of electricity is an indication that the investment is working and is expected to provide long-term value.
- The Community, Governance and Management and Workplace goals shown below are aggregate of the SFPUC-wide performance.

Chart H11 provides a representation of the performance of Power in FY 2014-15 in SFPUC's six sustainability categories.

Chart H11. FY 2014-15 Power Enterprise Excerpts from the Strategic Sustainability Plan

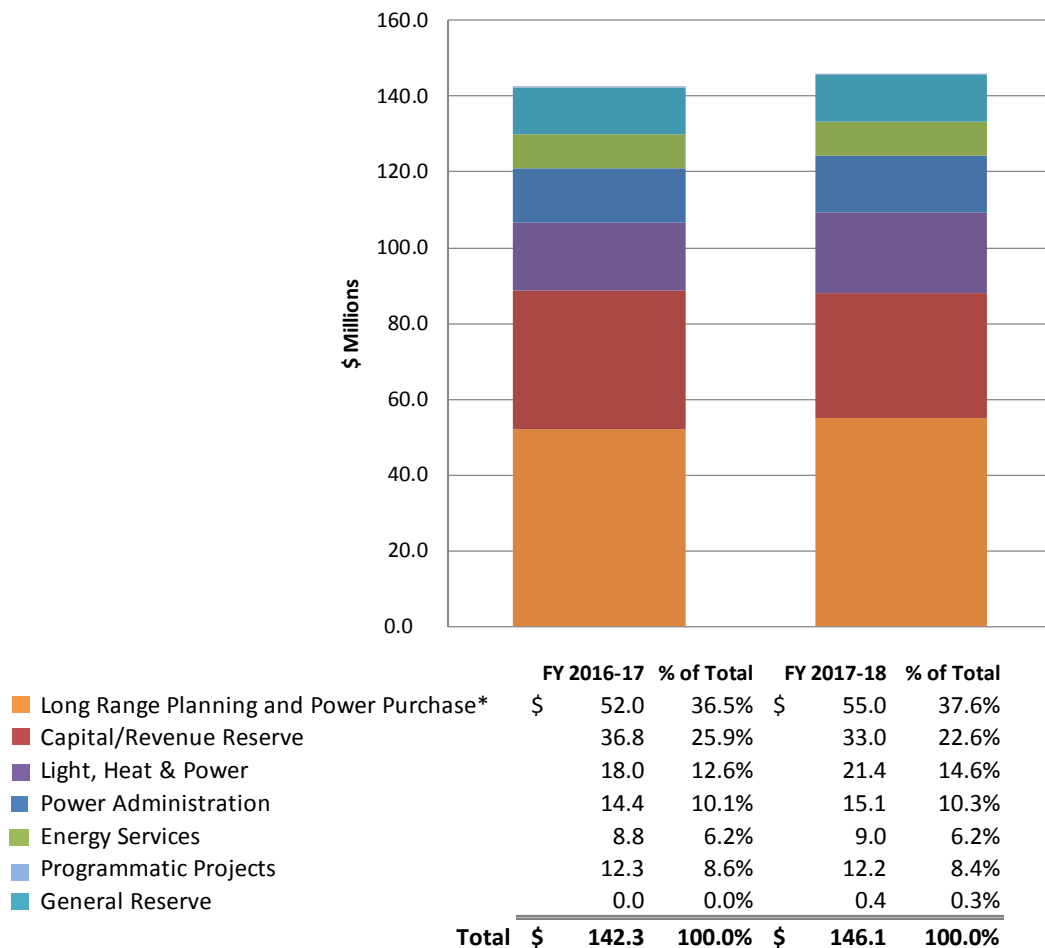
Strategic Mission	Strategic Sustainability Categories					
						
	CR	CY	ENR	GM	IA	WP
Provide High Quality Services	91% of the customers are metered		100% of electricity supplied to retail and municipal customers that is GHG-free and/or renewable	100% of outages repaired in <4 hours		
Promote a Green and Sustainable City	100 % of retail rate encourages conservation	Launched a new pilot initiative called the "Bayview Garden Supply Pop-ups" to provide resources to local community groups promoting healthy food access	Reductions in annual peak load reductions 594 kW Total reductions 1,632 MWh Customer gas reductions of 27,115 therms		100 % of retail rate encourages conservation	
Plan for the Future	Average residential water, bill as a percent of median income in San Francisco: .66%	Renewed all 25 Project Learning Grants for youth workforce development	Encourage conservation to reduce peak demand	Bond Rating GM4..4	Advanced its commitment to organization-wide Asset Management by dedicating accountable staff who established a program framework, set multiple-year targets for benchmarking performance	Advance Succession Planning: Implement a competency model framework to be populated as the basis for succession preparedness
Invest in SFPUC's People		Developed "Equitable Engagement Guidelines" for all project managers and communication staff to utilize in SSIP capital project outreach and engagement.		Security Plan is 75% completed	Lost time incident rate for procured construction hours	16 average hours of training per year
Engage SFPUC's Public and Invest in our Communities		47.5% of labor hours worked by service area residents 49% of labor hours worked by local residents (goal is 30%) 74% of apprentice labor hours worked by local residents (goal is 50%)	Average monthly electricity used by street light 45.97kWh			

Sections

Power has four sections, Administration, Energy Services, Long Range Planning and Power Purchase, and Light, Heat and Power. The Power budget is increasing by 2.6 percent from FY 2016-17 to FY 2017-18, mainly in Light, Heat & Power due to a projected increase in Pacific Gas & Electricity (PG&E) rates for natural gas and steam (pass-through). Power processes and bills City departments for natural gas and steam. The revenue is a pass-through and has no impact on Hetch Hetchy's revenues.

Chart H12 displays Power's Uses of Funds budget allocation for operations by section and for Revenue-Funded Capital, programmatic projects and general reserve.

Chart H12. FY 2016-17 and FY 2017-18 Power Uses of Funds by Section and Other Categories



*Includes Power Purchasing for FY 2016-17 and FY 2017-18 budgets.

The FY 2016-17 Power operations budget includes: \$8.8 million for Energy Services, \$18.0 million for Light, Heat and Power, \$14.4 million for Power Administration, and \$52.0 million for Long Range Planning and Power Purchase (\$47.0 million for Purchase of Power only). Revenue-Funded Capital totals \$36.8 million and Programmatic Projects totals \$12.3 million.

The FY 2017-18 operations budget includes: \$9.0 million for Energy Services, \$21.4 million for Light, Heat and Power, \$15.1 million for Power Administration, and \$55.0 million for Long Range Planning and Power Purchase (\$48.3 million for Purchase of Power only). Revenue-Funded Capital totals \$33.0 million, Programmatic Projects totals \$12.2 million and General Reserve totals \$0.4 million.

Administration

Power Administration assists Power operations managers with the biennial budget submittal, monthly planning, reporting, cost monitoring, transaction processing and contract management support. Administration also supports internal and external information requests, legislative matters, records management and retention coordination, and Electric Vehicle Infrastructure strategy coordination.

Budget Summary

Table H10 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

Table H10. Power Administration Budget Summary

Expenditure Category	FY 2014-15		FY 2015-16		FY 2016-17		FY 2016-17 vs. FY 2015-16		FY 2017-18 vs. FY 2016-17	
	Audited		Adopted		Adopted		Adopted Budget		Adopted Budget	
	Actual	Budget	Actual	Budget	Budget	Budget	Amount	%	Amount	%
Personnel	3,227,719	4,090,437	3,165,875	4,383,292	4,633,093		292,855	7.2%	249,801	5.7%
Non-Personnel Services	359,352	318,132	353,583	1,272,759	1,527,893		954,627	300.1%	255,134	20.0%
Materials & Supplies	35,635	59,000	64,494	56,726	56,726		(2,274)	-3.9%	-	0.0%
Services Of Other Depts	7,078,891	7,842,171	8,014,630	8,681,428	8,846,149		839,257	10.7%	164,721	1.9%
Total	10,701,597	12,309,740	11,598,582	14,394,205	15,063,861		2,084,465	16.9%	669,656	4.7%

Reasons for Changes, FY 2015-16 to FY 2016-17

The following describes FY 2015-16 to FY 2016-17 budget category variances greater than ten percent.

- **Non-Personnel Services** – Professional services funds were added to support Customer Locations and Risk Management Services.
- **Services of Other Depts** – Reflects Power's share of SFPUC Bureaus' cost of service and projected costs for risk management services, and workers' compensation claims.

Reasons for Changes, FY 2016-17 to FY 2017-18

The following describes FY 2016-17 to FY 2017-18 budget category variances greater than ten percent.

- **Non-Personnel Services** – Professional services funds were added to support energy market activities, regulatory and modeling assistance.

Energy Services

Energy Services consists of seven service areas: Retail Services, Energy Data Systems, Strategic Planning and Regulatory Affairs, Business and Financial Analysis, Customer Development, Retail Interconnections, and Redevelopment Projects.

Budget Summary

Table H11 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

Table H11. Energy Services Budget Summary

Expenditure Category	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
						Amount	%	Amount	%
Personnel	4,784,096	4,881,815	4,388,526	4,781,652	5,076,015	(100,163)	-2.1%	294,363	6.2%
Non-Personnel Services	1,444,389	3,323,565	1,332,339	1,733,436	1,636,008	(1,590,129)	-47.8%	(97,428)	-5.6%
Materials & Supplies	4,230	1,000	1,381	3,436	3,436	2,436	243.6%	-	0.0%
Equipment	-	-	-	-	-	-	0.0%	-	0.0%
Services Of Other Depts	2,057,159	2,306,656	2,328,962	2,306,656	2,306,656	-	0.0%	-	0.0%
Total	8,289,874	10,513,036	8,051,208	8,825,180	9,022,115	(1,687,856)	-16.1%	196,935	2.2%

Reasons for Changes, FY 2015-16 to FY 2016-17

- **Non-Personnel Services** – One-time funding for business and strategic services is eliminated and services related to the Meter Data Management System will be performed in-house.
- **Materials and Supplies** – Reflect projected costs for office and data processing materials and supplies.

Reasons for Changes, FY 2016-17 to FY 2017-18

There were no major changes in the FY 2017-18 Adopted Budget.

Long Range Planning and Power Purchase

The Long Range Planning and Power Purchase Group is responsible for: planning, developing and implementing energy efficiency programs and projects, and renewable generation facilities. The group is also responsible for power purchasing and scheduling, transmission planning and managing the City's solar incentive program, GoSolarSF.

Budget Summary

Table H12 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

Table H12. Long Range Planning and Power Purchase Budget Summary

\$	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
Expenditure Category						Amount	%	Amount	%
Personnel	1,604,745	785,354	1,354,911	998,285	1,016,472	212,931	27.1%	18,187	1.8%
Non-Personnel Services	22,008,552	51,541,733	25,067,243	47,962,902	48,608,571	(3,578,831)	-6.9%	645,669	1.3%
Materials & Supplies	180	5,000	4,088	27,603	5,000	22,603	452.1%	(22,603)	-81.9%
Debt Service	1,945,384	2,165,783	521,803	2,483,713	4,830,504	317,930	14.7%	2,346,791	94.5%
Services Of Other Depts	450,000	493,319	493,319	493,319	493,319	-	0.0%	-	0.0%
Total	26,008,861	54,991,189	27,441,364	51,965,822	54,953,866	(3,025,367)	-5.5%	2,988,044	5.8%

Reasons for Changes, FY 2015-16 to FY 2016-17

- **Personnel** – Transfers one position from Energy Services to Long Range Planning to reflect where the position works and reports.
- **Materials and Supplies** – Adds one-time funding for the Solar Inverter Replacement program.
- **Debt Service** – Reflects principal and interest on Power Revenue bonds to fund projects of Power capital program, Clean Renewable Energy Bonds and New Clean Renewable Energy Bonds (CREBs and NCREBs), Qualified Energy Conservation Bonds (QEBCs) and lease payment of the SFPUC's headquarters. The \$0.3 million net increase from FY 2015-16 reflects the projected principal and interest payments on New Clean Renewable Energy Bonds issued in October, 2015.

Reasons for Changes, FY 2016-17 to FY 2017-18

- **Materials and Supplies** – Eliminates funding for the Solar Inverter Replacement program.
- **Debt Service** – Funds the costs for new Clean Renewable Energy Bonds Series 2015 and projected increases in interest payments.

Light, Heat and Power

The Light, Heat and Power (LHP) section is responsible for Power Distribution and Distribution Field Service including maintaining over 25,509 SFPUC-owned streetlights in the City and County of San Francisco, and maintaining other City-owned, or other agency-owned power transmission and distribution systems, including substations, meters, backup generators, overhead and underground power lines, transformers, and switchgears. New installation work is also performed including the installation of new overhead service and underground connections up to 12 kilovolts (kV), meters, streetlights, switchgear, transformers, etc.

Streetlight Engineering Services is a section within LHP which manages all activities related to the administration, planning, design, investigation and reporting functions of the street light infrastructure owned and operated by the SFPUC. This group also facilitates planning and conducts design review of street lighting system installations in the public right of way performed by other agencies and contractors. Underground Service Alert requests are also managed by the engineering group. Work is performed for other City and State agencies, merchant and/or community groups, and general contractors.

Budget Summary

Table H13 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

Table H13. Light, Heat and Power Budget Summary

\$	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
						Amount	%	Amount	%
Expenditure Category									
Personnel	3,098,705	3,128,791	3,118,034	3,519,519	3,574,169	390,728	12.5%	54,650	1.6%
Non-Personnel Services	9,984,446	14,338,951	9,065,249	13,561,052	16,698,101	(777,899)	-5.4%	3,137,049	23.1%
Materials & Supplies	292,143	514,094	612,598	513,044	511,010	(1,050)	-0.2%	(2,034)	-0.4%
Equipment	-	212,880	248,686	95,395	310,525	(117,485)	-55.2%	215,130	225.5%
Services Of Other Depts	479,046	430,977	718,791	272,562	284,888	(158,415)	-36.8%	12,326	4.5%
Total	13,854,340	18,625,693	13,763,358	17,961,572	21,378,693	(664,121)	-3.6%	3,417,121	19.0%

Reasons for Changes, FY 2015-16 to FY 2016-17

- **Personnel** – Reflects an increase in temporary salaries and premium pay to fund projected costs related to streetlight maintenance.
- **Equipment** – Adjusts for projected equipment costs for FY 2016-17.
- **Services of Other Depts.** – Services for the Underground Service Alert are eliminated because services will be performed in-house.

Reasons for Changes, FY 2016-17 to FY 2017-18

- **Personnel** – Fringe benefit rates are adjusted.
- **Equipment** – Adds funding for one new and one replacement bucket truck used by the streetlight crews to install and maintain the streetlight system.

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CLEANPOWERSF

CleanPowerSF is San Francisco's Community Choice Aggregation program. Community Choice Aggregation is a State program that allows cities and counties to partner with their investor-owned utility (PG&E in San Francisco) to deliver cleaner energy to residents and businesses. Under these programs, PG&E continues to maintain the power grid, respond to outages and send customers their monthly bills.

CleanPowerSF began automatically delivering this cleaner energy to San Francisco neighborhoods in phases in May 2016.

On December 8, 2015, the Commission approved initial not-to-exceed rates and charges for the CleanPowerSF. Effective July 1, 2016 and each successive July 1 thereafter, the Commission authorized General Manager to adjust rates not otherwise adjusted by Commission action by the annual percentage change in the Consumer Price Index (CPI) for all Urban Consumers for San Francisco-Oakland-San Jose published by the U.S. Bureau of Labor Statistics for the twelve months ended December 31 in the calendar year preceding the year during which the rates will be effective.

The SFPUC intends that CleanPowerSF revenues be adequate to support its own operations, future projects, and be a financially independent program. Similar to other enterprises, CleanPowerSF is subject to Section 8B.125 of the City Charter which requires that an independent rate study be performed at least once every five years, and the Commission sets rates and charges for the program.

Budget Summary

Table CP1 shows the FY 2015-16 to FY 2017-18 adopted budgets, FY 2014-15 audited actual and FY 2015-16 actual, and budget variances between FY 2016-17 and FY 2015-16, and between FY 2017-18 and FY 2016-17.

Table CP1 below shows that the CleanPowerSF budget was appropriated for the first time in FY 2016-17 at \$33.7 million and in FY 2017-18 at \$40.3 million. From FY 2016-17 to FY 2017-18 there is a budget increase of 19.4 percent in Uses of Funds. The main increase from FY 2016-17 to FY 2017-18 in Uses of Funds is in Non-Personnel Services, General Reserve and Debt Service.

Table CP1. CleanPowerSF Sources and Uses of Funds

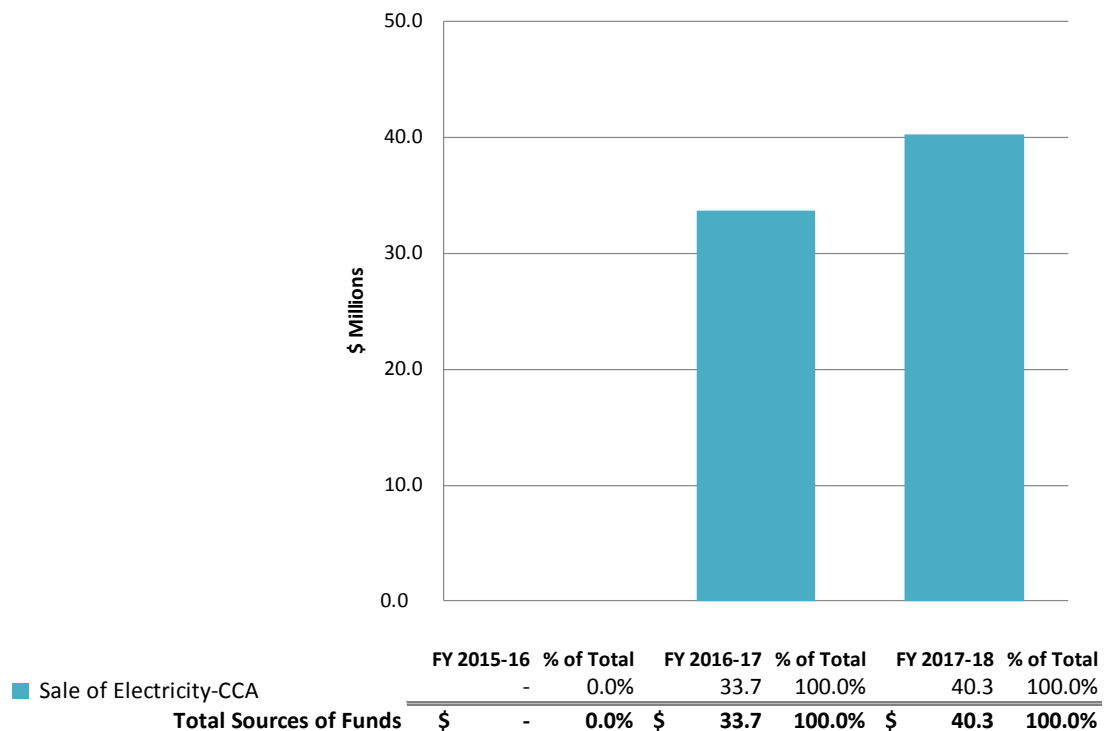
\$ Millions	FY 2014-15	FY 2015-16		FY 2016-17	FY 2017-18	FY 2016-17 vs. FY 2015-16		FY 2017-18 vs. FY 2016-17	
Category	Audited Actual	Adopted Budget	FY 2015-16 Actual	Adopted Budget	Adopted Budget	Adopted Budget		Adopted Budget	
						Amount	%	Amount	%
SOURCES OF FUNDS									
Sale of Electricity-CCA	-	-	-	33.7	40.3	33.7	100.0%	6.6	19.4%
Total Sources of Funds	-	-	-	33.7	40.3	33.7	100.0%	6.6	19.4%
USES OF FUNDS									
Personnel			-	1.8	2.2	1.8	100.0%	0.4	22.1%
Overhead				1.1	1.2	1.1	100.0%	0.1	13.9%
Non-Personnel Services			-	25.0	27.8	25.0	100.0%	2.8	11.1%
Materials & Supplies			-	0.0	0.0	0.0	100.0%	(0.0)	-16.3%
Debt Service			-	0.8	2.0	0.8	100.0%	1.2	153.9%
Services Of Other Depts			-	0.8	0.8	0.8	100.0%	-	0.0%
General Reserve			-	4.2	6.2	4.2	100.0%	2.0	47.8%
Total Uses of Funds	-	-	-	33.7	40.3	33.7	100.0%	6.6	19.4%

Sources of Funds

Chart CP1 shows the FY 2015-16 to FY 2017-18 budgeted Sources of Funds by revenue category.

Chart CP1 below shows that the CleanPower budget was appropriated for the first time in FY 2016-17 and FY 2017-18. From FY 2016-17 to FY 2017-18 there is a budget increase of 19.4 percent. The increase from FY 2016-17 in Sources of Funds is from Sale of Electricity-CCA. Reasons for these changes are explained below.

Chart CP1. FY 2015-16 to FY 2017-18 CleanPowerSF Sources of Funds



Summary

FY 2016-17 projected revenues from Sale of Electricity-CCA are \$33.7 million. FY 2016-17 represents the first annual budget appropriation for CleanPowerSF and currently reflects CleanPowerSF's sole source of income.

FY 2017-18 projected revenues from Sale of Electricity-CCA are \$40.3 million, a \$6.6 million or 19.4 percent increase from FY 2016-17.

Sale of Electricity-CCA

FY 2016-17 projected revenues from Sale of Electricity-CCA are budgeted at \$33.7 million. Sale of Electricity-CCA revenues are derived from selling electricity supplied from clean, renewable sources such as solar, wind, bioenergy, geothermal, and hydroelectric at competitive rates to San Francisco residents who choose to enroll SuperGreen, CleanPowerSF's 100% California-certified renewable energy product. SuperGreen rates will not exceed a two-cent premium over CleanPowerSF's basic energy rates per kilowatt hour delivered – about \$6 more per month for the average residential customer and \$33 more per month for the average small commercial customer. CleanPowerSF rates may change over time. Pacific Gas & Electric (PG&E), the current provider of electricity, continues to deliver electricity, maintain the power grid and respond to outages. PG&E also continues to send customer monthly bills, with CleanPowerSF charges replacing certain PG&E charges.

CleanPowerSF began delivering this cleaner energy to San Francisco neighborhoods in phases in May 2016.

FY 2016-17 forecasted Sale of Electricity-CCA revenues are based on usage patterns from actual billings for similar customers by customer class. Estimated revenue is also based on a five percent Opt-Out rate for each phase of customers enrolled, which is slightly below experience to date.

FY 2017-18 Sale of Electricity-CCA is budgeted at \$40.3 million, an increase of \$6.6 million from FY 2016-17. The net change reflects an estimated increase in the number of customers.

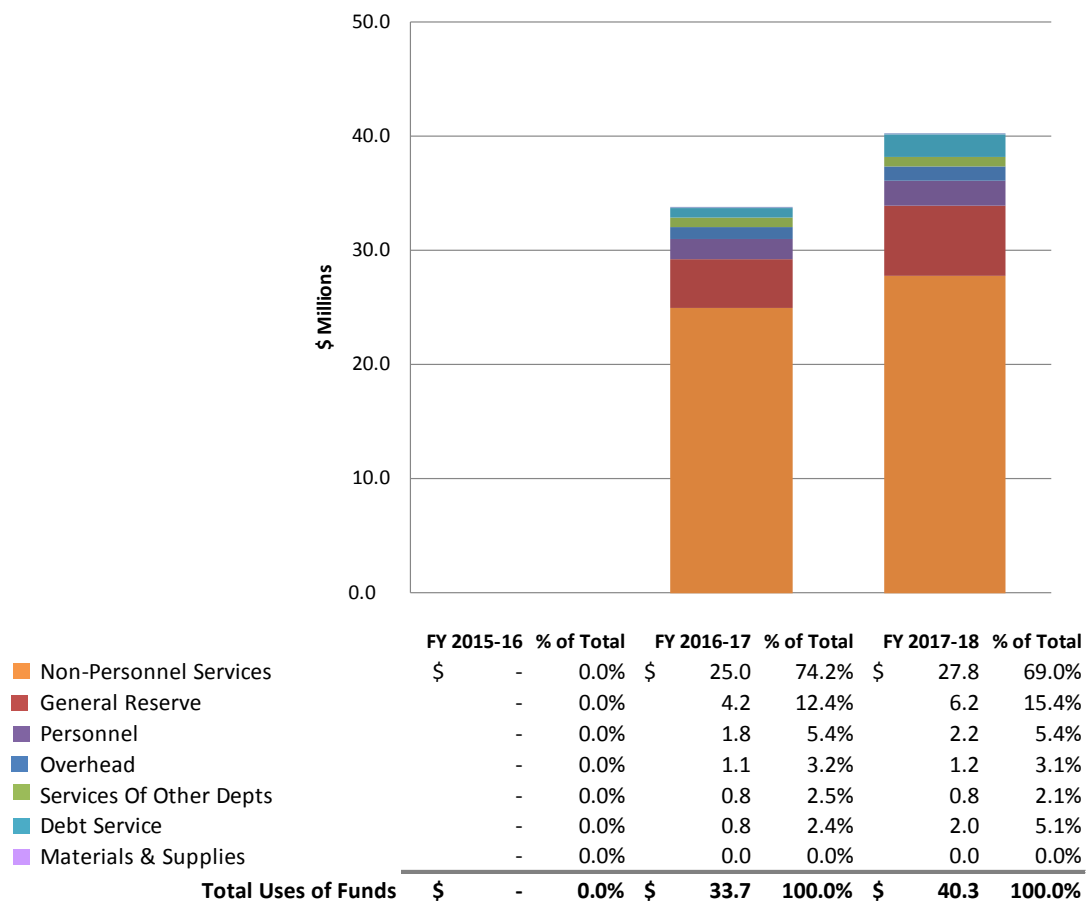
Uses of Funds

Chart CP2 shows the FY 2015-16 to FY 2017-18 budgeted Uses of Funds by expenditure category.

Total Uses of Funds for FY 2016-17 are \$33.7 million and represent the first annual budget appropriation for CleanPowerSF. The largest expenditure category is \$25.0 million for Non-Personnel Services that includes \$22.5 million for purchase of power or 66.7 percent of the entire budget. The General Reserve of \$4.2 million reflects more in estimated Sources of Funds than in Uses of Funds.

Total Uses of Funds for FY 2017-18 are \$40.3 million. The largest expenditure category is \$27.8 million for Non-Personnel Services that includes \$25.0 million for purchase of power or 62.0 percent of the entire budget. The General Reserve of \$6.2 million represents the program's working capital.

Chart CP2. FY 2015-16 to FY 2017-18 CleanPowerSF Uses of Funds



Summary

FY 2016-17 Uses of Funds are \$33.7 million. FY 2016-17 is CleanPowerSF's first annual budget appropriation. Uses of Funds include \$25.0 million for Non-Personnel Services, \$4.2 million for General Reserve, \$1.8 million Personnel, \$1.1 million for Overhead, and \$1.6 million for Services of Other Departments and Debt Service.

FY 2017-18 Uses of Funds are \$40.3 million and include \$27.8 million for Non-Personnel Services, \$6.2 million for General Reserve, \$2.2 million Personnel, \$1.2 million for Overhead, \$0.8 million for Services of Other Departments and \$2.0 million for Debt Service.

Non-Personnel Services

FY 2016-17 Non-Personnel Services are budgeted at \$25.0 million based on projected spending levels for various services required by CleanPowerSF. The budget includes \$22.5 million for payments to the California Independent System Operator (CAISO) and Scheduling Coordinator for energy contracts, \$2.0 million for professional services for marketing/communication, data management, and CleanPowerSF development and implementation and \$0.5 million for Green-e Energy certification fee and PG&E service fees and other support services.

FY 2017-18 Non-Personnel Services are budgeted at \$27.8 million, a \$2.8 million increase from FY 2016-17. The increase adjusts for payments to the California Independent System Operator (CAISO) and Scheduling Coordinator for energy contracts and for data management services.

General Reserve

FY 2016-17 General Reserve is budgeted at \$4.2 million. The General Reserve for CleanPowerSF represents the working capital available to the program.

FY 2017-18 General Reserve is budgeted at \$6.2 million, a \$2.0 million increase from FY 2016-17 due to an increase in projected revenues from Sale of Electricity-CLP.

Personnel

FY 2016-17 Personnel, labor and benefits are budget at \$1.8 million, including \$1.4 million for salaries and \$0.4 million for fringe benefits. Salaries are based on various labor agreements. The salaries budget funds the transfer of four positions from Hetchy Power to CleanPowerSF, one position substitution, and five new operating-funded positions to support outreach and customer education and marketing programs, implementation and operation of the CleanPowerSF program, electric load and supply settlement and risk management, energy data systems requirements and coordination and power generation services.

FY 2016-17 mandatory fringe benefits budget is \$0.4 million based on the cost of budgeted salaries, and adjustments to fringe benefits such as Social Security, retirement and health costs.

FY 2017-18 Personnel is \$2.2 million including \$1.6 million for salaries and \$0.6 million for fringe benefits. The salaries increase of \$0.2 million from FY 2016-17 funds two new positions to support activities of the CleanPowerSF program as it expands and salaries adjustments as required by the labor agreements.

FY 2017-18 mandatory fringe benefits budget is \$0.6 million. The net increase of \$0.2 million from FY 2016-17 reflects adjustments to salaries based on labor agreements and increases in retiree fringe benefits rates.

Overhead

FY 2016-17 Overhead is budgeted at \$1.1 million. The Overhead budget funds costs for Power's services and facilities provided to CleanPowerSF. The overhead rate of 81.0 percent reflects the Enterprise Recovery Rate per SFPUC's Indirect Cost Study of June 2014.

The FY 2017-18 Overhead budget is \$1.2 million, an increase of \$0.1 million from the FY

2016-17 budget. The adjustment reflects FY 2017-18 budget changes.

Services of Other Departments

FY 2016-17 Services of Other Departments is budgeted at \$0.8 million based on the projected costs of legal, communication, energy purchasing and scheduling, settlements and data systems services provided by other City departments to CleanPowerSF.

FY 2017-18 Services of Other Departments budget remains the same as in FY 2016-17.

Debt Service

The FY 2016-17 Debt Service budget is \$0.8 million based on principal and interest payments on the working capital loan from Hetchy Power.

The FY 2017-18 Debt Service budget is \$2.0 million, a \$1.2 million increase to fund scheduled principal payments on the working capital loan from Hetchy Power.

Authorized and Funded Full-Time Equivalents (FTEs)

Table CP2 shows a breakdown of positions by position type for FY 2014-15 to FY 2017-18.

Table CP2. CleanPowerSF Authorized and Funded Full-Time Equivalents (FTEs)

Position Type	FY 2014-15 Adopted Budget	FY 2015-16 Adopted Budget	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16	FY 2017-18 vs. FY 2016-17
Permanent Positions	-	-	9.00	11.00	9.00	2.00
Temporary Positions	-	-	3.15	3.08	3.15	(0.07)
Subtotal Operating Budget-Funded	-	-	12.15	14.08	12.15	1.93
Project-Funded Positions	-	-	-	-	-	-
Total Positions	-	-	12.15	14.08	12.15	1.93

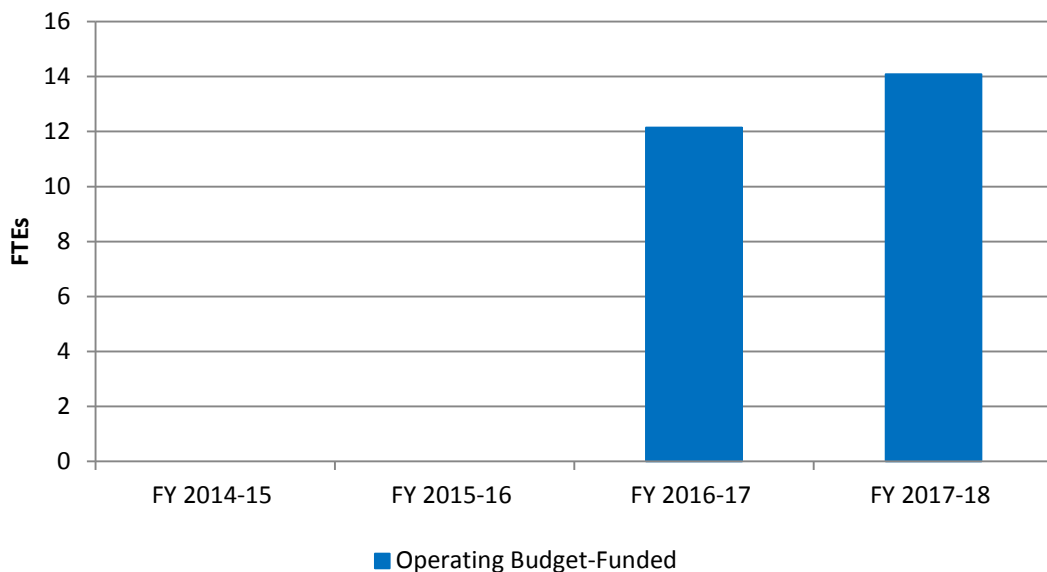
As noted above in Table CP2, the total authorized and funded full-time equivalent (FTE) operating, and temporary positions for FY 2016-17 are 12.15 FTEs. FY 2016-17 represents the first annual appropriation for CleanPowerSF and includes the transfer of four positions from Hetchy Power to CleanPowerSF, one position substitution, and five new operating-funded positions to support outreach and customer education and marketing programs, implementation and operation of the CleanPowerSF program, electric load and supply settlement and risk management services, energy data systems requirements and coordination and power generation services. Temporary positions support as needed communications, operations, programming and customer care and outreach services.

The FY 2017-18 FTEs are 14.08, an increase of 1.93 FTEs from FY 2016-17. The change includes two new FY 2017-18 positions to support activities of the CleanPowerSF program as it expands and FTE offset adjustment to temporary salaries based on funding.

Chart CP3 illustrates the trend of operating and project-funded FTEs from FY 2014-15 to FY 2017-18.

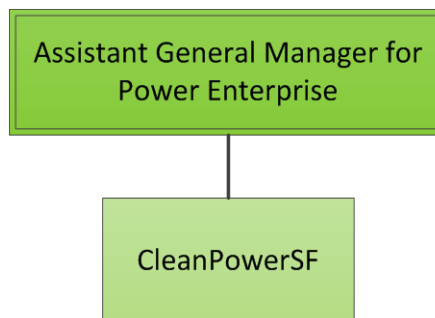
The operating and project FTEs trend reflects a slight increase in positions for FY 2016-17 through FY 2017-18.

Chart CP3. CleanPowerSF Operating FTEs Trend



CleanPowerSF

CleanPowerSF Organization Chart



Program Summary

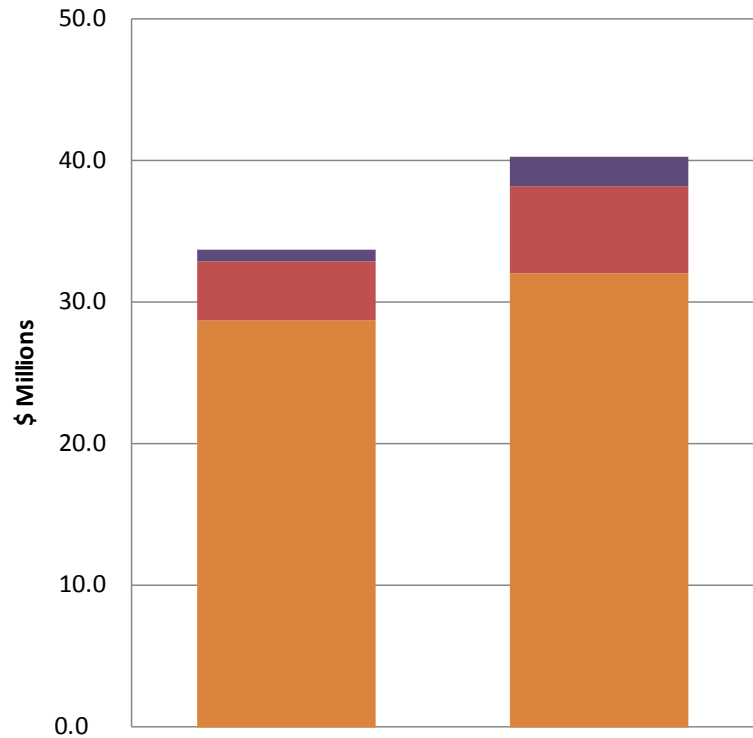
CleanPowerSF is San Francisco's Community Choice Aggregation program, as authorized under State law. CleanPowerSF provides the residents and businesses of San Francisco with an additional choice in the sources of energy generated and delivered. Under CleanPowerSF, PG&E will continue to maintain the power grid, respond to outages and collect payment. CleanPowerSF will replace the generation component of the customer's electricity bill with a new charge that represents cleaner sources of energy.

CleanPowerSF is a separate program offered by the San Francisco Public Utilities, with direct administrative oversight by the Commission. Through Board of Supervisors ordinance, the San Francisco Local Agency Formation Commission (LAFCO) will monitor and advise the SFPUC and the Board of Supervisors on the expansion, implementation, operation and management of CleanPowerSF. Additionally, the Rate Fairness Board will advise the Commission regarding rate setting.

The CleanPowerSF program is managed by the Assistant General Manager for Power with day-to-day operations managed by the Director of CleanPowerSF. With an initial staff of 15.5 FTEs, including permanent, temporary and work order positions, CleanPowerSF will be responsible for procuring resources to match the customer growth, managing energy contracts, expanding the program through a phased approach, overseeing back-office support, regulatory and legislative advocacy, and managing communications outreach. Power Enterprise staff will provide additional support to CleanPowerSF as needed.

Chart CP4 displays CleanPowerSF's Uses of Funds budget allocation for operations, general reserve and debt service.

Chart CP4. FY 2016-17 and FY 2017-18 CleanPowerSF Uses of Funds



	FY 2016-17		% of Total	FY 2017-18		% of Total
Operations	\$	28.7	85.2%	\$	32.1	79.6%
General Reserve		4.2	12.4%		6.2	15.3%
Debt Service		0.8	2.4%		2.0	5.1%
Total	\$	33.7	100.0%	\$	40.3	100.0%

The FY 2016-17 budget for CleanPowerSF includes \$28.7 million for operations, or 85.2 percent of the total budget, \$4.2 million for general reserve, or 12.4 percent of the total budget and \$0.8 million for debt service, or 2.4 percent of the total budget.

The FY 2017-18 budget for CleanPowerSF includes \$32.1 million for operations, or 79.6 percent of the total budget, \$6.2 million for general reserve, or 15.3 percent of the total budget and \$2.0 million for debt service, or 5.1 percent of the total budget.

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SFPUC BUREAUS

Mission, Roles, and Responsibilities

The SFPUC Bureaus provide support services to all three Enterprises, and include the Office of the General Manager, Business Services, and External Affairs. The Office of the General Manager includes five sections: the General Manager's Office, the Emergency Response and Security Division, Human Resources, Real Estate Services and

Enterprise Workforce Development. Business Services includes Administration, Financial Services, Asset Management, Information Technology Services, Customer Services, and Assurance and Internal Controls, Fleet Management & Operations, and Records Management. External Affairs includes Communications, Governmental Affairs, and Community Benefits. The Bureaus' budgets are funded through an allocation model that allocates costs of services to the three Enterprises.

Budget Summary

Table S1 shows the 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and between FY 2017-18 and FY 2016-17.

This Bureau Budget Summary, in Table S1 below, rolls up the budget by expenditure categories in the three organizations, Office of General Manager, Business Services and External Affairs. The Bureaus' budget in Table S1 increases by 4.4 percent from FY 2015-16 to FY 2016-17, and 2.7 percent increase from FY 2016-17 to 2017-18. The budget net increases from the adopted budget in FY 2015-16 to FY 2017-18 by 7.3 percent. The largest percentage growth in the budget is in Overhead with a significant growth of 61,850.1 percent from FY 2015-16 to FY 2017-18 and reflects the SFPUC's share of the Citywide overhead, or the County-Wide Cost Allocation Plan (COWCAP), based on the Controller Office's calculation of the City's cost allocation plan. Materials & Supplies has a net reduction of 21.3 percent and Equipment has a net reduction of 21.0 percent between FY 2015-16 and FY 2017-18. The increase between FY 2016-17 and 2017-18 in Personnel and the General Reserve accounts for the overall budget increase in FY 2017-18.

Table S1. Bureaus Budget Summary

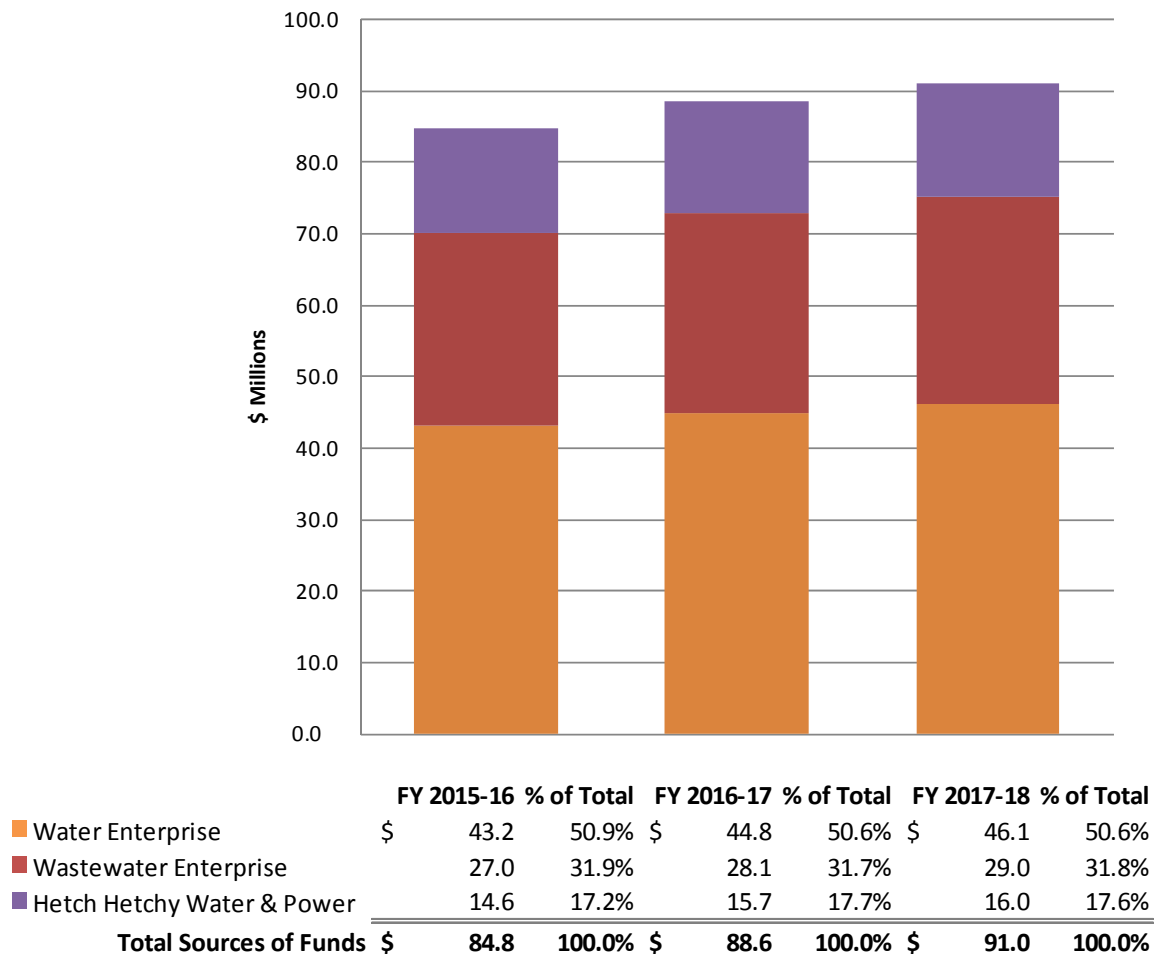
Expenditure Category	FY 2014-15	FY 2015-16	FY 2015-16 Actual	FY 2016-17	FY 2017-18	FY 2016-17 vs. FY 2015-16		FY 2017-18 vs. FY 2016-17	
	Audited	Adopted		Adopted	Adopted	Adopted Budget		Adopted Budget	
	Actual	Budget		Budget	Budget	Amount	%	Amount	%
Personnel	55,363,779	56,649,211	55,427,716	59,954,702	61,570,812	3,305,491	5.8%	1,616,110	2.7%
Overhead	-	2,277	2,592	1,410,604	1,410,604	1,408,327	61,850.1%	-	0.0%
Non-Personnel	9,897,198	10,440,345	10,014,580	9,565,405	9,511,829	(874,940)	-8.4%	(53,576)	-0.6%
Materials & Supplies	2,276,733	2,243,991	1,516,729	1,804,857	1,766,596	(439,134)	-19.6%	(38,261)	-2.1%
Equipment	2,312,221	2,143,757	2,059,730	1,775,068	1,694,260	(368,689)	-17.2%	(80,808)	-4.6%
Services of Other	11,634,056	13,369,968	13,343,647	14,088,966	13,261,537	718,998	5.4%	(827,429)	-5.9%
General Reserve	-	-	-	-	1,800,000	-	0%	1,800,000	100.0%
Total	81,483,987	84,849,549	82,364,994	88,599,602	91,015,638	3,750,053	4.4%	2,416,036	2.7%

Sources of Funds

Chart S1 shows a breakdown of the FY 2015-16, FY 2016-17 and FY 2017-18 Sources of Funds by Enterprise.

The Bureaus Sources of Funds grows 7.3 percent from FY 2015-16 to FY 2017-18; this growth is fairly even across the three enterprises.

Chart S1. FY 2015-16 to FY 2017-18 Bureaus Sources of Funds



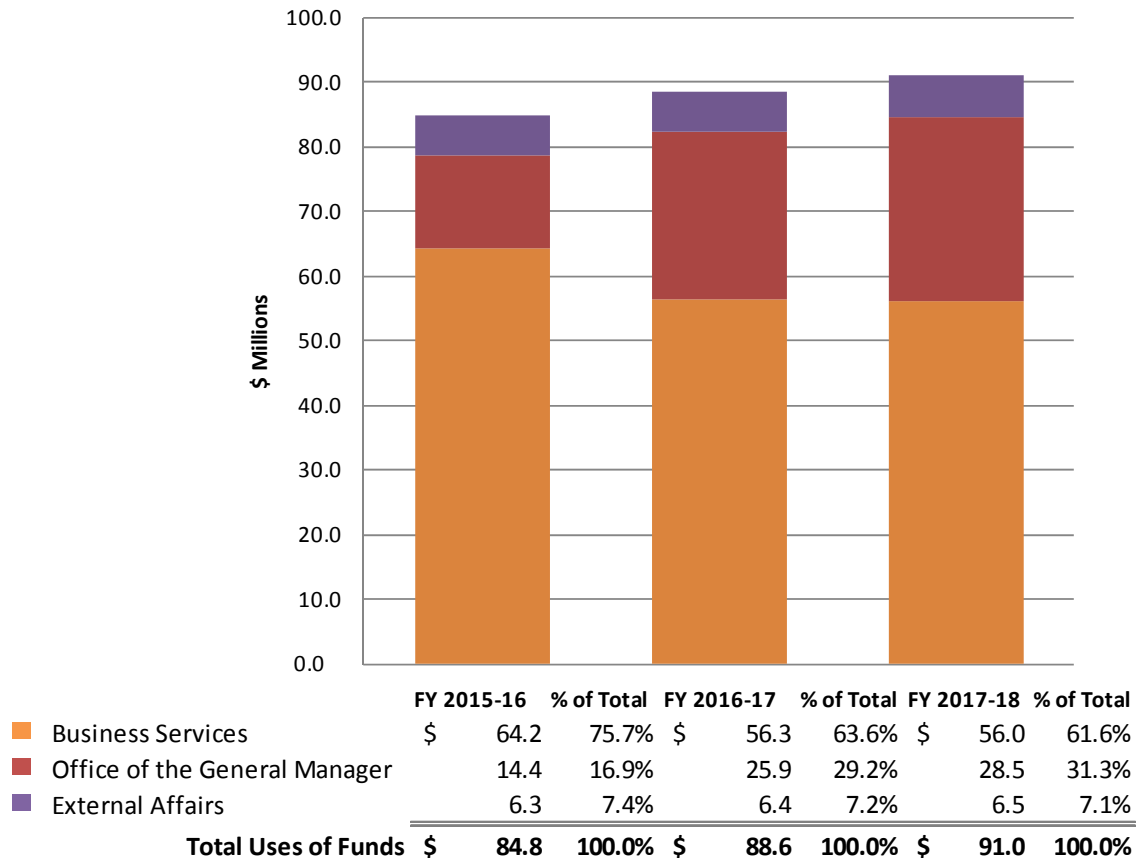
The FY 2016-17 Bureaus budget of \$88.6 million is funded by the Water Enterprise, \$44.8 million, or 50.6 percent; Wastewater Enterprise by \$28.1 million, or 31.7 percent; and Hetch Hetchy Water and Power by \$15.7 million, or 17.7 percent. The allocation of costs to the Enterprises includes assumptions such as employee full-time equivalent (FTE) employment, salary surveys, and direct services provided to the Enterprises.

The FY 2017-18 Bureaus budget of \$91.0 million is funded by the Water Enterprise, \$46.1 million, or 50.6 percent; Wastewater Enterprise, \$29.0 million, or 31.8 percent; and Hetch Hetchy Water and Power, \$16.0 million, or 17.6 percent. This allocation of costs to the Enterprises is based on the same assumptions in the allocation model as that for FY 2016-17.

Uses of Funds

Chart S2 shows a breakdown of the FY 2015-16 to FY 2017-18 Uses of Funds by Bureau.

Chart S2. FY 2015-16 to FY 2017-18 Bureaus Uses of Funds



Total Uses of Funds in FY 2016-17 for the Bureaus is \$88.6 million. This is a \$3.8 million, or 4.4 percent increase from the prior year (see Table S1). The General Manager's budget is \$25.9 million, or 29.2 percent of the total, and a 79.9 percent increase from FY 2015-16. The Business Services budget is \$56.3 million, or 63.6 percent of the total, and a 12.2 percent decrease from FY 2015-16. This significant change is a result of Human Resource Services being realigned from Business Services to the Office of the General Manager. The External Affairs budget is \$6.4 million, or 7.2 percent of the total with relatively no change from FY 2015-16.

Total Uses of Funds in FY 2017-18 for the Bureaus is \$91.0 million. This is a \$2.4 million, or 2.7 percent, increase from the prior year (see Table S1). The General Manager's budget is \$28.5 million, or 31.3 percent of the total, and a 10.2 percent increase from FY 2016-17. The Business Services budget is \$56.0 million, or 61.6 percent of the total, or a 0.5 percent decrease from FY 2016-17. The External Affairs budget is \$6.5 million, or 7.1 percent of the total with relatively no change from FY 2016-17.

The following sections go into further detail about the Bureaus. Tables G1, B1, and E1 provide the budget variances – between the FY 2016-17 and FY 2015-16 budgets, and between the FY 2017-18 and FY 2016-17 budgets – for the Office of the General Manager, Business Services, and External Affairs, respectively.

Authorized and Funded Full-Time Equivalents (FTEs)

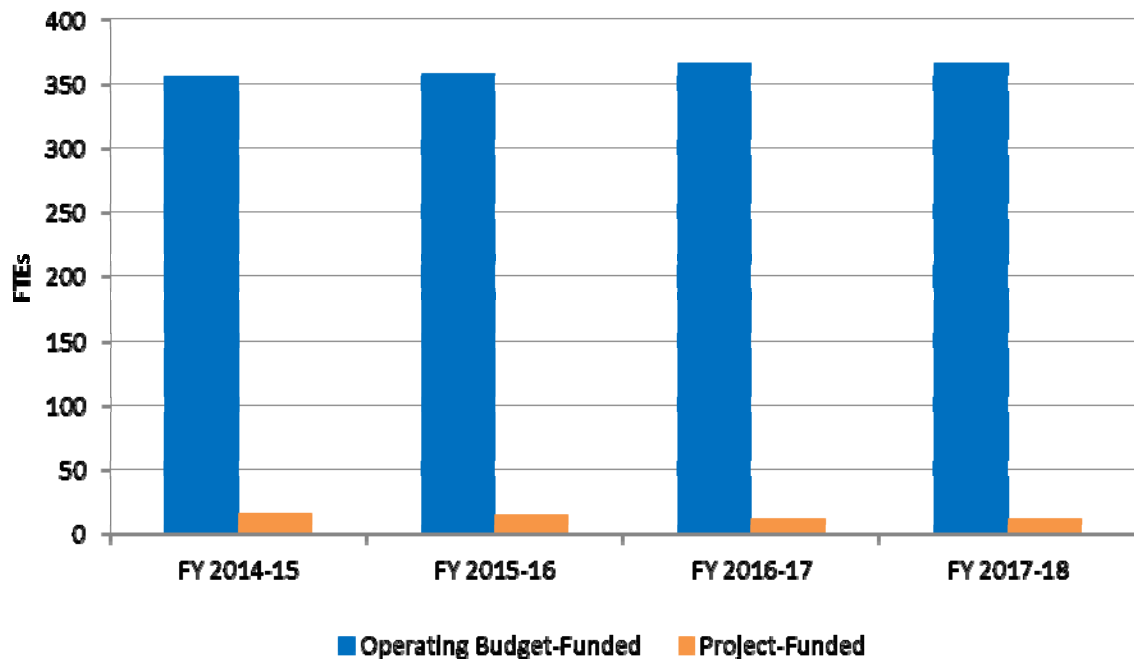
Table S2 shows total full-time equivalents (FTEs) operating budget, project funded, and temporary positions for FY 2014-15 to FY 2017-18.

Table S2. Bureaus Authorized and Funded Full-Time Equivalents (FTEs)

Position Type	FY 2014-15 Adopted Budget	FY 2015-16 Adopted Budget	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs FY 2015-16 Adopted Budget	FY 2017-18 vs FY 2016-17 Adopted Budget
Permanent Positions	347.61	349.33	351.84	352.61	2.51	0.77
Temporary Positions	7.97	8.99	14.59	14.42	5.60	(0.17)
Subtotal Operating-Funded	355.58	358.32	366.43	367.03	8.11	0.60
Project-Funded Positions	16.00	15.00	12.00	12.00	(3.00)	-
Total Positions	371.58	373.32	378.43	379.03	5.11	0.60

Chart S3 shows the operating budget and project-funded positions four-year trend.

Chart S3. Bureaus Operating and Project FTEs Trend



As noted on Table S2, on the previous page, the SFPUC Bureaus full-time equivalent (FTE) operating budget, project-funded, and temporary positions for FY 2016-17 is 378.43 FTEs, a 5.11 FTE increase from FY 2014-15. Chart S3, on the previous page, illustrates the trend of the number of operating and project-funded FTEs from FY 2014-15 to FY 2017-18. FY 2016-17 permanent positions increased by 2.51 FTEs, from 349.33 in FY 2015-16 to 351.84 FTEs in FY 2016-17. The net position increase is due to the conversion of one Project-funded position to permanent to support ITS and decreases to attrition offset by one position reassignment to the Water Enterprise's City Distribution Division.

Temporary positions from FY 2015-16 to FY 2016-17 increased by 5.60 FTEs, from 8.99 FTEs in FY 2015-16 to 14.59 FTEs in FY 2016-17. The increase supports the expansion of Enterprise Workforce Planning, Security and IT staffing.

Project-funded positions from FY 2015-16 to FY 2016-17 decreased by 3.00 FTEs, from 15.00 in FY 2015-16 to 12.00 FTEs in FY 2016-17. The decrease is due to two position reassignments to the Water Enterprise's City Distribution Division and the conversion of one Project-funded position to operating permanent.

Table S2 provides a breakdown of positions by position type.

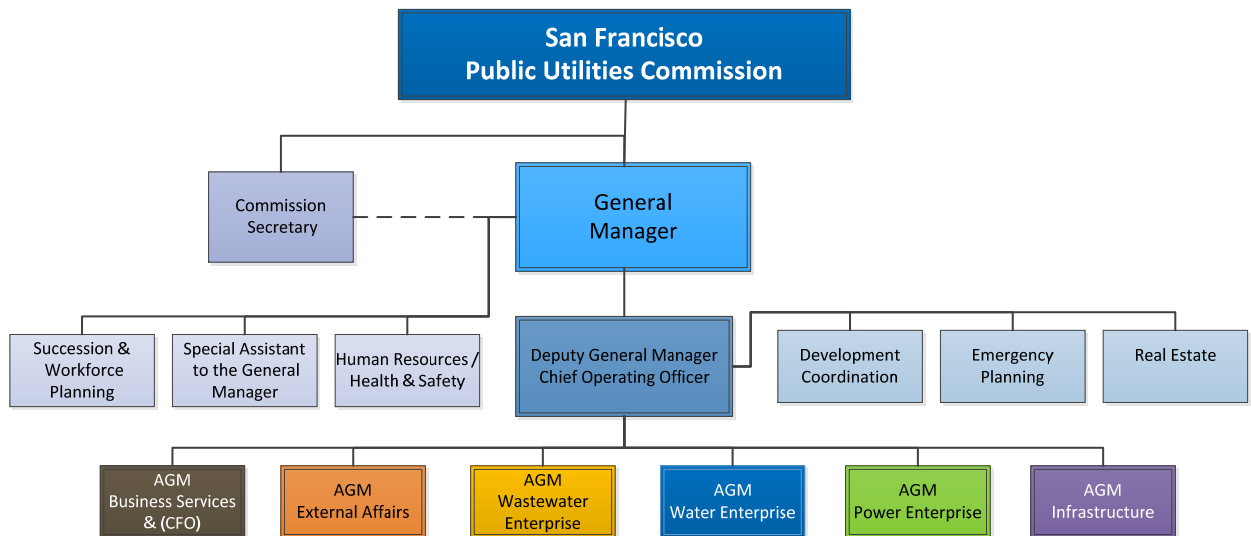
Also noted on Table S2, the SFPUC Bureaus full-time equivalent (FTE) operating budget, project-funded, and temporary for FY 2017-18 is 379.03 FTEs, a 0.60 FTE increase from FY 2016-17. FY 2017-18 permanent positions increased by 0.77 FTEs, from 351.84 FTEs in FY 2016-17 to 352.61 FTEs in FY 2016-17. The net position change is due to a decrease to attrition.

The number of temporary positions from FY 2016-17 to FY 2017-18 had relatively no change decreasing 0.17 FTEs, from 14.59 FTEs in FY 2016-17 to 14.42 FTEs in FY 2017-18.

Project-funded positions from FY 2016-17 to FY 2017-18 remained the same.

Office of the General Manager

Organization Chart



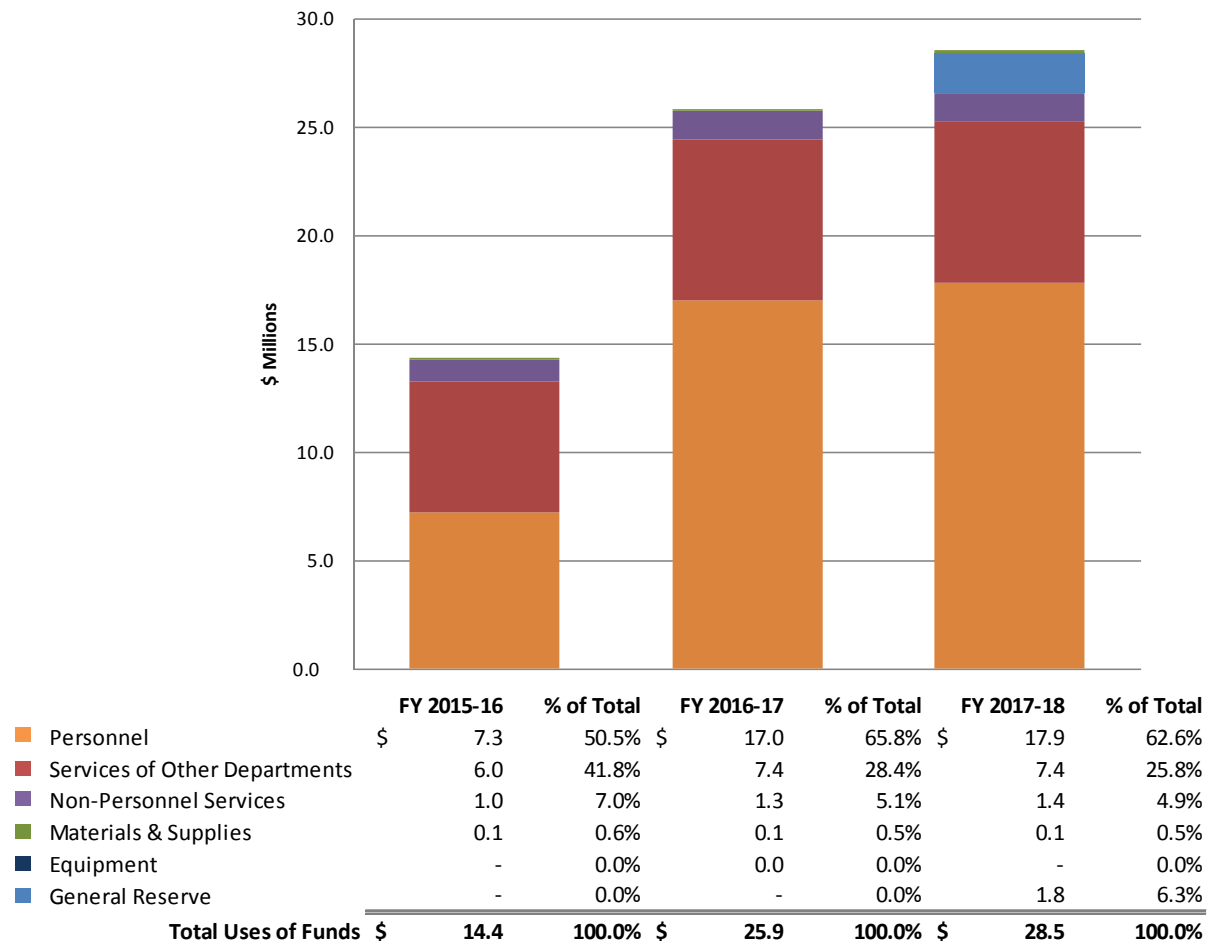
Mission, Roles, and Responsibilities

The General Manager of the SFPUC oversees the regional utility that delivers reliable, high quality drinking water to more than 2.6 million Bay Area customers, collects and treats wastewater and stormwater for the City and County of San Francisco (CCSF), and provides hydroelectric and other renewable power resources for San Francisco municipal customers as well as clean power to San Francisco retail customers. The functions of the Office of the General Manager support the General Manager in key oversight areas.

Uses of Funds

Chart G1 shows a breakdown of FY 2015-16, FY 2016-17, and FY 2017-18 Uses of Funds by expenditure category costs.

Chart G1. FY 2015-16 to FY 2017-18 Office of the General Manager Uses of Funds



Summary

The FY 2016-17 Office of the General Manager budget is \$25.9 million, a \$11.5 million, or 79.9 percent, increase from FY 2015-16. The major change from the FY 2015-16 budget is Human Resource Services being realigned from Business Services to the Office of the General Manager.

The FY 2017-18 Office of the General Manager budget is \$28.5 million, a 10.2 percent increase from FY 2016-17. The major change from FY 2016-17 is due to a reserve to fund unanticipated expenses.

Table G1 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2015-16 and FY 2016-17 and between FY 2016-17 and FY 2017-18.

The budget for the Office of the General Manager is 29.2 percent of the Bureaus' budget in FY 2016-17 and 31.3 percent in FY 2017-18 (See Chart S2). The Office of the General Manager's budget increases by 79.9 percent between FY 2015-16 and 2016-17 and thereafter increases by 10.0 percent in FY 2017-18; with a net increase from 2015-16 to 2017-18 of 11.3 percent. As mentioned earlier, the major change from the FY 2015-16 budget is a result of Human Resource Services being realigned from Business Services to the Office of the General Manager.

Table G1. Office of the General Manager Budget Summary

\$	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2016-17 vs. FY 2015-16	FY 2017-18 vs. FY 2016-17
Expenditure Category	Audited Actual	Adopted Budget	FY 2015-16 Actual	Adopted Budget	Adopted Budget Amount	Adopted Budget %
Personnel	7,762,998	7,270,905	7,725,910	17,041,414	17,850,838	9,770,509 134.4%
Non-Personnel	1,092,314	1,005,233	634,145	1,330,602	1,385,284	325,369 32.4%
Materials & Supplies	33,997	91,492	41,621	134,854	132,020	43,362 47.4%
Equipment	-	-	-	12,028	-	12,028 100.0%
Services of Other	5,355,252	6,020,822	4,918,624	7,362,445	7,364,509	1,341,623 22.3%
General Reserve	-	-	-	-	1,800,000	- 0.0%
Total	14,244,561	14,388,452	13,320,300	25,881,343	28,532,651	11,492,891 79.9%

Reason for Changes – FY 2015-16 to FY 2016-17

The following describes FY 2015-16 and FY 2016-17 budget category variances greater than ten percent.

- **Personnel** – Reflects Human Resource Services being realigned from the Business Services Bureau.
- **Non-Personnel Services** – Reflects Human Resource Services being realigned from Business Services offset by a reduction in consultant support for Real Estate Services and Emergency Response & Security.
- **Materials and Supplies:** Reflects the Human Resource Services being realigned from Business Services.
- **Equipment** – Reflects equipment needed for Human Resource Service's Respiratory Protection Program to support Cal/OSHA requirements.
- **Services of Other Departments** - Reflects Human Resource Services being realigned from Business Services.

Reasons for Changes – FY 2016-17 to FY 2017-18

The following describes FY 2016-17 and FY 2017-18 budget category variances that are greater than ten percent.

- **Equipment** – Decrease reflects one-time funding the Respiratory Protection program equipment included in FY 2016-17 budget.
- **General Reserve** – Reflects a reserve to fund unanticipated expenses.

Human Resource Services

Human Resource Services recruits, compensates, supports and retains a diverse and highly qualified workforce, and serves the SFPUC Enterprises and Bureaus in an efficient, responsive, and professional manner. The promotion of health, safety, workforce planning, and professional development for all SFPUC employees is critical to the SFPUC mission and Human Resource Services' functions.

Budget Summary

Table G2 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and between FY 2017-18 and FY 2016-17.

Table G2. Human Resource Services Budget Summary

\$	FY 2014-15		FY 2015-16		FY 2016-17		FY 2017-18		FY 2016-17 vs. FY 2015-16		FY 2017-18 vs. FY 2016-17	
	Audited Actual	Adopted Budget	FY 2015-16 Actual	Adopted Budget	Adopted Budget	Adopted Budget	Adopted Budget	Adopted Budget	Amount	%	Amount	%
Expenditure Category												
Personnel	7,647,969	8,522,790	7,855,235	8,533,543	8,703,366				10,753	0.1%	169,823	2.0%
Non-Personnel Services	705,640	694,083	565,133	618,605	673,287				(75,478)	-10.9%	54,682	8.8%
Materials & Supplies	108,309	105,651	52,888	71,592	68,758				(34,059)	-32.2%	(2,834)	-4.0%
Equipment	24,786	25,632	45,020	12,028	-				(13,604)	-53.1%	(12,028)	-100.0%
Services of Other Depts	1,865,464	1,894,984	1,882,116	1,917,833	1,872,422				22,849	1.2%	(45,411)	-2.4%
Total	10,352,168	11,243,140	10,400,392	11,153,601	11,317,833				(89,539)	-0.8%	164,232	1.5%

Reasons for Changes – FY 2015-16 to FY 2016-17

- **Non-Personnel Services** – Reflects funding reallocated to support the Enterprise Workforce Planning Section under the General Manager.
- **Materials & Supplies** – Reflects funding reallocated to support the Enterprise Workforce Planning Section and a reduction in office supplies and minor furnishings based on the Bureau's projected needs.
- **Equipment** – Reflects equipment needed for the Respiratory Protection Program to support Cal/OSHA requirements.

Reasons for Changes – FY 2016-17 to FY 2017-18

- **Equipment** – Decrease reflects one-time funding from the Respiratory Protection program equipment included in FY 2016-17 budget.

Table G3 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and between FY 2017-18 and FY 2016-17.

This budget consists of the General Manager, Emergency Response & Security, Real Estate Services and the newly created Enterprise Workforce Planning Section.

Table G3. The General Manager's Budget Summary (excluding HRS)

\$	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
Expenditure Category						Amount	%	Amount	%
Personnel	7,762,998	7,270,905	7,725,910	8,507,871	9,147,472	1,236,966	17.0%	639,601	7.5%
Non-Personnel Services	1,092,314	1,005,233	634,145	711,997	711,997	(293,236)	-29.2%	-	0.0%
Materials & Supplies	33,997	91,492	41,621	63,262	63,262	(28,230)	-30.9%	-	0.0%
Services of Other Depts	5,355,252	6,020,822	4,918,624	5,444,612	5,492,087	(576,210)	-9.6%	47,475	0.9%
General Reserve	-	-	-	-	1,800,000	-	0.0%	1,800,000	100.0%
Total	14,244,561	14,388,452	13,320,300	14,727,742	17,214,818	339,290	2.4%	2,487,076	16.9%

Reason for Changes – FY 2015-16 to FY 2016-17

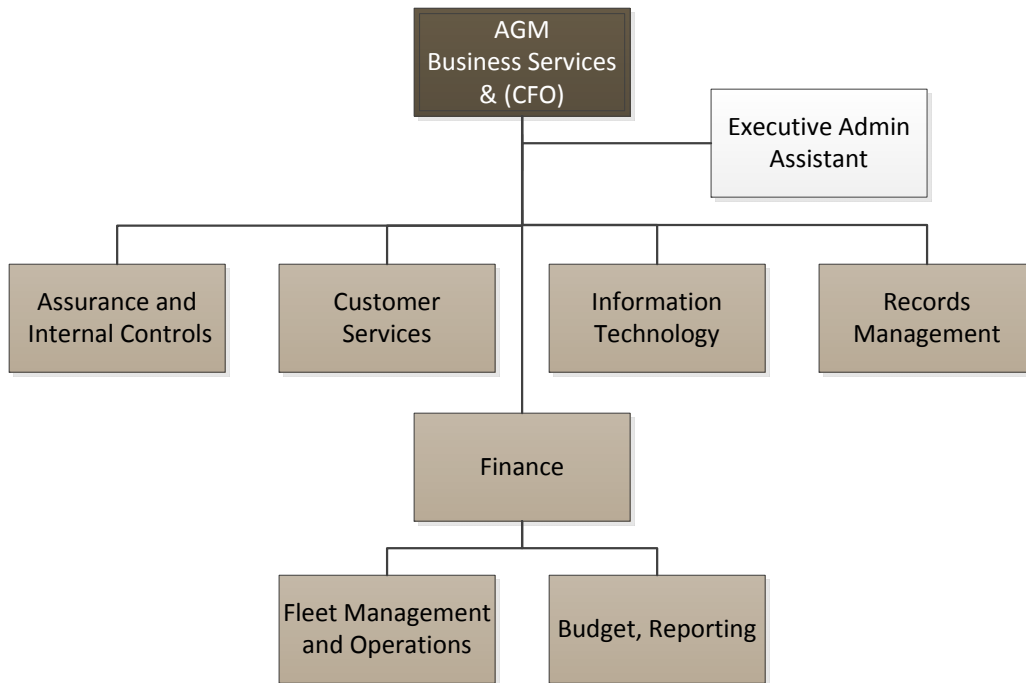
- **Personnel** – Reflects funding reallocated from Human Resource Services to support Enterprise Workforce Planning Section.
- **Non-Personnel Services** – Reflects the reduction in consultant support for Real Estate Services and Emergency Response & Security.
- **Materials and Supplies:** Reflects a decrease from the prior year due to one-time expenses for minor furnishings and miscellaneous materials and supplies.

Reasons for Changes – FY 2016-17 to FY 2017-18

- **General Reserve** – Reflects a reserve to fund unanticipated expenses.

Business Services

Organization Chart



Mission, Roles, and Responsibilities

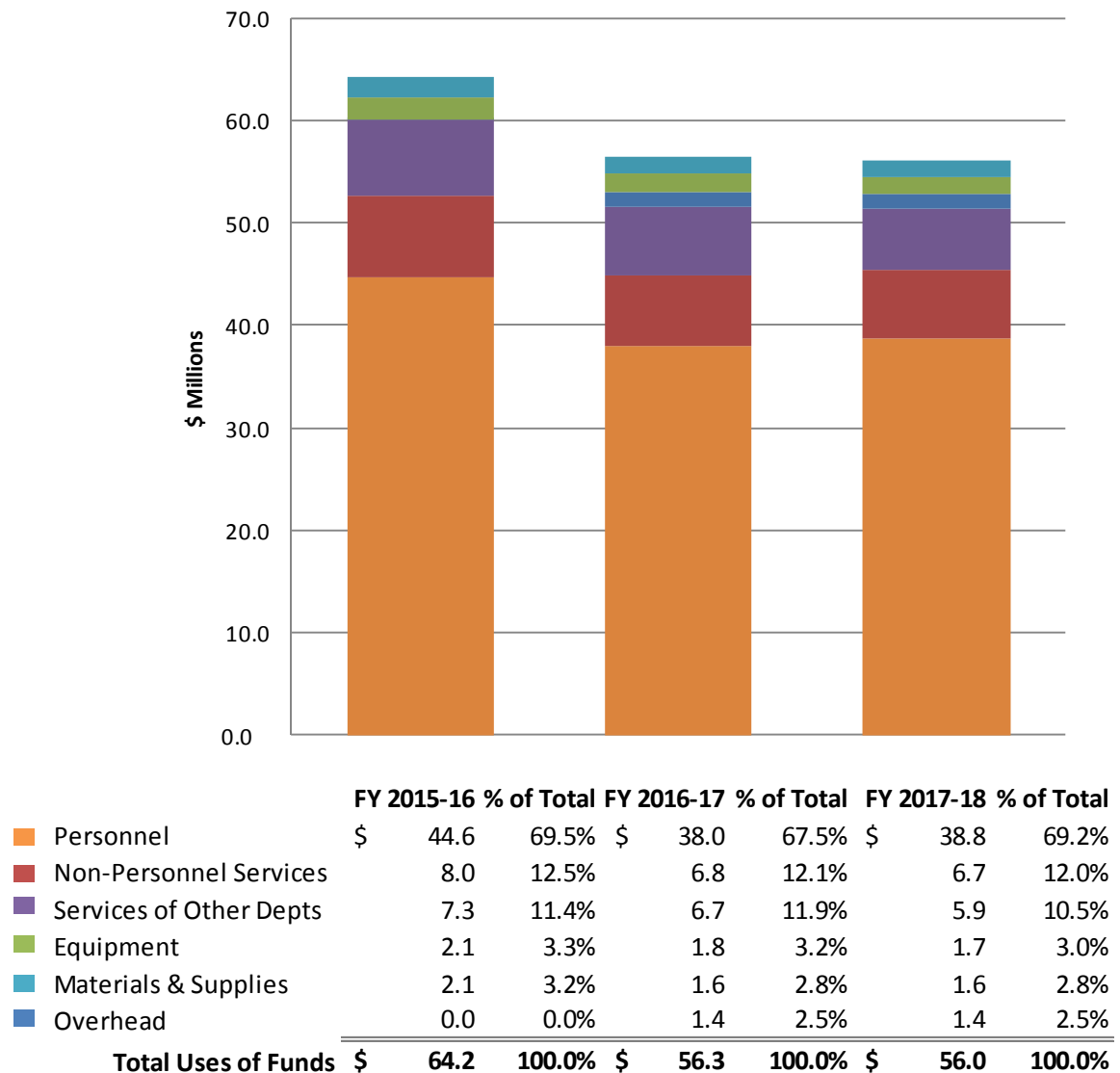
Business Services supports the Water, Power and Wastewater Enterprises to achieve operational efficiency, industry-leading customer service and sound financial performance.

* Budget for Records Management is in Business Services Administration.

Uses of Funds

Chart B1 shows a breakdown of FY 2015-16, FY 2016-17, and FY 2017-18 Uses of Funds by expenditure category cost.

Chart B1. FY 2015-16 to FY 2017-18 Business Services Uses of Funds



Summary

The FY 2016-17 Business Services budget is \$56.3 million, a \$7.9 million or 12.2 percent decrease from the prior year. Major changes from the FY 2015-16 budget include the realignment of Human Resource Services to the Office of the General Manager offset by increases to SFPUC's share of the City-wide overhead costs and City work orders including SFPUC's share of the new City-wide financial system and the purchase of software licenses through the Department of Technology.

The FY 2017-18 Business Services budget is \$56.0 million, a \$0.3 million, or 0.6 percent, decrease from the prior year. The major change from the FY 2016-17 budget is a reduction in SFPUC's share in the development of the new City-wide financial system.

Table B1 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and between FY 2017-18 and FY 2016-17.

The budget for Business Services is the largest portion of the Bureaus; representing 63.6 percent in FY 2016-17 and 61.6 percent in FY 2017-18 (See Chart S2). The Business Services budget as shown in Table B1 reflect the major changes in the Bureaus Budget Summary as discussed above; these are the net increase of 61,850.1 percent from FY 2015-16 to 2017-18 in Overhead offset by a reduction of 20.2 percent in Materials & Supplies and 20.0 percent in Equipment over the same period.

Table B1. Business Services Budget Summary

\$	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2016-17 vs. FY 2015-16	FY 2017-18 vs. FY 2016-17
Expenditure Category	Audited Actual	Adopted Budget	FY 2015-16 Actual	Adopted Budget	Adopted Budget Amount	Adopted Budget %
Personnel	43,239,802	44,648,394	43,295,282	38,035,177	38,758,111	(6,613,217) -14.8%
Overhead	-	2,277	2,277	1,410,604	1,410,604	1,408,327 61,850.1%
Non-Personnel	7,735,939	7,998,953	8,045,321	6,824,725	6,716,467	(1,174,228) -14.7%
Materials & Supplies	2,216,792	2,060,856	1,434,300	1,596,360	1,560,933	(464,496) -22.5%
Equipment	2,312,221	2,143,757	2,059,730	1,763,040	1,694,260	(380,717) -17.8%
Services of Other	6,111,911	7,349,146	8,333,717	6,716,521	5,887,028	(632,625) -8.6%
Total	61,616,665	64,203,383	63,170,627	56,346,427	56,027,403	(7,856,956) -12.2%

Reason for Changes – FY 2015-16 to FY 2016-17

The following describes FY 2015-16 and FY 2016-17 budget category variances greater than ten percent.

- **Personnel** – The FY 2016-17 Personnel budget is \$38.0 million, a \$6.6 million, or 14.8 percent reduction from FY 2015-16. The decrease reflects Human Resource Services being realigned to the Office of the General Manager.
- **Overhead** – The City-wide Overhead budget of \$1.4 million has been increased based on the City-wide cost allocation plan.
- **Non-Personnel Services** – The Non-Personnel budget is \$6.8 million, a \$1.2 million, or 14.7 percent reduction from FY 2015-16. The budget funds maintenance, travel, training, memberships, entertainment and promotion, and professional services. The decrease reflects Human Resource Services being realigned to the Office of the General Manager and reductions in consultant support services.
- **Materials & Supplies** – The FY 2016-17 Materials & Supplies budget is \$1.6 million, a \$0.5 million, or 22.5 percent reduction from FY 2015-16. The decrease reflects a reduction in projected maintenance and computer supplies for Business Services.
- **Equipment**: The FY 2016-17 Equipment budget is \$1.8 million, a \$0.4 million, or 17.8 percent reduction from FY 2015-16. The decrease reflects one-time funding of telecommunications equipment.

Reasons for Changes – FY 2016-17 to FY 2017-18

The following describes FY 2016-17 and FY 2017-18 budget category variances that are greater than ten percent.

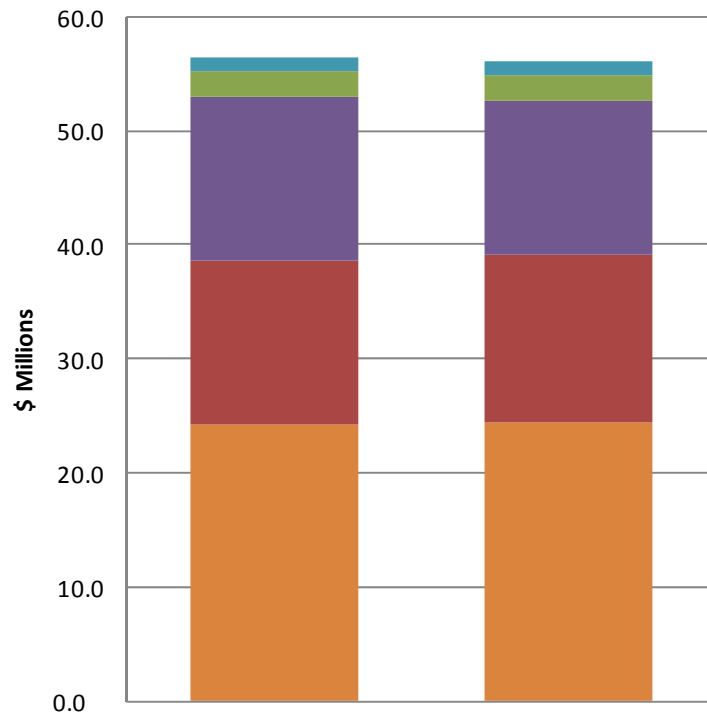
- **Services of Other Departments** - The FY 2017-18 Services of Other Departments budget is \$5.9 million, a \$0.8 million, or 12.4 percent decrease from FY 2016-17. The decrease reflects a shift from the cost for the development of the new City-wide financial system to its maintenance and operation.

Bureaus – Business Services

Chart B2 shows a breakdown of the FY 2016-17 and FY 2017-18 Business Services budget by bureau.

The decrease from FY 2016-17 to FY 2017-18 is 0.6 percent.

Chart B2. FY 2016-17 and FY 2017-18 Business Services Budget by Bureau



	FY 2016-17	% of Total	FY 2017-18	% of Total
Information Technology	\$ 24.2	43.0%	\$ 24.5	43.6%
Customer Services	14.4	25.5%	14.6	26.1%
Financial Services	14.3	25.4%	13.5	24.1%
Administration	2.3	4.2%	2.4	4.2%
Assurance & Internal Controls	1.1	2.0%	1.1	2.0%
Total Uses of Funds	\$ 56.3	100.0%	\$ 56.0	100.0%

Chart B2 provides a breakdown of the FY 2016-17 Business Services budget by Bureau. Information & Technology Service's budget is \$24.2 million, or 43.0 percent of the total. Customer Services budget is \$14.4 million, or 25.5 percent of the total. The Financial Services budget is \$14.3 million, or 25.4 percent of the total. Business Services Administration budget is \$2.3 million, or 4.2 percent of the total. The Assurance and Internal Controls budget is \$1.1 million, or 2.0 percent of the total.

Business Services FY 2017-18 budget: Information & Technology Services (ITS) budget is \$24.5 million, or 43.6 percent of the total. The Customer Services budget is \$14.6 million, or 26.1 percent of the total. The Financial Services budget is \$13.5 million, or 24.1 percent of the total. Business Services Administration budget is \$2.4 million, or 4.2 percent of the total. The Assurance and Internal Controls budget is \$1.1 million, or 2.0 percent of the total.

Business Services Administration, including Records Management

Business Services Administration provides overall administrative support and oversight within Business Services, as well as to the three Enterprises and other Bureaus.

Records Management includes the SFPUC's Record Retention Program, and within this Program are the SFPUC Historical Archive and the SFPUC Historian. The Records Retention Program promotes the integrity, confidentiality, and availability of records created and maintained to ensure the achievement of the organization's commitments, objectives and legal obligations.

Budget Summary

Table B2 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and between FY 2017-18 and FY 2016-17.

Table B2. Administration Budget Summary

\$	FY 2014-15	FY 2015-16		FY 2016-17	FY 2017-18	FY 2016-17 vs. FY 2015-16		FY 2017-18 vs. FY 2016-17	
Expenditure Category	Audited Actual	Adopted Budget	FY 2015-16 Actual	Adopted Budget	Adopted Budget	Adopted Budget	%	Adopted Budget	%
Personnel	524,193	578,708	503,325	605,154	618,330	26,446	4.6%	13,176	2.2%
Overhead	-	2,277	2,277	1,410,604	1,410,604	1,408,327	61,850.1%	-	0.0%
Services	16,067	194,967	66,773	200,795	193,758	5,828	3.0%	(7,037)	-3.5%
Materials & Supplies	-	24,000	9,157	15,908	15,385	(8,092)	-33.7%	(523)	-3.3%
Depts	35,799	119,881	82,278	110,855	114,968	(9,026)	-7.5%	4,113	3.7%
Total	576,059	919,833	663,810	2,343,316	2,353,045	1,423,483	154.8%	9,729	0.4%

Reasons for Changes – FY 2015-16 to FY 2016-17

- **Overhead** – Reflects the SFPUC's share of the Citywide overhead, or the County-Wide Cost Allocation Plan (COWCAP), based on the Controller Office's calculation of the City's cost allocation plan.
- **Materials & Supplies** – Reflects a reduction in office supplies and minor furnishings based on the Bureau's projected needs.

Reasons for Changes – FY 2016-17 to FY 2017-18

There were no major changes to the FY 2017-18 adopted budget.

Financial Services, including Fleet Management

Financial Services supports the SFPUC Enterprises and Bureaus, ensuring financial stewardship and oversight for ratepayer assets, and includes Fleet Management & Operations which is responsible for the establishment, implementation, and maintenance of policies and procedures governing SFPUC-owned vehicles. Financial Services includes accounting operations, asset management, audit oversight, reconciliation and financial reporting, budget management, debt management, purchasing support, and rates administration. Financial Services central mission is to accurately communicate the financial position of the SFPUC to rate payers, City departments, rating agencies, investors and other stakeholders.

Budget Summary

Table B3 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and between FY 2017-18 and FY 2016-17.

Table B3. Financial Services Budget Summary

\$	FY 2014-15	FY 2015-16		FY 2016-17	FY 2017-18	FY 2016-17 vs. FY 2015-16		FY 2017-18 vs. FY 2016-17	
Expenditure Category	Audited Actual	Adopted Budget	FY 2015-16 Actual	Adopted Budget	Adopted Budget	Adopted Budget	Amount	%	Amount
Personnel	9,232,191	9,260,003	9,300,241	9,835,802	10,027,813	575,799	6.2%	192,011	2.0%
Non-Personnel Services	623,716	947,215	823,559	757,492	757,492	(189,723)	-20.0%	-	0.0%
Materials & Supplies	29,326	157,924	30,774	91,741	91,741	(66,183)	-41.9%	-	0.0%
Equipment	-	-	-	138,024	-	138,024	100.0%	(138,024)	-100.0%
Services of Other Depts	926,453	2,387,215	3,097,294	3,469,797	2,600,147	1,082,582	45.3%	(869,650)	-25.1%
Total	10,811,686	12,752,357	13,251,868	14,292,856	13,477,193	1,540,499	12.1%	(815,663)	-5.7%

Reasons for Changes – FY 2015-16 to FY 2016-17

- **Non-Personnel Services** – Reflects a reduction in consultant support for the Debt Management Group.
- **Materials & Supplies** – Reflects a reduction in office supplies and minor furnishings based on projected needs.
- **Equipment** – Reflects funding for Fleet Management to replace two vehicles to support the modernization of the SFPUC's motor pool as well as hardware upgrades to support fuel data management.
- **Services of Other Departments** - Reflects SFPUC's share of the new City-wide financial system.

Reasons for Changes – FY 2016-17 to FY 2017-18

- **Equipment** – Decrease reflects one-time funding for Fleet Management's vehicle purchases and hardware for fuel data management.
- **Services of Other Departments** - Reflects a shift from the development of the new City-wide financial system towards its maintenance and operation.

Information Technology Services (ITS)

Information Technology Services (ITS) partners with the SFPUC Enterprises, Divisions and Bureaus, reliably supports the SFPUC's information technology, and delivers innovative solutions which enable the SFPUC to achieve its mission.

Budget Summary

Table B4 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and between FY 2017-18 and FY 2016-17.

Table B4. ITS Budget Summary

\$	FY 2014-15	FY 2015-16	FY 2015-16	FY 2016-17	FY 2017-18	FY 2016-17 vs. FY 2015-16	FY 2017-18 vs. FY 2016-17
Expenditure Category	Audited Actual	Adopted Budget	Actual	Adopted Budget	Adopted Budget	Adopted Budget Amount %	Adopted Budget Amount %
Personnel	13,249,336	13,187,883	12,998,925	14,025,537	14,276,871	837,654 6.4%	251,334 1.8%
Non-Personnel Services	6,080,778	5,514,967	5,829,519	5,178,784	5,089,213	(336,183) -6.1%	(89,571) -1.7%
Materials & Supplies	1,886,153	1,517,630	1,101,154	1,318,076	1,284,359	(199,554) -13.1%	(33,717) -2.6%
Equipment	2,287,435	2,118,125	2,014,709	1,625,016	1,694,260	(493,109) -23.3%	69,244 4.3%
Services of Other Depts	2,163,874	1,860,376	2,185,856	2,068,852	2,105,503	208,476 11.2%	36,651 1.8%
Total	25,667,576	24,198,981	24,130,163	24,216,265	24,450,206	17,284 0.1%	233,941 1.0%

Reasons for Changes – FY 2015-16 to FY 2016-17

- **Materials & Supplies** – Reflects a reduction in maintenance supplies to support the Supervisory Control and Data Acquisition (SCADA) system and reflects a decrease to computer supplies based on the Bureaus' projected needs.
- **Equipment** – Decrease reflects one-time funding of telecommunication equipment.
- **Services of Other Departments** – Reflects an increase of software licenses purchased through the Department of Technology.

Reasons for Changes – FY 2016-17 to FY 2017-18

There were no major changes to the FY 2017-18 adopted budget.

Customer Services

Customer Services is responsible for the billing and collection of utility services and is the primary point of contact for water and wastewater customers. CSB maintains over 174,000 water and wastewater service accounts, over 2,200 municipal and retail electric service accounts, and approximately 500 land-lease accounts totaling over \$780 million in annual revenue. Customer Services is also responsible for meter reading and field investigations, as well as responding to over 200,000 customer inquiries, complaints and requests for services annually.

Customer Services is comprised of five units all of which are dependent on one or more of the other units to effectively fulfill their respective roles. The five units are:

- Administration
- Business Center
- Customer Accounts
- Customer Contact Center
- Field Services

Budget Summary

Table B5 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and between FY 2017-18 and FY 2016-17.

Table B5. Customer Services Budget Summary

\$	FY 2014-15	FY 2015-16		FY 2016-17	FY 2017-18	FY 2016-17 vs. FY 2015-16		FY 2017-18 vs. FY 2016-17	
Expenditure Category	Audited Actual	Adopted Budget	FY 2015-16 Actual	Adopted Budget	Adopted Budget	Adopted Budget	Amount	Adopted Budget	Amount
Personnel	11,853,256	12,244,284	11,822,126	12,530,221	12,768,524	285,937	2.3%	238,303	1.9%
Non-Personnel Services	281,824	543,313	602,003	627,995	627,995	84,682	15.6%	-	0.0%
Materials & Supplies	189,432	250,281	240,328	167,438	167,438	(82,843)	-33.1%	-	0.0%
Services of Other Depts	1,120,231	1,085,690	1,086,173	1,066,017	1,066,031	(19,673)	-1.8%	14	0.0%
Total	13,444,743	14,123,568	13,750,630	14,391,671	14,629,988	268,103	1.9%	238,317	1.7%

Reasons for Changes – FY 2015-16 to FY 2016-17

- **Non-Personnel Services** – Reflects an increase to support the use of offsite payment locations as well as projected service fees for billing services.
- **Materials & Supplies** – Reflects a decrease in office supplies based on the Bureau's projected needs.

Reasons for Changes – FY 2016-17 to FY 2017-18

There were no major changes to the FY 2017-18 adopted budget.

Assurance and Internal Controls (AIC)

Assurance and Internal Controls (AIC) administers the SFPUC Governance Risk & Compliance framework and champions best practices for risk management, internal controls, accountability, compliance, transparency and completeness. The AIC Bureau supports all business divisions enterprise-wide with the objective to mitigate financial and operational risks, enhance opportunities for positive outcomes, and advance the achievement of SFPUC's strategic goals.

AIC manages the following areas related to governance, risk and compliance:

- Enterprise Risk Management
- Contractual Risk Transfer
- Governance & Assurance
- Audit & Compliance
- Data Analysis & Forensics

Budget Summary

Table B6 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and between FY 2017-18 and FY 2016-17.

Table B6. Assurance and Internal Controls Budget Summary

\$	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget Amount	FY 2016-17 vs. FY 2015-16 %	FY 2017-18 vs. FY 2016-17 Adopted Budget Amount	FY 2017-18 vs. FY 2016-17 %
Expenditure Category									
Personnel	732,856	854,726	815,430	1,038,463	1,066,573	183,737	21.5%	28,110	2.7%
Non-Personnel Services	27,915	104,408	158,333	59,659	48,009	(44,749)	-42.9%	(11,650)	-19.5%
Materials & Supplies	3,571	5,370	-	3,197	2,000	(2,173)	-40.5%	(1,197)	-37.4%
Services of Other Depts	90	1,000	-	1,000	389	-	0.0%	(611)	-61.1%
Total	764,432	965,504	973,763	1,102,319	1,116,971	136,815	14.2%	14,652	1.3%

Reasons for Changes – FY 2015-16 to FY 2016-17

- **Personnel** – Reflects the reassignment of one position from Business Services Administration to support Assurance and Internal Controls.
- **Non-Personnel Services** – Reflects the decrease in outside support for various internal controls processes.
- **Materials & Supplies** – Reflects a decrease in office supplies based on the Bureaus' projected needs.

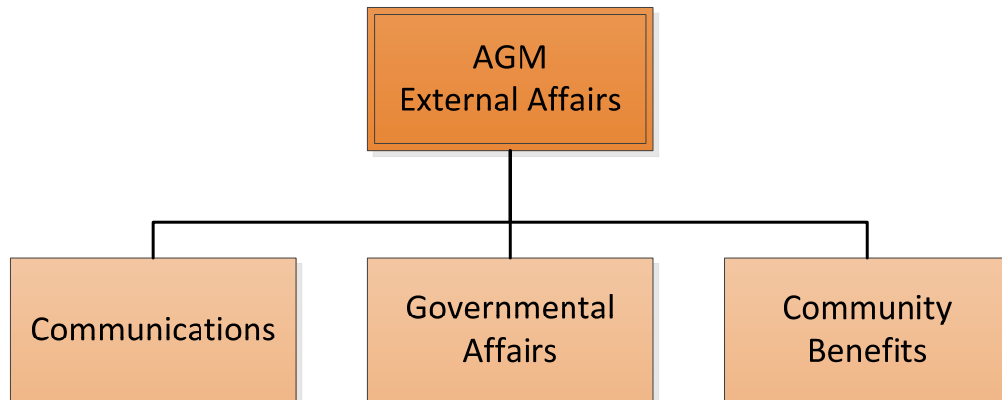
Reasons for Changes – FY 2016-17 to FY 2017-18

- **Non-Personnel Services** – Reflects a decrease in software licenses and maintenance fees for data mining software.
- **Materials & Supplies** – Reflects a decrease in office supplies based on the Bureau's projected needs.
- **Services of Other Departments** – Reflects the decrease in Reproduction services.

External Affairs

Organization Chart

This organizational chart reflects the budget structure of External Affairs.



Mission, Roles, and Responsibilities

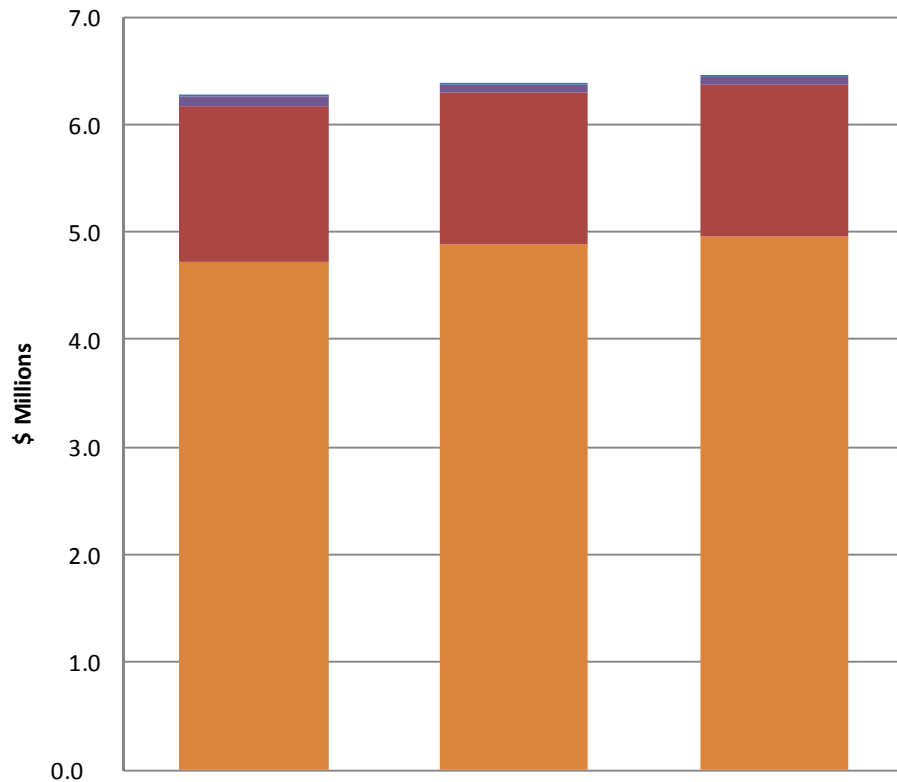
SFPUC External Affairs is comprised of three sections: Communications, Governmental Affairs, and Community Benefits. The Bureaus track and coordinate legislation perform public outreach and media relations, educate and communicate, and coordinate SFPUC community benefits activities. These activities support the SFPUC's mission to provide its customers with high quality, efficient, and reliable water, power, and wastewater services in a manner that values environmental and community interests.

The External Affairs budget as shown in Chart S2 is 7.4 percent of the total budget for the Bureaus. The budget has increased by 1.8 percent in FY 2015-16 to FY 2016-17 and 1.3 percent from FY 2016-17 to FY 2017-18. The net increase from FY 2015-16 adopted budget to FY 2017-18 is 3.2 percent.

Uses of Funds

Chart E1 shows a breakdown of FY 2015-16, FY 2016-17, and FY 2017-18 Uses of Funds by expenditure category.

Chart E1. FY 2015-16 to FY 2017-18 External Affairs Uses of Funds



	FY 2015-16 % of Total		FY 2016-17 % of Total		FY 2017-18 % of Total	
Personnel	\$	4.7	75.6%	\$	4.9	76.6%
Non-Personnel Services	\$	1.4	22.9%	\$	1.4	22.1%
Materials & Supplies	\$	0.1	1.5%	\$	0.1	1.1%
Services of Other Depts	\$	0.0	0.0%	\$	0.0	0.2%
Total Uses of Funds	\$	6.3	100.0%	\$	6.4	100.0%

Summary

The FY 2016-17 External Affairs budget is \$6.4 million, a \$0.1 million, or a 1.8 percent, increase from FY 2015-16, relatively no change from FY 2015-16.

The FY 2017-18 External Affairs budget is \$6.5 million, relatively no change from FY 2016-17.

Table E1 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and between FY 2017-18 and FY 2016-17.

Table E1. External Affairs Budget Summary

\$	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2016-17 vs. FY 2015-16	FY 2017-18 vs. FY 2016-17
Expenditure Category	Audited Actual	Adopted Budget	FY 2015-16 Actual	Adopted Budget	Adopted Budget Amount	Adopted Budget %
Personnel	4,360,978	4,729,912	4,406,525	4,878,111	4,961,863	148,199 3.1%
Non-Personnel Services	1,068,945	1,436,159	1,335,430	1,410,078	1,410,078	(26,081) -1.8%
Materials & Supplies	25,945	91,643	40,808	73,643	73,643	(18,000) -19.6%
Services of Other Depts	166,894	-	91,306	10,000	10,000	10,000 100.0%
Total	5,622,762	6,257,714	5,874,069	6,371,832	6,455,584	114,118 1.8%

Reason for Changes – FY 2015-16 to FY 2016-17

The following describes FY 2015-16 and FY 2016-17 budget category variances greater than ten percent.

- **Materials and Supplies:** The FY 2016-17 Materials and Supplies budget is \$0.1 million, or 19.6 percent decrease from FY 2015-16. The reduction reflects the Bureau's projected needs for office supplies.
- **Services of Other Departments:** This budget funds projected costs of services provided by other City Departments. This increase funds the SFPUC's share of the City's Transgender Initiative, a program that provides educational and employment services for transgendered individuals.

Reason for Changes – FY 2016-17 to FY 2017-18

The following describes FY 2016-17 and FY 2017-18 budget category variances that are greater than ten percent.

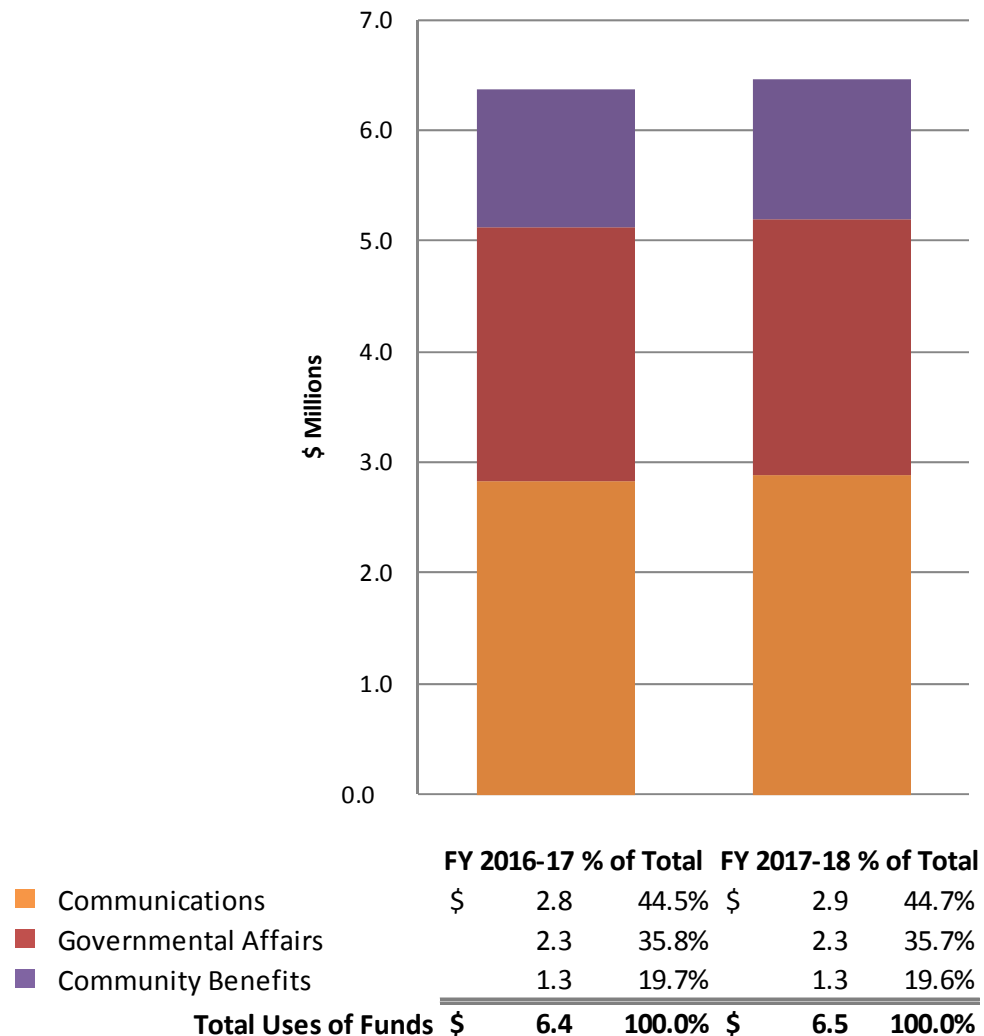
There were no major changes to the FY 2017-18 adopted budget.

Bureaus – External Affairs

Chart E2 shows a breakdown of the FY 2016-17 and FY 2017-18 External Affairs budget by Section

The allocation to the three sections of the External Affairs is flat and consistent between FY 2016-17 and FY 2017-18 and the budget is essentially flat.

Chart E2. FY 2016-17 and FY 2017-18 External Affairs Budget by Bureau



The FY 2016-17 Communications budget is \$2.8 million, or 44.5 percent of the total. Governmental Affairs budget is \$2.3 million, or 35.8 percent of the total. Community Benefits budget is \$1.3 million, or 19.7 percent of the total.

The FY 2017-18 Communications budget is \$2.9 million, or 44.7 percent of the total. Governmental Affairs budget is \$2.3 million, or 35.7 percent of the total. Community Benefits budget is \$1.3 million, or 19.6 percent of the total.

Communications

Communications oversees the SFPUC's communications, education, media and outreach functions; provides a full range of communication services to all of the Enterprises and Bureaus of SFPUC and oversees SFPUC publications; develops community understanding and support for Water, Power and Wastewater Enterprise projects; coordinates community outreach for capital improvement projects, hosts special community and media events, develops background collateral materials for SFPUC projects and programs, handles press and media inquiries, conducts surveys, and serves as the content manager for www.sfwater.org, the SFPUC website; and promotes diversity and the health, safety, and professional development of its employees.

Budget Summary

Table E2 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and between FY 2017-18 and FY 2016-17.

Table E2. Communications Budget Summary

\$	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
Expenditure Category						Amount	%	Amount	%
Personnel	2,679,785	2,514,013	2,486,136	2,601,085	2,649,207	87,072	3.5%	48,122	1.9%
Non-Personnel Services	181,512	259,531	152,190	203,220	203,220	(56,311)	-21.7%	-	0.0%
Materials & Supplies	17,846	31,700	11,557	31,700	31,700	-	0.0%	-	0.0%
Services of Other Depts	111,511	-	91,306	-	-	-	0.0%	-	0.0%
Total	2,990,654	2,805,244	2,741,189	2,836,005	2,884,127	30,761	1.1%	48,122	1.7%

Reason for Changes – FY 2015-16 to FY 2016-17

- **Non-Personnel Services** – The reduction reflects Communication's projected advertising and media needs.

Reason for Changes – FY 2016-17 to FY 2017-18

There were no major changes to the FY 2017-18 adopted budget.

Governmental Affairs

Governmental Affairs oversees the SFPUC's legislative affairs and strategic planning functions; manages the SFPUC's relationship with key stakeholders; provides a full range of legislative services to the Enterprises and Bureaus of the SFPUC; directs SFPUC activities associated with local, regional, State and Federal government; secures approvals and community support for all Water, Power and Wastewater Enterprise projects; plans for the continued service of reliable, high quality water to San Francisco and its customers, and for the continued collection, treatment, and discharge and reuse of wastewater for San Francisco in compliance with current and anticipated laws and regulations; and promotes diversity and the health, safety, and professional development of its employees.

Budget Summary

Table E3 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and between FY 2017-18 and FY 2016-17.

Table E3. Governmental Affairs Budget Summary

\$ Expenditure Category	FY 2014-15 Audited Actual	FY 2015-16 Adopted Budget	FY 2015-16 Actual	FY 2016-17 Adopted Budget	FY 2017-18 Adopted Budget	FY 2016-17 vs. FY 2015-16 Adopted Budget		FY 2017-18 vs. FY 2016-17 Adopted Budget	
						Amount	%	Amount	%
Personnel	1,070,566	1,408,391	1,193,314	1,451,632	1,477,075	43,241	3.1%	25,443	1.8%
Non-Personnel Services	549,417	746,630	598,464	816,630	816,630	70,000	9.4%	-	0.0%
Materials & Supplies	3,805	29,943	11,760	11,943	11,943	(18,000)	-60.1%	-	0.0%
Total	1,623,788	2,184,964	1,803,538	2,280,205	2,305,648	95,241	4.4%	25,443	1.1%

Reason for Changes – FY 2015-16 to FY 2016-17

- **Materials & Supplies** – Reflects a decrease in office supplies based on the projected needs over the next two fiscal years.

Reason for Changes – FY 2016-17 to FY 2017-18

There were no major changes to the FY 2017-18 adopted budget.

Community Benefits

Community Benefits coordinates and implements SFPUC community benefits programs and policies, environmental justice and land use policies, and jobs, workforce, and economic development policies. The Community Benefits Bureau was created in FY 2011-12 to engage communities where the SFPUC program and facilities are located and be a focal point within the SFPUC for the City and County of San Francisco community programs.

Community Benefits is also budgeted in the Enterprises Programmatic Projects representing an additional \$6.9 million over the two budget years.

Budget Summary

Table E4 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and between FY 2017-18 and FY 2016-17.

Table E4. Community Benefits Budget Summary

\$	FY 2014-15	FY 2015-16		FY 2016-17	FY 2017-18	FY 2016-17 vs. FY 2015-16		FY 2017-18 vs. FY 2016-17	
	Audited	Adopted	FY 2015-16	Adopted	Adopted	Adopted Budget		Adopted Budget	
Expenditure Category	Actual	Budget	Actual	Budget	Budget	Amount	%	Amount	%
Personnel	610,628	807,508	727,075	825,394	835,581	17,886	2.2%	10,187	1.2%
Non-Personnel Services	338,016	429,998	584,776	390,228	390,228	(39,770)	-9.2%	-	0.0%
Materials & Supplies	4,294	30,000	17,491	30,000	30,000	-	0.0%	-	0.0%
Service of Other Depts	55,383	-		10,000	10,000	10,000	100.0%	-	0.0%
Total	1,008,321	1,267,506	1,329,342	1,255,622	1,265,809	(11,884)	-0.9%	10,187	0.8%

Reason for Changes – FY 2015-16 to FY 2016-17

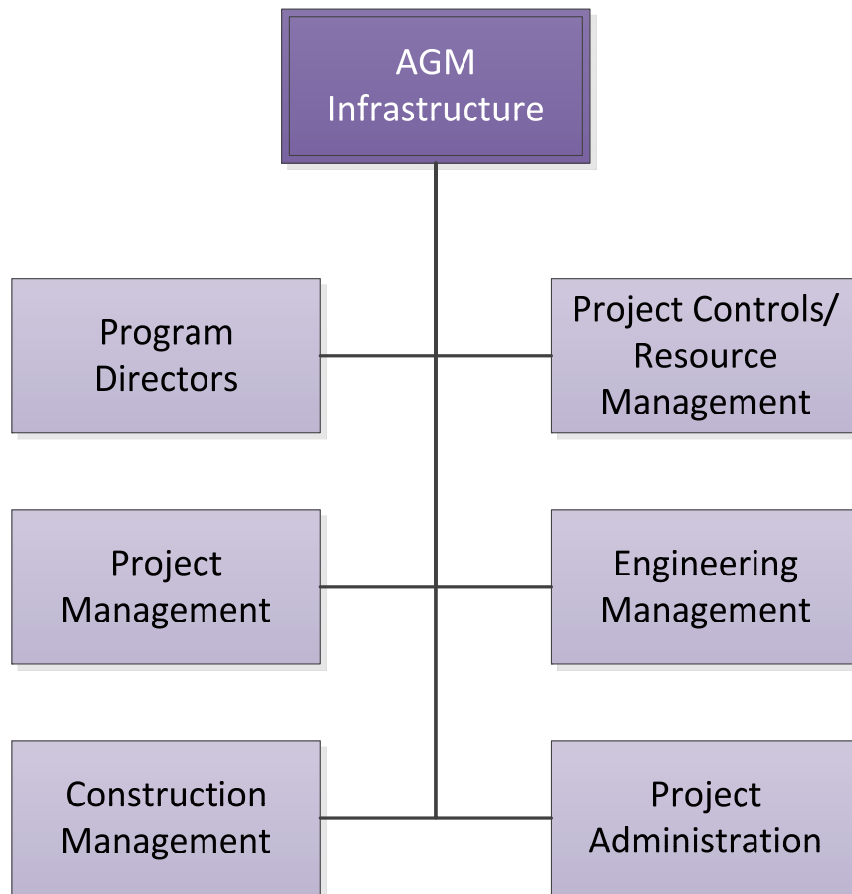
- **Services of Other Departments** - This budget funds projected costs of services provided by other City Departments. This increase funds the SFPUC's share of the City's Transgender Initiative, a program that provides educational and employment services for transgendered individuals.

Reason for Changes – FY 2016-17 to FY 2017-18

There were no major changes to the FY 2017-18 adopted budget.

Infrastructure

Organization Chart



Mission, Roles, and Responsibilities

Infrastructure manages the planning, design and construction of SFPUC capital programs, as well as the renewal and replacement of the Water, Wastewater and Power Enterprise facilities. The mission of Infrastructure is to provide high quality and cost-effective services in an environmentally sensitive manner, while at the same time meeting or exceeding customer and stakeholder expectations.

Infrastructure is led by the Assistant General Manager (AGM) of Infrastructure, and is supported by the Capital Program Directors, Project Controls, and Resource Management, and by the Project, Construction, Engineering, Environmental Management and Project Administration bureaus.

The responsibilities of Infrastructure include the implementation of the following:

- The \$4.8 billion Water System Improvement Program (WSIP), which will result in the repair, replacement and seismic upgrade of the Hetch Hetchy Water System, which

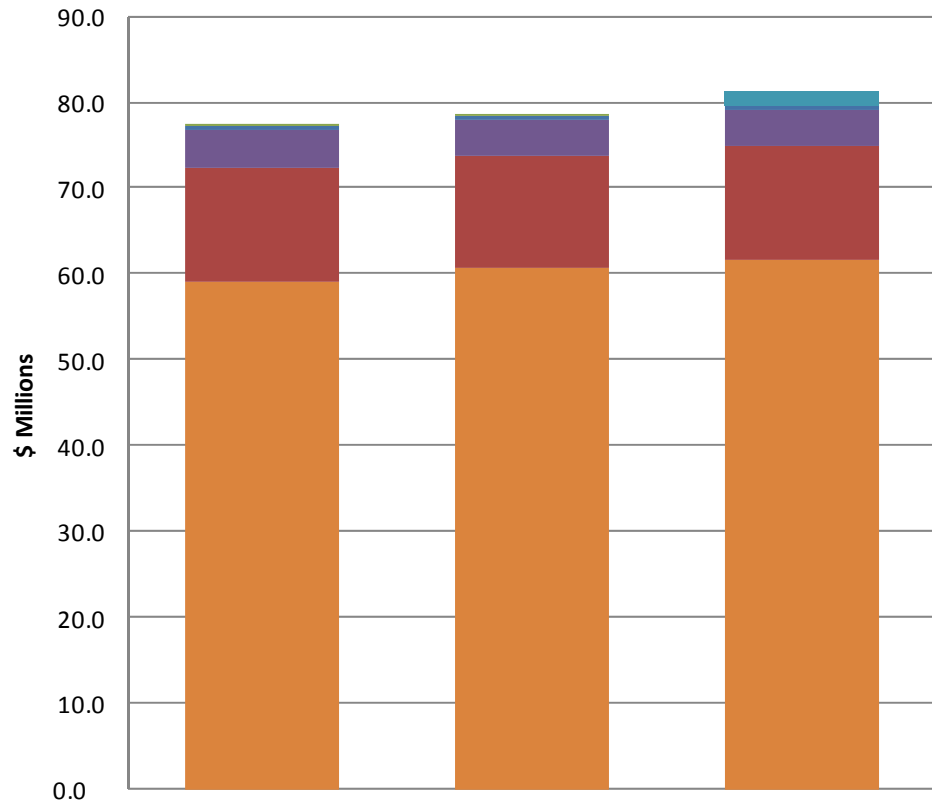
directly serves 2.6 million residential, commercial and industrial customers in the San Francisco Bay Area. This program is 92 percent complete as of July 1, 2016.

- The Sewer System Improvement Program (SSIP), estimated at \$6.9 billion, 20-year program, to provide a Bayside Biosolids Center, Rehabilitation of the Southeast Treatment Plant, new Central Bayside Facilities including a new tunnel in the Channel Basin, and improvements to all collection systems and treatment facilities. SSIP Phase 1 is 12.5 percent complete as of July 1, 2016.
- The Repair and Renewal Capital Programs for Water, Wastewater that are not included in the WSIP or the SSIP.
- A Hetch Hetchy Capital Improvement Program, which is being developed to address the needed work and projects for Power and water systems.
- The capital programs and projects that is necessary to provide a safe, adequate and reliable electrical power supply to San Francisco Government facilities and operations.

Uses of Funds

Chart I1 shows a breakdown of FY 2015-16, FY 2016-17, and FY 2017-18 Uses of Funds by expenditure category.

Chart I1. FY 2015-16 to FY 2017-18 Infrastructure Uses of Funds



	FY 2015-16 % of Total		FY 2016-17 % of Total		FY 2017-18 % of Total	
Personnel	\$ 59.2	76.5%	\$ 60.6	77.3%	\$ 61.6	75.8%
Services of Other Depts	13.1	17.0%	13.2	16.8%	13.3	16.3%
Non-Personnel Services	4.3	5.6%	4.2	5.4%	4.2	5.2%
Materials & Supplies	0.5	0.7%	0.4	0.5%	0.4	0.5%
Equipment	0.2	0.2%	0.0	0.0%	0.0	0.0%
General Reserve	-	0.0%	-	0.0%	1.8	2.2%
Total Uses of Funds	\$ 77.3	100.0%	\$ 78.4	100.0%	\$ 81.3	100.0%

Summary

The Infrastructure budget is funded by SFPUC's capital programs. The FY 2016-17 Infrastructure budget is \$78.4 million, a \$1.1 million, or 1.4 percent, increase from the prior year. The major change from FY 2015-16 budget is a 2.4 percent increase in Personnel based on labor agreements.

The FY 2017-18 Infrastructure budget is \$81.3 million, a \$2.9 million, or 3.7 percent, increase from the prior year. Major change to the FY 2017-18 budget is a \$1.8 million increase in the in the General Reserve to fund unanticipated expenses.

Table I1 shows the FY 2015-16, FY 2016-17, and FY 2017-18 adopted budgets, FY 2014-15 audited actual, FY 2015-16 actual, and the budget variance between FY 2016-17 and FY 2015-16 and FY 2017-18 and FY 2016-17.

As shown in Table I1 below, the Infrastructure budget has increased by 1.4 percent from FY 2015-16 adopted budget to FY 2016-17 and another 3.7 percent from FY 2016-17 to FY 2017-18. The net increase from FY 2015-16 adopted budget to FY 2017-18 is 5.1 percent.

Table I1. Infrastructure Budget Summary

Expenditure Category						FY 2016-17 vs. FY 2015-16		FY 2017-18 vs. FY 2016-17	
	FY 2014-15	FY 2015-16		FY 2016-17	FY 2017-18	Adopted Budget		Adopted Budget	
	Audited Actual	Adopted Budget	FY 2015-16 Actual	Adopted Budget	Adopted Budget	Amount	%	Amount	%
Personnel	19,751,869	59,172,173	18,947,395	60,603,087	61,573,963	1,430,914	2.4%	970,876	1.6%
Non-Personnel Services	3,922,718	4,348,023	4,264,393	4,197,183	4,197,183	(150,840)	-3.5%	-	0.0%
Materials & Supplies	200,042	518,424	183,571	414,174	414,174	(104,250)	-20.1%	-	0.0%
Equipment	29,190	159,657	189,108	11,555	11,555	(148,102)	-92.8%	-	0.0%
Services of Other Depts	12,222,143	13,147,023	12,102,845	13,174,695	13,275,958	27,672	0.2%	101,263	0.8%
General Reserve	-	-	-	-	1,800,000	-	-	1,800,000	-
Total	36,125,962	77,345,300	35,687,312	78,400,694	81,272,833	1,055,394	1.4%	2,872,139	3.7%

Reason for Changes – FY 2015-16 to FY 2016-17

The following describes FY 2015-16 and FY 2016-17 budget category variances that are greater than ten percent.

- **Materials & Supplies:** The FY 2016-17 Materials and Supplies budget is \$400,000, a \$100,000, or 20.1 percent, decrease from FY 2015-16. The decrease reflects projected reductions for data processing supplies and other miscellaneous office supplies.
- **Equipment:** The FY 2016-17 Equipment budget reflects a 92.8 percent decrease from FY 2015-16. The decrease reflects one-time funding for equipment in FY 2015-16.

Reason for Changes – FY 2016-17 to FY 2017-18

The following describes FY 2016-17 and FY 2017-18 budget category variances that are greater than ten percent.

- **General Reserve:** The FY 2017-18 budget is \$1.8 million to fund unanticipated expenses.

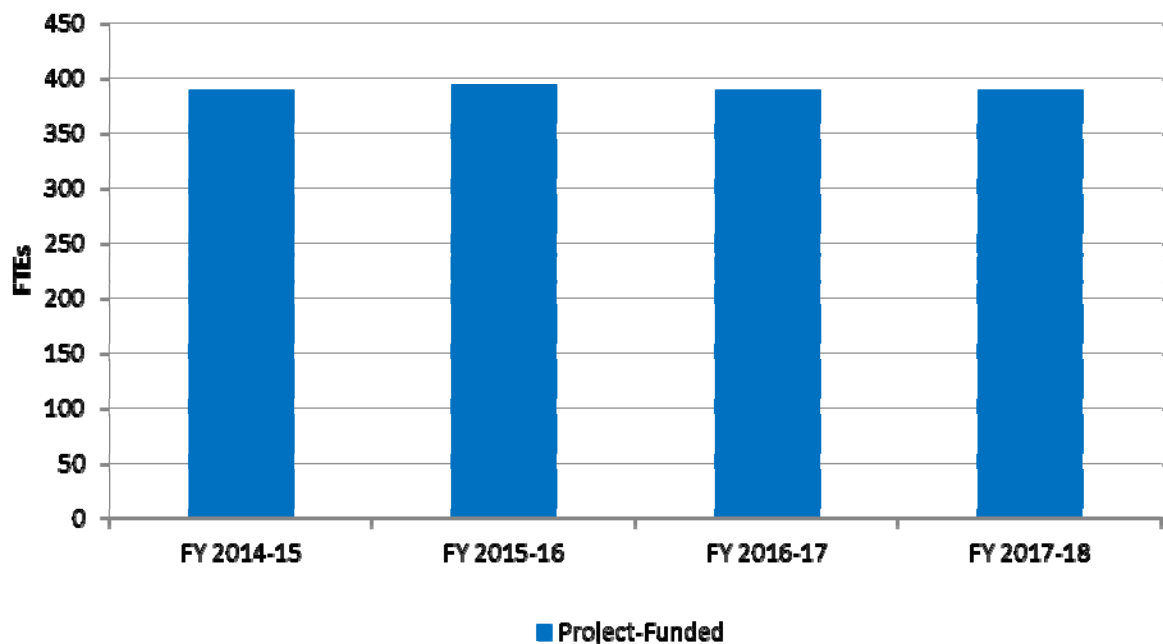
Authorized and Funded Full-Time Equivalents (FTEs)

Table I2 shows total full-time equivalents (FTEs) operating budget, project funded, and temporary positions for FY 2014-15 to FY 2017-18.

Table I2. Infrastructure Authorized and Funded Full-Time Equivalents (FTEs)

Position Type	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2016-17 vs	FY 2017-18 vs
	Adopted Budget	Adopted Budget	Adopted Budget	Adopted Budget	FY 2015-16 Adopted Budget	FY 2016-17 Adopted Budget
Permanent Positions	384.16	389.00	385.00	385.00	(4.00)	-
Temporary Positions	4.87	4.58	4.40	4.29	(0.18)	(0.11)
Total Positions	389.03	393.58	389.40	389.29	(4.18)	(0.11)

Chart I2. Infrastructure Authorized Position Trend



Infrastructure's authorized full-time equivalent (FTE) positions are funded through various capital projects. As Table I2 above shows, the total positions for FY 2016-17 are 389.40 FTEs, a 4.18 FTE decrease from FY 2015-16. Chart I2 illustrates the trend of the number of FTEs from FY 2014-15 to FY 2017-18. The variance from FY 2015-16 to FY 2016-17 reflects a decrease of four positions; three were reassigned to the Water Enterprise and one to the Wastewater Enterprise. The FY 2017-18 FTEs had no change from FY 2016-17.

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Appendix A – City and County of San Francisco Economy and General Information

This Appendix provides general economic and demographic information about the City and County of San Francisco (the “City”) and the Bay Area (defined below). The various reports, documents, websites and other information referred to herein are not incorporated herein by such references.

Area and Economy

The corporate limits of the City encompass over 93 square miles, of which approximately 49 square miles are land, with the balance consisting of tidelands and a portion of the San Francisco Bay (the “Bay”). The City is located on a peninsula bounded by the Pacific Ocean to the west, the Bay to the east, the entrance to the Bay and the Golden Gate Bridge to the north and San Mateo County to the south. The City is the economic center of the nine counties contiguous to the Bay: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano and Sonoma Counties (the “Bay Area”). The economy of the Bay Area includes a wide range of industries, supplying local needs as well as the needs of national and international markets. Major business sectors in the Bay Area include retail and entertainment, conventions and tourism, service businesses, banking, professional and financial services, corporate headquarters, international and wholesale trade, multimedia and advertising, biotechnology, and higher education.

Population and Income

The City’s estimated population as of 2014 was 852,537. Table A1 reflects the population and per capita personal income of the City, as estimated by the U.S. Census bureau and the Bureau of Economic Analysis (BEA).

Table A1. San Francisco Population and Income, 2010-2014

CITY AND COUNTY OF SAN FRANCISCO Population and Income 2010-2014		
Year	Population ¹	Per Capita Personal Income ²
2010	805,235	68,555
2011	812,826	74,425
2012	827,420	80,014
2013	837,442	82,230 ³
2014	852,537	90,600

¹ Source: Population Division, U.S. Census Bureau, 2009-2014. U.S. Census Bureau State & County QuickFacts.

² Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce. Updated on May 30, 2014; information is updated with newly available data.

³ Per capita personal income of a region is the total personal income of the residents of the region divided by the population of the region. The 2014 San Francisco City and County per capita personal income was estimated by assuming that San Francisco personal income as percent change from preceding period is 2.77 percent as consistent with California’s rate. Information was updated on May 30, 2014 according to the Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce.

Conventions and Tourism

According to the San Francisco Travel Association (the “Travel Association”), a non-profit membership organization, during the calendar year 2014 approximately 18.01 million people (150,412 average per day) visited the City, generating approximately \$10.7 billion for local businesses up 13.7% from the previous year. Visitors in San Francisco spent \$29.2 million on an average day (including spending related to meetings and conventions). Also, as reported by San Francisco Travel Association, hotel occupancy rates in the City averaged 86.3% for calendar year 2014, an increase of 1.1% from the previous year. Average daily room rates in the City during 2013 increased about 23.3% from \$231.34 compared to the prior year’s average of \$187.67. During calendar year 2014, only 29.0% of all out-of-town visitors stayed in

City hotels, but the Travel Association estimates that overnight hotel guests account for more than two of every three dollars spent locally by out-of-town visitors despite representing one third of all visitor to the City. According to the US Department of Commerce, during 2015 San Francisco attracted approximately 2.1 million (16 percent) of total national overseas travelers, 81.7 percent of which visits to San Francisco were for leisure purposes including vacation, and the remaining 14.6 percent were business visitors. In 2015, the City was ranked fifth in market share for international visitors to the U.S., behind New York, Miami, Los Angeles, and Honolulu. The City was ranked ahead of Chicago, Newark and Orlando. Table A2 illustrates hotel occupancy and related spending from calendar years 2009 through 2014, as reported by the San Francisco Convention & Visitors Bureau.

Table A2. San Francisco Overnight Hotel Guests, 2009-2014

CITY AND COUNTY OF SAN FRANCISCO San Francisco Overnight Hotel Guests			
Calendar Year	Annual Average Hotel Occupancy	Visitors Staying in Hotels or Motels (Thousands)	Estimated Hotel Visitor Spending (\$ Thousands)
2009	75.5%	4,520	4,870,000
2010	79.5%	4,890	4,640,000
2011	81.9%	5,040	5,200,000
2012	82.6%	5,080	5,540,000
2013	85.4%	5,240	5,200,000
2014	86.3%	5,300	6,910,000

Source: San Francisco Travel Association, Economic Research Associates

The Moscone Convention Center offers more than 2 million square feet of building area including over 900,000 square feet of exhibit space, up to 107 meeting rooms, and close to 151,000 square feet of prefunction lobbies. It covers more than 20 acres on three adjacent blocks. The new Moscone Expansion & Improvements project will add over 305,000 square feet of functional area, including new exhibition space, new meeting room and prefunction space, new ballroom space, and support areas. According to PKF Consulting, there are 223 hotels in San Francisco, and 20,000 of these rooms are within walking distance of the Moscone Center.

Employment

The City benefits from a highly skilled, educated and professional labor force. Key industries include tourism, real estate, banking and finance, retailing, apparel design and manufacturing. Emerging industries include multimedia and bioscience. See Table A4 for more information on the top employment sectors in the City. According to the California Employment Development Department, the unemployment rate for the City was 3.6% for June 2015 compared with an unadjusted unemployment rate of 6.8% for the State. See Table A3 and Table A4 for more information on the civilian labor of employment and unemployment in the City; and estimated average annual employment by sector from 2011-2015.

Table A3. San Francisco Civilian Labor Force, Employment, and Unemployment, June 2011 - June 2015

CITY AND COUNTY OF SAN FRANCISCO Civilian Labor Force, Employment, and Unemployment Jun 2011 through Jun 2015					
Year	Area	Labor Force	Employment	Unemployment	Unemployment Rate
Jun-11	San Francisco	460,400	419,100	41,300	9.0%
	State	18,364,800	16,157,300	2,207,100	12.0%
Jun-12	San Francisco	472,300	435,700	36,700	7.8%
	State	18,444,500	16,472,400	1,972,100	10.7%
Jun-13	San Francisco	1,032,000	972,000	60,000	5.8%
	State	18,609,000	16,928,000	1,681,000	9.0%
Jun-14	San Francisco	1,037,700	992,600	45,100	4.3%
	State	18,618,600	17,240,700	1,378,000	7.4%
Jun-15	San Francisco	986,600	951,500	35,100	3.6%
	State	18,893,000	17,602,000	1,291,000	6.8%

¹ The Unemployment Rate and Labor Force data are based upon "place of residence" – where people live, regardless of where they work. Individuals who have more than one job are counted only once. Civilian Labor Force is the sum of civilian employment and civilian unemployment. Civilian Employment includes all individuals who worked during the week including the 12th of the month. Civilian Unemployment includes those individuals who were not working but were able, available, and actively looking for work. Unemployment Rate is the number of unemployed divided by the labor force then multiplied by 100.

Data not seasonally adjusted.

Source: California Employment Development Department (EDD), Labor Market Information Division.

Table A4. San Francisco Estimated Average Annual Employment by Sector, 2011-2015

CITY AND COUNTY OF SAN FRANCISCO Estimated Average Annual Employment by Sector, 2011-2015					
Sector	2011	2012	2013	2014	2015
Professional & Business Services	131,500	143,600	154,700	167,100	182,700
Government	89,800	89,200	88,600	88,800	91,100
Leisure & Hospitality	79,400	84,600	87,700	91,400	94,000
Trade, Transportation & Utilities	62,400	65,400	69,400	70,000	74,200
Educational & Health Services	75,100	78,400	85,000	81,800	84,900
Financial Activities	46,900	47,700	48,900	50,100	52,000
Other Services	21,800	22,900	23,900	25,700	26,100
Information	22,700	25,500	25,300	28,300	31,800
Manufacturing	8,900	9,600	9,200	9,800	10,200
Total	538,500	566,900	592,700	613,000	647,000

Source: California Employment Development Department (EDD), Labor Market Information Division.

Table A5 shows the annual unemployment rates for San Francisco County, the State and the United States.

Table A5. San Francisco County Unemployment Rates, 2005-2015

COUNTY OF SAN FRANCISCO Unemployment Rates, 2005-2015			
Year	County of San Francisco	California	United States
2005	5.0%	5.4%	5.1%
2006	4.2%	4.9%	4.6%
2007	4.2%	5.4%	4.6%
2008	5.2%	7.2%	5.8%
2009	8.9%	11.3%	9.3%
2010	9.5%	12.4%	9.6%
2011	8.5%	11.8%	8.9%
2012	7.2%	10.4%	8.1%
2013	5.7%	8.9%	7.4%
2014	4.4%	7.5%	6.2%
2015	3.6%	6.2%	5.3%

Source: State of California, Employment Development Department, Labor Market Information Division and US Department of Labor, Bureau of Labor Statistics.

Table A6 lists the 25 largest employers in the City, as reported by the California Employment Development Department.

Table A6. San Francisco Major Employers

CITY AND COUNTY OF SAN FRANCISCO Major Employers	
Employer Name	Industry
10,000 + Employee	
University of CA-San Francisco	Schools-Universities & Colleges Academic
Boost Preschools LLC	Schools
5,000-9,999 Employee	
HC Moffitt Hospital	Hospitals
Pacific Gas & Electric Corporation	Electric Companies
UCSF Medical Center-Parnassus	Hospitals
1,000 -4,999 Employees	
Bechtel Corp	Engineers
California Pacific Medical Ctr	Hospitals
Ernst & Young	Accountants
Federal Reserve Bank	Federal Reserve Banks
Golden Gate University	Schools-Universities & Colleges Academic
GSA Pacific Rim Region	Government Offices-Us
Hilton-Union Square	Hotels & Motels
Innovative Dental	Dentists
Kaiser Foundation Hospitals	Hospitals
Laguna Honda Hospital & Rehab	Rehabilitation Services
Pacific Gas & Electric Company, Inc.	Electric Companies
Police Dept-Public Affairs	Police Departments
Riverbed Technology Inc	Publishers-Computer Software (mfrs)
San Francisco Chronicle	Newspapers (Publishers/Mfrs)
San Francisco Municipal Railway	Government Offices-City, Village & Twp
San Francisco Police Department	Police Departments
State Compensation Ins Fund	Insurance
UCSF-Medical Ctr At Mt Zion	Cancer Treatment Centers
US Veterans Medical Center	Hospitals
Yellow Cab	Taxicabs & Transportation Service

Source: State of California, Employment Development Department (EDD), Labor Market Information Division; EDD extracted this information from the America's Labor Market Information (ALMIS) Employer Database, 2016 2nd Edition.

Taxable Sales

Table A7 provides information on taxable sales for the City for calendar years 2010 through 2014. Total retail sales increased in 2014 by approximately \$0.7 billion compared to 2013. Data for full years after 2014 are not available from the California State Board of Equalization at this time.

Table A7. San Francisco Taxable Sales, Calendar Years 2010-2014

CITY AND COUNTY OF SAN FRANCISCO					
Taxable Sales - Calendar Year 2010-2014 (\$ Thousands)					
Categories	2010	2011	2012	2013	2014
Bldg. Matril and Garden Equip and Supplies	348,729	414,096	466,949	508,070	537,424
Clothing and Accessories Stores	1,499,912	1,701,395	1,886,746	2,040,734	2,168,822
Food and Beverage Stores	617,920	651,528	698,890	740,746	782,750
Food Services and Drinking Places	2,812,995	3,120,655	3,442,081	3,750,056	4,104,185
Gasoline Stations	507,626	626,887	664,318	650,678	611,354
General Merchandise	700,755	768,818	804,628	897,608	864,009
Home Furnishing and Appliance Stores	679,445	732,495	825,268	880,330	938,256
Motor Vehicle and Parts Dealers	413,479	452,375	505,612	548,713	588,769
Other Retail Stores	1,390,897	1,471,647	1,588,780	1,852,618	2,037,646
Retail Stores Total	8,971,758	9,939,895	10,883,271	11,869,553	12,633,215
All Other Outlets	4,471,363	4,950,632	5,070,334	5,224,609	5,836,514
Total All Outlets	13,443,121	14,890,527	15,953,605	17,094,162	18,469,729

¹Data categories for 2010 to 2014 and 2012 are grouped according to categories from the subsequent year 2011

²Other Retail Stores include Health and Personal Care Stores, Sporting Goods, Hobby, Book, and Music Stores, Miscellaneous Store Retailers, and Nonstore Retailers.

Two-thirds of SFPUC's water is sold to customers outside of San Francisco, key highlights from those counties where most of the wholesale water customers reside are included.

San Mateo County, Alameda County and Santa Clara County Economy and General Information

The information in this section provides economic and demographic information concerning the Counties of San Mateo, Alameda and Santa Clara. The following economic and demographic information about the Counties of San Mateo, Alameda and Santa Clara has been collected from the Counties or, as noted, third party sources. The historical economic and demographic data set forth in this section is current as of the dates indicated.

County of San Mateo and General Information

General

The County of San Mateo ("San Mateo County") was established on April 19, 1856. Located on the San Francisco Peninsula, coastal mountains run north and south through San Mateo County, dividing the lightly-populated western part from the heavily-populated eastern corridor between San Francisco and Santa Clara/Silicon Valley. San Mateo County covers 446 square miles and contains 20 incorporated cities and the San Francisco International Airport (SFO). As of July 1, 2015, the estimated population was 765,135.

Population

Table A8 shows population data for San Mateo County, its six largest cities, and the State of California (the "State"). San Mateo County's population increased by approximately 5.0% during the five-year period.

Table A8. San Mateo County Population, Its Six Largest Cities, and California, 2011-2015

COUNTY OF SAN MATEO					
Six Largest Cities and State of California, 2011-2015					
County/Cities	2011	2012	2013	2014	2015
San Mateo County	728,288	738,681	747,373	758,581	765,135
Six Largest Cities:					
Daly City	101,493	103,838	104,739	106,094	106,562
San Mateo	97,557	99,755	101,128	102,893	103,536
Redwood City	77,299	79,114	80,872	82,881	85,288
So. San Francisco	63,827	65,615	66,174	67,009	67,271
San Bruno	41,663	42,037	42,443	43,009	43,185
Pacifica	37,367	38,260	38,606	39,088	39,260
State of California	37,668,681	37,999,878	38,332,521	38,499,378	39,144,818

¹As of July 1 for the years shown.

Sources: August 2011; 2010 to 2013 figures are of State of California, Department of Finance, E-4 Population Estimates for Cities, Counties and the State, 2011-2014, with 2010 Census Benchmark. Sacramento, California, May 2014.

Employment

Table A9 shows annual averages of the estimated number of wage and salary workers by industry for calendar years 2011 through 2015.

Table A9. San Mateo County Estimated Average Annual Employment by Sector, 2011-2015

COUNTY OF SAN MATEO					
Estimated Average Annual Employment by Sector, 2011-2015					
Categories	2011	2012	2013	2014	2015
Goods Producing	39,700	39,600	42,400	44,800	48,600
Trade, Transportation & Utilities	68,500	70,200	72,400	74,300	74,300
Information	17,900	20,900	23,600	26,300	28,100
Financial Activities	19,400	20,000	20,200	20,600	21,600
Professional & Business Services	64,000	69,500	71,000	75,200	76,500
Education & Health Services	36,400	37,400	39,700	43,000	44,300
Leisure & Hospitality Services	35,400	36,800	39,500	40,900	42,500
Other	12,200	12,900	13,300	13,900	14,000
Government	30,600	30,300	30,400	31,200	32,700
Total Non-Farm	323,900	337,500	352,500	370,100	382,400
Total Farm	1,600	1,600	1,600	1,800	1,800
Total All Industries	325,500	339,100	354,100	371,900	384,100

Source: State of California, Employment Development Department, Industry Employment & Labor Force - by Annual Average, March 2015 Benchmark, San Mateo County.

Table A10 lists 25 major employers in San Mateo County, as reported by the California Employment Development Department.

Table A10. San Mateo County Major Employers

COUNTY OF SAN MATEO Major Employers		
Employer Name	Location	Industry
<i>5,000-9,999 Employees</i>		
Oracle Corp	Redwood City	Computer Software-Manufacturers
Lpch	Menlo Park	Health Care Facilities
US Interior Dept	Menlo Park	Federal Government-Conservation Depts
<i>1,000-4,999 Employees</i>		
A R Dental Care	Daly City	Dentists
Electric Charging Station	Menlo Park	Research Service
Electronic Arts, Inc.	Redwood City	Game Designers (Mfrs)
Facebook, Inc.	Menlo Park	Internet Service
Forced Dump Debris Box Services	Burlingame	Garbage Collection
Franklin Resources, Inc.	San Mateo	Investments
Genetech	South San Francisco	Pharmaceutical Products-Wholesale
Gilead Sciences, Inc.	Foster City	Biological Products (Mfrs)
Guckenheimer, Inc.	Redwood City	Marketing Programs & Services
Hyatt Regency-San Francisco	Burlingame	Hotels & Motels
Kaiser Permanente Medical Center	Redwood City	Hospitals
Kaiser Permanente Medical Center	South San Francisco	Hospitals
Motif Inc.	San Mateo	Business Services NEC
San Francisco International Airport SFO	San Francisco	Airline Companies
San Mateo County Behavior	Menlo Park	Government Offices-County
San Mateo Medical Center	San Mateo	Hospitals
Sciex LLC	Redwood City	Scientific Apparatus & Instrument-Mfrs
SRI International, Inc.	Menlo Park	Research Service
Visa, Inc.	Foster City	Credit Card & Other Credit Plans
Visa International Svc Assn	Foster City	Credit Card & Other Credit Plans
Visa USA, Inc.	Foster City	Credit Card & Other Credit Plans

Source: State of California, Employment Development Department (EDD), Labor Market Information Division; EDD extracted this information from the America's Labor Market Information (ALMIS) Employer Database, 2016 2nd Edition.

Table A11 shows the annual unemployment rates for San Mateo County, the State and the United States. During each of the years set forth in the table, the unemployment rate in San Mateo County has been lower than the unemployment rate in the State and in the United States.

Table A11. San Mateo County Unemployment Rates, 2005-2015

COUNTY OF SAN MATEO Unemployment Rates, 2005-2015			
Year	County of San Mateo	California	United States
2005	4.3%	5.4%	5.1%
2006	3.7%	4.9%	4.6%
2007	3.8%	5.4%	4.6%
2008	4.9%	7.2%	5.8%
2009	8.4%	11.3%	9.3%
2010	8.7%	12.4%	9.6%
2011	7.9%	11.8%	8.9%
2012	6.7%	10.4%	8.1%
2013	5.4%	8.9%	7.4%
2014	4.2%	7.5%	6.2%
2015	3.4%	6.2%	5.3%

Source: State of California, Employment Development Department, Labor Market Information Division and US Department of Labor, Bureau of Labor Statistics.

Taxable Transactions

Table A12 shows taxable transactions by type of business for the calendar years 2010 through 2014 in San Mateo County.

Table A12. San Mateo County Taxable Sales, Calendar Years 2010-2014

COUNTY OF SAN MATEO Taxable Sales - Calendar Year 2010-2014 ¹ (\$ Thousands)					
Categories	2010	2011	2012	2013	2014
Motor Vehicle and Parts Dealers	1,117,487	83,506	1,464,005	1,682,692	1,831,220
Home Furnishings and Appliance Stores	664,299	75,456	750,756	778,642	810,355
Bldg. Matrl. and Garden Equip. and Supplies	699,781	75,967	758,787	843,865	884,697
Food and Beverage Stores	508,941	86,504	563,507	584,609	610,223
Gasoline Stations	935,284	182,845	1,262,692	1,250,794	1,158,444
Clothing and Clothing Accessories Stores	595,402	180,891	683,382	727,281	786,446
General Merchandise Stores	1,026,497	159,784	1,130,266	1,131,430	1,124,294
Food Services and Drinking Places	1,279,295	205,170	1,502,049	1,612,392	1,754,008
Other Retail Group	1,019,289	180,481	1,161,700	1,323,935	1,318,949
Retail Stores Total	7,846,275	1,230,604	9,277,144	9,935,640	10,278,636
All Other Outlets	4,120,063	248,170	4,629,834	4,675,976	5,019,717
Totals All Outlets	11,966,338	1,478,774	13,906,978	14,611,616	15,298,353

¹Data categories for 2010 to 2014 and 2012 are grouped according to categories from the two subsequent years 2011

²Other Retail Stores include Health and Personal Care Stores, Sporting Goods, Hobby, Book, and Music Stores, Miscellaneous Store Retailers, and Non-store Retailers.

County of Alameda General Information

General

Alameda County ("Alameda County") is located on the east side of the San Francisco Bay and extends from the Cities of Berkeley and Albany in the north to the City of Fremont in the south. It is the seventh most populous county in the State, with most of its population concentrated in a highly urbanized area between the San Francisco Bay and the East Bay Hills.

The northern part of Alameda County has direct access to San Francisco Bay and the City of San Francisco. It is highly diversified with residential areas as well as traditional heavy industry, the University of California at Berkeley, the Port of Oakland, and sophisticated manufacturing, computer services and biotechnology firms. The middle of Alameda County is also highly developed, including older established residential and industrial areas. The southwestern corner of Alameda County has seen strong growth in residential development and manufacturing. Many high-tech firms have moved from neighboring Silicon Valley in Santa Clara County into this area. The southeastern corner of Alameda County has seen the most development in recent years due to land availability. Agriculture and the rural characteristics of this area are disappearing as the area maintains its position as the fastest growing residential, commercial and industrial part of Alameda County.

Population

Table A13 summarizes population figures for Alameda County.

Table A13. Alameda County Population, 2005-2015

ALAMEDA COUNTY Estimated Population 2005-2015	
Year	Population
2005	1,459,882
2006	1,464,839
2007	1,476,401
2008	1,491,781
2009	1,503,827
2010	1,513,527
2011	1,531,324
2012	1,553,960
2013	1,578,891
2014	1,612,850
2015	1,638,215

The figures for the years 2005-2009 are from the State of California, Department of Finance E-6 Population Estimates state and county population 2000 and 2010 benchmarked. Source: The 2010-2015 data are U.S Census figures.

Note: The estimates are based on the 2010 Census and reflect changes to the April 1, 2010 population.

Employment

Table A14 summarizes historical employment and unemployment in the Oakland Metropolitan Statistical Area ("MSA"), which is comprised of both Alameda and Contra Costa Counties.

Table A14. Oakland MSA Civilian Labor Force, Employment, and Unemployment, 2011-2015

OAKLAND Metropolitan Statistical Area (MSA) Civilian Labor Force, Employment and Unemployment Annual Averages ¹					
Categories	2011	2012	2013	2014	2015
Employment	1,161,000	1,196,400	1,224,100	1,275,300	1,310,000
Unemployment	133,800	117,700	97,800	80,100	67,000
Total Civilian Labor Force	1,294,800	1,314,100	1,321,900	1,355,400	1,377,000
Unemployment Rate	10%	9%	7%	6%	5%

¹ The Unemployment Rate and Labor Force data are based upon "place of residence" – where people live, regardless of where they work. Individuals who have more than one job are counted only once. Civilian Labor Force is the sum of civilian employment and civilian unemployment. Civilian Employment includes all individuals who worked during the week including the 12th of the month. Civilian Unemployment includes those individuals who were not working but were able, available, and actively looking for work. Unemployment Rate is the number of unemployed divided by the labor force then multiplied by 100. Data not seasonally adjusted.

Source: California Employment Development Department (EDD), Labor Market Information Division

Table A15 summarizes the historical numbers of workers in the Oakland Metropolitan Statistical Area, which is comprised of both Alameda and Contra Costa Counties, by industry.

Table A15. Oakland MSA Estimated Average Annual Employment by Sector, 2011-2015

OAKLAND MSA Estimated Average Annual Employment by Sector, 2011-2015					
Categories	2011	2012	2013	2014	2015
Agricultural	1,500	1,500	1,500	1,300	1,200
Natural Resources and Mining	1,200	1,200	1,200	800	900
Construction	47,600	52,000	56,100	58,600	62,400
Manufacturing	78,300	78,300	78,600	82,800	86,600
Trade, Transportation and Utilities	175,400	180,300	185,400	191,700	198,900
Information	22,600	22,000	21,400	21,300	22,400
Financial Activities	47,700	48,800	49,500	49,300	49,600
Professional and Business Services	157,200	166,100	172,300	178,800	183,000
Educational and Health Services	153,200	160,100	171,000	173,100	178,400
Leisure and Hospitality	88,200	92,200	98,000	102,100	106,300
Other Services	35,700	36,300	37,000	37,500	38,000
Government	163,900	162,800	163,400	166,500	168,700
Total All Industries	972,400	1,001,400	1,035,300	1,063,800	1,096,400

Source: California Employment Development Department (EDD), Labor Market Information Division.

Major Employers

Table A16 lists 25 major employers in Alameda County, as reported by the California Employment Development Department.

Table A16. Alameda County Major Employers

ALAMEDA COUNTY Major Employees		
Employer Name	Location	Industry
More than 10,000 Employees		
University of California-Berkeley	Berkeley	Schools-Universities & Colleges Academic
5,000-9,999 Employees		
Lawrence Livermore Natl Lab	Livermore	Laboratories
Merritt Pavilion Lab	Oakland	Laboratories-Medical
University of California	Berkeley	Schools-Universities & Colleges Academic
Alta Bates Summit Medical Center	Oakland	Hospitals
1,000 -4,999 Employees		
Alameda County Law Enforcement	Oakland	Sheriff
Alameda County Sheriff's Office	Oakland	Sheriff
Alta Bates Summit Medical Center	Berkeley	Hospitals
Bayer Corp	Berkeley	Drug Millers (Manufacturers)
California State-East Bay	Hayward	Schools-Universities & Colleges Academic
Coopervision Inc Advanced	Pleasanton	Optical Goods-Wholesale
East Bay Water	Oakland	Transit Lines
EMC Corp	Pleasanton	Computer Software
Grifols Diagnostic Solutions	Emeryville	Pharmaceutical Research Laboratories
Highland Hospital	Oakland	Hospitals
Kaiser Permanente Medical Center	Oakland	Hospitals
Life Scan Inc	Fremont	Physicians & Surgeons Equip & Supls-Mfrs
Oakland Police Patrol Division	Oakland	Police Departments
Residential & Student Svc Program	Berkeley	Schools-Universities & Colleges Academic
Safeway, Inc.	Pleasanton	Grocers-Retail
Tesla Motors	Fremont	Automobile Dealers-Electric Cars
Transportation Dept-California	Oakland	Government Offices-State
Ucsf Benioff Children's Hosp	Oakland	Hospitals
Valley Care Health System	Livermore	Hospitals
Washington Hospital Healthcare	Fremont	Hospitals
Waste Management	Oakland	Garbage Collection
Western Digital Corp	Fremont	Electronic Equipment & Supplies-Mfrs

Source: State of California, Employment Development Department (EDD), Labor Market Information Division; EDD extracted this information from the America's Labor Market Information (ALMIS) Employer Database, 2016 2nd Edition.

County of Santa Clara Economy and General Information

General

The County of Santa Clara ("Santa Clara County") lies immediately south of San Francisco Bay and is the sixth most populous county in the State. It encompasses an area of approximately 1,316 square miles. Named after Mission Santa Clara, which was established in 1777, and named for Saint Clara of Assisi, Italy, Santa Clara County was incorporated in 1850 as one of the original 28 counties of the State and operates under a home rule charter adopted by Santa Clara County voters in 1950 and amended in 1976 (the "Santa Clara County Charter").

The southern portion of Santa Clara County has retained the agricultural base which once existed throughout the area and has two cities, separated by roughly twenty miles. The northern portion of Santa Clara County is densely populated, extensively urbanized and heavily industrialized. It contains 15 cities, the largest of which is the City of San Jose, the third largest city in the State and the county seat. The uppermost northwestern portion of Santa Clara County, with its concentration of high-technology, electronics-oriented industry, it's popularly referred to as the "Silicon Valley." Large employers include Lockheed Martin Space Systems, Intel, and NASA.

Recent Annual Population Changes: All of the cities in Santa Clara County reported population increases over the period 2011 to 2015, with Morgan Hill posting the largest population growth (9.3% percent). Milpitas followed with a 8.9 percent increase, followed by Gilroy, with a 7.5 percent increase. The number of residents living in the unincorporated areas of Santa Clara County increases by 34.5 percent within the same period. From 2011 to 2015, Santa Clara County's population rose by approximately 6.9 percent. Approximately 6.0 percent of Santa Clara County's residents lived in unincorporated areas in 2015.

Table A17 provides a historical summary of population in Santa Clara County and its incorporated cities for calendar years 2011 through 2015.

Table A17. Santa Clara County Population, 2011-2015

SANTA CLARA COUNTY					
Population, 2011-2015 ¹					
County/City	2011	2012	2013	2014	2015
Campbell	39,610	39,820	40,373	41,900	41,900
Cupertino	58,665	58,931	59,575	59,800	59,800
Gilroy	49,316	50,081	51,505	52,300	53,000
Los Altos	29,136	29,414	29,769	29,900	30,000
Los Altos Hills	7,969	8,015	8,258	8,300	8,300
Los Gatos	29,613	29,808	30,225	30,400	30,500
Milpitas	66,637	66,865	67,845	69,900	72,600
Monte Sereno	3,360	3,368	3,417	3,400	3,500
Morgan Hill	38,255	39,067	40,049	41,100	41,800
Mountain View	74,618	75,158	76,204	76,600	77,900
Palo Alto	64,853	65,443	66,318	66,700	66,900
San Jose	957,369	969,880	983,574	1,002,300	1,016,500
Santa Clara	117,998	118,632	120,196	120,900	121,000
Saratoga	30,153	30,316	30,683	30,800	30,800
Sunnyvale	140,898	142,674	145,864	146,700	148,000
Incorporated	1,708,450	1,727,472	1,753,855	1,781,000	1,802,500
Balance Of County	85,887	86,230	87,040	93,526	115,544
County Total	1,794,337	1,813,702	1,840,895	1,874,526	1,918,044

¹As of July 1 for the years shown.

Sources: State of California, Department of Finance, E-4 Population Estimates for Cities, Counties and the State, 2011-2015, with 2011 Census Benchmark. Sacramento, California, May 2015.

Employment and Industry

According to the California Employment Development Department, the 2015 annual average of the labor force in Santa Clara County was an estimated 1,018,400 compared to 995,700 in 2014. From 2014 to 2015, unemployment in Santa Clara County fell slightly from 5.1 percent (51,200 unemployed) to 4.2 percent (42,300 unemployed). The unemployment rate in Santa Clara County as of 2015 was lower than the nationwide annual unemployment rate of 5.3 percent and lower than the State annual unemployment rate of 6.2 percent during the same period.

Within Santa Clara County, development of high technology and high technology jobs have been enhanced by the presence of Stanford University, Santa Clara University, San Jose State University, other institutions of higher education, and research and development facilities such as the Ames Research Center (NASA). In addition, the Rincon de los Esteros Redevelopment Area in northern San Jose has been the site of industrial/research and development submarkets in Silicon Valley.

Table A18 lists wage and salary employment in Santa Clara County by industry from 2011 to 2015.

Table A18. Santa Clara County Civilian Labor Force and Annual Employment by Sector, 2011-2015

SANTA CLARA COUNTY					
Civilian Labor Force and Annual Employment by Sector					
Industry Employment	2011	2012	2013	2014	2015
Civilian Labor Force	891,500	910,400	923,200	995,700	1,018,400
Civilian Employment	804,200	833,700	860,100	944,500	976,100
Civilian Unemployment	87,400	76,700	63,200	51,200	42,300
Civilian Unemployment Rate	9.8%	8.4%	6.8%	5.1%	4.2%
Total Employment	876,900	911,400	951,800	990,900	1,032,200
Total Farm	3,400	3,300	3,400	3,500	3,600
Total Non-Farm	873,500	908,100	948,400	987,400	1,028,600
Goods Producing					
Mining and Logging	200	200	300	300	200
Construction	30,900	33,900	36,700	38,500	42,100
Manufacturing	152,600	153,200	153,300	155,900	159,400
Subtotal Goods Producing	183,600	187,300	190,300	194,700	201,700
Service Providing					
Trade, Transportation & Utilities	125,000	129,000	132,500	134,400	135,800
Information	51,200	54,100	58,600	66,200	74,700
Financial Activities	32,000	33,000	33,200	34,300	35,000
Professional & Business Services	166,600	177,700	190,200	201,800	214,900
Education & Health Services	124,800	132,700	143,400	148,700	155,400
Leisure & Hospitality Services	76,300	81,300	86,100	90,700	94,500
Other	24,100	24,300	25,000	26,000	26,700
Government	89,900	88,700	89,100	90,600	89,900
Subtotal Service Providing	689,900	720,800	758,100	792,700	826,900

The unemployment rate is calculated using unrounded data. Data may not add due to rounding.

Source: California Employment Development Department (EDD), Labor Market Information Division.

Major Employers

Santa Clara County is home to numerous high technology and computer software and hardware manufacturing companies, which, together with public sector employers, continue to top the list of the largest employers in Santa Clara County. The County ranks as the number one public sector employer, with all departments collectively employing over 16,500 workers. The City of San Jose alone has approximately 5,800 full-time employees. Although there have been hiring freezes and cut-backs that have impacted public-sector organizations, such organizations typically tend to remain more stable in a volatile job market.

Table A19 lists 25 major employers in Santa Clara County, as reported by the California Employment Development.

Table A19. Santa Clara County Major Employers

SANTA CLARA COUNTY Major Employers		
Employer Name	Location	Industry
More than 10,000 Employees		
Cisco Systems Inc	San Jose	Computer Peripherals (mfrs)
E Bay Inc	Santa Clara	E-Commerce
5,000 -9,999 Employees		
Intel Corp	Santa Clara	Semiconductor Devices (Mfrs)
Flextronics International	Milpitas	Semiconductor Devices (Mfrs)
Applied Materials Inc	Santa Clara	Semiconductor Devices (Mfrs)
Lockheed Martin Space Systems	Sunnyvale	Satellite Equipment & Systems-Mfrs
Liberty Tax Svc	San Jose	Tax Return Preparation & Filing
Nasa	Mountain View	Federal Government-Space Research/Tech
Philips Lumileds Lighting Co	San Jose	Lighting Fixtures-Supplies & Parts-Mfrs
Kaiser Permanente Medical Grp	San Jose	Hospitals
Santa Clara Valley Med Ctr	San Jose	Hospitals
1,000-4,999 Employees		
Adobe Systems Inc	San Jose	Publishers-Computer Software (Mfrs)
Advanced Micro Devices Inc	Sunnyvale	Computers-System Designers & Consultants
Apple Inc	Cupertino	Computers-Electronic-Manufactu
Bon Appetit-Cafe Adobe	San Jose	Restaurant Management
California's Great America	Santa Clara	Amusement Places
Christopher Ranch, LLC	Gilroy	Garlic (Mfrs)
El Camino Hospital	Mountain View	Hospitals
General Motors Advanced Tech	Palo Alto	Automobile-Manufacturers
Hewlett-Packard Co	Palo Alto	Computers-Electronic-Manufactu
Kaiser Permanente Medical Ctr	San Jose	Hospitals
Microsoft Corp	Mountain View	Computer Software-Manufacturers
Net App Inc	Sunnyvale	Computer Storage Devices (Mfrs)
Sap Center	San Jose	Stadiums Arenas & Athletic Fields
Silicon Valley Sports & Entrtn	San Jose	Entertainment Bureaus
Stanford Univ School Medicine	Stanford	Schools-Medical
US Post Office	San Jose	Post Offices
Valley Medical Ctr-Palo Alto	Palo Alto	Hospitals

Source: State of California, Employment Development Department (EDD), Labor Market Information Division; EDD extracted this information from the America's Labor Market Information (ALMIS) Employer Database, 2016 2nd Edition.

Income

Owing to the presence of relatively high-wage skilled jobs and wealthy residents, Santa Clara County historically achieves high rankings relative to the rest of the State on a variety of income measurements. The per capita personal income in Santa Clara County increased from \$67,974 in 2012 to \$70,151 in 2013, which is higher than the 2015 national level of \$48,112 and the estimated 2015 State level of \$53,741¹.

¹ Source: US and California, Regional Economic Information System, Bureau of Economic Analysis, US Department of Commerce, updated September 28, 2016.

Appendix B – Pro-Forma Statement of Operations

Water Enterprise

SAN FRANCISCO WATER ENTERPRISE		
Statements of Revenues, Expenses, and Changes in Net Position		
Years ended June 30, 2016 and 2015		
(In thousands)		
	2016	2015
Operating revenues:		
Charges for services	\$ 393,582	400,023
Rents and concessions	12,081	12,284
Capacity fees	2,087	1,832
Other revenues	11,766	11,908
Total operating revenues	419,516	426,047
Operating expenses:		
Personnel services	103,027	99,192
Contractual services	13,451	12,729
Materials and supplies	12,896	12,667
Depreciation and amortization	106,666	95,384
Services provided by other departments	60,868	60,365
General and administrative and other	17,878	16,613
Total operating expenses	314,786	296,950
Operating income	104,730	129,097
Non-operating revenues (expenses):		
Federal and state grants	1,720	17
Interest and investment income	3,595	5,789
Interest expenses	(153,258)	(137,106)
Amortization of premium, refunding loss, and issuance costs	8,849	6,100
Net gain from sale of assets	9	8,120
Other non-operating revenues	29,524	39,177
Other non-operating expenses	(2,210)	(4,829)
Net non-operating expenses	(111,771)	(82,732)
Change in net position before transfers	(7,041)	46,365
Transfers from the City and County of San Francisco	34,368	52,143
Transfers to the City and County of San Francisco	(1,124)	(1,148)
Net transfers	33,244	50,995
Change in net position	26,203	97,360
Net position at beginning of year		
Beginning of year, as previously reported	596,465	654,212
Cumulative effect of accounting change	—	(155,107)
Beginning of year as restated	596,465	499,105
Net position at end of year	\$ 622,668	596,465

Wastewater Enterprise

SAN FRANCISCO WASTEWATER ENTERPRISE Statements of Revenues, Expenses, and Changes in Net Position Years ended June 30, 2016 and 2015 (In thousands)		
	2016	2015
Operating revenues:		
Charges for services	\$ 249,203	244,604
Rents and concessions	753	821
Capacity fees	7,244	6,357
Other revenues	4,575	4,220
Total operating revenues	261,775	256,002
Operating expenses:		
Personnel services	79,088	76,396
Contractual services	15,069	13,841
Materials and supplies	10,192	9,815
Depreciation and amortization	50,799	50,254
Services provided by other departments	36,157	36,212
General and administrative and other	30,248	29,967
Total operating expenses	221,553	216,485
Operating income	40,222	39,517
Non-operating revenues (expenses):		
Federal and state grants	—	1,075
Interest and investment income	1,185	1,207
Interest expenses	(22,251)	(22,791)
Amortization of premium, refunding loss, and issuance costs	2,979	5,347
Net gain from sale of assets	23	1
Other non-operating revenues	8,240	5,488
Other non-operating expenses	(485)	(280)
Net non-operating expenses	(10,309)	(9,953)
Change in net position before transfers	29,913	29,564
Transfers from the City and County of San Francisco	460	—
Transfers to the City and County of San Francisco	(16,485)	(232)
Net transfers	(16,025)	(232)
Change in net position	13,888	29,332
Net position at beginning of year		
Beginning of year, as previously reported	1,142,052	1,181,867
Cumulative effect of accounting change	—	(69,147)
Beginning of year as restated	1,142,052	1,112,720
Net position at end of year	\$ 1,155,940	1,142,052

Hetch Hetchy Water and Power

HETCH HETCHY WATER AND POWER Statements of Revenues, Expenses, and Changes in Net Position Years ended June 30, 2016 and 2015 (In thousands)						
	Hetchy Water	Hetchy Power	2016 Total	Hetchy Water	Hetchy Power	2015 Total
Operating revenues:						
Charges for services	\$ 38,624	125,850	164,474	38,731	108,841	147,572
Rents and concessions	118	144	262	104	127	231
Total operating revenues	38,742	125,994	164,736	38,835	108,968	147,803
Operating expenses:						
Personnel services	12,183	33,632	45,815	11,557	33,240	44,797
Contractual services	902	5,493	6,395	794	7,852	8,646
Transmission/distribution and other power costs	—	21,206	21,206	—	18,236	18,236
Purchased electricity	—	5,586	5,586	—	2,060	2,060
Materials and supplies	1,191	1,849	3,040	1,321	1,039	2,360
Depreciation and amortization	3,874	12,639	16,513	4,102	13,785	17,887
Services provided by other departments	2,054	7,397	9,451	1,979	5,979	7,958
General and administrative and other	16,332	24,157	40,489	18,948	23,031	41,979
Total operating expenses	36,536	111,959	148,495	38,701	105,222	143,923
Operating income	2,206	14,035	16,241	134	3,746	3,880
Non-operating revenues (expenses):						
Federal and state grants	—	—	—	8	1,819	1,827
Interest and investment income (loss)	(38)	1,318	1,280	(74)	1,253	1,179
Interest expenses	—	(3,355)	(3,355)	—	(1,815)	(1,815)
Amortization of premium, discount, and issuance costs	—	122	122	—	(893)	(893)
Net gain from sale of assets	—	1	1	9	18	27
Other non-operating revenues	200	12,255	12,455	233	7,465	7,698
Other non-operating expenses	(68)	(1,676)	(1,744)	(313)	(2,494)	(2,807)
Net non-operating revenues (expenses)	94	8,665	8,759	(137)	5,353	5,216
Change in net position before transfers	2,300	22,700	25,000	(3)	9,099	9,096
Transfers from the City and County of San Francisco	—	1,385	1,385	—	2,075	2,075
Transfers to the City and County of San Francisco	—	(705)	(705)	—	(32)	(32)
Net transfers	—	680	680	—	2,043	2,043
Change in net position	2,300	23,380	25,680	(3)	11,142	11,139
Net position at beginning of year						
Beginning of year, as previously reported	120,411	366,523	486,934	137,404	376,146	513,550
Cumulative effect of accounting change	—	—	—	(16,990)	(20,765)	(37,755)
Beginning of year as restated	120,411	366,523	486,934	120,414	355,381	475,795
Net position at end of year	\$ 122,711	389,903	512,614	120,411	366,523	486,934

Appendix C – SFPUC Rates Policy

- I. The SFPUC is an Enterprise department of the City and County of San Francisco, and receives no support from the San Francisco General Fund. The SFPUC's cost of providing utility service is covered by rate-paying customers through: service based rates, fees and charges, non-operating revenues (i.e. land leases).
- II. Rates are set by the SFPUC Commission pursuant to the authority and provisions set forth by the San Francisco Charter (Section 8b.125, above) and the Water Supply Agreement with the SFPUC's wholesale water customers.
- III. All budgets, rates, fees, and charges presented by SFPUC staff to the Commission will conform to the SFPUC Rates Policy. Any deviations from this policy will be reported to the Commission along with their impact to ratepayers and departmental operations.
- IV. The four key principles of the SFPUC Rates Policy are: affordability, compliance, sufficiency, transparency.
 - a. Affordability – In order to keep rates affordable to the SFPUC's retail and wholesale customers:
 - i. Rates will be set such that retail and wholesale customers pay for benefits and services that they receive.
 - ii. Budgets will provide for fund balance reserves to mitigate cost and revenue uncertainties and stabilize rates to minimize large rate changes.
 - iii. Rate setting will include comparative information of neighboring and other California utilities.
 - iv. Capital and program decision making will be based on both annual and total lifetime cycle costs.
 - v. Rate setting will include consideration of affordability for low-income customers.
 - b. Compliance – Rate-funded budgets will comply with:
 - i. All applicable State and Federal laws;
 - ii. San Francisco Charter, ordinances, resolutions, and other policy directives;
 - iii. Regulations and permits;
 - iv. Contract commitments;
 - v. Bond covenants;
 - vi. Other laws and Commission policies and objectives including, but not limited to:
 1. Budget law and policies,
 2. Debt law and policies,
 3. Ratepayer accountability,
 4. Community benefits policy,
 5. Environmental justice policy,
 6. Sustainability and resource conservation,
 7. Land use policy,
 8. Local hire ordinance,
 9. Electric resource plan,
 10. Technology adoption and implementation best practices,

11. Asset management best practices.

- c. Sufficiency – Rates will be sufficient to recover the full cost of providing the SFPUC's essential utility services and mission, including:
 - i. Adopted levels of service for Water, Power, and Sewer;
 - ii. Adopted and best practice levels of service for asset repair and replacement to ensure the maintenance of assets in a state of good repair;
 - iii. All anticipated operating and capital costs, including personnel cost changes and other operating cost inflation;
 - iv. Funding to carry out adopted Commission policies, including prudent reserves sufficient to mitigate unplanned rate changes, revenue, uncertainty, and operating contingencies for the duration of the rate adoption period.
- d. Transparency – Rate making will be transparent and include:
 - i. Open and timely public meetings and review of rate setting alternatives and timing;
 - ii. Public information designed to provide clear explanation of rate changes and trends, including average bill impact illustrations;
 - iii. A description of both operating and capital costs to ensure that ratepayers know the component costs of their utility service and related programs;
 - iv. Rate-setting oversight, including communications with the:
 - 1. Customers, both retail and wholesale,
 - 2. Citizens' Advisory Committee,
 - 3. Rate Fairness Board,
 - 4. Revenue Bond Oversight Committee,
 - 5. San Francisco Public Utilities Commission,
 - 6. Board of Supervisors, and
 - 7. Mayor's Office.

The Rates Policy was approved by the SFPUC Commission on February 14, 2012.

Appendix D – SFPUC Ratepayer Assurance Policy

SFPUC Ratepayer Assurance Policy

PURPOSE

The Ratepayer Assurance Policy provides assurance to ratepayers that their money will be spent wisely, and serves as guidance to the SFPUC General Manager and staff of the Commission's expectations regarding the wise use of ratepayer funds. SFPUC departments are ratepayer, self-supported enterprises that receive no support from San Francisco's General Fund. Our Water, Power & Sewer Enterprises are supported by service-based rates, fees and charges, as well as non-operating revenues such as rental income from land leases. Accountability to ratepayers is a central tenet that guides the management of our self-supported enterprise, a tenet always considered when using any ratepayer monies to support critical stewardship of our utility systems and the management of our resources. Ratepayer-related SFPUC good management practice is guided by two Commission-adopted policy cornerstones: 1) the Rates Policy and 2) this Ratepayer Assurance Policy. We recognize that SFPUC revenue comes from the hard-earned money of our ratepayers and that we take seriously our commitment to provide affordable and reliable Water, Power and Sewer services.

Ratepayer resources pay for: 1) what we do, i.e. our essential-service water, power and sewer utilities, 2) when we do it, i.e. our 24/7 reliability, and 3) how we do it, through our commitment to sustainability and adherence to the Commission's Environmental Justice and Community Benefits policies. Some of these factors are mandated by federal, state or local law; others are guided by local policies established through San Francisco's public process and reflect our commitments to environmental and sustainability best practices. Some factors are also the product of managerial decision making and their recommendations to prioritization and timing of key capital improvements, to ensure reliability, and financial impacts, to ensure ratepayer affordability. This policy is particularly focused toward the latter factors and is intended to provide ratepayers with the assurance that management recommendations and Commission decisions are and will be made in the ratepayers' best interest. This policy promotes accountability and transparency by requiring a biannual, independently developed report card through which ratepayers and the Commission can see verifiable results that the ratepayer safeguards and policies are being implemented and yielding successful outcomes. The report card shall address the following:

Mission Management

The SFPUC must comply with all San Francisco Charter requirements, including the development of our budget, as well as our long-term capital, financial and strategic plans. This includes mission-driven budgets for SFPUC Enterprises which are timely considered, adopted and published. It is the policy of the Commission that the mission statement is reviewed early in the budget process and that any changes to the mission are adopted by the Commission prior to the cost of such changes being budgeted. It is further the policy of the Commission that each budget presented to the Commission contain an analysis of mission changes, in both function and degree, funded by the proposed budget.

Personnel Management

Personnel costs are driven by how we staff our operations and organize our workforce; this includes the number of staff and the position classifications we hire. Compensation and benefit rates are determined by labor agreements, the Civil Service Commission, the City's Retirement Board and the City's Health Service System. Position classifications and hiring authorizations include a review process that is governed by the Civil Service Commission as well as the City's Human Resources Department to ensure our hiring is appropriate for the work assigned.

In order to adjust to changing needs, and in order to capture productivity savings made possible by technology advances consistent with the Commission's Technology Policy, it is the policy of the Commission to meet new position needs by reassignment of existing positions or substituting new positions for existing ones wherever possible. The Commission will also review all proposed position changes in every budget it considers in order to assure compliance with this policy.

In order to encourage high quality, high morale, high satisfaction and economic fairness in the workforce, it is the policy of the Commission to structure its workforce to ensure that customer service is both effectively and efficiently achieved, while at the same time job content is fulfilling and compensation is just.

Asset Management

As a utility, a good portion of the SFPUC budget is allocated for the acquisition, construction, repair and replacement of critical, physical assets. Purchasing, construction and the contracting for repair services are subject to extensive legal and administrative regulation. Asset costs are ultimately driven by the assets acquired and the way in which they are maintained. In order to minimize the utility cost of service over time, it is the policy of the Commission to acquire, design, construct, repair and replace assets such that their life cycle cost is minimized, and to fund such activities accordingly.

It is the policy of the Commission to utilize vehicle pools and public transit wherever feasible and to acquire energy efficient and Green House Gas-free vehicles whenever practicable to do so. All vehicle purchases should be reviewed and approved through the budget process and be consistent with City policies as well as best practices promulgated by the General Manager.

It is the policy of the Commission, promulgated by the General Manager, to assure that assets (including, but not limited to, vehicles, computers and other electronic devices) assigned to individuals are selected and assigned to meet utility needs in a cost effective manner and that they are used for business purposes that benefit the ratepayers.

It is the policy of the Commission to support the development of promising technologies, including the consideration of prudent demonstration projects, and to implement proved technologies that will ensure utility reliability, performance effectiveness, cost minimization, and strive toward continued environmental impact improvements and the sustainability of our utility operations.

Sustainability

It is the policy of the Commission to provide workplaces that are functional, economical, safe, secure, efficient and environmentally sustainable. Workspaces should be designed to facilitate the efficient use of our utility resources, including water, power and wastewater, as well as encourage recycling of waste products, and the promotion of environmentally sustainability practices such as ride-sharing and the use of public transportation.

Operating Cost Containment

To the extent that operating costs are determined by PUC actions and choices, it is the policy of the commission to limit operating cost increases, exclusive of debt service and cash funded capital investment, to no more than the cost of inflation. Any budget that increases the operating budget above this level will be supported by findings of necessity, adopted by the commission, that detail the specific reasons and needs for increases above the rate of inflation.

Appendix E – Debt Management Policies and Procedures

I. Scope and Application

The San Francisco Public Utilities Commission (“SFPUC” or “Commission”) has established these Debt Management Policies and Procedures (“Policies”) for debt financings associated with the Water, Wastewater and Power Enterprises.¹ These Policies are intended to enable the SFPUC to effectively manage its debt issuance and debt management practices. To the extent that any of the Policies contained herein conflict with the terms and conditions of the existing or subsequently adopted SFPUC legal requirements or agreements, such legal requirements or agreements will control. These Policies will be reviewed regularly, and revised or amended, as appropriate or desirable, with Commission approval. The last update was adopted by the Commission in March 2015.

This policy shall govern the issuance and management of all bonds and other forms of indebtedness of the SFPUC, together with any credit, liquidity, or other security instruments and agreements that may be executed in connection with the issuance of bonds and other forms of indebtedness (“Bonds”).

These policies will be on file with the Commission, SFPUC’s Financial Services Department (Financial Planning Group), the Public Utilities Commission Revenue Bond Oversight Committee (RBOC) and posted on the website of the SFPUC (www.sfwater.org) with copies delivered to the Office of Public Finance (OPF), the City Treasurer, the City Controller, and the Clerk of the Board of Supervisors (BOS).

II. SFPUC’s Debt Management Mission

SFPUC’s debt management mission is to serve, within the financial objectives and parameters established by the Commission, the capital financing needs of the respective enterprises in a cost effective, risk-appropriate and flexible manner, through the implementation of sound financial decision-making and the use of prudent debt management practices.

III. Debt Management Objectives

- a. Finance capital projects of SFPUC’s enterprises in a timely and cost-effective manner.
- b. Manage debt effectively within Commission objectives and parameters.
- c. Achieve and maintain the highest practicable credit ratings to minimize total borrowing costs of SFPUC debt.
- d. Retain financial flexibility.
- e. Maintain compliance with all relevant laws, reporting, and disclosure requirements.
- f. Ensure integrity of debt management process.

IV. Types and Purposes of Debt

¹ The Policies are the same for each enterprise, unless otherwise noted.

The SFPUC may issue debt to finance the acquisition and/or construction of capital improvements, unless otherwise decreed by court order or adjudicated settlement. Debt financings are not to be used to fund SFPUC operating costs.

- a. SFPUC revenue bonds are secured by a pledge that the rates of the applicable enterprise will generate net revenues sufficient to pay the principal of and interest on indebtedness.
- b. The SFPUC may issue the following types of tax-exempt or taxable debt:
 - i. Fixed rate bonds - long-term securities with serial and term maturities, including put-bonds. Interest rates are determined when the bonds are sold and are fixed to maturity.
 - ii. Fixed rate notes - securities with short-term maturities (i.e. 1 to 5 years). Interest rates are determined when the notes are sold and fixed to maturity.
 - iii. Variable rate bonds - long-term securities that do not bear a fixed interest rate to maturity, but instead bear rates adjusted at agreed upon intervals, such as daily, weekly or monthly. The holder of the variable rate security may be allowed to "put" the security to the SFPUC or to a bank credit facility provider retained by the SFPUC.
 - iv. Commercial paper - short-term (1-270 days) security with fixed interest rates set depending on the term of the commercial paper within the 270-day period. Customarily, commercial paper is secured by a pledge of net revenues that is subordinate in lien to the pledge of net revenues for senior lien revenue bonds. In order to further secure and have market access for the commercial paper, some form of credit facility, such as a letter or line of credit or a liquidity facility, must be obtained from a high-grade bank. Commercial paper is designed to provide flexible, low-cost financing to meet the interim encumbrance and expenditure needs of capital projects. Commercial paper is typically refunded with the issuance of long-term indebtedness.
 - v. Refunding bonds - issued to realize debt service savings, or for other debt restructuring purposes.
 1. Absent significant non-economic factors, refunding transactions must produce aggregate net present value debt service savings of at least 3% of the par value of the refunded bonds, calculated using the refunding issue's true interest cost (TIC) as the discount rate.
 2. Advance Refunding transactions in aggregate must also meet the 3% minimum debt service savings requirement as well as having a minimum 50% refunding efficiency or more. Refunding efficiency is defined as the ratio between the net present value savings and the refunding escrow negative arbitrage.
 - vi. Green Bonds - issued for any enterprise to fund qualified projects that have environmental and/or climate change mitigation or adaptation benefits. Proceeds from these bonds are earmarked for green projects and allow investors to invest directly in bonds which finance environmentally beneficial projects. The SFPUC will comply with the following when issuing Green Bonds:
 1. For each issuance of Green Bonds, the SFPUC will make a determination whether to self-certify the Bonds, or retain an independent consultant to certify the Bonds.
 2. The SFPUC will only issue Green Bonds if, during the life of the Bonds, they in no way impede or restrict the ability of the issuing enterprise to use the

Green Bond-funded projects for other future business purposes that are not in keeping with “Green Bond” principles.

3. The SFPUC will annually report on its website the status of spending of Green Bond proceeds during the construction period of the funded projects.

4. The SFPUC will conform with established Green Bond international standards as they develop, such as the recently-established Water Climate Bonds Standard.

vii. State Revolving Fund (SRF) Loan program–

1. Managed by the California State Water Resources Control Board, Clean Water SRF loans provide alternative capital financing for certain facilities of the Wastewater Enterprise and certain Water Enterprise Recycled Water projects. The SFPUC will not enter into SRF loans with lien status senior to outstanding senior lien Wastewater Revenue Bonds.
2. Managed by the California State Water Resources Control Board, Drinking Water SRF loans provide alternative capital financing for certain facilities of the Water Enterprise. The SFPUC will not consider entering into SRF loans with lien status senior to outstanding senior lien water revenue bonds.

viii. Tax Credit Bonds

1. Clean Renewable Energy bonds (CREBs) – no- or low-interest bonds administered by the Federal government to finance renewable energy projects of the Power Enterprise. CREBs are part of the 2009 American Reinvestment and Recovery Act (ARRA) legislation designed to stimulate state and local government capital project construction and improvements.
 2. Qualified Energy Conservation Bonds (QECBs) – also part of 2009 ARRA, this program authorized local communities to use some or all of their QECB allotment for funding municipal solar and energy efficiency projects, including capital expenditures of the Power Enterprise that reduce energy consumption on publicly-owned buildings by at least 20%, and implementing green community programs.
 3. New Clean Renewable Energy Bonds (NCREBs) - established by Congress as part of the Energy Improvement and Extension Act of 2008 and capped at \$2.4 billion by ARRA. These tax credit bonds allow certain issuers to receive subsidies, in the form of reimbursements, from the federal government when financing qualified renewable energy facilities.
- ix. Build America Bonds (BABs) – also part of the 2009 ARRA, this program allows state and local governments to issue taxable bonds for capital projects and to receive a new direct federal subsidy payment for a portion of their borrowing costs. The SFPUC issued several BABs for the Water and Wastewater Enterprises in 2010. Federal authorization for this program expired on December 31, 2010.
- x. Capital Lease Financing – equipment or facility lease financing as allowed by the Charter and Administration code.

V. Debt Financing Authorization

a. Charter

- i. Section 8B.124 Revenue Bonds (Proposition E, approved by voters in November 2002): Authorizes the SFPUC to issue revenue bonds or other forms of indebtedness for the purpose of reconstructing, replacing, expanding, repairing or improving water facilities or clean water facilities when authorized by ordinance approved by a two-thirds vote of the BOS.
 1. Required Certification: Bonds issued against Prop E require the certification of a Qualified Independent Consultant that estimated net revenues of the applicable enterprise will sufficiently meet debt service coverage and other Indenture requirements, as well as certification from an Independent Engineer that the projects to be financed by the bonds meet utility standards.
- ii. Section 9.110 Power Revenue Bond Election by Initiative (Proposition B, approved by voters November 2001): Authorizes the issuing, subject to BOS approval, of up to \$100 million in revenue bonds or other forms of indebtedness to finance solar energy, energy conservation, or renewable energy facilities and equipment.
- iii. Section 9.110 Water Revenue Bond Election by Initiative (Proposition A, approved by voters November 2002): Authorizes the SFPUC, subject to BOS approval, to issue up to \$1.628 billion in revenue bonds or other forms of indebtedness to finance the acquisition and construction of improvements to the City's water system.
- iv. Section 9.107(6) Water and Power Revenue Bonds: Authorizes the SFPUC to issue revenue bonds or other forms of indebtedness for the purpose of the reconstruction or replacement of existing water facilities or electric power facilities or combined water and power facilities when authorized by resolution approved by three-fourths vote of the BOS.
- v. Section 9.107(8) Power Revenue Bonds (Proposition H, approved by voters November 2001): Authorizes the issuance of revenue bonds to finance or refinance the acquisition, construction, installation, equipping, improvement or rehabilitation of equipment or facilities for renewable energy and energy conservation.
- vi. Section 9.109 Refunding Bonds: Authorizes the issuance of refunding bonds that achieve aggregate net debt service savings on a present value basis without voter approval. Refunding bonds must be approved by the Commission, and the Clerk of the BOS must be provided a report as more fully described in Section VI (e)(iii).

b. Commercial Paper Authorization

- i. Wastewater Enterprise \$500 million program:
 1. \$150 million authorized by SFPUC Resolution No. 06-0164 and BOS Ordinance Nos. 266-06/270-06.
 2. Authorization to increase Wastewater CP authorization from \$150 million to \$300 million (SFPUC Resolution No. 11-0197, BOS Ordinance No. 91-12)
 3. Authorization to increase Wastewater CP authorization from \$300 million to \$500 million (SFPUC Resolution No. 14-0139, BOS Resolution No. 378-14)
- ii. Water Enterprise \$500 million program

1. Authorization to issue up to \$150 million (SFPUC Resolution No. 99-084 and BOS Ordinance No. 451-99)
2. Authorization to increase Water CP issuance from \$150 million to \$250 million (SFPUC Resolution No. 00-0234 and BOS Ordinance No. 953-00)
3. Authorization to increase Water CP issuance from \$250 million to \$500 million (SFPUC Resolution Nos. 08-0202/09-0175 and BOS Ordinance No. 311-08)

iii. Power Enterprise \$90 million program

1. \$90 million authorized by SFPUC Resolution No. 15-0183 and BOS Resolution No. 427-15.

VI. Debt Financing Approval Process

- a. Voter Authorization and Ballot Procedure – SFPUC may, pursuant to Charter Section 9.107, seek voter approval for revenue bond issuance. Prior to placing any measure on the ballot, the SFPUC must submit the item to the Capital Planning Committee (CPC) for its review. Legislation requesting the submission of a proposal for the issuance of revenue bonds to the voters of the City must be submitted in the form of a resolution by the SFPUC at a regularly scheduled BOS meeting in sufficient time prior to the due date to the Department of Elections to account for a 30-day review period at the BOS and BOS Finance Committee meetings.
- b. SFPUC – Two Commission approvals in the form of a resolution is required for all SFPUC debt financings, as follows:
 - i. Bonding Authorization resolution approved by the Commission at the time of project appropriation.
 - ii. Transaction Authorization resolution approved by the Commission at the time of the bond sale. The resolution incorporates the disclosure and legal documents of the transaction.
- c. Capital Planning Committee (CPC) – Pursuant to the City's Administrative Code, Section 3.21, the CPC must review and submit a recommendation to the BOS on all proposed new long-term financing transactions for capital improvements. The SFPUC completes this CPC review during capital plan development.
- d. BOS Budget Analyst Review –The BOS Budget Analyst prepares a report and recommendation for the BOS on any item submitted for consideration.
- e. Board of Supervisors – BOS approval in the form of a resolution or ordinance is required for SFPUC financings, as follows:
 - i. Pursuant to voter-approved debt a resolution passed by a majority of the BOS is required.
 - ii. Pursuant to Charter Section 8B.124 (Proposition E), an ordinance passed by two-thirds vote of the BOS is required and is subject to referendum requirements of Charter Section 14.102. The ordinance does not become effective until 30 days after its adoption.
 1. Certification pursuant to administrative code section 8B.124, as follows:

- a. Certification by an independent engineer retained by the SFPUC that:
 - i. Projects to be funded by the bonds, including the prioritization, cost estimates and scheduling, meet utility standards; and
 - ii. Estimated net revenue after payment of operating and maintenance expenses will be sufficient to meet debt service coverage and other indenture or resolution requirements, including debt service on the bonds to be issued, and estimated repair and replacement costs.
 - b. Certification by the San Francisco Planning Department that facilitates under the jurisdiction of the Public Utilities Commission that projects funded with such bonds will comply with applicable requirements of the California Environmental Quality Act.
- iii. Pursuant to BOS Ordinances No. 111-16, 112-16, and 113-16, within 30 days of a new money or refunding bond issuance, the SFPUC must file with the Clerk of the BOS the following:
 - 1. New Money Bond Sale Report showing the results of the sale of the bonds, including (a) principal amount sold and method of sale, (b) true interest cost, (c) final maturity, (d) the facilities constructed and/or improved, and (e) a statement about the remaining bonding authorization under the applicable financing budget ordinance.
 - 2. Refunding Bond Savings Report prepared by the SFPUC's financial advisor that reflects at least a 3% net present value debt service savings, together with a copy of the final Official Statement for the refunding bonds.
- f. Revenue Bond Oversight Committee (RBOC) may review anticipated bond sales in advance of the issuance of the proposed financing transaction, including details with respect to amount, timing, and purpose of the issuance (Sec. 5A.30-36, Proposition P, approved by voters, November 2002). RBOC is scheduled to sunset on January 1, 2019, pursuant to extension legislation (Ordinance No. 189-15) by the Board of Supervisors on December 4, 2015.

VII. Debt Limitations

- a. Adopted financial policies that effectively limits the amount of debt issued, include:
 - i. Fund Balance Reserve Policy: establishes minimum levels of fund balance reserves from an operations perspective and a minimum debt service Indenture Basis Coverage threshold. (SFPUC Resolution No. 10-0027, approved February 11, 2010)
 - ii. Rate policy: predictable and financially prudent rate increase policy (SFPUC Resolution No. 12-0027, approved February 14, 2012).
 - iii. Ratepayer Assurance Policy: ensure accountability to ratepayers in all aspects of SFPUC operations and management (SFPUC Resolution No. 12-0196, approved October 23, 2012).
- b. Legal requirements and Indenture Limitations that place constraints on debt issuance include:

- i. Additional Bonds Test: City Charter (Sec. 8B.124) requires an independent certification that Indenture Basis Coverage of 1.25 will be maintained for 3 years after issuance of additional bonds.
- ii. Debt Service Coverage Requirements: for senior lien bonds, Indenture Coverage requires net revenues plus available fund balance equal to at least 125% of annual debt service; Current Basis Coverage requires net revenues, exclusive of available fund balance, equal to at least 100% of annual debt service.

VIII. Method of Bond Sale

a. General

- i. Marketing – Bond sales shall be advertised, and the Preliminary Official Statement be distributed, as broadly as possible and receive a rating from at least one nationally recognized rating agency, with two ratings preferred. The financial advisors and/or the underwriters, if applicable, for each transaction shall undertake to market the bonds to prospective bidders and investors as appropriate or relevant.
 - ii. Amendments – Terms of the bonds shall be subject to amendment as late as practicable in the issuance process.
- b. Competitive – New money and refunding fixed rate revenue bonds should be issued by competitive sale unless (i) there is significant deterioration in the SFPUC's overall credit rating or outlook, (ii) there are market issues specific to a transaction that are outside of the SFPUC's credit profile such as market volatility, threat of war or changes in taxation or sector risks, (iii) there is a financing structure that is not conducive to a successful competitive sale, or (iv) there are other factors which mitigate or make the use of the competitive sale process less attractive or likely to ensure a successful sale with the lowest total borrowing costs. The SFPUC may take bids in person, by facsimile or by electronic means, which is the preferred approach.
- i. Cancellation – Bond sales shall be subject to cancellation at any time prior to the time bids are to be received.
 - ii. Award – The bonds shall be awarded to the bidder whose conforming bid represents the lowest true interest cost (TIC) to the SFPUC. The SFPUC's financial advisor will confirm the calculation of the TIC before any bonds are awarded. The SFPUC's bond counsel will confirm that the bids conform to the requirements of the Notice of Sale. The SFPUC may then restructure the bonds in accordance with the Official Notice of Sale. The General Manager or his/her designee shall award the sale of SFPUC bonds.
 - iii. Rejection - The SFPUC shall reserve the unfettered right to reject all bids or waive bid irregularities.
- c. Negotiated Sale – Bonds, including fixed rate bonds, variable rate demand notes, put bonds, commercial paper, etc. may be issued by negotiated sale, at the discretion of the General Manager, if deemed necessary for a successful offering. One or more underwriters may be selected by the SFPUC for a negotiated bond sale pursuant to a competitive RFP solicitation process or from the approved Underwriter Pool of the Controller's Office of Public Finance. An independent pricing verification agent should also be selected to assist the SFPUC in a negotiated sale to provide further ratepayer assurance of lowest cost borrowing success. The SFPUC may retain one or more remarketing agents for each issuance of variable rate or put bond debt, or one or more dealers for each enterprise's commercial paper program. The SFPUC shall reserve the right to replace a dealer or remarketing agent with notice at any time for any reason in its sole discretion.
- i. Independent Pricing Verification Agent-for each negotiated bond sale, the SFPUC will retain an Independent Pricing Verification Agent ("IPA") to oversee the pricing process

and provide a letter to the SFPUC certifying whether the pricing results were fair and reasonable to the SFPUC in light of prevailing market conditions. The IPA will be a firm separate and independent from the SFPUC's financial advisors on the transaction.

- d. Private Placement –The General Manager may issue obligations by means of a private placement pursuant to a bond purchase contract and placed with an accredited investor in Rule 501(a) of Regulation D (or such other investor restrictions appropriate to the transaction), subject to the General Manager finding that such a sale method would result in a lower overall cost than would be achieved by selling bonds at a public sale.

IX. Debt Structuring Policies

- a. Standard terms – The following terms will apply to the SFPUC's transactions, as appropriate. Individual terms may change as dictated by the marketplace and/or by the unique characteristics of a given transaction.

- i. Fixed Rate Revenue Bonds

1. Term	Up to 40 years per issue
2. Maximum interest rate	Not to exceed 12% (statutory)
3. Maximum premium or discount	Case by case as recommended by SFPUC's financial advisor(s)
4. Payment dates	Water and Power Revenue Bonds: November 1 for annual principal and semi-annual interest; May 1 for semi-annual interest Wastewater Revenue Bonds: October 1 for annual principal and semi-annual interest; April 1 for semi-annual interest The first payment of any revenue bond issue may be extended beyond the first November or October after the bond sale, if it is advantageous CWSRF Loans: Principal and interest paid annually on each December 31st Power tax credit bonds: December 15 for annual 2008 CREBs payments; December 15 and June 15 for semi-annual QECBs payments; April 25 and October 25 for semi-annual 2012 and 2015 NCREBs payments
5. Call provisions	Shortest possible optional call consistent with optimal pricing; no more than 30 days' notice Make Whole Call: Permitted if market conditions required to ensure lowest total borrowing costs

6. Structure of debt	Level debt service unless an alternative structure is advantageous, such as deferral of principal so as to achieve level overall enterprise debt service – principal payments may be serial and/or term bonds
7. Reserve funds	The lesser of what is required, including no reserve requirement, pursuant to indenture requirements, and as governed by current tax law, or acceptable to the marketplace; surety or other credit instrument may also be used, assuming availability
8. Capitalized interest	Up to three years or such other lower amount as may be legally permissible and advantageous
9. Good faith deposit	1% of par amount which may be satisfied by cash, surety or equivalent
10. Other, Federal, and State	Unique structures as appropriate such as federal subsidies or stimulus funding, as in the case of Build America Bonds, CREBs, NCREBs, and QECBs.
ii. Variable Rate Obligations – The SFPUC may elect to issue variable rate obligations, including variable rate demand obligations, auction rate securities and commercial paper.	
1. Purpose	Lower net borrowing costs; match assets and liabilities; diversify debt portfolio
2. Portfolio allocation	No more than 25% of each enterprise's outstanding debt shall be variable rate
3. Term	Up to 40 years per issue, except commercial paper which has a maximum maturity of 270 days
4. Maximum interest rate	12%
5. Monitoring	SFPUC will monitor all variable rate bonds on a regular basis and shall determine, from time to time, whether to change modes, alter hedging strategies and/or replace a dealer or remarketing agent
6. Budgeting	SFPUC will recommend an annual budget of debt service on any variable rate obligations at a minimum of 1.5 times the rolling 3-year average of the Securities Industry and Financial Markets Association municipal swap index, or other appropriate index over a similar time frame.
7. Remarketing inventory	SFPUC may require that remarketing or dealer agreements contain a provision

obligation	requiring that the dealer or agent, in the event of a failed remarketing, inventory the securities, at prevailing interest rates, for up to 30 days.
8. Call/Conversion provision	On any date without penalty; no more than 20 days' notice or the minimum period allowed by the Depository Trust Company.
9. Liquidity	A bank credit facility, in the form of either a liquidity facility or letter of credit, will be obtained for all variable rate obligations as market conditions may require; Liquidity or letter of credit providers will maintain short-term ratings in the Tier 1 level of short-term ratings (P-1 and A-1 or higher).
10. Mode	Variable rate obligations, with the exception of commercial paper, may be issued as "multi-modal".

X. Derivatives Policy

- a. Permitted Investments All investments of bond proceeds shall be limited to the City's Investment Policy approved periodically by the Treasury Oversight Committee, unless otherwise required and approved apart from any debt authorization for the Commission. The "Permitted Investments" language of any debt issuance will be reviewed by the City Treasurer's office prior to closing.
- b. The SFPUC intends to establish a segregated special long-term endowment fund for the Bioregional Habitat Restoration (BHR) Mitigation Program for the Water Enterprise. The Fund will not be subject to the above Permitted Investments requirements for bond proceeds. The Fund will be invested pursuant to investment policies, guidelines and strategies as developed by an investment advisor retained for the Fund. It is expected that the goal of the Fund will be to maximize long-term returns by investing in a combination of fixed income and equity securities.
- c. Investment of bond proceeds that are held by the Trustee must be limited to those permitted in the financing documents or agreements.
- d. Investment agreements which may be entered into from time to time. In general, uncollateralized investment agreements shall be executed with counterparties rated at least "AA". Collateral may be required upon a downgrade below a "AA" rating.
- e. Repurchase agreements or forward delivery agreements shall be executed with counterparties rated at least "AA" with downgrade provisions requiring assignment or collateral upon a rating downgrade below the "A" level.
- f. Investment agreements shall have the following general limitations:

1. Purpose	Preserve principal
	Maximize interest earnings thereby reducing net borrowing costs

	Match assets and liabilities
2. Counterparty	Minimum rating of AA from at least one major credit rating agency
3. Mandatory termination	Limited to credit-related events and non-payment.
4. Cure provisions	Timelines on SFPUC's obligations to cure must be adequate to accommodate City process.
5. Priority of payment	Termination payments shall be subordinate to related debt payments
6. Procurement	Award based on best bid as defined in bid form

XI. Professional Assistance—The SFPUC will maintain high standards of integrity in selecting professional service providers and conducting its debt management activities in a manner consistent with all applicable regulations as well as the City and County of San Francisco's Conflict of Interest Code.

- a. Financial Advisors – SFPUC shall utilize the services of independent financial advisors in connection with financing-related issues. The financial advisors shall be selected via a competitive Request for Proposals (RFP) process or via the City-wide approved pool of financial advisors, and the services to be provided shall be documented by contract. Compensation shall be capped.
- b. City Attorney's Office – SFPUC shall utilize the services of the City Attorney's Office when appropriate for legal support on financing-related matters to ensure all City and Charter requirements are fully met.
- c. Bond Counsel – SFPUC, with the City Attorney's Office recommendation, shall select bond counsel for each transaction. Bond counsel shall be responsible for developing the legal documents required for each transaction.
- d. Disclosure Counsel – SFPUC shall utilize the services of a disclosure counsel for each transaction, with the City Attorney's Office's recommendation. Disclosure counsel shall be responsible for assisting the SFPUC to prepare the Preliminary and Final Official Statements and any other disclosure documents.
- e. Underwriters – Such firms shall be solicited pursuant to a competitive RFP basis utilizing the Underwriter's Pool of the City's Office of Public Finance. Selection will be based on a formal, scored evaluation process.
- f. Dealers, Auction Agents and Remarketing Agents – Such firms shall be selected on a competitive RFP basis and performance will be monitored regularly. SFPUC shall retain the right to replace any such firm with due notice at any time.
- g. Trustees – Trustee shall be selected on a competitive RFP basis and have a combined capital and surplus of at least \$50 million and be subject to supervision or examination by relevant Federal or State regulatory bodies.
- h. Letter of credit or liquidity facility providers – Selected via competitive RFP or from the City-wide pool of approved credit facility provider banks, or from banks who are HRC compliant, and subject to negotiations of its terms.

- i. Investment agreement counterparties – Selected from pool approved by the Office of Public Finance, if one exists. If no pool exists, selected on the basis of a competitive bid process, with bidders subject to approval by the City’s Human Rights Commission (HRC).
- j. Arbitrage Rebate Consultant – Selected via competitive RFP process.
- k. Independent pricing verification agent - Financial advisor not involved in transaction, engaged in negotiated transactions to provide independent pricing report and comparative sales details so as to reassure negotiated sale provided best possible pricing for the rate payers.
- l. Other professional assistance may be secured as necessary or desirable.

XII. Ongoing Debt Administration

- a. Continuing Disclosure – In connection with its publicly-offered bond financings, the SFPUC will provide timely information to the marketplace, as required by law, most notably SEC Rule 15(c)2-12. Disclosure information will be tracked in an annual binder, along with submission verification details.
 - i. Ongoing disclosure requirements established per continuing disclosure certificates and other financing documents and agreements shall be promptly met. In addition, the SFPUC shall post on EMMA and also provide to the rating agencies on a timely basis after transaction closing the financing documents associated with bonds or loans that have not been issued on a publicly offered basis and consequently do not have CUSIPs, but have instead been either privately-placed or directly entered into with a lender. Such transactions include tax credit bonds which have been privately-placed or State Revolving (SRF) Fund Loans entered into directly with the State Water Resources Control Board.
 - ii. Annual Disclosure Report – SFPUC covenants to provide its annual disclosure report no later than 270 days following the end of the fiscal year. However, SFPUC shall use its best efforts to issue the Annual Disclosure Report as soon as practical following the issuance of the City’s annual Comprehensive Annual Financial Report (CAFR). The SFPUC has covenanted, per its Continuing Disclosure Certificates, to issue the Annual Disclosure Report electronically, post it on the Investor Relations page of its web site (www.sfwater.org), the Electronic Municipal Market Access (EMMA) site of the Municipal Securities Rulemaking Board (MSRB), the Main Library, and file with the Commission, the Office of Public Finance, the City Treasurer, the City Controller, and the Clerk of the Board of Supervisors. The report shall include CUSIPs, trustee and issuer contacts, and all other information as required pursuant to continuing disclosure certificates.
 - iii. Material Event – A material event notice will be filed, in accordance with the provisions of SEC Rule 15c2-12, on EMMA.
 - iv. Green Bonds Proceeds Spending Report: The SFPUC will, after the end of each fiscal year, post information on the Investor Relations page of its web site related to the progress of spending of Green Bond proceeds on the projects that have are being funded with “Green Bond” proceeds. This disclosure will continue until proceeds are substantially spent.
 - v. Official Statements – Existing continuing disclosure obligations shall be included in all official statements, which may exceed obligations enumerated in SEC Rule 15c2-12.
- b. Disclosure Training: The SFPUC will conduct periodic disclosure training related to the drafting, review and approval of debt offering documents, such as Official Statements, for staff and members of

the Commission. The training will be conducted by the City Attorney's Office and the SFPUC's Disclosure Counsel.

c. Arbitrage Rebate Compliance – The SFPUC shall calculate arbitrage annually in each year that the related project fund (or equivalent) has had an outstanding balance. Thereafter, the SFPUC shall calculate arbitrage on the fifth anniversary of the bond issuance in accordance with IRS recommended practices. Any arbitrage liabilities will be reflected in the SFPUC financial statements.

d. Direct Pay Bond Compliance - This SFPUC shall comply with rules and regulations relating to Direct Pay Bonds, including Build America Bonds ("BABs") authorized under the American Recovery and Reinvestment Act.

e. Credit Ratings – SFPUC's policy is to secure underlying ratings on all newly issued obligations from at least one nationally recognized rating agency, though two is preferred.

vi. Annual Meetings – The SFPUC will meet (or formally communicate) with credit rating agencies when rating any outstanding obligations at least annually unless such meeting is deemed unnecessary by the rating agencies.

vii. Reporting – The SFPUC will promptly make Annual Audited Financial Statements, Adopted Budgets and other relevant documents available to rating agency personnel.

f. Citywide Ratings Notification – Any changes in ratings will be promptly noticed to the Commission, the Mayor, the Office of Public Finance, the Mayor's Budget Director and Press Secretary, the City Controller, City Treasurer, President of the Board of Supervisors, Chair of the Finance Committee of the Board of Supervisors, as relevant. Public Utilities Revenue Bond Oversight Committee (RBOC) - Provides oversight to ensure that the proceeds from revenue bonds authorized by the BOS and/or the voters after November 2002 are expended in accordance with the authorizing bond resolution and applicable law. (Administrative Code Chapter 5A and Proposition P, passed by voters in November 2002)

i. Reports at least annually to the Mayor, the BOS and the Commission regarding the SFPUC's expenditure of revenue bond proceeds. Such reports are filed with the Commission, the Clerk of the BOS and the Main Library.

ii. May prohibit further issuance or sale of authorized revenue bonds, pursuant to:

1. Independent audit of actual expenditures of revenue bond proceeds.
2. Consultation with the City Attorney.
3. Determination that proceeds are being or have been expended for unauthorized or illegal purposes.

4. Majority vote of all its members.

a. Determination may be appealed to the BOS within 30 days of the RBOC's decision.

b. BOS may overturn the decision of the RBOC by resolution approved by two-thirds vote of all its members.

iii. SFPUC will provide notice to the RBOC in advance of the issuance of a proposed financing transaction, including details with respect to the amount, timing and purpose of the issuance.

iv. To the extent permitted by law, one-twentieth of one percent of revenue bond proceeds fund the costs of the RBOC, except that costs associated with clerical, technical and administrative assistance in furtherance of its purposes and any compensation due the members are to be paid by the BOS. These amounts are subject to the applicable IRS rules associated with issuance of tax-exempt debt and generally must be spent within three years of issuance.

Derivative Policy

I. Derivatives (including swaps, swaptions, caps, floors and collars) – Purpose and Objectives

- a. To achieve significant savings as compared to a product available in the bond market.
- b. To prudently hedge risk in the context of a particular financing or the overall asset/liability management of the SFPUC's balance sheets for its respective enterprises.
- c. To ensure flexibility in meeting overall financing objectives.
- d. To generate increased net investment return.

II. Derivative Approval Process

- a. Commission approval - The Commission, prior to SFPUC entering into a derivative product, shall approve the transaction. If a proposed derivative product meets the objectives of the SFPUC as described herein, SFPUC shall provide to the Commission for their review and approval, an analysis and evaluation of the proposal including all risk factors indicated below.
 - i. Risk/benefit analysis – Identification and evaluation of proposed benefit and potential risks and any mitigations thereto. Such potential risks shall include:
 - 1. Counterparty Credit Risk – Risk of credit-worthiness of the counterparty. Mitigation is to include provisions in the documents that protect SFPUC from exposure to adverse changes in counterparty's credit standing.
 - 2. Market or interest rate risk – Risk of exposure to fluctuations in interest rates.
 - 3. Tax law risk – Risk of rate adjustments, extraordinary payments, termination or other adverse consequences in the event of a future change in federal income tax policy.
 - 4. Termination risk – Risk of termination by the counterparty in an adverse market (other than at the option of the SFPUC). Mitigation is the maintenance of sufficient liquidity to cover this exposure.
 - 5. "Put" risk – Risk of a future financing that is dependent upon third party participation. Mitigation is to obtain commitment that can be or have been secured for such participation.
 - 6. Legal authority risk – Risk of removal of any party's legal authority to participate in the transaction.
 - 7. Ratings Risk – Risk that the transaction could impact the SFPUC's current credit ratings or its desired future ratings and that the transaction could conflict with rating agency recommended practices today or in the future.
 - 8. Basis Risk – Risk that the payments that SFPUC would make or receive would not match the payments that it seeks to hedge because of changes in relationships between floating rates.

9. Tax-exemption of SFPUC Debt Risk – Risk that the transaction is not in compliance with all federal tax law requirements with respect to the SFPUC's outstanding tax-exempt bonds.
 10. Volatility Risk – The change of the mark-to-market value of a transaction resulting from a change in implied volatility.
 11. Accounting Risk – Risk that the transaction is not compatible with internal accounting procedures and reporting practices. Related risk is the impact on SFPUC's rate covenant calculation or compliance.
 12. Administrative Risk – Risk of counterparty's or SFPUC's failure to administer and monitor transactions consistent with the policies herein.
 13. Subsequent Business Conditions – Risk of dependence on the continuation or realization of specific industry or business conditions.
- ii. Savings Analysis – Independent analysis of potential savings from proposed transaction.
 - iii. Rate Exposure – Fixed versus variable rate and swap exposure on a project and for a counterparty before and after proposed transaction.
 - iv. Market Net Termination Exposure – Termination exposure on a per transaction and per counterparty basis for all existing and proposed transactions.
 - v. Notional Value – Total notional value of derivative products before and after proposed transaction.
- b. Board of Supervisors Approval – When required, Board of Supervisors approval may be required.
- III. Inappropriate Use of Derivative Products – SFPUC shall never enter into a derivative transaction for the following purposes or if certain conditions exist.
- a. For speculative purposes, including potential trading gains.
 - b. To achieve extraordinary leverage.
 - c. If liquidity is insufficient to protect against early termination.
 - d. Insufficient price “transparency” wherein SFPUC is unable to reasonably value the instrument.
- IV. Methods of Soliciting and Procuring Derivatives – Regardless of the method of procurement, the SFPUC shall obtain an independent finding that the terms and conditions of any derivative product entered into reflect a fair market value as of the date of its execution.
- a. Competitive – SFPUC would pre-qualify prospective bidders and reserve the right to select one or more bidders for the transaction in addition to the winning bidder if deemed in SFPUC's best interest.
 - b. Negotiated – SFPUC may determine that negotiating a transaction is in its best interest if:

- i. Due to size or complexity of the transaction, a negotiated process would result in the most favorable pricing or terms in which case an independent financial advisor would be assigned to assist in the process.
- ii. Doing so will advance SFPUC's interests by encouraging and rewarding innovation and/or the substantial commitment of time and resources by a counterparty.

V. Counterparty Requirements

- a. Minimum rating – At least one Aa3 or AA- from two rating agencies.
- b. Minimum capitalization – \$250 million or credit enhancement in one of the following forms:
 - i. Contingent credit support or enhancement.
 - ii. Collateral held by a 3rd party trustee and marked to market monthly.
 - iii. Ratings downgrade triggers.
- c. Demonstrated record –
 - i. Successful track record and reputation for executing and performing derivative transactions.
 - ii. Creating and implementing innovative ideas in the derivative market.

VI. Standard Terms for Swaps and Derivatives

- a. Term – Consistent with the purpose for which the derivative product is used while taking into account the call dates for the related debt or obligation. In no event shall the term extend beyond the existing debt (or other obligation being hedged).
- b. Events of default – An event of default by the counterparty shall lead to SFPUC having the option to terminate the agreement with the termination payment being calculated on the side of the bid-offered spread most beneficial to SFPUC. Events of default of a counterparty include:
 - i. Failure to make payment when due.
 - ii. Material breach of representations and warranties.
 - iii. Failure to comply with downgrade provisions.
 - iv. Failure to comply with any other provision of the agreement after a specified notice period.
- c. Termination provisions
 - i. Optional – All derivative transactions shall contain provisions granting the SFPUC the right to optionally terminate an agreement at any time over the term of the agreement.
 - ii. Mandatory – A termination payment to or from the SFPUC may be required in the event of termination of an agreement ONLY in the case of credit-related

and non-payment events. Prior to entering into an agreement or making any such termination payment, as appropriate, SFPUC shall evaluate whether it would be financially advantageous for the SFPUC to enter into a replacement transaction as a means of offsetting any such termination payment or obtaining insurance to guarantee performance of the counterparty. Any termination payment due from the SFPUC shall be made from available SFPUC monies.

- iii. Available liquidity - SFPUC shall consider the extent of the SFPUC's exposure to termination payment liability in connection with each transaction, and the availability of sufficient liquidity to make any such payments that may become due.
- iv. Cure provisions - Timelines on SFPUC's obligations to cure must provide for adequate time to affect the cure.
- v. Payment - Payments may be structured on a monthly, quarterly, semi-annual or annual basis.
- vi. Security – The agreement shall identify the security attributable to the derivative.
- vii. Collateral -
 - 1. Required - The SFPUC shall require collateral or other credit enhancement to be posted by each counterparty if the credit rating of the counterparty or its guarantor falls below the "AA" category by two of the three nationally recognized rating agencies (Moody's, Standard & Poor's and Fitch).
 - 2. Value –
 - a. The amount of collateral posted shall be equal to the positive termination value of the agreement to the SFPUC.
 - b. SFPUC will determine reasonable threshold limits for the initial deposit and for increments of collateral posted thereafter.
 - 3. Features of Collateral –
 - a. Cash, U.S. Treasury securities and U.S. Agency securities. The market value of the collateral shall be determined on at least a monthly basis.
 - b. Deposited with a custodian, acting as agent for the SFPUC, or as mutually agreed upon between the SFPUC and the counterparty.
 - c. The SFPUC shall determine on a case-by-case basis whether other forms of collateral are more beneficial to the SFPUC.

VII. Monitoring and Reporting - SFPUC shall report to the Commission at least annually and as requested

- a. Agreements –

- i. A summary of each swap agreement, including but not limited to: the type of swap; the rates and dollar amounts paid by the SFPUC and received by the SFPUC; the rate and amounts that were required to be paid and received; and current market value.
 - ii. Highlights of all material changes to the agreements or new agreements since the last report.
 - iii. Sensitivity analysis with net impact to the SFPUC of a 25 basis point movement (up or down) in the appropriate swap index or curve.
 - iv. Actual collateral posting by each counterparty, if any, under each agreement and in total by that counterparty.
 - v. Information concerning any default by a counterparty under a swap agreement with the SFPUC, and the results of the default, including but not limited to the financial impact to the SFPUC, if any.
 - vi. A summary of any agreements that were terminated.
 - vii. A summary of key terms of outstanding agreements, including notional amounts, interest rates, maturity and method of procurement.
 - viii. Values of early termination, shortening or lengthening the term to certain benchmarks, sale or purchase of options.
 - ix. Discussion of other risks associated with each transaction.
- b. Counterparties –
- i. Full name, description and credit ratings of each counterparty and credit enhancer insuring payments, if any.
 - ii. For each counterparty, the SFPUC shall provide the total notional amount position, the average life of each agreement, the available capacity to enter into a transaction, and the remaining term of each agreement.
 - iii. Listing of any credit enhancement, liquidity facility or reserves and accounting of all costs and expenses associated with the credit enhancement, liquidity facility or reserves.
 - iv. Aggregate marked to market value for each counterparty and relative exposure compared to other counterparties.
 - v. Calculation of SFPUC's net termination exposure for each counterparty.
- c. Future transactions - A summary of any planned transactions and the projected impact of such transactions on the SFPUC.

VIII. Payments

- a. Budgeting - Termination payment risk shall be determined annually and offset by a hedge or reserve to a predetermined limit.
- b. Priority of payment –

- i. Swap payments - no greater than parity with obligation being hedged
 - ii. Termination payments – If economically feasible, subordinate to related debt payments
- c. Swap counterparty termination exposure limit –
 - i. AAA Counterparties: \$40 million maximum collateralized net termination exposure; \$40 million maximum uncollateralized net termination exposure; \$40 million maximum total net termination exposure
 - ii. AA Counterparties: \$40 million maximum collateralized net termination exposure; \$10 million maximum uncollateralized net termination exposure; \$40 million maximum total net termination exposure
 - iii. Disclosure and documentation –
 - 1. Disclosure - Derivatives will be disclosed in the related Official Statement, if relevant, and in the SFPUC's annual financial statements in accordance with generally accepted accounting principles and in the Annual Disclosure Report.
 - 2. Documentation – Each transaction must utilize International Swaps and Derivative Association approved documents.

Summary of Disclosure Requirements as of September 2016

ISSUE	SOURCE DOCUMENT	DISCLOSURE OBLIGATION	RECIPIENT	DUE
•All Water Bonds •All Wastewater Bonds - All Power Bonds	•Indenture •Section 6.07 •Section 6.08	•Audited Financials •No Default Certificate •Annual Budget	Trustee Bondholder	• Water November 30 • Wastewater January 30
•All Water Bonds •All Wastewater Bonds - All Power Bonds	Continuing Disclosure Certificates	Annual Disclosure Report <i>Include for Water:</i> •audited financials •outstanding debt •obligations payable from revenues •water sales •rate increases •historical financials/coverage •WSIP budget and spending summary •status of WSIP projects <i>Include for Wastewater:</i> •audited financials •outstanding debt •sewer rates •sewer accounts by type •historical financials/coverage	EMMA, SFPUC Financial Management, CCSF Senior Managers	March 31
•All Water Bonds •All Wastewater Bonds •Water and Wastewater CP	Moody's Credit Report	Annual financial and statistical information for Water and Wastewater	Moody's Rating Analyst	Annually
•All Water Bonds •All Wastewater Bonds •Water and Wastewater CP	Standard & Poor's Credit Report	Annual audits and budgets and quarterly progress reports on projects for Water and Wastewater	S&P Rating Services	Annually
•Water 2006B (WSIP) Water Bonds	Provides volume cap to allow issuing some WSIP-related private activity debt on a tax-exempt basis	Annual Certification	California Debt Limit Allocation Committee (CDLAC)	March 1
•Water 2006B •Water 2006C	Financial Guaranty Agreement(s) Section 2.06 (a)-(c)	•Quarterly financials (if available) •Audited financials •Compliance Certificate	Syncora Guarantee, fka XL Capital (Surety)	•w/in 90 days •w/in 180 days •Annually
Water Commercial Paper	Letter of Credit Agreement Section 5.01/5.02	•Audited Financials •No Default Certificate •Annual Budget •Quarterly budget update	Bank of America (Standby LOC's) Royal Bank of Canada	•December 31 •December 31 •45 days from adoption •45 days from quarter end
Wastewater Commercial Paper	Letter of Credit Agreement Section 5.01	•Audited Financials •No Default Certificate •Annual Budget •Quarterly budget update	Wells Fargo	•December 31 •December 31 •45 days from adoption •45 days from quarter end
Water and Wastewater Commercial Paper	Liquidity Facility Agreements Section 7.1	•Audited Financials •Annual Budget •Water Bond Final OS •No Default Certificate •Quarterly Budget Update	US Bank Bank of Tokyo Barclays State Street	•December 31 •December 31 •w/in 10 days
Water and Wastewater Commercial Paper	Dealer Agreement Section 8	•Annual Disclosure Report for Water •Water Bond Final OS	Dealers	•March 31 •w/in 30 days
•Clean Renewable Energy Bonds (CREBs) •Qualified Energy Conservations Bonds (QECBs)	Master Lease/Purchase Agreement Section 2.01(g)	•Audited financials •Annual budget	Bank of America	•March 31 •Annually

SFPUC Arbitrage/Rebate Tax Compliance Policy

The SFPUC will bear primary responsibility for all ongoing tax compliance matters relating to the obligations (referred to herein as the “Bonds”) issued by the SFPUC and subject to the terms of these Policies. The person(s) who hold the following title(s) shall be responsible for monitoring ongoing tax compliance matters relating to the Bonds, including compliance with the arbitrage rebate requirements of Section 148 of the Code, as set forth in these Procedures, which are intended to satisfy Section 7.2.3.4.4 of the Internal Revenue Manual:

I. External Advisors/Documentation

- a. The Chief Financial Officer (“CFO”), to the extent necessary, will consult with bond counsel and other legal counsel and advisors following issuance of the Bonds to ensure that all applicable post-issuance requirements in fact are met. Such consultation will include, without limitation, questions about future contracts with respect to the use of Bond-financed or refinanced assets.
- b. The CFO will from time to time engage expert advisors (each a “Rebate Service Provider”) to assist in the calculation of arbitrage rebate payable in respect of the investment of Bond proceeds as required under the Code.
- c. The CFO shall prepare (or cause to be prepared) regular, periodic statements regarding the investments and transactions involving Bond proceeds and such statements shall be delivered to the Issuer if it so requests.

II. Arbitrage Rebate and Yield – In connection with Bonds subject to these Policies the CFO shall be responsible for:

- a. Engaging the services of a Rebate Service Provider and, prior to each rebate calculation date, causing the trustee or other account holder to deliver periodic statements concerning the investment of Bond proceeds to the Rebate Service Provider;
- b. Providing to the Rebate Service Provider additional documents and information reasonably requested by the Rebate Service Provider;
- c. Monitoring efforts of the Rebate Service Provider;
- d. Assuring payment of required rebate amounts, if any, no later than 60 days after each 5-year anniversary of the issue date of the Bonds, and no later than 60 days after the last Bond of each issue is redeemed;
- e. During the construction period of each capital project financed in whole or in part by Bonds, monitoring the investment and expenditure of Bond proceeds and consult with the Rebate Service Provider to determine compliance with any applicable exceptions from the arbitrage rebate requirements during each 6-month spending period up to 6 months, 18 months or 24 months, as applicable, following the issue date of the Bonds; and
- f. Retaining copies of all arbitrage reports and account statements as described below under “Record Keeping Requirements” and, upon request, providing such copies to the Issuer.

III. Use of Bond Proceeds and Bond-Financed or Refinanced Assets – The CFO, together with applicable City departments, shall be responsible for:

- a. Monitoring the use of Bond proceeds and the use of Bond-financed or refinanced assets (e.g., facilities, furnishings or equipment) throughout the term of the Bonds to ensure compliance with covenants and restrictions set forth in any tax agreement relating to the Bonds;

- b. Maintaining records identifying the assets or portion of assets that are financed or refinanced with proceeds of each issue of Bonds, including a final allocation of Bond proceeds as described below under “Record Keeping Requirements”;
- c. Consulting with bond counsel and other legal counsel and advisers in the review of any contracts or arrangements involving use of Bond-financed or refinanced assets to ensure compliance with all covenants and restrictions set forth in the Tax Agreement relating to the Bonds;
- d. Maintaining records for any contracts or arrangements involving the use of Bond-financed or refinanced assets as described below under “Record Keeping Requirements”;
- e. Conferring at least annually with personnel responsible for Bond-financed or refinanced assets to identify and discussing any existing or planned use of Bond-financed or refinanced assets, to ensure that those uses are consistent with all covenants and restrictions set forth in the Tax Agreement relating to the Bonds; and
- f. To the extent that the Borrower discovers that any applicable tax restrictions regarding use of Bond proceeds and Bond-financed or refinanced assets will or may be violated, consulting promptly with bond counsel and other legal counsel and advisers to determine a course of action to remediate all nonqualified bonds, if such counsel advises that a remedial action is necessary.

IV. Record Keeping – The CFO shall be responsible for maintaining the following documents for the term of each issue of Bonds (including refunding Bonds, if any) plus at least three years:

- a. A copy of the Bond closing transcript(s) and other relevant documentation delivered to the City at or in connection with closing of the issue of Bonds, including any elections made by the City in connection therewith;
- b. A copy of all material documents relating to capital expenditures financed or refinanced by Bond proceeds, including (without limitation) construction contracts, purchase orders, invoices, trustee requisitions and payment records, draw requests for Bond proceeds and evidence as to the amount and date for each draw down of Bond proceeds, as well as documents relating to costs paid or reimbursed with Bond proceeds and records identifying the assets or portion of assets that are financed or refinanced with Bond proceeds, including a final allocation of Bond proceeds;
- c. A copy of all contracts and arrangements involving the use of Bond-financed or refinanced assets; and
- d. A copy of all records of investments, investment agreements, arbitrage reports and underlying documents, including trustee statements, in connection with any investment agreements, and copies of all bidding documents, if any.

SFPUC Direct Pay Bond Compliance Policy

This policy establishes procedures to ensure the San Francisco Public Utilities Commission (the SFPUC) complies with rules and regulations relating to Direct Pay Bonds, including Build America Bonds ("BABs") authorized under the American Recovery and Reinvestment Act. These procedures shall be reviewed and modified from time to time.

I. Pre-Issuance

- a. The SFPUC will establish, prior to settlement of the Bonds, separate and discreet accounting codes for the following funds and accounts of the Bonds:
 - i. Project Fund
 - ii. Debt Service Fund
 - iii. Debt Service Reserve Fund
 - iv. Capitalized Interest Account
 - v. Cost of Issuance Fund
- b. The SFPUC will, in consultation with bond counsel engaged on the transaction and the City Attorney, determine the expected placed-in-service dates of capital improvements to be financed with Bonds. Placed-in-service date considerations shall be as follows:
 - i. Placed-in-service dates will be estimated conservatively, with the early project completion date for any financed project used in formulating capitalized interest on the Bonds, to the extent capitalized interest is necessary, desirable and permissible.
 - ii. The SFPUC's financial advisor(s) will use the above-information regarding placed in service dates to structure debt service on the Bonds and will provide detailed analyses of the methods and assumptions employed in determining the amount and duration of capitalized interest, if any.
 - iii. The SFPUC, the City Attorney and the SFPUC's financial advisor(s) will present the analyses to bond counsel engaged on the transaction for tax compliance review and approval.
- c. In coordination with its financing team, the SFPUC shall instruct bond counsel to draft an "Underwriter's Certificate" or "Purchase Price Certificate" or other appropriate document (singularly or collectively, "Underwriter's Certificate") to be included with the Bid Form or Notice of Sale, clearly setting forth the SFPUC's requirements for and expectations of a bona fide public offering of the Bonds and establishment of the "issue price" of the Bonds.
- d. To the extent necessary and required, the SFPUC will coordinate with the SFPUC's financing team to ensure that all notices, bid forms and other documentation as may be necessary, clearly state limiting parameters relating to costs of issuance, capitalized interest, underwriters' discount, initial offering price and bona fide public offering for the Bonds.

II. Date of Issuance

- a. The SFPUC will coordinate with its financing team and the underwriter of the Bonds for receipt of the Underwriter's Certificate attesting to the bona fide public offering and establishment of the "issue price" of the Bonds. The SFPUC shall rely on this certificate for purposes of complying with section 54AA(d)(2)(C) of the Code.

- b. In coordination with its financial advisor(s), the SFPUC will determine that the underwriter has complied with all terms and provisions of the bond offering, including:
 - i. Minimum and maximum bid and price parameters;
 - ii. Permissible costs of issuance, including underwriters' discount, at or below 2% of the par amount of Bonds.
- c. The SFPUC will receive from its financial advisor(s) and/or bond counsel, a computation of initial offering price for each maturity of the Bonds. Such computation shall include the maximum price Bonds may be sold to the public without violation of the de minimis premium limitation.

III. Post-Issuance

- a. Beginning on the sale date and continuing until the settlement date, the SFPUC in coordination with its financial advisor(s) will track the secondary market prices of its Bonds to determine that the underwriter has complied with the provisions of the Underwriter's Certificate.
 - i. All secondary market trades of the newly issued BABs as reported on EMMA (or other publicly available records and records) will be noted and kept in a file, in hard copy or in electronic form.
 - ii. The SFPUC in coordination with its financial advisor(s) will track the principal amount and dollar price of all trades to determine if and when at least the first 10% of each maturity of Bonds has been sold to the general public at or below the initial offering price.
 - iii. The SFPUC may cancel its sale or otherwise refuse to settle the Bonds if it determines that the underwriter is in violation of any provision of the Underwriter's Certificate or is otherwise unable to provide bond counsel with a sufficient certification as to the establishment of the "issue price" of the Bonds.
- b. Immediately after issuance of the Bonds, the SFPUC and the City Attorney will meet with project staff and accounting staff to brief them on the federal tax rules and requirements regarding investment (including rebate), expenditure and recordkeeping relating to the Bonds (including BABs). All BABs proceeds, other than moneys in a reasonably required reserve fund, if any, or used to pay costs of issuance, must be spent on capital expenditures.
- c. At least on a quarterly basis following the issuance of the Bonds, the SFPUC and the City Attorney shall review expenditures made with proceeds relating to BABs from the bond-related funds and accounts held with the Trustee and the City Treasurer to ensure compliance with all spend-down rules. Such review shall continue until all proceeds have been spent, after which no further reviews shall be necessary. If the SFPUC and the City Attorney determine that any violations of the Tax have occurred, such violations will be remedied through the "remedial action" regulations (Treas. Reg. Section 1.141-12) or the Voluntary Closing Agreement Program (VCAP) described in IRS Notice 2008-31 (or successor guidance). If any changes to the terms or provisions of Bonds are contemplated, the SFPUC and the City Attorney will consult bond counsel.
- d. Immediately after issuance of any Bonds, the SFPUC shall engage a nationally-recognized arbitrage rebate consultant for purposes of complying with arbitrage restrictions on all issuances of the Bonds.
- e. Quarterly, semi-annually or annually, as appropriate, the SFPUC shall confirm that investment earnings on all BABs-related funds and accounts are properly

transferred to the Project Fund and spent on eligible capital projects. The Controller's Office will reconcile balances recorded by project accountants.

- f. Not sooner than 90 days nor later than 45 days prior to each interest payment date on BABs, the SFPUC shall, in cooperation with the Trustee on the Bonds, BABs calculation agent, and other relevant parties, as applicable and necessary, calculate the amount of interest coming due on the immediately pending interest payment date and determine the amount of the refundable credit then due for inclusion on IRS Form 8038-CP for submittal to the US Treasury.
- g. The SFPUC will coordinate with the Trustee on the Bonds, BABs calculation agent, and other relevant parties, as applicable and necessary, for completion and submittal of each IRS Form 8038-CP.
 - i. The SFPUC shall cause the Trustee on the Bonds, BABs calculation agent, City departments, and other relevant parties, as applicable and necessary, to prepare the appropriate forms (including the IRS Form 8038-CP), which shall be signed by an appropriate officer of the SFPUC.
 - ii. The City Treasurer or his designee or the Trustee on the Bonds, as applicable, shall be the recipient of the refundable credit for deposit to the debt service fund of the appropriate series of the SFPUC's BABs.
- h. No later than 15 days before each interest payment date, the SFPUC will coordinate with the Trustee on the Bonds, BABs calculation agent, and other relevant parties, as applicable and necessary, to confirm that the interest subsidy payment has been received and will be applied in compliance with the Tax Code for BABs.
 - i. In the event that a partial interest subsidy payment or no interest subsidy payment is received, the SFPUC will coordinate with the Trustee on the Bonds, BABs calculation agent, and other relevant parties, as applicable and necessary, to
 - 1. determine the cause of the partial payment or no payment
 - 2. resolve disagreements, disputes, etc. with the IRS and/or US Treasury.
 - ii. In the event that a partial interest subsidy payment or no interest subsidy payment is received, the SFPUC will coordinate with the Trustee on the Bonds, BABs calculation agent, and other relevant parties, as applicable and necessary, to budget the gross amount of interest due on the Bonds in the applicable fiscal year until the full amount of interest subsidy payments are received.
- i. The SFPUC will create a monitoring record that tracks compliance with all applicable provisions of the Tax Code for BABs.
- j. The SFPUC will maintain a copy of each Form 8038-CP that is submitted. In addition, the SFPUC will maintain copies of all relevant documents and records sufficient to support that the tax requirements relating to BABs have been satisfied, including the following: closing transcript; all records of investments, arbitrage reports, returns filed with the IRS and underlying documents; construction contracts, purchase orders, invoices and payment records; documents relating to costs reimbursed with bond proceeds; all contracts and arrangements involving private business use of the bond-financed property; all reports relating to the allocation of bond proceeds and private business use of bond-financed property; and itemization of property financed with bond proceeds. Records may be kept in any combination of paper or electronic form.

- k. The SFPUC will confirm that no more than two percent (2%) of the proceeds of any issue of BABs will be used for costs of issuance.

Appendix F – FY 2011-16 Strategic Sustainability Plan Performance Results

Our Strategic Sustainability Plan (SSP) is a system for planning, managing, and evaluating SFPUC-wide performance that takes into account the long term economic, environmental and social impacts of our business activities.

Our reports reflect the feedback we've received over time from six sustainability categories: Customers, Community, Environment & Natural Resources, Government & Management, Infrastructure & Assets, and Workplace. The Global Reporting Initiative (GRI) approach to sustainability reporting was used to prepare the SSP, the reporting index and the annual performance report. The emphasis for the reporting is accountability, transparency and benchmarking.

Performance Evaluation and Scoring Methodology

Normalizing Performance Data

To facilitate evaluation and benchmarking, we have normalized data where appropriate. Normalizing data refers to the process of representing data against a driver or strongest determinant or correlator of performance.

For example, the amount of water distributed by the SFPUC is a driver that has a direct impact on the energy use of the organization. Thus, when looking at efficiency measures, for instance, data can be presented as energy use per million gallons of water delivered. Normalizing data enables trends to be seen over time as they hold the variable operating factors constant.

Performance Scale and Scoring

To score its annual performance, SFPUC uses a generic performance scale developed for its Sustainability Baseline Assessment. Because data collection for each sustainability performance indicator can result in a variety of quantitative and qualitative forms, this scale enables a more consistent, methodical approach to data analysis and assessment.

The following figure shows that each indicator is scored using an ordinal scale from 1 to 5, indicating progressive levels of performance. Each score represents the following:

		Strategic Sustainability Performance Scoring				
SCORING CRITERIA		1	2	3	4	5
Impact		Negative impact		No impact / Average	Positive impact	Significantly Positive Impact
Performance	Via Peers (/Via Self)	Doesn't meet requirements		Meets requirements	Exceeds requirements	Significantly exceeds requirements
	Baseline	Baseline data with no benchmark(s) with score 3				
Practice		Doesn't meet best practice		Meets best practice	Exceeds best practice	Leads best practice

Note that the term “average” reflects a score of 3. In this report, “average” does not refer to an industry average, but rather to average performance levels based on this relative scale from 1 to 5. When describing performance levels, therefore, SFPUC may use the phrase “below average” for scores less than 3 and the phrase “above average” for scores above 3.

For a qualitative indicator that requires a subjective evaluation of performance, SFPUC assumes that enough information is available to provide a basis for an assessment and score. In rare cases, a qualitative indicator may be so unique to SFPUC with variable targets and results, that we will describe but not evaluate or score the results. In case where SFPUC is assessing data for the first time or for which there is no appropriate industry standard or existing trend data, we use the initial data to establish a baseline. Unless this initial data indicates otherwise, we typically assign the result a neutral score of three in order to allow fair evaluation of future results against this baseline.

For a qualitative indicator that requires a subjective evaluation of performance, SFPUC assumes

Sample of FY 2012-14 Actual Performance Data

The following is a sample of our Fiscal Year 2012-14 performance data. Complete results, analyses, evaluation, benchmarking and scores, including our one-page performance profile, are posted on our website at www.sfwater.org/sustainability.

Customers (CR)

Performance Measure	FY2011-12 Actual Data	FY2012-13 Actual Data	FY2013-14 Actual Data	FY2014-15 Actual Data
Customers				
CR1.1: Percent of retail customers surveyed that rate SFPUC as good or better	83%	85%	85%	84%
CR1.2: Average Wholesale Customer Satisfaction (1 to 5 scale)	4.5	4.5	4.6	4.6
CR3.1 Billing Accuracy (billing errors per 10,000 completed for Water and Wastewater combined, and billing errors for Power for which 100% of (primarily municipal) accounts are reviewed prior to billing)	16 errors	13 errors	8 errors	13 errors
CR 3.3: Percent of customers that are metered:	100%	100%	100%	100%
a. Wholesale water:				
b. Retail water:	100%	100%	100%	100%
c. Power:	91%	91%	91%	91%
CR 3.4: Water meter reading accuracy (number of errors per 1,000 reads)	1.31	1.07	0.64	0.58
CR5.1: Average residential water, wastewater, and power bill as a percent of median income in San Francisco :	0.69%	0.55%	0.59%	0.58%
1) Water:				
Wastewater:	0.49%	0.72%	0.77%	0.71%
Power:	1.00%	0.64%	0.67%	0.66%
2) Water & Wastewater:	1.18%	1.27%	1.36%	1.29%
3) Water, Wastewater, & Power:	2.18%	1.91%	2.03%	1.95%
CR6.3: Percent of rate and fee structure that reflects cost of service:	100%	100%	100%	100%
a. Water:				
b. Wastewater:	100%	100%	100%	100%
c. Power:	55%	78%	70%	64%
CR 6.4: Percent retail rate and fee structure that encourages conservation and is designed to reduce peak demands on the system:	58%	100%	100%	100%
a. Water:				
b. Wastewater:	100%	100%	100%	100%
c. Power:	1%	100%	100%	100%

Community (CY)

Performance Measure	FY2011-12 Actual Data	FY2012-13 Actual Data	FY2013-14 Actual Data	FY2014-15 Actual Data
Community				
CY 3.1: Percent of labor hours worked by Service Territory Residents covered by the WSIP Project Labor Agreement: a. Percent labor hours worked by SFPUC Service Territory Residents as percent of all hours worked	51.0%	50.0%	48.1%	47.5%
b. Percent apprentice labor hours worked by Service Territory Residents Apprentices as a percent of all Apprentice hours worked	78.0%	75.0%	72.5%	71.0%
CY3.2: Percent of labor hours worked by local residents on SFPUC construction projects the City's Local Hiring Ordinance: a. Labor hours worked by local residents as of all hours worked	N/A	Ordinance Requirement: 20%: 36% Ordinance Requirement : 25%: 29%	Ordinance Requirement: 20%: 37% Ordinance Requirement : 25%: 39% Ordinance Requirement: 30%: 28%	Ordinance Requirement: 20%: 36% Ordinance Requirement : 25%: 38% Ordinance Requirement: 30%: 49%
b. Labor hours worked by local resident as a percent of all apprentice hours worked.	N/A	Ordinance Requirement: 50%: 79%	Ordinance Requirement: 50%: 74%	Ordinance Requirement: 50%: 74%
CY 4.1: Stakeholder Access/Exchange: b. Percent of projects for which engagement is timely, effective, and for which stakeholder feedback is included in early input (i.e. at design or other early planning stage):	100%	100%	100%	100%

Environment & Natural Resources (EN)

Performance Measure	FY2011-12 Actual Data	FY2012-13 Actual Data	FY2013-14 Actual Data	FY2014-15 Actual Data
Environment & Natural Resources				
EN 6.1: Total amount of water delivered/sold to customers:	89.59 gpcd	87.75 gpcd		77.30 gpcd
a. Total amount of water delivered to retail customers (gpcd):			83.43 gpcd	
b. Total amount of water sold to San Francisco residential customers (gpcd):	50.29 gpcd	48.94 gpcd	48.82 gpcd	43.58 gpcd
c. Total amount of water delivered to wholesale customers (mgd):	144.4 mgd	147.9 mgd	149.6 mgd	128.0 mgd
d. Total City and suburban water demand (mgd):	77.8 mgd	77.2 mgd	75.13 mgd	70.23 mgd
EN8.2: Percent of total water supplied by alternative sources to retail customers	3.0%	3.4%	3.5%	3.5%
EN9.4: Percent sewage sludge going to beneficial reuse	100%	100%	100%	100%
EN10.1 Number of unauthorized discharges from the combined sewer system	0 discharges	0 discharges	5 discharges	7 discharges
EN 10.2: Percent annual wet and dry weather flow treated before discharged per year (by level of quality)	100%	100%	100%	100%
EN12.2: Quantify Reductions in Customer Electricity and Gas Consumption:				
a. Annual Peak Load Reduction (kW):	639 kW	282 kW	276 kW	594 kW
b. Total Electricity Reduction Achieved by Customers (MWh):	639 MWh	3,140 MWh	2,686 MWh	1,632 MWh
c. Total Gas Reduction Achieved by Customers (therms):	639 therms	543,493 therms	1,823,225 therms	27,115 therms
EN 13.2: Percent of electricity supplied from GHG-emissions-free and/or renewable sources:	100%	100%	100%	100%
a. Percent of electricity supplied to retail and municipal customers that is GHG-free and/or renewables shown on the SFPUC's Power Content Label				
b. Percent of GHG-free and/or renewable electricity sold to all customers (wholesale and retail)	97.60%	95.60%	97.30%	90.00%

Performance Measure	FY2011-12 Actual Data	FY2012-13 Actual Data	FY2013-14 Actual Data	FY2014-15 Actual Data
Environment & Natural Resources				
EN16.1: Annual greenhouse gas (GHG) emissions due to: a. SFPUC's electricity and/or natural gas consumption for provision of all SFPUC services:	2,590 GHG	2,514 GHG	3,238 GHG	1,823 GHG
b. Annual greenhouse gas (GHG) emissions due to SFPUC's fleet fuel consumption (metric tons CO2e)	5,079 GHG	5,332 GHG	5,248 GHG	5,106 GHG
EN17.1: Direct energy consumption broken down by source= Energy Intensity (EI metric): a. Water Delivered (In-City Retail Water):	1.05 MWh/MG	1.14 MWh/MG	1.13 MWh/MG	1.20 MWh/MG
b. Water Delivered (Regional Water System):	0.48 MWh/MG	0.45 MWh/MG	0.46 MWh/MG	0.51 MWh/MG
c. Wastewater Treated:	2.14 MWh/MG	2.10 MWh/MG	2.20 MWh/MG	2.10 MWh/MG
EN17.3: Advance and measure SFPUC IT energy efficiencies and IT energy use reductions: a. Percent of laptops, desktops and monitors that meet the EPEAT Gold standard:	100%	100%	100%	100%
b. Percent of printers and servers that meet the Climate Savers Computing Base standard:	95%	95%	95%	98%
EN 19.2: Percent of waste diverted from landfill using three SFPUC San Francisco locations. (excludes biosolids, construction and industrial waste)	76.33% average	N/A KPI revision	64%	68%

Government & Management (GM)

Performance Measure	FY2011-12 Actual Data	FY2012-13 Actual Data	FY2013-14 Actual Data	FY2014-15 Actual Data
Government & Management				
GM1.1: Percent of Current Services meeting level of service goals a. Water : 1)Percent of Deliveries met in drought years (water supply) 2)Percent of Deliveries met after Seismic events	1) 100 % 2) 50 %	1) 100 % 2) 17 %	1) 100 % 2) 20 %	1) 100 % 2) 50 %
b. Wastewater: 1) Number of odor complaints from neighbors adjacent to operating facilities (SEP, Oceanside, Channel Pump Station) 2) Miles of sewer lines inspected	1) 5 odor complaints 2) 125 miles	1) 9 odor complaints 2) 130 miles	1) 3 odor complaints 2) 90 miles	1) data not available 2) 157 miles
c. Power: Percentage of outages repaired in less than 4 hours	N/A	N/A	100 %	100 %
GM 1.2: Quantify compliance with regulatory requirements: a. Incidents of, and fines or non- monetary sanctions for non-compliance with applicable laws and regulations	3 incidents	0 incidents	2 incidents	0 incidents
b. Drinking water quality compliance rate (percent days in full compliance with drinking water standards)	100 %	100 %	100 %	99.73 %
GM1.4: Management is held accountable for project and division performance through audits and performance reports 1) Number of audits completed 2)Number of clean audits with no findings 3)Number of findings or recommendations implemented from all prior audits within: Within 6 months Within 12 months Within 18 months 4) Number of findings not implemented	1) 23 2) 24 3) within: 6 mos.: 27 12 mos.: 15 18 mos.: 13 4) 15	1) 22 2) 5 3) within: 6 mos.: 44 12 mos.: 4 18 mos.: 2 4) 33	1) 17 2) 5 3) within: 6 mos.: 0 12 mos.: 15 18 mos.: 6 4) 142	KPI Revision: 1)21 2)12

Performance Measure	FY2011-12 Actual Data	FY2012-13 Actual Data	FY2013-14 Actual Data	FY2014-15 Actual Data
Government & Management				
GM 2.1: Credit rating for:	S&P: AA-Moody's: Aa3	S&P: AA-Moody's: Aa3	S&P: AA-Moody's: Aa3	S&P: AA-Moody's: Aa3
a. Water:				
b. Wastewater:	S&P: AA-Moody's: Aa3	S&P: AA-Moody's: Aa3	S&P: AA-Moody's: Aa3	S&P: AA-Moody's: Aa3
c. Power				S&P: A+ Fitch: AA-
GM2.2: Operating Cost Coverage (total operational revenues/total operating costs):	1.86	1.52	1.77	1.95
b. Wastewater:	1.68	1.51	1.62	1.60
c. Power:	1.47	1.11	1.16	1.31
GM2.3: Enterprise Operating Fund Balance is Sufficient to Comply with Fund Balance Reserve Policy:	6.2%	43.0%	60.6%	40.0%
1) OFBR as % of Annual Revenue:				
Wastewater:	17.6%	30.4%	42.1%	46.0%
Power:	51.7%	26.1%	16.4%	22.0%
2) OFBR as % of Annual Expenditures:	11.5%	71.7%	43.8%	31.0%
Water:				
Wastewater:	29.6%	31.2%	39.8%	45.0%
Power:	76.1%	21.3%	7.7%	12.0%
3) Debt Service Coverage Ratio: Water:	1.50	3.50	2.70	2.03
Wastewater:	3.20	4.30	4.08	4.35
Power:	204.30	52.50	27.30	53.2
GM3.1: Percent improvement in contracting procedures:	82.9%	56.5%	62.0%	61.0%
a. Percent of completion within 45 days from Commission Award to Certification of components of professional service contracts that are within SFPUC control				
b. Percent of completion within 60 days from Commission Award to Certification of components of construction contracts that are within SFPUC control	65.0%	66.0%	44.0%	66.0%
GM3.2: Percent of professional service firms for which post-project quality and satisfaction reviews have been carried out (does not include construction contracts)	N/A	65%	55%	53%

Performance Measure	FY2011-12 Actual Data	FY2012-13 Actual Data	FY2013-14 Actual Data	FY2014-15 Actual Data
Government & Management				
GM 4.4: Percent of power supplied vs. forecasted	99%	101%	100%	101%
GM 5.3: Percent of organization integrating Enterprise Risk Management (ERM) into sustainability and operational planning, management, & decision-making. Types of risk can include: strategic, operational, financial, reputational, environmental, political, regulatory and license to operate	18.5%	18.5%	16.9%	21.8%
GM 6.1: SFPUC-wide strategic security plan in place including annual implementation targets	Contract and task order in place to begin planning work with Consultant CH2MH	20%	50%	75%
GM 6.2: Emergency drinking water plan in place, and reviewed, updated and tested annually	Contract in place & beginning work with consultant AECOM	100% completed of SFPUC portion of the City's Emergency Drinking Water Plan 75% of total City Plan is complete	75%	A task order has been developed on CS-366 to complete the remaining parts of this plan in the next year.
GM 6.3: Quantify progress institutionalizing Emergency Operations Plans (EOPs) a. SFPUC EOP in place including required annual review and updates	90%	100%	100%	EOP and DEOP's are updated on an on-going, as-needed basis. As incidents occur during the year, the plan is tested and after, corrective actions are written.
b. SFPUC Enterprise and Bureau EOPs in place including required annual review and updates to be completed	60.0%	W: 100% WW: being revised P: 0% Finance: 50% all other bureaus: 10%	71.5%	A task order has been developed on CS-366 to complete the remaining parts of this plan in the next year.

Infrastructure & Assets (IA)

Performance Measure	FY2011-12 Actual Data	FY2012-13 Actual Data	FY2013-14 Actual Data	FY2014-15 Actual Data
Infrastructure & Assets				
IA 2.1: Lost time incident rate for procured construction hours	0.7	0.7	0.7	0.4
IA2.2: Deviation in Actual vs. Planned Facilities and Project Expenditures (in Million dollars):	19.2	15.3	5	-23.7
a. WSIP Local:				
b. WSIP Regional:	3.9	122	14	-109.4
c. SSIP:	0	281	-149	-157.2
d. WWE:	22.7	38.6	-19	-22.3
IA 2.3: Percent of projects completed within the program budget	75%	100%	100%	100%
IA2.4: Percent Deviation in Actual vs. Planned Capital Facilities and Project Schedules:	80.20%	1.20%	0.90%	0.60%
b. WSIP Regional	42.70%	6.30%	2.50%	1.50%
c. WWECIP		12.70%	2.00%	3.80%
IA5.1: Preventive Maintenance Ratio for:	80.81%	78.56%	71.57%	91.93%
a. Water:				
b. Wastewater	38.00%	50.00%	40.00%	54.00%
IA 5.2: Water outages	N/A	N/A	a. 0.046% b. 0.00115%	a. 0.058% b. .001%
a. Percent of service connections without water for 4 hours or less as a result of an unplanned outage				
b. Percent of service connections without water for 12 hours or more as a result of an unplanned outage				
IA5.3: System Renewal and Replacement Rates (in miles): a. Water Distribution Mains	8 miles	4.82 miles	5.1 miles	11.4 miles
b. Wastewater Pipelines	11.8 miles	13.7 miles	12.75 miles	14.89 miles
IA 6.2: Non-revenue water in percent and MGD	9.8%	9.2%	7.9%	5.3%

WorkPlace (WP)

Performance Measure	FY2011-12 Actual Data	FY2012-13 Actual Data	FY2013-14 Actual Data	FY2014-15 Actual
Workplace				
WP1.2: Number of Complaints Filed Regarding Equal Opportunity Violations/Discrimination	10 Complaints	12 Complaints	10 Complaints	21 Complaints
WP 3.1: Average percent of SFPUC workforce turnover	N/A	5.38%	7.17%	7.69%
WP4.2: Recordable Injury, Lost Time Rates, and Work Related Fatalities (based on previous calendar year): a. Recordable Injury Rate (per 100 employees):	7.9	7.6	6.9	8.2
b. Recordable Lost Time Rate (hrs./100 employees)	4.1	3.2	3.5	3.5
c. Number of Work-Related Fatalities	0 Fatalities	0 Fatalities	0 Fatalities	0 Fatalities
WP 6.1: Average number of days to fill vacant position from the date the requisition is issued	178 days	201 days	287 days	112.5 days
WP 8.1: Average hours of training per year per	16.38 hours	16 hours	11.59 hours	16 hours

Glossary of Terms

Accrual Basis of Accounting

A method of accounting in which all assets and liabilities associated with its operations is included on the statement of net assets; revenues are recorded when earned, and expenses recorded when liabilities are incurred.

American Recovery and Reinvestment Act (ARRA)

The ARRA, or the Stimulus or The Recovery Act, is an economic stimulus package enacted by the United States Congress in February 2009 and signed into law on February 17, 2009, by President Barack Obama. The primary objective for ARRA was to save and create jobs almost immediately; and secondary objectives were to provide temporary relief programs for those most impacted by the recession and invest in infrastructure, education, health, and 'green' energy.

Annual Appropriation Ordinance (AAO)

Upon approval, this document is the legal authority for the City to spend funds during the fiscal year. It contains information on the sources and uses of selected City funds detailed by department and by program. Additional schedules summarize selected City revenues and expenditures by service area, department and fund.

Annualization

New positions for the fiscal year are budgeted at 0.77 FTE, to account for the time it takes to hire a new employee (approximately three months). These new positions are annualized in the following fiscal year at 0.23 FTE, to reflect the annual salary costs.

Assistant General Manager (AGM)

An AGM supports the General Manager of the SFPUC as principal member of the senior management team: Business Services, External Affairs, Infrastructure, Power Enterprise, Water Enterprise, and the Wastewater Enterprise.

Attrition Savings

Attrition savings is the projected amount of permanent salaries that will be saved during a fiscal year due to attrition or employee turnover.

Auxiliary Water Supply System (AWSS)

A system of mains and 1889 High Pressure Fire Hydrants, independent of the domestic water supply built solely for the purpose of firefighting. The system is supplied with fresh water, by gravity, from a reservoir and two tanks located at high elevation in the City.

Balanced Budget

The Constitution of the State of California requires all cities to adopt a balanced budget wherein revenues must match expenditures.

Bay Area Water Supply and Conservation Agency (BAWSCA)

BAWSCA represents the interests of 27 suburban wholesale that purchase water wholesale from the San Francisco regional water system. These entities provide water to 1.7 million people, businesses and community organizations in Alameda, Santa Clara and San Mateo counties.

Board of Supervisors (BOS)

The Board of Supervisors is the legislative branch of the City and County of San Francisco. The Board consists of 11 members. Each member is elected on a non-partisan basis from a district where he or she resides. The Board is responsible for approving and amending the SFPUC's proposed budget. The Board's Budget Analyst also participates in reviews of City spending and financial projections.

British Thermo Units (kBtu)

It is a traditional unit of work equal to about 1055 joules. kBtu measures the energy needed to raise the temperature of one pound of water by one degree Fahrenheit. It is most often used as a measure of power in the electric power, steam generation, heating, and air conditioning industries.

Budget and Finance Committee

The Budget and Finance Committee of the Board of Supervisors oversees appropriation ordinances, and measures concerning bond issues, taxes, fees and other revenue measures, redevelopment, and real estate. The Committee also oversees the annual appropriation and annual salary ordinances, and holds a public hearing on the Mayor's budget instructions to City departments for each annual City budget after the instructions are released.

Build America Bonds (BABs)

This is a tax credit or direct payment subsidy bond for municipal capital projects.

Bureau of Economic Analysis (BEA)

The BEA is an agency of the U.S. Department of Commerce, and along with is part of the Department's Economics and Statistics Administration. It produces economic accounts statistics that allow government and business decision makers, researchers, and the American public, to follow and understand the performance of the nation's economy. The BEA collects source data, conducts research and analysis, develops and implements estimation methodologies, and disseminates statistics to the public.

California Building Code (CBC)

The California Building Standards Code is the building code for California, and title 24 of the California Code of Regulations (CCR). It is maintained by the California Building Standards Commission.

California Cap and Trade

The Cap-and-Trade Program is designed to achieve the goals of Global Warming Solutions Act of 2006. The program involves creating a market where GHG emission allowances can be bought and sold by entities, better facilitating the reduction of GHGs in a way that prevents inflexible limitations on economic activity.

California Department of General Services (DGS)

The Department of General Services (DGS) serves as business manager for the state of California. General Services helps to better serve the public by providing a variety of services to state agencies. DGS is committed to sustainability in its facilities, fleet and purchasing.

California Energy Commission (CEC)

The California Energy Commission has responsibility for activities that include forecasting future energy needs, promoting energy efficiency appliance and building standards, and supporting renewable energy technologies.

California Environmental Quality Act 1970 (CEQA)

The California Environmental Quality Act is a statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible.

California Independent Systems Operator (CAISO)

CAISO is a non-profit public benefit corporation charged with operating the majority of California's high voltage wholesale power grid.

California Public Utilities Commission (CPUC)

The California Public Utilities Commission is an administrative agency that exercises both legislative and judicial powers. The major duties of the CPUC are to regulate privately owned utilities, securing adequate service to the public at rates that are just and

reasonable to both customers and shareholders of the utilities. The CPUC also provides electricity and natural gas forecasting, and analysis and planning of energy supply and resources.

Capital Expenditures

Expenditures that extend the service life on an existing asset or the acquisition and/or construction of a new asset.

Capital Improvement Program (CIP) (Annual CIP)

The Capital Improvement Program is supported by the Ten-Year Capital Plan and Ten-Year Financial Plan. SFPUC's CIP includes renewal and replacement (R&R) and capital improvement programs to improve water efficiency, power infrastructure, and sewage treatment facilities. The issuance of revenue bonds, other forms of indebtedness, and the execution of governmental loans are provided under the San Francisco City Charter to finance the SFPUC's capital programs. The repayment of this indebtedness is provided for under the annual rates and revenues of the particular Enterprise that incurs the debt, categorized as debt service in the budget.

Capital Planning Committee (CPC)

The legislation creating San Francisco's (City) Ten-Year Capital Plan created the Capital Planning Committee (CPC). This body is chaired by the City Administrator and consists of the President of the Board of Supervisors, the Mayor's Finance Director, the Controller, the City Planning Director, the Director of Public Works, the Airport Director, the Executive Director of the Municipal Transportation Agency, the General Manager of the Public Utilities System, the General Manager of the Recreation and Parks Department, and the Executive Director of the Port of San Francisco. Through a series of meetings, the Capital Planning Committee reviews proposals, staff recommendations, and documents toward the development of a City-wide capital plan and annual capital budget. Furthermore, the Committee establishes prioritization and assessment criteria to assist the City Administrator and staff in developing the capital plan.

Carryforward

Outstanding budget commitments at the end of the fiscal year funded out of the annual operating budget, that are authorized to be carried over and expended during the following fiscal year.

Certificates of Participation (COP)

An instrument evidencing a pro-rata share in a specific pledged revenue stream, usually lease payments by the issuer. The certificate generally entitles the holder to receive a share, or participation, in the lease payments from a particular project. The lease payments are passed through the lessor to the certificate holders. The lessor typically assigns the lease and lease payments to a trustee, which then distribute the lease payments to the certificate holders.

Chemical Oxygen Demand (COD)

COD refers to the amount of oxygen required to oxidize the organic compound in a water sample.

Citizen's Advisory Committee (CAC)

The purpose of the Citizen's Advisory Committee is to provide policy recommendations to the Mayor, Board of Supervisors, City Administrator and Commissions on prioritization of public benefits.

City and County of San Francisco (CCSF)

CCSF is the City and County of San Francisco and SFPUC is one of departments governed by the Mayor and Board of Supervisors.

CleanPowerSF

CleanPowerSF is San Francisco's Community Choice Aggregation program. Community Choice Aggregation is a State program that allows cities and counties to partner with their

investor-owned utility (PG&E in San Francisco) to deliver cleaner energy to residents and businesses.

Clean Renewable Energy Bonds (CREBs)

CREBs are bonds used to fund the solar photovoltaic projects included in the Hetch Hetchy Water and Power budget as debt service. CREBs are a form of tax credit bond in which interest on the bonds is paid in the form of Federal tax credits by the United States government in lieu of interest paid by the issuer. Created under the Energy Tax Incentives Act of 2005, CREBS can be used, among other entities, by local governments, to finance certain renewable energy and clean coal facilities.

Clean Water Act

The Clean Water Act establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters.

Commercial Paper (CP)

Used as a financing strategy that utilizes short-term financing to calibrate financing needs with project spending. The CP program facilitates short-term financing typically at lower interest rates than longer-term debt, which minimizes costs.

Committee on Information Technology (COIT)

The Committee on Information Technology (COIT) is the City's technology planning and governance body that is charged with submitting a five-year Information and Communication Technology (ICT) plan on a biannual basis to the Mayor and Board of Supervisors. As required by the City's Administrative Code, this plan seeks to better align City resources with the City's technology goals and objectives. The ICT Plan provides a framework for the City to proactively plan, fund, and implement projects which align with the City's goals of innovation, sustainability, and resilience. As the City's third iteration, the ICT Plan outlines a path to maximize current and future resources to support technology projects. The ICT Plan is updated every other year and covers the next five fiscal years.

Community Choice Aggregation (CCA)

As defined by Assembly Bill 117, CCA permits any city, county or city and county to aggregate the electric loads of residents, businesses and municipal facilities to facilitate the purchase and sale of electrical energy.

County-Wide Cost Allocation Plan (COWCAP)

The County-Wide Cost Allocation Plan is developed annually by the Controller's Office and calculates the overhead rate charged to each department for its share of City-wide overhead costs, such as payroll, accounting, and operations.

Cubic Feet (Ccf)

The billing unit for water and wastewater bills, where 1 Ccf=100 cubic feet=748 gallons. The average single-family residence uses about 51 gallons per person per day versus the California State-wide average of 155 gallons per day per capita.

Debt Service

Debt service is principal and interest payments on revenue bonds, State Revolving Fund loans used to finance system improvements, repayments on loans, and financing for Clean Renewable Energy Bonds.

Department of General Services (DGS)

DGS serves as business manager for the State of California. DGS provides a variety of services to State agencies through innovative procurement and acquisition solutions, creative real estate management and design, state-of-the-art telecommunications, environmentally friendly transportation, and funding for the construction of safe schools.

Earthquake Safety and Emergency Response (ESER)

The San Francisco's Earthquake Safety and Emergency Response Program first approved by voters through a bond measure in 2010. The purpose of the program is to make repairs

and improvements to neighborhood firehouses, upgrade the emergency firefighting water system and construct the City's new Public Safety Building that will allow San Francisco to quickly respond to a major earthquake or disaster.

Enterprise Fund

An enterprise fund establishes a separate accounting and financial reporting mechanism for municipal services for which a fee is charged in exchange for goods or services.

Environmental Management System (EMS)

EMS ensures that energy and water are efficiently and productively used in the course of Operations and Maintenance of the sewer system. This program encompasses pollution prevention to prevent harmful pollutants from entering the wastewater system; the biosolids treatment process; public outreach and involvement; exceeding regulatory compliance; and resource recovery in the form of energy recovery and recycling biosolids back to soil or other beneficial use of this resource.

Environmental Protection Agency (EPA)

The EPA is an agency of the United States federal government, created to protect human health and the environment by writing and enforcing regulations based on laws passed by Congress

Equipment

Equipment has a value greater than \$5,000, and a useful life of three years or more, such as vehicles and hardware, or other heavy equipment.

Financial Project System (F\$P)

In June 2015, the City launched the Financial System Project (F\$P) to manage the implementation of a new PeopleSoft Financial and Supply Chain Management system citywide by July 2017. The PeopleSoft system will replace accounting, fixed assets, and procurement systems and introduce new business processes based on best practices. The SFPUC is excited to join this effort to modernize our systems and streamline how the City tracks finances, purchases and contracts for goods and services, and pays invoices.

Fats, Oils, and Grease (FOG)

The SFPUC Water Pollution Prevention Program has materials that can assist businesses in properly managing their fats, oils and grease wastes; FOG can be a major problem for San Francisco's sewers and for the Bay and Ocean that surround San Francisco, because when not disposed of properly FOG forms thick layers inside sewers and constricts flow.

Financial Accounting Standards Board (FASB)

The FASB is the designated organization in the private sector for establishing standards of financial accounting. Those standards govern the preparation of financial statements. They are officially recognized as authoritative by the Securities and Exchange Commission (SEC) (Financial Reporting Release No. 1, Section 101, and reaffirmed in its April 2003 Policy Statement) and the American Institute of Certified Public Accountants (AICPA) (Rule 203, Rules of Professional Conduct, as amended May 1973 and May 1979).

Fiscal Year (FY)

San Francisco's fiscal year is from July 1st to June 30th.

Full-Time Equivalent (FTE)

An FTE is one or more employees who cumulatively work 40 hours per week.

Fund Balance

Fund balance is the difference between assets and liabilities.

Gallons Per Capita Daily (GPCD)

This used to refer to per capita daily water use. GPCD can be used for estimating future water use demand, but it is also an important tool for tracking conservation goals, since it

provides a baseline for households and individuals to track & compare their own conservation efforts.

General Fund

The General Fund is a source of discretionary spending and funds many of the basic municipal services in the City and County of San Francisco such as public safety, health and human services and public works. Primary revenue sources include local taxes such as property, sales, payroll and other taxes.

General Reserves

General Reserves are budgeted to balance annual revenue and expenditure amounts. It is budgeted when revenues exceed expenditures.

General Use (GUSE)

Referring to general fund department customers generally pay subsidized rates.

Global Reporting Initiative (GRI)

GRI is an international independent organization that helps businesses, governments and other organizations understand and communicate the impact of business on critical sustainability issues such as climate change, human rights, corruption and many others.

GoSolarSF Program

The GoSolarSF Program was developed by the San Francisco Solar Task Force to encourage the installation of photovoltaic systems on residents and businesses within the City. GoSolarSF solar incentive program was approved by the San Francisco Public Utilities Commission in January 2008. The Board of Supervisors passed ordinances establishing a long-term Solar Energy Incentive Program and a Solar Energy Incentive Pilot Program in June 2008. The program was launched on July 1, 2008.

Governmental Accounting Standards Board (GASB)

The Governmental Accounting Standards Board (GASB) is the independent organization that establishes and improves standards of accounting and financial reporting for U.S. State and local governments.

Green-e Energy

The nation's leading independent consumer protection program for the sale of renewable energy and greenhouse gas reductions in the retail market. Green-e offers certification and verification of renewable energy and greenhouse gas mitigation products.

Greenhouse Gas (GHG)

GHG is a gas in an atmosphere that absorbs and emits radiation within the thermo infrared range. This process is the fundamental cause of the greenhouse effect.

Hetchy System Improvement Program (HSIP)

HSIP is the capital improvement program to upgrade the aging Hetchy Regional Water/Power infrastructure.

Independent System Operator (ISO)

The Independent System Operator is nonprofit public benefit corporation that manages the flow of electricity across the high-voltage, long-distance power lines that make up 80 percent of California's and a small part of Nevada's power grid.

Interconnection Agreement (IA)

The interconnection agreement is a business contract between telecommunications organizations for the purpose of interconnecting their networks and exchanging telecommunications traffic and certain services.

Interest Income

Revenue earned by an Enterprise on its cash investments.

Key Performance Indicators (KPIs)

Financial and non-financial metrics used to quantify objectives to reflect strategic performance of an organization.

Kilovolt (kV)

This is a measure of the potential energy of a unit charge at a given point in a circuit relative to a reference point.

Leadership in Energy and Environmental Design (LEED)

LEED stands for Leadership in Energy and Environmental Design and was developed by the U.S. Green Building Council (USGBC) to set a benchmark for design, construction, and operation of high-performance green buildings.

Light-Emitting Diode (LED)

LED is a new solid-state lighting technology that offers better lighting performance and energy efficiency. Light is emitted from clusters of diodes, which direct light. The fixture lasts for 15 years.

Local Agency Formation Commissions (LAFCO)

LAFCO is responsible for reviewing and approving proposed jurisdictional boundary changes, including annexations and detachments of territory to and/or from cities and special districts, incorporations of new cities, formations of new special districts, and consolidations, mergers and dissolutions of existing districts.

Low-Impact Design (LID)

LID refers to a land planning and engineering design approach to manage stormwater runoff. LID directs runoff to natural vegetated systems, such as landscaped planters, swales and gardens that reduce filter or slow stormwater runoff. Strategic placement of this system can help mitigate the impacts of impervious surfaces and in some cases increase the level of service provided by the traditional sewer pipes.

Materials & Supplies (M&S)

M&S is an expenditure category that includes maintenance, safety, fuel, office supplies, and other miscellaneous materials and supplies for the maintenance and operations of an Enterprise/Bureau.

Megawatt (MW)

Megawatt is a standard unit of power in the international system equal to one million watts, used as a measure of the output of a power station.

Memorandum of Understanding (MOU)

A memorandum of understanding describes a bilateral or multilateral agreement between two or more parties

Million Gallons per Day (MGD)

Million gallons per day is a measurement of water flow frequently used in measurement of water consumption.

Modesto Irrigation District (MID)

One of four irrigation districts in California; its electric service area includes Modesto, Salida, Empire, Waterford, Mountain House and parts of LaGrange, Riverbank, Ripon, Escalon and Oakdale.

Modified Accrual Basis of Accounting

A basis of accounting used with a current financial resources measurement focus. It modifies the accrual basis of accounting in two significant ways: first, revenues are not recognized until they are measurable and available; and second, expenditures are recognized in the period in which the SFPUC normally liquidates the related liability rather than when the liability is first incurred, if earlier.

National Pollutant Discharge Elimination System (NPDES)

A permit program, authorized by the Clean Water Act, that controls water pollution by regulating point sources that discharge pollutants into waters of the United States.

New Clean Renewable Energy Bonds (NCREBs)

New Clean Renewable Energy Bonds (New CREBs) are one of several types of tax credit bonds authorized under IRC Section 54A, that allow a credit to investors that hold such bond on one or more of the quarterly credit allowance dates.

Non-Personnel Services

Non-personnel services includes the maintenance of equipment and facilities, travel, training, memberships, professional services, rent, and other expenses that support maintenance for the operation of an Enterprise.

North American Electric Reliability Corporation (NERC)

The electric reliability organization (ERO) certified by the Federal Energy Regulatory Commission purpose is to establish and enforce reliability standards for the bulk-power system. NERC develops and enforces reliability standards; assesses adequacy annually via a 10-year forecast, and summer and winter forecasts; monitors the bulk power system; and educates, trains and certifies industry personnel.

Office of the General Manager (GM)

Supports the General Manager in his key oversight functions, which are to oversee the regional utility that delivers reliable, high quality drinking water to more than 2.5 million Bay Area customers; that collects and treats wastewater and stormwater for the CCSF; and that provides hydroelectric and other renewable power resources for the San Francisco municipal customers.

Oil and Grease (O/G)

One of the determinants of wastewater rates for nonresidential customers.

Operating Transfers Out

Operating transfers out refers to the revenue transfers between Enterprise funds.

Operations and Maintenance (O&M)

Includes budgets for Personnel, Overhead (or COWCAP), Non-Personnel Services, Materials and Supplies, Equipment, and Services of Other Departments.

Other Non-Operating Revenues

Non-utilities revenues, including rent, permit fees, sale of property, custom work, and reimbursements.

Pacific Gas & Electric (PG&E)

Incorporated in California in 1905, Pacific Gas & Electric is a natural gas and electric utilities company, with a service area from Eureka in the north to Bakersfield in the south, and from the Pacific Ocean in the west to the Sierra Nevada in the east. The company is based in San Francisco.

Pass-through

A pass-through is when the budget and/or expenditures are off-set by a like amount in revenues.

Personnel

Personnel refers to all labor costs including full-time, temporary, and projected-funded employees, overtime, premium and holiday pays and related benefits.

Pretreatment and Pollution Prevention (P2)

Programs to ensure regulatory compliance in wastewater collection systems; they focus on contaminant reduction activities for residential, commercial, and industrial dischargers.

The major P2 programs include: Street Sweeping, Fats, Oils & Grease (FOG), Mercury Reduction Program, Pesticides/Integrated Pest Management (IPM), and Storm Water P2 Program/Construction Runoff Control.

Proceeds from Debt

Refers to revenues received through the issuance of bonds, loans, or other borrowings.

Programmatic Projects

Programmatic projects are annual projects that close-out at the end of the fiscal year. These projects are used to capture costs for specific operating or maintenance programs.

Project Labor Agreement (PLA)

A pre-hire collective bargaining agreement with one or more labor organizations that establishes the terms and conditions of employment for a specific construction project.

Proposition 218

Prop 218 amended the California Constitution (Articles XIII C and XIII D) which, as it relates to assessments, requires the local government to have a vote of the affected property owners for any proposed new or increased assessment before it could be levied. The Proposition was passed by California voters on November 5, 1996, and the assessments portion placed in effect on July 1, 1997

Proposition A (2002)

Approved by voters in November 2002, authorizes the SFPUC, subject to Board of Supervisors approval, to issue up to \$1.628 billion in revenue bonds or other forms of indebtedness to finance the acquisition and construction of improvements to the City's water system.

Proposition A (2009)

Approved in November 2009, this Proposition amended the City Charter to require the City to transition to a two-year budget cycle by FY 2012-13.

Proposition E (2002)

Approved by voters in November 2002, authorizes the SFPUC to issue revenue bonds or other forms of indebtedness for the purpose of reconstructing, replacing, expanding, repairing or improving water facilities or clean water facilities when authorized by ordinance approved by a two-thirds vote of the Board of Supervisors.

Qualified Energy Conservation Bonds (QECBs)

QECBs are tax credit bonds specifically targeting energy conservation and green programs.

Rate Fairness Board (RFB)

The RFB was established with the passage of Proposition E, approved by San Francisco voters on November 5, 2002. The RFB advises the SFPUC on water and sewer rate matters. Its specific duties are: Annual review of a five-year rate forecast; hold one or more public hearings on annual rate recommendations before the SFPUC Commission adopts rates; provide a report and recommendations to the SFPUC on the rate proposal and; in connection with periodic rate studies, submit to the SFPUC rate policy recommendations for the Commission's consideration, including recommendations to reallocate costs among various retail utility customer classifications, subject to any outstanding bond requirements.

Renewable Portfolio Standards (RPS)

(RPS) is a regulation that requires the increased production of energy from renewable energy sources, such as wind, solar, biomass, and geothermal.

Renewal and Replacement (R&R)

R&R refers to projects in the Enterprises, including both minor and major construction projects, maintenance and rehabilitation projects, planning studies, and preliminary engineering analysis for major capital improvements.

Request for Proposal (RFP)

The process by which a corporate department or government agency prepares bid documents to acquire equipment or services.

Retail Water Sales

Retail water sales consist of rate schedules that include City and Suburban Retail rates. City Retail Rates include general rates - single-family residential, multiple-family residential, and commercial (industrial). These rates consist of a monthly service charge based on meter size and a two-step commodity charge for single- and multiple-family residential customers, and meter size and a uniform commodity charge for commercial (industrial) customers. Suburban retail rates include rate schedules for use outside of San Francisco.

Revenue-Funded Capital

The Revenue-Funded Capital is the revenue portion of the two-year capital program approved outside the budget process. This revenue reserve is funded in the operating budget.

Sale of Electricity

Sale of electricity refers to charges for electric power to City departments for municipal use, wholesale customers, and other retail customers.

Sale of Gas and Steam

Revenues from gas and steam provided to City departments by Hetch Hetchy Power. These revenues are a pass-through and have no impact on Hetchy Hetchy's fund balance levels.

Sale of Water

The budget category for revenues from sales of water to retail customers in San Francisco and suburban areas and to wholesale customers under the terms of a long-term Water Supply Agreement (WSA).

San Francisco Municipal Transportation Agency (SFMTA)

A public service Enterprise department of the CCSF that provides a surface transportation network for pedestrians, bicyclists, transit and paratransit customers, motorists, and taxis.

San Francisco Public Utilities Commission (SFPUC)

The SFPUC is a department of the City responsible for the maintenance, operation and development of three utility enterprises: the Wastewater Enterprise, the Water Enterprise and the Power Enterprise. The SFPUC provides regional water, local water, wastewater (collection, treatment, and disposal), and power.

Services of Other Departments

Services performed for the SFPUC by other City departments.

Sewer Service Charges

Sewer service charges are the primary funding source for the payment of costs associated with the Wastewater Enterprise's sanitary waste and stormwater collection, treatment and disposal.

Sewer System Improvement Program (SSIP)

A major focus of the Wastewater Enterprise, the SSIP is a long-term capital program that provides strategies and policies for the future. The San Francisco Sewer System Improvement Program objectives are to: develop a long-term vision and strategy for the management of the City's wastewater and stormwater; provide a detailed capital planning roadmap for improvements needed; estimate the funds to implement these improvements; address specific challenges facing the system; and maximize system reliability and flexibility.

SFPUC Commission

Under the Charter, the SFPUC is given exclusive charge of the operation and management of all water, wastewater and municipal customers' energy supplies and utilities of the City as well as the real, personal and financial assets under the SFPUC's jurisdiction. The Commission consists of five Commissioners appointed by the Mayor and subject to confirmation by a majority of the Board of Supervisors serving four-year terms.

State Revolving Fund (SRF)

State revolving funds are available as loans to government entities for the construction of publicly owned water and wastewater treatment facilities. The fund is administered by State Water Resources Control Board.

Strategic Sustainability Plan (SSP)

The SSP provides the SFPUC with a system for planning, managing, and evaluating SFPUC-wide performance that takes into account the long-term economic, environmental, and social impacts of the SFPUC's business activities.

Ten-Year Capital Plan

The City and County of San Francisco Administrative Code requires the annual development of a Ten-Year Capital Plan for City-owned facilities and infrastructure. Under the authority of the City Administrator, the Capital is presented to the Capital Planning Committee (CPC) for their review. The CPC completes its review of the capital plan by March 1 and presents it to the Board of Supervisors (BOS). The BOS must adopt the Capital Plan by May 1.

Ten-Year Financial Plan

The Ten-Year Financial Plan is a planning document as required by the City and County of San Francisco, that includes a ten-year financial summary for each Enterprise, describing projected sources and uses, resulting fund balances and associated financial reserve ratios.

Total Suspended Solids (TSS)

A water quality measurement that serves as one of the determinants of wastewater rates for nonresidential customers.

Treasure Island (TI)

The Water, Wastewater, and Power Enterprises operate and maintain the water, wastewater, and power distribution systems, and the associated revenues, on Treasure Island, on behalf of the Treasure Island Development Authority (TIDA) and in accordance with a water supply and quality permit issued by the California Department of Health Services, and the National Pollutant Discharge Elimination System (NPDES) permit issued by the California Regional Water Quality Control Board.

Treasure Island Development Authority (TIDA)

The Treasure Island Development Authority (TIDA) is a non-profit, public benefit agency dedicated to the economic redevelopment of former Naval Station Treasure Island. The Authority is vested with the powers of a California Redevelopment Agency as well as the rights to administer Tidelands Trust property. TIDA also performs and administers vital municipal services for the residential and daytime population during the interim reuse of the former military base.

Turlock Irrigation District (TID)

This is one of four irrigation districts in California that provides irrigation water as well as electric retail energy directly to homes, farms and businesses.

Up-country

Up-country refers to the water and power facilities located east of Alameda Country to the Sierras.

Water Supply Agreement (WSA)

The City and County of San Francisco and the 27 suburban wholesale customers entered into an agreement to purchase water from San Francisco on a wholesale basis and distribute it to residents, businesses, and thousands of community organizations in Alameda, Santa Clara and San Mateo Counties. The WSA was approved in April 2009 and has a term of 25 years. The Agreement changes the cost basis by which the wholesale rate is determined from a “utility cost basis” to a “cash basis”. Beginning in FY 2009-10, wholesale customers will pay a proportionate share of regional system operating expenses, debt service on bonds sold to finance regional improvements, and other regional system improvements funded from current revenues. The WSA requires the rate be calculated and set annually and include a “true-up” between prior year revenues expenses.

Water System Improvement Program (WSIP)

The SFPUC launched a \$4.6 billion Water System Improvement Program (WSIP) to repair, replace, and seismically upgrade the San Francisco Regional Water System's aging facilities. Built in the early to mid-1900s, many parts of the San Francisco Regional Water System, often referred to as the Hetch Hetchy System, are nearing the end of their working life, with crucial portions crossing over or near to three of the nation's most active earthquake faults. The WSIP increases resilience to vulnerable portions of the system to mitigate earthquake risk and enhance water treatment processes to ensure a reliable supply of water for SFPUC customers.

Western Electricity Coordinating Council (WECC)

The Western Electricity Coordinating Council (WECC) is the Regional Entity responsible for coordinating and promoting Bulk Electric System reliability in the Western Interconnection. In addition, WECC provides an environment for coordinating the operating and planning activities of its members as set forth in the WECC Bylaws.

Western Renewable Energy Generation Information System

The Western Renewable Energy Generation Information System (WREGIS) is an independent, renewable energy tracking system for the region covered by the Western Electricity Coordinating Council (WECC). WREGIS tracks renewable energy generation from units that register in the system using verifiable data and creates renewable energy certificates (RECs). WREGIS certificates can be used to verify compliance with state and provincial regulatory requirements (i.e. - Renewable Portfolio Standards) and in voluntary market programs.

Western Systems Power Pool (WSPP)

WSPP is an agreement and an organization that creates power trading opportunities and allows WSPP members to manage power delivery and price risk. The mission of the organization is to provide a catalyst for an efficient and robust wholesale electric power market. WSPP accomplishes this by constantly facilitating refinements to the Agreement, and promoting trading relationships.

Wholesale Water Sales

The Water Enterprise provides wholesale water service to 27 wholesale customers, which consist of 24 municipalities and water districts, one private utility, one private non-profit university and one mutual water association. Wholesale customers are located in Alameda, Santa Clara and San Mateo counties. The SFPUC and the wholesale customers have negotiated a new Water Supply Agreement (WSA) that changes the cost basis by which the wholesale rate is determined from a “utility basis” to a “cash basis”. Beginning in FY 2009-10, wholesale customers will pay a proportionate share of regional system operating expenses, debt service on bonds sold to finance regional improvements, and other regional system improvements funded from current revenues.



San Francisco Public Utilities Commission
A Department of the City and County of San Francisco, California

Financial Services

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